

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

In re:)
)

Russell City Energy Center)

PSD Permit No. 15487)

PSD Appeal No. 10-02

**RUSSELL CITY ENERGY COMPANY, LLC'S
RESPONSE TO PETITION FOR REVIEW
FILED BY CHABOT-LAS POSITAS COMMUNITY COLLEGE DISTRICT**

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I. INTRODUCTION

Permittee Russell City Energy Company, LLC (“RCEC”) hereby submits its Response to the Petition for Review Filed by Chabot-Las Positas Community College District (PSD Appeal No. 10-02) (“Petition”). The petition for review challenges the decision by the Bay Area Air Quality Management District (the “Air District”) to issue a Prevention of Significant Deterioration (“PSD”) permit to RCEC to construct a new natural gas-fired combined-cycle power plant in Hayward, California. Petitioner raises four issues related to RCEC’s PSD permit. For numerous reasons, all of these arguments fail.

First, Petitioner argues that the Air District’s source impact analysis was erroneous because it used an incorrect emissions rate. According to Petitioner, had the correct emissions rate been used, the maximum concentration would have resulted in an exceedance of the 24-hour National Ambient Air Quality Standard (“NAAQS”) for fine particulate matter (*i.e.*, less than 2.5 microns in diameter) (“PM2.5”). This argument fails. As an initial matter, the Air District had a strong legal basis for its conclusion that the 24-hour PM2.5 standard no longer applies for purposes of PSD permitting due to the Bay Area’s recent non-attainment designation. Nevertheless, the Air District conservatively assumed that PSD permitting continues to apply to PM2.5, at least with respect to the annual standard, and conducted a proper PM2.5 air quality impacts analysis. With respect to that analysis, Petitioner’s arguments have no merit: Petitioner’s own use of an incorrect emissions rate does not mean that the Air District erred in its analysis; Petitioner’s arguments about the emissions rate used by the Air District were not preserved for appeal; and Petitioner is incorrect as a matter of law that the Air District should have used a permit exceedance as the worst-case emissions rate, instead of the federally enforceable permit limit.

Second, Petitioner contends that the Air District erred by excluding from its PM2.5 source impact analysis all nearby roadways but one. The Air District, however, provided extensive explanations and responses to comments on how it identified the impact area and considered the cumulative impact of the facility’s emissions, background concentrations, and

emissions from other nearby sources. Petitioner identifies no error in these responses. Moreover, the Air District properly concluded that it need not model the contribution from roadways that could not result in a significant concentration gradient in the same location as the facility's modeled significant impacts. Petitioner identifies no error in this conclusion. To the contrary, Petitioner appears to err in conflating the terms "significant impact" and "significant concentration gradient."

Third, Petitioner argues that the Air District erred in rejecting an auxiliary boiler as BACT based on an improper cost-effectiveness analysis. This argument has no merit. Any mistake the Air District made in using incorrect data provided by the Petitioner from the Caithness facility was immaterial to the Air District's decision. In addition, Petitioner's claim about the size of the auxiliary boiler at the Mankato, Minnesota facility, which the Air District relied on in its analysis, is factually incorrect. Moreover, this issue was not preserved for appeal.

Fourth, Petitioner claims that RCEC's PSD permit must be remanded to require the Air District to prepare an environmental justice analysis that considers the environmental and social cost of the facility on the community. This argument, however, ignores both the Air District's environmental justice analysis and responses to comments on this issue. In addition, the entire substance of Petitioner's claim rests on Petitioner's arguments concerning the PM_{2.5} air quality impact analysis, which themselves have no merit. Thus, this claim is baseless.

Because Petitioner fails to demonstrate that any decision by the Air District was clearly erroneous or otherwise warrants Environmental Appeals Board ("Board") review, RCEC respectfully requests that the Board deny review of all issues raised in the Petition.

II. BACKGROUND

The Russell City Energy Center will be a 600-MW natural gas-fired, combined-cycle power plant in Hayward, California (the "Project"). The Project cannot commence construction without obtaining a federal PSD permit from the Air District, which issues PSD permits in its jurisdiction pursuant to a delegation agreement with the U.S. Environmental Protection Agency ("EPA"), Region 9. *See* U.S. EPA - Bay Area Air Quality Management District Agreement for

Delegation of Authority to Issue and Modify Prevention of Significant Deterioration Permits Subject to 40 CFR 52.21 (Feb. 4, 2008). The factual and procedural history of the Project up through mid-2008 is well known to the Board because the PSD proceedings were subject to two prior petitions for review (PSD Appeal Nos. 08-01 and 08-07). See *In re Russell City Energy Center*, PSD Appeal No. 08-01 (EAB, July 29, 2008); *In re Russell City Energy Center*, PSD Appeal No. 08-07 (EAB, Nov. 25, 2008) (Order Denying Review).

In the approximately 18 months since the Board remanded the Project's PSD permit to the Air District, the Air District completed PSD permit proceedings pursuant to 40 C.F.R. part 124 and the Board's July 29, 2008 Order. On December 8, 2008, the Air District issued a Draft PSD Permit for the Project. Exhibit 1, Statement of Basis for Draft Amended Federal "Prevention of Significant Deterioration" Permit (Dec. 8, 2008) ("Statement of Basis"). The Air District solicited public comments on the Draft PSD Permit and accompanying Statement of Basis and accepted written comments for nine weeks, until February 6, 2009. Exhibit 2, Letter from Brian Bateman, Director of Engineering, Bay Area Air Quality Management District, to Rick Thomas, Vice President of Development (Feb. 4, 2010) at 1 ("February 4, 2010 Letter"). The Air District also held a public hearing at the Hayward City Hall on January 21, 2009. *Id.* Based on the comments received during this first comment period and the Air District's additional review and analysis, the Air District issued a revised Draft PSD Permit and Additional Statement of Basis on August 3, 2009. Exhibit 3, Additional Statement of Basis, Draft Federal "Prevention of Significant Deterioration" Permit (Aug. 3, 2009) ("Additional Statement of Basis"). The Air District solicited public comments on the revised Draft PSD Permit and accompanying Additional Statement of Basis and accepted written comments for more than six weeks, until September 16, 2009. Exhibit 2, February 4, 2010 Letter, at 2. The Air District held a second public hearing at the Hayward City Hall on September 2, 2009. *Id.* Altogether, since the Board remanded the permit to the Air District, the Air District accepted additional public comments on the Draft PSD Permit for more than 15 weeks during two public comment periods, each with a public hearing conducted pursuant to EPA requirements.

On February 3, 2010, the Air District issued the Final PSD Permit for the Project. Exhibit 4, Prevention of Significant Deterioration Permit Issued Pursuant to the Requirements of 40 CFR § 52.21 (Feb. 3, 2010) (“Final PSD Permit”). It also issued a 235-page Responses to Public Comments that responds to comments received during both public comment periods. Exhibit 5, Responses to Public Comments, Federal “Prevention of Significant Deterioration” Permit (Feb. 2010) (“Responses to Public Comments”).

Petitions for review of the Final PSD Permit were filed by the following ten parties: (1) CalPilots (PSD Appeal No. 10-01); (2) Chabot-Las Positas Community College District (PSD Appeal No. 10-02); (3) Citizens Against Pollution (PSD Appeal No. 10-03); (4) Robert Sarvey (PSD Appeal No. 10-04); (5) CARE/Simpson (PSD Appeal No. 10-05); Juanita Gutierrez (PSD Appeal No. 10-06); (7) Karen D. Kramer (PSD Appeal No. 10-07); (8) Hayward Area Recreation and Park District (PSD Appeal No. 10-08); (9) Minane Jameson (PSD Appeal No. 10-09); and (10) Idojine J. Miller (PSD Appeal No. 10-10). For the reasons discussed below, the petition for review filed by Chabot-Las Positas Community College District (hereinafter, “Petitioner”) should be denied in its entirety at this time.

III. STANDARD OF REVIEW

The Board will grant review of a PSD permitting decision only if it involves a “finding of fact or conclusion of law which is clearly erroneous,” or “an exercise of discretion or an important policy consideration which the [Board] should, in its discretion, review.” 40 C.F.R. § 124.19(a)(1)-(2). The Board has noted repeatedly that its “power of review should be only sparingly exercised” and that “most permit conditions should be finally determined at the [permitting authority] level.” *In re Knauf Fiber Glass, GmbH*, 9 E.A.D. 1, 6-7 (EAB 2000) (“*Knauf II*”) (quoting 45 Fed. Reg. 33,290, 33,412 (May 19, 1980)).

In determining whether to grant review of a petition, the Board “first looks to whether the petition meets the threshold procedural requirements of the permit appeal regulations.” *Knauf II*, 9 E.A.D. at 5 (citing 40 C.F.R. § 124.19; *In re Sutter Power Plant*, 8 E.A.D. 680, 685 (EAB 1999)). The threshold procedural requirements include timeliness, standing, and preservation of

an issue for review. *Knauf II*, 9 E.A.D. at 5. The Board “strictly construes threshold procedural requirements, like the filing of a thorough, adequate, and timely petition.” *In re Town of Marshfield, Massachusetts*, NPDES Appeal No. 07-03, slip op. at 4 (EAB, Mar. 27, 2007) (Order Denying Review). Petitions for review “must meet a minimum standard of specificity.” U.S. Environmental Protection Agency, *The Environmental Appeals Board Practice Manual* 33 (June 2004) (“EAB Practice Manual”). Petitioners “must not only state their objections to a permit but must also explain why the permitting authority’s response to those objections (for example in a response to comments document) is clearly erroneous or otherwise warrants review.” *In re Indeck-Elwood, LLC*, PSD Appeal No. 03-04, slip op. at 87-88 (EAB, Sept. 27, 2006). To do so, “the petitioner must address the permit issuer’s responses to relevant comments made during the process of permit development; the petitioner may not simply reiterate comments made during the public comment period, but must substantively confront the permit issuer’s subsequent explanations.” *Id.* at 88. Failure by a petitioner to do so will result in a denial of review. *In re Zion Energy, L.L.C.*, 9 E.A.D. 701, 705 (EAB 2001).

For every issue raised, the petitioner bears the burden of demonstrating that review is warranted. *See* 40 C.F.R. § 124.19(a); *accord In re Steel Dynamics, Inc.*, 9 E.A.D. 740, 744 (EAB 2001). A petitioner seeking review of a technical issue bears an especially “heavy burden.” *In re Three Mountain Power, L.L.C.*, 10 E.A.D. 39, 50 (EAB 2001) (“[w]e generally accord deference to permitting agencies when technical issues are in play. As such, we assign a heavy burden to persons seeking review of issues that are quintessentially technical.”) (citations omitted).

IV. RESPONSE TO PETITIONER’S SPECIFIC ISSUES

A. The Air District’s PM_{2.5} Source Impact Analysis Was Proper

Petitioner’s first argument is that the Air District “clearly erred by not disclosing, plotting out and circulating for public review the modeling results for 24-hour PM_{2.5} at the achievable emissions rate of 9 lb/hr which results in a higher concentration level of 6.33 µg/m³, a level which [the Air District] admits would cause or contribute to the violation of the NAAQS under

the Clean Air Act.” Petition at 5. In support of this argument, Petitioner claims that the source impact analysis used an emissions rate that Petitioner contends is not achievable, even though it reflects the emissions limit imposed upon the facility by the final PSD permit (7.5 lb/hr PM_{2.5}). *Id.* at 26. Petitioner also contends that if Petitioner’s higher emissions rate (9 lb/hr PM_{2.5}) were used instead, the maximum concentration would have resulted in an exceedance of the 24-hour NAAQS, there would have been an additional 2,400 receptor locations where the maximum concentration exceeded the Air District’s specified significant impact level (“SIL”) of 1.2 micrograms per cubic meter (µg/m³) for the 24-hour NAAQS, and the area in which such impacts above the SIL were modeled would have extended out to 7.1 miles in radius from the site, rather than the 6 miles indicated by the Air District’s analysis. *Id.* Thus, Petitioner’s basic contention is that the Air District’s source impact analysis for PM_{2.5} erroneously concluded that the project would not cause or contribute to a violation of the 24-hour PM_{2.5} NAAQS. *Id.*

Petitioner’s allegations of error by the Air District have no merit. First, Petitioner fails to demonstrate any error in the Air District’s determination that the non-attainment designation obviated the need for any 24-hour impact analysis. To the extent that the Air District was required to demonstrate compliance with the annual PM_{2.5} standard, the Air District used an 8.1 km impact area, which was highly conservative given that the annual PM_{2.5} impacts above the SIL were not found more than approximately 450 meters from the project site. Second, the Air District thoroughly responded to comments on the PM_{2.5} impacts analysis and explained that Petitioner’s alleged discrepancies were due to Petitioner’s own selection of the wrong emissions rate. Third, Petitioner’s allegation that the Air District wrongly relied in its analyses upon the PSD permit’s emissions rate of 7.5 lb/hr PM_{2.5} was not preserved for appeal. Fourth, even if the 7.5 lb/hr issue had been preserved for appeal, it is without basis in EPA regulations or guidance.

