



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Office of Air Quality Planning and Standards
Research Triangle Park, North Carolina 27711

September 17, 1991

MEMORANDUM

SUBJECT: AES Ohana, Inc. PSD Permit Application

FROM: Joseph A. Tikvart, Chief *J. Tikvart*
Source Receptor Analysis Branch (MD-14)

TO: David Calkins, Chief
Air Programs Branch, Region IX

In response to your request, the Model Clearinghouse has reviewed your position that AES Ohana needs to collect on-site meteorological data for input to COMPLEX I. The model will be used in the ambient air quality analysis for their proposed power plant at Barbers Point, Hawaii. We agree with your position. It has been a long-standing EPA policy that when modeling in complex terrain with a model requiring the input of hourly meteorological data, such data need to be collected on-site in order to properly characterize the transport and dispersion of the plume.

It should be noted that, in addition to the anemometer height problem that both you and the State of Hawaii have identified with the off-site data, there is also an additional consideration that makes the off-site data clearly inferior to that of on-site data. Whereas the wind direction and speed from the off-site data result from "1-minute" dial readings taken once per hour, the on-site data would represent true hourly averages of 360 to 3600 samples. These data are clearly better for characterizing plume transport and dispersion over an hourly period, which is the basic time frame, or kernel, for all concentration calculations in COMPLEX I.

In summary, we support your conclusion that AES Ohana needs to collect on-site meteorological data. Numerous Model Clearinghouse responses to issues similar to yours over the past ten years have been consistent with this position. Also, it should be noted that, from a national perspective, we are aware of contemporary projects in other Regions that could potentially be compromised if a decision were made in this case to allow an exception to our policy.

If you have any questions please contact Dean Wilson at
FTS 629-5683.

cc: D. Bailey
D. deRoeck
D. Wilson

FY 91 MODEL CLEARINGHOUSE MEMORANDA

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