

2021 Data Certification Q&A Meeting - 033121

Questions and Answers

Q1:

Dickie, Morgan

We have a monitor that was closed out, with the close out date as 1/2/20 using the Maintain Monitor form in AQS. In the AMP600 report, this monitor shows up as a monitor NOT recommended for concurrence by AQS because of a red flag for 0 percent completeness for the 2020 year.

Dickie, Morgan

Thank you, we will run the Monitor Description Form. All raw data collection and reporting to AQS ended 12/31/19, the last bit of data entered on 1/2/20 was a QA/QC check to close out the monitor. But yes my question was, why is the monitor still being included in the AMP 600? Thank you for the answer.

A1:

Steger, Joette

Put the end date for the certifying agency as 20191231 and then it will not show up in the AMP600 report.

Judge, Robert (R1)

It'll still recommend an "N" as likely audits/p-checks were not done. 12/31/19 shutdown will fix it.

Curran, Trisha (OAQPS)

Any data for a monitor that is reported for a given year will cause it to appear in the AMP600. Make sure the correct end dates have been entered for all agency roles. This can be done by checking the monitor description report. Work with your EPA Regional Office to determine the most appropriate course of action to resolve this issue.

Q2:

Hoffman, Keith (DNREC)

Are we ever going to have a code to indicate issues with data completeness or gaps in the data due to COVID-19 closures, etc.

A2:

Curran, Trisha (OAQPS)

OAQPS has been working with the EPA Regional Offices and have had many discussions on possible data issues related to COVID-19 impacts. Please work with your EPA Regional Office to determine the most appropriate action for your network and data.

Q3:

Wagner, Lisa

What is the status of the lead comments being omitted in the AMP600?

A3:

Chris Chapman (OAQPS)

We are working on the AMP600 currently and the fix should be evident in the next few weeks. Not correctly showing the Pb comments in the AMP600.

Q4:

Lilian R. Turcios-Metho

Are there any resources available for data certification training? I am not very familiar with the process and would like to have additional support

A4:

Trish Curran (OAQPS)

Please review the training available on the [AQS homepage](#) under [AQS Support> Training](#). There are videos, webinars, and written trainings available. You can also go to the [Data Certification/Validation webpage on AMTIC](#) where there is a data certification guidance document and Q&A document available. These documents address some of the general information, including the color-coding criteria, and some of the most common questions about data certification. There was also a presentation on the overall data certification process by [Bob Judge \(Region 1\) at the 2018 Ambient Air Monitoring Conference](#). There are also [QA EYE Newsletter articles](#) that address data certification, especially Issues #14 and #24. If you have additional questions or need further assistance, please contact your EPA Regional Office.

Q5:

Sean Fitzsimmons

Would you please describe the process for excluding continuous PM2.5 FEM data that does not meet comparability requirements in Part 58?

A5:

Chapman, Chris (NADG)

I am working on that issue and hope to have it resolved by end April.

Hanley, Tim (OAQPS)

We have information on the process to exclude these types of data on our [AMTIC PM2.5 Monitoring Network site](#). See the [Instructions and Template for Requesting that data from PM2.5 Continuous FEMs are not compared to the NAAQS](#) under Quality Assurance and Other Guidance Documents. Please work with your EPA Regionals Office to determine if NAAQS exclusion is appropriate, and if so, the best way to arrange it.

Trish Curran (OAQPS)

There are a couple of options for this some agencies have put it instead of putting it under the criteria pollutant code, they have put it under another PM25 code so that its not NAAQS comparable, there is another option also if it is under a criteria pollutant parameter code, there is a way to mark it as not NAAQS comparable and your regional office would have to concur on that , they may have an idea as to what option is more appropriate for you, should check with Regional Contact.

Tim Hanley (OAQPS)

The nuance is if starting up method the way to code it is 88101 FPM and then you can do NAAQS exclusion for up to 24 months If SLT if not sure if want to use that data for NAAQS purposes you have that flexibility built into part 58 to say this is an FPM just testing out the method but it does go into 88101 as an FPM and you need to put a NAAQS exclusion and the region needs to approve it. An AQS person is not making a policy decision, an AQS person is loading data that has been agreed that a policy decision has been made, that happens by if you go through this process and you like wow we don't meet the comparability requirements either in the annual network monitoring plan or separate, and there is a provision in Section 58 that allows you to do it separate, you need to reach out to region in writing and show that info and request that it be excluded. Once the region responds to the annual plan or separate says we agree, there are still more options. Can go into 88502 if its intended for AQI, if the data is so bad that you couldn't use for AQI then you would put it into 88501, So there are 3 avenues and it depends on where you are the process of evaluating that method in committing to use the data or not committing to us the data. Continue to work with your regions.

