

Questions and Answers on Ambient Air Monitoring Data Certification for CY2023 Data

Data should be appropriately validated, flagged, and submitted to AQS. If a monitoring organization requires assistance in determining appropriate flags or actions pertaining to their data (including QA/QC) please work with your Regional Office to determine the best course of action. Checks of analyzers that produced a measurement to test technical functionality (e.g., precision check, flow check, etc) of an analyzer or sampler and are specified as critical criteria in Appendix D, Measurement Quality Objectives and Validation Templates, of the Quality Assurance Handbook for Air Pollution Measurement Systems Volume II or in an approved QAPP, were not subject to change. However, QA/QC checks and data validity are subject to 40 CFR Part 58, Appendix A, Section 1.2.3, including failure to conduct QA/QC, “weight of evidence”, and use of data submitted.

1. What does it mean for a monitoring agency to certify its data?

Certification signals that the monitoring agency has loaded all of its data for the year and has completed the monitoring agency’s normal validation process. The responsible official certifies and states in their letter (i) the ambient concentration data and the quality assurance data are completely submitted to AQS, and that (ii) the ambient data are accurate to the best of his or her knowledge taking into consideration the quality assurance findings. The first part means that all of the ambient data and all of the quality assurance data that were collected, and that have completed and passed the monitoring agency’s data validation process have been submitted to AQS. The second part means that the responsible agency official has considered the results of all periodic quality control checks and other relevant performance assessments and has determined that the ambient data, quality assessment (QA) and quality control (QC) data meets EPA regulatory requirements and the data quality requirements specified in their agency’s QAPP(s).

EPA does **NOT** certify a monitoring agency’s data as submitted to AQS. The ambient concentration and quality assurance data is considered certified once the designated certifying agency submits a complete data certification package to EPA. No approval from EPA or the setting of the EPA evaluation flags changes that. Part of the certification process is for the certifying agency to set the certification flags in AQS. There are three flag columns in the AMP600, the AQS recommended flag (which cannot be changed by the certifying agency or EPA), the certifying agency flag, and the EPA evaluation flag (which can only be changed by EPA).

2. What types of monitoring organizations must certify their data?

Per 40 CFR Part 58.15, state and local government monitoring organizations must certify their ambient concentration data and QA/QC data. A state official should certify all data submitted for all monitors specified in 40 CFR §58.15 within the Primary Quality Assurance Organization (PQAO), except where responsibility for compliance with 40 CFR Part 58 requirements has been delegated to a local or tribal monitoring agency or other PQAO. Note that even if multiple monitoring organizations are within the same PQAO, the certification may come from the state certifying agency or from each local

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agency which has delegated responsibilities for compliance with 40 CFR Part 58. Specific data certification responsibilities on a monitor by monitor basis are documented through the [AQS Certifying Agency Code](#).

A Tribe must certify its data if the Tribe is monitoring for regulatory purposes and is identified as the certifying agency and/or PQA/O. A Tribe may also be required to certify its data under terms of a grant from EPA. Tribes should consult with the appropriate Regional office on questions regarding regulatory monitoring and the certification process.

3. What monitoring data must agencies certify by May 1, 2024?¹

Only data collected by FRM, FEM, and ARM monitors at SLAMS and SPM monitoring stations that meet Appendix A of 40 CFR Part 58 must be certified.² In practice, this refers to monitoring data for CO, NO₂, SO₂ (hourly and 5-minute average data), ozone, lead, PM₁₀, PM_{10-2.5}³, and PM_{2.5}. Please refer to Question 2 for tribal data certifications. This also includes any data that needs to be re-certified. For example, data that has been changed in previous years and is now flagged with an “M”.

Data is certified when a monitoring agency has entered the certification flags in AQS and submitted the certification package with the required signed letter and reports to EPA. An “N” or “Y” flag, entered into AQS by the certifying agency, indicates which data is being certified. An “N” flag does **not** mean the data is not certified. It indicates that caution is needed when using the data since it may not meet certain requirements, such as data completeness or regulatory QA/QC requirements. The meanings of the data certification flags can be found in the response to the last question or on the [AQS Code List website](#).

Data no longer needing certification include:

- Non-FRM/FEM/ARM continuous PM monitors
- PM_{2.5} speciation data - (total mass and speciated components)
- NCore/PAMS data including NO_y, VOC, carbonyl, NH₃, and HNO₃ if collected
- Meteorological data
- Air Toxics data
- Monitors generating data considered not NAAQS comparable

Monitoring agencies are not required or expected to certify data from CASTNET

¹ The [final ambient monitoring rule](#) was signed on March 10, 2016 and was effective on April 27, 2016, revising these requirements. [Monitoring Regulations on AMTIC](#).

