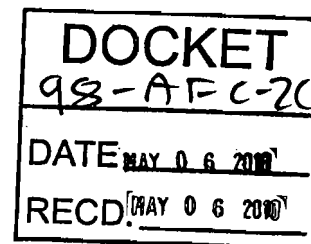


CALIFORNIA ENERGY COMMISSION

1516 NINTH STREET
SACRAMENTO, CA 95814-5512
WWW.ENERGY.CA.GOV



DATE: May 6, 2010
TO: Interested Parties
FROM: Mary Dyas, Compliance Project Manager
**SUBJECT: La Paloma Generation Project (98-AFC-2C)
Staff Analysis of Proposed Modifications to AQ-51**



On April 5, 2010, the La Paloma Generating Company filed a petition with the California Energy Commission (Energy Commission) to amend the Energy Commission Decision for the La Paloma Generating Project. Staff prepared an analysis of this proposed change and a copy is enclosed for your information and review.

The 1,124 megawatt project, which was certified in October 1999, began commercial operations in January 2003. The power plant is located east of the community of McKittrick in Kern County.

The proposed modifications will allow the La Paloma Generating Project to increase the level of PM10 emissions from the cooling towers due to increased levels of total dissolved solids in the facility's source water.

Energy Commission staff reviewed the petition and assessed the impacts of this proposal on environmental quality, public health and safety, and proposes revisions to existing Condition of Certification AQ-51. It is staff's opinion that, with the implementation of the revised condition, the project will remain in compliance with applicable laws, ordinances, regulations, and standards and that the proposed modifications will not result in a significant adverse direct or cumulative impact to the environment (Title 20, California Code of Regulations, Section 1769).

The amendment petition and staff's analysis have been posted on the Energy Commission's webpage at www.energy.ca.gov/sitingcases. The Energy Commission's Order (if approved) will also be posted on the webpage. Energy Commission staff intends to recommend approval of the petition at the June 16, 2010, Business Meeting of the Energy Commission. If you have comments on this proposed modification, please submit them to me at the address below prior to May 30, 2010.

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

Comments may be submitted by fax to (916) 654-3882, or by e-mail to mdyas@energy.state.ca.us. If you have any questions, please contact me at (916) 651-8891.

Interested Parties

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For further information on how to participate in this proceeding, please contact the Energy Commission Public Adviser's Office, at (916) 654-4489, or toll free in California at (800) 822-6228, or by e-mail at publicadviser@energy.state.ca.us. News media inquiries should be directed to the Energy Commission Media Office at (916) 654-4989, or by e-mail at mediaoffice@energy.state.ca.us.

Enclosure

AIR QUALITY

Joseph Hughes

INTRODUCTION

On April 5, 2010, the La Paloma Generating Company, LLC (LPGC) filed a petition with the California Energy Commission for Amendment to Condition of Certification AQ-51. The 1,124-megawatt project was certified by the Energy Commission on October 6, 1999. The project is located approximately 40 miles west of Bakersfield and 1.9 miles east of McKittrick in the San Joaquin Valley and is regulated by the San Joaquin Valley Air Pollution Control District (SJVAPCD).

The purpose of the amendment is to update the particulate matter less than 10 microns in diameter (PM10) emission limit for consistency with the SJVAPCD Authority to Construct Permits (ATC) that were issued March 1, 2010 for the cooling towers and the pending modification of the respective Title V Permits to Operate (PTO) (LPGC).

LAWS, ORDINANCES, REGULATION, AND STANDARDS (LORS) - COMPLIANCE

The proposed modification to Condition of Certification AQ-51 does not represent any change to facility design elements or present any significant new environmental impacts. The SJVAPCD has previously approved the requested increase in permitted emissions. The ATC Permits issued by SJVAPCD include a Title V Certification of Compliance, documenting that U.S. Environmental Protection Region 9 concurs with the permit change (LPGC p.5).

SETTING

On September 25, 2008, EPA redesignated the San Joaquin Valley to attainment for the PM10 National Ambient Air Quality Standard (NAAQS) and approved the PM10 Maintenance Plan. PM10 is non-attainment for state designation. Particulate matter less than 2.5 microns in diameter (PM2.5) is currently non-attainment for both state and federal designation (SJVAPCD).

ANALYSIS

PM10 emissions from the La Paloma Generating Plant (Plant) cooling towers are a function of total dissolved solids (TDS) in the incoming water supply. Over time, the Plant has experienced increased TDS in the supply water source received from the California Aqueduct that is the result of salt water intrusion into the southern end of the Sacramento Delta due to long-term drought conditions. Elevated TDS levels are expected to continue for the foreseeable future (LPGC p.1).

On January 19, 2009, daily conductivity measurements of the Plant's incoming supply water identified conductivity at a level significantly higher than normal. Normal levels are in the range of 400-450 microsiemens/centimeter ($\mu\text{S}/\text{cm}$); the January 19, 2009 levels were between 760-800 $\mu\text{S}/\text{cm}$. The increased conductivity is indicative of the increase in TDS (LPGC p.1).

Due to the increased TDS levels, LPGC on February 2, 2009, petitioned the SJVAPCD for a one year variance to allow research into the TDS issue and allow time for permit modification. During the reporting period, daily PM10 emissions averaged 10.4 lb from each cooling tower: peak emissions rates were 16.0 lb/day and 14.1 lb/day for cooling towers 1 and 2, respectively. The 11.2 lb/day permit limit was exceeded 154 and 145 days for cooling towers 1 and 2, respectively, over the course of that year.

The facility is not able to adjust their process enough to absorb the new TDS levels. Therefore, they are applying to increase the amount of PM10 they can emit from 11.2 lb/day to 20 lb/day to account for worst case scenarios. The facility is providing offsets for the increase in PM10 emissions (SJVAPCDa). The district has required 4,818 pounds of PM10 offsets per year (lb PM10/yr) for each cooling tower. The total of 9,636 lb PM10/yr includes an offset ratio of 1.5:1.

CONCLUSIONS AND RECOMMENDATIONS

The project would continue to comply with applicable laws, ordinances, regulations, and standards. The increased PM10 emissions from the cooling towers are directly related to the increased TDS from the plant's water source. This increase is out of the control of LGPC and the plant is not able to change its process to absorb such increases. The plants average emissions are expected to be around 10.4 lb/day and the new PM10 emission limit would be used to account for high concentrations of TDS on worse case days. The 1.5:1 offset ration required by SJVAPCD rules provide for a net air quality benefit to the air basin. The proposed change to AQ-51 is recommended by staff to ensure LGPC's continuous compliance with this Condition of Certification.

AMENDED AND PROPOSED CONDITIONS OF CERTIFICATION

AQ-51 PM10 emission rate for each cooling tower shall not exceed ~~11.2~~ 20 lb/day.
[District Rule 2201]

Verification: The project owner shall compile the required daily PM10 emissions data and maintain the data for a period of five (5) years. The project owner shall make the site available for inspection by representatives of the District, CARB, and the Commission.

References

LPGC - La Paloma Generating Company, LLC. Petition for Amendment Condition of Certification AQ-51: Cooling Tower PM10 Emission Limit. April 5, 2010.

SJVAPCD – San Joaquin Valley Air Pollution Control District. Ambient Air Quality Standards & Valley Attainment Status <http://www.valleyair.org/> April 2010.

SJVAPCDa – San Joaquin Valley Air Pollution Control District, Authority to Construct Application Review. January 26, 2010.