

State of California

State Energy Resources Conservation and Development Commission

In the Matter of:)	Docket # 09-AFC-04
)	Exhibit 403
Oakley Generating Station)	Air Quality Testimony of
)	Robert Sarvey
)	
)	

Air Quality Testimony of Robert Sarvey

The proposed Oakley Generating Station (OGS) does not conform with all applicable federal, state and Bay Area Air Quality Management District air quality laws, ordinances, regulations and standards (LORS). The proposed OGS project does result in significant air quality-related impacts. The mitigation proposed does not reduce the projects air quality impacts to a level of less than significant and the project should be rejected.

The Staff's analysis ignores the fact that the existing background 24-hour PM_{2.5} monitoring data from the Concord Station already equals the Federal standard and that any contribution from the project creates an exceedence of the 24 hour PM 2.5 standard.¹² The FSA predicts that the 24 hour PM 2.5 impact from the OGS equals 4.2 µg/m³. Staffs testimony then states, *"Because of the high exhaust temperature and velocity, project impacts (in addition to the background concentration) would be about one-half the maximum level (or less than 2.2 µg/m³) for the nearest residences at 900 feet (275 meters) southwest of the site and 2,350 feet (720 meters) east of the site. For all other nearby residences, including those approximately 3,280 feet (1,000 meters) northeast of the project boundary near Big Break Marina and those east of Big Break Road, the highest modeled impacts of PM₁₀/PM_{2.5} would be less than 4% (2 µg/m³) of the limiting standard (50 µg/m³) and less than 3% of the background."*⁴ Any of these impacts combined with the national 24 hour design values of 34, 35 and 33 µg/m³⁵ for the years 2007, 2008 and 2009 respectively is a modeled violation of the 24 hour PM 2.5 standard

¹ [Supplemental Filing - Air Quality and public Health](#), Revised April 7, 2010. Posted: July 12, 2010.

Page 5.1-6 http://www.energy.ca.gov/sitingcases/oakley/documents/applicant/2010-07-12_Supplemental_Filing_Air_Quality_Public_Health_TN-56162.pdf

² <http://www.arb.ca.gov/adam/topfour/topfourdisplay.php>

³ FSA page 4.1-29 Air quality Table 4,1-29

⁴ FSA Page 4.1-29

⁵ FSA page 4.1-29 Air quality Table 4,1-29

in the project area for any of those years. The OGS violates the 24 hour PM 2.5 standard without even considering the cumulative sources in the project area.

Staff's testimony concludes that, "The projects PM10 and PM2.5 emissions and the PM10/PM2.5 precursor emissions of SO_x would contribute to the existing violations of state PM10 and state and federal PM2.5 ambient air quality standards."⁶ Staff's mitigation strategy ignores the number one contributor to secondary particulate formation the projects ammonia emissions. The project has the potential to emit 120 tons per year of ammonia. According to the BAAQMD's most recent study on PM 2.5, ammonia is a larger contributor to the secondary particulate than any other precursor emission.⁷ Staff's mitigation proposal fails to mitigate the projects ammonia emissions which according to the BAAQMD have more potential to create secondary particulate than the project NO_x and SO₂ emissions which staff proposes to mitigate. Staff believes that by limiting the projects ammonia emission to 5ppm that the ammonia emissions will not contribute to significant secondary formation of PM 2.5.

The CEC Staff fails to adequately address the cumulative impacts from the multiple emission sources in the project area. Contra Costa is home to over half of the power plants in the BAAQMD and a large number of chemical plants and refineries. Contra Costa is the second most industrialized county in California. The CEC did not perform a cumulative health risk assessment of existing facilities in conjunction with the OGS and failed to assess their impacts on the minority residents. The CEC staff and the air district performed no health risk assessment of the particulate matter impacts from the project much less the cumulative impacts from the multitude of industrial sources.

The CEC staff performed a cumulative air quality impact assessment and concluded that the cumulative 24 hour PM 2.5 impacts from existing sources and the OGS is an astounding 169 µg/m³. The annual PM 2.5 impacts are 15.6 µg/m³ which is over the federal standard without even considering background concentrations. This cumulative impact assessment exposes the significant impacts to the environmental justice community before even considering the OGS. The staff states in areas where the cumulative impact exceeds the federal standard the OGS contribution is only 1 µg/m³. Staff rationalizes that the OGS 's contribution to the cumulative impact of all the nearby facilities is not considerable. Staff states, *"In the areas of modeled violation for 24-hour PM10/PM2.5, the OGS would contribute less than 1 µg/m³, which would be less than the federal Significant Impact Level (SIL) for PM10 of 5 µg/m³, which staff considers to be a suitable level for determining whether the contribution by OGS would be cumulatively*

