

DOCKET

01-AFC-7C

DATE _____

RECD. AUG 10 2010

Mary Dyas, Compliance Project Manager
California Energy Commission
1516 9th Street, MS-2000
Sacramento, CA 95814

**Re: Russell City Energy Center (01-AFC-7C),
August 11, 2010 Business Meeting, Agenda Item 5
*Petition to Amend Air Quality Conditions of Certification***

Dear Ms. Dyas

Thank you for this opportunity to object to this Amendment. The Commission should remember that, Calpine rejected OpFlex because of the associated cost Calpine also rejected the commission recommendation to use Fast Start technology.

"AQ-SC10 In lieu of complying with **AQ-SC7**, **AQ-SC8**, and **AQ-SC9**, the project's combustion turbine/HRSG units shall be designed and built with equipment and control systems to minimize start-up times and emissions. These could include the Fast-Start technology with an integrated control system and a once-through Benson boiler design, appropriate system configuration and equipment to facilitate operating chemistry during starting sequences, and an auxiliary boiler."

If Calpine is having difficulty obtaining air permits it is their own fault. Had they followed the commissions guidance they would likely be built by now. Calpine's insistence on utilizing used turbines that it has had in stock are the basis of their troubles.

The amendment includes;

AQ-44. The owner/operator shall properly install and maintain the S-5 cooling tower to minimize drift losses. The owner/operator shall equip the cooling tower with high-efficiency mist eliminators with a maximum guaranteed drift rate of 0.0005 percent. The maximum total dissolved solids (TDS) measured at the base of the cooling towers or at the point of return to the wastewater facility shall not be higher than ~~8,000~~ **6,200** ppmw

While this limit would appear to lower PM emissions to acceptable levels for permitting from the vaporization of City Wastewater. No explanation is offered how the facility will meet the new limit or if this number is merely manufactured for permitting. Ironically the commission agenda for the same day includes an amendment of a permit for the presently operating;

La Paloma Generation Project (98-AFC-2C) to increase PM emissions. That amendment states; The applicant has proposed a PM10 emission rate of 20 lb/day. The water supply for the makeup water is being subject to variability and could change from TDS concentration of 500 ppm to 1000 ppm." *and* "the January 19, 2009 levels were between 760-800 μ S/cm." The La Paloma Generation Project utilizes fresh water from the California Aqueduct as opposed to wastewater and it could not maintain the limits proposed by RCEC using wastewater. An demonstration that the permit limit is achievable should be required and if the permit limit is achievable La Paloma should be held to the same limit.

The scheduling letter for The La Paloma Generation Project offers ample time for public review/comment and staff to review comments prior to the business meeting;" ****This**

cover letter was originally sent to interested parties on May 6, 2010, along with staff's analysis. The date of the business meeting that staff will recommend approval of this petition to amend has changed from June 16, 2010 to August 11, 2010. Comments are now due by June 30, 2010.*" (Original in Red)

The amendment appear to follow a different path than the RCEC amendment, obtaining an ATC prior to the amendment as opposed to after, as is proposed in the RCEC amendment.

"On March 1,2010, the SJVAPCD issued final ATC Permit S-3412-5-5 and ATC Permit S-3412-6-5 to implement the revised 20 lb/day PM10 emission limit in Condition 3 (see Attachment 1). These ATC Permits were reviewed by U.S. EPA Region 9, and they include a Title V Certification of Compliance. " page 2 PETITION FOR AMENDMENT TO CALIFORNIA ENERGY COMMISSION DECISION -DOCKET NO. 98-AFC-2 CONDITION OF CERTIFICATION: AQ-51

There appears to be no Determination of Compliance from the Air District associated with amendment. Some determination from the Air District would seem integral to an air quality Amendment, as was completed for the above facility. In its response to comments regarding the PSD permit the Air District stated; "the Air District disagrees that it is inappropriate to consider emissions estimates from the project applicant or from the CEC in its permitting analysis....The Air District therefore concludes that that relying on information from the applicant and the CEC is appropriate in a PSD permitting analysis, and disagrees with the comments that suggested otherwise."14 and "If the CEC determines that these claims have merit and decides to undertake further proceedings, the Air District would be happy to participate in any such proceeding at the request of the CEC....the Air District will participate in any CEC license proceeding as requested by the CEC. 21 It appears that the CEC staff failed to invite the Air District to participate in these proceedings. The CEC should request that the Air District participate in this proceeding.

The amendment application section 3.3.1 states; BAAQMD issued the Authority to Construct on November 1, 2007...an Authority to Construct expires after two years, unless renewed at the request of the permittee (BAAQMD Reg. 2-1-407)" and so the Authority to Construct would appear to be expired. The applicant appears to wish to back load the process and bypass a Preliminary and Final Determination Of Compliance instead imposing its will upon the Air District through the CEC process in its statement "Because no State or local agency may impose more stringent requirements than appear within the CEC license, it falls to the CEC to adopt any more stringent requirements needed to meet current BACT, so BAAQMD may then proceed with reissuance of the Authority to Construct for another two years." If the CEC agrees with this interpretation and omission of the Air Districts participation in this Air Quality Amendment it should at least perform a top down BACT analysis of the source. The Air District stated in its response to comments regarding the proposed PSD permit states "This means that the Federal PSD Permit review does not look at alternatives such as solar power, demand management, or other similar alternatives. That does not mean that such considerations are unimportant, however, and they can appropriately taken into account in the overall permitting of the facility. But this type of review of alternatives is undertaken in other forums such as the CEC's CEQA-equivalent environmental review process, not through the Federal PSD permitting process." page 230

The Applicants contention that "The required changes in the Conditions of Certification will not result in any environmental impacts because, in all cases, they will reduce RCEC's emissions to a lower level than is currently required by the Conditions of Certification." simply ignores the fact that the current conditions of Certification are not a baseline for comparison.

