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

In the Matter of:	)	
	)	PETITION FOR REVIEW
	)	(Clerical Amendment)
	)	
	)	
Palmdale Hybrid Power Plant PSD Permit	)	

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INTRODUCTION

Pursuant to 40 C.F.R. § 124.19(a), Rob Simpson ("Petitioner") petitions for review of the conditions of Clean Air Act Prevention of Significant Deterioration Permit No. SJ 08-01 ("the Permit"), which was issued to Palmdale Hybrid Power Plant ("PHPP") on October 18, 2011 by Deborah Jordan, Director, Air Division, Region IX, Environmental Protection Agency. The permit at issue in this proceeding authorizes the City of Palmdale to construct and operate the PHPP in Palmdale, California.

Petitioner contends that certain pertain conditions are based on clearly erroneous findings of fact and conclusions of law. Specifically, petitioner challenges the following permit conditions:

(1) Permit in its entirely
(2) Permit conditions or lack of permit conditions relating to greenhouse gases emissions

FACTUAL AND STATUTORY BACKGROUND

The EPA received an application for a PSD permit for the Palmdale Hybrid Power Plant ("PHPP") April 1, 2009. On August 11, 2011 the EPA issued a proposed permit and opened the comment period ending September 14, 2011.

On September 12, 2011, Petitioner requested an extension of the comment period, writing "We will be commenting on the above referenced project. 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." Appendix A. That same day, Director Jordon declined to extend the comment period. Appendix A.

The permit was issued October 18, 2011. On November 15, 2011 Petitioner requested that the Regional Administrator reopen the comment period pursuant to 40 C.F.R. § 124.14. Appendix B. Petitioner has not received an answer to this request.

THRESHOLD PROCEDURAL REQUIREMENTS

Petitioner satisfies the threshold requirements for filing a petition for review under Part 124, to wit:

1. Petitioner has standing to petition for review of the permit decision because he participated in the public comment period on the permit. See 40 C.F.R. § 124.19(a). Petitioner's comments are attached as Appendix C and can be found in the administrative record.

2. The following issues were raised by Petitioner during the public comment period and therefore were preserved for review.

Sufficiency of the BACT analysis
Failure to extend public comment period

3. The following issues were not reasonably ascertainable at time of comment as they arose out of the Response to Comments or became issues after the comment period had ended:

Changes in the BACT analysis
Failure to reopen public comment

ARGUMENT

I. THIS PERMIT WAS GRANTED IN VIOLATION OF NOTICE AND PUBLIC PARTICIPATION REGULATIONS

a. The public comment period was not adequate

The EPA has not articulated any reason why Petitioner's request for an extension of the comment period was denied. Petitioner requested extension on September 12, 2001 stating, "We will be commenting on the above referenced project. 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." Petitioner again requested an extension in his comment.

In the Response to Comments, EPA writes "We 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 therefore the extension request was denied." This is addressed in the response to comments as follows:

> Comment: In response to EPA's denial of his request for extension of the public comment period, the commenter stated that the application has been under review for several years, but EPA only posted the documents related to the Proposed Permit on August 12, 2011. The commenter stated that all of the posted documents equate to tens of thousands of pages of information and the EPA only intends to have an informational meeting on the last day of the public comment period. The commenter stated that previously, information was posted to the docket and accessible as it became available. The commenter stated that the present practice of withholding all information until the start of the public comment period, with the shortest public comment period that the law might allow, serves to preclude public participation.
>
> Response: Please see Response 25. We are unaware of how the commenter determined that the documents associated with the Project equate to tens of thousands of pages of information. EPA reviewed the documents made available and estimated

the number of pages of all documents at around 1,000 pages. EPA does not believe that the relevant information was particularly voluminous in this case, nor were the key documents especially lengthy.

40 C.F.R. § 124.13 calls upon "All persons, including applicants, who believe any condition of a draft permit is inappropriate" to "raise all reasonably ascertainable issues and submit all reasonably available arguments supporting their position by the close of the public comment period." When members of the public call upon the EPA to allow them sufficient time to do just this, such request should be granted so that meaningful public participation is not frustrated.

According to EPA staff, the air quality modeling files make up more than 1000 pages of the administrative record. "I estimate that printing those viewable as text files would easily be greater than 2,000 sheets (front and back), possibly close to 5,000 sheets. It's over 700 MB of data." Email from Lisa Beckham to Rob Simpson, November 07, 2011. Appendix E. The EPA materials reference the CEC proceedings regarding a number of critical issues; the docket for this proceedings indicates over 13,000 pages of records. 30 days was not an adequate time period to comment on the proposed action in compliance with § 124.13.

b. <u>Petitioner's request to reopen public comment period should have been granted</u>

Petitioner requested November 15, 2011 that the Regional Administrator reopen the comment period pursuant to 40 C.F.R. § 124.14. Appendix B. Petitioner has not, as of the submission of this Petitioner, received any communication regarding this request.

Had the Regional Administrator reopened the comment period, it would have the likely effect, as called for in 40 C.F.R. § 124.14, to expedite the decision-making process. Unfortunately, no response was received and so Petitioner brings the argument for a reopening of the comment period to the Board.

40 C.F.R. § 124.14(b) allows for the following:

> If any data information or arguments submitted during the public comment period, including information or arguments required under § 124.13, appear to raise substantial new questions concerning a permit, the Regional Administrator may take one or more of the following actions:
> (1) Prepare a new draft permit, appropriately modified, under § 124.6 ;
> (2) Prepare a revised statement of basis under § 124.7, a fact sheet or revised fact sheet under § 124.8 and reopen the comment period under § 124.14; or
> (3) Reopen or extend the comment period under § 124.10 to give interested persons an opportunity to comment on the information or arguments submitted.

Both the 9th and District of Columbia Circuit Courts of Appeals call for the reopening of a comment period where an Agency's conclusion is not a "logical outgrowth" of the preceding notice and comment period.

> Our conclusion does not imply any dissatisfaction with the rule that the Agency need not subject every incremental change in its conclusions after each round of notice and comment to further public scrutiny before final action. E. g., International Harvester Co. v. Ruckelshaus, 155 U.S.App.D.C. 411, 424, 478 F.2d 615, 632 n.51 (1973); South Terminal Corp. v. EPA, 504 F.2d 646, 659 (1st Cir. 1974). But in this case, the Agency's final conclusions are far from the "logical outgrowth" of the preceding notice and comment process, Id., and instead are the result of a complex mix of controversial and uncommented upon data and calculations. Given the lengths that the Agency must travel to justify its revisions between the interim and final stages, we cannot be sure that further and ultimately convincing public criticism of those changes would not have been forthcoming had it been invited by the Agency. n27 See Marathon Oil Co. v. EPA, 564 F.2d 1253, 1271-72 n.54 (9th Cir. 1977).

Weyerhaeuser Co. v. Costle, 590 F.2d 1011, 1031 (D.C. Cir. 1978).

In this case, data, information, and arguments submitted during the public comment period raised substantial new questions concerning the permit. This includes data submitted for the first time by the applicant as public comment and a complete reversal by the EPA on a number of critical issues. A complete reversal of opinion is not a logical outgrowth of the preceding notice and comment, particularly when this reversal was based on information not previously available to commenters. The public should have the opportunity to comment on the new information and on changes made in the response to comments. There are substantial new questions regarding the following:

1. BACT analysis – CO2 sequestration

Page 37 of the Response to Comments explains, "The commenter stated that the CO2 sequestration analysis that determined CCS to be technically infeasible for this project was actually an issue of cost and not technical feasibility." In response, the EPA writes, "we are revising our BACT analysis to assume, for purposes of the analysis, that potential technical or logistical barriers would not make CCS technically infeasible for the PHPP. As a result, CCS would be the topranked control option, and we proceed to Step 4 of the top-down BACT analysis to consider CCS."

Based upon the comments, the EPA has entirely reversed its position regarding the status of CO2 sequestration as a control technology and should reopen the comment period to allow for comment on this. Additionally, this 'revision' to the BACT analysis has not been conducted in accordance with the Clean Air Act and the public should have the opportunity to comment on an appropriately revised BACT analysis.

2. BACT analysis - solar

The EPA likewise reversed its position on the status of solar as a control technology. Again, this reversal of position is by no means a logical outgrowth of the notice and comment period and is deficient. The public should be given the opportunity to comment on a full analysis of solar as BACT prepared in compliance with the CAA. The argument relating to solar as BACT is addressed in full below.

3. BACT analysis – Particulate Matter

On page 50 of the Response to Comments, the EPA announces, "After reviewing the information provided by the commenter we are revising the proposed BACT limits for PM, PM10, and PM2.5 (collectively referred to hereafter in this particular response as "PM")."

This substantial change is based entirely upon information put on record for the first time by the applicant as comments on the draft permit. The public has not had an opportunity to review and comment on this new information or the EPA's revision.

The public should be given the opportunity to comment on the permit in full including the above described issues and all other data, information, and arguments made in the comments and responses to comments that raised substantial new questions.

c. The public was denied the opportunity to comment on the actual permit conditions

The final permit conditions were drastically different from that presented to the public. The changes are so substantial that it cannot be said that the public was afforded

the opportunity to comment on the permit. The permit must be remanded and public comment reopened so that the process can benefit from the meaningful public participation afforded in the CAA.

1. PM-10 emissions

EPA's August 12, 2011 fact sheet estimated that the project's PM-10 emissions would be 62.5 tons per year. PHPP Fact Sheet, page 10. In the final permit issued after the close of the comment period EPA disclosed that PM-10 emissions would be 111.1 tons per year or a 77 % increase in PM-10 emissions for the project. PSD Permit, page 7. Similarly the August 12, 2011 Fact Sheet claimed that PM 2.5 emissions would be 56 tons per year. PHPP Fact Sheet, page 10. After the close of the comment period and with the issuance of the final permit EPA now estimates that PM 2.5 emission will total 88 tons per year a 57% increase in annual emissions. PSD Permit, page 7. The public was clearly misled as to the impacts of this project and the Board must remand the permit to correct the emissions so the public can effectively understand the projects impacts and comment on the permit.

The public was also led to believe by the Fact sheet that EPA is setting mass emission limits of 4.7 lb/hr without duct firing and 8.0 lb/hr with duct firing based on a 3-hr average for PM-10 which would be BACT for PM-10. Fact Sheet, page 27.

