

# DATA CERTIFICATIONS

2024 Primary Quality Assurance Organization (PQAO) Training February 27-28, 2024

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## WHAT IS DATA CERTIFICATION?



 Required May 1<sup>st</sup> submittal to the Regional Administrator by 40 CFR §58.15: a PQAO attests the completeness and accuracy of the previous year's data collected by approved monitors at SLAMS and SPM sites that meet CFR QA/QC criteria.

Data certification requirements may also be in other agreements.

 EPA does not "validate" or "certify" data submitted by an agency but does review the data and enters EPA evaluation flags.

# WHAT IS DATA CERTIFICATION? CONTINUED



Data should be verified and validated prior to the data certification process.

- The data certification package:
  - A data certification cover letter
  - AMP600 Report (for criteria pollutants) signed with certifying agency
  - AMP450 NC Report for any PMcoarse (PM10-2.5) and/or 5-min SO<sub>2</sub> data

## DATA CERTIFICATION FLAGS AND THEIR MEANINGS

Flag	Application
Value	
Х	Certification is not required by 40 CFR 58.15 and no conditions apply to be the basis for
	assigning another flag value
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.
S	The certifying agency has submitted the certification letter and required summary
	reports. A value of "S" conveys no Regional assessment regarding data quality per se.
	This flag will remain until the Region provides an "N" or "Y" concurrence flag.
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.
Υ	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).
M	The monitoring organization has revised data from this monitor since the most recent
	certification letter received from the state.

Can be found in the data certification guidance documents, AMTIC webpage, and AQS webpage.

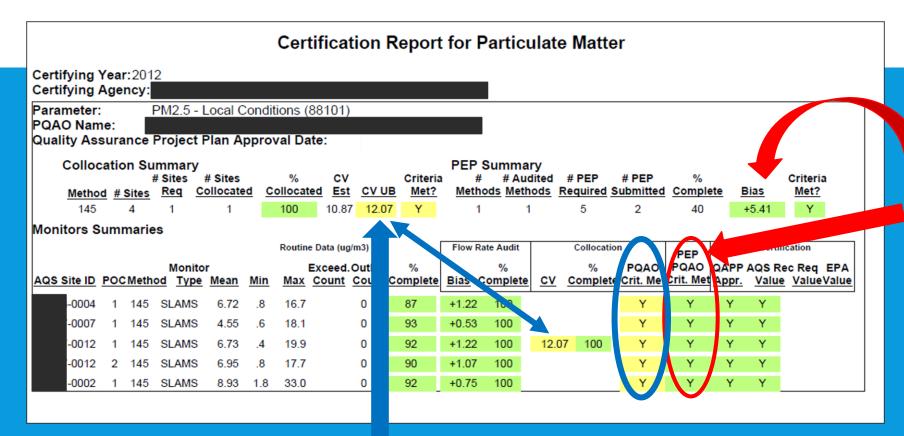
## AMP600 COLOR CODING

- In the data certification guidance documents on AMTIC webpage.
- Check the guidance documents annually for any changes to the process or AMP600.
- NOTE: 3 Yellow Flags trigger an red AQS "N" flag.

