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

In re:	)	
Palmdale Hybrid Power Plant	)	PSD Appeal No. 11-07
PSD Permit No. SE 09-01	)	

EPA REGION 9'S RESPONSE TO PETITION FOR REVIEW

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INTRODUCTION

The EPA Environmental Appeals Board ("EAB" or "Board") should deny review of the challenge brought by Rob Simpson ("Petitioner") to the Prevention of Significant Deterioration ("PSD") permit issued pursuant to section 165 of the Clean Air Act ("CAA") by EPA Region 9 ("Region 9") on October 18, 2011 to the City of Palmdale ("City," "Permittee," or "applicant") authorizing the construction and operation of the Palmdale Hybrid Power Project ("Project" or "PHPP").[1] The Region's PSD permit decision for the PHPP is fully supported by the record, including a detailed Fact Sheet and Ambient Air Quality Impact Report ("Fact Sheet") and response to comments document ("RTC"), and Petitioner has failed to demonstrate clear error, an abuse of discretion, or an important policy consideration warranting review in Region 9's decision. In addition, Petitioner has failed in some instances to meet the EAB's pleading requirements, including demonstrating that issues have been preserved for Board review.

FACTUAL AND PROCEDURAL BACKGROUND

On August 11, 2011, Region 9 proposed to issue a PSD permit ("Proposed Permit") to the City for the PHPP. *See* Proposed Permit, Region 9 Excerpt of Record (hereinafter "Ex.") 1; see also Ex. 2 (Public Notice). The Project, a 570-megawatt natural gas-fired power plant to be located in the town of Palmdale, in Los Angeles County, California, would combine the use of natural gas and solar energy to generate electricity. The Region's Fact Sheet accompanying the Proposed Permit described the Region's finding that the Proposed Permit was consistent with PSD requirements, because, among other things, the Proposed Permit required the Best Available Control Technology ("BACT") to limit emissions of nitrogen oxides ("NO_x"), carbon

[1] The PSD permit number assigned to the PHPP is PSD Permit No. SE 09-01, rather than SJ 08-01 as stated in Petitioner's brief and as indicated in the docket and other written materials issued by the Board to date in this matter.

monoxide ("CO"), total particulate matter ("PM"), particulate matter under 10 micrometers (μm) in diameter ("PM_{10}"), particulate matter under 2.5 μm in diameter ("$PM_{2.5}$") and greenhouse gases ("GHG"), to the greatest extent feasible; and the proposed emission limits would protect the National Ambient Air Quality Standards ("NAAQS") for nitrogen dioxide ("NO_2"), CO, PM_{10}, and $PM_{2.5}$. *See* Fact Sheet, Ex. 3, at 1. Region 9 held a public information meeting and public hearing on the Proposed Permit on September 14, 2011, and the public comment period also concluded that day. See Ex. 2; RTC, Ex. 4, at 3-4.

After careful consideration of the public comments submitted regarding the Proposed Permit, including comments from the City, Petitioner, and other interested parties, on October 18, 2011, Region 9 issued a final decision to grant the City a PSD permit for the PHPP. See final permit, Ex. 5. The final permit included a number of changes as compared with the Proposed Permit, and each change was specifically identified in the record. *See generally* RTC, and final permit at 58-62 (redline/strikeout showing changes from Proposed Permit to final permit). In addition, along with the final permit, Region 9 prepared the 62-page RTC, which explained in detail the Region's reasoning in responding to the comments received, including the basis for any permit changes made and additional analyses conducted by the Region as part of its response. *See generally* RTC.

The EAB's docket indicates that on November 17, 2011, Petitioner filed five documents with the Board, four of which are referred to in the docket as "petition for review" and appear to contain arguments challenging Region 9's permit decision for the PHPP, and one of which is referred to as an attachment to the petition for review. *See* Docket #1-5. In a letter dated November 22, 2011, the EAB notified Region 9 of the filing of a petition by Mr. Simpson and

requested that the Region provide a response to the petition by December 13, 2011. *See* Docket #6.

On November 24, 2011, counsel for Petitioner filed an amended Petition for Review with the Board, *see* Docket #9 ("Petition" or "Petition for Review"), accompanied by a letter stating:

> Please accept the Petition for Review (Clerical Amendment) uploaded November 24, 2011 in lieu of the documents uploaded November 17, 2011. I attempted to file a petition for review of a PSD permit decision November 17, 2011. The CDX electronic filing system rejected my attempts to upload the document a number of times giving the message, "An unexpected failure (Node Submission Error) has occurred while accessing the Ears date flow" (see screen on following page). I was finally able to upload the petition but, in an abundance of caution and unbeknownst to me, my client uploaded an early, unapproved draft shortly before I was able to finally upload the petition.
>
> This has undoubtedly caused some confusion which I hope can be cleared up ***by replacing all documents filed November 17, 2011 with the one document uploaded today***. This clerical amendment does not include any substantive changes. The changes are all clerical and are as follows:
>
> Table of contents, petition for review, and exhibits are combined into one document
> The appendices/attachments are renumbered
> A few typos are corrected

See Docket #8 (emphasis added).[2]

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[2] On February 1, 2012, shortly after receiving the Board's order setting the current briefing schedule, Region 9 received an email from Petitioner, which was copied to the City and to the Clerk of the Board, stating:

> I understand that my attorney submit[sic] a clerical Amendment of a portion of my, timely filed, appeal. Her accompanying letter may have appeared to intend to modify the entire appeal that I filed. It is not our intent to modify the appeal, except to the extent that the clerical amendment amends clerical issues in the documents that it replaces, identified as entry 1 and 5 on the docket for this proceeding. It is my intent that all other documents, timely filed, remain a part of my appeal. It may be appropriate to remove the word Draft form [sic] the docket log on the other entries. I am sorry if this creates any confusion. I look forward to a swift remand of the permit. Thank you.

Docket #20.

Region 9 responded via an email transmitted the same day, also copied to the Board and the City. Docket #21. In that email, the Region stated that the parties to this matter had proceeded in good faith reliance on the correspondence Petitioner filed with the Board months ago making clear that the November 24, 2011 filing constituted his petition for review and replaced all other "petition" filings, and that therefore the issues and arguments included in that November 24, 2011 filing provided the sole basis for Mr. Simpson's arguments on appeal. The Region also noted that Petitioner's filings of November 17, 2011 contain various deficiencies, including the fact that the combined filings exceed the Board's page limit requirements. The Region further stated its belief that any attempt by Petitioner to augment his amended November 24, 2011 petition for review should be requested

On November 30, 2011, Petitioner notified the Board and the other parties of his interest in participating in the EAB's Alternative Dispute Resolution ("ADR") process for this matter, and Region 9 and the City subsequently filed papers with Board expressing their interest in participating in the ADR process. *See* Docket #10, 12-13. On December 9, 2011, the Board issued an order staying this case until February 7, 2012 to allow the parties to participate in the ADR process. Docket #16. The parties were unable to resolve the case during the ADR process, and on February 1, 2012, the EAB issued an order lifting the stay and establishing a deadline of February 17, 2012 for Region 9 and the City to file responses to the Petition for Review. Docket #18.

STANDING AND STANDARD AND SCOPE OF REVIEW

The Board has stated that in considering a petition for review of a PSD permit,

> the Board first considers whether the petitioner has met key threshold pleading requirements such as timeliness, standing, and issue preservation. For example, a petitioner seeking Board review must file its appeal within thirty days of permit issuance and must have participated during the public comment period. Moreover, in order to demonstrate that an issue has been preserved for appeal, a petitioner must show that any issues being appealed were raised with reasonable specificity during the public comment period.

In re Indeck-Elwood, LLC, 13 E.A.D. 126, 143 (EAB 2006) (select internal citations and footnotes omitted). The burden of establishing that issues have been preserved for review rests squarely with the petitioner. *In re Encogen Cogeneration Facility*, 8 E.A.D. 244, 250 n.10 (EAB 1999) ("It is not incumbent upon the Board to scour the record to determine whether an issue

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via a formal motion filed with the Board, and that given the lateness of this effort and the upcoming filing deadline, the Region would object to any such request. Thereafter, Petitioner responded with an email stating that he did not intend to file such a motion. *See* Docket #22.

At this time, Region 9 is not aware of any motion properly filed by Petitioner with the Board requesting to amend or add to his November 24, 2011 Petition for Review. Therefore, Region 9 responds herein only to the November 24, 2011 Petition. *See* Docket #9. Should the Board request further briefing concerning this issue, Region 9 would be happy to provide it.

was properly raised below."). Alternatively, a petitioner may demonstrate that an issue or argument was not reasonably ascertainable during the public comment period. 40 C.F.R. § 124.13; *see In re Encogen*, 8 E.A.D. at 250 n.8.