1. Petitioner Fails To Demonstrate Any Error in the Air District’s Determination that the Non-Attainment Designation Obviated the Need for a 24-Hour Impact Analysis or in the Air District’s Use of a Conservative Impact Area

As the Air District explained upon publication of its PM_{2.5} source impact analysis in the

Additional Statement of Basis, a non-attainment designation would obviate the need to conduct a PM2.5 24-hour analysis as part of the PSD permit. Petitioner does not demonstrate any error in the Air District's conclusion. Moreover, Petitioner makes no allegation that the Air District erred in reaching its conclusion that the 8.1 km impact area used was highly conservative.

a. Petitioner Fails to Demonstrate Any Error in the Air District's Determination That the Non-Attainment Designation Obviated the Need for Any 24-Hour Impact Analysis

Petitioner does not demonstrate any error in the Air District's conclusion that the 24-hour PM2.5 standard no longer applied for purposes of PSD permitting and that the corresponding analysis was irrelevant for purposes of its permitting decision. While Petitioner expresses disagreement with this decision, suggesting instead that the Air District should have considered the 24-hour PM2.5 analysis regardless of the non-attainment designation, Petitioner provides no legal argument that would call into question the Air District's decision in this respect. *See* Petition at 30-32.

Furthermore, to the extent that Petitioner suggests that no permits should be issued for an area that is designated non-attainment, the Air District expressly responded to comments on this point, "disagree[ing] that no permits should be issued as a result of the fact that ambient air in the Bay Area is not in compliance with the PM2.5 NAAQS (24-hour)." Exhibit 5, Responses to Public Comments at 77 n.157. The Air District then went on to explain how the Clean Air Act's permitting programs are designed to address concerns about compliance with these standards through appropriate permit conditions and permitting analyses imposed under the Non-Attainment New Source Review ("NSR") permitting requirements. *See id.* The Air District further explained why RCEC was not subject to the Non-Attainment NSR permitting program requirements that would be implemented pursuant to 40 C.F.R. Part 51, Appendix S (because it is not a major stationary source of PM2.5 and/or PM2.5 precursors identified by Appendix S). *Id.* at 77-78. While Petitioner apparently finds these conclusions unsatisfactory, Petitioner identifies no error in the Air District's conclusions in this respect. *See* Petition at 32.

The Air District anticipated the effect of the non-attainment designation when it

published the Additional Statement of Basis, proposing two alternative approaches to PM_{2.5} permitting:

First, in the event that the non-attainment designation did not become effective, the facility would remain subject to PSD requirements. In that case, the Air District proposed issuing a PSD permit covering PM_{2.5}, along with the other PSD pollutants, based on the PSD analysis in the Additional Statement of Basis. Second, in the event that the non-attainment designation became effective before the final decision on permit issuance, the facility would cease to be subject to PSD requirements for PM_{2.5} (at least as they relate to the 24-hour standard) and would instead become subject to EPA's non-attainment NSR permitting requirements in 40 C.F.R. Part 51, Appendix S.

Exhibit 5, Responses to Public Comments at 77-78. Acknowledging that it was “this latter scenario that has come to pass as of the time of final permit issuance,” the Air District said it was “going ahead with the second proposed alternative in the final PSD permit.” *Id.* at 78.

The Air District also acknowledged that this scenario “present[ed] a further question . . . regarding whether the PSD permit must still satisfy PSD requirements for PM_{2.5} for the annual standard under the ‘split’ attainment designation.” *Id.* As explained by the Air District:

In the Additional Statement of Basis, the Air District proposed to address this “split” attainment designation by including PM_{2.5} issues in the PSD permit with respect to the annual standard, since the region is still “attainment/unclassifiable” for the annual standard and PSD requirements apply in areas that are attainment/unclassifiable for a particular standard. The Air District solicited further input and comment from the public about whether this is the correct approach, or whether Non-Attainment NSR permitting under Appendix S supersedes PSD permitting such that facilities would be subject only to Appendix S permitting PM_{2.5}. The Air District did not receive any further comments during the second comment period objecting to its proposed approach. Air District staff did obtain an oral opinion from staff from EPA Region IX stating an opinion that Appendix S permitting supersedes PSD permitting for PM_{2.5}, but Region IX staff were not able to point to any definitive analysis to support this opinion as of the time of final permit issuance. *The Air District is therefore conservatively assuming that PSD permitting for the annual standard remains in effect, at least until such time as it can be established that PSD permitting no longer applies for the annual standard in an area that has been designated as non-attainment for the 24-hour standard.*

Id. (emphasis added).

b. The Air District’s Conservative Approach of Assuming That It Still Needed to Demonstrate Compliance with the Annual PM2.5 Standard Prior to Issuance of the Permit Provides No Basis for Review

The Air District conservatively assumed that PSD permitting continues to apply to PM2.5, at least with respect to the annual standard and, accordingly, issued the PSD permit with limits on PM2.5. *Id.* Although RCEC did not disagree with the Air District’s approach because EPA guidance to date has not definitively addressed how to deal with such a “split” attainment designation, a strong argument can be made that, since the non-attainment designation became effective prior to issuance of the final PSD permit, PM2.5 is no longer subject to PSD permitting. *See infra.* If this is the case, no demonstration of compliance with either the annual or 24-hour PM2.5 NAAQS was required by the Clean Air Act or PSD regulations. Nevertheless, because the Air District conducted an appropriate PM2.5 air quality impacts analysis, any question in this respect is immaterial to the permit decision.

Neither Petitioner, nor anyone else, argued during the public comment period that the 8.1 km impact area was inappropriate to use for purposes of demonstrating compliance with the annual PM2.5 NAAQS. *Id.* at 160. Rather, according to the Air District, “an 8.1 km impact area was actually very highly conservative for the annual analysis given that annual impacts above the SIL were not found more than approximately 450 meters from the project site.” *Id.*

c. EPA’s PSD Rules Strongly Suggest That PM2.5 Is No Longer Subject to PSD Permitting Due to the Effect of the Non-Attainment Designation

According to EPA’s PSD rules, “[t]he requirements of paragraphs (j) through (r) of this section shall not apply to a major stationary source or major modification with respect to a particular pollutant if the owner or operator demonstrates that, as to that pollutant, the source or modification is located in an area designated as non-attainment under section 107 of the Act.” 40 C.F.R. § 52.21(i)(2). The referenced paragraphs (j) through (r) include all the substantive

requirements of PSD permitting.¹

Thus, the plain language of EPA's PSD regulations provides that "[t]he requirements of paragraphs (j) through (r) of this section shall not apply to a major stationary source or major modification with respect to *a particular pollutant* if the owner or operator demonstrates that, *as to that pollutant*, the source or modification is located in an area designated as non-attainment." 40 C.F.R. § 52.21(i)(2) (emphasis added). It is undisputed that the Bay Area has been designated non-attainment for the 24-hour PM_{2.5} standard and that this designation became effective on December 14, 2009. *See* Final Rule, Air Quality Designations for the 2005 24-Hour Fine Particulate (PM_{2.5}) National Ambient Air Quality Standards, 74 Fed. Reg. 58,688 (Nov. 13, 2009). As a consequence, according to the plain language of the regulations, no demonstration of compliance should be required at all with respect to PM_{2.5}.

Had the language of the PSD regulations provided that the relevant requirements no longer applied with respect to a particular *standard*, rather than "a particular pollutant," once an area was designated non-attainment for that standard, then it would be clearer that PSD requirements continue to apply for purposes of the annual PM_{2.5} standard, notwithstanding the effective date of the 24-hour standard's non-attainment designation for the Bay Area. However, given that the PSD regulations provide that applicability is determined "*as to that pollutant*" (40 C.F.R. § 52.21(i)(2) (emphasis added)), there is a strong case to be made that PSD permitting no

¹ Under paragraph (k), an applicant must conduct a "source impact analysis," which demonstrates that "allowable emission increases from the proposed source or modification in conjunction with all other applicable emissions increases or reductions (including secondary emissions), would not cause or contribute to air pollution in violation of: (1) Any NAAQS in any air quality control region; or (2) Any applicable maximum allowable increase over the baseline concentration in any area." 40 C.F.R. § 52.21(k). The first subparagraph is intended to assure that the source's emissions will not cause a violation of the NAAQS, which, in this case, consist of the 24-hour and annual PM_{2.5} standards of 35 µg/m³ and 15 µg/m³, respectively. The second subparagraph is the "increment consumption analysis", which assures that, in those locations currently meeting the federal NAAQS (*i.e.*, those deemed "attainment" or "unclassifiable"), the concentration of a given pollutant cannot increase by an amount greater than the "maximum allowable increase" specified by the Clean Air Act and/or the PSD regulations.

longer applies to PM_{2.5} due to the non-attainment designation. As a consequence, all of Petitioner's arguments concerning the PM_{2.5} source impact analysis may be moot.

Nevertheless, the Air District's conservative decision to proceed with issuance of the PSD permit with respect to the annual PM_{2.5} standard reflects no error on the part of the Air District and provides no basis for review by the Board. The Air District performed an adequate air quality impacts analysis with respect to both the annual and 24-hour PM_{2.5} standards and Petitioner has demonstrated no error in the Air District's analysis or conclusions, as described below.

2. The Air District Thoroughly Responded to Comments on the PM_{2.5} Impacts Analysis and Explained That Petitioner's Alleged Discrepancies Were Due to Petitioner's Own Selection of the Wrong Emissions Rate

Petitioner contends that if Petitioner's higher emissions rate (9.0 lb/hr) is used, the maximum concentration would have resulted in an exceedance of the 24-hour NAAQS, there would have been an additional 2,400 receptor locations where the maximum concentration exceeded the Air District's specified significant impact level SIL of 1.2 µg/m³ for the 24-hour NAAQS, and the area in which such impacts above the SIL were modeled would have extended out to 7.1 miles in radius from the site, rather than the 6 miles indicated by the Air District's analysis. Petition at 26.

In its Responses to Public Comments, the Air District noted comments on these same issues concerning Petitioner's independent modeling analysis, which allegedly produced an impact area for the PM_{2.5} 24-hour impacts that extended out to 11.45 kilometers (km), as opposed to the 8.1 km that the Air District used in its analysis, and resulted in 8,424 receptors above the SIL, as opposed to the 6,019 locations calculated by the Air District. Exhibit 5, Responses to Public Comments at 159-60. According to the Air District, "[t]hese commenters opined that the difference between the outcomes was because the commenters used EPA's AERMOD program whereas the District used a commercial version of the program." *Id.* at 160. According to the Air District, the commenters had based these comments upon records they

construed as indicating that the Air District's modeling files were generated using "BEE-Line Software," which the commenters alleged was a proprietary model not authorized by EPA's Modeling Guideline (Appendix W). *Id.*

Regardless that the Air District's 24-hour PM_{2.5} impacts analysis was rendered moot by the non-attainment designation, "[t]he Air District nevertheless respond[ed] on the substantive issue raised by these comments in order to provide full information to the public and to assure interested parties that the Air District used the correct approach for a PSD permit analysis." *Id.* According to the Air District, the alleged discrepancies between Petitioner's and the Air District's modeling results concerning the number of locations where modeled emissions exceeded the SIL and the size of the impact area were due to Petitioner's reliance on the wrong emissions rate and not to any impropriety in the modeling software used by either the Air District or the applicant:

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 difference in the modeling inputs or methods.

Id.

Regarding Petitioner's contention that these discrepancies were due to use of proprietary version of EPA's model software, the Air District responded as follows:

With respect to the modeling program used, the Air District disagrees that it used a proprietary commercial version of the AERMOD software. To the contrary, the Air District used the same publicly available AERMOD program that the commenters apparently did. The reference to the proprietary "BEE-Line

Software” relates to graphical user interface software that makes it easier to input the modeling data that will be used in the AERMOD analysis. This software takes the input information and then organizes it into a format that can be used in the AERMOD program. The actual dispersion model itself that the Air District used, along with the AEMOD input and output files, are based upon the publicly available software. The only additional software that the Air District used was the graphical user interface on the front end to help streamline data inputting. (Note also that the applicant did not use any third-party input programs for the modeling analysis that it provided.) *For these reasons, the Air District disagrees with these comments that the District would get different results if it used a different modeling program. The Air District used the same publicly-available AERMOD program as the commenters did, and the discrepancy in the commenters’ results comes from the fact that they used incorrect inputs, not because they used a different modeling program.* But again, the issue is now moot with respect to the Air District’s decision to issue the permit because the 24-hour analysis is no longer part of the PSD permit requirements.

Id. at 160-61 (emphasis added).

Petitioner alleges no error in any of the foregoing conclusions. In fact, the Petition expressly notes that Petitioner did not apply the same inputs as the modeling analysis that the Air District relied upon in issuing the PSD permit:

Specifically noted by the College District was that it utilized the emissions rate of ___ reflected on the modeling file received from BAAQMD on September 1, 2009, not ___, which was identified on the July 2009 Summary of Impact Analysis which RCEC’s counsel forwarded.

Petition at 14 n.7 (underlined blanks (“___”) in original). Petitioner’s earlier comments had also filled in these “blanks” in its Petition, revealing that it had relied upon the wrong emissions rate: “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 [Source Impact Analysis] Report.” Exhibit 8, Letter from Jewell J. Hargleroad to Weyman Lee (Sept. 16, 2009) at 6 n.3 (“Chabot Comments 9/16/2009”). Thus, without evincing any awareness or understanding that the higher rate – 1.134 g/s – corresponded to the 9 lb/hr emissions limit proposed by the December 2008 version of the draft permit or that the lower emissions rate appearing with RCEC’s analysis – 0.945 g/s – corresponded to the 7.5 lb/hr emissions limit proposed by the August 2009 version of the draft permit, Petitioner selected the higher rate. According to an email exchange between the Air District and Petitioner’s legal counsel, Petitioner’s legal counsel accidentally reviewed files

contained in the wrong folder of a compact disc (“CD”) pertaining to the older, higher emissions rate, when she should have instead been looking for the PM2.5 modeling results in another folder.² RCEC cannot confirm or deny whether any particular modeling files were on the CD received by Petitioner’s legal counsel.