Assessment	Current CFR	Green	Yellow	Red	Comments		
	Requirement or Guidance	(Acceptable)	(Warning)	(Recommend N Flag)			
Technical	PQAO every 3	TSA within 3 years	TSA within 4	TSA > 5 years	Not a monitoring Org responsibility.		
Systems Audit	years		years		Will <u>be_reported</u> on summary page not by pollutant		
Gaseous Criteria Pollutants							
Routine Data	75%	<u>&gt;</u> 80%	79-70%	<70%	Based on CFR criteria for data use 100* Number of hourly obs/number		
Completeness					of hours in monitor sample period <sup>1</sup>		
QAPP	Approval date	Approval date	Approval date	Not approved	Could be sole reason for "N" flag if		
Approval	within 5 years of current date	within 5 years of current date	between 5-10 vears	and/or approval date greater than	QAPP not approved.		
	corrent date	current date	years	10 years			
1-Point QC	75%	<u>&gt;</u> 75%	65-75%	<65%	Based on 26, 1-point QC for a year.		
Completeness					Calculated based on the number of days the monitor operated.		
1-Point QC	<7.1% O3,	≤7.1% O3,	8-20% O3	> 20% O3	Based on all valid 1-point QC checks		
Precision	<10.1% CO, SO2	<10.1% CO, SO2	11-25% CO, SO2	> 25% others	in AQS for the year. Value should		
	<15.1% NO2	<15.1% NO2	16-25% NO2		reflect AMP256 value		
1-Point QC	<u>&lt;+</u> 7% O3,	<u>≤ +</u> 7% O3,	± 8-20% O3	> <u>+</u> 20% O3	Based on all valid 1-point QC checks		
Bias	< <u>+</u> 10.1% CO, SO2 <+15.1% NO2	< <u>+</u> 10.1% CO, SO2 <+15.1% NO2	±11-25% CO, SO2	> <u>+</u> 25% others	in AQS. Value should reflect AMP256 value		
	<u>₹13.1% NO2</u>	<u>₹</u> 13.1% №02	±16-25% NO2		value should reflect AMP 236 value		
Annual PE	1 PE/year	1 PE/year	1 PE/year	No PE or	Will not count more than one actual		
Completeness	3 audit levels	3 audit levels	2 audit levels	1 audit level	value in an audit level. For example, two audits in one level count as 1		
					audit level.		
Annual PE Bias							
03, SO2, NO2,	< ±1.5 ppb /< +15.1%	≤ ±1.5 ppb / ±15%	<u>&lt; +</u> 1.6-3.0 ppb /  + 16-25%	> <u>+</u> 3.0 ppb / <u>+</u> 25%	Average PD of all PE values for the monitor		
со	_	< ±0.03 ppm/ ±	<u>+</u> 10-25% ≤ <u>+</u> 0.04-0.06	> +0.06 ppm/ +			
	≤ ±0.03 ppm/ ± 15%	15%	ppm/ <u>+</u> 16-25%	25%			
NPAP Audit	20% of sites in	20% of sites in	10-19% of sites	<10% of sites in	Not a monitoring Org responsibility.		
Completeness	PQAO	PQAO	in PQAO	PQAO	Will be marked as "Y"		
-PQAO							
NPAP Bias	< <u>+</u> 10.1% O3	< <u>+</u> 10.1% O3	± 10.1-20% O3	> <u>+</u> 20% O3	median PD for all values at a site and		
	< <u>+</u> 15.1% others	< <u>+</u> 15.1% others	±15.1-25% others	> <u>+</u> 25% others	median PD for PQAO level estimate		
NPAP Audit	4 levels	4 levels	2-3 levels	≤1 level	Not a monitoring Org responsibility		
Completeness							
-Site							
Outliers					Not implemented in 2018		



## HOW THE AMP600 CRITERIA WORKS



PEP PQAO Criteria is based on Bias estimate, not completeness.

Some flags are generated at a PQAO level and affect every monitor's AQS recommended flag.

