

## MEMORANDUM

SUBJECT: Use of Collocated PM<sub>2.5</sub> Data and Parameter Occurrence Codes (POCs)

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TO: Deputy Director, Office of Ecosystem Protection, Region I  
Director, Environmental Planning and Protection Division, Region II  
Director, Air Protection Division, Region III  
Director, Air, Pesticides, and Toxics Management Division, Region IV  
Director, Air and Radiation Division, Region V  
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Emissions Monitoring and Analysis Division

This memo formally transmits supplementary guidance on the use of PM<sub>2.5</sub> data produced at collocated PM<sub>2.5</sub> samplers and the use of parameter occurrence codes (POCs).

### **Collocated Data**

The new guidance is intended to clarify any potential ambiguities in the QA Handbook Method 2.12 and to conform with a July 24, 1989 memo on the handling of PM<sub>10</sub> collocated data. Section 13.4.1 in the April 1998 version of the *Quality Assurance Guidance Document 2.12* states that:

*“Under no circumstances should data from the collocated sampler be reported as coming from the reporting sampler”*

This statement was an attempt to ensure that one could identify when collocated data, versus the primary sampler data, was used for reporting purposes. It was not intended to disallow the use of the collocated data if the primary sampler was not operating or for some reason, invalidated.

Since 40 CFR Part 58 Appendix A Section 3.5.2 States: “A monitor designated as an EPA FRM shall be collocated with a monitor having the same EPA FRM designation”, it implies that both samplers are operating independently, have the same operating characteristics, and as long as

they are within the precision acceptance requirements, can be considered repeatable and unbiased.

***Accordingly, data from a collocated sampler can be substituted for the primary sampler if the primary sampler was not operating or did not produce a valid measurement for that same day.***

In order to distinguish the fact that the collocated data was substituted for the primary sampler, OAQPS suggests designating the collocated data with a parameter occurrence code (POC) of "2" in AIRS. This designation will also facilitate our review of data completeness for precision data since the collocated value would no longer show up in a precision transaction if it was substituted for the primary sampler. Since POC codes have not been designated for specific types of samples in the past, this guidance may not adequately apply to all situations in the current AIRS since a POC of "2" may already be in use at some PM<sub>2.5</sub> sites (see Table 2)

### **Use of Parameter Occurrence Codes (POCs)**

As the amount of PM<sub>2.5</sub> data reported to AIRS increases in both the number of stations and the number of monitors at any one station, the need to ensure a uniform coding structure for reporting becomes more important. This is essential for both data reviewers and analysts who may not be intimately familiar with any one agency's network design. Having a uniform coding structure will ensure that data is efficiently accessible for its intended use across multiple reporting agencies.

All of the codes for reporting PM<sub>2.5</sub> data can be found on-line in AIRS Geocommon. These codes are also available on the TTN Internet site in both the AIRS section at: [http://www.epa.gov/ttn/airs/memos.html#AQS Memos](http://www.epa.gov/ttn/airs/memos.html#AQS%20Memos) and the PM<sub>2.5</sub> section at: <http://www.epa.gov/ttn/amtic/datamang.html>. These codes provide for appropriate identification of the data for things such as the parameter, method, interval, and units code. While codes such as these ensure that data from any one site are appropriately identified, they do not provide for an efficient analysis of data across multiple reporting agencies. In order to provide for efficiency in data analysis, the OAQPS is instituting this non-binding guidance for use of the Parameter Occurrence Code (POC). By having consistency in which POC is assigned to PM<sub>2.5</sub> data, a large efficiency will be gained in data review and analysis.

The purpose of the POC is identified in the AIRS User's Guide Volume AQ2, Air Quality Data Coding, section 5.1.2. POC (Parameter Occurrence Code). "POC is a code used to distinguish between different monitors at one site that are measuring the (same) parameter." In the legacy AIRS the POC is a required 1 digit code to be entered into column 16 of the raw data transaction. The POC can be a number in the range of 1 through 9. In the re-engineered AIRS system a two digit POC will be available.

