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

24 JUL 1989

MEMORANDUM

SUBJECT: Use of Collocated PM_{10} Data

FROM: William G. Laxton, Director
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TO: Director, Environmental Services Division, Regions I, III, V, VI, VII, VIII & X
Director, Air & Waste Management Division, Region II
Director, Air, Pesticides, & Toxics Management Division, Region IV
Director, Air Management Division, Region IX

This memo formally transmits supplementary guidance on the use of PM_{10} data produced at collocated PM_{10} samplers. The new guidance is intended to clarify any potential ambiguities in 40 CFR 50 and 40 CFR 58 together with the November 21, 1988 OAQPS memorandum entitled, "Revision to Policy on the Use of PM_{10} Measurement Data."

Two issues are presented: The first involves the independent use of collocated PM_{10} data for attainment assessment. The second related issue involves the use of data from a collocated sampler when the primary sampler is not operating. The following discussion summarizes our guidance on both of these issues. The details of this memo were previously transmitted to the NAMS Coordinators, PM_{10} Monitoring Contacts and PM_{10} SIP Contacts as cc's to a June 13, 1989 memo from Neil Frank of my staff to Carol Bohnenkamp of Region IX.

Independent Use of PM_{10} Data for Attainment Assessment

The November 21, 1988 policy memorandum states that:

a. If multiple samplers are collocated for data quality assessment purposes, similar sampler types must be used and one sampler must be designated a priori (as the primary sampler) for data reporting purposes.

b. Monitoring stations shall be used separately to assess attainment or nonattainment with the National Ambient Air Quality Standards (NAAQS).

c. The primary sampler shall represent the monitoring station.

It, therefore, follows that:

> **data from a collocated sampler sited for quality assurance purposes cannot be considered separately for determining attainment or nonattainment of the standard.**

This interpretation of the regulations is designed to maintain uniform data quality among all reporting sites, by eliminating a potential positive bias from duplicate samples with random measurement error. Collocated sites are strictly intended to assess the precision of a monitoring network. If collocated samplers were used independently to make comparisons with the NAAQS, then multiple measurements would exist on each sampling day and the chance of violating the standard would be increased due to measurement imprecision at every site which had collocated samplers. For this reason, our policy states that only the primary sampler shall be used.

Use of PM_{10} Data from a Secondary Collocated Sampler

A related issue is the use of data from a collocated monitor when the primary sampler is not operating. The purpose for using this data is to maximize data completeness for the reporting site. Unlike the situation discussed above, only one measurement would be used on any given day.

Since both samplers are operating independently and have the same operating characteristics, then they are essentially interchangeable. When two samplers are interchangeable, one cannot predict in advance which sampler will measure a higher value on any given day. Therefore, this situation does not introduce a bias. Accordingly,

> **data from a collocated sampler should be reported as being from the data from the primary sampler if the primary sampler was not operating or did not produce a valid measurement for that same day.**

This situation is conceptually analogous to substituting a nonoperational reference sampler with a replacement reference device.