Q6:

Jennifer Eberwein (MDAQMD)

What are the consequences of missing the May 1st deadline?

A6:

Curran, Trisha (OAQPS)

There may be various possible consequences for missing the May 1st deadline required per §58.15. Your grant and funding could possibly be impacted if this is an identified deliverable. It could be a finding if meeting this deadline is identified in your QAPP and you are not meeting the deadline. Lack of certified data could also possibly impact any decisions based on your data, including attainment/non-attainment decisions. It is highly recommended you contact your EPA Regional Office as soon as possible if you think you may not meet the May 1st deadline to determine the extent of the possible consequences.

Judge, Robert (R1)

You miss a CFR "requirement", and it may be a PPA / 105 grant requirement.

Q7:

Jennifer Eberwein MDAQMD

Can you please describe how the annual PE bias is determined?

A7:

OAQPS

For the Annual Performance Evaluation performed by the monitoring agency, the bias is calculated in accordance with 40 CFR Part 58 Appendix A 4.1.1 (calculation of %difference for audit levels) & 4.1.3 (calculation of bias using %difference of audit levels), as referenced in 40 CFR Part 58 Appendix A 3.1.2.6 (which data to report for calculations for the Annual Performance Evaluations). Please keep in mind these are only for the gaseous criteria pollutants (CO, NO₂, SO₂, and O₃). Calculations for PM_{2.5}, PM₁₀, or Pb may differ. Quality Indicator Assessment Reports and Tools are available on the [AMTIC Quality Assurance Webpage](#), including the data assessment statistical calculator (DASC), that can help you calculate the bias for all pollutants.

Q8:

David Nicholas

The data from an FEM (Method 170) is recommended for concurrence, but the associated AMP600 has a collocation summary that includes methods that are not related to the FEM, which do not meet the criteria. Does that matter? I don't recognize the methods that don't meet criteria.

A8:

Steger, Joette

You might want to check to see if end dates were added to AQS for the methods that you don't recognize

OAQPS

There could be many reasons the AMP600 could be showing that the collocation criteria are not being met, since there are many nuances to PM_{2.5} collocation. First, be sure that any sites with methods you don't recognize are correct. It may be possible that incorrect methods were entered for those monitors or that the monitors were supposed to be shut down and end dates weren't entered into AQS. Please also see 40 CFR Part 58 Appendix A 3.2.3 for collocation information. Basically, it says 15% of primary monitors of each method designation have at least 1 collocated monitor. A site with collocation only counts towards collocation of the method for the monitor designated as primary at that site. So, it may be that you are collocating Method 170 with other methods at certain sites while at other sites those other methods are the primaries but have no collocation. Therefore, the other methods aren't meeting the collocation requirements.

In order to best understand what is happening, please contact your EPA Regional Office to determine the cause of the issue and the most appropriate actions to take in order to resolve it.

Q9:

Jasmine Bootman

In the 2018 EPA memo "Steps to Qualify or Validate Data after an Exceedance of Critical Criteria Checks", it states "If routine data is invalidated using null codes, the valid QC check, although reported to AQS, will not be used in aggregate statistics of precision and bias since the check is not representing the precision and bias of the routine data for that time period". However, I have seen in the AMP256 that even if the raw data is nulled around the QC check, the QC check is used for CV and bias calculations. Is there a flag we should use in the AMP504 to indicate that this valid but exceeded QC check had the raw data nulled?

A9:

OAQPS

Thank you for bringing this to our attention. We can't fix it if we don't know about it, so these notifications/comments are always beneficial and very much appreciated.

A quick summary/background. The memo being referenced can be found on the [AMTIC Policy Memoranda and Technical Guidance Webpage](#). A valid QC check is one that is conducted using certified, properly functioning equipment, conducted in a manner that adheres to appropriate procedures (SOPs) and the test concentration is accepted as accurate. If a valid QC check was performed and it was deemed that the data needs to be invalidated, then this guidance document states the QC check will not be used in aggregate statistics of precision and bias.