Regardless, Petitioner’s allegation that the Air District “fail[ed] to disclose the modeling results applying [the higher emissions rate]” (Petition at 27) is without any merit. Indeed, Petitioner makes no claim that its legal counsel did not actually receive a copy of the modeling results on the CD provided by the Air District. *See supra* n.2. Further, the modeling files apparently relied upon by Petitioner clearly indicated that they were prepared well before the analysis that supported the August 2009 version of the draft permit: Petitioner’s own comments on the alleged impropriety of using proprietary software noted that the modeling runs it had received from the Air District bore an “Input File Creation Date [of]: **4/30/2009** Time: 11:37:47 AM”. Exhibit 8, Chabot Comments 9/16/2009 at 6 (emphasis added). Thus, with no technical rationale for doing so, Petitioner apparently disregarded the inputs reported within RCEC’s modeling report, which was published by the Air District along with the Additional Statement of Basis, and instead relied upon the outdated modeling file accidentally copied onto a compact disc for Petitioner’s legal counsel. *See supra* n.2. Moreover, while Petitioner insinuates that the Air District wrongfully failed to disclose the results of the earlier modeling runs using the higher emissions rate, Petitioner cannot claim that it did not actually receive those results; hence, its suggestion that the Air District was seeking to keep these results from the public is wholly

² Exhibit 26, Email to Kevin Poloncarz from Gregory Darwin, Atmospheric Dynamics, Feb. 22, 2010, Subject: FW: Request for Records Relied On: RCEC applica. 15487, at 3, email from Alexander Crockett to Jewell Hargleroad, Feb. 19, 2010 (2:53 PM) (explaining that the Air District’s modeler “believed that you were looking under a folder on the CD entitled ‘NO2, CO, and PM10’ where there were some previous PM2.5 runs made using the higher emissions rate... [and] that the final runs for PM2.5, using the revised emission rate, are contained in the first main folder labeled ‘PM25’ with a date of 10/29/09”). Petitioner’s legal counsel alleged that the CD did not contain such a folder. Exhibit 26 at 3, Email from Jewell Hargleroad to Alexander Crockett, Feb. 19, 2010 (3:26 PM) (“this confirms that the CD we received does not contain a folder labeled ‘PM25’ with a date of 10/29/09.”).

lacking in credibility.

3. Petitioner's Allegation That the Air District Wrongly Relied upon the PSD Permit's Emissions Limit of 7.5 lb/hr PM_{2.5} Was Not Preserved for Appeal

Apparently dissatisfied with the Air District's explanation concerning Petitioner's selection of the wrong emissions rate, Petitioner now contends that use of an emissions rate equivalent to the PSD permit's emissions limit of 7.5 lb/hr was wrongful and departs from EPA guidance, which allegedly requires such modeling to be based upon "worst case" emissions. Petition at 27-29. In support of this contention, Petitioner relies upon comments submitted after the close of the comment period by other power plant owners and operators, who had argued that the lower limit of 7.5 lb/hr is not achievable. *Id.* at 28. Based on these comments, Petitioner claims that a higher limit of at least 9 lb/hr should have been both established by the permit and used in the source impact analysis. *Id.* at 27-29.

The 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. According to EPA's regulations concerning permit appeals, "[a]ll persons, including applicants, who believe any condition of a draft permit is inappropriate . . . must raise all reasonably ascertainable issues and submit all reasonably available arguments supporting their position by the close of the public comment period (including any public hearing) under § 124.10." 40 C.F.R. § 124.13. Further, to meet the minimum pleading requirements of the Board, "[t]he petition shall include a statement of the reasons supporting that review, including a demonstration that any issues being raised were raised during the public comment period (including any public hearing) to the extent required by these regulations" 40 C.F.R. § 124.19(a). Board precedent is clear that comments must be raised with sufficient specificity to be preserved for appeal. *See In re Rockgen Energy Center*, 8 E.A.D. 536, 540-45 (EAB 1999) (general comments raising various catalysts for consideration insufficient to preserve issue of selection of dry low-NO_x technology over selective catalytic reduction technology for appeal); *Sutter*, 8 E.A.D. at 691 (rejecting issue where earlier comments did not fairly raise the issue

advanced on appeal); *In re ConocoPhillips Co.*, PSD Appeal No. 07-02, slip op. at 46 (EAB, June 2, 2008) (extensive comments concerning greenhouse gas emissions did not reflect the requisite level of specificity required to properly preserve the issue of whether BACT for carbon dioxide and methane was required).

a. Petitioner's Comments About Its Use of a Higher Emissions Rate (1.134 g/s PM2.5) Do Not Preserve the Issue

In its comments, Petitioner indicated that it had used a higher emissions rate of 1.134 g/s PM2.5 in obtaining its own modeling results. *See* September 16, 2009 Comments Letter at 6 n.3. Petitioner never made any contention, however, that the Air District's analysis must rely on the corresponding emissions rate of 9 lb/hr. In fact, Petitioner's earlier comments evince no awareness or understanding that the higher emissions rate of 1.134 g/s it took from superseded modeling files corresponded with the 9 lb/hr emissions limit proposed by the December 2008 version of the permit. Neither Petitioner, nor anyone else, made any contention, as Petitioner now makes, that use of the 7.5 lb/hr emissions rate was not appropriate for purposes of the air quality impacts analysis. Neither Petitioner, nor anyone else, previously contended that the use of the lower emissions rate equivalent to the proposed limit of 7.5 lb/hr did not represent the worst case emissions for use in modeling.

Because 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 for appeal and cannot be raised at this time.

b. Petitioner's Allegation That 7.5 lb/hr PM2.5 Represents Too Low of an Emissions Rate Contradicts Its Earlier Argument that Such an Emissions Rate Was Not Low Enough to Meet BACT

Regarding Petitioner's allegation that 7.5 lb/hr is too low to constitute an achievable emissions limit, the Air District received a comment from Petitioner's legal counsel after the close of the public comment period, wherein Petitioner argued *just the opposite*: Petitioner alleged that the draft PSD permit's proposed limit of 7.5 lb/hr for both particulate matter less than 10 microns in diameter ("PM10") and PM2.5 was not low enough and that a lower

emissions limit should be imposed instead. Exhibit 9, Letter from Jewell J. Hargleroad to Weyman Lee (Sept. 25, 2009) at 2 (“Chabot Comments 9/25/2009”). Although this comment was not submitted during the public comment period, the Air District described and responded to Petitioner’s comment as follows:

The Air District also received a communication after the close of the comment period stating that the Blythe facility has a lower PM₁₀ limit and that the Russell City limit should also be lower. Since this communication was not received during the comment period, it does not constitute a formal public comment and the Air District is therefore not obligated to respond to it. . The Air District has nevertheless reviewed the Blythe permit, which has a 6 lb/hr limit. The Air District notes, however, that the turbines at the Blythe facility are smaller than the Russell City turbines, and when size it taken into account the Russell City limit is effectively the same as the Blythe limit. The Blythe turbines are Siemens V84.3A combustion turbines rated at 1776 MMBtu/hr each. Russell City, but [sic] contrast, will have a capacity of 2238.6 MMBtu/hr per turbine/HRSG train. . . . When this size differential is taken into account, both of these permit limits allow for the emission of 0.003 pounds of PM per MMBtu of fuel consumed. Moreover, it appears that the 6.0 lb/hr limit was intended to apply as a 3-hour average, based on the CEC’s analysis. Emissions in pounds per hour were estimated at between 6.4 and 7.6. (See CEC Final Staff Assessment, Air Quality Table 6, p. 4.1-17, available at www.energy.ca.gov/2005publications/CEC-700-2005-007/CEC-700-2005-007.PDF.) The Air District therefore disagrees that the Blythe facility would provide a basis on which to impose a lower BACT limit for particulate matter. In addition, 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.

Exhibit 5, Responses to Public Comments at 84-85 n.173.

Petitioner raises no allegation that the Air District erred in this conclusion, but instead now seeks to claim that the 7.5 lb/hr level is not achievable because it is *too low*. As a consequence, Petitioner now claims that the final limit cannot be relied upon for purposes of the NAAQS compliance demonstration. According to Petitioner, the NAAQS compliance demonstration must be based on an emissions rate no lower than the vendor-guaranteed rate of 9 lb/hr PM₁₀/PM_{2.5} and as high as 10.65 lb/hr, which was the highest source test result considered by the Air District in selecting 7.5 lb/hr as the BACT limit. See Petition at 30, 32 (“[s]uch a construction is clearly erroneous and this permit must be remanded back to BAAQMD for it to

publish and disclose the air impact results for PM_{2.5} 24 hour utilizing the recognized achievable emissions rate of 9 lbs/hour, as well as the *worst case* emissions rate of 10.65 lbs/hour, and apply the results to the applicable federal regulations.”) (emphasis in original). As discussed above, these allegations were never previously raised by anyone and therefore were not preserved for appeal.

4. Even if the 7.5 lb/hr PM_{2.5} Issue Had Been Preserved for Appeal, It Is Without Basis in EPA Regulations or Guidance

Even if Petitioner’s allegation that 7.5 lb/hr was not an appropriate emissions rate for use in the air quality impacts analysis had been preserved for appeal, it is meritless and without any basis in law or regulation.

a. The Air District Clearly Justified Its Rationale for Proposing a Lower Limit of 7.5 lbs/hr PM_{2.5} in the Additional Statement of Basis

The Air District’s analysis clearly justified the basis for imposing an emissions rate lower than the 9 lbs/hr emissions limit proposed by the December 2008 version of the draft permit, as summarized in the Responses to Public Comments:

The Air District nevertheless reviewed the proposed limits of its own volition after the first comment period ended and determined that lower limits would be appropriate. As explained in the Additional Statement of Basis, based on further review of additional information, the Air District determined that a revised limit on Particulate Matter emissions from each gas turbine and heat recovery boiler train of 7.5 lb/hr would be appropriate. This emissions limit would include all filterable and condensable particulate emissions (*i.e.*, “front” and “back” half, respectively). This revised limit was based on a review of additional source testing data from a number of similar combined-cycle facilities, which showed average particulate emissions of 4.58 lb/hr, with a high of 10.65 lb/hr. The Air District concluded that some of the higher test results may be attributed to anomalies in the testing and analytical methods, the influence of which may be mitigated by application of more rigorous quality assurance/quality control (“QA/QC”) by the testing contractor or analytical laboratory. The Air District therefore concluded that it would not be appropriate to establish a compliance margin that would accommodate these high test results. Instead, the Air District discounted the highest 5% of the test results (4 of the 73), and concluded that a permit limit based on the remaining 95% would provide an appropriate compliance margin. This approach yields a permit limit of 7.5 lb/hr. The Air District also reviewed available permits for other similar facilities and did not find

any lower permit limits. For these reasons, the Air District concluded that the appropriate BACT limit for PM₁₀/PM_{2.5} for each gas turbine/heat recovery boiler train should be 7.5 lb/hr. The Air District also revised its proposed conditions for the daily and annual Particulate Matter limits accordingly.

Exhibit 5, Responses to Public Comments at 83-84 (footnote omitted).

b. Petitioner's Contention That the Air District Erred in Imposing a Limit Lower Than the 9 lb/hr Rate That Vendors Are Willing to Guarantee Lacks Merit

Although Petitioner had previously argued in favor of a lower limit than 7.5 lb/hr PM_{2.5}, Petitioner now contends that even 7.5 lb/hr is not achievable and that the Air District's air quality impacts analysis must be based on the maximum source test result reviewed by the Air District as the basis for this limit (10.65 lb/hr) or the level that vendors are reportedly willing to guarantee (9 lb/hr). Petition at 27-29.

There is simply no merit to Petitioner's contention that 7.5 lb/hr does not constitute an appropriate emissions limit because it is not backed by a vendor guarantee. As EPA's New Source Review Workshop Manual provides, a vendor guarantee is only one piece of information relevant to what is achievable. *See* New Source Review Workshop Manual: Prevention of Significant Deterioration and Nonattainment Area Permitting, Draft 1990 ("Draft NSR Workshop Manual"), at B.20 ("EPA does not consider a vendor guarantee alone to be sufficient justification that a control option will work. Conversely, lack of a vendor guarantee by itself does not present sufficient justification that a control option or an emissions limit is technically feasible."); *see also In re Newmont Nevada Energy Investment, LLC, TS Power Plant*, 12 E.A.D. 429, 445 (EAB 2005) ("a BACT limit is not based on a guarantee, but rather upon various sources of data including manufacturer's data, engineering estimates, and the experience of other sources").

Thus, Petitioner's contention that the Air District erred in imposing a limit lower than the 9 lb/hr rate that vendors are willing to guarantee is without any basis in EPA regulations or guidance.

c. Petitioner’s Contention That the Air District Erred in Imposing a Limit Lower Than the Highest Source Test Result from Existing Facilities Lacks Merit

Similarly, there is no merit to Petitioner’s suggestion that test results from existing facilities reporting emissions higher than 7.5 lb/hr demonstrate that such an emissions limit is not achievable. Petition at 27-29.

