

CALIFORNIA ENERGY COMMISSION

1516 NINTH STREET
SACRAMENTO, CA 95814-5512

DOCKET	
93-AFC-2	
DATE:	DEC 3 1993
RECD:	DEC 3 1993



December 3, 1993

P&G AFC
93-AFC-2

Ms. Susan Strachan
Licensing Project Manager
Sacramento Municipal Utility District
P.O. Box 15830
Sacramento, CA 95826

Dear Ms. ~~Strachan~~ *SUTAN*:

FIRST SET OF DATA REQUESTS

Pursuant to Title 20, California Code of Regulations (CCR) section 1716, the California Energy Commission (Commission) staff requests that the Sacramento Cogeneration Authority (Applicant), supply the information specified in the enclosed set of data requests. The information is necessary for a complete analysis of the Procter & Gamble Cogeneration Project with regard to environmental impacts and mitigation, engineering design, and compliance with the applicable laws, ordinances, regulations and standards.

Written responses to the enclosed data requests are due to the Commission by January 3, 1994, or at such later date as may be agreed upon by staff and Applicant. A workshop has been scheduled for December 15, 1993, to discuss these questions.

If you are unable to provide the information or object to providing it, you must, within 15 days of receiving these requests, send a written notice of you inability or objection(s) to both Vice-Chair Crowley, Presiding Member of the Committee for this proceeding, and me. The notification must also contain the reasons for not providing the information and the grounds for any objection. [See Title 20 CCR section 1716(e), on the 15-day notice requirements for responding parties.]

If you have any questions regarding the enclosed data requests, please call me at (916) 654-3930.

Sincerely,

Darrel H. Woo

DARREL "H" WOO
Regulatory Project Manager

Enclosure

cc: Service list

PROOF OF SERVICE (REVISED _____) FILED WITH ORIGINAL. MAILED FROM SACRAMENTO ON 12/3/93 *JGM*

EFFICIENCY

EFF-1 Public Resources Code (PRC) § 25540.6(a) allows a project to bypass a Notice of Intention and move directly to an Application for Certification (AFC) if it qualifies as a cogeneration plant. PRC § 25134 sets forth the requirements for qualification as a cogeneration plant. Please provide the following information.

a. Describe how the project will qualify as a cogeneration power plant under PRC § 25134. Demonstrate how it will meet these operating and efficiency standards, showing assumptions and calculations.

b. The Project Description and Air Quality sections imply that the two gas turbines used for combined cycle might operate simultaneously at 50% load. Is there a projected operating scenario in which only one combustion gas turbine generator would operate in combined cycle with the steam turbine generator (refer to the AFC, Table 3.19-2)? If so, include this in the calculations.

c. Describe how compliance with these operating and efficiency standards will be demonstrated over the life of the project.

TRANSMISSION SYSTEM EVALUATION

The following information is necessary to determine whether transmission circuits in the project area have adequate capacity.

TSE-1 Please provide conductor size and type (e.g., Aluminum Conductor Steel Reinforced [ACSR]) stranding, and normal/emergency ratings for the following lines/circuits:

Western Area Power Authority (WAPA) 230 kV Double Circuit Tower Line (DCTL)

Pacific Gas and Electric (PG&E) 230 kV DCTL for Brighton Substation

PG&E 115 kV leaving Brighton Substation

The following information is necessary to verify the costs of wheeling alternatives.

TSE-2 Please identify and discuss the range of wheeling rates considered for Table 3.15-4. Identify the source (e.g., recent contracts), and date of each rate.

AIR QUALITY

"Project Emissions"

Staff needs to verify that the identified project air emission estimates include all potential sources, and that the project's potential air emissions are properly categorized, quantified, and mitigated.

AQ-1 Please clarify if the air pollutant emissions for the construction of the transmission line are included in the construction emissions identified in AFC Section 6.1.3, and identify the expected transmission line construction air emissions sources, duration of operation, emission rates and proposed mitigation measures.