The final permit allows a 8.6 lb/hr of PM-10 without duct firing and a 11.3 lb/hr of PM-10 with duct firing averaged over 9 hours. The final permit allows an 82% increase in PM-10 emission rate without duct firing and an averaging prior three times longer than

the original permit. The public has plainly been misled by the fact sheet which offers a brand new Cadillac but the final delivers a run down clunker.

The Fact Sheet issued for public comment states that the EPA was setting mass emission limits of 4.7 lb/hr without duct firing and 8.0 lb/hr with duct firing based on a 3-hr average for PM-10 which would be BACT for PM-10. PHPP Fact Sheet, page 27. The final permit allows a 8.6 lb/hr of PM-10 without duct firing and a 11.3 lb/hr of PM-10 with duct firing averaged over 9 hours. BACT for large combined cycle turbines similar to the Palmdale Project is 7.5 pounds per hour or 0.0036 lb PM10/ PM2.5 per MM BTU of natural gas. *See* Russell City PSD Permit, page 10 available at: http://www.baaqmd.gov/~/media/Files/Engineering/Public%20Notices/2010/15487/PSD%20Permit/B3161_nsr_15487_psd-permit_020410.ashx?la=en. This limit was recently permitted for the Russell City Energy Center's PSD permit. The public was mislead that the project would be employing BACT for particulate matter but the final permit issued without an opportunity for public comment raised the PM-10 emission rate by 82%. The Board must remand the permit back to Region 9 and allow the public an opportunity to address this enormous increase in PM-10 emission rates and yearly limits. The public was led to believe that the project was employing BACT for PM-10 but in fact it was not as revealed in the final permit after the close of the comment period.

The Fact Sheet issued for public comment stated that EPA was setting mass emission limits of 4.7 lb/hr without duct firing and 8.0 lb/hr with duct firing based on a 3-hr average for PM-10. The final permit allows a 8.6 lb/hr of PM-10 without duct firing and a 11.3 lb/hr of PM-10 with duct firing averaged over 9 hours. This is a significant

change in the averaging time after the close of the comment period. Normally PM-10 emission rates are averaged over 1 hour such as the Russell City energy Center Permit which has a PM-10 emission rate limitation of 7.5 lb/hr averaged over one hour. The nine hour averaging period is a significant relaxation of the emission rate and is not protective of the health based standards for particulate matter.

2. BACT for Start-Up and Shut down emissions

In the draft permit EPA provided hourly permit limits on NOx emissions for Cold Starts of 52.4 pounds per hour and CO emissions of 224 lbs per hour. For shut down events the draft permit restricted NOx emissions to 114 pounds per hour and 674 pounds of CO per hour. In the Final Permit issued after the close of the public comment period EPA removed the hourly limitation and increased cold start emissions to 96 pounds per event for NOx and 410 pounds per event for CO and eliminated the pound per hour limitation. The shut down emission limits were changed to 57 pounds per event for NOx and 337 pounds per event for CO. Warm Start Emissions in the draft permit were 30 lbs per lb hour for NOx and 247 pounds per hour for CO. The final permit changed the emission limits for warm start to 40 lb per event for NOx and 329 pounds per event for CO.

GE has provided vendor guarantees for its fast start technology for the Oakley Generating Station which utilizes the GE Frame 7FA with fast start technology the same class of turbine as the Palmdale Project. Appendix D.

EPA's BACT determination for the Palmdale Project does not meet the current BACT for Start Up and Shutdown emission for this class of turbine. CO BACT for Cold Start Up is 360 pounds per event which is significantly less than the 410 pound per event BACT limit in the Palmdale permit. NOx BACT for warm starts as guaranteed by GE is 22 pounds per event compared to the 40 pounds per event listed as BACT for the Palmdale Project. CO BACT for warm starts is 85 pounds per event which is 25% of the 320 pounds per event CO emissions limit declared as BACT for the Palmdale project . BACT for NOx for shutdown events is 39 pounds per event 30% less than the BACT determination for the Palmdale Project of 57 pounds. The BAAQMD has utilized these vendor guarantees and determined these values as BACT for the GE Frame 7FA with rapid start technology for Start UP and Shut Downs. See http://www.baaqmd.gov/~/media/Files/Engineering/Public%20Notices/2011/20798/Oakley%20FDOC%20January%202011.ashx?la=en). Accordingly the permit must be remanded so that the BACT is used for the PHPP.

3. GHG BACT heat rate

Petitioner informed EPA that the project must set its GHG BACT limit through permit limits on the heat rate for the Palmdale project as the proposed permit contained no heat rate limitation. EPA agreed and in response to petitioners comments EPA set a maximum heat rate of 7,319 Btu/kWh. The EAB should remand the permit to provide the public an opportunity to comment on the proposed heat rate limitation. EPA's

proposed heat rate limitation is higher than the maximum heat rate identified by the applicant of 6,970 Btu/kWh.

"The heat rate of 6,970 Btu/kWh is based on the higher heating value (HHV) of natural gas with two CTGs operating at 100% with no solar input and with no duct firing. A lower heat rate (and hence fewer emissions) would be realized for the scenario of full solar and no duct firing, and would depend on operating conditions (temperature, pressure, etc." Response to Comments, page 2)

The proposed heat rate of 7,319 Btu/kWh is higher than the achieved heat rates of comparable facilities identified by the applicant and the California Energy Commission: La Paloma Generating 7,172 Btu/kWh, Pastoria Energy Facility L.L.C. 7,025 Btu/kWh, Elk Hills Power, LLC 7,048 Btu/kWh, Sunrise Power 7,266 Btu/kWh. CEC Final Staff Assessment, page 4.1-95.

Clearly a lower heat rate has been achieved in practice by comparable facilities without the advanced turbines and solar generating capabilities of the Palmdale Project. The permit must be remanded to allow the public to comment on the proposed heat rate limitation.

II. THE BACT ANALYSIS DOES NOT REFLECT CONSIDERATION OF ALL RELEVANT STATUTORY AND REGULATORY CRITERIA IN THE PSD PERMITTING PROGRAM.

The Best Available Control Technology ("BACT") analysis does not reflect consideration of the requirements of the Clean Air Act. The Prevention of Significant Deterioration permit granted based upon the flawed BACT analysis should, therefore, be remanded so that the BACT analysis can be undertaken.

The Clean Air Act's (CAA or Act) Prevention of Significant Deterioration (PSD) program, 42 U.S.C. § 7477, bars construction of any major air pollutant emitting facility not equipped with "the best available control technology." § 7475(a)(4). The Act defines BACT as:

> An emission limitation based on the maximum degree of reduction of each pollutant subject to regulation under this chapter emitted from or which results from any major emitting facility, which the permitting authority, on a case-by-case basis, taking into account energy, environmental, and economic impacts and other costs, determines is achievable for such facility through application of production processes and available methods, systems, and techniques, including fuel cleaning, clean fuels, or treatment or innovative fuel combustion techniques for control of each such pollutant.

42 U.S.C. § 7479(3); accord 40 C.F.R. § 52.21(b)(12).

No PSD permit may be issued unless the proposed facility is subject to the best available control technology for each pollutant emitted from the facility subject to the CAA. 42 U.S.C. § 7475(a)(4); *see Alaska v. EPA*, 540 U.S. 461 (U.S. 2004). EPA claims to have employed the EPA "recommended top-down methodology" to determine BACT for the PHPP. *Id.* at 485 *citing* EPA, New Source Review Workshop Manual B2

(Draft Oct. 1990). The Palmdale Hybrid Power Project Greenhouse Gas BACT Analysis ("Palmdale GHG BACT Analysis") explains:

> EPA guidance for a "top-down" BACT analysis requires reviewing the possible control options starting with the best control efficiency. In the course of the BACT analysis, one or more options may be eliminated from consideration because they are demonstrated to be technically infeasible or have unacceptable energy, economic, or environmental impacts on a case-by-case (site-specific) basis.
>
> The steps required for a "top-down" BACT review are given below:
> 1. Identify available control technologies;
> 2. Eliminate technically infeasible options;
> 3. Rank remaining technologies;
> 4. Evaluate remaining technologies (in terms of economic, energy, and environmental impacts); and
> 5. Select BACT (the most efficient technology that cannot be rejected for economic, energy, or environmental impact reasons).

Palmdale GHG BACT Analysis, page 4.

The Palmdale GHG BACT Analysis properly describes the top-down methodology laid out in the EPA, New Source Review Workshop Manual B2 (Draft Oct. 1990) ("NRS Manual"). "Although the top-down approach is not mandated by the Act, if [an agency] purports to follow this method, it should do so in a reasoned and justified manner." *Alaska v. E.P.A.*, 298 F.3d 814, 822 (9th Cir. 2002). This Board has expressed this requirement slightly differently:

> As a general matter, the Board will not fault a BACT analysis simply for deviating from the NSR Manual's five-step structure. We will, however, carefully examine each analysis to ensure a defensible BACT determination that reflects consideration of all relevant statutory and regulatory criteria in the PSD permitting program. See, e.g., In re ConocoPhillips Co., PSD Appeal No. 07-02, slip op. at 28-36 (EAB June 2, 2008), 13 E.A.D. ___ (remanding BACT determination for petroleum refinery flare CO emissions due to lack of adequate analysis establishing that permit issuer considered all relevant statutory and regulatory criteria); Knauf, 8 E.A.D. at 134-44 (remanding BACT analysis conducted for fiberglass plant's emissions of PM10 because explanations of competing control

> options and other technical matters were insufficiently detailed to demonstrate compliance with PSD program requirements."

In re Northern Mich. Univ., PSD Appeal No. 08-02, slip op. at n9 (EAB Feb. 18, 2009).

Having thus opted to use the top-down methodology in analyzing BACT, the EPA's analysis must comport with its own guidelines in employing this methodology. This has not happened resulting in an "internally inconsistent and unreasonable BACT determination" undermining the permit conditions based upon these conclusions. See *Alaska v. E.P.A.*, 298 F.3d at 823. The permit should therefore be remanded so that a BACT analysis can be conducted in compliance with the CAA.