² Data certification requirements may also be included in auxiliary agreements such as MOA's between states and operators of industrial networks, for example, SO₂ monitors being installed to comply with the Data Requirements Rule.

³ The AMP600 report is not configured to handle PM coarse data or 5-minute SO₂ data that is reported under a separate POC or parameter code. See [AQS Guidelines for Reporting 5-minute SO₂ Data from January 3, 2011](#).

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program samplers located within their jurisdiction. In most other cases, CASTNET data will be certified by the responsible Federal agency (e.g., National Park Service or EPA Office of Atmospheric Programs) and subsequently reviewed by the Regions or OAQPS.

4. What documents need to be provided by May 1, 2024?

These documents are required:

- A data certification letter signed by the head air pollution monitoring official in each monitoring agency, or his or her designee, sent to the applicable EPA Regional Administrator or the delegated official, addressed to the attention of the primary AQS contact noted at the end of this document. Certifying agencies should check with their Regional contact to determine the appropriate official recipient for the transmittal. The letter must include the specific statements (i and ii) given in the response to Question 1 above. The letter must be clear regarding what combinations of site, monitor, pollutant, and POC are the subject of the certification statement.
- AMP600 data certification report
- AMP450NC for PM_{10-2.5} (PM_{coarse}) and 5-min SO₂ data⁴³. Although these parameters do not appear in the AMP600, certification flags can still be entered for these parameters using the AQS Certification Form within AQS.
- Monitoring agencies can choose to submit an AMP450NC for any non-criteria data. Some agencies may choose to do this for PAMS data being used for designations or other pollutant data used for exceptional events.

Certifying agencies must use the AMP600 process for CY2023 data. Follow these steps:

- Run the AMP600 report to review and make changes to the ambient monitoring and QA/QC data as needed.
- Add the Monitoring Agency Certification flag for each monitor using the AQS Data Certification form within AQS for the pollutants required to be certified that were identified in Question 3.
- Run the AMP600 report a second time to generate a copy for submittal to EPA, sign the summary page, and send it in with the certification letter for CY2023 data and AMP450NC Reports.

5. Who will be responsible for reviewing submitted certification packages?

EPA regional staff will be reviewing the certification packages with the exception of the CASTNET or NPS monitors. The CASTNET or NPS monitors will be certified by the responsible Federal Agency, as noted in Question 3. The [evaluation criteria utilized in the AMP600 report](#) are updated annually.

³ The AMP600 report is not configured to handle PM coarse data or 5-minute SO₂ data that is reported under a separate POC or parameter code. See [AQS Guidelines for Reporting 5-minute SO₂ Data from January 3, 2011](#).

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Once the certification packages are received, EPA may or may not perform a rigorous review of the certified data. This should have been performed by the certifying agency throughout the year and prior to the data certification submittal. EPA may only perform a cursory review of the information provided in the data certification package and the Data Certification Form within AQS before placing the EPA evaluation flag in AQS. More thorough data reviews may be performed by EPA on a quarterly basis throughout the year, during TSAs, and during other data review processes.

6. When will the AQS evaluation flags start appearing?

EPA regional staff will commence the review process after the May 1 deadline (or earlier in the case of state-requested early certification packages), following the review of certification package submittals to assure completeness and adherence to CFR requirements. There is no explicit deadline for the insertion of evaluation flags. As with previous years, the flag is displayed on both the AMP450 Quick Look summary report and AMP450NC reports.

The AQS Team will apply a U-Flag for any data uncertified after July 1, 2024. This will happen if the certifying agency did not submit the required certification letter and summary reports, did not run an AMP600 report, did not apply a Monitoring Agency Certification flag to a listed monitor within the Data Certification Form, or the state's certification letter states that a given monitor is not part of the certification process for that year. The EPA Evaluation Value flag field will display an S-flag until the EPA regional office takes action.

7. How does data certification affect how ambient air monitoring data are used by EPA and others?

EPA presumes that before the May 1 deadline, monitoring agencies may still be reviewing and validating their data, making the data subject to change. After the deadline has passed, EPA may move ahead and use both certified and uncertified data to propose and make designations or findings of attainment. OAQPS usually advises outside data users to be cautious about using data before the certification deadline has passed. EPA typically does not use AQS data in broadly distributed publications until the deadline for certification has passed.