It appears this QC data in this situation may still be being used for in precision and bias calculations. If you believe this is happening to you and influencing your data or data certification, please contact your EPA Regional Office. Remember, you can enter flags different than the AQS recommended flags and enter comments/justifications on why. This can include a comment that calculations are incorrect. Your Regional Office will work with you through the certification process and review. We are looking into this further and are working to make changes, if necessary. As soon as we have any additional information, we will notify everyone as soon as possible.

Q10:

Sean Fitzsimmons

Do the design values calculated by EPA prior to 6/1 (as indicated on the AQS AMP 480 and posted on its website) exclude the PM2.5 data that has been flagged for exclusion due to comparability problems in AQS?

A10:

Robert Coats (OAQPS)

"Is the data just flagged by the monitoring agency, or has the flagging also been concurred by the Region?" If it has been concurred, then it will be excluded; if not, it won't.

Q11:

Jennifer Eberwein MDAQMD

Follow-up on the PE bias question - for NO₂ and SO₂ we are not seeing any results on the AMP600 report and for CO we are seeing a very high number (but did not fail PE audits). We had audits that were missed due to COVID closures - could that be related?

A11:

OAQPS

First, please verify that all your NO₂, SO₂, and CO QA/QC data were loaded and that the information is correct. Sometimes the data doesn't load or a decimal place or two could be out of place. Generally, one high audit point would skew the bias calculations higher the fewer the number of audits that are performed. However, the lack of a PE at one site should not influence the bias of other sites. I highly recommend coordinating with your EPA Regional Office to determine the cause and the best course of action for a resolution.

Q12:

Little, Michael

I am also interested in the CV levels for PM_{2.5}. We used to co-locate like monitors FRM to FRM and now we are co-locating unlike monitors FEM to FRM and the PE is very difficult to maintain at the current levels.

A12:

Crumpler, Dennis (OAQPS)

FEM results have more natural scatter which lends itself to higher CVs. The diminishing PM_{2.5} concentrations have also driven the average CVs up, as a result of using % difference in the CV analysis.

Hanley, Tim (OAQPS)

Yes, having unlike methods used in a CV calculation will likely lead to higher (poorer) CV results. In addition, as the atmosphere continues to become cleaner and cleaner, these CV calculations become more challenging to meet since including low values makes minor differences in concentration more apparent. When considering the overall DQO process for adding PM_{2.5} continuous FEMs to the network, EPA factored in the potential for higher CV's. However, such higher precision CV's were determined to be acceptable since by having continuous (and therefore daily measurements), the overall data quality needs would be met. The information on this, including CASAC's review of this work, were all detailed in documents leading up to the proposal and final rules for PM monitoring, both of which were published in 2006.

Q13:

Regynski, Barb

Do you know of any changes that will be made for next year's data certification?

A13:

Curran, Trisha (OAQPS)

Short answer: No. There are no changes that will be made to the data certification criteria or process for next year (2021 data certification). Any proposed changes are discussed amongst the EPA data certification workgroup. Then, prior to implementing any changes to the certification criteria or process, EPA will announce them the year before the affected annual data. For example, if changes were going to be made to the data certification criteria or process for the 2021 data, we would have announced it early 2020 (1st quarter of 2020) at the latest. We want to make sure we would have enough time to get feedback, give everyone enough time to process any new information, and implement any needed changes.

Q14:

Berschling, Jenny

On the AMP600 Routine Data mean/min/max, are the calculations different for Ozone from other parameters? Our internal reports agree with everything except for ozone. I've tried 1-hour, 8-hour, annual, and seasonal.

I looked back to 2019 and got the same discrepancy but hadn't noticed it before.

A14:

leslie.collyer

Is the O3 report for the current standards being chosen? that is my issue sometimes..

Berschling, Jenny

Yes, I also sent it to our regional contact. I'm not sure which standard. I didn't think I have a choice for the AMP600?

leslie.collyer

The reports don't always default to the current regs..

Clover, Fletcher

Jenny, are your "internal reports" using AQS data, or data stored at your agency? need to make sure the same standards and data handling are used.

Todd Russell

Ozone raw data must be truncated to ppb for the one-hour and eight-hour values to match with AQS.

Berschling, Jenny

The internal reports are generated with the same system (AirVision) that the AQS data files are sent from, so the identical data set with the same precision, I assume.