The Baseline for comparison must be the laws in effect at the time of the amendment. The section makes no claim that; the The construction and operation of the RCEC, as amended, will conform with all applicable LORS related to Air Quality and so fails; 1769(a)(1)(F) A discussion of the impact of the modification on the facility's ability to comply with applicable laws, ordinances, regulations, and standards;

The applicant filed a 1507 page amendment, posted on November 19, 2009. CEC staff responded with a 23 page Analysis Posted: June 29, 2010 followed by a 17 page supplemental analysis dated July 9, 2010 followed by a document identified in the Commission Documents as "Supplemental Staff Analysis Attachment A 1-Hour Modeling Assessment (revised) Posted July 26, 2010 This document is not reflected in the Docket log for this proceeding. It does not identify the author but does indicate that it was; Prepared for: Russell City Energy Company, LLC. and "Prepared by: Atmospheric Dynamics, Inc. The Document states:"Ozone data from the San Leandro monitoring site for the same period as the meteorological data (2003-2007) were used for the OLM analyses. Missing ozone data for periods of 1 hour were interpolated from the San Leandro data before/after the missing period. Missing data for longer periods were replaced with data from Hayward monitoring site or, if both San Leandro and Hayward data were missing, from the Fremont monitoring site."

The problem with using the Hayward Monitoring site is that it is not consistent with 40 CFR Part 58, Appendix D as identified in; Federal Register / Vol. 70, No. 216 / Wednesday, November 9, 2005 / Rules and Regulations (1) Calculating the annual average concentrations of NOX with an urban model, and (2) converting these estimates to NO2 concentrations using an empirically derived annual NO2/NOX ratio. A value of 0.75 is recommended for this ratio. However, a spatially averaged alternative default annual NO2/NOX ratio may be determined from an existing air quality monitoring network and used in lieu of the 0.75 value if it is determined to be representative of prevailing ratios in the urban area by the reviewing agency. To ensure use of appropriate locally derived annual average NO2/NOX ratios, monitoring data under consideration should be limited to those collected at monitors meeting siting criteria defined in 40 CFR Part 58, Appendix D as representative of "neighborhood", "urban", or "regional" scales. Furthermore, the highest annual spatially averaged NO2/NOX ratio from the most recent 3 years of complete data should be used to foster conservatism in estimated impacts. (emphasis added)

http://www.epa.gov/ttn/scram/guidance/guide/appw_05.pdf

The Bay Area Air Quality Management District 2009 Air Monitoring Network Report identifies the site as follows;"The Hayward air monitoring site was chosen to measure ozone at a higher elevation. Located on the east side of Hayward at an elevation of 951 feet, it is the highest elevation air monitoring site in the Air District. Studies had shown that on high ozone days, a cloud of ozone and precursors moves southward from Oakland on the west side of the East Bay Hills. Because ozone monitoring sites were already in place in the low-lying areas of the East Bay, i.e. in San Leandro and Fremont, this site was chosen to be between them, but at a higher elevation. Thus, the site gives an indication of ozone levels aloft. The Hayward site is also important because it provides air quality forecasting information concerning residual ozone from the previous day. Although there is a large water tank onsite in the upwind direction, the instrument probe is high enough to avoid the tank being an obstacle. The scale of this site is considered to be regional because it is representative of ozone levels aloft. The Hayward site was temporarily shut down on November 6, 2009, due to the demolition and reconstruction of the water tank nearby the site. The construction project is expected to be completed in mid-summer 2010. During the most recent 3 years, the 75 ppb national 8-hour ozone standard was exceeded four times at this site."

http://www.baaqmd.gov/~media/Files/Technical%20Services/2009_Network_Plan.ashx

The 951 foot elevation of the Hayward monitoring site would tend to indicate that ground level ozone levels would be much higher in the city of Hayward. The Monitor Site is not "representative of "neighborhood", "urban", or "regional" scales" The project is planned at or near sea level on the shoreline of the San Francisco Bay.

It appears that the modeling also failed to consider the emissions from the adjacent waste and wastewater facilities. The EPA document, **AIR EMISSIONS MODELS FOR WASTE AND WASTEWATER** including the equations used in the WATER9 model. WATER9, the wastewater treatment model, is a Windows based computer program and consists of analytical expressions for estimating air emissions of individual waste constituents in wastewater collection, storage, treatment, and disposal facilities; a database listing many of the organic compounds; and procedures for obtaining reports of constituent fates, including air emissions and treatment effectiveness.

<http://www.epa.gov/ttnchie1/software/water/index.html>

The Air district indicates that biocides would be utilized in the vaporized waste water no study of the effects on air quality of the biocides or Chlorine in the water has been presented or the reactivity with other pollutants and effects of high nitrogen content in wastewater. The overall global warming effect of vaporization of water is also ignored. Water vapor is the greatest cause of global warming and its effects should be studied for this amendment.

Part of the problem with this series of amendments is that it appears that no one has looked over the fence in the pursuit of their biological assessments since 2001. The petition for amendment states; 3.1.2 Biological Resources Biological resources issues were addressed in the 2001 AFC and agency consultation with CEC, U.S. Fish and Wildlife Service (USFWS), and California Department of Fish and Game (CDFG)...Supplementary reconnaissance-level field surveys were performed by CH2M HILL biologist Danielle Tannourji on October 6, 2009, to characterize the biological resources for the additional laydown and parking areas addressed in this Amendment." 3-2 the assessment ignores the adjacent U.S. waters and misstates their location. ;**5.2.2 Surface Water** The nearest surface water is an unnamed estuarial slough situated approximately 0.3 mile west of the Site. The slough is an inlet of San Francisco Bay, which is located approximately 1.4 miles to the west."

