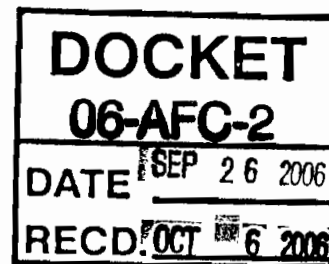




# South Coast Air Quality Management District

21865 Copley Drive, Diamond Bar, CA 91765-4178  
(909) 396-2000 • www.aqmd.gov



September 26, 2006

Ms. Julie Way  
AES Highgrove, LLC  
690 Studebaker Road  
Long Beach, CA 90803

Subject: Request for Information, AES Highgrove Power Plant Project, 06-AFC-02,  
AQMD Application numbers 458297-458304, facility ID 141891

Dear Ms. Way:

The applications for permit to construct the Highgrove Power Plant are currently under engineering review. The following issues have been identified.

## Gas Turbines

1. The air quality modeling is currently under review by AQMD's modeling staff. However, Table 8.1-25 of the AFC indicates violation of state AQ standard for NO<sub>x</sub> during the commissioning period. The AQMD will not be able to accept the explanations provided in the applications. This issue needs to be addressed immediately.
2. The permit applications provide a gas turbine commissioning schedule that was copied from another CEC project. Although the gas turbines are the same GE LMS100 units the emission limits are not the same. Therefore, Table 8.1B-3 needs to be corrected to reflect the correct emission limits.
3. The permit applications did not provide a complete commissioning schedule. In order to determine the 30-day average emissions during the commissioning period the application shall provide a day-by-day commissioning schedule. This schedule shall show 1) for how many calendar days that the commissioning will last and 2) daily schedule for each commissioning task.
4. The permit applications need to provide a monthly operating schedule for normal operations. This is required for calculation of the 30-day average emissions. The monthly schedule shall include the maximum hours of operations, the number of startups and the number of shutdowns per day and per month, and whether there are any fuel usage limits. The application does show in Table 8.1B-9 mitigation

liability. However, the application did not provide detailed calculations to substantiate the numbers. The footnotes of the table seem to suggest that the numbers are derived from daily operating schedule at ambient temperature of 80 °F. That would not be correct.

5. The permit applications need to provide an annual operation schedule. This is to calculate the annual NOx RTC requirements. Although the applications mentioned the annual operating of 5,475 hours it is not clear how the annual RTC requirements of 212,141 lbs for the 1<sup>st</sup> year and 183,518 lbs for normal operation (Table 8.1-32) are derived.
6. The permit applications need to specify when the NOx CEMS are to be certified. It is desirable that they are certified immediately after the gas turbines are commissioned. Otherwise, before the CEMS are certified the turbine NOx emissions will be calculated at a higher limit (25 ppmv) instead of the permit limit of 3.5 ppmv. This will result in a higher 1<sup>st</sup> year RTC requirement.
7. The permit applications conducted a hazardous air pollutant (HAP) modeling that did not include Hexane. Hexane is typically found in the exhaust from natural gas combustions. It is listed in the Clean Air Act section 112(b). Although it does not have cancer risks it does contribute to the chronic hazard index. It should be included in the HAP modeling and accounted for in determination of NESHAP compliance.

#### Cooling Towers

1. The applications need to conduct a HAP emissions calculation to determine MICR (Maximum Individual Cancer Risk). The MICR must be less than 1 in a million or permit application would be needed. The permit applications did not perform the HAP calculation. Even though AES plans to use ground water the HAP calculation must be conducted. At the minimum there shall be a ground water sample that quantifies any HAPs in the ground water. Unless there are no HAPs in the ground water the HAP concentrations can be used to derive MICR.

#### SCR and CO Catalysts

1. CO catalyst total volume. The catalyst module dimensions are incomplete so that the total CO catalyst volume can not be derived.
2. Please advise if the vendors and models for the SCR and the CO catalysts have been finalized.

#### Ammonia Storage Tank

1. Ammonia storage tank dimensions. The current drawing is preliminary and is based on a 12,000 gallons tank.
2. Please advise whether the ammonia storage tank design has been finalized.

Oil Water Separator

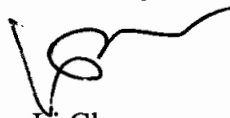
1. Please advise if the design of the oil water separator has been finalized.

Facility-wide Issues

1. The facility has indicated that it intends to opt into the NO<sub>x</sub> RECLAIM program. Please submit a letter indicating that it desires to enter the NO<sub>x</sub> RECLAIM program.
2. As indicated in the letter from AQMD to you on July 14, 2006 the facility shall conduct due diligence efforts to secure available ERCs from the open market. This is required since the facility is likely to request access to the priority reserve. The facility shall report to the AQMD on a monthly basis the due diligence efforts.

Please respond to the above issues and get back to me by October 13, 2006. Please do not hesitate to contact me by phone at 909.396.2426 or by email at [lchen@aqmd.gov](mailto:lchen@aqmd.gov) if you have any questions. Your timely response is appreciated and key to the timely processing the permits.

Sincerely,



Li Chen  
Air Quality Engineer  
Energy Team, Engineering and Compliance

cc: Robert Worl, CEC ✓  
Mohsen Nazemi, AQMD  
Mike Mills, AQMD  
John Yee, AQMD