Curran, Trisha (OAQPS)

As stated by other, please make sure that you are using the same standards and values for each monitor. You can run an AMP350 (Raw Data Report) to identify where rounding or truncating is being used. If you are still seeing an issue, please work with your EPA Regional Office to identify the cause and resolution.

Q15:

Leif Paulson - Wyoming DEQ-AQD

Will The AQS Team post the 2020 webinar, Ask the Experts, to the AQS website? I'm not seeing it on there

A15:

Stuart Gray (OAQPS)

Yes, "AQS Ask the Experts November 2020" has been posted on the AQS Homepage under User Support>Training>Webinars and Other Trainings

Q16:

Sean Fitzsimmons

If raw PM data is bracketed by passing flow checks, but the interval between the flow checks is greater than CFR requirements, should the data be qualified, and if so how?

A16:

Miller, Jennifer F (EEC)

What does your QAPP say?

Guillot, Richard

Is this a one time thing or a systemic issue?

Judge, Robert

The PM flow check question is also a "data validation template" issue/ question. AMP600 supporting documentation also has very clear criteria as to what they will use regarding recommended "N" vs "Y" (green/ yellow/ red)

OAQPS

These activities are in the Validation Template and may result in the invalidation of data. However, the length of time that passes between these activities will have an effect. Factors to examine to assess impact will include any other QC check results (precision checks), field blanks, analyzer diagnostic data, and similar performance indicators. The application of flags will vary depending on the effects observed. Missing an activity by itself would not necessarily warrant a flag. If needed, OAQPS recommends that monitoring organizations consult the AQS qualifiers table to select the proper qualifier to describe the issues or effects on the data

collection. Please work with your EPA Regional Office to determine the most appropriate course of action in this case.

Q17:

Leif Paulson - Wyoming DEQ-AQD

Also, are there any general changes or updates planned for AQS?

A17:

Chris Chapman (OAQPS)

In the short term, Robert Coats is performing Design Value tweaks, we're about to start work on tweaks to accept ambient air AA-PGVP, and we've finally started to manage disaster and recovery environments.

We are starting an AQS modernization effort because the products used in AQS (Forms and Reports) are near the end of their useful life. We do not have an anticipated date yet for when that work will start or parts of all of a new ambient air system will be available for use. The goal is to have a modern tech stack and a user experience that is much more pleasant for the user.

Q18:

Anderson, David

Isn't bias based on the %D of the one-point QC checks for the gaseous components, calculated per 58 App A 4.1.4? Not based on PE samples.

A18:

Curran, Trisha (OAQPS)

Yes, there is a bias calculation based on the % difference for 1-pt QC checks for criteria gaseous pollutants as identified in 40 CFR Part 58 Appendix A 3.1.1(d), 4.1.1, and 4.1.3. However, bias is also calculated for Annual Performance Evaluations as identified in 40 CFR Part 58 Appendix A 3.1.2.6, 4.1.1, and 4.1.3. NPAP bias is also calculated using the equation in 40 CFR Part 58 Appendix A 4.1.1 and 4.1.3. All three of these bias calculations are calculated and appear in the AMP 600 report for all the criteria gaseous pollutants (CO, NO₂, SO₂, and O₃). The AMP600 color coding criteria for the biases are identified in the documents located on the [AMTIC data certification/validation webpage](#).

Q19:

leslie.collyer

I find it challenging to change methods and report the associated final/initial QC/flow checks in AQS when they are done on the same day. End and start days cannot be the same nor reported flow checks. Can this be tweaked with allowing hours for same dates? Yes, but need to make

significant programming changes to make that happen, in light of priorities not sure when it will have the opportunity to work on and accomplish

A19:

Steger, Joette

You probably need to change the POC number.

leslie.collyer

Thanks- currently 'playing' with the reported dates. POC changes can be cumbersome..

Jager, Doug (OAQPS)

For each transaction there should be an assessment number that can be changed to record multiple checks on the same day. For instance, for the method that was ending you can enter a final flow check as assessment 1 and for the new method perform a flow check as assessment 2 and this should allow them to be entered into AQS on the same day under the same POC. However, we highly encourage you to work with your EPA Regional staff to identify the best resolution for this issue.

NADG/AAMG

This issue could be avoided if all the QA/QC checks for method being discontinued are all performed on one day. Then, the QA/QC checks and method being established are all commenced on the following day. Again, please work with your EPA Regional Office to determine the best course of action for ending and beginning any new methods at a site in your network.