The inlet which is a brackish mix affected by the tides with unrestricted access to the bay is on or directly adjacent to the entire west side of the Tompkins property. In contrast to the biologists above statement it is clearly within 100 feet of the parcel making it within the jurisdiction of the Bay Conservation And Development Commission(BCDC). A group of staff visited the site in December of 2008 and clearly determined jurisdiction at Depot Road. They were accompanied by their Chief legal council Tim Eichenberg. The CEC should seek concurrence with BCDC prior to acceptance of the amendment The waterway and clearly depicted by the historical maps identified included with the amendment. It is identified in section **7.1.4 Historical Topographic Maps "Property**. On the 1899 and 1948 maps, the Site is depicted as undeveloped. On the 1959 and 1968 maps, the Site is generally depicted as vacant although a water channel is depicted on the western edge of the Site." **Page 17**

In the November 7, 2007, Energy Commission Business Meeting Marcia Gerfarud, of the California Department of Fish and Game commented about the failure to consider this asset and include Fish and Games in the decision making process. She also identified jurisdiction over the waterway in question. The CEC should consult with the The Department of Fish and Game and the USFWS prior to acceptance of the amendment.

The amendment completely fails to address environmental Justice issues. Te local community demographics have changed in the last decade. No analysis of the effect on this

low income, community of color was accomplished for this proceeding. The laydown areas also presently serve as recycling facilities or as identified " an auto dismantling facility" These facilities form a vital function for some in the community to keep their cars running and recycle. The CEC should study this effect on the community.

The phase one study is expired the amendment states;

"Only the party for whom this report was originally prepared, and other specifically named parties, may make use of and rely upon the information in this report, in its entirety, for a period not to exceed 180 days in accordance with the ASTM's "Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process," ASTM Designation E 1527-00, dated May 10, 2000; ASTM's "Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process," ASTM Designation E 1527-05, dated November 1, 2005; and/or the Code of Federal Regulations (CFR) 40 CFR Part 312, "Standards and Practices for All Appropriate Inquiries: Final Rule," dated November 1, 2005. After 180 days and prior to using the information contained herein, the report should be updated in accordance with ASTM Standards and federal regulations....

On July 29, 2009, Ms. Eva Chan of LFR conducted a reconnaissance of the portion of the Site," We are well beyond 180 days. The CEC should require a current amendment.

The Air monitoring site at 9925 International Blvd, Oakland CA 94603 is closer to the planned facility than Fremont and more representative it should be used if the CEC declines to require local monitoring.

The Commission's Final Decision On amendment - Posted October 3, 2007 states; "Commercial operation is expected to begin by the summer of 2010." page 15. Summer began on June 20, 2010 Commercial operation did not begin. § 1769 (a)(1) "After the final decision is effective under section 1720.4, the applicant shall file with the commission a petition for any modifications it proposes to the project design, operation, or performance requirements." emphasis added The applicant did not petition for this modification of operation. They are therefore in violation of their their License.

It has not been possible for me to obtain additional information I have contacted the Compliance manager Ms. Dyas by email and telephone without response.

The attachments are include as additional objections to this amendment. The Amendment should be rejected by the CEC

Thank You

Rob Simpson
27126 Grandview Avenue
Hayward CA. 94542
Rob@redwoodrob.com
510-909-1800

Comments RCEC.txt

From: Rob Simpson
Sent: Wednesday, September 16, 2009 11:43 PM
To: Weyman Lee;
Subject: Comments RCEC

Attachments: rcec sept 09 asob comment final.pdf
Attached please find my comments for application 15487 Calpine/GE Hayward plan

Thank you all.

Rob Simpson
510-909-1800

Thank you for this opportunity to submit comments on the Revised Amended/Not-amended Corrected Additional Statement of Basis for the Proposed Draft Federal "Prevention of Significant Deterioration" Permit for application Number 15487 Russel City Energy Center in the City of Hayward

The last (undated) Notice of public Hearing identifies "Russell City Energy Company," as "an affiliate of Calpine Corporation." Are they merely an affiliate or is the company wholly owned by the Calpine corporation and or General Electric? I have found no disclosure of General Electric (GE) ownership of this project. Is GE an owner of the project ? If so how did the District satisfy the notice requirements of 40 C.F.R 124. if GE is an owner and the District did not satisfy the notice disclosure requirements please disclose this information in a public notice and recirculate the Draft permit.

The Notice states "Comments submitted during the previous comment period **do not** need to be resubmitted at this time" Does this include all comment periods? Are the comments that were received by the District and placed in the Eastshore Energy Center proceeding included? Are the comments received between comment periods included? Is the submittal to the District appeals board and both EAB appeals considered comments? Have the people, whose comments were included in the Eastshore Proceeding provided Notice of this proceeding? Have the people who signed petitions against the permit that were submitted to the District, been provided Notice of this proceeding? Have the people who participated in the proceeding before the CEC or District since 2001 been provided Notice of the proceeding? Have the Comments received by The CEC regarding Air Quality Been included? Please provide the District mailing list for this proceeding. Please incorporate all comments questioned above into my comments of today. I also incorporate by reference into my comments all comments by Bob Sarvey,

Government and Public Officials:

Supervisor Gail Steele, District II

Congressman Pete Stark

Chabot-Los Positas Community College District

Hayward Area Park and Recreation District, (HARD)

Community Organizations:

Hayward Area Shoreline Planning Agency, Citizens Advisory Committee, (HASPA CAC)

San Lorenzo Heritage Society

Hayward Democratic Club

Hayward Area Planning Association (HAPA)

Skywest Town House Homeowners Association

California State Audubon Society

Sierra Club, Southern Alameda County Chapter

Sierra Club, State of California

California Native Plant Society, East Bay Chapter

Healthy 880 Communities

Green Action

Students for Social Justice, Chabot College

Pacific Environment,

CARE CALifornians for Renewable Energy

Citizens to Complete the Refuge

California Pilots Association

Golden Gate University Environmental Law and Justice Clinic

Earthjustice, and Communities for a Better Environment

Mike Toth, Ernie Pacheco and Andrew Wilson.