The Air District responded to late-filed comments from other power plant owners and operators who “questioned whether a limit of 7.5 pounds per hour would be achievable over all operating scenarios.” Exhibit 5, Responses to Public Comments at 86. In its response, the Air District expressly acknowledged “that equipment manufacturers will not guarantee emissions below 9.0 pounds per hour,” but noted that “the presence or absence of a vendor guarantee is not by itself determinative” of BACT. *Id.* The Air District also disagreed with the power plant owner/operators who had argued that the small percentage of test results that exceeded the proposed BACT limit of 7.5 lb/hr – 5% – “necessarily means that a 7.5 pound-per-hour limit cannot be found to be achievable for purposes of BACT.” *Id.* Ultimately, the Air District decided that it “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” because “[t]he project applicant has agreed to accept a permit limit of 7.5 pounds per hour, and that limit meets or exceeds BACT.” *Id.*

Petitioner raises no evidence or allegation that would call into question the Air District’s rejection of the highest 5% of source test results as an appropriate BACT limit or its determination that some of the highest results “may be attributed to anomalies in the testing analytical methods, the influence of which may be mitigated by application of more rigorous quality assurance/quality control (“QA/QC”) by the testing contractor or analytical laboratory.” *Id.* at 83-84. Accordingly, Petitioner’s allegations fall far short of the heavy burden that a petitioner bears in challenging a permitting agency’s technical determinations. *See Three Mountain Power*, 10 E.A.D. at 50 (“[w]e generally accord deference to permitting agencies when technical issues are in play. As such, we assign a heavy burden to persons seeking review of

issues that are quintessentially technical.”) (citations omitted).

The Air District also responded to comments that had argued that the Air District’s reliance upon source test data from existing facilities was a poor indicator of what could be achieved by new facilities and that the Air District had not adequately justified why no lower limit than 7.5 lb/hr constituted BACT. *See* Exhibit 5, Responses to Public Comments at 85. The Air District responded to these comments as follows:

Particulate matter emissions from gas turbines vary considerably, based on a number of factors including the levels of sulfur and particulates in the natural gas the turbines burn and the amount of particulates entrained in the combustion air. Moreover, source test results can also vary considerably from test to test, in part because the standard test method, EPA Method 201A/202, was designed to measure higher particulate levels than are emitted by gas turbines. This high degree of variability among particulate matter emissions is evident from the test results the Air District reviewed. (*See* discussion in Additional Statement of Basis at pp. 51-52 and fn. 98.) The BACT limit must be established at a level that can accommodate this variability so that it is achievable by the facility. The Air District therefore established the proposed BACT limit at 7.5 lb/hr as the most stringent emissions rate that will actually be achievable, consistent with the BACT requirement. The Air District disagrees with the comments that this is an inappropriate method for establishing a BACT limit, and in particular disagrees that the limit must be set at the lowest emissions rate ever seen in a test result, or at the average emissions rate seen in a group of test results. To the contrary, the BACT limit must be established at a level that can accommodate all reasonably foreseeable operating and testing scenarios, and the Air District’s PM limit does that based on all available evidence. The Air District also disagrees that it has not adequately explained how it arrived at the 7.5 lb/hr BACT limit, as the discussion in the Additional Statement of Basis, as expanded upon herein, clearly explains the source test results the Air District reviewed and the way the Air District used the 95th percentile level as a way to arrive at a BACT limit that the most stringent that will be achievable by the facility.

The Air District also disagrees with the comments that it should not rely on test results from existing facilities. Test results from facilities that are built and actually operating are an appropriate means to establish the emissions rate that current technology can achieve. Obviously, if there are indications that new technology that is available but has not actually been built and operated yet can achieve even lower emissions, that information would support imposing an even more stringent limit that what is achievable by facilities that have been built and are actually operating. But the comments did not provide any information about any such new technologies, and the Air District is not aware of any. The Air District therefore concludes that the emissions rates achieved by existing sources

that the Air District reviewed are an appropriate basis for establishing the BACT limit.

Id. Petitioner makes no contention that would call into question the Air District's conclusions in this respect.

d. Petitioner's Argument that the Air District Cannot Rely on the PSD Permit Limit in Its Air Quality Impacts Analysis Lacks Merit

Petitioner argues that “[h]owever, rather than examining the results of the worst case emissions of 10.65lbs/hour as required as a matter of law, under the permit proposed attempting to adopt 7.5 lbs/hour, *supra*, instead BAAQMD bases its air quality analysis published to the public on the ‘best case’ emission rate” Petition at 29. Petitioner's argument that federally enforceable permit limit of 7.5 lb/hr provides an inappropriate basis for the air quality impacts analysis is without any basis in law or regulation.

Petitioner seeks to argue that the “worst case” emissions for purposes of such analyses must be equivalent, not to the maximum federally enforceable permitted emissions limit, but to some higher level. Such a contention is clearly erroneous and has no basis whatsoever in regulation or guidance. Indeed, the EPA guidance that Petitioner cites in support of its contention actually proves otherwise:

For both NAAQS and PSD increment compliance demonstrations, the *emissions rate* for the proposed new source or modification must reflect the maximum allowable operation conditions as expressed by the federally enforceable *emissions limit, operating level, and operating factor* for each applicable pollutant and averaging time.

Petition at 30 (citing to NSR Workshop Manual at C 45) (emphasis in both original and Petition).

Petitioner makes no contention that 7.5 lb/hr does not constitute a federally enforceable emissions limit; nor does Petitioner argue that 7.5 lb/hr does not apply to the facility across all operating scenarios and under all operating conditions. Rather, Petitioner reverses course from its earlier position that a lower level than 7.5 lb/hr should be required and now seeks to argue that 7.5 lb/hr is not, in fact, an achievable limit. However, as explained above, the Air District clearly justified why a lower limit than 9.0 lb/hr was achievable based on source test data and

why the higher test results did not provide an appropriate basis for a BACT limit. Petitioner has identified no error in the Air District's determination in this respect.

Further there simply is no basis in EPA regulations or guidance for arguing that the maximum permitted emissions do not provide an appropriate basis for determining compliance with ambient air standards. Rather, EPA's Guideline on Air Quality Models, 40 C.F.R. Part 51, Appendix W ("Modeling Guideline") expressly requires that "NAAQS compliance demonstrations in a PSD analysis should follow the emission input data shown in Table 8-2" (Modeling Guideline at 8.1.2.i), which, for compliance with short-term limits, includes "[m]aximum allowable emission limit or federally enforceable permit limit." Modeling Guideline, Table 8-2, "Point Source Model Emission Input Data for NAAQS Compliance in PSD Demonstrations." Again, Petitioner makes no claim that 7.5 lb/hr does not constitute the applicable emissions limit that applies to all operating conditions.

e. Petitioner Fails to Demonstrate That the Federally Enforceable Limit Does Not Reflect the Worst-Case Emissions from the Proposed Facility

The Air District correctly modeled "worst case" emissions, according to EPA guidance and Board precedent. Petitioner clearly misconstrues the Board decision cited in its Petition: *In re Northern Michigan University*, PSD Appeal No. 08-02, (EAB, Feb. 18, 2009). *See* Petition at 29. In that decision, the Board stated that "the *emissions rate* for the proposed new source . . . must reflect the maximum allowable operating conditions as expressed by the federally enforceable *emissions limit, operating level, and operating factor* for each applicable pollutant and averaging time. The applicant should base the emissions rates on the results of the BACT analysis * * *." *Northern Michigan*, slip op. at 49 (emphasis in original). The Air District used 7.5 lbs/hour for its calculation, which is the maximum allowable emissions under all operating conditions provided by the federally enforceable limit in the PSD permit.

In essence, Petitioner attempts to transform the error it made in its own modeling analysis – use of the 9.0 lb/hr PM_{2.5} limit proposed by the December 2008 version of the permit, rather than the 7.5 lb/hr limit proposed by the August 2009 version of the permit – into a substantive

legal argument. But that argument – that the federally enforceable emissions limit established by the proposed permit cannot provide the basis for the air quality impacts analysis – lacks any merit. Petitioner’s attempt to suggest that the Air District somehow acted in a manner contrary to EPA guidance or policy by not publishing modeling runs based on the higher limit is unconvincing. There simply is no basis in EPA rules or guidance that would require an agency to include as part of its analysis modeling runs that assumed a limit higher than the maximum emissions rate allowed under the permit. Further, Petitioner’s insinuation that the Air District kept information concerning such modeling runs from public view is belied by the fact that Petitioner’s legal counsel received copies of these earlier modeling runs on compact discs obtained from the Air District.

In sum, Petitioner’s arguments concerning the emissions rate used in the air quality impacts analysis fail to identify any error in the Air District’s analysis or in the conditions of the PSD permit that would warrant review. For all the reasons discussed above, the Board should deny review of Petitioner’s first issue.

B. The Air District Correctly Modeled Roadway Emissions

Petitioner’s second contention is that the Air District “clearly erred by excluding from its modeling *all roadway emissions but one* as those excluded nearby roadway emissions already have been identified as causing significant concentration gradients within the acknowledged significantly impacted area, and generally are recognized by [the Air District] as a contributing factor for the cause of increased health problems experienced in the community.” Petition at 5. According to the Petitioner, communities already burdened by disproportionate amounts of pollution are located near other roadways, including Interstate 880 and Hesperian Boulevard. *Id.* at 33. Petitioner claims that, “[a]stoundingly . . . **without any explanation at all nor citation to any supporting documents, BAAQMD ignores the emissions contributed by these nearby roadways which already are recognized as posing a significant concentration gradient.**” *Id.* (emphasis in original). Petitioner then asserts that the Air District’s “explanation for excluding all other roadways within an entire six mile radius, which include several carrying two to three

times more vehicle and truck traffic as Highway 92,” is without any basis, except for what Petitioner calls a “gratuitous[]” citation to the applicant’s source impact analysis report and a memorandum from the applicant’s representative. *Id.* at 34, 34 n.13. For the reasons discussed below, none of these arguments have merit.

1. Petitioner’s Claim That No Cumulative Impacts Analysis Has Been Performed for PM_{2.5} Is Without Any Merit

Petitioner fails to identify any error in the Air District’s air quality impacts analysis, as presented in the Additional Statement of Basis and Responses to Public Comments. Contrary to Petitioner’s allegation that the Air District’s analysis is unsupported by the record, the Responses to Public Comments contain more than twenty single-spaced pages of detailed discussion and explanation specifically with respect to the Air District’s PM_{2.5} impacts analysis, with more than fifteen additional pages addressing issues more generally pertaining to the air quality impacts analyses. *See* Exhibit 5, Responses to Public Comments at 132-69. Specifically on the subject of its cumulative PM_{2.5} analysis, the Air District provided the following explanation:

To conduct the full impact analysis, the Air District identified an “impact area” for further analysis, which is a circular area around the facility location with a radius out to the farthest point at which an impact was modeled above a SIL. The farthest location with an impact above any SIL was located 8.1 km from the facility, at which there was a modeled impact above the 24-hour SIL of 1.2 µg/m³. In accordance with EPA policy, the Air District then established a circular “impact area” with a radius of 8.1 km around the facility location in order to conduct a full impact analysis. The Air District then considered the cumulative impact of the facility’s emissions, background ambient air concentrations, and emissions from other nearby sources on receptors located within this impact area. The facility’s contribution was based on modeling using the facility’s emissions, and the background contribution was based on the Fremont-Chapel Way monitoring data as discussed above. For the contribution from other nearby sources, the Air District undertook a search of its database of PM_{2.5} sources within a radius of 6 miles (9.7 km) around the facility location that have been permitted since January 1, 2007, and located a total of 29 such sources (including 21 backup diesel generators). The Air District also evaluated non-point sources within this area that could cause a significant concentration gradient at any of the areas where the facility’s impact was above the SIL. The Air District identified a portion of Highway 92 that is located approximately 1 km south of the facility as such a non-point source, and included it in the analysis. The cumulative impact from all of these contributions (the facility, the 29 point sources, and Highway 92) was

then modeled for each receptor location within the impact area where the facility's impact was above the SIL.

Based on this cumulative analysis, the District evaluated whether the highest 98th percentile (highest 8th high) PM_{2.5} ambient air concentrations would be above the NAAQS at any receptor location. This analysis found that the maximum total combined annual-average ambient air concentration that would occur at any location would be 10.56 µg/m³, which is well below the annual NAAQS standard of 15 µg/m³. The proposed project therefore satisfies the Section 52.21(k) NAAQS compliance requirements for the annual PM_{2.5} standard. The facility will not cause or contribute to a violation of the annual PM_{2.5} NAAQS.

As noted above, the District's analysis also evaluated 24-hour impacts, even though 24-hour impacts are no longer part of the PSD analysis. The District summarizes the results here as well for purposes of providing the public with additional information, since several commenters discussed the results in their comments. As with the annual analysis, the 24-hour analysis evaluated whether the highest 98th percentile (highest 8th high) PM_{2.5} ambient air concentrations would be above the NAAQS at any receptor location where the project's contribution would be above the 1.2 µg/m³ SIL. This evaluation examined whether the modeled concentration from the proposed facility plus other modeled sources would be above 6.0 µg/m³ at any such receptor location, because the background level is 29.0 µg/m³, meaning a further increase above 6.0 µg/m³ would exceed the 24-hour NAAQS of 35 µg/m³. The analysis concluded that there would not be any locations where both the project's contribution would be above 1.2 µg/m³ and the total contribution from the project plus the other modeled sources would be above 6.0 µg/m³. The analysis did find some locations where the total contribution from all modeled sources was over 6.0 µg/m³. For example, the highest 98th percentile modeled concentration from these sources was 11.27 µg/m³. But in each of these situations, the project's contribution at that location was well below the SIL, meaning that the project would not be causing or contributing to any NAAQS violation within the meaning of Section 52.21(k). Similarly, the analysis found some locations where the project's contribution was above the SIL, but in each of these situations the total contribution from all modeled sources was below 6.0 µg/m³. This situation arises from the fact that when the wind is from the northwest, the project's impacts can sometimes exceed the SILs, but at those times the wind is blowing the contributions from other sources (such as Highway 92) in the other direction and not causing an exceedance of the NAAQS. Similarly, when the wind is blowing from the Southeast emissions from sources like Highway 92 can cause exceedances of the NAAQS within the impact area, but at those times the wind is blowing the project's contribution the other way such that the project's emissions are below the SIL. Thus, even if the 24-hour standard were still applicable as part of the PSD permit analysis – which it is not anymore – the District would conclude that the project satisfies the Section 52.21(k) NAAQS compliance requirements for the 24-hour PM_{2.5} standard.