"The ROC for NO_x Interpollutant Trading"

The Applicant stated on page 6.1-166 that the photochemical study to determine the appropriate reactive organic compounds (ROC) for oxides of nitrogen (NO_x) offset ratio will be completed by "the fourth quarter of 1993 or the first quarter of 1994." The review of the AFC could be delayed if the photochemical study is not completed until the first quarter of 1994. It is critical to the timing of staff's review that a determination of the appropriate interpollutant offset ratio of ROC for NO_x made by the District and the California Air Resources Board in the immediate future. Staff requires information from this photochemical study to substantiate the appropriate interpollutant offset ratio.

AQ-2 Please provide the documentation from the photochemical modeling study which substantiates the statement that "preliminary indications are that 1 pound of ROC will offset at least 1 pound or more of NO_x (AFC p. 6.1-166).

"Modeling Analysis"

In order to verify the validity of the air dispersion modeling analysis presented in the AFC, staff needs to see the input files used for the modeling analysis.

AQ-3 Please provide copies (on 3 1/2" disks) of all input files used for the screening, refined, and cumulative modeling analyses presented in the AFC. (At this time, for data response filing purposes, only 5 copies of each disk are required; additional copies will be required upon the request of the CEC regulatory project manager.)

"Cumulative Modeling Analysis"

Staff understands (for the reasons stated on p. 6.1-138, Section 6.1.5.2 of the AFC) why the Applicant did not include the existing Procter & Gamble (P&G) boilers in the cumulative analysis. However, for staff to agree that the existing P&G boilers should not be included in the cumulative modeling analysis, further clarification of the timeframe of contemporaneous operation of the proposed new project and the existing P&G boilers is needed.

AQ-4 Please describe the performance criteria P&G and/or the Sacramento Cogeneration Authority (SCA) will use to determine when the project equipment operation and steam supply (from the new cogeneration project) are "demonstrated to be reliable."

AQ-5 Please describe the anticipated time frame (days, weeks, months or years) within which P&G or SCA will be satisfied that the new cogeneration facility will be "demonstrated to be reliable."

AQ-6 Please discuss the ultimate fate (permits surrendered and equipment removed, or permits kept current and equipment used as standby) of the existing P&G boilers once it is determined that the new cogeneration facility is demonstrated to be reliable and the P&G boilers no longer need to be operated.

AQ-7 Please discuss the ultimate fate (permits surrendered and equipment removed, or permits kept current and equipment used as standby) of the existing P&G LM2500 combustion turbine generator (CTG) once it is determined that the new cogeneration facility is demonstrated to be reliable and the P&G LM2500 CTG no longer needs to be operated.

AQ-8 Please discuss whether the SCA/P&G Steam Sales Contract includes conditions and circumstances whereby the existing P&G boilers and LM2500 CTG would provide steam to P&G.

"District Data Requests"

In a letter dated November 9, 1993 from the Sacramento Metropolitan Air Quality Management District (District) to Darrel Woo of the CEC, the District raised the following questions concerning the proposed project:

AQ-9 Re: the applicability of the standby emergency generator exemption to the proposed internal combustion engine used when there is an actual interruption of power. It is stated that the engine will be used if there is a plant trip. It is unclear if a plant trip, in all cases, will cause a loss of power to the facility. Therefore, please elaborate on what constitutes a plant

trip and the status of electrical power to the facility during such an occurrence.

AQ-10 Re: The best available control technology (BACT) determination for the standby generator internal combustion engine, it was stated that natural gas would not be appropriate due to its reliability as compared to diesel fuel during a natural gas curtailment episode. The generator in question is defined under the District's rules as a standby generator only for use during electrical outages. This appears to be consistent with the Applicant's apparent intention to use it in an emergency mode, following a plant "trip," to maintain turbine spin in order to prevent the need for "start-up" once power from the transmission grid is restored (AFC pp. 3-25 and 3-43). However, under the Applicant's assumed "natural gas curtailment" scenario, neither the gas turbine nor the standby generator would be operating, and a diesel fuel option would provide no benefit. If this is not the case, please provide further explanation which justifies the use of diesel fuel in the standby generator. The explanation should also include a discussion of the appropriateness of the use of alternative fuels, such as methanol, in the generator.