It appears from the index posted by the District that application 15487 was received by the District in May of 2001. What are the statutory time periods for processing an application? This process has made it impossible for informed public participation. There is no other indication of when the application was received or considered complete. When was it received? When was it considered complete? The PSD and ATC permits were apparently first integrated, then disintegrated through District failures, A Draft PSD permit was circulated as an amendment then determined to never have been issued, now partially recirculated with partial responses to select comments without identifying commenter's and bifurcated with the intent to subsequently reintegrate with an ATC permit that was based upon the PSD permit that is now disclosed to not have been issued. Supporting determinations are stale and scattered over the last decade. The District documents do not even disclose the most basic information that should be in a public notice, a simple chart detailing the National Air Quality standards, our attainment status and the projects effect on air quality or PSD increment. The District has gone to such great lengths to evade its responsibility to process a compliant ATC and PSD permit that it can not even keep its story straight. The District should rescind the Delegation agreement and let the EPA process this permit.

The Public notices, when the District claimed that the permit was an amendment gave great weight to the idea that it was an amendment. Now that the district admits it is not an amendment. There is nothing in the public notice identifying this truth. The "Project fact sheet" which I believe is the 4th iteration, has not been changed to reflect this information. How many "fact sheets" have been issued? It still states that it is an "Amended Federal Prevention of Significant Deterioration ("PSD") Permit" The District does not disclose that it is not an amendment until page 5 of the Amended Statement Of Basis (ASOB). Incorrect information that serves to legitimize the action can mislead the public. The Draft permit is riding the coattails of a non existent permit. The District appears to acknowledge this fact in the following statement, "To the extent that there were any issues involving the District's proposal that any members of the public refrained from commenting on during the initial comment period because they understood the proposed permit to be an amendment and not a new permit, the Air District invites the public to submit any such comments for the District's consideration at this time." ASOB 6 The problem is that the District did not include this information in the notice or correct the Fact sheet.

Please re-notice the draft permit and disclose in the notice the correction and chart identified above. Also please issue another Fact sheet, this time limited to facts. It is notable that the District consumed considerable resources of the EAB to futilely defend the previously issued permit which included concerns of Endangered species act consultation and only now discloses that "the District did not issue a final Federal PSD Permit along with its state-law Authority to Construct, as is the District's normal practice. The record indicates that the District did not finalize the Federal PSD Permit at the time it issued the Authority to Construct because EPA Region 9 had not completed its Endangered Species Act consultation with the US Fish & Wildlife Service." ASOB 5 Is an Authority to Construct (ATC) for this facility valid without a PSD permit or should the District have understood that when the PSD permit was remanded, it invalidated the ATC?

The District stated "Redesigning the project to incorporate a solar system like Victorville's would therefore require the facility to be moved to another location, making it impossible to achieve the project objectives served by the current location" ASOB 12. The City recently put out an RFP for a solar facility next to the project site there is nothing on this record beyond a baseless statement to support the "impossible" contention. Does the District have any basis for this statement? The District stated "if the underlying estimates turn out to be inaccurate and actual emissions exceed

the estimates as they have been incorporated into the permit limits, the facility will be in violation of its permit and will have to shut down or curtail operations unless it can fix whatever problems are causing the increased emissions" ASOB 13 This is not the procedure that we saw in Calpines Metcalf and Sutter plants or PG&Es Gateway. What we saw in Metcalf and Sutter with similar plants is that When they changed operations to function like peakers because there is not demand for additional baseload generation they simply quietly amended their permits to pollute more. Gateway has not been required to "shut down or curtail" despite no permit. Would the District include an enforceable permit condition that the facility will not be permitted to modify its permit or obtain a new permit to increase its emissions? If not the statement is misleading.

Does the District have evidence that the "intermediate-to-Baseload capacity.. for which the facility has been proposed and designed" ASOB page 13 is consistent with the intended operations contained in the facilities power purchase agreement?

The District stated "the District also received some comments asking for detailed information about the combustion turbines the applicant intends to use at the facility, such as turbine serial numbers, dates of manufacture, cost, *etc.* But specific details such as these are not relevant to determining the Best Available Control Technology" ASOB 13

I still contend that these are likely used or re-manufactured turbines from a turbine repair company that Calpine bought in Las Vegas (where they claim that the turbines are stored). This is important because as they District stated;

"The original equipment manufacturer's degradation curves only account for anticipated degradation within the first 48,000 hours of the gas turbine's useful life; they do not reflect any potential increase in this rate which might be expected after the first major overhaul and/or as the equipment approaches the end of its useful life. Further, because the projected 5.2% degradation rate represents the *average*, and not the maximum or guaranteed, rate of degradation for the gas turbines, the Air District has determined that, for purposes of deriving an enforceable BACT limitation on the proposed facility's heat rate, gas turbine degradation may reasonably be estimated at 6% of the facility's heat rate." ASOB 31

"For the gas turbines, the Air District is basing its analysis on a 48,000-operating-hour degradation curve provided by Siemens, which reflects anticipated recoverable and non-recoverable degradation in heat rate between major maintenance overhauls of approximately 5.2% According to combustion turbine manufacturers, anticipated degradation in heat rate of the gas turbines alone can be expected to increase non-linearly over time." ASOB 32

