



THE STATE
of **ALASKA**
GOVERNOR SEAN PARNELL

Department of Environmental Conservation

DIVISION OF AIR QUALITY
Air Monitoring & Quality Assurance Program

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PM_{2.5} Precision measurement requirement for Prevention of Significant Deterioration (PSD) sampling projects.

The Alaska Department of Environmental Conservation is providing the following interpretation of the PSD PM_{2.5} sampling requirements for collocated data pairs. For general information regarding the Department's air quality monitoring requirements, see 18 AAC 50.215(a) and <http://dec.alaska.gov/air/am/index.htm>.

PM_{2.5} monitoring networks must have a redundant monitor at one or more of the monitoring sites as a data precision check, per 40 CFR 58 Appendix A Section 3.2.5. If the primary sampler at this site is an EPA approved Federal Equivalent Method (FEM) then the collocated sampler has to be an approved EPA Federal Reference Monitor (FRM). If the network is large enough to require more than one collocated site (i.e. more than 7 sites in the network) then 50 % of the collocated monitors shall be FRM samplers and the other 50% shall be FEM samplers having the same method designation as the primary sampler. The collocated FRM sampler shall operate every third day in order to produce *about* 25 valid sample pairs a year (emphasis added). A sample pair is considered valid if both 24-hour values are above 3 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$), per 40 CFR 58 Appendix A 4 (c).

The Department recognizes that in rural and remote areas of the state, PM_{2.5} concentrations are usually low and that the EPA sampling schedule might not produce 25 data pairs with both values meeting the 3 $\mu\text{g}/\text{m}^3$ threshold. Therefore the Department considers the PM_{2.5} PSD precision requirements met as long as:

1. the PM_{2.5} data were collected following the EPA sampling frequency, and
2. the absolute difference of the PM_{2.5} pairs where one or both sample values are below the 3 $\mu\text{g}/\text{m}^3$ concentration threshold is less than 3 $\mu\text{g}/\text{m}^3$.

If an applicant believes an alternative sampling schedule is warranted, the applicant must provide a detailed description of and justification for the proposed alternate sampling schedule in the project specific Quality Assurance Project Plan (QAPP). Department approval will be required *prior to* collecting data under an alternative schedule.

A handwritten signature in blue ink, appearing to read "Barbara Trost".

Barbara Trost
Program Manager