The PHPP BACT analysis falls down every step of the way. The analysis failed to identify available control technologies, identified control technologies but then did not analyze the technology based on a faulty change of business purpose and technically infeasible arguments, did not thoroughly evaluate the identified control technologies, did not properly rank technologies, and wrongly rejected more efficient technologies. In the response to comment, the EPA acknowledges some of its errors in dismissing control technologies, but does not remedy the faulty analysis.

a. <u>The GHG BACT Analysis failed to identify all available control technologies</u>

The foundation for any BACT analysis is the initial identification of appropriate technologies – if all technologies have not been identified, the analysis is flawed from the 'get-go.' "If reviewing authorities let slip their rigorous look at "all" appropriate technologies, if the target ever eases from the "maximum degree of reduction" available to something less or more convenient, the result may be somewhat protective, may be

superior to some pollution control elsewhere, but it will not be BACT." *In re Northern Mich. Univ.*, PSD Appeal No. 08-02, slip op. at 19 (EAB Feb. 18, 2009).

The EPA did not identify all appropriate technologies. Upon being alerted to this fact, the EPA simply outright denied this to be true. The Response to Comments reads: "[Mr. Simpson] stated that EPA did not appear to identify all GHG control technologies. The commenter concluded that EPA, DOE, and CEC and others appear to indicate that there are other GHG control technologies . . . The commenter has not specifically identified which technologies EPA did not consider." Response to Comments, page 40. Petitioener's comments clearly identified control technologies not identified: "Carbon sequestration in algae ponds is a feasible technology to capture GHG emission form the proposed Palmdale Project and should be included in the BACT evaluation for GHG emissions."

At the same time, the EPA acknowledges that "The commenter questioned whether algae ponds . . . could be used as GHG control technologies" but dismissed this control technology as somehow not qualifying as a control technology: "EPA regulations do not require pollutant mitigation or offset practices to be control technologies that must be considered in the PSD permitting process. Applicants are only required to evaluate inherently lower-emitting technologies (that result in reductions from equipment at the facility) and add-on control technologies. While the identified practices can be a part of the overall climate change plan, they are not applicable to this PSD permitting process." Response to Comments, page 39.

b. <u>The GHG BACT Analysis failed to analyze solar as a control technology</u>

EPA first dismissed solar as a control technology, then admitted in the Response to Comments that it was in fact a control technology, but then conducted no BACT analysis of the technology, effectively failing to identify it as a control technology necessitating analysis. As the cleanest of fuels, the use of sun is certainly a control technology that needs to be analyzed and this permit should be remanded for a full analysis of the use of solar as BACT for the PHPP. This Board has been resounding clear on the upmost importance of clean fuels in BACT analyses:

> Congressional direction to permitting applicants and public officials is emphatic. In making BACT determinations, they are to give prominent consideration to fuels. Board cases frequently underscore this charge. See, e.g., In re Prairie State Generating Co., PSD Appeal No. 05-05, slip op. at 19-37 (EAB Aug. 24, 2006), 13 E.A.D. ___, aff'd sub nom. Sierra Club v. EPA, 499 F.3d 653 (7th Cir. 2007); In re Hillman Power Co., 10 E.A.D. 673, 677-79, 688-92 (EAB 2002); In re Maui Elec. Co., 8 E.A.D. 1, 7-16 (EAB 1998); In re Inter-Power of N.Y., Inc., 5 E.A.D. 130, 134 (EAB 1994); In re Old Dominion Elec. Coop., 3 E.A.D. 779, 793-94 (Adm'r 1992) . . .

In re Northern Mich. Univ., PSD Appeal No. 08-02, slip op. at 17-18 (EAB Feb. 18, 2009).

> [T]he CAA promotes "clean fuels" with particular vigor. See CAA § 169(3), 42 U.S.C. § 7479(3). Merely equating use of lower polluting fuels to impermissible redesign in the hope of paving an automatic BACT off-ramp pointedly frustrates congressional will. The United States Court of Appeals for the Seventh Circuit is notably dismissive of such strategies. Clean fuels may not be "read out" of the Act merely because their use requires "some adjustment" to the proposed technology. Sierra Club v. EPA, 499 F.3d 653, 656 (7th Cir. 2007).

Id. at 27.

In this case, the EPA called upon the excuse of impermissible redesign to pave an automatic BACT off-ramp for solar. The Palmdale GHG BACT Analysis states that

solar "was not considered as part of the BACT analysis" because it would change the business purpose of the Project:

> The modification of the project to include alternative lower GHG-emitting technology, or an increase in the amount of solar thermal generation beyond 50 MW would fundamentally alter the business purpose of the Project. However, as stated by EPA (EPA 2010b, pg. 27), a BACT analysis is not generally used to redefine the applicant's project.
>
> 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 inherently 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. Consequently, no additional lower emitting alternative technologies are feasible to incorporate into the project without fundamentally changing the business purpose of the Project.

Palmdale GHG BACT Analysis, page 14.

> As discussed previously, any of the commercially available low GHG-emitting technologies that could be implemented, including additional solar thermal generating capacity, were determined to be infeasible for this site (CEC 2010a) and would fundamentally alter the business purpose of the emission source. As such, lower emitting alternative technology was not considered as part of the BACT analysis (EPA 2010b, pg. 27).

Id. at 19.

In the Response to Comment, the EPA backtracks on the earlier attempt to manufacture redesign:

> 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 . . . 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 combustion turbines and associated heat recovery system. . .
>
> Therefore, requiring the applicant to utilize, and thus construct, the solar component as a requirement of BACT did not fundamentally redefine the source.

Response to Comments, page 40.

While acknowledgment of solar as a control technology is a step in the right direction, the following inquiry falls far short of meeting the CAA standards for BACT analysis. The sum total of the BACT analysis for solar is: "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." Response to Comments, page 40.

This 'analysis' is factually incorrect and entirely deficient . There is no analysis of the nature of the control technology including the type of solar to be utilized and associated benefits and drawbacks (e.g. thermal vs. photovoltaic), the manner in which the solar will be used (e.g. only in conjunction with a power plant or stand-alone), the potential environmental effects (e.g. GHG emissions from vehicles used to service the solar field, nitrogen emissions from thermal solar, etc.), control efficiency, cost, etc. In other words, the EPA has skipped all BACT analysis steps for solar as a control technology.

The "space constraints" identified by the EPA as a basis for rejection of consideration of different project configurations is without basis. The EPA assumes that the only options are the planned 251 acres solar field or "an-all solar facility" on a "331-acre lot." This implies that only 331 acres is available for solar where there may actually

be almost twice as much land available for the project. The CEC project description states:

> The Palmdale Hybrid Power Project (PHPP) would be located on a 333-acre site that is currently vacant and undeveloped, and is part of a 613.4-acre property owned by the city of Palmdale. In February 2009, the city approved a general plan amendment, zone change, and tentative parcel map for the entire 613.4- acre city-owned property, including the 333-acre PHPP site. As a result, according to Resolution PC-2009-008, the entire city-owned site is intended for the PHPP and for other future industrial uses. Part of the resolution and ordinance state that the proposed discretionary actions are in the public's best interests as they would result in the development of the PHPP and the generation of electricity through the use of both natural gas and solar power.

The record does not show that there is any approved plan for the remaining acres on the 613.4 acre lot or that solar energy collection would interfere with any other proposed use. Even if the artificially created space constraint exists, the EPA did not consider the difference between the 251 acre solar facility and one that matched the purported 331 acre lot. For example, facility rooftops, drainage areas and roadways could be shaded by solar panels. The project proponent should not be allowed narrow a project description to creates space constraints, where none exist, to effect evasion of consideration of control technologies.

The description of the solar component is vague and overbroad and highlights the need for a full BACT analysis of solar. The Permit describes the solar components as "Integrated (through the HRSG and STG) with a 251-acre solar-thermal plant (STP) consisting of parabolic solar-thermal collectors and associated heat-transfer equipment designed to contribute up to 50 MW of generation from the STG."

First, it is difficult, if not impossible, to analyze a project where the description is so vague. It is unclear what "contribute up to 50 MW of generation" means. Up to 50 includes any amount less than or equal to 50. This leaves open the possibility that the project could be built, at the peril of 251 acres of endangered species habitat, to generate only nominal MW and still comply with the PSD permit. Even if the PHPP generates the maximum 50 MW on 251 acres, there is not evidence that this is the best achievable control technology. 50MW over 251 acres requires 5.02 acre to produce 1 MW. The CEC Final Staff Assessment indicates that it is possible to generate 1 MW per 4 acres of land. This represents a staggering difference in efficiency that has not been considered in any way by the EPA.

The EPA's contention that "solar energy is not available at all times to meet baseload demands" is strange and not based in fact. Storage of energy produced by solar is commonly known to be commercially available and EPA offers no evidence to the contrary. For example, the CEC Integrated Energy Policy Report discusses energy storage for renewable sources of energy, including solar, at length:

> Examples of energy storage technologies commercially available and under development include advanced technology batteries, flywheels, compressed air energy storage, pumped hydroelectric energy storage, capacitors, and others. These technologies can provide value at each level in California's electric grid – generation, transmission and distribution, and end use – with storage technologies varying in type and size depending on the level of service needed. . . The use of energy storage technologies can also reduce the number and amount of natural gasfired power plants that would otherwise be needed to provide the firming characteristics the system needs to operate reliably. Energy storage systems can respond rapidly to the needs of the electric grid, and Energy Commission research indicates that smaller amounts of energy storage can smoothly and effectively integrate renewable energy when compared to the amount of natural gas-fired power plants required to meet the same response times. California should seize

this opportunity and encourage developers to install energy storage to support commercial scale solar and wind farms and reduce the need for new natural gas-fired plants as an energy-firming source.

California Energy Commission, Integrated Energy Policy Report 2009, pages193-194.

c. <u>The GHG BACT Analysis failed to properly rank the control technologies</u>

The NSR Manual is clear in the how step 3, ranking the remaining technologies, should be conducted:

> In step 3, all remaining control alternatives not eliminated in step 2 are ranked and then listed in order of over all control effectiveness for the pollutant under review, with the most effective control alternative at the top. A list should be prepared for each pollutant and for each emissions unit (or grouping of similar units) subject to a BACT analysis. The list should present the array of control technology alternatives and should include the following types of information:
>
> ! control efficiencies (percent pollutant removed);
> ! expected emission rate (tons per year, pounds per hour);
> ! expected emissions reduction (tons per year);
> ! economic impacts (cost effectiveness);
> ! environmental impacts (includes any significant or unusual other media impacts (e.g., water or solid waste), and, at a minimum, the impact of each control alternative on emissions of toxic or hazardous air contaminants);
> ! energy impacts.