AQ-11 The BACT determination for the auxiliary boiler discounts the use of selective catalytic reduction (SCR) due to an expected service factor of less than 50 percent. However, the entire analysis is based on a 50 percent service factor. This raises questions as to the classification of this boiler as standby. Please clarify the use of the auxiliary boiler.

HAZARDOUS MATERIALS

The following requested information is needed to evaluate the potential for, and potential consequences of, an accidental ammonia release associated with the ammonia transfer piping.

HAZ MAT-1 Please provide a preliminary piping and instrumentation diagram for the ammonia pipeline between the storage facility and the ammonia injection skids.

The following requested information is needed to evaluate the potential for accidental mixing.

HAZ MAT-2 Please describe the method of delivery (truck or rail) and the locations of the delivery facilities for sulfuric acid, hydrochloric acid, aqueous ammonia, and sodium hypochlorite.

The following requested information is needed to evaluate the potential for accidental release of ammonia during loading

operations and potential consequences of such a release on the public.

HAZ MAT-3 Please provide a complete discussion of the procedures and description of the facilities related to ammonia loading. This should include engineering diagrams of the storage facility, catchment basin(s), and all valves and piping between the storage tank and loading receptacle. This should also include a detailed discussion of all safety measures and safety equipment associated with loading operations.

The following requested information is needed to evaluate the potential explosive hazards and mitigation measures associated with major pieces of combustion equipment (e.g. HRSG).

HAZ MAT-4 Please provide a complete description of all procedures, instrumentation, and safety related equipment to be utilized during start up of the HRSG to ensure that an explosive mixture is not present at start up.

INDUSTRIAL SAFETY

The following question is necessary to determine whether there will be any significant impacts associated with the operation of the project.

SAFE-1 Please provide a draft copy of an Emergency Action Plan and a Fire Prevention Plan.

LAND USE

The following questions are necessary to clarify information provided or to update information that may be subject to change prior to conducting the technical analysis.

LAND USE-1 Page 6.6-7, Section 6.6.1.3 states that, "It is anticipated that the cogeneration facility will occupy the entire site during operation." Is there a possibility that additional uses may be added to the site? If so, what are they? Please discuss the reasons for their addition, their function, and their impact on the cogeneration plant.

LAND USE-2 Page 6.6-8, Section 6.6.1.4 states that, "Public and private easements will be necessary to construct the transmission line." Please identify all existing easements, the owner of each easement, and whether access rights have been arranged. Also, identify where easements do not exist or access rights have not

been secured and a schedule when these easements will be acquired.

LAND USE-3 Page 6.6-14, Section 6.6.2 includes a discussion of relevant Sacramento General Plan policies. However, this section discusses only proposed sections of the draft General Plan. Because of the uncertainty that the draft General Plan will be approved prior to the decision on the AFC, please provide a similarly detailed review of the existing General Plan and affiliated community plans. Please address all relevant policies, objectives, and goals and discuss to what extent the proposed policy complies with them.

LAND USE-4 Re: Page 6.6-30, please update the status on the Sacramento Army Depot reuse commission activities.

LAND USE-5 Please revise Section 6.6.7.4 on page 6.6-33 to include the existing Sacramento County General Plan and community plans.

NOISE

The following information is required to determine whether the proposed project will cause significant adverse noise impacts to the community and the workers from construction and operation activities?

NOISE-1 Please provide estimated L_{max} for emergency shut-down, start-up and upset conditions. In addition, please provide an estimate of the duration (minutes) of the emergency shut-down, start-up and upset conditions for the power plant. If the noise levels exceed 75 dBA at the sensitive receptors, please propose additional mitigation measures to ensure that the 75 dBA maximum permitted noise levels are not exceeded.

NOISE-2 The table on page 6.10-8 accounts for 26 of the 33 hours monitored. Please provide the data collected after 4 a.m. on 5/27/93.

