

DOCKETED

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SACRAMENTO MUNICIPAL UTILITY DISTRICT FINANCING AUTHORITY
P.O. Box 15830, Sacramento, CA 95852-1830

Cosum11cs Power Plant

SFA 18-010

November 2, 2018

Mary Dyas
Compliance Project Manager
California Energy Commission
Siting, Transmission, & Environmental Protection Division
1516 9th Street, MS-2000
Sacramento, CA 95814

Subject: Sacramento Municipal Utility District Finance Authority's Cosumnes Power Plant (01-AFC-19C)

Dear Ms. Dyas:

The California Energy Commission received several public comments on the Sacramento Municipal Utility District Finance Authority (SFA) Cosumnes Power Plant (CPP) Petition to Amend (PTA). SFA provides the following responses to these comments. The responses are formatted based on the Transaction Number (TN) for each filing received.

1. Transaction Number 224945 - Steve Uhler Comments CPP PTA NERC Compliance errors in TN224837

The commenter states that there are errors in Table 4 of the NERC Compliance report pertaining to the listed capacity of the Hedge Solar Generation dispatch capacity (see Table 4 of TN 224837). The commenter then poses three (3) questions presented below.

- What are the CEC Plant IDs for the generation in Table 4?
- Has the Energy Commission verified the modeling?
- How was the verification done?

Response: The SFA submitted a North American Electric Reliability Corporation (NERC) Reliability Standard FAC-002-2 analysis (Transaction Number 224837) demonstrating that CPP's increased electrical generation will not impact Sacramento Metropolitan Utility District's (SMUD) electrical grid. SMUD has reviewed this filing and has verified that the maximum operating (1.5 MW) and dispatch (1 MW) capacities for the Hedge Solar Generation plant are correct (as are the other data presented in the filing). SFA defers to the California Energy

Commission (CEC) to respond to the three specific questions regarding the verification of SMUD's assessment.

2. Transaction Number 224946 - Steve Uhler Comments CPP PTA LORS
SMAQMD BACT

The commenter asks the following questions.

Is Technologically Enhanced Naturally Occurring Radioactive Material (TENORM) considered in Authorities To Construct 25800 & 25801 (Cosumnes Power Plant)?

Table 1-1. Turbine Emission Rate lists Lead (CAS 7439921) as a emission from turbines (TURB01, TURB02) in Sacramento Municipal Utility District (SMUD) petition to Energy Commission (CEC)¹.

Is the source known for Lead (CAS 7439921) listed in the SMUD petition to CEC? SMAQMD BACT CLEARINGHOUSE BACT No 203 Determination Information² has space for Lead, but no data.

Was Lead overlooked by SMAQMD?

Is (222)Ra or (210)Pb that may be found in Natural Gas Pipelines feeding Cosumnes Power Plant a source of Lead emissions produced by power plant turbines (TURB01, TURB02) as shown in SMUD petition to CEC?

Response: SFA does not expect TENORM (or Radium 222) to be present in the fuel supply to CPP since neither SFA nor its fuel suppliers engage in any activities meeting the Environmental Protection Agency's (EPA) TENORM definition.

The EPA defines TENORM³ as:

*"Naturally occurring radioactive materials that have been concentrated or exposed to the accessible environment as a result of human activities such as manufacturing, mineral extraction, or water processing."
(emphasis added)*

Furthermore, as specified in by SFA in the SMAQMD ATC application (Section 3.1.3.2 and

3.1.3.7) and the PTA (Section 3.9.2), the facility's hourly and yearly toxic air contaminant (TAC) emissions are based on US EPA's AP-42 emission factors (for both natural gas and digester gas), neither of which include TENORMs as a potential toxic air contaminant or hazardous air pollutant.

A review of Appendix E Table 1-1 of the CPP air permit application (or Attachment 3.1 of the CPP PTA), SFA included lead emission estimates (based

¹<https://efiling.energy.ca.gov/GetDocument.aspx?tn=224625> {PDF page 140}

²<http://www.airquality.org/StationarySources/Documents/BACT%20Determination%20No%20203%20-%20Gas%20Turbine.pdf#search=Cosumnes%20Power%20Plant>

³<https://www.epa.gov/radiation/technology-enhanced-naturally-occurring-radioactive-materials-tenorm>

on EPA emission factors for digester gas combustion) in the CPP health risk assessment analysis. However, lead was not considered as part of the Best Available Control Technology (BACT) assessment as the Sacramento Metropolitan Air Quality Management District's (SMAQMD) lead BACT trigger level is 3.3 lb/day and CCP's annual lead emissions are less than 2.8 pounds per year. Therefore, a BACT review for lead was not applicable.