NSR Manual, pages B7-8.

This information cannot be found in the Palmdale GHG BACT or in Response to Comments. There can be no valid comparisons of control technologies without data on which to base comparison. The paltry effort at comparison is, therefore, not in keeping with the requirements of the CAA and this permit should be remanded so that BACT analysis can be properly undertaken.

d. The GHG BACT Analysis improperly dismissed control technologies as economically infeasible

As explained above, in its Response to Comments the EPA reversed its position on the technical feasibility of Carbon Capture and Sequestration ("CCS" or "carbon sequestration"). Having determined that CCS is feasible, the EPA purports to have provided a BACT analysis for CCS in the Response to Comments:

> However, given that there is limited data in EPA's record concerning potential logistical barriers relating to the building of CO2 pipelines for the PHPP or other technical or logistical barriers to implementing CCS for the Project, we are revising our BACT analysis to assume, for purposes of the analysis, that potential technical or logistical barriers would not make CCS technically infeasible for the PHPP. As a result, CCS would be the topranked control option, and we proceed to Step 4 of the top-down BACT analysis to consider CCS. Our analysis assumes that 90% of CO2 emissions would be captured.
>
> *GHG BACT Analysis – Step 4 - CCS Cost Analysis*
>
> 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.

Estimated Annual Cost for CCS[14]	
	$/year
CO_2 Capture and Compression	$75,944,187.00
CO_2 Transport	$1,566,747.00
CO_2 Capture Storage	$878,067.00
Total Annual Cost	**$78,389,001.00**

> Accordingly, based on these costs, CCS is being eliminated as a control option because it is economically infeasible. BACT for this project remains the thermal efficiency associated with a natural gas-fired combined cycle power plant.
>
> [Footnote] 14 The cost were estimated by using EPA's GHG Mitigation Strategies Database and The Report of the Interagency Task Force on Carbon Capture and Storage (August 2010). This information is available at

> http://ghg.ie.unc.edu:8080/GHGMDB/ and http://www.epa.gov/climatechange/downloads/CCS-Task-Force-Report-2010.pdf, respectively. In each case, the lowest cost between the two sets of information was used for this analysis."

Response to Comments, page 38.

In the absence of the Step 3 data demonstrating the value of control measures, the EPA impermissibly compared the overall price for CCS to the price for the facility. A comparison of the purported cost of control to the purported cost of the facility does not fulfill BACT analysis requirements – the proper measure is dollars per tons of pollutant emissions removed/reduced.

> The permit issuer evaluates the economic impacts by estimating the average and incremental cost-effectiveness of the control technologies, measured in dollars per tons of pollutant emissions removed. Steel Dynamics, 9 E.A.D. at 202. The purpose of step 4 is to either validate the suitability of the top control option identified or provide a clear justification as to why that option should not be selected as BACT. NSR Manual at B.26; see also Prairie State, 13 E.A.D. at 38-51 (considering the application of step 4); Three Mountain Power, 10 E.A.D. at 42 n.3 (evaluating environmental impacts); Steel Dynamics, 9 E.A.D. at 202-07, 212-13 (remanding permit because of incomplete cost-effectiveness analysis under step 4).

In re Mississippi Lime Co., PSD Appeal No. 11-01, slip op. at 12 (EAB August 9, 2011); *see also* EPA, The PSD and Title V Permitting Guidance for Greenhouse Gases ("The economic impacts component of the analysis should focus on direct economic impacts calculated in terms of cost effectiveness (dollars per ton of pollutant emission reduced).")

Even had the dollar per ton of pollutant emissions costs been provided, the EPA's analysis is fatally flawed as the estimated cost of CCS appear to have been grossly inflated. The Response to Comments indicates that the cost was estimated as the lowest cost found in the EPA's GHG Mitigation Strategies Database and The Report of the Interagency Task Force on Carbon Capture and Storage (August 2010).

The Report states: **"**DOE analyses indicate that for a new 550 MWe net output power plant, addition of currently available pre-combustion CO_2 capture and compression technology increases the capital cost of an IGCC power plant by approximately $400 million (~25 percent) compared with the non-capture counterpart." The Report of the Interagency Task Force on Carbon Capture and Storage, page 33. The report continues to explain that this cost may actually be even less due to offsets from additional revenues from oil production. "CO_2-EOR provides two potential economic incentives for encouraging the deployment of CCS, 1) CO_2 sales revenues at the individual project level, and 2) an increase in the total amount of domestic crude oil production. At the present time, an important limiting factor in new CO_2-EOR projects is a shortage of CO_2." *Id*.

PHPP is planned as a 570 MW plant with 50 MW supplied by the solar. As a 520MW plant, 5% smaller than that analyzed by the DOE, the cost for CCS would be an estimated $380 million.

Not accounting for cost offsets, $380 million annualized over 20 years is $19 million a year. This is far afield from the EPA's estimate of $75,944,187.00 a year! The 'analysis' further ignored the potentials to pay for the technology through ancillary sources as described in the California Energy Commission, Integrated Energy Policy Report 2009, page 109.

> The U.S. Department of Energy (DOE) recently solicited proposals for large-scale industrial CC S projects at facilities fueled chiefly by noncoal energy; it is poised to award more than $1.3 billion in project cofunding authorized by the ARA of 2009. Further, DOE has added funds to its cooperative agreement with the Energy

> commission for the West Coast Regional Carbon Sequestration Partnership (WESTCAR B; a public-private research collaborative involving more than 80 organizations) to work with PG&E to conduct an engineering-economic evaluation of CC S at natural gas combined cycle plants in California. WESTCAR B also continues to work with the California Geological Survey and industry partners to characterize California deep saline formations suitable for commercial-scale CO 2 storage; two CO 2 storage field tests in the Central Valley are planned. Although the cost of applying CCS to natural gas power plants or oil refinery furnaces is relatively high using proven technologies (about $75 per metric ton of CO2 avoided), the prospect of energy-saving technology improvements and the sale of captured CO2 to oilfield operators for oil recovery has increased likelihood that CCS can be economically competitive and, as a consequence, the interest of state agencies working on AB 32 compliance.

The EPA has failed to prove CCS economically infeasible and the permit should be remanded so that the BACT analysis can be properly undertaken. "Because [the PSD permit granting agency's] report shows that (1) [applicant] failed to meet its burden of demonstrating that [the control technology] was economically infeasible; and (2) [the agency] failed to provide a reasoned justification for its elimination of [the control technology] as a control option, the EPA did not act arbitrarily and capriciously in concluding that [the agency] abused its discretion by making an internally inconsistent and unreasonable BACT determination." *Alaska v. United States EPA*, 298 F.3d at 823.

III. THE EPA FAILED TO CONSIDER THE NEED FOR THE FACILITY

The EPA has not considered a no-build alternative in the context of need for this facility. "The statutory text's plain meaning does not lend itself to excluding public comments that request consideration of the "no build" alternative to address air quality

concerns. Moreover, the Board's and Administrator's prior decisions would appear to recognize that consideration of "need" is an appropriate topic under section 165(a)(2). See In re EcoEl´ectrica, LP, 7 E.A.D. 56, 74 (EAB 1997) (recognizing that question of need for the proposed facility may be raised in a PSD permitting appeal, but declining to grant review on the grounds that it was not clear error for the permit issuer to defer to the state agency tasked with the responsibility to consider need for the facility); In re Kentucky Utils. Co., PSD Appeal No. 82-5, at 2 (Adm'r 1982) (same)." *In re Prairie State Generating Company*, 13 E.A.D. 1, 32 (EAB 2006).

In this case, it was clear error for the EPA to defer to the state agencies, the CEC and PUC, as these agencies have no jurisdiction to make this determination for this facility. The Response to Comments states:

> However, we have also observed that it is appropriate to refrain from analyzing whether a proposed facility is needed where the State has tasked another State agency with the authority to consider that issue. . .
>
> Various mechanisms are in place within the State of California that provide a structure for considering the need for new natural gas-fired power plants in the context of the State's renewable energy requirements and policies. These mechanisms include, among other things, a regular integrated assessment by the CEC of major energy trends and issues facing the State's electricity and natural gas sectors, and the California Public Utilities Commission's oversight of the very detailed planning processes and the procurement activities of investor-owned utilities within the State.
>
> We also note generally that the CEC has 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.

Page 35-36.

The PUC has not reviewed the project and, because the developer is not an "investor owned utility," California law does not requires PUC review. There is no evidence that the PUC will ever conduct any review of PHPP.

The CEC never makes determinations of need as it is statutorily prohibited from doing so. The CEC Decision on the PHPP states" "Staff's expert testified that they do not analyze need . . . Senate Bill No. 110, which became Chapter 581, Statutes of 1999 repealed Public Resources Code sections 25523(f) and 25524(a) and amended other provisions relating to the assessment of need for new resources. SB 110 removed the requirement that, to certify a proposed facility, the Commission must make a specific finding that the proposed facility is in conformance with the adopted integrated assessment of need." CEC PHPP Decision.

The EPA recognized the "integrated assessment of need," the California Energy Commission, Integrated Energy Policy Report 2009 in its response but then relied on another document to demonstrate a "need" for the facility. The EPA quotes the CEC Committee Guidance on Fulfilling CEQA Responsibilities at 224 (March 2009), in support of the contention that "the CEC has indicated relatively recently that there continues to be a need for natural gas-fired power plants in California." In fact, this document states, "the views and recommendations contained in this document are not official policy of the Energy Commission but express the recommendations of the Siting Committee."

The Integrated Energy Policy Report, the official policy document of the CEC on the issue, states "Once CHP targets and OTC replacements were made, only a few new

natural gas plants had to be added to meet local capacity and energy needs. Those were in the Sacramento Municipal Utility District, Turlock Irrigation District, and Imperial Valley control areas, which have no OTC and limited numbers of large host industrial." California Energy Commission, Integrated Energy Policy Report 2009, page 191.

The Report further states; "the possibility of overgeneration, a condition when more generation is provided than there is available load, will require additional analysis. In the June 29, 2009, IEPR Committee workshop on renewable integrating issues, [Southern California Edison, Palmdale area utility] reported that a Nexant study suggests a possible overgeneration problem in April and May as the state moves to 2020." *Id.* at 193.