Assuming that a petitioner satisfies these pleading obligations, the Board then evaluates the petition on the merits to determine if review is warranted, applying the following standard of review:

> [T]he Board's review of a PSD permit is discretionary. Ordinarily, the Board will not review a PSD permit unless it is based on a clearly erroneous finding of fact or conclusion of law, or involves a matter of policy or exercise of discretion that warrants review. *See* 40 C.F.R. § 124.19(a); Consolidated Permit Regulations, 45 Fed. Reg. 33,290, 33,412 (May 19, 1980). Additionally, the Board analyzes PSD permits guided by the preamble to section 124.19, which states that the Board's power of review "should be only sparingly exercised" and that "most permit conditions should be finally determined at the [permit issuer's] level." 45 Fed. Reg. at 33,412; *accord In re Cardinal FG Co.*, 12 E.A.D. 153, 160 (EAB 2005).
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> The petitioner bears the burden of demonstrating that review is warranted. . . .[] To meet that burden, Petitioner must not only specify the objections to the permit, but also explain why the permit issuer's previous response to those objections is clearly erroneous or otherwise warrants review. [*In re BP Cherry Point*, 12 E.A.D. 209, 217 (EAB 2005)]; *In re Steel Dynamics, Inc.*, 9 E.A.D. 740, 744 (EAB 2001). The petitioner's burden is particularly heavy in cases where a petitioner seeks review of issues that are fundamentally technical or scientific in nature, as the Board typically defers to the expertise of the permit issuer on such matters if the permit issuer adequately explains its rationale and supports its reasons in the record. *See In re NE Hub Partners, L.P.*, 7 E.A.D. 561, 567 (EAB 1998), *review denied sub nom. Penn Fuel Gas, Inc. v. EPA*, 185 F.3d 862 (3rd Cir. 1999); *accord In re Dominion Energy Brayton Point*, LLC, 12 E.A.D. 490, 510 (EAB 2006); *In re Peabody Western Coal*, 12 E.A.D. 22, 33-34 (EAB 2005).

In re Avenal Power Center, LLC, PSD Appeal Nos. 11-02 through 11-05, slip. op. at 4-5 (EAB Aug. 18, 2011). ***See also*** Standing Order Governing Petition for Review of Clean Air Act New Source Review Permits (April 19, 2011) ("NSR Standing Order") at 4 ("Where a comment was previously raised, the petitioner must also demonstrate with specificity, by citing to the applicable documents and page numbers, where in the response to comments the permit issuer responded to the comments and must explain why the permit issuer's response to comments is

inadequate. The Board may decline to consider issues that do not comply with these requirements.").

With respect to the standard of review applicable to a Region's decision not to reopen the public comment period under 40 C.F.R. Part 124, the Board has stated: "The critical elements are that new questions *must* be 'substantial' and that the Regional Administrator '*may*' take action. As a result, [the Board] review[s] a region's decision not to reopen the comment period under an abuse of discretion standard and afford[s] the region substantial deference." *In re Dominion Energy Brayton Point, LLC*, 13 E.A.D. 407, 416 (EAB 2007) ("*Dominion Energy II*") (emphasis added). "The determination of whether the comment period should be reopened … is generally left to the sound discretion of the permit issuer." *Indeck-Elwood*, 13 E.A.D. at 146. "The Board has long acknowledged the deferential nature of this standard." *In re NE Hub Partners, LP*, 7 E.A.D. at 585.

ARGUMENT

Petitioner Rob Simpson raises five primary issues in his appeal challenging Region 9's permit decision for the PHPP. Petitioner first argues that Region 9 should have granted his request to extend the public comment period, then argues that Region 9 should have granted his November 15, 2011 request to reopen the comment period. Petitioner also argues that certain final permit limits were inappropriate and that Region 9's BACT analysis for the permit was flawed. Last, Petitioner asserts that Region 9 improperly failed to consider the need for the facility.

Board review is not warranted on any of these grounds. As a general matter, much of the Petition fails to meet general pleading requirements by failing to identify, with cites to the applicable documents and page numbers, the specific comments provided to the Region or the

relevant analysis and reasoning provided by the Region with regard to the various arguments raised. *See* NSR Standing Order at 4. Similarly, some of Mr. Simpson's claims are not properly before the Board because they also do not meet the Board's other pleading requirements, including the requirement to demonstrate that arguments were raised with reasonable specificity during the public comment period or were not reasonably ascertainable at that time.

Even where the Petitioner may have met these pleading requirements, review is still not warranted because, as explained below, Region 9 reasonably applied the relevant PSD regulatory criteria to the specific facts surrounding this Project, fully and adequately responded to the comments submitted by Petitioner and other commenters, including the City, and conducted additional analyses and made appropriate permit changes in response to these comments. Petitioner fails to satisfy his burden of demonstrating that Region 9's permitting decision constituted clear error, or involved an abuse of discretion or an important policy consideration warranting Board review. Petitioner also fails to demonstrate that the Region abused its discretion in deciding not to reopen the public comment period after issuing its final permit decision.

I. Petitioner Fails to Demonstrate that Region 9's Decision Not to Extend the Public Comment Period Constituted Clear Error, an Abuse of Discretion, or Raises Important Policy Considerations that the Board Should Review

Petitioner first argues that Region 9 should have granted his request for an extension of the public comment period for the Proposed Permit, but Petitioner does not, and cannot, show that the Region's determination not to grant his request was clear error, an abuse of discretion, or raises an important policy consideration that the Board should review.

Only two days before the close of the public comment period for the Proposed Permit, Petitioner requested an extension of the comment period by email, supported only by the

statement that "there is a massive amount of information to review. Please extend the comment period by 30 days so that we can submit more complete comments." *See* Petitioner's App. A. After Region 9 promptly notified Mr. Simpson that his request was denied, *see id.*, Mr. Simpson sent another email to the Region asking that the Region reconsider, stating the record was tens of thousands of pages of information, and noting that the Region had not posted documents in the matter on its website prior to issuing its Proposed Permit. Ex. 6. Subsequently, in his comments submitted on September 14, 2011, Petitioner inquired why the Region had declined his request, but provided no further information demonstrating why an extension would be necessary in this case. App. C at 42.

Region 9's RTC provided a detailed response on this issue, stating that the Region believed that it provided appropriate and sufficient notice to all interested parties regarding the proposed Project, and that this notice provided the public with a reasonable opportunity to provide comments on the Proposed Permit. The RTC further stated that the Region found no particular issue associated with the Project that warranted public review time beyond that established in the public notice and required by 40 C.F.R. Part 124 nor did the commenter demonstrate a need for additional time per 40 C.F.R. § 124.13, and noted that the Region did not believe the relevant information was particularly voluminous in this case, nor were the key documents especially lengthy. *See* Ex. 4 at 27-29 and n. 10. Region 9 also noted that EPA is not required to post its administrative record on its website, nor does Region 9 have a history of posting documents on its website prior to permit proposal.[3] *Id.* at 29.

EPA rules clearly provide that "[a] comment period longer than 30 days *may* be necessary to give commenters a reasonable opportunity to comply with the requirements of

[3] The Board has held that the permit issuer does not have an obligation to provide an electronically accessible copy of the administrative record on the permit issuer's website. *See In re Cape Wind Associates, LLC*, OCS Appeal No. 11-01, slip op. at 9 and n.4 (EAB May 20, 2011).

[section 124.13]. Additional time shall be granted under § 124.10 *to the extent that a commenter who requests additional time demonstrates the need for such time*." 40 C.F.R. § 124.13 (emphasis added). Under the facts of this case, the Region's determination that Petitioner had not demonstrated the need for additional time, as explained in its RTC, was reasonable because Petitioner never provided any specificity in his requests, such as identifying the issue(s) he needed more time to consider and explaining why the comment period was insufficient for that task.

At the outset, Mr. Simpson's requests for an extension simply referenced the size of the record for the Proposed Permit and provided no other specific information demonstrating the need for more time. While the full record at the time of permit proposal may have numbered thousands of pages, the key record documents – *i.e.*, the Proposed Permit and Fact Sheet – were a small subset of the entire record, which included lengthy data sets and other detailed modeling and background information. EPA reasonably determined that this request did not amount to the demonstration required under 40 C.F.R. § 124.13. Mr. Simpson's requests did not identify any particular permit documents that were particularly lengthy, state that he was having difficulty reviewing those documents in the time period provided, or explain the specific reason for such difficulty.