Id. at 143-44 (footnotes omitted).

The Air District also provided a detailed description of its process for selection of nearby point and non-point sources for consideration as part of the full impact analysis. The Air District relied upon EPA's Modeling Guideline and Draft NSR Workshop Manual, which instructs that identification of "nearby sources" "calls for the exercise of professional judgment by the appropriate reviewing authority." *Id.* at 157 (citing Modeling Guideline). The Air District said that it "followed this guidance and has applied its best engineering judgment in undertaking the full impacts analysis" and "believes that it appropriately exercised its professional judgment in identifying all nearby sources that should have been included in the analysis." *Id.* at 157-58. Accordingly, the Air District concluded that it was "confident that its conclusion that there will be no locations where the facility's emissions will significantly contribute to any exceedance of the PM2.5 NAAQS is correct." *Id.* Petitioner has raised no facts that call into question the Air District's exercise of its technical judgment in this respect.

2. The Air District Fully Responded to Petitioner's Comments on Roadway Emissions

The Air District responded specifically to Petitioner's comments concerning the selection of highways, and Petitioner fails to identify any error in this response. In responding to Petitioner's specific comment concerning the alleged failure to include other roadways as nearby sources in the full impacts analysis,³ the Air District provided the following explanation:

The Air District disagrees that other roadway sections should be included in the full impacts analysis. The Air District properly included all roadway emissions that could cause a significant concentration gradient in the areas where the facility's impacts would be above the SIL. The Air District determined that these other roadway sections, even though they may lie within the 6-mile radius the District used to identify potential nearby sources, would not cause a significant concentration gradient at locations where the project's impacts would be above the SIL. EPA's guidance is clear that the full impact analysis does not need to consider a source as a "nearby" source unless it could result in a significant

³ See Exhibit 11, Chabot Comments 9/16/2009 at 10-11.

concentration gradient in the same vicinity as the proposed source's impacts. That is, even if a particular highway segment might generate a significant concentration gradient *somewhere* within the impact area, but not within the same location where the source's impacts also exceed the SIL, then its exclusion from the multi-source full impact analysis is appropriate; so long as the facility's predicted impacts which exceed the SIL do not coincide in both time and location with any potential violation of the NAAQS resulting from the highway segments, then the facility cannot be found to cause or contribute to such a violation. [Footnote: *See In re Prairie State Generating Company, supra* note 6, pp. 137-144 (affirming decision to issue permit where modeled violations of the NAAQS were not coincident in both time and location with the source's modeled impacts above the SIL).] Identifying the location of the proposed facility's impacts, relative to the location of such other sources, no additional sources were identified as "nearby sources" for inclusion in the full impact analysis because none of such sources could reasonably be expected to cause a significant concentration gradient in or around the same location where the proposed facility's impacts were modeled above the SIL. Accordingly, since most of the modeled locations that were above the SIL were in the immediate vicinity of the proposed project, it was appropriate not to model additional sources as part of the multi-source modeling analysis. [Footnote: The exponential manner in which the PM2.5 impacts from roadway sources falls off as one moves farther away from the source is discussed further in the Applicant's PM2.5 Source Impact Analysis prepared by Atmospheric Dynamics, Inc. (July 30, 2009 revision), at p. 13.]

Exhibit 5, Responses to Public Comments at 158-59.

As explained by the Air District, the modeled impacts from the proposed Project that exceeded the respective SIL were, for the annual standard, limited entirely to the 450-meters immediately adjacent to the Project location and, for the 24-hour standard, located almost entirely within the 1260-meters adjacent to the Project location, with six isolated locations above the SIL in elevated terrain up to 8.1 kilometers away. *See id.* at 155-156, n. 314.

Both EPA guidance and Board precedent clearly provide that, where a source's contribution to a predicted violation of a NAAQS is less than the respective SIL at all times and locations where violations are predicted, the source will not be found to "cause or contribute to" a violation of the NAAQS. *See* Draft NSR Workshop Manual at C.52 ("[t]he source will not be considered to cause or contribute to the violation if its own impact is not significant at any violating receptor at the time of each predicted violation."); *In re Prairie State Generating Co.*, PSD Appeal No. 05-05, slip op. at 137-44 (EAB, Aug. 24, 2006), *aff'd sub. nom Sierra Club v.*

U.S. Env'tl. Protection Agency, 499 F.3d 653 (7th Cir. 2007) (affirming decision to issue permit where modeled violations of the NAAQS were not coincident in both time and location with the source's modeled impacts above the SIL). Further, the Modeling Guideline makes clear that “[t]he impact of nearby sources should be examined at locations where interactions between the plume of the point source under consideration and those of nearby sources (plus natural background) can occur.” 40 C.F.R. Part 51, App. W § 8.2.3.e. Accordingly, the Air District properly concluded that it need not model the contribution from roadways that could not result in a significant concentration gradient in the same location as the Project's modeled significant impacts. This is particularly true with respect to the annual standard, given that the 450-meter “impact area” encompasses no roadway segments (not even any of the sections of Highway 92 that were modeled). Petitioner has provided no evidence which disputes this logical assumption and basis for the NAAQS compliance demonstration.

The Air District specifically defended the conservatism of its use of a larger impact area based on the 24-hour standard as the basis for identifying nearby sources for purposes of the NAAQS compliance demonstration. The Air District explained that, now that the PSD is no longer applicable for the 24-hour standard, the air quality impacts analysis would only need to look at the farthest exceedance of the annual SIL:

The most distant impact above the annual SIL was at only 450 meters. The impact area for the annual SIL is therefore only 63.6 hectares in size, whereas the Air District considered the larger impact area of 20,612 hectares based on the 24-hour standard. Rather than redo the analysis with this smaller area, the Air District continued to rely on the larger impact area since even using that larger area the analysis shows no significant contribution to any NAAQS exceedance. The Air District considers the use of this larger area – over 300 times larger in size than the impact area that would result from using the annual SIL – to add a high degree of conservatism to its analysis.

Exhibit 5, Responses to Public Comments at 143 n.281. This high degree of conservatism provides no basis for review and Petitioner presents no evidence that would call into question the Air District's conclusions in these respects.

Thus, Petitioner's claim that the Air District “ignore[d]” roadways “without any

explanation at all nor citation to any supporting documents” (Petition at 33) entirely lacks merit. To the contrary, the Air District provided a complete and thorough response to Petitioner’s contention that the Air District should consider emissions from additional roadways as part of its cumulative impacts analysis.

3. Petitioner Fails to Demonstrate That the Air District Erred in Not Modeling Emissions from Roadways That Allegedly Are Recognized as Posing a Significant Concentration Gradient

Petitioner alleges that **“without any explanation at all nor citation to any supporting documents, BAAQMD ignores the emission contributed by these nearby roadways which already are recognized as posing a significant concentration gradient.”** Petition at 33 (emphasis in original). Petitioner provides no evidence of any such “recognized” “significant concentration gradient” in the same location as the source’s modeled significant impacts. Although Petitioner attached certain “Alameda County Congestion Management Maps” at Exhibit 3 of its Petition, Petitioner provides no explanation of or evidence for how these maps might demonstrate the existence of a significant concentration gradient in the same location as the proposed source’s significant impacts.⁴

In identifying nearby sources for inclusion in the cumulative modeling analysis, both the Modeling Guideline and NSR Workshop Manual provide that “nearby sources” include “[a]ll sources expected to cause a significant concentration gradient in the vicinity of the source or sources under consideration.” 40 C.F.R. Part 51, App. W §§ 8.2.3.b; 8.2.1.c; NSR Workshop Manual at C.32. Emphasizing that “[t]he number of sources is expected to be small except in

⁴ Petitioner’s only reference to the Exhibit 3 maps is in a footnote, where they are described as “copies of the Alameda County Congestion management Maps for 2008 of the overall area falling within the significantly impacted area as identified within six miles. RCEC is located east and north of the toll gate for the Highway 92 bridge. This reflects that Interstate 880 generally operates at a LOS ‘F’ (worst level of traffic – [gridlock?]) in the morning commute while Hesperian operates at varying LOS from ‘F’ to ‘C’” Petition at 9 n.2.

unusual situations,” the Modeling Guideline leaves identification of nearby sources to the “professional judgment” of the permitting agency. 40 C.F.R. Part 51, App. W §§ 8.2.3.b; 8.2.1.c. The NSR Workshop Manual further underscores the “flexibility” and “judgment” required to identify “nearby sources:

In determining which existing point sources constitute nearby sources, the *Modeling Guideline* necessarily provides flexibility and requires judgment to be exercised by a permitting agency. Moreover, the screening method for identifying a nearby source may vary from one permitting agency to another. To identify the appropriate method, the applicant should confer with the permitting agency prior to actually modeling any existing sources.

Draft NSR Workshop Manual at C.32 (emphasis in original).

Notwithstanding Petitioner’s assertion that the record contains no support for the Air District’s selection of highway segments, Petitioner acknowledges that the Air District cited the applicant’s source impact analysis -- albeit “gratuitously,” according to Petitioner. *See* Petition at 34 n.13. The referenced section of this analysis provides the following explanation concerning how roadways were selected for the cumulative impacts analysis:

Based on the location of significant impacts illustrated by Figures 1 and 1a, RCEC, in consultation with BAAQMD representatives, considered the potential that other background sources within the impact area might produce a significant concentration gradient in the same location where RCEC’s modeled impacts were at or above the SIL. As discussed above, a majority of these locations occur in the immediate vicinity of the project site. Given the proximity of Highway 92 to these modeled exceedances of the SIL, the BAAQMD identified traffic on certain lengths of Highway 92 as nearby sources, *i.e.*, sources whose emissions might cause a significant concentration gradient in the vicinity of the project’s impacts.

Exhibit 10, PM2.5 PSD Source Impact Analysis (Revised July 30, 2009) for the Russell City Energy Center Draft Prevention of Significant Deterioration (PSD) Permit, Atmospheric Dynamics, Inc. (hereinafter, “RCEC Source Impact Analysis”) at 12-13. Contrary to Petitioner’s allegation that there was no basis for identification of highway segments to include in the cumulative impacts analysis, RCEC followed EPA’s instructions to “confer with the permitting agency” (NSR Workshop Manual at C.32) and, “in consultation with BAAQMD representatives,” the applicant and permitting agency then “considered the potential that other

background sources within the impact area might produce a significant concentration gradient in the same location where RCEC's modeled impacts were at or above the SIL." Exhibit 10, RCEC Source Impact Analysis at 12. Thus, the process followed for identifying roadways to include in the full impacts analysis followed EPA guidance.

Further, in responding to comments on selection of nearby sources for the full impacts analysis, the Air District specifically referred to the "applicant's sensitivity analysis for Highway 92, which measured ambient PM_{2.5} concentrations as a function of distance from the highway, and found an exponential falloff in concentrations the farther [sic] one moves from the PM_{2.5} source. (See Source Impact Analysis, p. 13, Figure 2, 'PM_{2.5} Sensitivity Analysis, Impact vs. Distance from Road for Middle Route 92 Segment'.)" Exhibit 5, Responses to Public Comments at 156 n.312.

The referenced sensitivity analysis further explains how it was used to determine which highway segments should be specifically modeled as part of the full impacts analysis:

To determine the potential of Highway 92 to produce a concentration gradient, receptors were placed at equidistant locations along the highway, near Clawiter and extended outwards from the highway up to 10,000 meters. AERMOD was then used to determine the concentration gradient, which is shown in Figure 2.

Based on the graphical results in Figure 2, a significant concentration gradient exists from the center of the highway outwards to distances up to 1000 meters from the source. Using the results of the significance modeling and the demonstration of the Highway 92 concentration gradient, the Air District provided emissions and highway length segment recommendations for use in the PM_{2.5} NAAQS modeling assessment. Figures 1a and 3 display the portions of Highway 92 that were included in the cumulative modeling assessment, which are outlined in light blue.

Exhibit 10, RCEC Source Impact Analysis at 13. Thus, contrary to Petitioner's contention that the Air District provided no support for the selection of roadways, the Air District clearly explained the process that was used to determine which roadway sections should be included within the cumulative impacts analysis. Petitioner provides no evidence of error that would call into question the Air District's exercise of its engineering judgment in choosing to model only the selected segments of Highway 92 and no other highways.

Here, again we note the Air District’s determination that, in light of the effect of the non-attainment designation, use of the 24-hour significant impact area for purposes of identifying nearby sources affords a “very high degree of conservatism,” given that impacts exceeding the SIL for the annual standard extend out only 450 meters from the facility and do not even reach any of the sections of Highway 92 which were specifically modeled as part of the cumulative impacts analysis. Petitioner identifies no clear error in the Air District’s methods or conclusions and, as a consequence, Petitioner’s allegations fail to meet the heavy burden of a petitioner seeking to challenge permitting agency determinations that are inherently technical in nature. *See Three Mountain Power*, 10 E.A.D. at 50 (“[w]e generally accord deference to permitting agencies when technical issues are in play. As such, we assign a heavy burden to persons seeking review of issues that are quintessentially technical.”) (citations omitted).