⁶ FSA Page 4.1-43

⁷ "Reducing ammonia emissions by 20 percent (around 15 tons/day) was the most effective of the precursor emissions reductions. Secondary PM2.5 levels were typically reduced 0-4 percent, depending on location, with an average around 2 percent. Ammonia emissions reductions were less effective near ammonia sources, where the secondary PM forming chemistry was limited by lack of nitric acid. Reducing NO_x and VOC emissions by 20 percent (around 250 tons/day total) was relatively ineffective. Reducing sulfur-containing PM precursor emissions by 20 percent (around 16 tons/day) typically had a small impact on Bay Area PM2.5 levels under episodic conditions." Exhibit 406 page E-3,4 Fine Particulate data analysis and modeling in the Bay Area October 1, 2009 <http://www.baaqmd.gov/%7E/media/Files/Planning%20and%20Research/Research%20and%20Modeling/PM-data-analysis-and-modeling-report.ashx>

considerable.”⁸ Since almost all of the projects Particulate matter emissions are PM 2.5 the PM-10 Significant Impact Levels are irrelevant and an inappropriate measure.

The BAAQMD and the CEC have recently approved the Marsh Landing Facility, the Gateway Facility, and are now are considering approval of the Oakley Facility within a 1 mile radius of each other. All of these projects emit pollutants at major source levels but have artificially limited their emissions to escape PSD review. Each project is a major source but the Marsh Landing and now the Oakley project have escaped PSD review. The combined emissions from these three sources the Gateway Project, Marsh Landing, and Oakley, none of which has a PSD permit will collectively exceed the PSD emission limits. The table below captures the combined emissions of the three major sources all within a 1 mile radius.

<i>Total Maximum Annual Emissions Gateway, Oakley and Marsh Landing tons per year</i>						
	NO2	VOC	PM 2.5	CO	SO2	Ammonia
Marsh Landing	72.0	14.2	31.6	138.9	4.9	108
Oakley	98.8	30.0	76.3	98.8	12.6	120
Gateway	174.3	46.6	101.7	554.3	37.0	244
Total	345.1	90.8	209.6	792.0	43.1	472

A pattern of development is emerging, either through design or circumstance that is circumventing the level of protection that Congress intended in crafting the PSD program. It is clear that the permitting of many “synthetic minor” sources in a limited geographic area is resulting in emissions increases that should be controlled and assessed through the PSD program.

The CEC as the permitting agency for all of these projects should first examine the cumulative environmental impacts of these plants regardless of their major or minor status to ensure that individually and collectively they do not violate applicable PSD increments. The CEC and the BAAQMD should use all credible information available in making this assessment, including ambient monitoring data and modeling analyses. Second, the BAAQMD and the CEC should evaluate whether the development of individual power projects are part of a larger strategy that would support the conclusion that they operate as one source. The CEC and the districts permitting staff should ask for documentation concerning long term plans for ownership and operation of individual projects, information on contractual agreements⁹ and voting interests, or contracts for service among owners and operators. The CEC and the district should note that all of three of these facilities are either owned or contractually linked to provide power under contract to PG&E. The district should also note that USFWS has informed the CEC that emissions from the Oakley Project, Marsh Landing and the Gateway Project will

⁸ FSA Page 4.1-40

⁹ Oakley and Gateway are both owned by PG&E and Marsh Landings output is contracted to PG&E.

negatively impact the Antioch Dunes Wildlife Refuge.¹⁰ In the permitting of the Oakley Project these issues should be considered.

The project violates the new Federal 1 hour NO₂ standard but staff has failed to appropriately apply the new federal guidelines for analyzing the projects NO₂ impacts much like it has ignored the appropriate federal guidelines for analyzing PM 2.5 exceedances. The project as proposed violates both the 24 hour PM 2.5 standard and the Federal 1 hour NO₂ standard. The projects direct and precursor emissions are significant.

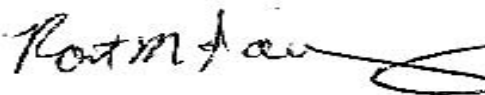
¹⁰ http://www.energy.ca.gov/sitingcases/oakley/documents/others/2010-10-13_USFWS_Comments_on_AFC_TN-58786.pdf

DECLARATION OF
Robert Sarvey, MBA, BS

I Robert Sarvey declare as follows

- 1) I prepared Exhibit 403: Air Quality Testimony of Robert Sarvey.
- 2) It is my professional opinion that the prepared testimony is valid and accurate with respect to the issues addressed therein.
- 3) I am personally familiar with the facts and conclusions related in the testimony and if called as a witness could testify competently thereto.
- 4) A copy of my professional qualifications is attached.