While the Petition for Review attempts to bolster Mr. Simpson's argument about the length of the documents in the record, focusing on the detailed modeling data files, identifying these documents in the Petition does not change the fact that Petitioner did not discuss these modeling data files in his extension request, much less request to review these data files during the public comment period. *See* App. E. Petitioner's brief further notes that Region 9's record referred to materials in the California Energy Commission's ("CEC") docket of 13,000-plus

pages for the CEC's licensing decision for the Project, but Petitioner fails to recognize that the fact that reference was made to information in documents from the CEC proceeding did not incorporate the docket from that proceeding into the record for the Proposed Permit and thus did not require review of the complete CEC docket during the public comment period. Moreover, the length of the record alone is somewhat irrelevant in light of the fact that Petitioner never provided any specificity in his original requests (or even in the current Petition) about why he needed more time to develop his comments, ***e.g.***, what further issue(s) he needed more time to consider, and why the standard comment period was insufficient for that task. Indeed, Petitioner submitted two separate comments on Region 9's Proposed Permit, App. C and Ex. 7, raising a wide variety of issues which the Region considered and addressed in its response to comments.

In sum, Region 9's determination that Petitioner did not demonstrate the need for an extension of the comment period was reasonable. Petitioner has not demonstrated clear error or an abuse of discretion on this issue, and Board review on this basis therefore should be denied. *See In re Shell Offshore, Inc., Kulluk Drilling Unit and Frontier Discoverer Drilling Unit,* 13 E.A.D. 357, 401-402 (EAB 2007) ("While the Region certainly could have rescheduled the public hearing and extended the comment period, nothing in NSB's petition or in the record before us convinces us that the Region's decision not to do so in this case was clearly erroneous or otherwise warrants review by this Board.").

II. Region 9's Decision Not to Reopen the Public Comment Period Was Well Within Its Discretion

On November 15, 2011, nearly a month after Region 9 issued its October 18, 2011 final permit decision for the PHPP, Petitioner submitted a letter to Region 9 asking that the Region reopen the public comment period for the Project, raising numerous arguments to support his request, many of which are repeated in Petitioner's brief. *See* App. B. While Petitioner's brief

states that Region 9 did not respond to this request, the Region provided a brief email response to the request on November 18, 2011, stating that the Region declined to grant Petitioner's request. See Ex. 8.

Petitioner argues that Region 9 should have reopened the comment period because data, information and arguments submitted during the public comment period raised substantial new questions concerning the permit, including "data submitted for the first time by the applicant and a complete reversal by EPA on a number of critical issues." Pet. at 9. Petitioner also states that reopening the comment period would expedite the decisionmaking process.

As discussed above, the Board reviews a Region's decision not to reopen the comment period for PSD and other permits issued under 40 C.F.R. Part 124 under an abuse of discretion standard, and affords the Region substantial deference. In considering the discretion granted by 124.14(b), the Board has noted four factors a Region may consider in deciding whether to reopen a public comment period:

> [W]hether permit conditions have changed, whether new information or new permit conditions were developed in response to comments received during prior proceedings for the permit, whether the record adequately explains the agency's reasoning so that a dissatisfied party can develop a permit appeal, and the significance of adding delay to the particular permit proceedings.

Dominion Energy II, 13 E.A.D. at 416 n.10.

When considered in light of these factors, the circumstances here make clear that Region 9 did not abuse its discretion in deciding not to reopen the comment period. First, while the permit provisions and further analyses that Petitioner questions were changed in some respects between the proposed and final permits, these changes were made by EPA in response to public comments, a number of which were submitted by Petitioner himself. Moreover, in all such instances, Region 9 provided a clear and adequate explanation in its response to comments as to

the changes that were made and the basis for the changes, which provided an adequate record on which a dissatisfied party such as Petitioner could develop a permit appeal.

The fact that the additional analyses and permit changes between the proposed and final permit were developed directly in response to comments is a factor the Board has often focused on in deciding whether a public comment period should be reopened. *In re NE Hub Partners, LP*, 7 E.A.D. 561, 587 (EAB 1998); *In re Am. Soda, LLP*, 9 E.A.D. 280, 299 (EAB 2000); *In re Caribe General Elec. Prods., Inc.*, 8 E.A.D. 696, 705 n. 19 (EAB 2000). The Part 124 regulations specifically contemplate that, in responding to comments, the Region may make changes from the proposed to the final permit, and may document its response to new matters raised during the comment period by adding new materials to the administrative record. 40 C.F.R. § 124.17. In fact, the Board has recognized that the PSD permitting regulations "do not call for a new comment period every time the permit issuer adds a new permit condition in response to comments on the draft permit. Indeed, the regulations contemplate the possibility that permit terms will be added or revised in response to comments received during the public comment period." *In re Indeck-Elwood, LLC*, 13 E.A.D. at 146; *see also Caribe General Elec.*, 8 E.A.D. at 705 n. 19. Where, as here, an issue has been raised by a commenter and the resulting additional analyses and permit changes are fully addressed and thoroughly explained in the response to comments, reopening the comment period is unnecessary.

Further, Petitioner has not demonstrated that any of the changes made in this case is so substantial that the opportunity afforded to interested parties such as Petitioner to address those changes in a petition for review would be inadequate. As discussed in more detail below, the record appropriately contains the information on which the Region relied in making permit changes and conducting additional analyses and adequately explains the Region's reasoning. In

fact, Petitioner's arguments voicing his disagreement with a number of these changes and additional analyses show that the Region's reasoning has been sufficiently explained for Petitioner to develop his Petition for Review. *See In re Indeck-Elwood*, 13 E.A.D. at 147 (identifying and explaining each permit change "ensures that interested parties have an opportunity to adequately prepare a petition for review and that any changes in the draft permit are subject to effective review").

Finally, the significance of delay far outweighs Petitioner's generally stated interest in additional opportunity for public comment, given the need for EPA to make PSD preconstruction permit decisions in a timely manner and the fact that there is no demonstrated need to reopen the public comment period in the circumstances presented here. While Petitioner states that if the Region had reopened the comment period, "it would have the likely effect" of expediting the decisionmaking process, Pet. at 8, he provides no explanation as to why that would be the case.

Rather than addressing how relevant Board precedent applies to the facts in this permitting action, Petitioner simply argues that certain additional analyses and information and new permit conditions resulting from the public comment period necessarily require reopening of the comment period, but Petitioner fails to demonstrate that such reopening is necessary or otherwise show that the Region abused its discretion in electing not to do so.

Petitioner first argues that Region 9's decision to revise its BACT analysis to assume that carbon capture and sequestration ("CCS") was not technically infeasible and thus consider the economic feasibility of CCS under Step 4 of the top-down BACT analysis constitutes a complete reversal of its position on CCS, necessitating reopening of the comment period. However, the additional analysis concerning economic feasibility conducted by the Region was not a complete reversal of position, but simply further analysis supporting the Region's ultimate determination

that CCS was not BACT for GHGs in this case. *See* RTC at 37-38. Moreover, this further analysis was conducted specifically in response to Petitioner's comments suggesting that such analysis be conducted. *See id.*; App. C at 46. The analysis in the Region's response to comments provided a reasoned discussion of the Region's position on the issues, and Petitioner provides no explanation as to why he could not raise any and all concerns about this analysis in his Petition; indeed, the Petition challenges the Region's revised analysis. Pet. at 26-29.[4] As discussed above, it is not clear error for a Region to address an issue for the first time in its response to comments. *In re Russell City Energy Center*, PSD Appeal Nos. 10-01 through 10-05, slip op. at 95 n. 86 (EAB Nov. 18, 2010). In rejecting a petitioner's argument to the contrary, the Board has explained:

> [Petitioner's] statements show a misunderstanding of the part 124 permitting process, including the purpose of the . . . review process. Significant issues are often raised for the first time in comments on a draft permit. When that occurs, the permit issuer is expected to address those newly raised, significant issues in its responses to comments. Those commenters not satisfied with the response may petition the Board for review of the issue or issues.

Id. (citations omitted). Here, too, Petitioner's argument that changes in the analysis between permit proposal and the final permit decision necessarily trigger reopening of the comment period should be rejected.

Petitioner next argues that the Region's recognition of the voluntary solar component of the Project as BACT is a reversal of position necessitating reopening public comment. However, this change was foreseeable, given that the Fact Sheet specifically recognized that the project design included 50 MW of potential solar thermal power generation that represented an inherently lower-emitting technology for the facility as a whole, and that the change was the

[4] Petitioner's brief makes a number of substantive arguments challenging the same revised analyses and revised permit provisions that he argues trigger the need to reopen the public comment period. Region 9 addresses these substantive arguments in Sections III-IV below.

direct result of the Region's consideration of Petitioner's comments on the issue. *See* Ex. 3 at 27, n. 28; RTC at 39-40; App. C at 46. The RTC provided a clear explanation of the Region's analysis and decision, *see* RTC at 39-40, and thus provided a more than adequate record on which to base a permit challenge, as is evidenced by Petitioner's substantive arguments concerning just this issue. Pet. at 20-25. Again, Petitioner fails to demonstrate that the Region abused its discretion in not reopening the comment period with respect to this issue.