(ii) "a reasonable performance degradation margin of 6% to reflect reduced efficiency from normal wear and tear on the equipment between major maintenance overhauls" ASOB 28

An enforceable BACT limitation must be set at a level that the facility can achieve for the life of the facility, including as its equipment ages and incurs anticipated degradation.
ASOB 28

The turbines' Design Base Heat Rate is 6,852 Btu/kWhr (HHV), based on operation of both combustion turbines with no duct firing, corrected to ISO conditions.⁴⁸ (For comparison with a pounds-per-megawatt-hour efficiency rating, this is between 792.9 and 815.5 lbs/MWhr, depending upon which CO₂ emissions factor is applied.⁴⁹) This represents what the plant (at the design stage) is

expected to achieve when it is new and clean; it does not represent what it will achieve over time as the equipment incurs degradation between major maintenance overhauls." ASOB 29

So, if the turbines are used or overhauled, their pollution characteristics may be different than the original manufacturer specifications.

The District stated "The facility's contribution was based on modeling using the facility's emissions, and the background contribution was based on the Fremont-Chapel Way monitoring data as discussed above. For the contribution from other nearby sources, the Air District undertook a search of its database of PM2.5 sources within a radius of six miles (9.7 km) around the facility location that have been permitted since January 1, 2007, and located a total of 29 such sources (21 of which are diesel backup generators). The Air District also evaluated non-point sources within this area that could cause a significant concentration gradient at any of the areas where the facility's impact was above the SIL. The Air District identified a portion of Highway 92 that is located approximately 1 km south of the facility as such a non-point source, and included it in the analysis. The cumulative impact from all of these contributions (the facility, the 29 point sources, and Highway 92) was then modeled for each receptor location within the impact area where the facility's impact was above the SIL.

ASOB 87

I contend that Fremont is not the right monitoring station if the District used the Hunters point or Oakland stations it would be more representative and comparable distance. I witness from my house that smog comes from Oakland and S.F. and is lesser in Fremont. second the District recognized highway 92 in their analysis but ignored within the same 6 mile radius many miles of highways including 11.7 miles of 880, 10.5 miles of 92, 4.85 miles 580, 8.6 miles of 238, 10 miles of route 185 plus major arterial Roads.

What would the results be if Oakland or San Francisco monitoring stations were used?

The District stated "With respect to the new electrical generating capacity that the project will provide, it is speculative whether this new capacity will be a cause or any significant growth in the region. Some of it may be used to take the place of older generating capacity that is being taken off-line, and even if it does provide some overall expansion of the region's total electric generating capacity there is no indication that this would cause any new development. It is unlikely that any new growth or development will occur simply because of the existence of excess electrical generating capacity, as opposed to some other independent reason." ASOB 91 This which comes first chicken or egg speculation seems to have no basis in the facts on the record. If accepted the same argument could be used to dismiss any growth analysis. It is clear that areas without electricity do not tend to grow, inversely areas with excess capacity could tend to grow. Please complete a Growth analysis based upon facts on the record.

Can the District identify any other Plant that presently affects Hayward's Air quality?

Please identify older plants that would be "taken off-line" as a result of this development and the benefit to Hayward Air Quality.

The District stated "The proposed facility has been designed to handle wastewater from the treatment plant and use it as cooling water, not the other way around – the wastewater treatment plant was not built to handle wastewater from the proposed facility. This will be an environmentally beneficial aspect of the facility in that it will obviate the need for the City of Hayward to discharge its wastewater into the Bay." ASOB 92 I have found no evidence on this record to indicate any environmental benefit from

discharging wastewater into the air instead of into the bay. Discontinuance of water deliveries to the bay may cause an undisclosed negative effect that should be studied and disclosed. Emissions of 4 million gallons of effluent into the air could have public health risks that have not adequately been studied. "The project will require a new tertiary treatment plant to treat the wastewater from the wastewater treatment plant in order to make it clean enough to use in the facility's cooling system, but it will not involve any expansion to the capacity of the wastewater treatment plant." 92 ASOB There has been no disclosure of the energy usage or pollutants associated with this water treatment for the facility. please disclose this information.

The District stated "Commenters suggested that the wet cooling system could involve a risk of causing Legionnaire's disease, and claimed that this potential health risk should be investigated further as part of the Health Risk Analysis. The Air District notes that its expertise as a public health agency is primarily in the area of chemical air pollutant and the health problems they can cause, not in medical pathogens. For this reason, the Air District does not address medical concerns such as issues related to Legionnaire's disease in its Health Risk Assessment. To the extent that the proposed project may raise concerns about Legionnaire's disease, those concerns should appropriately be addressed in the broader environmental review context through the Energy Commission's CEQA-equivalent process." If the District is requiring that the CEC consider this comment prior to issuance of the PSD permit then this response would be sufficient. If not this analysis is deficient because it does not analyze the health risks associated with dispersion of 4 million gallons of "effluent" per day into the air. If the District does not have the expertise please hire someone who does and provide a health risk analysis for the "effluent" dispersal.

They State in Footnote 164 "As noted in the December 2008 Statement of Basis, the state-law permitting process has been completed and is now final. Avenues for reviewing state-law conditions have therefore been exhausted" ASOB 98 Is this a true statement?

"Reopening the comment period under 40 C.F.R. section 124.10 to give interested persons an opportunity to comment on the new information and the District's proposed treatment of it; and to give interested persons an opportunity to submit any further comments that they could not reasonably have submitted during the initial comment period." ASOB 2. It is unclear from the code cited to what extent this partial reopening of the comment period complies with 40C.F.R. 124.10. Please identify the specific authority that permits this piecemeal method to limit public participation and what thresholds will be used to determine which comments could or "could not reasonably" have been submitted. Even if all comments are accepted this statement by the District may have precluded public participation.