Table 1 below identifies the appropriate use of each POC:  
Table 1 Appropriate use of each POC for PM<sub>2.5</sub>

<b>Parameter of Occurrence Code (POC)</b>	<b>Type of data to be submitted</b>	<b>Notes</b>
1	FRM Primary sampler	If multiple single channel samplers are used to capture daily sampling, all would still be reported as a POC 1.
2	FRM Collocated sampler	Use of this POC is optional since collocated data is submitted under the precision transaction. However, some Agencies choose to submit their collocated data as raw data. For these Agencies this POC would be preferred.
3	First continuous PM2.5 sampler. (Not a FEM)	Usually reported as 1 hour data.
4	Any collocated continuous PM2.5 sampler. (Not a FEM)	Does not have to be same make or model as the POC 3 sampler.
5	First Speciation NAMS sampler. (Not a FRM or FEM)	POC 5 was previously identified in the AIRS speciation data management issues paper.
6	Collocated Speciation NAMS sampler. (Not a FRM or FEM)	POC 6 was previously identified in the AIRS speciation data management issues paper.
7	Other PM2.5 sampler	
8	Other PM2.5 sampler	
9	Other QA PM2.5 sampler	

Currently most of the data reported to AIRS is FRM data and most of that data does have POC's consistent with the table above. Table 2 contains a list of sites that have more than one POC and also identifies sites who that do not have a POC 1. For example, AIRS Site ID 20900010 has no POC 1 site but does record data for a POC 2. For those agencies that are not using the POC formats as in Table 1, OAQPS and the Regions will work to provide a smooth transition to these formats.

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 Director, Science & Ecosystems Support Division, Region IV  
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**Table 2. Multiple POCs Being Used at a Site, or Sites where POC 1 is Not Being Used**

AIRS ID	POC	Observations	Reporting Organization
10970002	1	24	Al Dept. Of Env. Mgt.
10970002	2	14	Al Dept. Of Env. Mgt.
11010007	1	27	Al Dept. Of Env. Mgt.
11010007	2	15	Al Dept. Of Env. Mgt.
20900010	2	34	Alaska Department of Environmental Conservation
60170011	1	14	California Air Resources Board
60170011	2	14	California Air Resources Board
60190008	3	28	California Air Resources Board
60190008	4	19	California Air Resources Board
60631008	2	2	California Air Resources Board
60670006	1	29	California Air Resources Board
60670006	2	9	California Air Resources Board
60670010	2	29	California Air Resources Board
60771002	2	30	California Air Resources Board
60990005	2	30	California Air Resources Board
61010003	1	15	California Air Resources Board
61010003	2	15	California Air Resources Board
61072002	2	26	California Air Resources Board
90010010	1	40	Connecticut Department of Environmental
90010010	9	42	Connecticut Department of Environmental
90019003	2	16	Connecticut Department of Environmental
90090018	1	46	Connecticut Department of Environmental
90090018	9	40	Connecticut Department of Environmental
90091123	1	42	Connecticut Department of Environmental
90091123	9	31	Connecticut Department of Environmental
90092123	1	47	Connecticut Department of Environmental
90092123	9	38	Connecticut Department of Environmental
180431004	1	25	Indiana Depart of Environ Management/off
180431004	2	14	Indiana Depart of Environ Management/off
180891016	1	109	Indiana Depart of Environ Management/off
180891016	2	8	Indiana Depart of Environ Management/off
180950009	1	15	Indiana Depart of Environ Management/off
180950009	2	7	Indiana Depart of Environ Management/off
181411008	1	5	Indiana Depart of Environ Management/off
181411008	2	3	Indiana Depart of Environ Management/off
181630006	1	6	Indiana Depart of Environ Management/off
181630006	2	3	Indiana Depart of Environ Management/off
180970081	1	116	Indianapolis Division of Air Pollution c
180970081	2	17	Indianapolis Division of Air Pollution c
180970083	1	122	Indianapolis Division of Air Pollution c
180970083	2	18	Indianapolis Division of Air Pollution c
211110043	1	250	Jefferson County Air Pollution Control d
211110043	2	43	Jefferson County Air Pollution Control d
200910007	1	33	Kansas Department of Health and Environm
200910007	2	24	Kansas Department of Health and Environm
201070002	1	42	Kansas Department of Health and Environm
201070002	2	20	Kansas Department of Health and Environm
201730010	1	51	Kansas Department of Health and Environm
201730010	2	24	Kansas Department of Health and Environm
202090021	1	20	Kansas Department of Health and Environm
202090021	2	11	Kansas Department of Health and Environm