NOISE-3 Please explain the following anomalies:

a. the large swings in some noise level readings (e.g readings of 46 dBA at 3:00 a.m. and 61.6 dBA at 4 a.m. on 5-26-93 at NML - 3).

b. why readings taken in the early morning hours are higher than in the afternoon when noise levels are expected to be higher due to traffic.

NOISE-4 Please provide an estimate of the noise levels at the nearest sensitive receptors from the steam blow operations.

SOILS

Revegetation is identified by the Applicant as a method to minimize erosion at the cogeneration facility and along the transmission and fiber optic lines. Clarification of revegetation measures are necessary for a complete project description, complete environmental analysis and to ensure consistency with applicable ordinances.

Page 6.2-10 of the AFC (revised Nov. 5, 1993) under Mitigation indicates that seeding will be one soil erosion measure that will be used. Please identify all areas to be revegetated, as well as the plant species that will be used. Planting techniques, including seeding and fertilizer rates and irrigation schedules should be identified. If container plants are to be used, the size and the planting density should also be identified.

Soils-1 Please provide a description of the proposed measures for monitoring the success of the revegetation program. Include a description of the maintenance and monitoring program.

TRANSPORTATION

The following questions are required to determine the nature and significance of potential traffic and transportation impacts and potential mitigation measures to reduce potential impacts.

TRANS-1 The transportation setting discussion refers to numerous additional High Occupancy Vehicle (HOV) lanes and to the extension of light rail service (Figure 6.5-3). What is the likelihood of these measures being available in a time frame that encompasses the construction/operation of the P&G project? What are the traffic and transportation implications for the P&G project of such additional HOV lanes or light rail extension not being available?

TRANS-2 Page 6.5-24 refers to information obtained from local building trades that indicates a vehicle occupancy ratio of 2:1 (2 workers per each vehicle). Past CEC staff experience has shown that the highest ratios which can normally be expected during construction are 1.5:1 with a reasonably aggressive carpooling effort.

a. Please provide justification for the expected 2:1 ratio and provide the means used to obtain that ratio.

b. Will the measures identified in Trans-2.a. above be used for the P&G cogeneration project. Will such ratio be accomplished by incorporation as part of the P&G

Transportation Management Plan (TMP)? If yes, please explain if and how the TMP should be revised to accomplish this ratio.

c. The mitigation discussion concludes that impacts during construction will not be significant because of a relatively small workforce and encouragement of carpooling; however, there is no discussion of a mechanism to assure that goals established for carpooling will be as effective as desired. Please justify this conclusion in a discussion which includes proposed mechanisms to monitor the effectiveness of carpooling.

d. The mitigation discussion also concludes that the project will comply with the City of Sacramento Transportation System Management (TSM) requirements. Please substantiate this conclusion. Will the project satisfy the city's TSM requirements independently, or as part of the overall P&G TMP?

TRANS-3 Operation Impacts states that there will be 21 permanent plant staff.

a. Please discuss whether this staff will work in shifts, the number of shifts, the hours for the shifts, and the number of workers per shift.

b. Please provide the breakdown of operations traffic numbers to validate that the project will not contribute significantly to the 1998 baseline traffic plus project traffic conditions as shown in Table 6.5-7.

VISUAL

The following information is needed to determine the nature and significance of potential visual impacts and potential mitigation measures to reduce potential impacts.

VIS-1 Figure 6.9-1 shows the area from which the project will be visible. Please explain how this area was determined.

VIS-2 The AFC (pp.6.9-8 to 6.9-9) indicates that partial views of the HRSG stacks may occur from Baer Park and Sim Park. Please reconcile this with the fact that these parks are located outside the area designated on Figure 6.9-1 from which the project will be visible.

VIS-3 The AFC (p.6.9-8) states that Warren Park will not have views of the power plant. Please explain why this is so.

VIS-4 The AFC (p.6.9-6) specifies the height of the major project facilities. Please specify the length and width of each of these major project elements.

