

## DOCKETED

<b>Docket Number:</b>	00-AFC-14C
<b>Project Title:</b>	El Segundo Power Redevelopment Project Compliance
<b>TN #:</b>	203080
<b>Document Title:</b>	ROC with Air District
<b>Description:</b>	N/A
<b>Filer:</b>	Christine Stora
<b>Organization:</b>	CEC/ Wenjun Qian
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**Siting, Transmission  
 and Environmental  
 Protection Division**

**FILE: 00-AFC-14C**  
**PROJECT TITLE: El Segundo Power Facility  
 Modification (ESPFM)**  
**Docket: 00-AFC-14C**

<b>TECHNICAL AREA(S): Air Quality</b>			
<input checked="" type="checkbox"/> Telephone		<input type="checkbox"/> Meeting Location: N/A	
<b>NAME:</b>	Wenjun Qian, CEC	<b>DATE:</b>	8/29/14 or 9/2/14; 9/4/14
<b>TIME:</b>		<b>WITH:</b>	~ 11 am
<b>WITH:</b>	Kenneth Laird (South Coast Air Quality Management District)		
<b>SUBJECT:</b>	Discussions regarding the Final Determination of Compliance		

**COMMENTS:**

Energy Commission staff (staff) asked the South Coast Air Quality Management District (district) staff to confirm the Best Available Control Technology (BACT) levels for the auxiliary boiler of the El Segundo Power Facility Modification (ESPFM) project in item 1. Energy Commission staff also asked the district staff to clarify some typographical errors and inconsistencies in the Final Determination of Compliance (FDOC) for the ESPFM.

1) BACT levels of the auxiliary boiler

In the April 30, 2014 letter to the district (attached to TN# 202293 Project Owner's Comments Regarding Preliminary Staff Assessment, dated 5/5/2014), the facility owner proposed a 2-tier CO BACT limit: 50 ppm CO when the boiler operates between 20% to 100% load and 100 ppm CO when the boiler operates below 20% load (10% to 20%). The FDOC states that the auxiliary boiler will comply with the CO BACT limit of 50 ppmv at 3% O<sub>2</sub> at boiler loads between 10% and 100%. The district staff confirms that the facility owner and the district resolved this issue and agreed the CO BACT limit for the auxiliary boiler should be 50 ppmv at 3% O<sub>2</sub> at boiler loads between 10% and 100% instead of the 2-tier limit.

The April 22, 2014 vendor letter to NRG (attached to TN# 202293 Project Owner's Comments Regarding Preliminary Staff Assessment, dated 5/5/2014) shows the selective catalytic reduction (SCR) system for the auxiliary boiler is designed to reduce stack NOx emissions by 90% based on a minimum catalyst inlet temperature of 500°F with a maximum ammonia (NH<sub>3</sub>) slip of 10 ppmvd. Page 16 of the FDOC shows the auxiliary boiler SCR warranty is 5 ppmvd NH<sub>3</sub> slip at 3% O<sub>2</sub> at dry conditions. The district staff confirms that the facility owner and the district resolved this issue and agreed that the NH<sub>3</sub> slip limit for the auxiliary boiler SCR should be 5 ppmvd at 3% O<sub>2</sub> at dry conditions instead of 10 ppmvd.

2) Ammonia emission rates of the auxiliary boiler

Condition D12.20 on page 70 of the FDOC limits the ammonia injection rate to 5 lb/hr in the SCR for the auxiliary boiler. Table D-5 on page 110 of the FDOC shows the ammonia emission rate of the auxiliary boiler is also 5 lb/hr. Energy Commission staff believes the ammonia emission rate should be much less than 5 lb/hr because most of the injected NH<sub>3</sub> would have reacted with NOx emissions. The district staff agreed to



check the ammonia emission rate of the auxiliary boiler.

3) Greenhouse Gases (GHG) emissions

In Appendix E of the FDOC, the district updated the total GHG emissions (tons/year) based on revised Global Warming Potential (GWP [Federal Register, November 29, 2013]) values, which became effective on January 1, 2014. However, the district didn't update the GHG emissions in tons/net MWh and lbs/net MWh. For example, on page 117 of the FDOC, the total GHG emissions from the combined cycle with 45% load has been revised to 425,166.44 tons/year. However, the corresponding 967.10 lbs/net MWh shown in the FDOC was based on the original estimate of total GHG emissions of 424,884 tons/year. Current FDOC condition E193.6 also limits the GHG emissions to 967 lbs/net MWh. Using the revised total GHG emissions, the lbs/net MWh number should be revised to 967.74, which will be rounded to 968. The corresponding GHG limit in E193.6 will become 968 lbs/net MWh. The district staff agrees to review the GHG calculations and make necessary adjustments.

4) Capacity limit

Condition E448.3 on page 80 of the FDOC limits the total maximum amount of electricity produced from the new turbines to 447 MWh. Energy Commission staff believes "MWh" is a typographical error, which should be corrected to "MW". The district staff concurs with Energy Commission staff that it should be corrected to "MW".

5) Timeframe to submit source test protocols

Condition D29.10 on page 71 of the FDOC requires a source test protocol to be submitted to the district engineer no later than 90 days before the proposed test date. Energy Commission staff noticed in other conditions, such as D29.13, the timeframe to submit a source test protocol has been revised from 90 days to 60 days before the proposed test date. The district staff agrees the "90 days" in condition D29.10 is a typographical error and should be corrected to "60 days".

6) RECLAIM Trading Credits (RTCs)

Energy Commission staff found inconsistencies in the total RTCs required for the 1<sup>st</sup> year of operation on different pages of the FDOC. On page 57, the total RTCs required for the 1<sup>st</sup> year of operation is shown to be 242,084 lbs. On page 122, the total RTCs required for the 1<sup>st</sup> year of operation is calculated to be 242,139 lbs. Energy Commission staff believes the correct total RTCs required for the 1<sup>st</sup> year of operation should be 242,139 lbs. The district staff agrees to review the RTC calculations and make necessary corrections to any typographical errors in the RTC requirements.

7) Commissioning emissions

Energy Commission staff noticed the district revised the commissioning emissions of PM10 and SOx for the Trent 60 turbines on page 96 of the FDOC. The district staff verified that the revised commissioning emissions are based on the facility owner's February 7, 2014 submittal to the district, which was also submitted to the Energy Commission on September 12, 2013. Staff believes the revised SOx emissions for the Trent 60 turbines are based on a sulfur content of 0.25 grains per 100 standard cubic feet (0.25 gr/100 scf). Staff believes the SOx emissions during the commissioning of the



GE 7FA turbine on page 87 of the FDOC were based on a sulfur content of 0.75 gr/100 scf. Energy Commission staff asked the district staff whether the district would revise the commissioning SOx emissions of the GE 7FA turbine to be based on a sulfur content of 0.25 gr/100 scf. The district staff states that the emissions during commissioning of the GE 7FA are based on the facility owner's submittal to the district and the district does not intend to revise the data from the facility owner. Energy Commission staff just would like to make sure the district staff is aware of the inconsistencies. The facility owner's worst case impact analysis was conservatively based on a sulfur content of 0.75 gr/100 scf.

Energy Commission staff asked the district staff how the district is going to process the above mentioned revisions. The district staff states that the district will not revise the FDOC but will make the above mentioned possible changes in a revised permit. Energy Commission staff is also aware that the facility owner is requesting the district to clarify language about startups and startup limits. The district staff states that if the district is going to change the startup language, it will also be in a revised permit, not a revised FDOC.

<b>cc:</b>	<b>Signed:</b>
	<b>Name:</b> Wenjun Qian