4. Petitioner Seeks to Conflate the Terms of Art “Significant Impact” and “Significant Concentration Gradient” as One-in-the-Same

In contending that **“BAAQMD ignores the emissions contributed by these nearby roadways which already are recognized as posing a significant concentration gradient”** (Petition at 33) (emphasis in original), Petitioner seeks to conflate two distinct terms-of-art used in EPA’s PSD regulations and Modeling Guideline: a “significant impact” does not, by itself, demonstrate the existence of a “significant concentration gradient.” That is, just because a particular roadway might cause significant impacts – *i.e.*, a greater than *de minimis* impact or one in excess of the respective significant impact level – does not mean it would cause a significant concentration gradient at the same location as the source’s modeled significant impacts.

Rather, as explained by the Responses to Public Comments, “[t]he Air District determined that these other roadway sections, even though they may lie within the 6-mile radius the District used to identify potential nearby sources, would not cause a significant concentration gradient at locations where the project’s impacts would be above the SIL.” Exhibit 5, Responses to Public Comments at 158. As the Air District emphasized, “EPA’s guidance is clear that the full impact analysis does not need to consider a source as a ‘nearby’ source unless it could result

in a significant concentration gradient in the same vicinity as the proposed source's impacts." *Id.* at 158-59.

As described above, the Air District then referred to RCEC's sensitivity analysis as a demonstration for how one identifies the existence of such a "significant concentration gradient." *Id.* at 159. If Petitioner contends that, for each section of each arterial roadway within 8.1 kilometers of the Project, the administrative record should have included a sensitivity analysis identical to the one the applicant's consultant performed for Highway 92, before the Air District eliminated any such roadway section from the cumulative impacts analysis, Petitioner's position would gain no support in EPA's regulations or Modeling Guideline. As the Air District emphasized in its explanation of the full impacts analysis above, modeling exercises necessarily involve exercise of discretion on the part of the permitting agency. Petitioner has offered no evidence that would challenge the Air District's exercise of that judgment as erroneous or departing from common modeling practices among permitting agencies performing NAAQS compliance demonstrations. As such, Petitioner has clearly fallen short of the heavy burden it must bear to demonstrate error in inherently technical determinations of this sort.

Moreover, the rationale for excluding those highway segments that could not cause a significant concentration gradient in the same vicinity as the source's modeled significant impacts is clear: if a given highway segment does not cause a significant concentration gradient in the same location as the source's significant impacts, due to the exponential drop-off in emissions that occurs over distance, then that 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. As a consequence, specifically modeling that highway segment's emissions would amount to "double-counting" its contribution for purposes of the NAAQS compliance demonstration. The Air District clearly expressed its rationale for excluding these other highway segments and Petitioner demonstrates no error in the Air District's conclusion in this respect or in its underlying technical justification. Accordingly, Petitioner's contention that the Air District made this determination "**without any explanation**

at all nor citation to any supporting documents” (Petition at 33) (emphasis in original) is patently false and therefore should be dismissed.

For these reasons, Petitioner’s contentions with respect to inclusion of highway segments within the cumulative impacts analysis are without any merit and provide no basis for review by the Board.

C. The Air District’s Cost-Effectiveness Analysis for Auxiliary Boiler Technology Was Correct

Petitioner’s third contention is that the Air District “clearly erred in rejecting an auxiliary boiler as BACT based on cost effectiveness analysis provided by Calpine that relies on cost for an auxiliary boiler eight times the size/capacity of that needed for RCEC, as established by the records of both Caithness which has the same size turbines as those contemplated by RCEC.” Petition at 5. This contention fails for two main reasons. First, the error Petitioner alleges with respect to the Air District’s calculation of reductions that would be achieved through use of an auxiliary boiler was caused, not by any error on the part of the Air District, but by Petitioner’s own submission of the wrong vendor data. In any event, although the Air District could not verify the Petitioner’s claimed reductions based on these data, the Air District concluded that, even if Petitioner’s estimate were true, the resulting reductions would still come at a cost significantly greater than has been required of similar sources. Second, Petitioner’s allegations about the size of the boiler used in the Air District’s analysis were not raised during the public comment period and, thus, were not preserved for appeal. Moreover, Petitioner’s claim that the Air District had relied upon a 320 million British thermal units per hour (MMBtu/hr) boiler for purposes of its analysis is patently false.

1. Petitioner’s Allegations About the Caithness Records Have No Merit

Petitioner argues that the PSD permit should be remanded because the Air District “Clearly Erred Rejecting An Auxiliary Boiler Based On Documents Which Are Inapplicable to RCEC.” Petition at 35. To support this claim, Petitioner contends that the Air District “erroneously understates the emissions reduced from start-ups by utilizing an auxiliary boiler by

relying on records from Caithness *which apply to oil fuel, not natural gas*, while ignoring the Caithness records applicable to natural gas cited by the College District and disclose a much higher emission reduction during start-ups.” *Id.* (emphasis in original). What Petitioner fails to mention is that Petitioner itself was the source of any error when it mistakenly submitted the vendor data relevant to combustion of fuel oil, and not natural gas, in support of its comments. Moreover, as discussed below, any mistake the Air District made in taking the data provided by Petitioner and using them to try to verify the accuracy of Petitioner’s estimates was immaterial to the Air District’s ultimate decision: the Air District concluded that, even if the estimates asserted by Petitioner were true, the resulting cost per ton of reduction would exceed levels required of similar sources pursuant to the federal BACT standard.

a. The Air District Conducted an Appropriate Cost-Effectiveness Analysis Concerning the Reductions That Could Be Achieved Through Use of an Auxiliary Boiler During Startup

The Air District considered whether it should require use of an auxiliary boiler to reduce startup emissions. *See* Exhibit 5, Responses to Comments at 114. To do so, the Air District considered startup data from a similar Calpine power plant located in Mankato, Minnesota, a facility that is equipped with an auxiliary boiler due to the cold climate and the need to protect the steam cycle equipment from freezing while not in operation. *Id.* According to the Air District’s analysis, by using a similar auxiliary boiler at the proposed Project to keep the heat recovery steam generator (“HRSG”) and steam turbine warm when not in operation, RCEC could accomplish some, albeit small, reduction in the duration of both cold and warm startup times and, as a consequence, emissions of nitrogen oxides (“NO_x”) and carbon monoxide (“CO”). *Id.* According to the analysis using the Project’s operating scenario, this would only amount to a reduction of approximately 0.9 tons per year of NO_x and 12.4 tons per year of CO. *Id.* In light of the annualized cost for installation and operation of an auxiliary boiler, this would amount to a cost-effectiveness of \$1,143,192 per ton of NO_x and \$82,800 per ton of CO reduced. *Id.*

b. The Air District Properly Responded to Petitioner’s Comments on the Cost-Effectiveness Analysis

As explained by the Air District in the Responses to Public Comments, the Petitioner “provided vendor information that they claimed was used in developing the Caithness permit conditions,” referring to the startup emissions limits on Caithness Energy’s Long Island Energy Center. Exhibit 5, Responses to Public Comments at 114-15. The Air District described the claims made by Petitioner’s comments as follows:

These comments implied that this information provides a better measure of the benefits from using the auxiliary boiler than the information the District used. The comments offered an alternative calculation based on the emission reduction numbers from the Caithness vendor data, which they claimed show that using an auxiliary boiler could eliminate 89.9 tons per year of CO based on the Air District’s assumptions regarding the facility’s operating profile. Using this larger emissions reduction number, the comments stated that the cost-effectiveness should be calculated at \$11,515 per ton of CO reduced, which is approximately 8 times smaller than the number the Air District calculated. The comments claims that at this lower cost level, an auxiliary boiler should be required as BACT.

Id. at 115.

The Air District then explained that it had reviewed the vendor information submitted by Petitioner in support of its comments and found that it did not support the claimed reduction of 89.9 tons per year of CO cited by Petitioner’s comments letter:

The Air District reviewed the vendor estimates cited in these comments and disagrees that they support an estimated reduction of 89.9 tons per year of CO from using an auxiliary boiler. The vendor’s documents show that the estimated cold startup emissions at 51°F are 2,164 pounds of CO without the auxiliary boiler and 1,271 pounds with the auxiliary boiler, a difference of 893 pounds. For warm startups, the documents show emissions of 2,157 pounds of CO without the auxiliary boiler and 1,237 pounds with the auxiliary boiler, a difference of 920 pounds. Using these estimates, the annual emissions reductions come to 48.7 tons of CO, not the 89.9 tons calculated by the commenters. This amount of emission reductions would lead to a cost-effectiveness calculation of \$21,140 per ton of CO reduced, not the \$11,515 figure cited in the comments.

Id. (footnote omitted).

Thus, the Air District tried to verify Petitioner’s estimate of the emissions reductions that could be achieved through use of an auxiliary boiler by performing calculations based upon the

vendor data reportedly submitted by Petitioner in support of its comments.⁵ Although it could not verify Petitioner's estimates with these data, the Air District nevertheless concluded that, even if they were correct, the resulting cost per ton would still exceed the cost the Air District had found was typically borne by similar sources to achieve such reductions:

But even taking the numbers presented in these comments at face value, an auxiliary boiler would not be considered sufficiently cost-effective to require as BACT. Even \$11,515 is well above the costs of achieving a ton of CO reductions that the Air District found to be justified in its cost-effectiveness analysis in Response to Comment V.1. above. The Air District therefore disagrees with these comments that it should require an auxiliary boiler here to achieve additional startup reductions.

Id.

Petitioner makes no claim of error with respect to the Air District's determination of the level of cost typically borne by similar sources to achieve reductions in emissions. Nor does Petitioner contend that \$11,515 per ton of CO is a reasonable cost that should be imposed upon the Project to meet BACT. Instead, Petitioner argues that the Air District's decision should be

⁵ According to the Air District, Petitioner never submitted the vendor data showing the emissions from the Caithness plant fired on natural gas with an auxiliary boiler. *See* Declaration submitted by Air District in support of its response to the Petition. (RCEC understands that the Air District would be submitting a declaration attesting to this, along with its response on the merits.) Rather, Petitioner reportedly submitted a data sheet showing startup emissions from firing the Caithness plant on natural gas *without* an auxiliary boiler and a companion sheet showing startup emissions from firing the plant on fuel oil *with* an auxiliary boiler. In other words, of the four data sheets attached at Exhibit 4 to the Petition showing startup emissions when fired on natural gas and fuel oil, both with and without an auxiliary boiler, Petitioner only submitted two of them to the Air District, only one of which dealt with firing of the plant on natural gas. The emissions figures that the Air District cited in its Responses to Public Comments as coming from these two data sheets correspond with the vendor's estimated startup emissions for firing of the gas turbine on *natural gas without an auxiliary boiler* (at 51°F, 2,164 and 2,157 lbs CO for cold and warm starts, respectively) and for firing of the gas turbine on *fuel oil with an auxiliary boiler* (1,271 and 1,237 lbs CO for cold and warm starts, respectively). *See* Exhibit 5, Responses to Public Comments at 115; *compare with* Petition Exhibit 4, Siemens Westinghouse Power Corporation, "Caithness – Bellport Energy Center – Total Estimated Startup and Shutdown Emissions W501FD Upgrade in Combined Cycle Operation on Natural Gas – No Aux. Boiler – With Stack Damper – Rev. 03", December 14, 2004, page 1; and Petition Exhibit 4, Siemens Westinghouse Power Corporation, "Caithness – Bellport Energy Center – Total Estimated Startup and Shutdown Emissions W501FD Upgrade in Combined Cycle Operation on No. 2 Fuel Oil – With Aux. Boiler – With Stack Damper – Rev. 01", December 14, 2004, page 2.

remanded because, in attempting to verify Petitioner's calculations, the Air District had relied upon the wrong vendor data that Petitioner had itself mistakenly submitted in support of its comments. This alleged error provides no basis for remand.

c. As the Air District Explained, Even if Petitioner's Estimate of Achievable Reductions Were True, the Reductions Still Would Not Be Cost-Effective

The Air District's Responses to Public Comments clearly explains that "the basis for [Petitioner's] comparison is not entirely clear because the emissions numbers they cite are not found anywhere in the documentation they attached with their comments." *Id.* at 115 n.238. As a consequence, when the Air District attempted to verify Petitioner's calculations, it could not do so. Nevertheless, the Air District found that, even if it took Petitioner's estimates at face-value, the resulting reductions would still be much more costly than has typically been required of similar sources. Petitioner neither suggests, nor demonstrates any error in the Air District's conclusion in this respect. Instead, Petitioner seeks to cloud the record by raising an alleged error attributable to its own submission of the wrong vendor data.

Any alleged mistake that the Air District made in trying to make sense of the vendor data submitted by Petitioner was immaterial to its ultimate decision and provides no basis for review.

As the Board has explained, it typically declines to review errors that are immaterial:

The Board typically declines to review errors that have no bearing on the ultimate conclusion by the permit issuer. *In re Steel Dynamics, Inc.*, 9 E.A.D. 740, 749 (EAB 2001) (concluding that allegedly erroneous analogy used to justify agency's reliance on data from certain sources in making its permitting decision was harmless where agency had articulated other legitimate bases for relying on data from those sources); *In re Old Dominion Elec. Coop.*, 3 E.A.D. 779, 780-82 (Adm'r 1992) (reliance on invalid reasoning is harmless error where permit issuer also relied on other reasonable grounds for decision); *In re Spokane Reg'l Waste-to-Energy*, 2 E.A.D. 809, 815 (CJO 1989) (failure on the part of permit issuer to consider an alternate technology was harmless error where no such consideration was required and would only serve to satisfy academic concerns, but would have no effect on the outcome). Thus, if the role of the production foregone calculation was so insignificant to the Region's overall analysis that the ultimate result – selection of closed-cycle cooling as the best technology available for BPS – would remain unchanged regardless of an error in that calculation, then any such error would be harmless

In re Dominion Energy Brayton Point, L.L.C., NPDES Appeal No. 07-01, slip op. at 49-50

(EAB, Sep. 27, 2007).