Next, Petitioner argues that changes in the BACT analysis relating to particulate matter and related revisions to PM limits in the final PSD permit for the PHPP necessitate reopening the comment period because these changes were based on information put on record for the first time in the City's comments on the draft permit. As stated above, significant issues are often raised for the first time in comments on a draft permit. *In re Russell City Energy Center*, slip op. at 95-96 n. 86 (EAB Nov. 18, 2010). As EPA recognized when adopting the part 124 regulations that govern EPA PSD permitting procedures, "if all new material in a response to comments required reproposal, the agency would be put to the unacceptable choice of either providing an inadequate response or embarking on the same kind of endless cycle of reproposals which the courts have already rejected." 45 Fed. Reg. 33,290, 33,412 (May 19, 1980). The fact that a permit applicant might provide information suggesting modification to the BACT analysis and related permit limit revisions, as happened here, is entirely foreseeable, and the Region's discussion of BACT for PM and the PM limits in its response to comments provided a clear and reasoned explanation of the additional analysis conducted and related permit revisions. RTC at 49-52; Ex. 9 at 2-6. Again, Petitioner fails to demonstrate that the Region abused its discretion in not reopening the comment period, in light of the opportunity to challenge the Region's revised analysis in his appeal to the Board. *See Am. Soda*, 9 E.A.D. at 297-99 (holding that

Region did not err by adding report submitted by permit applicant after close of comment period—nor by referencing report in the Region's response to comments—without reopening the comment period).

Petitioner also appears to suggest that the fact that Region 9 revised the emission limits for startup and shutdown requires reopening of the comment period, Pet. at 13-14, but he does not demonstrate why these revised limits necessitate a new comment period when the revisions were made after consideration of comments from the City and Petitioner concerning the startup/shutdown limits, and the Region's reasoning was clearly described in its response to comments. *See* RTC at 47-48, 54-55; *see also* Ex. 9 at 7-8; App. C at 53-54. Similarly, Petitioner argues that the fact that the Region included heat rate limits in the final permit as suggested by comments merits reopening of the comment period because he disagrees with the numerical limits that were ultimately selected. However, the Region's response to comments explained in detail why it revised the permit as it did and the basis for the final permit limits selected. RTC at 46, 53-54; *see also* Ex. 9 at 7; App. C. at 52-53. With respect to both of these issues, Petitioner has had an adequate opportunity to address concerns about the permit revisions in his appeal, and Petitioner fails to demonstrate that the Region's determination not to reopen the comment period was an abuse of discretion.

In sum, applying the factors previously considered by the Board to the facts of this case confirms that the Region did not abuse its discretion in deciding not to reopen the public comment period. In this case, Petitioner has not met his burden, and review on these grounds should be denied, particularly in light of the substantial deference that is due to the Region's decision. *See Dominion Energy II,* 13 E.A.D. at 416.

III. Petitioner Fails to Demonstrate That the Revised Limits in the Final Permit Are Clearly Erroneous

Next, Petitioner argues that Region 9 erred by modifying certain of the Proposed Permit conditions when it issued the final permit for the PHPP, but he fails to meet his burden of demonstrating that these final permit limits were clearly erroneous. As discussed above, these permit changes were made by the Region in response to comments, including those submitted by Petitioner and by the City, and the Region's RTC clearly described the comments made and the Region's reasoned explanation for all the permit changes to which Mr. Simpson objects. While Mr. Simpson's Petition generally argues that these permit changes were erroneous, none of the arguments he makes demonstrates that review is warranted, as detailed below. In most cases, Petitioner does not even mention the comment that resulted in the permit change, or explain specifically why he believes Region 9's response to comments explaining the change was inadequate or erroneous. And even if he had done so, Petitioner simply fails to meet his burden to show that the Region's decisions are clearly erroneous, and cannot do so because the Region's response to comments explains the changes clearly and shows that the Region's decisions were reasonable. *Cf. In re Indeck-Elwood, LLC*, 13 E.A.D. at 146-148 (remanding PSD permit when permitting authority failed to provide a meaningful analysis of a change made in response to comments).

A. Petitioner Fails to Demonstrate that the Final Permit Limits for PM_{10} Are Clearly Erroneous

Petitioner objects to the final PHPP permit limits for PM, specifically the limits for PM_{10}. As noted above, however, the changes that were made to the PM_{10} limits in the final PHPP permit were made in response to comments submitted by the City, and Region 9's RTC

explained clearly the changes that were being made and provided a reasonable explanation for those changes. *See* RTC at 49-52; Ex. 9 at 2-6.

Petitioner does not describe or even mention the comments that resulted in Region 9's decision to make these permit revisions or the Region's response to those comments explaining in detail the changes that were made and its rationale, much less provide any argument as to why the Region's analysis of these issues was inadequate or otherwise in error, as is required. Therefore, Board review concerning the final PM_{10} permit conditions should be denied. *See Avenal Power Center*, slip op. at 4-5 and cases cited therein.

Even if review were not denied for this reason, while Petitioner objects generally that the final PM_{10} limits are less stringent than those in the Proposed Permit, he does not meet his burden of demonstrating that the Region's decision to set these final limits was clearly erroneous. Petitioner argues that the mass emission limits for PM_{10} do not reflect BACT, but supports this assertion only by citing permit limits for one other facility, the Russell City Energy Center. Pet. at 12. In so doing, Petitioner fails to acknowledge the comments recommending changes to the PM limits or to discuss the Region's response explaining in detail its analysis and rationale for the final permit limits, which addressed the issues that Petitioner is now raising. *See* RTC at 49-52. The gas turbines used at the Russell City facility cited by Petitioner are Siemens/Westinghouse 501F models, see Ex. 10 at 3, whereas the PHPP turbines are GE 7FA models. As Region 9 explained in its response to comments:

> We agree with the commenter that in cases such as this where add-on controls are not used, the variability between different manufacturers should be considered…. Although there are units with lower permitted limits, given the uncertainties in terms of differences between manufacturers, and the wide range of PM BACT limits evaluated in the Fact Sheet, we find these limits to represent BACT.

RTC at 51. The Region therefore selected the most stringent limits for the same type of turbine and manufacturer as that used in the PHPP, and Petitioner has not demonstrated that the Region's reasoning in this regard is incorrect.

Petitioner further argues that the nine-hour averaging period for the PM_{10} mass emission limits in the final permit is "not protective of the health based standards for particulate matter," but he provides no explanation as to why he believes that this is the case, other than stating that "normally" PM_{10} emission rates are averaged over one hour, once again citing as an example the Russell City facility. Pet. at 12-13. We note that the Region's RTC stated that "the revised [PM] emission limits do not affect the air quality impact analysis because that analysis was based on the limits initially proposed by the applicant, which [were] higher" and therefore less stringent than the revised limits in the final permit. RTC at 51. Petitioner does not explain how the final PM limits or the related averaging period are not protective of the PM NAAQS, given the Region's explanation that the revised PM emission limits do not affect the air quality impact analysis for the PHPP, which demonstrated compliance with the PM NAAQS. *See* Fact Sheet at 60-61 ("The analysis demonstrates that emissions from PHPP . . . will not cause or contribute to exceedances of the NAAQS for . . . 24-hour PM10, 24-hour PM2.5, or annual PM2.5 or applicable PSD increments").

Petitioner's general argument that PM_{10} emission rates are "normally" averaged over one hour also does not support the conclusion that the revisions to the averaging period provisions in the final permit are not protective of the PM NAAQS when considered in light of the permit record here. First, even if, as Petitioner alleges, the Russell City facility's permit includes such an averaging period,[5] the record makes clear that the averaging period for PM testing in permits

[5] Petitioner provides no information to support his claim that the permit for the Russell City facility specifies a one-hour averaging period for PM_{10} testing.

varies considerably, and often is not even specified in permits. *See* Fact Sheet at 25. Second, and more importantly, the Region specifically explained that it revised the averaging period for the PM testing (from 3 hours in the Proposed Permit to 9 hours in the final permit) in order to allow for longer sampling times, which, along with an appropriate averaging period, should result in more accurate test results:

> Regarding the testing conditions, we are revising the averaging period for the PM limits to reflect the circumstances needed to properly conduct the required compliance testing. Because of inherently low emissions, PM emissions are generally below the detection limit for the test methods (Method 5 and 202/201A) when using one hour sampling times. For example, the Chouteau Power Plant testing used two-hour sampling times for each test run. However, we believe three-hour test runs may be more appropriate and would account for more variability in operations than the shorter 1-hr test runs referenced by the commenter. Condition X.C.1 has been revised to reflect the revision to a 9-hr averaging period.