The Response states; "a rigorous and robust analysis would be time-consuming and burdensome for the permit issuer….In California, in order to conduct a reasoned analysis to determine the need for new natural gas-fired power plants in general, or a specific natural gas-fired power plant in particular, either within the State as a whole, or in a particular geographic location within the State, EPA would need to consider a myriad of extremely complex factors and detailed information that EPA has neither the resources nor the expertise to analyze. Therefore, EPA does not believe that it is appropriate to conduct the type of rigorous and robust analysis that would be required to definitively determine the need for the Project. We note that even if EPA did have the expertise and resources to conduct such an analysis, 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." Response to Comment, page 36.

EPA's concern's that such an analysis would be too "time-consuming," are easily dismissed. The EPA need only review The Integrated Energy Policy Report and review California geography. Since the project is not near Sacramento, Turlock, or Imperial Valley, it is not needed. It was clear error for the permit issuer to issue the permit and shirk its responsibility to consider the no build alternative by deferring analysis to state agencies that are statutorily prohibited from considering the need for the project, have expressed a lack of need in the area, or have not opined on the project at all.

This document contains 8473 words.

DATED: November 17, 2011.

By: April Rose Sommer

April Rose Sommer

Attorney for Rob Simpson

Appendix A

From: rob@redwoodrob.com
To: Beckham.Lisa@epa.gov
CC: aprilsommerlaw@yahoo.com
Subject: Palmdale Hybrid Power Project PSD Permit Number SE 09-01
Date: Mon, 12 Sep 2011 09:14:50 -0700

Dear Ms. Beckham,
We will be commenting on the above referenced project. 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.
Thank you
Rob Simpson
cc April Sommer

-------- Original Message --------
Subject: [SPAM] Palmdale Hybrid Power Project PSD Permit Number SE 09-01
From: Jordan.Deborah@epamail.epa.gov
Date: Mon, September 12, 2011 2:00 pm
To: <rob@redwoodrob.com>, "April Sommer" <aprilsommerlaw@yahoo.com>
Cc: Walters.Julie@epamail.epa.gov, Rios.Gerardo@epamail.epa.gov, Beckham.Lisa@epamail.epa.gov

Dear Mr. Simpson,

Thank you for your interest in EPA's proposed PSD permit for the Palmdale Hybrid Power Project. EPA has reviewed and considered your request for an extension of the comment period for this action. I decline to grant your request. Therefore, the public comment period will close as scheduled on September 14, 2011. Please note that comments submitted by email must be submitted no later than 11:59 pm Pacific daylight time on September 14, 2011.

We look forward to receiving and reviewing your comments on EPA's proposed action.

Sincerely,

Deborah Jordan

_____

Deborah Jordan
Director, Air Division
U.S. EPA Region 9
phone: (415) 972-3133
fax: (415) 947-3581

Appendix B

April Rose Sommer
Attorney at Law
P.O. Box 6937, Moraga, CA 94570
p (510) 423-0676 f (510) 590-3999
Environmental Litigation AprilSommerLaw@yahoo.com

November 15, 2011

Jared Blumenfeld
Regional Administrator
U.S. EPA, Region IX
75 Hawthorne Street
San Francisco, CA 94105
SENT VIA ELECTRONIC MAIL to blumenfeld.jared@epa.gov

Re: Request to Reopen Comment Period for Palmdale PSD

Dear Administrator Blumenfeld,

I am writing on behalf of my clients Rob Simpson and Helpings Hand Tools to request that you exercise your power pursuant to 40 C.F.R. § 124.14 to reopen the comment period for the Clean Air Act Prevention of Significant Deterioration permit granted October 18, 2011 to the City of Palmdale for the Palmdale Hybrid Power Plant. 40 C.F.R. § 124.14(b) allows for the following:

> If any data information or arguments submitted during the public comment period, including information or arguments required under § 124.13, appear to raise substantial new questions concerning a permit, the Regional Administrator may take one or more of the following actions:
> (1) Prepare a new draft permit, appropriately modified, under § 124.6 ;
> (2) Prepare a revised statement of basis under § 124.7, a fact sheet or revised fact sheet under § 124.8 and reopen the comment period under § 124.14; or
> (3) Reopen or extend the comment period under § 124.10 to give interested persons an opportunity to comment on the information or arguments submitted.

Both the 9th and District of Columbia Circuit Courts of Appeals call for the reopening of a comment period where an Agency's conclusion is not a "logical outgrowth" of the preceding notice and comment period.

> Our conclusion does not imply any dissatisfaction with the rule that the Agency need not subject every incremental change in its conclusions after each round of notice and comment to further public scrutiny before final action. E. g., International Harvester Co. v. Ruckelshaus, 155 U.S.App.D.C. 411, 424, 478 F.2d 615, 632 n.51 (1973); South Terminal Corp. v. EPA, 504 F.2d 646, 659 (1st Cir. 1974). But in this case, the Agency's final conclusions are far from the "logical outgrowth" of the preceding notice and comment process, Id., and instead are the result of a complex mix of controversial and uncommented upon data and calculations. Given the lengths that the Agency must travel to justify its revisions between the interim and final stages, we cannot be sure that further and ultimately convincing public criticism of those changes would not have been forthcoming had it been

> invited by the Agency. n27 See Marathon Oil Co. v. EPA, 564 F.2d 1253, 1271-72 n.54 (9th Cir. 1977)."

Weyerhaeuser Co. v. Costle, 590 F.2d 1011, 1031 (D.C. Cir. 1978).

In this case, data, information, and arguments submitted during the public comment period raise substantial new questions concerning the permit. This includes data submitted for the first time by the applicant as public comment and a complete reversal by the EPA on a number of critical issues. A complete reversal of opinion is not a logical outgrowth of the preceding notice and comment, particularly when this reversal was based on information not previously available to commenters. The public should have the opportunity to comment on the new information and on changes made in the response to comments. The most significant issues are concerning the Best Achievable Control Technology (BACT) analysis. These are summarized below.

1. BACT analysis – CO2 sequestration

Page 37 of the Response to Comments explains, "The commenter stated that the CO2 sequestration analysis that determined CCS to be technically infeasible for this project was actually an issue of cost and not technical feasibility." In response, the EPA writes, "we are revising our BACT analysis to assume, for purposes of the analysis, that potential technical or logistical barriers would not make CCS technically infeasible for the PHPP. As a result, CCS would be the topranked control option, and we proceed to Step 4 of the top-down BACT analysis to consider CCS."

Based upon the comments, the EPA has entirely reversed its position regarding the status of CO2 sequestration as a control technology and should reopen the comment period to allow for comment on this. Additionally, this 'revision' to the BACT analysis has not been conducted in accordance with the Clean Air Act and the public should have the opportunity to comment on an appropriately revised BACT analysis.

2. BACT analysis - solar

The Palmdale Hybrid Power Project Greenhouse Gas BACT Analysis states that solar "was not considered as part of the BACT analysis" because it would change the business purpose of the Project (Palmdale Hybrid Power Project Greenhouse Gas BACT Analysis, page 19):

> The modification of the project to include alternative lower GHG-emitting technology, or an increase in the amount of solar thermal generation beyond 50 MW would fundamentally alter the business purpose of the Project. However, as stated by EPA (EPA 2010b, pg. 27), a BACT analysis is not generally used to redefine the applicant's project.
> 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 inherently 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. Consequently, no additional lower emitting alternative technologies are feasible to incorporate into the project without fundamentally changing the business purpose of the Project.

(Page 14)

> As discussed previously, any of the commercially available low GHG-emitting technologies that could be implemented, including additional solar thermal generating capacity, were determined to be infeasible for this site (CEC 2010a) and would fundamentally alter the business purpose of the emission source. As such, lower emitting alternative technology was not considered as part of the BACT analysis (EPA 2010b, pg. 27).

(Page 19.)

In the Response to Comment, the EPA reaches the opposite conclusion:

> 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 combustion turbines and associated heat recovery system. . .
>
> 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.

(Page 40.)

Again, this reversal of position is by no means a logical outgrowth of the notice and comment period and is deficient. The public should be given the opportunity to comment on a full analysis of solar as BACT prepared in compliance with the CAA.

3. BACT analysis – Particulate Matter

On page 50 of the Response to Comments, the EPA announces, "After reviewing the information provided by the commenter we are revising the proposed BACT limits for PM, PM10, and PM2.5 (collectively referred to hereafter in this particular response as "PM")."

This substantial change is based entirely upon information put on record for the first time by the applicant as comments on the draft permit. The public has not had an opportunity to review and comment on this new information or the EPA's revision.

My clients request that the public be given the opportunity to comment on the permit in full including the above described issues and all other data, information, and arguments made in the comments and responses to comments that raised substantial new questions, not all of which are addressed in this letter. The most efficient way to facilitate this is with a reopening of the comment period. Thank you for your careful consideration of this request.

Sincerely,

April Rose Sommer

Appendix C

September 14, 2011

Rob Simpson Comments on Palmdale

Thank you for the opportunity to comment on the PSD permit for the proposed;
Palmdale Hybrid Power Project PSD Permit Number SE 09-01

We timely submit these comments but have requested an additional 30 days to comment. This request has been denied. Please provide all internal communications and the basis for the decision to deny an extension of the comment period and include my comments regarding the request for an extension as a part of the administrative record for this proceeding. Please identify the basis for accepting or denying other comment periods extensions in the past. The number of requests for extensions and disposition of the requests. I am concerned that the denial of my request may be an attempt to violate my civil rights and limit my participation in retaliation for my significant environmental Justice related participation in other proceedings. Another example of which may be the Stockton cogen PSD permit. Despite repeated requests to be on the notice lists for PSD permits and an EAB decision in my favor (EAD08-01) over failed public participation procedures, the EPA failed to provide notice of that proceeding to me or respond to my request to reopen the comment period.

Initially to clarify the format of these comments. On occasion I pose comments as questions. I find that a comment and response are much akin to a question and answer. This has been misinterpreted at times to claim that my question was not an objection to the permit. Please consider all comments contained herein, including those posed as questions, as objections to the permit.