3. Transaction Number 224947 - Steve Uhler Comments CPP PTA LORS (210)Pb

The commenter asks "Is Technologically Enhanced Naturally Occurring Radioactive Material (TENORM) covered by HSC 115000.1 ?"

Response: California Health and Safety Code 115000.1⁴ is specific to generators of low level radioactive waste. As noted in the response to questions contained in Transaction Number 224946, SFA does not expect the CPP to emit radionuclides or generate low level radioactive wastes. Therefore, California Health and Safety Code 115000.1 to the CPP.

Furthermore, it appears that the TENORM document sited pertains to oil production facilities and not natural gas fired facilities.

4. Transaction Number 224948 - Steve Uhler Comments CPP PTA TOD Timer adoption modeling

The comment asks "What level of timer use adoption such as SMUD recommends in the SMUD video clip below was used in modeling reliability?" from a video of a workshop on SMUD's Time of Day (TOD) rates.

Response: The purpose of the CPP PTA is to assist SMUD in meeting its Load Serving Capacity needs by ensuring sufficient electrical supply is available to meet our new and existing customers' electrical demand. The CPP PTA has no association with SMUD's TOD rate structure in anyway.

5. Transaction Number 224980 - Steve Uhler Comments CPP Fuel content

The commenter asks the following questions pertaining to the power plant's fuel content:

What is the makeup of the fuel content for CPP?

Response: CPP combusts pipeline quality natural gas satisfying Pacific Gas and Electric's (PG&E) Rule 21 standards and treated digester gas from the Sacramento Regional County Sanitation District. The digester gas is treated to pipeline quality, consistent with Rule 21, by removing hydrogen sulfide to 0.5 grains per one-hundred cubic feet (gr/100 SCF). Of the proposed 2,200 million British thermal units per hour (MMBTU/hr) fuel heat input, SMAQMD's permits - limits digester gas use to 2,500 cubic feet per minute or approximately 90 MMBTU/hr per combustion turbine (representing less than 5 percent of the heat input).

⁴ <https://codes.findlaw.com/ca/health-and-safety-code/hsc-sect-115000-1.html>

How is the fuel content monitored?

Response: CPP uses several calibrated fuel monitors at the combustion turbines to continuously measure fuel input per the specified requirements in the current SMAQMD Permits to Operate and CEC license.

How much Lead (Pb) is in the fuel?

Response: As mentioned above, based on the use of the EPA lead digester gas emission factor, CPP is estimated to generate a maximum of 2.8 pounds of lead per year.

How much Radon (Ra) is in the fuel?

Response: SFA does not believe the fuel used at CPP contains any radionuclides. Furthermore, in reviewing PG&E's natural gas quality rule (Rule 21), there are no references to radionuclides limits for pipeline quality natural gas (including biomethane or digester gas).

What is the (210)Pb and (222)Ra content?

Response: Please see the responses to these questions above.

6. Transaction Number 224983 - Steve Uhler Comments CPP Heat Rate

The commenter makes the following comments.

How does the heat rate in the SFA petition compare with SFA budget for correctness?

Response: SFA did not present a heat rate for the CPP project in either SFA CPP PTA or supplemental PTA filing.

SFA 2018 budget on PDF page 7 lists average heat rate as 6,380. That number appears to come from the table on PDF page 8⁵.

Response: This comment does not appear relevant to the CPP PTA

There appears to be math errors in this SMUD Board approved budget document.

Response: This comment does not appear relevant to the CPP PTA

Perhaps the math in SFA's petition and supporting documents should be validated?

Response: This comment does not appear relevant to the CPP PTA

What is the correct heat rate for SMUD's Cosumnes Power Plant?

⁵ See The SFA 2018 Budget at this smud.org link below (SMUD Board approved posted document is not ADA compliant).

Response: The heat rate after the increase in CPP's electrical generation, if approved by the CEC, is expected to be 6,818 British thermal units per kilowatt-hour, which is accounted for in SMUD's 2019 budget as the proposed changes to CPP will not be implemented at the earliest until 2019.

If you require any clarifications or additional information, please let me know.

Sincerely,

A handwritten signature in blue ink that reads "E. S. Poff". The signature is fluid and cursive, with the first and last names being clearly legible.

Eric Poff
Manager, Thermal Generation, Power Generation

cc: D. Blevins/EthosEnergy
Rene Toledo/SMUD
Jeff Adkins/Trinity