See RTC at 51-52 (internal footnote deleted), 59. Condition X.G.1.a of the PHPP permit requires that PM testing be conducted according to 40 C.F.R. § 60.8, *see* Ex. 5 at 16, which in turn requires, in paragraph (f), three separate test runs for each performance test. Therefore, compliance with the PM emission limits for the PHPP is calculated from the results of three 3-hour test runs. Because the total sampling time is 9 hours, the averaging period is referred to as a 9-hour averaging period. Petitioner does not even mention this reasoned explanation of the Region's decision to set a 9-hour averaging period to achieve more accurate test results, much less attempt to explain how achieving more accurate test results would not be protective of the NAAQS.

As noted earlier, the petitioner's burden is particularly heavy in cases where a petitioner seeks review of issues that are fundamentally technical or scientific in nature, as the Board typically defers to the expertise of the permit issuer on such matters if the permit issuer adequately explains its rationale and supports its reasons in the record. *See In re NE Hub*

Partners, L.P., 7 E.A.D. at 567; *In re Dominion Energy Brayton Point*, LLC, 12 E.A.D. at 510; *In re Peabody Western Coal*, 12 E.A.D. at 33-34. Here, Petitioner has not even addressed the Region's rationale on the technical issues with respect to the PM_{10} conditions in the final permit. For the reasons stated above, Petitioner therefore fails to meet his burden of demonstrating that the Region's final PM_{10} permit conditions are clearly erroneous.

B. Petitioner Fails to Demonstrate that the Final Startup/Shutdown Permit Limits for NO_x and CO Are Clearly Erroneous

Similarly, while Petitioner raises objections to the final permit's startup/shutdown limits for NO_x and CO, Petitioner fails to mention either the comments from the City and Petitioner that Region 9 considered prior to setting these limits or the rationale for setting the limits provided in the RTC. *See* RTC at 47-48, 54-55; *see also* Ex. 9 at 7-8; App. C at 53-54. On this basis alone, review of this issue should be denied. On the merits of the issue, while Petitioner argues that the final permit's startup/shutdown limits do not reflect BACT, he fails to demonstrate specifically how the final startup/shutdown permit conditions do not reflect BACT or are otherwise clearly erroneous.

As a preliminary matter, Petitioner mischaracterizes the changes in the final permit by suggesting that Region 9 replaced lb/hr limits in the Proposed Permit with increased lb/event limits in the final permit. However, Proposed Permit Condition X.D.3 had both lb/hr and lb/event limits during startup and shutdown events. The final permit maintained the Proposed Permit's lb/event limits but revised the lb/hr limits for NO_x and CO to be the same value during any type of startup or shutdown event in Condition X.D.7 and X.D.8. *See* RTC at 60.

The Region made these permit revisions as a result of its consideration of comments from the City, which stated that it did not believe that the Proposed Permit's NO_x limits during startup were achievable, and which suggested different limits designed to ensure compliance with the

NO_2 NAAQS, as the lb/hr limits were set with the intent of ensuring compliance with the modeled worst-case emission rates. The City's comments also requested removal of the CO lb/hr limits as the City believed that violation of the CO NAAQS was not a concern because the modeled emissions were below the significant impact level. *See* RTC at 54; Ex. 9 at 7-8. In response, the Region revised the permit as described above, maintaining the Proposed Permit's lb/event limits but revising the lb/hr limit to be the same value for NO_x and CO during any type of startup or shutdown event. Ex. 5 at 10-11; *see also* RTC at 60. As the Region explained: "The proposed permit had lb/hr emission rates averaged over the lb/event limits rather than being based on the modeled emission rates. Because the lb/hr limits were set to ensure compliance with the NAAQS, the emission rates used for modeling should be used as the BACT lb/hr limits. In this case, the limits will be based on a combined emission rate," *i.e.*, the combined emissions from both turbines. *See* RTC at 54-55. The Region specifically noted that "[t]he revision of these lb/hr emission limits does not affect the lb/event and time duration limits established as part of the BACT determination and does not allow operation of the facility in a manner that would exceed the modeled emission rates." *Id.* Petitioner fails to even mention this reasoned explanation for the permit changes and therefore does not demonstrate that the Region's explanation was inadequate or erroneous.

As the sole support for his argument that the permit limits do not reflect BACT, Petitioner simply cites to vendor guarantees for the GE Frame 7FA turbine with Fast Start technology at the Oakley Generating Station ("OGS") and compares the emission limits for the OGS with those in the final permit for the PHPP. Pet. at 13-14. Yet Region 9's analysis specifically explained why the startup/shutdown limits for the OGS are not comparable to those for the PHPP:

> The [Oakley Generating Station (OGS)] and PHPP will use two different types of GE 7FA turbine technology. The OGS facility will use two gas turbine generators and one steam turbine generator to produce 624 MW of power. The PHPP will use two gas turbine generators with duct burners and one steam turbine generator to produce 570 MW of power…Because the emission limits are on a mass basis we find that the difference in size and setup of the two facilities does not make the emissions during startup and shutdown directly comparable. For example, a larger unit will generate more emissions on a mass basis (lb/hr or lb/event in this case) but on a concentration basis (ppm or lb/MMBtu) the emissions could be equivalent. This is demonstrated by the NOx limits during normal operations for these two facilities. Both facilities must meet 2.0 ppm but OGS has a lb/hr emission limit of 15.52 whereas PHPP's lb/hr emission limit is 13.47 lb/hr (without duct burning). We continue to conclude that BACT during startup and shutdown is the lb/event limits and duration limits in the Proposed Permit.

RTC at 47-48. Petitioner does not mention this explanation, much less demonstrate that it was clearly erroneous. And given the differences between the two facilities' turbines and associated emission limits as described in the Region's RTC, Petitioner's late attempt to introduce vendor guarantees for the turbines used at OGS to support his argument about BACT limits for the PHPP is equally unpersuasive.

As discussed above, the Board typically defers to the expertise of the permit issuer on matters that are fundamentally technical or scientific in nature if the permit issuer adequately explains its rationale and supports its reasons in the record. *See In re NE Hub Partners, L.P.*, 7 E.A.D. at 567. In this case, Petitioner has not even attempted to refute the Region's rationale as described in the RTC with respect to the startup/shutdown limits in the final permit. Petitioner has not demonstrated that the Region's final permit limits for the PHPP for startup/shutdown are clearly erroneous, and review of this issue should therefore be denied.

C. Petitioner Fails to Demonstrate that the Final Heat Rate Permit Limits for GHG Are Clearly Erroneous

Petitioner notes that he submitted a comment recommending that Region 9 include heat rate limits as BACT for GHG, and that Region 9 adopted that recommendation[6] and determined

[6] *See* RTC at 46.

that a maximum heat rate limit of 7,319 Btu/kWh represents BACT for the PHPP. Pet. at 14. While Petitioner's argument concerning heat rate focuses on his request to reopen the comment period, as discussed above, Petitioner also appears to question the appropriateness of the final permit's heat rate limit, stating that lower heat rates have been "achieved in practice" by comparable facilities, and citing heat rates for "comparable facilities identified by the applicant and the [CEC]." Petitioner also states that the heat rate limit selected is higher than the maximum heat rate identified by the applicant of 6,970 Btu/kWh. *See* Pet. at 14-15. However, Petitioner fails to explain how these arguments point to any inadequacy or error in the reasoned explanation provided in the Region's RTC concerning the Region's development of the heat rate limits:

> As a part of the GHG BACT analysis, the applicant included a list of the average heat rates (Btu/kWh based on the HHV) for various facilities near southern California. The applicant listed the heat rate for the PHPP as 6,970 Btu/kWh. This heat rate was lower than all of the other facilities that were listed. EPA also looked at other recent permitting decisions to determine whether the PHPP value was comparable. One commenter (see Comment 55) pointed to the Oakley Generating Station, which has a heat rate of 6,752 Btu/kWh. However, that heat rate was not included as part of the limits in the permit. The Russell City Energy Center has a voluntary GHG heat rate limit of 7,730 Btu/kWh in its PSD permit. And, on September 28, 2011, EPA Region 6 issued a draft PSD permit for the Lower Colorado River Authority's combustion turbines (CTs) with a GHG heat rate limit of 7,720 Btu/kWh. These limits considered a variety of factors that can affect heat rate, including seasonal variations (i.e. temperature, humidity) and equipment degradation. As a result, we are setting the BACT limit for the PHPP at 7,319 Btu/kWh to ensure the limit is achievable over various operating conditions and during the life of the equipment. Because the heat rate for the PHPP is comparable, and in fact lower, than other permitted or proposed limits, we find that 7,319 Btu/kWh represents BACT for this facility.