Q20:

Sean Fitzsimmons

Would you please discuss the design value changes referenced previously?

A20:

Dave Mintz (OAQPS)

Three areas no changes are being made that are going to change the process for the way DVs are calculated, the changes are implemented to facilitate DV calcs in AQS so AQAG group doesn't do additional process downstream of AQS.,

1. There are a few sites and monitors that should be linked, for example, where a site is moved and site data should be linked) we are working with AQS to ensure data from sites is linked in AQS.
2. We've reassessed how CO DVs are calc based on 2 year of data evaluated independently, currently in AQS don't have a way to do that, the AQS group is working on a table in AQS, not report, where you can pull CO DV for the 2 year period directly,
3. Third thing, we've had few requests re: concentration based PM10 DV, pm10 standard is exceedance based. The current DV table provides estimated exceedance counts that are consistent with the standard. Request for concentration based values DV,,I add a table to provide conc based pm10 based DV based on a table look up method based on older guidance.

Q21:

Downs, Tom

What report shows Ozone DV linked sites?

A21:

Mintz, David

Regarding ozone linked sites:

The two views utilized by AQS for site-level Ozone design values and combined site Ozone Design Values are:

- OZONE_SITE_DESIGN_VALUES (single site only)
- OZONE_LINKED_SITE_DV (combined site only)

Chapman, Chris

AMP480 we have a linked sites table in AQS so you can see what sites are linked by parameter and state and code. The DV report will show include linked sites data now so as it transitions during the three-year DV period it will show data from both sites. Also, Linked Sites can be seen in AQS on Maintain>Linked Sites form.

Q22:

Melinda Ronca-Battista

Could just briefly review the different codes for PM2.5? I misheard Tim and would love to hear a recap.

A22:

Hanley, Tim (OAQPS)

There is a lot to this. EPA has a description of the codes and purpose on the [AMTIC web site under Policy Memoranda and Technical Guidance](#) titled [Parameter Codes Used to Report PM2.5 Continuous Monitor and Speciation Sampler Data to AQS \(2006\)](#). This document combined with the file on setting aside data on our [AMTIC PM2.5 Monitoring Network site](#) titled [Instructions and Template for Requesting that data from PM2.5 Continuous FEMs are not compared to the NAAQS](#), provide detail on the process. Since there has been some changes to AQS over the years, I am going to summarize how this all works now. In summary, agencies should start out using a PM2.5 continuous FEM by reporting the data to 88101. If the agency is satisfied with the data, it will be used to compare to the NAAQS per normal rules. If the agency would like to take its time and see results of comparability to a collocated FRM, it can take up to 24 months to evaluate the method. In this case label as a monitor type of "SPM" and ask in AQS for a "NAAQS Exclusion". The NAAQS exclusion requires regional concurrence. With Regional concurrence of a NAAQS exclusion, the data will not be used to compare to the NAAQS. By 24 months the agency in consultation with the Regional office should decide if the method meets the comparability requirements or not and how the data will be used for comparison to the NAAQS and/or the AQI. If the method is to be used for NAAQS, the NAAQS exclusion code is taken off and data stay in 88101. If the Region agrees that the data do not meet comparability requirements in Part 58, but are still useful for AQI, the data may be reported to 88502 and used for AQI. If the data are valid but with very

poor comparability to an FRM such that they should not even be used for AQI, then report the data to 88501. In this way there is a record that the data were attempted to be collected but are not to be used for NAAQS or AQI.

Q23:

Palmer, Darren

Chris are you sure "all" AQS users can see this? I've had agencies tell me that "Linked Sites" isn't an available option for them. It has led me to believe that only EPA users can see this information. Are all AQS users supposed to be able to see "Linked Sites" as an option from the Maintain screen?

A23:

Chris Chapman (OAQPS)

Our team is currently investigating how to provide read only access to the linked sites form.

Q24:

My understanding is that some aqs reports such as the Quicklook and AMP256 are legacy reports and have not been updated for the latest CFR requirements. Would you please comment on legacy or deprecated AQS reports?

A24:

Chris Chapman (OAQPS)

We have deprecated reports over time, i.e., predecessor to the AMP256, the AMP255, and where we reengineered the QA process about 5 years ago. The user should contact Chris Chapman directly to discuss.