VIS-5 The AFC (p.6.9-28) states that:

The SACTI model predicted that for approximately 90 percent a year the predicted plume height will be less than 394 feet (120 meters). Additionally, the model predicted that maximum shadowing will occur about 656 feet (200 meters) east of the tower for 684 hours for the 5 year meteorological period (1985-1989), or an average of 1.6 percent a year. Beyond 656 feet (200 meters), the model predicted that the average hours of plume shadowing occurring at any direction from the tower represent less than 0.5 percent of the year (approximately 119 hours for the 5 year period).

a. Does the above indicate that the model predicted a plume height of greater than 394 feet for approximately 10 percent of the year?

b. Please specify the maximum plume height predicted by the model.

c. Please specify the percent of the year that the maximum plume height is predicted to occur.

d. Please provide the SACTI model cooling tower plume results summarized on AFC p.6.9-28.

VIS-6 Please clarify whether the colors used for the project features in Figures 6.9-3b and 6.9-4b are the colors specifically proposed for the project.

VIS-7 The AFC (p.6.9-31) states that:

"Trees will also be planted in parking and other maneuvering areas along the front of the plant to provide shading."

a. Please provide a map showing the location of the tree planting in relation to the project.

b. Please specify the expected height of the trees at maturity.

c. If the trees will provide screening of the project from any area from which it can be viewed by the public, please provide an artist's rendering of the effect of such screening.

ALTERNATIVES

ALT-1 The AFC (Section 3.15.2) discusses electrical transmission line alternatives, using several different routes. Please revise this discussion to include consideration of the environmental factors along each route.

WATER RESOURCES

AFC Section 3.3.2 states that "The overall site will be raised somewhat because of onsite spoiling of excavation material resulting from foundation installation and the aggregate surfacing finish that will be added to the site. Since the site is located in the 100 year floodway fringe and not in the floodway, this small rise in elevation will not have a detrimental effect on the surrounding areas. Plant structures on the site will be constructed 1 foot above the 100 year flood plain elevation." Section 3.3.4.1 states that "The 100 year flood elevation at the intersection of 83rd Street and 24th Avenue has been determined to be approximately 41.7 feet above mean sea level (Sibilsky 1993)."

Based on this later statement, staff concludes that the plant structures will be placed at 42.7 feet above mean sea level and, as the site is generally lower than 42.7 feet, a significant amount of fill will be required. Raising the plant structures to 42.7 feet, may enlarge the existing A99 flood plain boundaries and may cause adjacent properties to become inundated. Inundation by this project can be avoided by balanced cut and fill.

Water Res-1 To determine the magnitude of the impact, if any, please provide description of cut and fill volumes of earthwork and/or added foundation structures.

STATE OF CALIFORNIA

State Resources Conservation
and Development Commission

In the Matter of:) Docket No.: 93-AFC-2
Application for Certification of)
the Sacramento Cogeneration Authority's) PROOF OF SERVICE
Procter & Gamble Cogeneration Project) (rev. 12/3/93)

PROOF OF SERVICE

I, Gina Morthole', declare that on December 3, 1993, I deposited copies of the attached **FIRST SET OF DATA REQUESTS** in the United States mail in Sacramento, California with first class postage thereon fully prepaid and addressed to the following:

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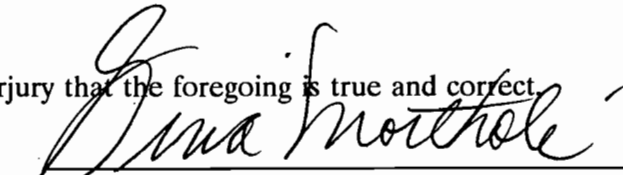
(none listed)

CALIFORNIA ENERGY COMMISSION

(Docket Unit - 12 copies required)

Docket Unit, MS-4
1516 Ninth Street
Sacramento, CA 95814

I declare that under penalty of perjury that the foregoing is true and correct.



(Signature)

* * * * *

INTERNAL DISTRIBUTION LIST

Parties do not mail to the following individuals. The Energy Commission Docket Unit will internally distribute documents filed in this case to the following:

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* * * * *

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