RTC at 53-54. Petitioner provides no argument questioning the Region's reasoning concerning the various factors affecting heat rate that must be accounted for when setting a BACT limit for heat rate, specifically including, among other factors, equipment degradation. However, these factors are not accounted for in the heat rate of 6,970 Btu/kWh identified by the applicant and

referenced by Petitioner. Similarly, the heat rates listed by Petitioner with respect to several additional facilities (Pet. at 15) are not BACT limits, but rather anecdotally reported heat rate data that are not tied to any permit limit. Petitioner fails to provide any information demonstrating that these rates would be achievable over time given variability in operating conditions, temperature, pressure, and equipment degradation, or that any of these facilities are comparable to the PHPP with respect to such factors, all of which the Region explained must be considered. *See, e.g., In Re: Newmont Nevada Energy Investment, L.L.C.*, 12 E.A.D. 429, 442 (EAB 2005) ("Agency guidance and our prior decisions recognize a distinction between, on the one hand, measured 'emissions rates,' which are necessarily data obtained from a particular facility at a specific time, and on the other hand, the 'emissions limitation' determined to be BACT and set forth in the permit, which the facility is required to continuously meet throughout the facility's life.")

For these reasons, Petitioner fails to demonstrate that EPA's final heat rate permit limits are clearly erroneous.

IV. Board Review of Other Aspects of Region 9's BACT Analysis Is Not Warranted

Next, Petitioner raises a number of issues concerning Region 9's BACT analysis for the PHPP that are not tied to the specific final permit issues discussed above. However, Petitioner fails to demonstrate that any of these issues constitutes clear error, an abuse of discretion, or raises important policy considerations that the Board should review. Moreover, in some instances, Petitioner fails to demonstrate that the issue was even preserved for review because he has not shown that it was either raised during the public comment period or not reasonably ascertainable at that time.

A. Petitioner Fails to Demonstrate Clear Error Based on Region 9's Identification of Control Technologies for GHGs

Petitioner argues that EPA did not identify all appropriate control technologies for GHGs. However, Petitioner neglects to describe his very general comment on this issue, or discuss EPA's complete response to comments on the issue. Petitioner's comment on this issue merely stated that EPA did not appear to identify all GHG control technologies, and that EPA, the Department of Energy ("DOE"), CEC and others appear to indicate that there are other GHG control technologies. App. C at 47. Region 9's response stated, in full:

> The commenter has not specifically identified which technologies EPA did not consider. The commenter provided links to EPA websites on agriculture and forestry practices to reduce GHG emissions. As stated in Response 39, we do not believe these practices are appropriately considered as BACT for the facility at issue. The commenter also provided a link to a DOE paper regarding advances in CO2 capture. EPA's Fact Sheet indicated that EPA determined CO2 capture to be technically feasible, but that CCS was not being required because of the lack of a feasible sequestration option. EPA's BACT analysis for CCS is supplemented in Response 37 above, where we assume for purposes of the BACT analysis that CO2 capture and sequestration would be technically feasible, but eliminate CCS due to economic infeasibility.

RTC at 40-41. Petitioner does not explain why the Region's response on this issue is clearly erroneous, but merely notes that Petitioner asked whether algae ponds could be used as a control technology. Pet. at 19. This algae pond question was raised by Petitioner in separate, very brief comments,[7] to which the Region provided a reasonable response. *See* RTC at 38-39, 40-41, 46. While Petitioner's brief quotes from the Region's response on the algae ponds issue, he provides no explanation as to why that response is inadequate or erroneous. In sum, Petitioner has neither identified any errors in EPA's responses to comments nor identified other particular control technologies that should have been addressed, and as a result, his argument fails. *See In re Knauf Fiber Glass, GmbH*, 9 E.A.D. 1, 5 (EAB 2000) ("Petitions for review may not simply

[7] *See* App. C at 46, 52.

repeat objections made during the comment period; instead they must demonstrate why the permitting authority's response to those objections warrants review").

B. Petitioner Fails to Demonstrate that Region 9's Decision Not to Analyze Alternative Solar Configurations as BACT for GHGs Is Clearly Erroneous

Petitioner argues that Region 9 should have considered various alternative solar scenarios as BACT for GHGs for the PHPP and conducted additional detailed BACT analysis along these lines. However, Petitioner fails to meet his burden of showing that the Region's treatment of the solar component of the facility warrants review.

The BACT analysis in Region 9's Fact Sheet acknowledged the solar thermal component of the Project, stating that the project design includes 50 MW of potential solar thermal power generation, which represents an inherently lower-emitting technology for the facility as a whole. *See* Fact Sheet at 27, n. 28.[8] However, the BACT analysis in the Fact Sheet did not explicitly consider the solar thermal component of the Project to be BACT for GHGs, nor did the Proposed Permit explicitly require the operation of the solar component in a particular manner.

During the public comment period, Petitioner's comments noted the language in the Region's Fact Sheet, including the BACT analysis, discussing the solar component, and stated that the Region appeared to indicate that the solar component is a GHG control technology, and thus a permit condition requiring the solar generation should be included in the permit. App. C at 47. Petitioner expressed concerns that the solar aspect of the Project might not be built and also questioned whether a greater solar component would represent greater control, and what the ideal ratio of solar to natural gas would be for maximum GHG and environmental justice benefits for the project. *See id.*

[8] Other portions of the Fact Sheet also described or referred to the solar component. *See, e.g.,* Fact Sheet at 3, 5-6.

After consideration of this comment, Region 9 determined that, in this unique case – where the permit applicant had incorporated the solar component of the PHPP into its project design in a manner that served its project purpose – this inherently lower-emitting technology should be considered BACT. *See* RTC at 39-40. The Region then explained that it was adopting appropriate permit conditions to ensure that the solar component proposed by the applicant would be constructed, operated and maintained in a manner ensuring its full utilization. *See id.* Region 9 revised the final permit to require the solar thermal plant ("STP") designed to generate 50 MW of power proposed by the applicant be built as part of the facility (see Ex. 5 at 2), and added Conditions III.B, III.C, and X.I.11 to the permit (Ex. 5 at 4, 21),[9] which require the development of a maintenance plan to ensure that the solar-thermal component is operated and maintained according to the design parameters. The final permit specifically requires that the STP be operated and maintained in a manner consistent with good engineering practices for its "full utilization." Ex. 5 at 4.

Not only did the Region's RTC explain its reasoning for adding these provisions to the permit, but it also discussed why, after having reviewed relevant information in the record from the applicant, the Region believed that alternative solar configurations would not meet the primary project purpose and therefore need not be considered further, indicating that to do so would require fundamentally redefining the source:

> The solar component of the Project was described in the EJ Analysis, but was not the basis for any specific determination or conclusion in our analysis of the proposed permit's limits or impacts. Upon review of this comment, we find it appropriate to clearly state that the solar component is a lower-emitting GHG technology at this facility. Because the solar component is integrated into the heat recovery portion of the project, it has the potential to reduce GHG emissions by reducing use of the duct burners during peak energy demand. The Project, as described in the application, includes the development of 50 MW of solar energy. As an integrated part of the Project with the ability to reduce GHG emissions, we consider the solar component to be part of the GHG BACT determination for the

[9] *See also* RTC at 58.

> combustion turbines and associated heat recovery system. In addition, the permit has been revised to ensure that the solar component is a required part of the facility. Conditions III.B, III.C, and X.I.11 have been added to the permit to require construction of a solar-thermal plant designed to generate 50 MW of power. Accordingly, the permit also requires the development of a maintenance plan to ensure the solar-thermal component is operated and maintained according to the designed parameters.
>
> While EPA agrees that for any project there are less GHG emissions per MWh from solar energy than from fossil fuel energy, the primary purpose of the PHPP is to provide 570 MW of baseload power to increase the reliability of the electrical supply for the City of Palmdale. In addition, the applicant has proposed to use solar technology to generate a portion of the facility's power output to support the State of California's goal of increasing the percentage of renewable energy in the State. The applicant is proposing to use 251 acres of a 331-acre lot for solar generation. An all solar facility would not be feasible because of the space constraints of the 331-acre lot and because solar energy is not available at all times to meet baseload demands. Given the scope of the Project, it is not necessary for the applicant to determine an optimal ratio of solar to natural gas.
>
> Finally, we note that the incorporation of the solar power generation into the BACT analysis for this facility does not imply that other sources must necessarily consider alternative scenarios involving renewable energy generation in their BACT analyses. In this particular case, the solar component was a part of the applicant's Project as proposed in its PSD permit application. Therefore, requiring the applicant to utilize, and thus construct, the solar component as a requirement of BACT did not fundamentally redefine the source. EPA has stated that an applicant need not consider control options that would fundamentally redefine the source. However, it is expected that each applicant consider all possible methods to reduce GHG emissions from the source that are within the scope of the proposed project.

RTC at 39-40 (internal footnote omitted).