I declare under penalty of perjury, under the laws of the State of California, that the forgoing is true and correct to the best of my knowledge and belief, and that this declaration was executed on March 9, 2011 in Tracy, California.



Robert Sarvey

Resume of Robert Sarvey

Academic Background

BA Business Administration California State University Hayward 1975

MBA California State University Hayward 1985

Experience

San Joaquin Valley Air Pollution Control District Citizens Advisory Board Industry Representative: Analyzed proposed air quality regulations and made recommendations to the Governing Board for approval.

GWF Peaker Plant 01-AFC-16: Participated as an Intervenor in the project and helped negotiate and implement a 1.3 million dollar community benefits program. Successfully negotiated for the use of local emission reduction credits with GWF to offset local air quality impacts.

East Altamont Energy Center 01-AFC-14: Participated as an Intervenor and helped develop the conditions of certification for hazardous materials transportation, air quality, and worker safety and fire protection. Provided testimony for emergency response and air quality issues.

Tesla Power Project 01- AFC-04: Participated as an Intervenor and provided air quality testimony on local land use and air quality impacts. Participated in the development of the air quality mitigation for the project. Provided testimony and briefing which resulted in denial of the PG&E's construction extension request.

Modesto Irrigation District 03-SPEE-01: Participated as Intervenor and helped negotiate a \$300,000 air quality mitigation agreement between MID and the City of Ripon.

Los Esteros: 03-AFC-2 Participated as an Intervenor and also participated in air quality permitting with the BAAQMD. Responsible for lowering the projects permit limit for PM-10 emissions by 20%.

SFERP 4-AFC-01: Participated as an Intervenor and also participated in the FDOC evaluation. My comments to the BAAQM D resulted in the projects PM -10 emission rate to be reduced from 3.0 pounds per hour to 2.5 pounds per hour by the District. Provided testimony on the air quality impacts of the project.

Long Beach Project: Provided the air quality analysis which was the basis for a settlement agreement reducing the projects NOx emissions from 3.5ppm to 2.5ppm.

ATC Explosive Testing at Site 300: Filed challenge to Authority to Construct for a permit to increase explosive testing at Site 300 a DOE facility above Tracy. The permit was to allow the DOE to increase outdoor explosions at the site from 100 pounds per charge to 300 pounds per charge and also grant an increased annual limit on explosions from 1,000 pounds of explosive to 8,000 pounds of explosives per year.

Succeeded in getting the ATC revoked.

CPUC Proceeding C. 07-03-006: Negotiated a settlement with PG&E to voluntarily revoke Resolution SU-58 which was the first pipeline safety waiver of GO 112-E granted in the State of California. Provided risk assessment information that was critical in the adoption of the Settlement Agreement with PG&E which, amongst other issues, resulted in PG&E agreeing to withdraw its waiver application and agreeing to replace the 36-inch pipeline under the sports park parcel after construction.

East shore Energy Center: 06-AFC-06 Intervened and provided air quality testimony and evidence of cancellation of Eastshore's power purchase agreement with PG&E.

Colusa Generating Station: 06-AFC-9 Participated as air quality consultant for Emerald Farms. Filed challenge to the PSD Permit.

CPUC proceeding 08-07-018: Tesla Generating Station CPCN participated in proceeding which was dismissed due to motion by IEP. Reviewed all filings, filed protest, signed confidentiality agreement and reviewed all confidential testimony.

GWF Tracy Combined Cycle 08-AFC-07: Participated in negotiation of the Air Quality Mitigation Agreement with the San Joaquin Valley Air Pollution Control District and GWF.

CPUC Proceeding 09-09-021: Provided Testimony on behalf of Californians for Renewable Energy. Demonstrated PG&E failed to follow its environmental protocol in the LTPP. Provided testimony and evidence that PG&E's need had fallen since 2007 and that the Commission should limit PG&E's procurement to the 950-1000 MW Range.

CPUC Proceeding A. 09-04-001: Represented Californians for Renewable Energy in the proceeding.

CPUC Proceeding A. 09-10-022: Provided Testimony on behalf of Californians for Renewable Energy. Provided confidential evaluation of PPA value. Provided testimony and evidence that PG&E had violated the Mariposa Settlement. Provided testimony that demonstrated PG&E's demand had fallen sharply since the issuance of D. 07-12-052.