# THE DATA CERTIFICATION PROCESS



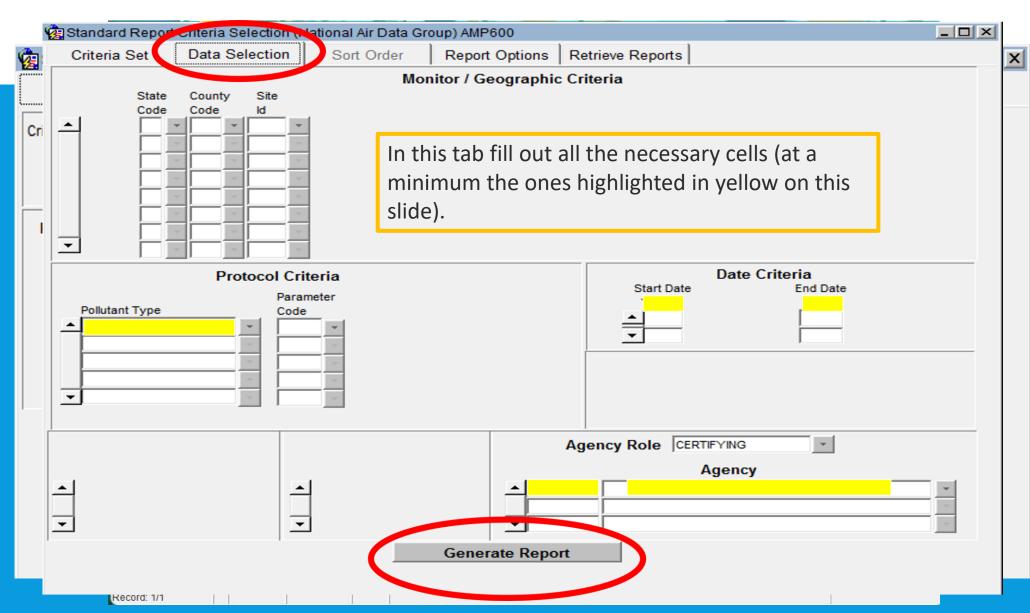


## **STEP 1: RUN REPORTS**

- 1. Run the AQS Monitor Description Report (AMP390) If a certifying agency role is not designated, then the monitor will not appear in the AMP600.
- 2. Run the Certification Evaluation and Concurrence Report (AMP600) AQS will recommend a certification flag for each monitor based on 40 CFR Part 58 criteria.
- 3. Run the QA Data Quality Indicator Report (AMP256) to get a more detailed look at the QA data.



## RUNNING AN AMP600 IN AQS



## THE AMP600 REPORT SUMMARY PAGE

**Data Evaluation and Concurrence Report Summary** 

Jul. 22, 2014

Certification Year: 2012 Certifying Agency (CA):

Pollutants in Report:

ts in Report:		Monitors	Monitors Recommended for	Monitors NOT Recommended
Parameter Name	Code	<b>Evaluated</b>	Concurrence by AQS	for Concurrence by AQS
Carbon monoxide	42101	3	3	0
Nitrogen dioxide (NO2)	42602	2	2	0
Ozone	44201	16	14	2
PM10 Total 0-10um STP	81102	8	7	1
PM2.5 - Local Conditions	88101	12	9	3
Sulfur dioxide	42401	4	4	0

PQAOs in Report:

**PQAO Name** 

**PQAO Code** TSA Date

09/27/12

Summary of 'N' flags for all pollutants:				AQS	Cert. Agency
-	Parame	ter		Recommended	Recommended
POAO	Code	AOS Site-ID	POC	Flag	Flag

<b>PQAO</b>	Code	AQS Site-ID	POC	Flag	
	44201	-1100	1	N	
	44201	-0032	1	N	
	88101	-0016	2	N	
	88101	-0014	1	N	
	88101	-0103	1	N	
8	81102	-0014	1	N	