The Region's analysis is consistent with EPA's recent guidance on PSD Permitting for Greenhouse Gases, which states: "While Step 1 [of a BACT Analysis] is intended to capture a broad array of potential options for pollution control, this step of the process is not without limits. EPA has recognized that a Step 1 list of options need not necessarily include lower polluting processes that would fundamentally redefine the nature of the source proposed by the permit applicant. BACT should generally not be applied to regulate the applicant's purpose or

objective for the proposed facility."[10] PSD and Title V Permitting Guidance for Greenhouse Gases, EPA Office of Air Quality Planning and Analysis, EPA-457/B-11-001, March 2011, at 26 (hereinafter "PSD/Title V GHG Permitting Guidance"). The EAB has consistently recognized the permitting agency's discretion in this regard:

> As the NSR Manual explains, "[h]istorically, EPA has not considered the BACT requirement as a means to redefine the design of the source when considering available control alternatives." NSR Manual at B.13. Thus, while "it is legitimate to look at inherently lower-polluting processes in the BACT analysis, [] EPA has not generally required a source to change (i.e., redefine) its basic design." . . . Consequently, where a permit issuer properly concludes that an alternative technology would amount to a redefinition of the source, the permit issuer need not consider the alternative as part of its BACT analysis. . . On the other hand, while "it is not EPA's policy to require a source to employ a different design, redefinition of the source is not always prohibited. This is a matter for the permitting authority's discretion."

In re Russell City Energy Center, slip op. at 96-97 (EAB Nov. 18, 2010) (internal citations omitted).

Here, Petitioner does not demonstrate that Region 9's reasoned determination that consideration of other solar configurations would fundamentally redefine the source is clear error.[11] Petitioner cites no precedent for requiring consideration of solar technologies in general

[10] Petitioner quotes this guidance document when describing page 14 of the applicant's GHG BACT Analysis. See Pet. at 21.

[11] To the extent Petitioner raises new specific arguments or factors concerning the solar configuration that he argues Region 9 should have considered, such as issues concerning GHG emissions from vehicles used to service the solar field, the placement of solar panels on facility rooftops, drainage area, and over roadways, generation of more MW in the area provided, and solar as a "clean fuel," Petitioner fails to demonstrate that these issues were raised in public comment and thereby preserved for Board review or that they were not reasonably ascertainable during the public comment period. *See In re Steel Dynamics, Inc.*, 9 E.A.D. 165, 230 (EAB 2000) and cases cited therein (explaining that the Board "often denie[s] review of specific issues that were raised in a general manner during the public comment period" and denying review of PSD arguments based on EPA guidance which was not cited in petitioner's comments). Even if Petitioner had shown that these issues were preserved for review, however, for the reasons stated in the RTC and elsewhere in this section, requiring consideration of alternative solar configurations beyond the voluntary solar configuration proposed by the applicant would require fundamentally redefining the source. To the extent that Petitioner might be arguing that additional utilization of the solar component must be considered in the "clean fuels" analysis, EPA has recognized that the list of control options for a BACT analysis – including clean fuels – "does not need to include 'clean fuel' options that would fundamentally redefine the source." PSD/Title V GHG Permitting Guidance at 27-28; *see also In re Old Dominion Electric Cooperative*, 3 E.A.D. 779, 793-94 (Adm'r 1992). Accordingly, this type of clean fuels analysis was not required in this case because, as explained above, Region 9 had already explained that such a change would fundamentally redefine this source.

as BACT for natural gas-fired electric generating facilities. The fact that the PHPP includes a particular solar component that Region 9 has determined in this unique case is an inherently lower-emitting process that should be recognized as BACT does not lead to the conclusion that myriad other solar configurations must also be considered in a case where, as here, the Region has provided a reasoned basis for concluding that to do so would fundamentally redefine the source.

Petitioner attempts to refute EPA's determination by arguing that EPA's statement that "solar energy is not available at all times to meet baseload demands" is incorrect, quoting a CEC document's discussion of energy storage technologies that are commercially available and under development to support reliable storage of energy on the electric grid in California. Pet. at 24-25.[12] However, citation to this very general discussion does not demonstrate clear error in the Region's conclusion, based on the record, that alternative solar configurations would not serve the PHPP's project purpose of availability to provide power at all times to meet baseload demands. In fact, another CEC document in the record for Region 9's permitting decision supports the opposite of the conclusion suggested by Petitioner:

> The decline in the gas-fired energy in the system might easily mislead some to think that no more gas-fired power plants need be built. However, that misapprehends the nature of an electric system more reliant on "intermittent" renewable power such as wind and solar energy, and the need for reserve generation capacity when those intermittent renewable sources generate less. Wind power, for instance, is often less available on the hottest summer days when generation capacity is most needed to meet system load requirements. Thus, a system that increasingly relies on renewable generation for energy must likewise provide gas-fired dispatchable capacity to make the system reliable when intermittent renewable generators are providing less.

[12] Petitioner argues that the land adjacent to the Project site could be used for additional solar arrays, but this issue is not central to the Region's conclusion that alternative solar configurations would not serve the Project purpose as a baseload facility. Even if it were, however, the fact that the City owns an adjacent parcel does not in and of itself demonstrate that the City could easily build an additional or different solar configuration there or that any such solar configuration would be consistent with the Project's purpose.

See RTC at 35-36 (quoting CEC Committee Guidance on Fulfilling CEQA Responsibilities at 224 (March 2009), see http://www.valleyair.org/programs/CCAP/documents/CEC-700-2009-004.pdf).

Petitioner further argues that the final permit's description of the solar component contributing "up to 50 MW of generation" is vague and necessitates further analysis, suggesting that the Permittee could generate only nominal energy from the solar component. Pet. at 23-24. However, as discussed above, and in Region 9's RTC, Region 9 revised the final permit to require that an STP designed to generate 50 MW of power be built as part of the facility, and to require that the solar-thermal component be operated and maintained according to the design parameters and in a manner consistent with good engineering practices for its "full utilization." *See* RTC at 39-40. These conditions make clear that the facility will effectively and fully utilize the electric generating capacity of its solar component. Petitioner fails to demonstrate how these conditions and the Region's response to comments on this issue are inadequate.

For all the reasons stated above, Petitioner has failed to demonstrate the Region's permit decision concerning the solar component of the PHPP warrants review. Board review of this issue therefore should be denied.

C. Petitioner Fails to Demonstrate that Issues Concerning Region 9's Ranking of GHG Control Technologies Were Preserved for Review or Not Reasonably Ascertainable During the Public Comment Period

Petitioner argues that Region 9's ranking of GHG control technologies was faulty because certain information that may be relevant to Step 3 of a top-down BACT analysis as discussed in the Office of Air Quality Planning & Standards, U.S. EPA, New Source Review Workshop Manual 1 (draft Oct. 1990) ("NSR Manual") is not found in Region 9's PHPP GHG BACT analysis or in the Region's response to comments. Pet. at 25. However, Petitioner fails

to demonstrate that this issue was raised during the public comment period or, alternatively, that the issue was not reasonably ascertainable at the time comments were submitted. Review of this issue therefore should be denied. *See* 40 C.F.R. § 124.19(a); *In re BP W. Coast Products, LLC, Cherry Point Co-generation Facility*, 12 E.A.D. 209, 218-20 (EAB 2005).[13]

D. Petitioner Fails to Demonstrate that Region 9's Determination that Carbon Capture and Sequestration Is Economically Infeasible for the PHPP Was Clearly Erroneous

Petitioner argues that as part of its GHG BACT analysis, Region 9 improperly dismissed CCS as economically infeasible. As discussed above, Petitioner's comments suggested that CCS was not technically infeasible and that the issue with CCS was instead "one of cost," and went on to state that "[t]here should be real analysis, real numbers on cost." App. C at 46. In response to Petitioner's comments, Region 9 analyzed the economic feasibility of CCS. *See* RTC at 37-38. Petitioner argues that in conducting such analysis, the Region's comparison of the cost of control using CCS to the cost of the facility as a whole does not fulfill BACT analysis requirements, asserting that the Region was required to evaluate the cost per ton of pollutant emissions removed or reduced by adding CCS. Petitioner further argues that the Region's analysis of CCS improperly characterized the applicable data resulting in inaccurate cost estimates under the analytical approach taken by the Region.

Region 9's response to comments appropriately considered the economic feasibility of CCS as BACT for the PHPP, explaining that:

> As provided in the CEC's PMPD, the estimated capital costs for the PHPP are $615-$715 million dollars. For comparison purposes, if these capital costs were annualized (over 20 years) they are about $35 million. In comparison, the estimated annual cost for CCS is about $78 million, or more than twice the value of the facility's annual capital costs.

[13] If the Board desires further briefing on the merits of this issue, Region 9 would be happy to provide it.