The District stated "it [is] appropriate for the permitting authority to distinguish between electric generating stations designed to function as 'base load' facilities and those designed to function as 'peaking' facilities, and that this distinction affects how the facility is designed and the pollutant emissions control equipment that can be effectively used by the facility"). This issue is moot here, however, as the Air District has concluded that there are no superior alternatives even if such an analysis were required. ASOB Footnote 5 page 10 Why would an analysis be necessary if the District can reach its conclusions without analysis?

"A solar alternative to duct burning would not be feasible for the Russell City facility, however, because there is far less available area at the project than in the Mojave Desert, and the compact site would not provide adequate space for installation of a solar collectors. To construct a solar thermal plant to replace some of the peak capacity from duct burning would need 275 acres of To construct a

solar thermal plant to replace some of the peak capacity from duct burning would need 275 acres of land,¹³ which would not be feasible given the space-constrained project site on the edge of the San Francisco Bay.¹⁴ " This statement seems to rely on the application For certification from 2001. Has solar technology changed at all this decade which may lead to a different conclusion if a contemporary analysis were completed? Please complete an alternative analysis based upon current technology. The San Francisco Bay, industrial areas of Hayward and City streets are well over 275 acres. What consideration has been given to utilizing adjacent acreage for solar. Is 275 acres a fixed size for a solar installation or would 1/2 the acreage or twice the acreage , for instance, produce "some of the peak capacity"? The City of Hayward recently published a request for proposals for an adjacent solar facility. Has that been considered in this proceeding?

The footnote for the above states, ¹⁴ The project site for the Russell City Energy Center is a 14.7-acre area located in the West Industrial District of Hayward, California, adjacent to the City of Hayward Water Pollution Control Facility and near existing transmission facilities. *See* Calpine, *Application for Certification, Russell City Energy Center* (May 2001) (hereinafter, "RCEC Application for Certification"), at 9-3 – 9-4; available at: www.energy.ca.gov/sitingcases/russellcity/documents/applicant_files/afc/vol-1/.

This refers to the previous site. Please conduct an analysis of the present site using current data. Although, I believe that I informed the District of the new site location in previous comments, the Districts confusion is understandable. The public is also likely confused. Many probably still do not understand that the plant named Russell City is actually in the city of Hayward. The District also never disclosed the actual location before misleading name in public notices. Readers of the notice may stop reading when reading the name of another city. The District should first figure out where the project is, analyze it in context to its location and then if it intends to issue a permit provide Notice of the location prior to the misleading name. The site location, description and address Continue to change. Is the site "on the edge of the San Francisco Bay" as described above? Is it 14.7 acres as described above? Is it near the corner of Depot Road and Cabot Boulevard as identified in the latest public notice? How many different addresses and site descriptions has the District published for this project and what are they? Is it in the "West industrial District" as identified above. What is the zoning? Have there been nearby land use changes since the original application that could effect determinations? for instance any protected habitats, Federal wildlife sanctuaries, wetland restorations.

The District also received comments noting that the facility would be operated to meet contractual load and spot sale demand, and may not operate on a full-time, base-loaded basis. These comments questioned the anticipated operating mode of the proposed Russell City Energy Center, suggesting that if it were intended for load-following or other duty that would involve frequent startup and shutdown events, the Applicant should be required to construct a fast-start-capable, peaking-to-intermediate duty plant instead.

The Air District has considered this issue further in light of these comments. The Air District notes that the Federal PSD Permit process is designed to ensure that a proposed facility will be as low-emitting as possible (among other requirements). It is not designed to require an applicant to propose a different type of project of a different fundamental scope and design, for example to substitute a simple-cycle peaking plant instead of a combined-cycle intermediate-to-baseload project as the commenters suggest here.¹⁷ Moreover, it would not make any sense from an emissions standpoint to require a simple-cycle facility for the purpose that this facility is intended to be used for, which is to serve intermediate-to-baseload capacity. Simple-cycle facilities are less efficient than combined-cycle facilities, which recover the heat from the turbine exhaust (which would simply be emitted and wasted in a simple-cycle facility) and use it to generate additional electricity. Simple-cycle facilities are therefore generally

inferior to combined-cycle facilities, except for applications where the generating capacity must come on-line in a very short time frame, which is not the case with the uses for which this facility has been proposed and designed. The Air District therefore disagrees that it should require the applicant to redesign the facility as a simple-cycle peaking facility."

ASOB 12 Like all the District responses it is impossible to identify which comments they are responding to. Is a fast starting or solar augmented facility necessarily a simple Cycle facility? Could these technologies be considered control technologies and not a "different type of project"?

"Of the comments the Air District has received so far, none has disagreed with the Air District's assessment that the only feasible control technology for reducing greenhouse gas emissions from fossil-fuel burning power generating facilities is to use the most efficient electrical generating technology,²⁵ and that at present there are no feasible post-combustion add-on controls for such facilities." ASOB 18 Allow me to disagree; Carbon Sequestration is a feasible control technology that has not been adequately studied for this project. Subterranean sequestration may be a viable alternative as well as bio-sequestration of pollutants in algae producing ponds. There are extensive ponds adjacent to the site that could accommodate this. After sequestration the water/ algae could be utilized for reforestation or irrigation to create a buffer between the the developed and natural areas of the shoreline or in other locations further sequestering Carbon. Please study this plan.

The Air District did receive comments stating that the Air District should have evaluated alternative energy production methods that do not rely on fossil fuel combustion, however. These comments suggested that the District should not focus simply on turbine efficiency, as opposed to looking at more efficient ways of making electricity without using combustion turbines.