The Public notice for this proposed project states;
"EPA is issuing a proposed PSD permit that would grant conditional approval, in accordance with the PSD regulations (40 CFR 52.21), to the City of Palmdale to construct and operate a 570 megawatt (MW, nominal) electric generating facility." but the EPA Environmental Justice (EJ) Analysis states; "The City of Palmdale, in conjunction with Inland Energy Inc., has applied to EPA for a PSD permit for the Palmdale Hybrid Power Project" Which statement correctly identifies the applicant(s) If Inland Energy is an applicant the EPA should reissue a public notice which states that and include an address for Inland Energy Inc. I almost did not participate in this proceeding as it appeared to be a city project. Failure to identify the true applicants can have a chilling effect on public participation. The public may not feel that a decision between two government agencies warrants participation or that their participation had a chance of impacting the decision. When a private energy developer in the state of California is involved it could be a whole different. Some have a checkered history in this State. Who would actually construct the project? The notice appears that it may be a public works project with associated benefits. If it is a private developer who will construct the project that should be disclosed in a new public notice. Who will operate the project? The same logic applies. If the City of Palmdale will operate the project under its mandate the people could experience a different set of circumstances and benefits than if it is operated by a private firm.

Please identify the public participation and outreach conducted. How, when, where, and for how long, did the EPA publish its notice(s) Did any notice from the EPA or other involved government entities post notice of the National Ambient Air Quality Standards (NAAQS), the areas attainment status or the projects effects in relationship to these standards? Did any notice identify the volume of pollutants in any form? . Could that information have been germane for decision makers (the public) to determine their approval, or desire to participate the permitting? Isn't that one of the reasons that the standards were created? The EPA should disclose some data regarding the volume of pollutants in a new notice for this action. Does the EPA agree with the figures expressed in Air Quality Table 5 of the California Energy Commission (CEC) final decision (found on the 150th page of the 669 page document)? These figures could affect public participation and the EPA should publish them in a new notice for this action.

Air Quality Table 5
Maximum Modeled Concentrations for PHPP Normal Operations

Pollutant	Averaging Period	Concentrations ($\mu g/m^3$)					Percent of Limiting Standard
		AERMOD Result	Ambient Background	Total	CAAQS	NAAQS	
NO_2[1]	1-hour State	203.1	---	203.1	339	--	60%
	1-hr Federal	175.3	---	175.3	---	188	93%
	Annual	1.0	28.2	29.2	57	100	51%
CO	1-hour	367	3,680.0	4,047.0	23,000	40,000	18%
	8-hour	20.4	1,978.0	1,998.4	10,000	10,000	20%
PM10	24-hour	18	181.0	199.0	50	150	**398%**
	Annual	1.8	30.2	32.0	20	--	**160%**
PM2.5	24-hour	11.6	16.3	27.9	--	35	80%
	Annual	1.2	8.9	10.1	12	15	84%
SO_2	1-hour	1.6	28.8	30.4	665	--	5%
	3-hour	1.3	23.6	24.9	--	1,300	2%
	24-hour	0.9	13.1	14.0	105	365	13%
	Annual	0.1	2.6	2.7	--	80	3%

1. Modeled NO_2 concentrations as determined with the OLM. Maximum AERMOD concentration given is

Does the above table contradict the statement in the EPA Notice for this proposal; "Air pollution emissions from the Project would not cause or contribute to violations of any National Ambient Air Quality Standards (NAAQS) for the pollutants regulated under the PSD permit."

Did the EPA incorporate the CEC or air district service list, interested parties list or commenter list for this project, or other projects, into its notice list for this proposed action? Did the EPA provide notice to the CEC and ensure that the notice was posted on its public docket? Did the EPA provide notice to participants form other EPA actions? Which government officials did the EPA provide notice to? Air Force? City of Lancaster? How many notices did the EPA deliver and to whom were

they served? What outreach did the EPA conduct in the identified Environmental Justice Community? When did the EPA conduct its outreach? Did the EPA identify any pre existing health issues or particular stressors to the identified EJ communities? Has the EPA participated in any meetings workshops or other events where comments were made regarding this project that was not recorded and included in the comments regarding this permit? If so why? What is the point of having an informational meeting scheduled directly before the public hearing and scheduled on the day that the public comment period is scheduled to end. Has any permit ever changed based upon information that the public received at an information meeting held on the last day of public comment? Is the informational meeting recorded and included in the public comments for this project? What is the circulation of each publication in which the EPA published notice of this proposed action? expressed as a gross number and what percentage of the potentially affected population that this number would represent. Separately please provide the same information for distribution in the identified Environmental Justice communities and include the market penetration ratios for Spanish language notices to Spanish speaking people. The EPA included a contact phone number for more information but it is a long distance call from the project area. A new notice for this action should include a local or toll free number because the payment of a toll call may prevent some low income persons from calling.

Please provide; "all supporting documents, reports, studies, public announcements via alternative media, certified copy(ies) of the newspaper announcement(s), fliers, brochures, radio broadcasts, public meeting documentation (e.g., agenda, minutes, any handouts, presentation outline, attendance signage sheets)."
http://www.ct.gov/dep/lib/dep/environmental_justice/EJ_Guid.pdf

The Fact Sheet (FS) for this proposal states;

"9.3 Growth
The growth component of the additional impact analysis considers an analysis of general commercial, residential, industrial and other growth associated with the PHPP. 40 C.F.R. § 52.21(o)." FS

The EPA then seems to replace the word "associated" with "induce" to dismiss the association between the project and "projected growth" this interpretation completely undermines the plain meaning of the statute. The FS makes clear that growth is associated with this project, yet no meaningful analysis has been offered. The EPA should require a growth analysis which considers the growth associated with this project. If a project can simply excuse itself from the regulation by pointing to projected growth, then no power project would need comply with the Clean Air Act.

The EPA should also look at the nuances of growth that would likely occur in this, oversupply of fossil fuel burning electric generation, market. Will the growth that occurs be dependent upon this

generation? Without this oversupply would the area develop more efficient buildings? Would cleaner energy sources be developed or would development not occur? The EPA should repond to the questions posed in the California Energy Commission (CEC) (Decision);
"Jason Caudle from the City of Lancaster expressed similar concerns to those contained in the letter submitted by **Mark V. Bozigian**, the City Manager for the City of Lancaster, on May 2, 2011 requesting suspension of proceedings in the PHPP due to changes of the PSD rules relative to PM2.5 (see the **Air Quality** section of this Decision). Mr. Caudle asked, "What is now the cost associated with [PHPP]? What doesn't get built? Does the transmission capacity in this valley get utilized by the ground energy, and therefore Edwards Air Force Base's 500 megawatt solar plant doesn't get built? Does our distributed generation program that we're working on, distributed generation from the solar standpoint throughout the community, not get built as a result of it? Does additional manufacturing not get built as a result of this selling of this credit or selling of this increment? What manufacturing facility can't come here because the threshold of significance has reached beyond the air quality standards?" (3/2/11 RT 183:11 –23.)"
(notably Jason Claude is the Deputy City Manager for the City of Lancaster)

The FS further seems to rely on some nebulous claim of displacing once through cooling facilities. The once through cooling facilities hardly operate at this point as there is no demand for their power, just as there is not demand for the power generated by this proposed project. A direct link between which facilities will close as a result of this project should be provided. If this project is to serve other "existing demand" that demand should also be demonstrated. This project will interfere with the development of cleaner resources to serve growth and existing demand. The EPA should analyze this effect as a part of the growth analysis. The FS states;

"With regards to the question of whether the Project's power generation would induce growth, the applicant anticipates that the Project would likely displace the older once-through cooling facilities in the Southern California region that are expected to be retired in the future. Therefore, rather than induce growth, PHPP would supply energy to accommodate the existing demand and projected growth in the Southern California region. In sum, based on our consideration of the information and analysis provided by the applicant, we do not expect the Project to result in any significant growth." FS

"While geotechnical analyses have not been conducted to verify the suitability of these sites, other proposals have been made to capture and sequester CO2 emissions in the San Joaquin Valley; as a result, there is a reasonable presumption that suitable sequestration sites do exist in these areas despite the lack of extensive studies prepared for this Project. Nevertheless, the primary issue with the feasibility of CCS in this case lies with the location of the PHPP in relation to the sequestration sites and the surrounding geography. As shown in the figure above, significant mountain ranges lie between the project location and the potential sequestration sites (oil fields,

gas fields, and ocean storage). Sequestration of CO2 emissions from the Project would require construction of CO2 pipelines through these mountains. The offsite logistical barriers of constructing such a pipeline (e.g., land acquisition, permitting, liability, etc.) make this technology technically infeasible for the Project." FS

It appears that the EPA argument against Carbon Capture and Sequestration is not one of technical infeasibility but one of cost. The Natural gas industry is no stranger to pipeline construction and so it is unlikely that the logistics of constructing a pipeline is beyond it. The CEC decision states;

"Natural gas would be delivered to the project through a new 20-inch, 8.7-mile underground gas line that will be designed and constructed by the Southern California Gas Company (SCGC). The proposed gasline will be constructed from the project site south along Sierra Highway, east along Lockheed Way, south along 10th Street E, to East Avenue S along existing streets and will share the same route as the proposed secondary-treated water line. (Ex. 300, p. 3-3.)"
and
"The Applicant's proposed PHPP transmission line route would be approximately 35.6 miles long and would consist of two segments. Segment 1 would begin on the PHPP onsite switchyard and extend approximately 23.7 miles through new and existing right-of-ways (ROWs) to Southern California Edison's (SCE) existing Pearblossom Substation and would involve stringing conductors on new steel poles. Average pole spacing would be approximately 750 feet, pole heights would range from 100 feet to 135 feet. Segment 2 would be approximately 11.9 miles long and the conductors would be strung on new steel poles in the existing SCE ROW between Pearblossom and the Vincent Substation. The route would travel through and near a mixture of disturbed and undisturbed areas, which includes desert areas, agricultural properties, industrial and residential areas. (Ex. 4; Ex. 300, p. 6-10.)"

Both of these routes extend into the very mountains that are claimed to be insurmountable for a CO2 line but that all other utilities have conquered.

The EPA and many others have worked long and hard for the GHG regulations to be enacted. The survival of our society may very well hinge on adherence to the regulation. The EPA should not so easily mute this groundbreaking regulation "despite the lack of extensive studies prepared for this Project" (FS) The EPA would simply be forming a no build zone anywhere close to sequestration sites if it chose to exclude polluters who chose to develop away from sequestration sites or who chose not to prepare adequate studies for their projects. There should be real analysis, real numbers on cost and polluters that choose to locate away from sequestration sites should not get a free ride. Could tree planting be a control technology? How many trees would the applicant need to plant to offset the GHG from this project? What about Algae ponds? Changed forestry or farm practices? Is the EPA concerned about the localized effects of GHG emissions as identified in the Jacobson effect?

http://www.stanford.edu/group/efmh/jacobson/CO2loc0709EST.pdf
Or can a GHG control be located in another location or even air basin like the offsets proposed?