<b>AIRS ID</b>	<b>POC</b>	<b>Observations</b>	<b>Reporting Organization</b>
210190017	1	41	Kentucky Division for Air Quality
210190017	2	11	Kentucky Division for Air Quality
210590014	1	44	Kentucky Division for Air Quality
210590014	2	12	Kentucky Division for Air Quality
210670012	1	51	Kentucky Division for Air Quality
210670012	2	15	Kentucky Division for Air Quality
211950002	1	46	Kentucky Division for Air Quality
211950002	2	15	Kentucky Division for Air Quality
212270007	1	47	Kentucky Division for Air Quality
212270007	2	13	Kentucky Division for Air Quality
250130016	1	54	Mass Dept Environmental Protection-div a
250130016	2	56	Mass Dept Environmental Protection-div a
250210007	1	55	Mass Dept Environmental Protection-div a
250210007	2	2	Mass Dept Environmental Protection-div a
250230004	1	46	Mass Dept Environmental Protection-div a
250230004	2	46	Mass Dept Environmental Protection-div a
250250027	1	47	Mass Dept Environmental Protection-div a
250250027	2	34	Mass Dept Environmental Protection-div a
250270020	1	53	Mass Dept Environmental Protection-div a
250270020	2	54	Mass Dept Environmental Protection-div a
311090022	1	55	Nebraska Department of Environmental Con
311090022	2	27	Nebraska Department of Environmental Con
311530007	1	23	Nebraska Department of Environmental Con
311530007	2	17	Nebraska Department of Environmental Con
310550052	2	5	Omaha-douglas County Health Department
60250005	3	26	San Diego County Air Quality Management
60710014	3	24	San Diego County Air Quality Management
450190048	1	125	South Carolina Department Health and Env
450190048	2	21	South Carolina Department Health and Env
450370001	2	40	South Carolina Department Health and Env
450430009	1	69	South Carolina Department Health and Env
450430009	2	65	South Carolina Department Health and Env
450450009	1	86	South Carolina Department Health and Env
450450009	2	11	South Carolina Department Health and Env
450790019	1	79	South Carolina Department Health and Env
450790019	2	42	South Carolina Department Health and Env
60370002	2	77	South Coast Air Quality Management Distr
60371002	2	33	South Coast Air Quality Management Distr
60371103	2	62	South Coast Air Quality Management Distr
60371201	2	26	South Coast Air Quality Management Distr
60371301	2	38	South Coast Air Quality Management Distr
60371601	2	33	South Coast Air Quality Management Distr
60372005	2	20	South Coast Air Quality Management Distr
60374002	2	78	South Coast Air Quality Management Distr
60590001	2	81	South Coast Air Quality Management Distr
60651003	2	37	South Coast Air Quality Management Distr
60652002	2	31	South Coast Air Quality Management Distr
60658001	2	78	South Coast Air Quality Management Distr
60710025	2	40	South Coast Air Quality Management Distr
60712002	2	48	South Coast Air Quality Management Distr
60719004	2	38	South Coast Air Quality Management Distr
191630015	2	81	University Hygienic Laboratory

<b>AIRS ID</b>	<b>POC</b>	<b>Observations</b>	<b>Reporting Organization</b>
490350003	2	89	Utah Department of Environmental Quality
60195001	3	39	Ventura County APCD
60271003	3	46	Ventura County APCD
60271003	4	25	Ventura County APCD
60290010	3	40	Ventura County APCD
60290014	3	107	Ventura County APCD
60290014	4	23	Ventura County APCD
60310004	3	36	Ventura County APCD
60472510	3	9	Ventura County APCD
60792002	3	26	Ventura County APCD
60798001	3	30	Ventura County APCD
60798001	4	28	Ventura County APCD
60830010	3	28	Ventura County APCD
61110007	3	54	Ventura County APCD
61110007	4	28	Ventura County APCD
61112002	3	53	Ventura County APCD
61113001	3	48	Ventura County APCD