



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
RESEARCH TRIANGLE PARK, NC 27711

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OFFICE OF
AIR QUALITY PLANNING
AND STANDARDS

MEMORANDUM

SUBJECT: Use of "Non-Regulatory" Monitor Type Code in AQS to Identify Criteria Pollutant Monitors That Do Not, or Are Not Intending to Provide Data for Regulatory Purposes

FROM: Lewis Weinstock, Leader *Lewis Weinstock*
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TO: Regional Air Program Managers

In order for air concentration data to be compared to the National Ambient Air Quality Standards (NAAQS), ambient air monitors must meet three sets of requirements:

- Use reference (FRM), equivalent (FEM), and approved regional (ARM) methods (40 CFR Part 58 Appendix C);
- Meet siting criteria (40 CFR Part 58 Appendix E); and
- Meet quality assurance (QA) requirements (40 CFR Part 58 Appendix A).

Data can and are reported to AQS for many multiple purposes and objectives. Many of these objectives are not NAAQS related and, therefore, are not required to meet the requirements listed above. At present, there is no functioning, reliable mechanism in AQS to identify sites/monitors for which the data should be meeting all applicable requirements for NAAQS comparisons.

The intent of this memo is to provide a mechanism in AQS to objectively identify monitors that are measuring criteria pollutants that do not or are not intending to provide data for regulatory purposes by identifying them with a "NON-REGULATORY" Monitor Type. By default, any monitor that does not include a "NON-REGULATORY" code as a Monitor Type will be assumed by EPA to be available for comparison to the NAAQS and meeting all applicable requirements for NAAQS comparisons. This guidance is for the criteria pollutants only.

Beginning in 2009, EPA asks that organizations responsible for reporting monitoring data to AQS add the "NON-REGULATORY" code to all applicable monitors before the 2008 data certification (July 1, 2009). For those monitors that will be identified as "NON-REGULATORY," the "Monitor Type Begin Date" when this code applies should also be included. Therefore, if the monitor has always been "NON-REGULATORY," the start date of the monitor should be used as the applicable Monitor Type Begin Date for the "NON-REGULATORY" Monitor Type code.

Use of the "NON-REGULATORY" code is not meant to replace the current Monitor Type but supplement it. For example, there may be tribal monitors that are designated using the "TRIBAL MONITOR" Monitor Type code. We would expect the monitors to keep the "TRIBAL MONITOR" Monitor Type code and add a second "NON-REGULATORY" code to the monitors where the "NON-REGULATORY" code was applicable.

The only monitors where it is not acceptable to include a second "NON-REGULATORY" code are those monitors designated with the "SLAMS" Monitor Type.

Additional background, rationale, and details for this procedure are included in the attached Technical Guidance. If you have any specific questions on the implementation of this process, please contact Mike Papp, QA Lead in my Group (papp.michael@epa.gov), or Jonathan Miller of the National Air Data Group (miller.jonathan@epa.gov). This information will also be distributed as technical note on the AQS user group listing.

Attachment

cc: Phil Lorang
Martin Husk
Tim Hanley
Mike Papp
Jonathan Miller
Mark Schmidt
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**Technical Note on
Use of “Non-regulatory” Monitor Type Code in AQS to Identify Criteria Pollutant
Monitors That Do Not, or Are Not Intending to Provide Data for Regulatory
Purposes.**

Summary:

The intent of the technical note is to provide a mechanism in AQS to objectively identify monitors that are measuring criteria pollutants that do not or are not intending to provide data for regulatory purposes by identifying them with a “non-regulatory” Monitor Type. EPA asks that the “non-regulatory” code be applied for 2009 data. *Starting in 2009, any monitor that does not include a “Non-regulatory” code as a Monitor Type will be assumed by EPA to be using a FRM/FEM/ARM method, to be meeting the siting criteria (or have an approved waiver of the siting criteria), and to be subject to and meeting the QA requirements (with no waiver).* Additional background and rationale for this procedure follows.

Background

In order for air concentration data to be compared to the National Ambient Air Quality Standards (NAAQS), ambient air monitors must meet three sets of requirements:

- Use reference (FRM), equivalent (FEM) and approved regional (ARM) methods (40 CFR Part 58 App C),
- Meet siting criteria (40 CFR Part 58 App E), and
- Meet quality assurance (QA) requirements (40 CFR Part 58 Appendix A)

The Appendix C requirement for use of FRM/FEM/ARM monitors cannot be waived for any “SLAMS” monitor that state/local monitoring agencies use to meet the minimum requirements of 40 CFR 58 for the number of monitors to be operated; if a non-FRM/FEM/ARM monitor is used, the monitor should be classified as a special purpose monitor (SPM) and its data are not to be used for NAAQS compliance determinations. The Appendix E siting requirements can be waived for a monitor under certain conditions, and if they are waived the monitor’s data will still be used for NAAQS compliance determinations¹. The QA requirements of Appendix A may not be waived for SLAMS monitors, but they may be waived for SPMs; if the QA requirements are waived for a SPM, the data from the SPM are not used in NAAQS compliance determinations.² Compliance with all three of these requirements is voluntary for tribal monitoring programs (unless they are specified in a grant agreement), but the same rules apply as to whether data will be used in NAAQS compliance determinations.