The EPA appears to indicate that the solar component is a GHG control technology. The FS states;

"Step 1 – Identify all control technologies
The inherently lower-emitting control options for GHG emissions include28:..
"28 In addition to the measures discussed here specifically for the gas turbines, we note 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"

The EPA also relied on the solar component to satisfy its environmental Justice analysis;
"On sunny days, the solar array is capable of providing 50 MW of the total electrical generation from the steam
turbine, allowing the facility to reduce operation of the natural gas-fired duct burners during periods of peak
demand, thereby reducing air pollution." FS

While I could agree with this interpretation the solar component does not appear to regulated by the PSD permit. A permit condition requiring the 50 Mega Watt (MW) solar generation should be included.

I am concerned that there may be plans to eliminate some or all of the solar component and that this could be a scam permit. Does the EPA have any indication that some or all of the solar component may not be constructed? Is it possible that if the project was advertised as a "hybrid" project it would reduce public participation or increase public acceptance? If 50 MW of solar represents a control technology would a greater solar component represent greater control? What is the ideal ratio of solar to natural gas for maximum GHG and EJ benefits for this proposal?

The EPA did not appear to identify all GHG control technologies. Did the EPA identify all GHG control technologies? The EPA, DOE, CEC and others appear to indicate that there are other GHG control technologies.

http://www.netl.doe.gov/technologies/carbon_seq/refshelf/CO2%20Capture%20Paper.pdf

http://www.epa.gov/sequestration/faq.html

http://www.epa.gov/sequestration/index.html

I have objections regarding the baseline emissions and modeling parameters. When was the application for this proposal deemed complete? I believe that one reason the Clean Air Act mandates

a one year limitation for permitting decisions to ensure that contemporaneous baselines, rules and pollution control techniques are utilized. Does the EPA agree with this belief? When was this application deemed complete? What years were used for baseline emission considerations? If the EPA adhered to the one year decision mandate would different years be required for the baseline period? If 2009 and 2010 were used as the baseline would the project still fall just below the significance levels?
"The modeled impact annual NO2 impact is 0.98 μg/m3, which is below the Significant Impact Level (SIL) of 1 μg/m3 and did not trigger a cumulative NAAQS analysis, and the cumulative 1-hour NO2 impact is 185.3 μg/m3, as compared with the NAAQS of 188 μg/m3." EJ

It appears that significant potential emission sources were not included in the modeling results. Did the modeling include the cumulative impacts of; the Wastewater treatment plant emissions, airports and airplane emissions at Palmdale Regional Airport and the United States Air Force, the Lockheed Martin Aeronautics and Northrop Grumman facilities and "four future projects within the approximate distance from PHPP included: Fairway Business Park, 1.3 miles southwest; Palmdale Transit Village Specific Plan, 2.5 miles southwest; Amargosa Creek Specific Plan, 2 miles northwest; and 30th St. W and Avenue K Projects, 3 miles northwest." CEC Decision. Did it include all local roadways? Did it include the increased potential traffic as a result of having the roads paved to create PM offsets? Since

"The applicant later switched to a variant of EPA's March 2011 memo's43 "first tier" approach: it used the 98th percentile of all monitored values, though only for model receptors outside the USAF Plant 42
boundary; the hour-by-hour approach still applied to other receptors." FS. How did this "variant" limit the results? What if receptors inside the USAF plant were included?

The analysis of secondarily formed PM is inadequate and should be supplemented;

"The PHPP application has little discussion of secondarily formed PM2.5 (as distinguished from directly emitted primary PM2.5). However, the applicant does cite an earlier AECOM analysis showing that that near the source, primary PM2.5 emissions dominate the modeled impacts (Supplemental Information, p.2-10 pdf. 18). EPA notes that, due to the time needed for chemical formation, secondary PM2.5 impacts are likely to occur much farther downwind than the significant primary impacts, which occur within 400 m of the project (Updated Analyses Memo p.12 pdf.12), and so are likely to be small and not overlapping with the impacts estimated in the Application." FS

"if the facility emits significant quantities of PM25 precursors, some assessment of their potential contribution
to cumulative impacts as secondary PM25 may be necessary"
http://www.epa.gov/region7/air/nsr/nsrmemos/pm25memo.pdf

The proposal fails to conform witht the new PM2.5 increment regulations released on October 20, 2010 and it will not have a final permit by Oct. 20 2011. The permit should be denied.

The EPA EJ analysis states;
"In order to provide further information about the potential air quality impacts of the Project, EPA notes that the CEC analyzed environmental justice considerations in the Presiding Member's Proposed Decision (08-AFC-9), pp. 8.3-6 to 8.3-8 (June 2011). The Commission proposed, based on the evidentiary record that the fully mitigated project would not result in any significant adverse environmental or public health impacts to any population. *Id*. at 8.3-8. With respect to air quality impacts, the Commission found that the PHPP will not cause or contribute to disproportionate impacts upon minority or low income populations, as all PHPP significant impacts will be mitigated below significance. *Id*. at 8.3-8."
In fact the CEC decision was unable to justify the offsets proposed by the project and left that duty tot the EPA The CEC Decision states; Based on the evidence, NOx ERCs are located up to 116 miles upwind of the project site and VOC ERCs are located up to 285 miles upwind of the project site….
"The project will be subject to review by the US EPA for purposes of determining compliance with the federal PSD program and it is expected that US EPA will review all aspects of PHPP, including offsets. Based on the large distance
between the project site and ERC sources, the need for offset ratios that are based on these distances and the lack of information on offset ratios needed for adequate abatement, the evidence shows that the proposed VOC and NOx ERCs are not adequate to fully offset PHPP emissions, result in a net air quality benefit or meet the requirements of AVAQMD Rule 1305." (emphasis added) the CEC then went on to propose offsets but used the 2004 as a basis.

a. Ozone
The District is currently classified as not in attainment (or "nonattainment") of the state 1-hour and the federal 8-hour ozone air quality standards. In 2004, the District adopted its *2004 Ozone Attainment Plan (OAP),* which was submitted to the California Air Resources Board (CARB) for consideration and forwarded to the U.S.EPA for incorporation into the State Implementation Plan (SIP). The OAP states that "(t)he AVAQMD is downwind of the Los Angeles basin, and to a lesser extent, is downwind of the San Joaquin Valley. Prevailing winds transport ozone and ozone precursors from both regions into and through the MDAB during the summer ozone season. These transport couplings have been officially recognized by CARB. Local AVAQMD emissions contribute to exceedances of both the NAAQS and CAAQS for ozone, but the MDAB would be in attainment of both standards without the influence of this transported air pollution from upwind regions." Therefore, the PHPP, fully mitigated, along with the emissions from expansion of the Lockheed Martin Aeronautics and Northrop Grumman facilities will not cause violations of the ozone standards." CEC decision.

The problem with the EPA relying on this back loaded attempt to rewrite the Clean Air Act is that the EPA has not yet found justification to approve the plan. It appear that the EA has not approved a plan for the area since 1997. Could this be part of the reason that the area is in Severe non attainment? The EPA EJ states;

"This plan and the State's analysis of it may be found on the California Air Resources Board (ARB) website at the following URL: http://www.arb.ca.gov/planning/sip/planarea/mojavesedsip.htm. The plan was open for public comment before it was adopted by the districts and before it was adopted by the State. When EPA proposes action on this plan, there will be an additional 30-day comment period on EPA's action. Further, as noted above, the District's FDOC includes provisions to address ozone precursors."

The EPA also appeared to unable to justify the offsets in 2 letters.
http://www.energy.ca.gov/sitingcases/palmdale/documents/others/2009-07-27_EPA_Comments_on_Revised_PDOC_TN-52602.PDF

http://www.energy.ca.gov/sitingcases/palmdale/documents/others/2010-10-26_US_EPA_Final_Determination_of_Compliance_Comment_Letter_TN-58861.pdf

These letters appear to be dated prior to the EPA determination that an environmental justice community exists. Is that correct? Did the EPA consider its environmental justice mandate with respect to the offsets for this project. It appears that polluting a highly affected EJ community while rich communities 285 miles away enjoy the benefits of offsets would be the definition of environmental discrimination. The EPA limitation of the EJ analysis to exclude "all aspects of PHPP, including offsets." is overly narrow and disguises the true impacts of this project and is unsupported by the record in this proceeding and the mandate contained in Executive Order 12898, The EPAs action to approve or disapprove the offsets is subject to its EJ analysis The PSD pollutants are precursors to ozone "3 Because NOx is also a precursor to ozone in this area, it will also be regulated by the separate District ozone nonattainment New Source Review permit in addition to this PSD permit." FS

The Precursors are also subject to LEAR; "1 New source review in non-attainment areas is different from PSD review. Because the area already has air quality that does not meet national health standards, and yet to preserve the ability for economic development to occur in those areas without exacerbating air quality and public health concerns, the Clean Air Act requires that sources seeking to build or expand in a non-attainment area must meet the Lowest Achievable Emissions Rate (LAER) and offset their anticipated new emissions by eliminating emissions of an equal, or depending on the severity of the nonattainment, greater amount. LAER requires a level of emissions reduction, through

the use of control technology or other approaches, that is as or more stringent than BACT, which is required in attainment/unclassifiable areas." EJ
Did the EPA delegate its environmental justice responsibilities to another agency, the air district, the CEC or the applicant? Did the EPA monitor any monitor any action to ensure that the EPA environmental justice mandate was satisfied. At what time did the EPA conduct outreach. Did the EPA satisfy any of the precepts in'
ENVIRONMENTAL JUSTICE PUBLIC PARTICIPATION POLICY
http://www.epa.state.il.us/environmental-justice/public-participation-policy.pdf

The EPA EJ analysis is basically saying that we have the NAAQS so we do not need further EJ analysis If the NAAQS adequately protects why is the area in severe ozone unattainment?

