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AQMA DESIGNATION IN HAWAII

Statement for Environmental Protection Agency
Public Hearing, 20 August 1974

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This statement is based in large measure on earlier considerations of the problems of air quality control in Hawaii by the now inactive Air Quality Task Force of the University of Hawaii Environmental Center. It is presented on behalf of the Center with the approval of the Center Director. It does not, however, represent an institutional position of the University.

This hearing was scheduled to permit discussion of the proposed designation by the federal Environmental Protection Agency (EPA) of the Honolulu Standard Metropolitan Service Area (SMSA), in other words the island of Oahu, as an AQMA, a specific "Air Quality Maintenance Area" with respect to particulate air pollution as defined by EPA. The proposal that the AQMA be designated by EPA is based on an allegation that the State Department of Health neither designated any AQMA in Hawaii nor justified its failure to designate any AQMA. The proposed designation of the Honolulu SMSA as an AQMA with respect to particulates is based on a two-stage analysis in accordance with EPA guidelines for designation of AQMA's. First, other pollutants than particulates were identified as "obvious non-problem areas" on the basis of such data as ambient air quality standards, concentrations in the recent past, and projected future concentrations. Second, particulates, which were not eliminated in the first stage, were confirmed as an "obvious problem area" by a calculation indicating that the national ambient air quality standards for this pollutant would not be met by 1985.

We understand that the alleged failure of the State Department of Health to establish AQMA's on its own authority or to justify the non-establishment of any AQMA have resulted at least in part from lack of clear and timely notification of the requirements to the Department. We understand that the details of the calculation indicating that the ambient particulate standards will not be met by 1985 are being challenged. Our primary concern is, however, not with either of these matters but with the artificiality and arbitrariness of the model which forms the basis for the state's air quality control plan, including the basis for calculating the effectiveness of air quality controls on particulate concentrations in 1985.

Stripped to its essentials this model, called the "proportional model" assumes that the contributions of all sources of an air pollutant on the ambient air quality at a given point of concern is indicated solely by the strength of the emission, regardless of the relative locations of sources and points of concern, and hence that the difference between the ambient air concentration of a pollutant at any point of concern and the background concentration will be reduced in proportion to the total reductions of emissions of that pollutant, regardless of where the reductions are effected. This could be true only if the air in the region of concern were uniformly mixed, which of course is not the case as indicated by the differentiation in the air quality control plan between background monitoring stations and monitoring stations at which the maximum reduction in concentration are considered necessary.

We recognize that this hearing was not intended to reexamine the fundamental bases for the state's air quality control plan. However, we have considered it desirable to enter this discussion to indicate the arbitrariness of decisions to establish or not to establish an AQMA on the basis of the "proportional model," regardless of what agency is responsible for the decisions.