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January 21, 2009

Mr. Weyman Lee, P.E.
Senior Air Quality Engineer
Bay Area Air Quality Management District
939 Ellis Street
San Francisco, CA, 94109

Subject: Proposed Air Quality Permit for the Russell City Energy Center, Hayward, CA

Dear Mr. Lee:

The Aircraft Owners and Pilots Association (AOPA) represents the general aviation interests of 414,500 members, more than two-thirds of the nation's pilots, including over 50,000 members in the State of California. AOPA is committed to ensuring the future viability and economic development of general aviation airports and their facilities as part of the state and national transportation system.

Any development that threatens the safety of aircraft operating near airports can be considered a threat to the viability of a local airport and the national aviation transportation system. This is especially true in highly developed metropolitan areas such as the San Francisco Bay area and Hayward, California.

Based on the information we have reviewed regarding the above referenced project, AOPA is concerned with the impacts of the thermal plumes associated with the proposed power plant facility based on the close proximity within one and a half miles from Hayward Executive Airport (HWD). HWD, with over 477 based aircraft and nearly 125,000 operations each year, is a major reliever airport in the Bay Area.

AOPA is concerned that thermal plumes generated by the facility could create hazards to aircraft operating into and out of the Hayward Executive Airport. We are particularly concerned with over flight operations from transient aircraft unfamiliar with the facility.

During certain atmospheric conditions, vapor plumes created by this plant will create turbulent conditions for aircraft that over fly the site either on approach to HWD or another airport in the same geographic area. Such vapor plumes will also have an impact on equipment used for navigation to the airport under visual or instrument conditions.

Pilots using ground references as a means of navigation will be required to circumnavigate the plume and thus decrease their maneuvering flexibility into and out of

the airport traffic patterns. Pilots navigating by reference to instruments could potentially fly through or over the plume inadvertently and be subject to turbulent conditions resulting from the plume. Current helicopter pilot guides for the airport indicate that the plant will be located within the southern approach area with helicopters approaching the airport at altitudes as low as 500' above ground level.

The FAA Flight Procedure Standards Branch, AFS-400, has issued a report on "Safety Risk Analysis of Aircraft Overflight of Industrial Exhaust Plumes." In January 2006, this study was issued as a report and published under Safety Study Report DOT-FAA-AFS-420-06-1.

In summary, the report indicated:

> *The underlying presumption is that high efflux temperature or velocity from industrial facilities may cause air disturbances via exhaust plumes. Two hazards were identified during brainstorming sessions by members of the safety risk analysis team. The first hazard recognized turbulence that may be associated with plumes that could result in possible airframe damage and/or negative affects on aircraft stability in flight. The second hazard discussed was the possible adverse effects of high levels of water vapor, engine/aircraft contaminants, icing, and restricted visibilities produced by these plumes. These hazards taken individually or cumulatively, could possibly result in the loss of the aircraft or fatal injury to the crew, as well as substantial damage to ground facilities. The SME team considered these situations to be most critical for general aviation (GA) aircraft flying at low altitudes during the takeoff and/or landing phase when an aircraft is in close proximity to an airport. The safety risk analysis team performed their analysis of the predictive risks associated with the plumes and determined the effects of the hazards as low, or in the green section of the risk matrix.*

The consequences of even one aircraft being upset by the thermal plumes and resulting in an incident or accident could affect the lives of the aircraft occupants and people on the ground. Such an unfortunate occurrence would undoubtedly lead to attempts to restrict operations at the airport, or worse, attempts to close the airport.

A similar gas turbine generation facility, Blythe Energy, is located approximately the same overall distance (approximately 1 mile) from the Blythe, California airport. Our members have reported to us the same detrimental effect on their ability to land safely at that airport. Aircraft have experienced flight "upsets" due to turbulence encountered while over flying the exhaust stacks of that facility. It is our understanding that a number of mitigation measures promised by the proponent of the Blythe site were never implemented as promised.

In 2004 an ammonia release at the Blythe Energy plant resulted in closing the highway for more than 3 hours, yet no one notified the airport of a hazmat situation on the approach path to runway 26 at the Blythe airport. The Russell City Energy Center will also utilize ammonia in addition to other hazardous materials that could potentially leak and create similar situations. In the event of such a release the vapors will be drawn up by the cooling tower fans. These vapors and materials could act as irritants to pilots overflying the area and affect their ability to safely operate their aircraft.

AOPA strongly suggests you consider the thermal plume impacts of the proposed plant on operations into nearby Hayward Executive Airport and, we again respectfully request that the District not issue the permit for this project. Instead, we suggest that other locations be explored that will not have a detrimental safety impact on aircraft operations in the Bay Area and at Hayward Executive Airport specifically.

Sincerely,

John L. Collins
Manager
Airport Policy