Ammonia Emissions

Due to the large combustion turbines used in this project and the need to control NOx emissions, significant amounts of ammonia will be injected into the flue gas stream as part of the SCR system. Not all of this ammonia will mix with the flue gases to reduce NOx; a portion of the ammonia will pass through the SCR and will be emitted unaltered, out of the stacks. These ammonia emissions are known as ammonia slip. Ammonium nitrate (NH4NO3) and ammonium sulfates (NH4HSO4 and [NH4]2SO4) are important constituents of airborne fine particulate matter (PM2.5), and can contribute significantly to visibility impairment and regional haze. The top down BACT analysis for NOx fails to consider the collateral impacts of the use ammonia in SCR system.

The project has the potential to emit over 60 tons per year of ammonia.[1] Considerable secondary particulate formation can occur as ammonia is a known precursor to secondary particulate and the project area is ammonia limited according to available research. Ammonia emissions can also affect visibility. The BACT analysis and the visibility analysis are defective since they ignore the collateral impacts from the projects ammonia emissions.

Endangered Species

[1] http://www.energy.ca.gov/2010publications/CEC-700-2010-001/CEC-700-2010-001-FSA.PDF Page 4-7.17

In a letter dated August 5, 2011, EPA requested FWS's written concurrence with EPA's determination under ESA section 7 that the proposed PSD permit for the PHPP is not likely to adversely affect the desert tortoise or arroyo toad. The EPA is proposing to issue the permit after receiving concurrence from USFWS on the ESA Section 7 permit. This precludes the public form meaningful comments on the Section 7 permit since it will be issued after the PSD comment period has expired. Several projects are impacting the desert tortoise at this time and several planned projects also are expected to have significant impacts to the desert tortoise.

The Ivanpah Solar project just one of the large solar projects in the desert has recently been forced to halt construction due to exceeding the limits on incidental take for the desert tortoise.[2] EPA must do a comprehensive analysis of this massive utilization of desert property and must hold the public comment period open until USFWS has issued its opinion for public comment.

BACT for GHG

The proposed permit dismisses carbon sequestration as a feasible technology for GHG BACT. Carbon sequestration in algae ponds is a feasible technology to capture GHG emission form the proposed Palmdale Project and should be included in the BACT evaluation for GHG emissions.

The permit also ignores GHG emission from maintenance vehicles for the solar component of the project. Electrical powered maintenance vehicles can eliminate virtually all GHG emissions from vehicles used to maintain the solar field and should be considered in the BACT analysis for GHG emissions.

The permit fails to establish a heat rate as BACT for GHG emissions. For these turbines a net facility heat rate of 6,752 (HHV) has been accepted as the achievable net facility heat rate.[3] The PSD permit must establish some quantifiable and verifiable heat rate as BACT for GHG emissions

[2] http://blogs.law.columbia.edu/climatechange/2011/05/18/green-vs-green-litigation-for-and-against-solar-power-in-california/

[3] http://www.baaqmd.gov/~/media/Files/Engineering/Public%20Notices/2011/20798/Oakley%20FDOC%20January%202011.ashx?la=en Page 85

otherwise the permit provides no GHG limits and does not comply with new federal GHG regulations.

BACT for Fugitive Road Dust

The proposed permit eliminates road paving for control of fugitive dust even though it is the number one option. That technology is established as BACT unless it is demonstrated that technical considerations, or energy, environmental, or economic impacts justify a conclusion that the most stringent technology is not achievable for the case at hand, The permit eliminates the paving option without demonstrating the option is not economically feasible. The permit must make the demonstration to eliminate the top control option road paving.

Further if the road paving option is eliminated speeds of maintenance vehicles can be lower than 10 miles an hour during dry conditions and limit fugitive dust even further. The BACT analysis is inadequate as it eliminates the top option without a cost effectiveness analysis and fails to consider other dust control options.

Start Up and Shutdown CO BACT

The Palmdale permits cold start CO limit is 410 lbs per event. The Oakley Generating Station in the BAAQMD employs the same turbines and fast start technology as the Palmdale Project. The Oakley cold start CO limit is 362.4 pounds per event.[4] The Palmdale Projects CO cold start limit is 410 lbs pounds per event. The Oakley Project has a warm start CO limit of 85.2 pounds[5] and the Palmdale project has a 329 lb cold start limit per event a 243 pound difference. The Palmdale Project has a 674 pound per hour CO limit for shutdown while the Oakley Project has 144.7 lb per hour shutdown limit[6] a 560 pound difference. The Palmdale Project has a 337 pound per event CO

[4] http://www.baaqmd.gov/~/media/Files/Engineering/Public%20Notices/2011/20798/Oakley%20FDOC%20January%202011.ashx?la=en Page 18
[5] http://www.baaqmd.gov/~/media/Files/Engineering/Public%20Notices/2011/20798/Oakley%20FDOC%20January%202011.ashx?la=en Page 18
[6] http://www.baaqmd.gov/~/media/Files/Engineering/Public%20Notices/2011/20798/Oakley%20FDOC%20January%202011.ashx?la=en Page 18

shutdown limit while the Oakley Project has a 140.2 pound per shutdown limit.[7] The Palmdale limits for CO emissions for start up and shutdown are not comparable with current BACT limits.

Start Up and Shutdown NO_2 BACT

The Palmdale Project has a 40 lb NO_2 start up limit per event and the Oakley Project has a 22.3 pound per event limit. The Palmdale Project has a 57 pound per shutdown limit and the Oakley Project 46.9 pound per shutdown limit. Cold Start up limits for both projects are 96 pounds per event.

Thank you,

Rob Simpson

[7] http://www.baaqmd.gov/~/media/Files/Engineering/Public%20Notices/2011/20798/Oakley%20FDOC%20January%202011.ashx?la=en Page 18

Appendix D

GE Energy

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December 1, 2010

Ms. Kathleen Truesdell
Air Quality Engineer
Bay Area Air Quality Management District
939 Ellis Street
San Francisco, CA 94109

RE: : Contra Costa Generating Station (Oakley) – Emissions Guarantees and Estimated Startup and Shutdown Durations and Emissions

Dear Ms. Truesdell

The Bay Area Air Quality Management District (BAAQMD) requested that General Electric (GE) provide documentation of the guaranteed emissions for normal operation and as well as the estimated startup and shutdown durations and emissions for Contra Costa Generating Station LLC's (CCGS) Oakley Generating Station project.

Table 1 lists the stack emissions during normal operations that GE is guaranteeing for the Oakley Generating Station project.

TABLE 1
Guaranteed Stack Emissions During Normal Operations

Pollutant	Operating Range	Value
NO_X	Minimum Emissions Compliance Load (MECL) to Base Load	2 ppmvd @15% O_2
CO	MECL to Base Load	2 ppmvd @15% O_2
NH_3	MECL to Base Load	5 ppmvd @15% O_2
POC	MECL to Base Load	1 ppmvd @15% O_2
PM10	Base Load	9 lbs/hr

Table 2 lists GE's current estimates of the gas turbine startup and shutdown durations and emissions for the Oakley Generating Station project. The values shown are based on gas turbine startup and shutdown profiles for Rapid Response with Purge Credit. Startup values are from gas turbine ignition to the gas turbine Minimum Emissions Compliance Load. Shutdown values are from gas turbine Minimum Emissions Compliance Load to gas turbine flameout. All values are per gas turbine per event.

TABLE 2
Estimated Startup and Shutdown Durations and Emissions

	Hot Start	Warm Start	Cold Start	Shutdown
Duration, min.	14	14	45	30
NO_X, lbs as NO_2	22	22	96	39
CO, lbs	85	85	360	140
POC, lbs as CH_4	31	31	67	17

Notes:

1. A hot start is defined as a start following 8 hours of shutdown or less. A warm start is defined as a start following 48 hours of shutdown. Cold start is defined as a start following 72 hours of shutdown or more.
2. Combined Cycle Unit is kept in stand-by configuration during Standby Period with HRSG stack closure closed, gas turbine compartment doors closed, HRSG motor operated isolation valves closed, HRSG isolated and no blowdown, draining or other release of internal energy has been occurred, as well as other procedures and conditions in accordance with Seller's recommendations.
3. All normal pre-start conditions and procedures are satisfied in accordance with Seller's recommendations prior to initiation of normal start-up sequence. Pre-start conditions include, but are not limited to:
   - Auxiliary Boiler is operating and auxiliary system piping is pre-warmed, drained
   - Steam turbine is rotating at turning gear speed
   - Steam turbine seal steam system is operating normally and condenser pressure is below alarm value.
   - Steam turbine seals have warmed the steam turbine to the minimum metal temperature required for startup. This typically requires one hour seal operation for a completely cooled steam turbine
   - The steam system is ready to generate steam with pumps running, electrical equipment energized, drum and hotwell levels at startup level and controls in auto.
4. Combined Cycle Unit is started using Rapid Response start-up sequence in accordance with Seller's recommendations.
5. Turbine insulation and enclosures installed per GE acceptance of drawings and instructions.
6. Design, manufacture, construction and commissioning of equipment outside GE's scope of supply, have satisfactorily met GE requirements.

If you have any questions regarding this information, please feel free to contact me

Sincerely,

Pete Bukunt

Cc: J McLucas, Radback
C Matis, GE

Appendix E

-------- Original Message --------
Subject: Re: public records request for Palmdale Hybrid Power Project
From: Beckham.Lisa@epamail.epa.gov
Date: Mon, November 07, 2011 9:43 am
To: <rob@redwoodrob.com>
Cc: Bohning.Scott@epamail.epa.gov

Hi Mr. Simpson,

The modeling files are in several different formats (e.g. .pfl, .ua, .sfc). However, many of them are viewable has text files and some are Word or Excel files. I estimate that printing those viewable as text files would easily be greater than 2,000 sheets (front and back), possibly close to 5,000 sheets. It's over 700 MB of data. I copied Scott Bohning on this email, who reviewed the modeling for the PHPP. Scott would be able to help you review the files once you have them and determine which, if any, additional programs you would need. I will defer to Scott on understanding the modeling files, as he is the expert.

Here's one example of a file on the CDs that can be viewed as a text file, so you can get an idea of what the information looks like.

Additional information on air modeling is also available on our website at: http://www.epa.gov/ttn/scram/dispersion_prefrec.htm#aermod.

The "public distribution list" was included in the information I sent you. There are two lists - one for the proposed permit and one for the final permit. These were document V-1 and V-25. I believe they were sent in the 10/31/2011 email at 9:44 a.m. They are both Excel files - password protected to prevent editing, simply open as "ready only".

Lisa Beckham
Environmental Engineer
Air Division, Permits Office
U.S. EPA Region 9
(415) 972-3811