There are several reasons why the federal/state/tribal monitoring community needs to achieve more transparency regarding which monitors are subject to these requirements and whether the requirements apply and are being met, apply but have been waived,

¹ 40 CFR Part 58, Appendix E, paragraph 10

² 40 CFR Part 58.20(c)

apply but for whatever reason are not being met nor have been waived, or simply do not apply.

1. More transparency about whether QA practices in fact meet applicable requirements or have been waived will make the process of designating areas under new or revised NAAQS more understandable and predictable to all parties, and less likely to be disputed later.
2. Over the last few years issues have come up at specific sites where the data being used or attempted to be used for NAAQS decisions were found to be deficient in some aspects of the QA requirements, and therefore the quality of data used to make a determination about compliance with a NAAQS was called into question. Earlier lack of clarity as to whether QA requirements were applicable to specific monitors may have played a role in the QA gap. Being clear in the future will help ensure that monitoring agencies plan to comply with the QA requirements where they apply, and that EPA Regional Office monitoring staff conducting program audits investigate QA practices appropriately so that any QA gaps that do occur are noticed and corrected.
3. When attempting to review annual certifications of data quality and completeness submitted by state monitoring officials, EPA has difficulties in identifying the monitors that are required to perform the mandatory quality assurance checks. As a result, EPA has in some cases concluded (and said) incorrectly that a state monitoring agency had not performed all the required checks at particular monitors.
4. Every three years, EPA reviews the aggregate data quality of the monitoring network for each criteria pollutant. This review should only encompass those sites that are subject to the QA requirements, but without a clear indication of which monitors these are, the review may omit some monitors that should be included or include some that should not be. This may cause a false description of the data quality that is intended to be described.
5. Every year, EPA must count the number of sites in each primary quality assurance organization (PQAO) in order to determine the number of National Performance Audit Program (NPAP) through-the-probe gas audits, the number of PM_{2.5} Performance Evaluation Program (PEP) audits, and the number of lead-PEP audits that must be performed, since the required number of these audit within a PQAO depends on the number of QA-subject sites operated by the PQAO. EPA must be able to identify the monitors/sites that are subject to the QA requirements in order to count them correctly.

At present there is no functioning, reliable mechanism in AQS to identify sites/monitors for which the data should be meeting all applicable requirements for NAAQS comparisons.

An obvious approach to consider is to make use of the descriptors that AQS users have (or can) place in the "Monitor Type" field in AQS. It is safe to assume that monitors designated by the monitor type "SLAMS" are using FRM/FEM/ARM methods and that they are subject to and do meet the QA requirements, assuming that the "SLAMS" descriptor is accurate and monitoring program managers understand the EPA monitoring

rules. However, there are other (non-SLAMS) monitor types (e.g., Tribal, SPM, and possibly others) that also may be using FRM/FEM/ARM methods and that are required to meet or are intending to voluntarily meet the QA requirements. These monitors are the ones where problems can arise from the standpoint of ensuring the appropriate implementation of the QA audit requirements and of ensuring that the right monitors are encompassed by the three-year data quality assessments.

Proposal

In an effort to ensure that decision makers and data users can identify monitors that are required to meet the 40 CFR Part 58 regulatory requirements, EPA is proposing that monitoring organizations make use of the “Non-regulatory” Monitor Type code for any monitor³ that is not required to meet and also is not intending to voluntarily meet the three sets of requirements listed above.⁴ Any monitor that does not include a “Non-regulatory” code as a Monitor Type will be assumed by EPA to be using a FRM/FEM/ARM method⁵, to be meeting the siting criteria (or have an approved waiver of the siting criteria), and to be subject to and meeting the QA requirements (with no waiver). Because SLAMS, state/local-operated SPMs, and tribal monitors supported by EPA grants are subject to an EPA requirement for a Quality Assurance Project Plan to be developed and approved by EPA, and furthermore because EPA regularly performs technical systems audits of state, local, and tribal monitoring programs, EPA will assume that monitors of these types not labeled as “Non-regulatory” are in fact meeting the three requirements, unless there is specific evidence to the contrary. Data from these monitors will be used in NAAQS compliance determinations.