Reason for AQS Recommendation

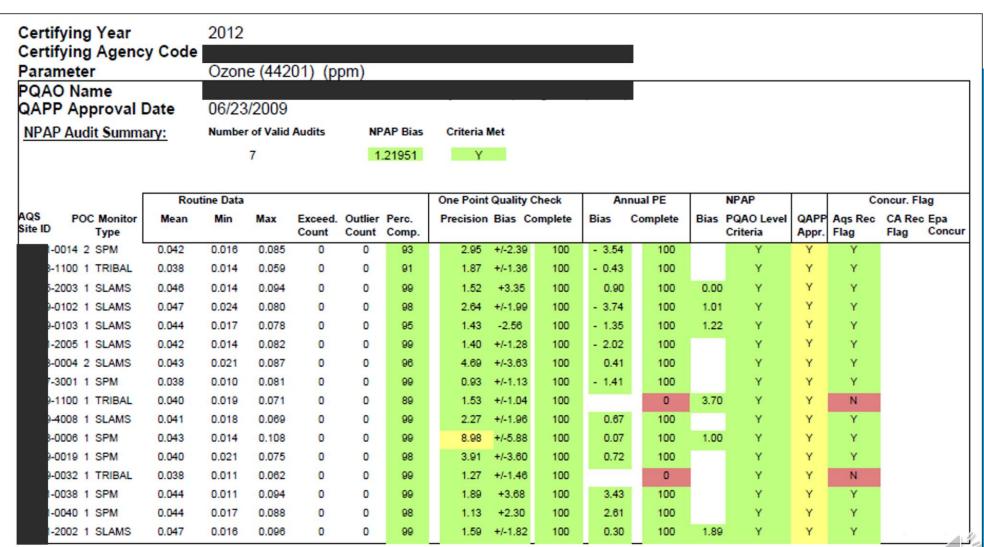
Annual Performance Evaluation Audit Missing or 1 Level. Annual Performance Evaluation Audit Missing or 1 Level. Annual Summary completeness < 70%. Annual Summary completeness < 70%. PQAO-Level Collocation criteria not met. Flow Rate Audit completeness < 65%.

Signature of Monitoring Organization Representative: \_

Make sure the report is signed here before submittal.

## THE AMP600 POLLUTANT PAGE

**Before Certification** 



### STEP 2: DATA REVIEW AND CORRECTION

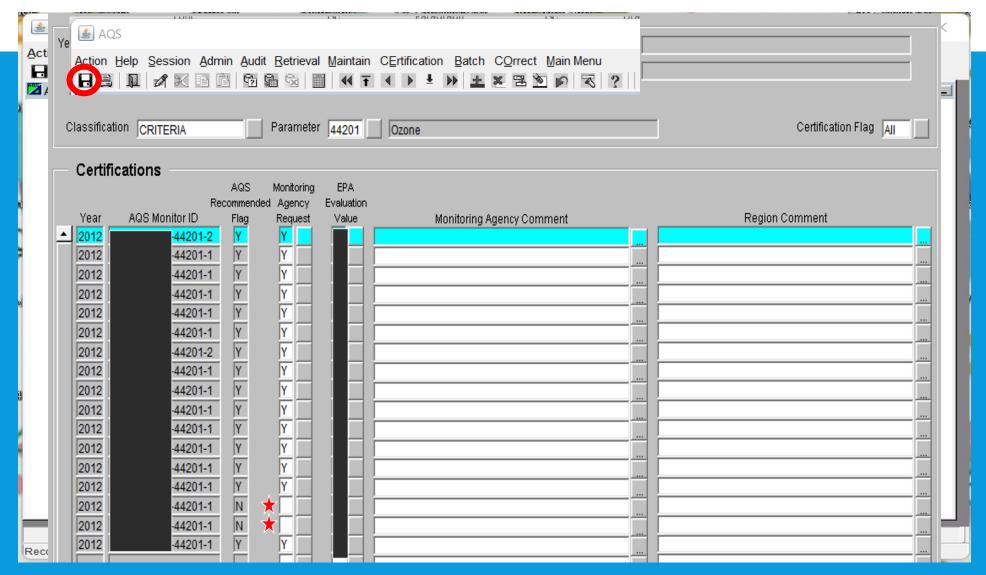
- If you see "N" flags in the AMP 600 check the following:
  - 1. Has any data not been submitted?
  - 2. Should data be invalidated and removed from AQS?
  - 3. Run an AMP256 and/or AMP390 to get more details.

• The AQS recommended flags cannot be altered - it is based on the AMP600 criteria.

• Use the AQS Certification Form to enter your certifying agency flags.