RTC at 38. While Petitioner is correct that EPA's BACT analyses typically consider the cost per ton of pollutant emissions removed or reduced based on recommendations in EPA guidance, there is nothing in the Act or in EPA's rules that requires such an analysis. *See generally* 42 U.S.C. § 7479(3) (BACT definition); 40 C.F.R. § 52.21(b)(12) (same). Neither does Petitioner show that it is necessary for the Region to consider detailed information evaluating the cost per ton of pollutant emissions removed or reduced where, as here, the overall cost of the control technology at issue on an annualized basis is more than twice the cost of the Project overall, and the technology at issue, CCS, has not been previously required and has had only limited application in trial settings. Indeed, EPA's PSD/Title V GHG Permitting Guidance recognized that there may be circumstances where the type of economic analysis recommended in prior EPA guidance is not necessary, such as the following:

> With respect to the evaluation of the economic impacts of GHG control strategies, it may be appropriate in some cases to assess the cost effectiveness of a control option in a less detailed quantitative (or even qualitative) manner. For instance, when evaluating the cost effectiveness of CCS as a GHG control option, if the cost of building a new pipeline to transport the CO2 is extraordinarily high and by itself would be considered cost prohibitive, it would not be necessary for the applicant to obtain a vendor quote and evaluate the cost effectiveness of a CO2 capture system.

PSD/Title V GHG Permitting Guidance at 42. Region 9's analysis in this case is consistent with that guidance. The estimated annual cost of CCS (approximately $78 million) is so high when compared with the annualized capital costs of the facility (approximately $35 million) that this less detailed quantitative analysis is more than adequate to demonstrate that CCS would be economically infeasible.

Petitioner further argues Region 9 has grossly inflated the estimated $75.9 million annual cost of carbon capture and compression for the PHPP, citing as support specific language from the DOE report used, in part, as the basis for the Region's cost estimate. Petitioner's argument

fails, however, because the lower cost figure cited by Petitioner reflects a cost estimate for ***pre-combustion*** carbon capture in the context of an integrated gasification combined-cycle ("IGCC") facility. *See* Pet. at 28.[14] The cost data cited by Petitioner is not relevant to the analysis here because his argument fails to recognize that natural-gas fired power plants such as the PHPP must capture carbon ***post-combustion,*** as was considered by Region 9 in its analysis, since CO_2 is generated from the combustion process and is not available pre-combustion. ***See, e.g.,*** Ex. 3 at 27 ("CCS is a technology that involves capture and storage of CO_2 emissions to prevent their release to the atmosphere. ***For a gas turbine, this includes removal of CO_2 emissions from the exhaust stream*** . . .") (emphasis added).

Petitioner's brief also suggests that because costs of CCS could be offset from additional revenues from oil production or from funding from the DOE, these factors argue against the conclusion that CCS would be economically infeasible for the PHPP. However, there is nothing in the record to indicate that the City will actually receive such funding or participate in such oil recovery activities, and Petitioner cites no authority suggesting that it would be reasonable for EPA to rely on the mere possibility of outside cost offsets or a funding source for a particular type of control technology or facility to determine that an otherwise economically infeasible technology is, in fact, economically feasible. Accordingly, this argument fails as well.

In sum, Petitioner fails to demonstrate that the Region's determination that CCS was economically infeasible is clearly erroneous.

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[14] The IGCC process gasifies solid or liquid fuel into CO_2 and hydrogen (H_2) prior to the occurrence of combustion and power production.

V. Petitioner Fails to Demonstrate that Region 9's Decision Not to Conduct a Complex and Resource-Intensive Needs Analysis for the PHPP Is Clearly Erroneous

Petitioner also argues that Region 9 erred by deciding not to conduct a detailed analysis of a "no-build alternative" in this case. However, Petitioner's argument is without merit.

First, during the public comment period, Petitioner's comments included a *very* general comment that Region 9 determined *might* be interpreted as raising the question of whether the facility was needed. *See* RTC at 35 (noting that "the commenter appears to suggest that there is not a need for the facility"). Region 9 responded reasonably to this very general comment, noting that EPA has previously recognized that it may consider the need for a facility and a "no build" alternative within the context of CAA section 165(a)(2). *See* RTC at 35-36. However, the RTC also explained that the Region believed that mechanisms within the State of California provide the appropriate vehicles through which to address issues regarding the need for natural gas-fired power plants in the State, as those mechanisms involve the entities specifically authorized and best equipped to consider the State's short- and long-term energy needs in the context of State renewable requirements, among other factors. *Id.* As mentioned above, Region 9 further noted that the CEC had indicated relatively recently that there continues to be a need for natural gas-fired power plants in California in the context of increasing reliance on renewable generation. *See id*. Region 9 then explained that it was not required to perform an independent analysis of alternatives or an analysis that extends beyond that submitted by commenters. The Region noted that the type of analysis that would be required to determine the "need" for a specific natural gas-fired power plant in California would require a "myriad of extremely complex factors and detailed information that EPA has neither the resources nor the expertise to analyze," and that even if such expertise and resources did exist, "the level of analysis and

information submitted by the commenter does not consider all of the relevant factors or provide the type of detailed information necessary for such an analysis." *Id.* at 36.

Petitioner fails to demonstrate that Region 9's RTC or determination on this issue was clearly erroneous, particularly given that Petitioner's comments did not provide the type of detailed information that Region 9 indicated would be necessary to conduct a needs analysis within the State of California for natural gas-fired power plants in general or for the PHPP in particular.

First, Petitioner appears to misapprehend the position stated in the RTC. Petitioner contends that because the CEC and the California Public Utilities Commission were not required to make a specific determination of need for this facility, it was inappropriate for the Region to rely on State agency analyses to forgo conducting such an analysis itself. Region 9's RTC, however, did not rely on the State's having conducted a specific needs analysis for the PHPP. Rather, Region 9 accurately noted the primary agencies within the State of California that play a role in determining the need for various types of power generating facilities within the State, and emphasized the difficulty and complexity involved with conducting a project-specific needs assessment for such facilities in California. *See* RTC at 35-36. Region 9 stated its determination that conducting such an assessment is generally beyond EPA's expertise, particularly where, as in this case, the type of information necessary to conduct such an analysis has not been provided by the commenter. As discussed above, the Region noted that a PSD permit-issuing authority is not required to perform an independent analysis of alternatives, or an analysis that extends beyond that submitted by commenters, noting that the EAB has found that "[t]hese limits on the permit issuer's obligation to consider alternatives are particularly important where…a rigorous and robust analysis would be time-consuming and burdensome for the permit issuer. In this

context, the permit issuer must be granted considerable latitude in exercising its discretion to determine how best to apply scarce administrative resources." RTC at 35 (citing *In re Prairie State Generating Co.*, 13 E.A.D. 1, 33 (EAB 2006) ("*Prairie State*")). In this case, conducting a project-specific needs assessment, as Petitioner suggests, without having been provided adequate information, is precisely the type of "rigorous and robust analysis [that] would be time consuming and burdensome for the permit issuer" that was rejected by the Board in *Prairie State*. *See Prairie State* at 33-34 (rejecting petitioners' argument "that a commenter can require a permit issuer to perform a rigorous analysis simply by raising the subject of 'need' in the public comments").

Petitioner also belatedly attempts to introduce new information and arguments concerning the need for the facility that were not raised during the public comment period, quoting the 2009 CEC Integrated Energy Policy Report, which is not part of the administrative record for the permit decision, but he fails to demonstrate that these arguments were not reasonably ascertainable during the public comment period. Accordingly, these arguments cannot be considered in this matter. *See, e.g., In re BP W. Coast Products*, 12 E.A.D. at 218-20, *In re Steel Dynamics, Inc.*, 9 E.A.D. at 230.[15]

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[15] Should the Board desire further briefing on the merits of these arguments, Region 9 would be happy to provide it.

CONCLUSION

For all of the reasons stated above, Region 9 respectfully requests that the Board deny review of Region 9's final permit for the PHPP.

Date: February 17, 2012

Respectfully submitted,

/S/ Julie Walters

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STATEMENT OF COMPLIANCE WITH WORD COUNT LIMITATION

I hereby certify that this Response to Petition for Review submitted by EPA Region 9, exclusive of the Table of Contexts, this Statement of Compliance, and the attached Certificate of Service, contains 13,591 words, as calculated using Microsoft Word word-processing software.

/S/ Julie Walters

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Julie Walters

CERTIFICATE OF SERVICE

I hereby certify that I caused a copy of **EPA REGION 9'S RESPONSE TO PETITION FOR REVIEW** and **EPA REGION 9'S EXCERPTS of RECORD** to be served by electronic mail upon the persons listed below.

February 17, 2012

/S/ Julie Walters

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