“N” flags do **not** mean the data is not certified. It indicates that caution is needed when using the data since it may not meet certain requirements, like data completeness or QA/QC requirements. The meanings of the data certification flags can be found in the response to the last question or on the [AQS Code List website](#).

8. Why is a monitor’s certification flag reset if a monitoring agency modifies the data for that monitor after EPA first sets the flag? How can a monitoring agency get a “Y” value restored?

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AQS will automatically reset the certification flag to “M” if any deletion, revision, or addition of concentration data causes a change in the reporting of the value or a summary statistic. AQS is programmed to reset the data certification flag because the data within AQS are no longer what was originally submitted and certified. The certifying agency should repeat the normal procedure of submitting a signed certification letter, including submission of a new signed AMP600 report as soon as possible, but no later than with the next May 1st certification submittal. This will allow the Regional Office to repeat their review and reset the certification flag to an appropriate value, thus informing all data users that the monitoring organization considers the new data set to be accurate and complete.

A best practice is to run the AMP600 for the year being certified and for the previous 2-3 years to ensure data has not been flagged with “M” and would need re-certification by the May 1st deadline. This ensures DVs are calculated from certified data. If re-certification is needed for a previous year the state should submit a re-certification of the data with an explanation to EPA.

9. How can I learn more about the AMP600 report and the data certification process?

A wealth of information is available on the [AQS training page](#). [Data certification specific training](#) is also available. You can also find a detailed explanation of the [meaning of each certification flag](#) which is also located in the table in Question 11.

Other questions or requests for assistance should be directed to your EPA Regional Office point(s) of contact located in Question 10 or [Trisha Curran](#).

10. Who are the designated EPA Regional Office point(s) of contact for the data certification process?

An updated list of the AQS regional contacts can be found on the [AQS User Support](#) webpage.

Region	Primary POC	Secondary POC
1	Mary Jane Cuzzupe	
2	Gavin Lau	
3	Clinton McCrowey	
4	Darren Palmer	Daniel Garver
5	Chad McEvoy	Michael Compher
6	David Anderson	
7	Stephen Krabbe	James Regehr
8	Ethan Brown	Joshua Rickard
9	Fletcher Clover	Dena Vallano
10	Will Wallace	Sarah Waldo

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11. What are the meanings of the data certification indicator flags?

Flag Value	Application	Comments
X	Certification is not required by 40 CFR 58.15 and no conditions apply to be the basis for assigning another flag value.	Originally this was a blank (no flag). However, the use of "X" makes it definitive and therefore a flag will be associated with all criteria pollutant data.
U	Uncertified. The certifying agency did not submit a required certification letter and summary reports for this monitor even though the due date has passed, or the state's certification letter specifically did not apply the certification to this monitor.	EPA will need to determine the fields or parameters necessary to identify this data for flagging. The "U" Flag will be entered for any un-certified data after July 1 st .
S	The certifying agency has submitted the certification letter and required summary reports. A value of "S" conveys no EPA Regional assessment regarding data quality per se. This flag will remain until the EPA Regional Office provides an "N" or "Y" evaluation flag.	For the reporting process, the monitoring organization officially submits the data flagged with an EPA "S" in all cases, even when there appears to be data that need to be flagged as "N". This signifies that EPA processing for a set of data can start and it also helps to identify what data is in the EPA evaluation process.
N	The certifying agency has submitted the certification letter and required summary reports, but the certifying agency and/or EPA has determined that issues regarding the quality of the ambient concentration data cannot be resolved due to data completeness, the lack of performed quality assurance checks or the results of uncertainty statistics shown in the AMP256 report or the certification and quality assurance report.	Signifies that the certifying agency and/or EPA has determined there are issues regarding the quality of the ambient concentration and/or QA/QC data which cannot be resolved.
Y	The certifying agency has submitted a certification letter, and EPA has no unresolved reservations about data quality (after reviewing the letter, the attached summary reports, the amount of quality assurance data submitted to AQS, the quality statistics, and the highest reported concentrations).	Signifies that the certifying agency and/or EPA has determined there are no reservations about the data quality.
M	The monitoring organization has revised data from this monitor since the most recent certification letter received.	When data is changed and needs to be re-certified. Once the agency updates the certifying agency flag the EPA flag will be an "S".