



South Coast Air Quality Management District

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California Energy Commission

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TN # 70536

APR. 30 2013

April 26, 2013

Charles Turlinski
Project Manager
Palen Solar Electric Generation Station
1999 Harrison Street, Suite 2150
Oakland, CA 94612

Subject: Permit Applications for the Palen Solar Electric Generation Project, located at Corn Spring Road, Desert Center, CA 92239 (Facility ID# 174021)

Dear Mr. Turlinski:

The South Coast Air Quality Management District (SCAQMD) received permit applications for the Palen Solar Electric Generation Station Energy Project on April 4, 2013. As a first step in our review process, we have briefly evaluated the applications to determine whether they are complete and ready for review. Based on our initial review of the submitted materials it has been determined that the application package is incomplete. The reference application numbers for this project and our initial review determination are provided in the table below:

Application	Equipment Description	Completeness Determination
549399	Title V/RECLAIM Significant Revision	Deemed Incomplete
549379	Auxiliary Boiler no. 1	Deemed Incomplete
549380	Auxiliary Boiler no. 2	Deemed Incomplete
549381	Night Preservation Boiler no. 1	Deemed Incomplete
549383	Night Preservation Boiler no. 2	Deemed Incomplete
549387	Emergency ICE no.1	Deemed Incomplete
549389	Emergency ICE no. 2	Deemed Incomplete
549384	Emergency Fire Pump ICE no. 1	Deemed Incomplete
549385	Emergency Fire Pump ICE no. 2	Deemed Incomplete
549386	Emergency Fire Pump ICE no. 3	Deemed Incomplete
549390	Emergency ICE no. 3	Deemed Incomplete

Please be aware that, in addition to the information required below, other information will be needed during the course of our full engineering evaluation. Your cooperation is key to the timely review of the applications. The following issues have been identified during the completeness review:

1. Appl. Nos. 549379 and 549380— Auxiliary Boilers
 - A. Each boiler is rated at 249 mmbtu/hr and is subject to Rule 1146 (c)(1)(F) and the rule limits the NOx concentration limit to less than 5 ppmv or less effective on 1/1/2013. The proposed burner is rated at 9 ppmv NOx and does not comply with Rule 1146. Please provide revised analysis including equipment changes or additional applications which may be needed to show compliance with the 5 ppm

emissions limits. Please include manufacturer data including make, model and emissions guarantees for all operating loads including all turn down loads.

- B. The applicant is proposing to a CO concentration limit of 25 ppmv or less. Please provide a guarantee for CO for all loads this boiler is operated from the burner manufacturer.
- C. Please provide model of boiler and include equipment specifications sheet.
- D. Please explain why the boiler needs to operate at turn down ratio of 8:1 or 12.5% load.
- F. Table 4.1 A-1 lists the PM10 EF as 5.10 lb/mmcf, (no reference listed). Use the PM10 emissions factor of 7.6 lb/mmcf, reference AP-42, Table 1.4-2 and revise the PM10 emissions.
- G. Table 4.1 A-14 estimates the commissioning emissions. Please revise the emissions factors for all pollutants at different loads based on a 5 ppmv NOx emissions limit.
- H. The rated heat input capacity of the boilers are greater than 40 mmbtu per hour and are subject to the Continuous Emissions Monitoring (CEM) per Rule 1146 (c)(6). Please be advised a CEMs application may be required and to contact SCAQMD source testing staff for applications and fee amount.
- I. Table 4.1-22, Title 40 CFR Parts 71-75, Acid Rain Program. Provide the analysis identifying applicable sections of the subparts showing this equipment is not subject to this Regulation.
- J. Table 4.1-22, Title 40 CFR Part 60 Db, for the boilers provide the analysis identifying applicable sections of the subparts showing this equipment is in compliance with this Regulation.
- K. Table 4.1-22, Title 40 CFR Part 63, Subpart JJJJJJ, for the boilers provide the analysis identifying applicable sections of the subparts showing this equipment is in compliance with this Regulation.

2. Appl. Nos. 549381 and 549383— Night Preservation boilers

- A. Please provide model of boiler.
- B. Please provide make and model of the burner.
- C. Please provide the NOx and CO emission guarantee from the burner manufacturer for all loads the boiler is operated.
- D. Please provide the equipment specification sheet for the boiler and burner.
- E. Table 4.1 A-1 lists the PM10 EF as 5.10 lb/mmcf, (no reference listed). Use the PM10 emissions factor of 7.6 lb/mmcf, reference AP-42, Table 1.4-2 and revise the PM10 emissions.

- F. Table 4.1-22, Title 40 CFR Part 60 Dc, for the boilers provide the analysis identifying applicable sections of the subparts showing this equipment is in compliance with this Regulation.
- G. Table 4.1-22, Title 40 CFR Part 63, Subpart JJJJJ, for the boilers provide the analysis identifying applicable sections of the subparts showing this equipment is in compliance with this Regulation.
3. Appl. Nos. 549387 and 549389- Emergency ICE, 3633 HP
- A. The proposed engines will be equipped with a CAT Clean Emissions Module consisting of Selective Catalytic Reduction (SCR), Diesel Particulate Filter with oxidation catalyst. Please provide the make and model of the control system (include specification sheet).
- B. Please provide the following information for the emissions control system.
- Time required to meet the minimum inlet temperature for the SCR from cold engine start-up.
- The minimum and maximum inlet temperature to the SCR.
- The ammonia slip (ppmv). How is the ammonia slip monitored. Was the ammonia slip evaluated for Rule 1401.
- Provide information on the SCR control system. Is control system feed forward or combination feed forward feedback system.
- The maximum pressure drop across the system (inches W.C.).
- Is there a diesel particulate filter (DPF), if so is it an active or passive type.
- Pounds of SCR catalyst.
- Pounds of oxidation catalyst.
- Pounds of ammonia catalyst.
- C. Provide the most recent emissions data sheet from the engine manufacturer (data sheet emission Tier 4i verification). If the PM g/bhp-hr is different from the 0.03 g/bhp-hr provided in the application package , the Rule 1401 MICR has to be revised.
- D. The uncontrolled emission from the engine.
4. Appl. Nos. 549390- Emergency Engine 398 HP
Please provide the Tier 3 emissions data sheet.

5. Appl. No. 549399- Initial Title V and RECLAIM application
 - A. The application filing fee is not correct. Please submit an additional \$16.46 fee.
 - B. Please provide a separate letter requesting to opt into NOx RECLAIM program.
6. Solar Plant

Solar Receiver Steam Generation (SRSG), the steam generated from the SRSG does it contain any additives, if yes please provide name of the additives, along with material safety data sheets. Estimation of leaking losses through flanges, valves pumps, etc.
7. Mirror Washing

Table 4.1-7 list the mirror washing emissions. The pump that is used to spray the water on the mirrors, is it electrically powered. If the water that is sprayed on the mirrors is heated, please describe how it is heated. Are there any detergent, soaps, surfactants used in conjunction with the mirror washing process.

Please provide requested information within 30 days of receipt of this letter. If you have any questions regarding your permit applications please contact Mr. Roy Olivares at (909) 396-2208 or rolivares@aqmd.gov.

Sincerely,



Mohsen Nazemi, P.E.
Deputy Executive Officer
Engineering and Compliance

MN:AYL:JTY:rdo

cc: Roger Johnson, CEC