Because the calculations allegedly made in error were immaterial to the ultimate conclusion that the resulting reductions were too costly to require them as BACT, and because this alleged error was actually introduced by Petitioner itself, the Board should dismiss Petitioner's claim as failing to demonstrate any error on the part of the Air District.

2. Petitioner's Allegations Concerning the Mankato Facility Were Not Preserved for Appeal and Are Incorrect

After raising the alleged error regarding the Air District's reliance upon the vendor data submitted by Petitioner, Petitioner's next contention is that the Air District's "error is then magnified by erroneously relying on cost estimates to install an auxiliary boiler intended for *Minnesota*, which not surprisingly requires an auxiliary boiler eight times larger than needed for RCEC, or installed at Caithness, which operates the same turbines and has the same operating scenario as contemplated by RCEC." Petition at 35 (emphasis in original).⁶ Petitioner then

⁶ On March 26, 2010 – four days after the deadline for filing appeals – Petitioner filed a "Supplemental Errata to Petition for Review of Prevention of Significant Deterioration Permit by Chabot-Las Positas Community College District." Docket No. 12 ("Supplemental Errata"). Petitioner's Supplemental Errata purports to make a number of changes to the Petition, including to the above-quoted text concerning the auxiliary boiler. This Supplemental Errata was in addition to an errata filed by Petition on the same day of its Petition. See Errata to Petition for Review and Appendix of Exhibits in Support of Petition for Review of Prevention of Significant Deterioration Permit by Chabot-Las Positas Community College District, Docket No. 2.01 ("Errata").

Instead of moving for leave to file its Supplemental Errata or providing any basis on which the Board could find good cause, Petitioner's legal counsel "apologize[d] for any inconvenience to the Board and its staff, as well as other interested parties, for these inadvertent errors." Supplemental Errata at 3. Petitioner then encloses corrected pages "for the convenience of the Board and parties". *Id.* The Board should not accept the amendments Petitioner attempts to make to its Petition through submission of the Supplemental Errata. Petitioner apparently did not seek and still has not sought leave to file any amendment to its Petition. Moreover, Petitioner has shown no good cause for why it could not file its Supplemental Errata in a timely fashion. See *In re Town of Marshfield, Massachusetts*, NPDES Appeal No. 07-03, slip op. at 8 (EAB 2007) (acknowledging that, had petitioner filed timely petition and then moved for extension of time to file supplemental brief to support issues in its petition, Board could have entertained such supplemental briefs).

The changes Petitioner intends to make to its Petition through filing of the Supplemental Errata do not correct errors that might be described as "inadvertent", but rather amount to minor shifts in emphasis in some of Petitioner's arguments. (They are not akin to the changes made by Petitioner's Errata, which

(Footnote Continued on Next Page.)

concludes, “[c]learly, this permit must be remanded for BAAQMD to provide a proper cost analysis which is applicable to the project contemplated.” *Id.* at 36. This argument fails because the issue was not preserved for appeal and is factually incorrect.

a. Petitioner’s Allegation That the Boiler Used by the Air District Was Too Large Was Not Preserved for Appeal

Petitioner’s allegation that the Air District’s cost-effectiveness analysis was in error due to the size of the boiler used for such purposes was never previously raised during public comments and, accordingly, was not preserved for appeal. Despite Petitioner’s general allegation that “[t]he issues set forth 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), Petitioner fails to demonstrate that this issue was raised or was not reasonably ascertainable during the public comment period during. Moreover, Petitioner can make no such credible claim.

According to EPA’s regulations concerning permit appeals, “[a]ll persons, including applicants, who believe any condition of a draft permit is inappropriate . . . must raise all reasonably ascertainable issues and submit all reasonably available arguments supporting their position by the close of the public comment period (including any public hearing) under § 124.10.” 40 C.F.R. § 124.13. Further, to meet the minimum pleading requirements of the Board, “[t]he petition shall include a statement of the reasons supporting that review, including a demonstration that any issues being raised were raised during the public comment period (including any public hearing) to the extent required by these regulations” 40 C.F.R. §

(Footnote Continued from Previous Page.)

corrected Petitioner’s mistaken reference to a June 15, 2009 letter with a reference to the correct letter, dated September 16 , 2009.) Although the Supplemental Errata’s changes have no bearing on the merits of Petitioner’s contentions, the Board should not accept them for consideration because doing so would cause unnecessary confusion to the Air District and RCEC in determining what exact contentions they must respond to at this time. For these reasons, RCEC would ask the Board reject Petitioner’s Supplemental Errata and any other untimely amendment to its petition that a party would file without first seeking and obtaining leave from the Board to do so.

124.19(a).

The Additional Statement of Basis specifically mentioned that “[t]he use of such an auxiliary boiler is common in colder regions where low temperatures can greatly prolong startups during cold weather” Exhibit 3, Additional Statement of Basis at 69. Thus, to the extent that the Air District’s cost-effectiveness analysis was based on a facility designed to operate in a much colder climates, the analysis expressly emphasized this fact.

While Petitioner claimed that the Air District underestimated the amount of reductions that could be achieved through use of an auxiliary boiler (*see* September 16, 2009 Comments Letter at 3-4) and, in support of that claim, submitted detailed comments and vendor information used in the design of other facilities which employ an auxiliary boiler, neither Petitioner, nor any other commenter, ever called into question the appropriateness of using Calpine’s Mankato Energy Center as a basis for comparison. No comment was received that raised any concern with the size of the boiler used in the Air District’s cost-effectiveness analysis, its appropriateness for the proposed Project, or the related cost estimates.

Because no comments previously raised this issue and it was ascertainable during the public comment period, it cannot be raised at this time. *See In re Knauf Insulation, GmbH*, PSD Appeal Nos. 06-01 through 06-06, slip op. at 4 (EAB, Nov. 14, 2006) (“The Board has also frequently emphasized that petitioners must raise issues with a reasonable degree of specificity and clarity during the comment period in order for the issue to be preserved for review. On this basis, the Board has often denied review of issues raised on appeal that were not raised with the requisite specificity during the public comment period.”) (citations omitted). The reason for requiring comments to be raised first during public comments is particularly evident here: had any question pertaining to the size or appropriateness of the boiler used in the cost-effectiveness analysis been raised in public comments, the Air District would have had the opportunity either to correct any misimpression on the part of the commenter or to revise its analysis accordingly. At the very least, the Air District would have had the opportunity to correct Petitioner’s mistaken assumption concerning the size of the boiler.

b. Petitioner Falsely Claims That the Boiler Used by the Air District in Its Analysis Is More Than Four Times Larger Than It Actually Is

Petitioner claims, with no support whatsoever in either the Petition or the cited exhibits, that the boiler used for purposes of this cost analysis was a very large boiler: “These reflect that the estimated cost information provided by Calpine was based on a much larger auxiliary boiler, one with a heat input of 320 MMBtu/hr.”⁷ See Petition at 25 & 35. Petitioner then compares the alleged size of the auxiliary boiler at Calpine’s Mankato Energy Center, with that of the Caithness Long Island Energy Center and Lake Side Power Plant, as follows:

The auxiliary boilers installed at Caithness, New York, and at the Lake Side plant in Utah, however, to which the College District referred BAAQMD are much smaller. In fact, **Lake Side is the same size combined cycle plant as RCEC and the auxiliary boiler capacity is 49 MMBtu/hr, one-sixth the size assumed by Calpine for the RCEC auxiliary boiler.**

Petition at 25-26 (emphasis in original).

As a matter of fact, the auxiliary boiler at Calpine’s Mankato Energy Center is only 70 MMBtu/hr. Exhibit 11, Site Permit Application, Mankato Energy Center, Mankato, Minnesota, Docket No. 04-76-PPS CALPINE, submitted to Minnesota Environmental Quality Board, March 2004 at 2-18 (“[t]he auxiliary boiler will be capable of burning natural gas at a maximum firing capacity of 70 MMBtu/hr.”). Thus, Petitioner’s allegation is blatantly false and supported by nothing in its Petition or supporting exhibits.

Moreover, the capacity and firing rate of the boiler at Mankato Energy Center was clearly indicated as no greater than 70 MMBtu/hr on the spreadsheet submitted by Calpine in support of this analysis. Exhibit 12, Spreadsheet entitled “Mankato Energy Center Start Profile for winter months,” attached to email from Barbara McBride to Kevin Poloncarz, *et al.*, March 31, 2009

⁷ As support for the alleged size of the boiler, the Petition cites to “Exhibit 4,” which consists of the June 15, 2009 letter from Petitioner’s legal counsel to the Air District, the permit issued by the Utah Division of Air Quality for the Lake Side Power Plant and the Siemens vendor information for the Caithness Long Island Energy Center discussed above.

(showing “Fuel” and “AXB Gas” as no greater than “70” during any hour and including the notation that “Fuel is based on 20 degrees F ambient and in the units of MMBTU”). Thus, there simply was no reasonable basis for confusion in this regard.

The only reference to a 320-MMBtu/hr boiler in the administrative record left no room for such confusion: in estimating the offsetting emissions that would result from the auxiliary boiler itself (*i.e.*, the emissions from combustion of fuel in an auxiliary boiler that would need to be subtracted from any calculated reduction in emissions due to use of the auxiliary boiler during cold or warm start-up events), RCEC referred to the emissions rates for a larger auxiliary boiler at its Los Medanos Energy Center, for which the spreadsheet indicated a capacity of 320 MMBtu/hr. The larger boiler’s emissions rates, in pounds per hour of NO_x and CO, were used to derive a pounds per MMBtu/hr emissions rate, which was then used to calculate the offsetting emissions from a smaller, 70-MMBtu/hr boiler, such as that operated by Calpine at its Mankato Energy Center for purposes of freeze protection. This was clearly explained in the transmittal email that accompanied submission of the analysis to the Air District. Exhibit 13, Email from Kevin Poloncarz to Sandy Crockett (Apr. 2, 2009) (“Barbara’s emails provide an explanation for the basis for calculating the reductions that would be achieved during startup by use of an auxiliary boiler, using Los Medanos Energy Center’s emissions profile as the basis for the small offsetting increase in emissions from the auxiliary boiler itself.”).

Had Petitioner or anyone else raised any question about the reference to the 320-MMBtu/hr boiler at Los Medanos Energy Center that appeared in the spreadsheet, the Air District or RCEC could have clarified any confusion and provided an appropriate response.⁸

⁸ During the appeals period, the Air District received requests from another petitioner’s legal counsel for additional clarification concerning calculations submitted by RCEC in support of certain analyses. In response, RCEC’s attorney sent legal counsel for such other petitioner an electronic copy of the actual Excel file used to derive such calculations, with an explanation. Exhibit 14, Email from Kevin Poloncarz to Helen Kang (Golden Gate University Environmental Law & Justice Clinic, Counsel for petitioner Citizens Against Pollution). Perhaps not surprisingly, the petition submitted by legal counsel on behalf of the other petitioner raises no concern regarding the subject of that Excel file.

c. Petitioner Makes No Contention That Any Difference Between the Actual Size of the Boiler Used in the Air District’s Analysis and the Boilers Used by Other Facilities Was In Any Way Material to the Air District’s Decision

Petitioner makes no contention that the difference between the actual size of the auxiliary boiler used in the Air District’s analysis – 70 MMBtu/hr, rather than the 320 MMBtu/hr alleged by Petitioner – and the size of the other auxiliary boilers mentioned by Petitioner is in any way material or reflects any error on the part of the Air District.

The auxiliary boiler at Caithness Long Island Energy Center is limited to 29.4 MMBtu/hr when firing natural gas. Exhibit 15, Letter from Walter Mugdan to Ross D. Ain, April 7, 2006, re: Prevention of Significant Deterioration of Air Quality (PSD), Caithness Long Island Energy Center, Enclosure I, § VI.B. According to the information submitted by Petitioner in support of its Petition, Caithness Long Island Energy Center consists of an “[a]uxiliary boiler sized to supply pegging steam to HRSG and seal steam to ST.”⁹ Given the configuration of Caithness’ plant as a “1x1” power plant (*i.e.*, one gas turbine/HRSG train, in combination with one steam turbine generator), with a 135 MW steam turbine (Exhibit 16, Long Island Power Authority, Caithness Long Island Energy Center, Final Environmental Impact Statement, June 2005, Section 2.2), this would amount to an auxiliary boiler with a capacity of approximately 0.218 MMBtu/hr per MW generated by the steam cycle.¹⁰

In contrast, the Steam Turbine Generator at RCEC is sized at 235 MW. Exhibit 1, Statement of Basis at 9. Thus, if the 70-MMBtu/hr auxiliary boiler used by Calpine’s Mankato Energy Center to keep the HRSG and steam turbine generator warm when not in operation were to be installed at RCEC for the same purpose, this would amount to an auxiliary boiler with a

⁹ Petition Exhibit 4, Siemens Westinghouse Power Corporation, Caithness – Bellport Energy Center – Total Estimated Startup and Shutdown Emissions W501FD Upgrade in Combined Cycle Operation on Natural Gas – With Aux. Boiler – With Stack Damper – Rev. 01, December 14, 2004, Startup/Shutdown Emissions Notes no. 18.

¹⁰ Dividing the auxiliary boiler capacity by the steam cycle capacity ($29.4 \div 135$) results in 0.218 MMBtu/hr per MW generated by the steam cycle.

capacity of approximately 0.298 MMBtu/hr per MW generated by the steam cycle.¹¹ Petitioner has made no contention that this marginal difference in capacity between these two auxiliary boilers – 0.08 MMBtu/hr per MW generated by the steam cycle¹² – would be material to, or reflect any error in, the conclusions of the Air District’s analysis.