The Air District has considered these comments and is in agreement that the development of non-fossil-fuel electrical generating sources is of critical importance in meeting California's energy needs while at the same time furthering its air quality goals, especially in light of recent advances in the understanding of the problems posed by global climate change. The Air District recognizes, however, that alternative generating technologies are not currently capable of meeting the state's electrical power demand at all times and under all circumstances, and that some fossil-fuel generating capacity is still needed.²⁶ Determining the most appropriate mix of electrical generation sources under these circumstances is a highly complex engineering and policy exercise that is most appropriately undertaken by the California Energy Commission, the state's expert agency on energy policy matters. The Air District obviously has a supporting role to play in helping the Energy Commission to understand the air quality impacts of its siting decisions and to include appropriate air quality conditions in its licenses. But as an agency, the Air District does not have the expertise nor the authority to determine what type of generation sources are needed, of what capacity, and where. The Air District must therefore necessarily defer to the Energy Commission's decision that the proposed natural-gas fired, combined-cycle facility is the most appropriate alternative for this project. If it would be more appropriate to use wind or solar power to serve the function intended for the proposed Russell City project, the Energy Commission is the agency best suited – and specifically tasked by the California legislature – to make that determination. ASOB 18

Because The CEC determinations are stale for the purposes of this PSD permit the District should require current determinations regarding this vital issue.

"The Energy Commission ultimately rejected those alternatives as not feasible because "they do not fulfill a basic objective of the plant: to provide power from a baseload facility to meet the growing demands for reliable power in the San Francisco Bay Area."²⁷ .. 27 2002 Energy Commission Decision, *supra* note 15, at p. 19. The Energy Commission made a further finding in its 2007 Amendment decision that no renewable alternatives would be able to meet the project's objectives. *See*

California Energy Commission, *Final Commission Decision, Russell City Energy Center* (October 2007) (hereinafter, "2007 Energy Commission Decision"), p.21, finding3(available at www.energy.ca.gov/2007publications/CEC-800-2007-003/CEC-800-2007-003-CMF.PDF). In making this finding, the Commission relied in part upon the detailed analyses that were undertaken in connection with the original licensing proceeding in 2002. *See id.* at pp. 20-21." ASOB 19 Is demand growing? if so is it growing through increased per capita usage or population growth? Will this facility facilitate growth? If it is not built will it restrict growth? Is it better from an air quality standpoint to increase supply or decrease demand? If the facility is not built may demand be met through conservation or cleaner sources? Would the District collect the same fees for a cleaner plant?

- *Data Showing Achievable Emissions ~800 lb/MW-hr*: The commenters stated that emissions data from new turbines show that current equipment should be able to achieve emissions as low as 800 lb/MW-hr. Commenters also stated that the District should look at the best achievable performance level of all turbines, including new turbines, and not limit its review to turbines that were built several years ago. Commenters also claimed that the District considered emissions data from only one year of operation from only two facilities, and should conduct a broader review. ASOB 25 What year were the turbines built? Was it "several years ago" or several decades ago?

"105 In addition, it is worth noting that any Appendix S requirements would be applicable through a Non-Attainment NSR permit, not through the PSD Permit. There may be reasons to address both types of requirements in an integrated permit proceeding, but technically they are separate permitting programs applicable under different sections of the Clean Air Act." ASOB 55 Wasn't this an integrated permit proceeding? will it be reintegrated? Is it now disintegrated or what is it called? What would the "reasons to address both types of requirements" be?

"These comments stated that a Flex-Plant 10 system is appropriate for peaking-to-intermediate duty operations, whereas the Flex-Plant 30 system is the appropriate technology for intermediate-to-baseload operations. These comments were based on the observation that there is an energy efficiency penalty when using the single-pressure steam boilers system, compared with the more efficient triple-pressure system that is being proposed here. The Air District agrees with the latter comments. Flex-Plant 10 is an excellent technology to allow peaking-to-intermediate plants – which have to be able to start up and come on line very quickly – to gain the benefits from using combined-cycle technology (as opposed to less efficient simple-cycle turbines). But it is not appropriate for intermediate-to-baseload facilities where quick startup times are less important because of the energy efficiency penalty associated with using a single-pressure steam turbine. For intermediate-to-baseload facilities, it is preferable to obtain the better overall emissions performance achievable through the use of a triple-pressure system instead of using a less efficient single-pressure system like the Flex-Plant 10. (Note that when Flex-Plant 30 technology becomes available it will allow suitable triple-pressure systems to achieve faster startups as well, but this technology is not yet available for this project.)" ASOB 70 An analysis of the Power Purchase agreement and current need assessment should be needed to make these conclusions

"The Air District also received comments that disagreed with the District's assertion that EPA Region IX does not require OpFlex as BACT, based on the permit Region IX issued for the Colusa Project. The

comments noted that a commenter in the Colusa proceeding brought the issue to the Region's attention in a comment, but that the comment was withdrawn and so Region IX did not consider it. The comments requested that the District consider the comments that were submitted and subsequently withdrawn in the Colusa proceeding here. The District agrees that that EPA Region IX did not formally respond to the withdrawn comments on the record. But once EPA was aware of the issue, it would not (and legally could not) fail to require OpFlex technology if that technology were BACT. The agency has an independent responsibility to impose BACT based on all of the information available to it, even if the specific comment that brought the issue to light was withdrawn. For this reason, the District stated in the initial Statement of Basis that EPA Region IX did not require OpFlex as BACT.132

Finally, as for considering the Colusa comments that were withdrawn, they were submitted in the Colusa proceeding and were not submitted on the record as comments in this proceeding, so the District is not obligated to respond to them. If the commenters believe that the Air District should consider them on the record in this proceeding, they have an obligation to submit them into the record for the Air District to review, but they did not do so here. Nevertheless, the Air District obtained a copy of the comments from EPA Region IX to ensure that it had researched all information that could have bearing on this issue, and found nothing whatsoever in those comments to suggest that OpFlex should be required here. The comment letter cited several of the same points about the Palomar Energy Center that have been raised in this proceeding, to which the Air District is responding in detail in this section." ASOB 73 Since the District admits that it has the comments I will consider them "on the record" and state that they do not appear to be adequately analyzed. It is also notable that the Colusa permit has been reopened for modification. Opflex should be required here.