Monitoring organizations can use the “Non-regulatory” descriptor in addition to using other codes that may be more indicative of the type of monitoring they are performing. For example, a tribe may also identify its monitors using the “Tribal Monitor” Monitor Type. If the tribe voluntarily plans on using the information for NAAQS comparison, or there is a grant condition that monitoring data is to be useable for NAAQS comparisons, then use of the “Tribal Monitor” monitor type code without the additional use of the “Non-regulatory” code would identify the monitor as being required to meet the necessary method, siting, and QA requirements. If the tribal monitor is being used for non-regulatory purposes, the tribe can assign both the “Tribal Monitor” code and the “Non-regulatory” code.

The situation with SPMs has been a source of some confusion in the past, so additional explanation with respect to SPMs is appropriate here. Starting in 2009, special purpose monitors (SPMs) that are being run by state/local monitoring organizations with FRM/FEM/ARMs are required to follow QA requirements unless a waiver is granted by

³ “[a]ny monitor” here means only any monitor for a criteria pollutant, recognizing that monitors for other pollutants are not subject to the method, QA, and siting requirements.

⁴ A monitor which is intending to use a FRM/FEM/ARM method and to meet the QA requirements of Appendix A, but which has a waiver of Appendix E siting criteria would be considered Regulatory and should not have the “Non-regulatory” descriptor applied to it.

⁵ This assumption can be verified by EPA when it is critical to be certain that a FRM/FEM/ARM method is being used, by checking on the Method Code recorded elsewhere in AQS.

the Regional Administrator. SPMs are not required to meet siting criteria, but many individual SPMs may in fact meet the siting criteria. Therefore, in 2009 most SPM monitors run with FRM/FEM/ARMs should not be coded as “Non-regulatory.” Any SPM granted a QA waiver so that its data would not be used for regulatory purposes, and any SPM that does not meet siting criteria and has not received a waiver from the siting criteria, would have an “SPM” monitor type and a second “Non-Regulatory” monitor type.

NOTE: The use of the “Non-regulatory” monitor type is never appropriate for monitors designated by the monitoring type “SLAMS” if they are measuring criteria pollutants.

Use of the “Non-regulatory” monitor type code will allow EPA to better identify data for the purposes of reviewing state/local certification statements, preparing the 3-year network data quality assessments, and annual planning of QA audits. It will also allow EPA to identify the monitor set that should be considered in making determinations about NAAQS compliance. For the latter application, because of the stakes involved in such determinations, EPA or stakeholders may in individual cases investigate the actual siting situation and QA practices at a monitor, rather than rely only on the Monitor Type descriptor in AQS.

Implementation Timetable for the Approach

EPA asks that monitoring organizations review the Monitor Type descriptors in AQS for all their criteria pollutant monitors (O₃, CO, Pb, NO₂/NO_x, SO₂, PM₁₀, PM_{2.5} mass) and make any changes necessary to meet the approach described above prior to the submission in July 2009 of the certification letters for 2008 monitoring data. This will allow EPA to perform appropriate data assessments properly, for example by ensuring that the associated AMP255 reports encompass the intended monitors. Since the addition of a “Non-regulatory” monitor type requires one to include an “effective date”, organizations completing this process before certification can effect the proper review of 2008 data.

EPA Regional Offices should discuss with monitoring organizations their intentions to add “Non-regulatory” as a Monitor Type for one or more monitors, and/or review the changes that monitoring organizations have made, to ensure that there has been no misunderstanding and that all monitors that end up with the “Non-regulatory” descriptor are appropriately so described.

Longer Term Approach

The approach described above will improve on the current situation and will allow EPA from this point forward to definitively identify monitors to be used for regulatory purposes, but may not meet every need. For example, it will not result in any record of when a monitoring site first achieves compliance with QA or siting requirements, or when a waiver if any was granted. There is a set of “Regulations Compliance” data

fields and codes in the AQS data structure (in the Regulation Compliances Table), that in theory can be used to capture the data fields mentioned above

The existence of these “Regulations Compliance” data fields and how to use them seem not to be widely known to AQS users; AQS users are not required to enter data into these fields; EPA has not in recent memory done much to encourage AQS users to put data into these fields voluntarily; and in fact these fields are mostly empty at this time. While it is EPA’s long term intention to work with AQS users to use these fields as they were intended to be used, EPA cannot rely on these fields at this time to meet these additional information needs. Furthermore, it seems overly ambitious to expect AQS users to master the complexities of the “Regulations Compliance” data fields in a short period.

EPA is interested in exploring further whether these more complex data fields can be used effectively for the longer term. In particular, EPA is interested in the possibility of them being used more consistently for newly established lead (Pb) monitoring sites. EPA intends to discuss this possibility internally and with AQS partners over the next several months. The first set of newly required lead monitoring sites, those that are to be source-oriented, are required to be in operation by January 1, 2010 and will be required to submit data by June 30, 2010. Discussions will need to be aimed at achieving resolution sometime before the latter date so that monitoring organizations can know of any new EPA expectations when they establish these new monitors in AQS.