Likewise, any difference between the size of the auxiliary boiler at Lakeside Power Plant – 49 MMBtu/hr (Petition at 25-26) – and the actual size of the boiler used for purposes of the Air District’s analysis – 70 MMBtu/hr – is immaterial. Petitioner makes no contention that this incremental capacity of 21 MMBtu/hr would in any way affect the outcome of the Air District’s analysis.

For this reason, even if it had been preserved for appeal, Petitioner’s contention that the Air District’s cost-effectiveness analysis was in error is without any merit. Moreover, it is based upon a false allegation concerning the size of the boiler used by the Air District for purposes of that analysis. Accordingly, the Board should dismiss this argument.

Had Petitioner (or anyone else, for that matter) ever made such a claim or expressed any concern regarding the size of the boiler used in the analysis during the public comment period, the Air District could have disabused Petitioner of any confusion on this point. But because the issue was not previously raised, it cannot now be raised as the basis for remand. In any event, Petitioner identifies no error in the Air District’s conclusion in this respect; nor does Petitioner contend that the actual difference in size between the boiler used for purposes of the Air District’s assessment and the boilers used by other facilities for reductions in startup emissions would in any way alter this conclusion. For these reasons, the Board should dismiss Petitioner’s contentions concerning whether an auxiliary boiler should be required to meet BACT.

¹¹ Dividing the auxiliary boiler capacity by the steam cycle capacity ($70 \div 235$) results in 0.298 MMBtu/hr per MW generated by the steam cycle.

¹² This reflects the difference between 0.298 and 0.218 MMBtu/hr per MW generated by the steam cycle.

D. The Air District Appropriately Addressed Environmental Justice Issues

Petitioner’s final contention is the Air District “clearly erred in its environmental justice analysis by failing to consider or weigh the environmental and social costs imposed on the community and the impacts on a community already suffering from disproportionate health risks and problems caused by pollution should bear the cost of RCEC’s additional pollution.” Petition at 5. Petitioner expressly acknowledges that the Air District did, in fact, find “that there will be no disproportionate adverse impacts on any environmental justice community.” *Id.* at 36. Petitioner, however, reprises the substantive claims it already raised with respect to the Air District’s PM2.5 air quality impact analysis and claims that the environmental justice impact is not “*de minimis.*” *Id.* at 36. As discussed above (*see supra* sections IV.A & B), Petitioner’s substantive claims have no merit. Accordingly, Petitioner’s allegations fall flat. Moreover, Petitioner fails to demonstrate any error in the conclusions of the Air District’s Health Risk Assessment. Nor does Petitioner demonstrate any inadequacies in the Air District’s responses to comments on environmental justice issues. For all of these reasons, the Board should deny review of this issue.

1. The Air District Appropriately Considered Environmental Justice in Its Issuance of the Permit

Throughout the PSD permitting process, the Air District affirmed its commitment to implementing its permitting authority in a manner that was fair and equitable:

Another important consideration that the Air District evaluated is environmental justice. The Air District is committed to implementing its permit programs in a manner that is fair and equitable to all Bay Area residents regardless of age, culture, ethnicity, gender, race, socioeconomic status, or geographic location in order to protect against the health effects of air pollution. The Air District has worked to fulfill this commitment in the current permitting action.

Exhibit 1, Statement of Basis at 65.

Based on results of its Health Risk Assessment, the Air District concluded that “emissions from the proposed project will not cause or contribute to any significant public health impacts in the community” because the “risk levels involved (lifetime cancer risk of 0.7 in one million; maximum chronic Hazard Index of 0.007; and maximum acute Hazard Index of 0.024)

are below what the Air District, EPA, or any other public health agency considers to be significant.” Exhibit 1, Statement of Basis at 66. The Air District applied these findings to the environmental justice context and concluded that because there was no adverse impact on any community, there could be no “disparate adverse impact on an Environmental Justice community located near the facility.” *Id.*

In response to comments alleging that “there are areas near the proposed facility with low-income and minority residents, employees and students,” on whom the Project would place disparate environmental burdens, the Air District provided the following response:

The Air District is aware of the CEC’s analysis regarding the demographic makeup in areas near the project site, and acknowledges the other information cited by the commenters regarding the demographic makeup of the area surrounding the proposed facility. The Air District does not disagree with this assessment. But the Air District’s conclusion that there will be no disproportionate adverse impacts on any environmental justice community was not based on an assumption that there are no environmental justice communities near the project site. To the contrary, it was based on the District’s assessment that there will be no significant adverse impacts to the community regardless of demographic makeup. (*See* Statement of Basis, pp. 65-66.) The Air District continues to believe that there will not be any significant adverse impacts on any community regardless of demographic makeup.

Exhibit 5, Responses to Public Comments at 192.

The Air District also clarified that its Health Risk Assessment is “performed as a requirement of the Air District’s state-law regulations, and it is therefore not directly a part of the PSD Permit evaluation, as the Environmental Appeals Board explained in its Remand Order for this permit.” *Id.* at 184. The Air District responded to public comments on its Health Risk Assessment for two reasons. First, “the Air District considers a facility’s potential for health risks to be an important topic of public interest that it wants to inform the public about.” *Id.* Second, “the Air District is also responding to the extent that these issues may be tangentially related to PSD issues in that the Air District has relied on an assessment of health risks in connection with PSD-related analyses such as considerations of ancillary environmental effects of various BACT control alternatives and considerations of potential impacts to Environmental

Justice communities.” *Id.*

2. The Air District Provided an Adequate Response to Comments Questioning the Appropriateness of Its Health Risk Assessment Methodology for Sensitive Populations

The Air District received comments claiming that the Air District cannot use the same Health Risk Assessment methodology that it uses for other projects to assess potential impacts to Environmental Justice communities. *Id.* at 193. These comments claimed “that the area around the proposed project location has a disproportionate number of people with diseases such as asthma, chronic lung disease, congestive heart failure and other chronic conditions, as well as higher overall mortality issues.” *Id.* They also “claimed that students who attend an educational institution a mile to the west of the facility location, some of whom are non-white and some of whom may lack medical insurance coverage, are particularly sensitive to external environmental degradation.” *Id.* In response, the Air District explained that, “[t]he Air District’s Health Risk Assessment methodology is designed to take sensitive populations, such as those who may be particularly sensitive to air pollution concerns, into account.” *Id.*

Regarding the impact on sensitive populations, the Air District said:

This is an important consideration for all communities, as every community has some members who may have heightened sensitivity to potential airborne health hazards to some extent. The Air District supports its Health Risk Assessment methodology as an appropriate way to characterize the potential health risks associated with the proposed Russell City Energy Center with respect to communities that have members with heightened environmental sensitivities. The Air District has reviewed relevant EPA guidance on this issue and has not found any indication that such a Health Risk Assessment methodology cannot be used in evaluating Environmental Justice considerations.

Id. Thus, it simply is not true that the Air District’s environmental justice analysis does not “recognize[] the existing health problems already borne by a community which already suffers from disproportionate health risks from pollution,” as alleged by Petitioner. *See* Petition at 38. Petitioner fails to show any error in the Air District’s reliance on the Health Risk Assessment methodology to assess impacts to the Environmental Justice community. Nor does the petitioner explain how the Air District’s comments addressing this issue are somehow inadequate.

3. Petitioner Fails to Demonstrate That the Facility Will Cause Significant Adverse Impacts on Environmental Justice Communities

Petitioner alleges that the Air District's conclusion that the Project will not result in any significant adverse impacts is erroneous because (1) "the project increases the community's PM2.5 concentration levels to greater than 1.2 ug/m³, as a matter of law, such a contribution of pollution directly associated with serious health problems is not '*de minimus*'" [*sic*]; (2) "air modeling applying the expected achievable emission rate of 9 lbs/hour for PM2.5 . . . reveals that RCEC will cause and contribute to the exceedance of the NAAQS in violation of the Clean Air Act [and] that as a matter of law this is not '*de minimis*'"; and (3) "because BAAQMD excluded emissions from all roadways but one . . . BAAQMD does not present any evidence or authority to support its conclude [*sic*] that RCEC's pollution, in conjunction with the emissions contributed from these nearby roadways, is '*de minimis*.'" Petition at 36. Petitioner makes no claim that the Air District's identification or application of the significant impacts level for the 24-hour analysis was in error. Rather, Petitioner simply reiterates its substantive allegations about the Air District's modeling.

This claim is without any merit. As previously discussed, because the non-attainment designation for the 24-hour PM2.5 NAAQS became effective prior to issuance of the final permit, the Air District was not required to demonstrate compliance with the 24-hour PM2.5 NAAQS. Nevertheless, the Air District's full impacts analysis did, in fact, demonstrate compliance with the relevant NAAQS. Accordingly, Petitioner's allegation is without any basis in law or fact. Further, to the extent Petitioner contends that a PSD permit cannot be issued for a source, which has been found not to cause or contribute to any violation of the NAAQS, but would nevertheless result in a concentration greater than the identified SIL within an environmental justice community, Petitioner's contention is without any basis in law or regulation and should be dismissed. Moreover, Petitioner fails to demonstrate that the facility will, in fact, result in any significant impacts on identified environmental justice communities.

Although none of the claims in Petitioner's Petition bears any reference to them, Petitioner's Supplemental Appendix submitted on March 26, 2010 includes a "Supplement to

Exhibit 2,” which consists of an appendix to a July 2009 Workshop Report prepared by the Air District in support of certain rule revisions. Petitioner’s Supplemental Appendix says that these documents “include a map, page 8, showing the locations, including Depot Road in Hayward, where RCEC is proposed in relation to the Chabot Community College Campus located on Hesperian, the surrounding nearby roadways and the communities which BAAQMD’s CARE program identifies as ‘at risk.’” Supplemental Appendix at 2.

RCEC believes that the Board should not accept Petitioner’s Supplement for consideration unless and until Petitioner seeks leave of the Board to amend and/or supplement its Petition. *See supra* note 5. Regardless, these documents provide no evidence to demonstrate any error in the Air District’s analysis of environmental justice considerations. Nor do they support Petitioner’s contention that the Air District’s environmental justice analysis is flawed because the Project would allegedly result in significant impacts to communities already disproportionately impacted by air pollution. To the contrary, the proposed Project and all of its modeled impacts above the respective SIL for both the annual and 24-hour PM2.5 standards are located outside of the area identified as a “priority community” for the Air District’s Community Air Risk Evaluation (“CARE”) program. Upon close examination of the map attached to Petitioner’s Supplemental Appendix Exhibit 2 and RCEC’s Source Impact Analysis, it is clear that all of the significant impacts of the source lie *outside* of the identified priority community.¹³

As the documents submitted by Petitioner’s Supplemental Appendix indicate, these

¹³ The map attached to Petitioner’s Supplemental Errata at Supplemental Exhibit 2, entitled “Exposure to Toxic Air Contaminants of Sensitive Populations in Western Alameda County in the Year 2005 Based on a Weighted Product of Population and Emissions” dated April 17, 2009, clearly indicates that, at its western boundary, the priority community designation travels north-northwest through the intersection of Depot Road and Clawiter. Comparison with the plots shown at Figure 1 of RCEC’s Source Impact Analysis (Exhibit 10 at 10) shows that, for the 24-hour PM2.5 standard, RCEC’s impacts above the SIL are confined primarily to an area west of Clawiter. Further, the six points at high terrain to the east are all well to the east of Mission, which is the eastern boundary of the priority community. Similarly, for the annual PM2.5 standard, it is clear that RCEC’s impacts above the SIL are all well to the west of the boundary of the priority community. Exhibit 10 at 11, Figure 1a.

priority communities were identified based on exposure of sensitive populations to emissions of toxic air contaminants and income data indicating areas where 40% of family incomes were below 185% of the federal poverty level. Supplemental Appendix to Exhibit 2, Appendix C; Guidelines for Designation of Priority Communities at C-2. While Petitioner apparently submitted these documents to suggest that the Project will impact communities within this area, that simply is not true.

In short, Petitioner provides no evidence that would demonstrate any error in the Air District's environmental justice analysis or otherwise warrants review. As provided by earlier sections of this response, Petitioner has failed to demonstrate any error whatsoever in the Air District's cumulative PM_{2.5} analysis that warrants review. Accordingly, the Board should deny review of Petitioner's arguments for remand concerning alleged deficiencies in the Air District's environmental justice analysis.

V. CONCLUSION

Petitioner fails to meet threshold pleading requirements on certain issues and fails to demonstrate that any decision by the Air District related to its PM_{2.5} air quality impacts analysis, selection of roadways in that analysis, cost-effectiveness analysis for auxiliary boiler technology, or environmental justice analysis was clearly erroneous or otherwise warrants Board review. Thus, RCEC respectfully requests that the Board deny review of all issues raised in the Petition.

Respectfully submitted,

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Dated: April 23, 2010

CERTIFICATE OF SERVICE

I hereby certify that on the 23rd day of April, 2010, an identical paper copy of the foregoing Russell City Energy Company, LLC's Response to the Petition for Review Filed by Chabot-Las Positas Community College District, which was electronically filed on the same date via the Central Data Exchange portal, was also sent via Federal Express to:

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Clerk of the Board
Environmental Appeals Board
Colorado Building
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Washington, D.C. 20005

I hereby certify that on the 23rd day of April, 2010, copies of the foregoing Russell City Energy Company, LLC's Response to the Petition for Review Filed by Chabot-Las Positas Community College District were served via first-class U.S. mail, postage prepaid, to:

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