

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

MEMORANDUM

SUBJECT: Request by the Hawaiian Electric Co. to Burn 2.0% Sulfur Fuel Oil  
at their Kahe Units #1-5

FROM: Sheldon Meyers, Director  
Office of Air Quality Planning and Standards

TO: David P. Howekamp, Director  
Air Management Division, Region IX

This is in response to your memoranda to me concerning the impact of the PSD regulations on Hawaiian Electric Co.'s (HECO's) desire to switch to 2.0% sulfur fuel oil at Kahe Units #1-5. In January 1979, your Region issued a PSD permit to HECO for the construction of Unit #6 at their Kahe Generating Station. As a condition of that permit, HECO agreed to limit the sulfur in fuel combusted at Units #1-5 to 0.5%. This limit was deemed necessary in order to prevent predicted violations of the SO<sub>2</sub> NAAQS.

Prior to the actual startup of Unit #6, existing Units #1-5 actually burned somewhat less than the 2.0% sulfur oil. Since the startup of Unit #6, these existing units have complied with the 0.5% sulfur oil requirements. Over the past year, HECO has gathered actual air quality data which they contend shows that the sulfur in fuel limit for Units #1-5 could be raised to 2.0% without violating the NAAQS for SO<sub>2</sub>. As a result of this new data, HECO has requested Region IX to amend the 0.5% sulfur in fuel conditions to 2.0%. The Agency has determined that such a change in a PSD permitted limit would constitute a major modification and require the source to undergo PSD review.

Since that response has been transmitted to HECO, an additional question of applicability has arisen. That question is whether the 0.5% limit can be amended to a level which would provide for no significant net contemporaneous increase over the source's actual SO<sub>2</sub> emissions prior to burning 0.5% sulfur oil in a manner to avoid triggering a full PSD review.

A review of the PSD regulations reveals that a major modification will occur as a result of ". . . any physical change in or change in the method of operation of a major stationary that would result in a significant net emissions increase of any pollutant regulated under the act." It has previously been determined that the proposed switch in permitted levels will qualify as a change in the method of operation. The next question is whether it will result in a significant net emissions increase. Net emissions increase means,

"the amount by which the sum of the following exceeds zero: (a) Any increase in actual emissions from a particular physical change or change in method of operation at a stationary source; and (b) Any other increases and decreases in actual emissions at the source that are contemporaneous with the particular change and are otherwise creditable."

Contemporaneous is defined as,

". . . occur(ing) between: (a) The date five years before construction on the particular change commences; and (b) The date that the increase from the particular change occurs."

An increase or decrease in actual emissions is creditable

". . . only if the Administrator has not relied on it in issuing a permit for the source under this section, which permit is in effect when the increase in actual emissions from the particular change occurs."

Since the proposed increase, that is the change from 0.5% to some higher level, will occur within five years of the time when Units #1-5 switched to 0.5%, such decrease can be considered contemporaneous for PSD purposes. In order for such a decrease to be acceptable, it must also be creditable. Since the issuance of the original PSD permit to HECO was conditioned on Units #1-5 agreeing to burn 0.5% sulfur fuel, it must be concluded that EPA relied on this decrease in issuing the original permit. The preamble to the August 7, 1980 regulations states at page 52701:

". . . a reviewing authority 'relies' on an increase or decrease when, after taking the increase or decrease into account, it concludes that the proposed project would not cause or contribute to a violation of an increment or ambient standard."

The facts in this case, as described in your memorandum clearly state that the requirement to burn 0.5% sulfur fuel in Units #1-5 was considered necessary to pretend predicted violations of the SO<sub>2</sub> NAAQS. Further, additional sources have been or are being permitted also in reliance on HECO's continued compliance with the 0.5% sulfur fuel oil requirement of the existing permit. Therefore, any attempt on the part of HECO to increase their sulfur in fuel levels such that there will be a significant increase in SO<sub>2</sub> emissions will require a PSD permit.

This response has been coordinated with the Office of General Counsel and they concur in its findings. Should you choose to discuss this matter further, please contact me.

cc: Darryl Tyler  
Bill Pederson  
Mike Trutna  
Peter Wyckoff  
David Rochlin