"Another comment claimed that, based upon telephone conversations with Siemens representatives, a low-load "turn-down" technology product is currently available for Siemens turbines. The Air District investigated this issue further, and reviewed communications from Siemens confirming in writing that it does not have a low-load product that is commercially available for F-class turbines. Siemens' LLOF product, known as "Low Load Carbon Monoxide" (LLCO), has been validated for G-class turbines as noted in the documentation the Air District relied on in the initial Statement of Basis. (See Statement of Basis at p. 41 and n. 33.) The Air District confirmed this with Siemens in response to this comment. Siemens reports that "LLCO validation for F-class turbine began in December 2008 and [is] currently in process [but] the validation for the F-class turbine has not been concluded." ASOB 73 There is not likely a pressing need for Siemens to develop this technology for the antiquated turbines proposed for this facility. If BACT for one pollutant is not the same technology as BACT for another the District should consider both before making a decision that coincidentally selects the outdated turbines that the developer happens to have in stock.

As explained in the initial Statement of Basis, Air District has estimated sulfuric acid mist emissions as accurately as it can, and believes that emissions will be below 7 tons per year. The Air District is not aware of any data or analysis suggesting that emissions will be over 7 tons per year, and none of the comments on this issue cited any, and so the Air District continues to believe that this is an accurate assessment. ASOB 76 How much Sulfuric acid would the facility emit?

Class I Areas Analysis

Finally, EPA also requires an analysis of the potential for impacts to any Class I areas within 100 km of the proposed facility. Point Reyes National Seashore is located approximately 62 km from the project, so the Air District conducted a Class I area impact analysis for PM2.5" ASOB 88 Is the Adjacent Don

Edwards National Wildlife Sanctuary a Class on Area? Should it be considered one?

The District stated "The proposed project will have two stacks each having a height of 150 feet above the ground level." ASOB 95 The CEC decision states Each HRSG unit will have a 145-foot exhaust stack CEC decision 10 which is correct?

"The Air District received comments citing recent developments in the understanding of the health impacts of fine particulate matter. These comments suggested that the Air District should consider fine particulate matter in its Health Risk Assessment.

The District has considered adding fine particulate matter in our permitting procedures...

These guidelines have not been developed at this stage, however, and so the Air District does not have the appropriate tools to include fine particulate matter in its formal Health Risk Assessment" ASOB 95 If the "District does not have the appropriate tools" they should get them and use them prior to approval or the application should be rejected or someone else with the proper tool should process the application.

#602 Del Monte Corp Oakland 6/6/84 #30

#855 PG&E San Francisco 9/30/85 #14
FDOC

Calpine/GE propose to mitigate polluting in Hayward with Emission Reduction Credits some from a plant that closed in San Francisco in 1985 some from Del Monte in Oakland in 1984. How do these credits help Hayward?

Page 19 of the FDOC indicates regarding the Emission reduction credits
(Information for certificate #30 is not available)

Is information regarding certificates required for compliance with the Clean Air Act?
Are the credits planned contemporaneous?

If after the plant is built the asthma rates increase for children in Hayward or the respiratory rate increases for Seniors in Hayward what will the District do?

Some estimates are that we are already overbuilt for electricity generation by as much as 30%, including a new 550 megawatt plant that came on line in Antioch 6 months ago. Calpine also curtailed operations at its San Jose plant based upon the reduced need. Plants like these operate through contracts with PG&E and so get paid by PG&E ratepayers whether they operate or not. With a finite need for electricity, overbuilding fossil fuel fired generation prevents the need for renewable resources and the potential redistribution of wealth from PG&E, Calpine and GE to communities like ours.

If Calpine/GE builds this 600 megawatt fossil fuel fired plant in Hayward Does that prevent 600 megawatts of renewable energy from being developed?

Some estimates suggest that renewable energy projects would create 10 times the number of jobs.
Would renewable energy projects create more jobs?

This plant was originally planned in response to the turn of the century energy crisis. The crisis has since been proved a scam by companies like Enron. Calpine was subsequently fined \$6,000,000 by the

California Attorney Generals office for manipulating the energy market, then Calpine went bankrupt. Is the electricity from this plant needed?

It appears that the Turbines planned for this facility are antiquated models perhaps retired from another facility and other equipment will be removed from a plant that was never completely constructed in another state.

Modern comparable sized plants like the one planned in Carlsbad would emit less than 1/2 of some of the worst pollutants. Calpine/GE intend to emit 12.2 tons per year of Sulfur Dioxide into Hayward's air, Carlsbad will emit 5.6 tons. Calpine/GE would emit 71.8 tons of particulate matter (small enough to go straight through the lungs into the bloodstream) Carlsbad will emit 39 tons. Calpine/GE plan to emit 127 tons of Oxides of Nitrogen compared to Carlsbad 72.8 tons.

Can the District explain why, if this is the best available Control Technology other plants emit less?

There appears to be limited wastewater storage available.

Does the District have any information about how much time elapses between the time we flush and when they would vaporize the effluent?

At any time in the last 10 years has the Air District monitored the Air in Hayward to provide a basis for its air quality claims? If not why not?

As a local Real Estate Broker I contend that development of this plant at the San Mateo Bridge gateway to the City will harm property values throughout the city.

Has the District conducted any studies to demonstrate the effects on property values from their plan?

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