## THE AQS CERTIFICATION FORM



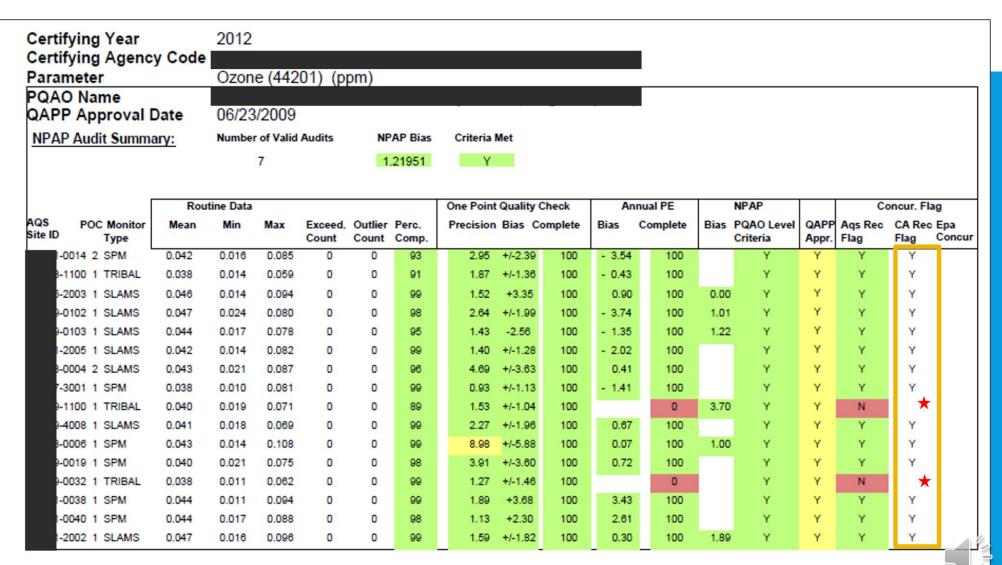
An agency can choose to put in a different flag than the AQS flag and provide a comment. "M" flags indicate data was changed after certification and needs recertification.

**SAVE** your changes before leaving the certification form!

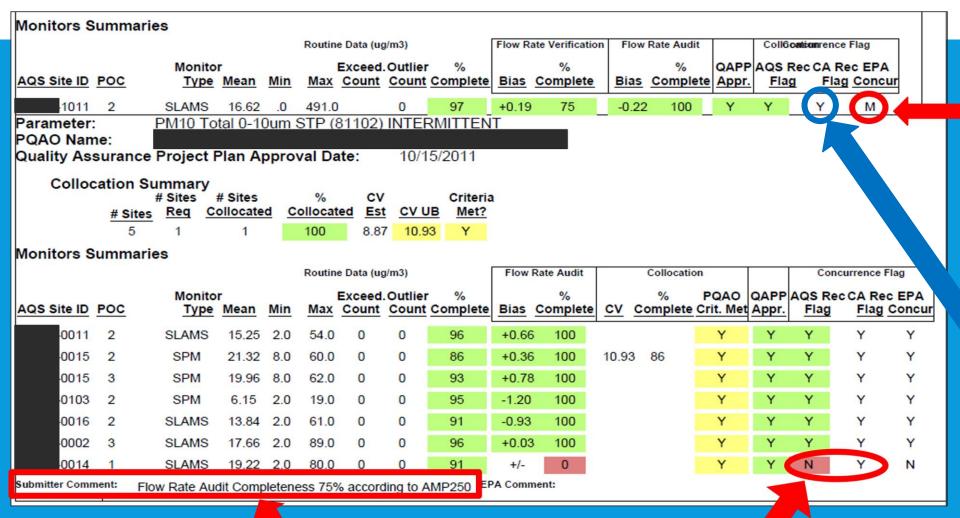
For the  $\bigstar$  monitors, until the agency enters their flags, EPA Evaluation Flags will not be added.

## THE AMP600 POLLUTANT PAGE

After CA Flags are Entered



# "M" FLAGS + CA & AQS FLAGS THAT DIFFER



"M" flags indicate a change to the data was made after certification. In this case, the CA has already changed their "M" flag to another flag. This indicates the data needs recertification.



## **STEP 3: DATA CERTIFICATION**

1. Rerun the AMP600 - Verify flags and comments have been entered.

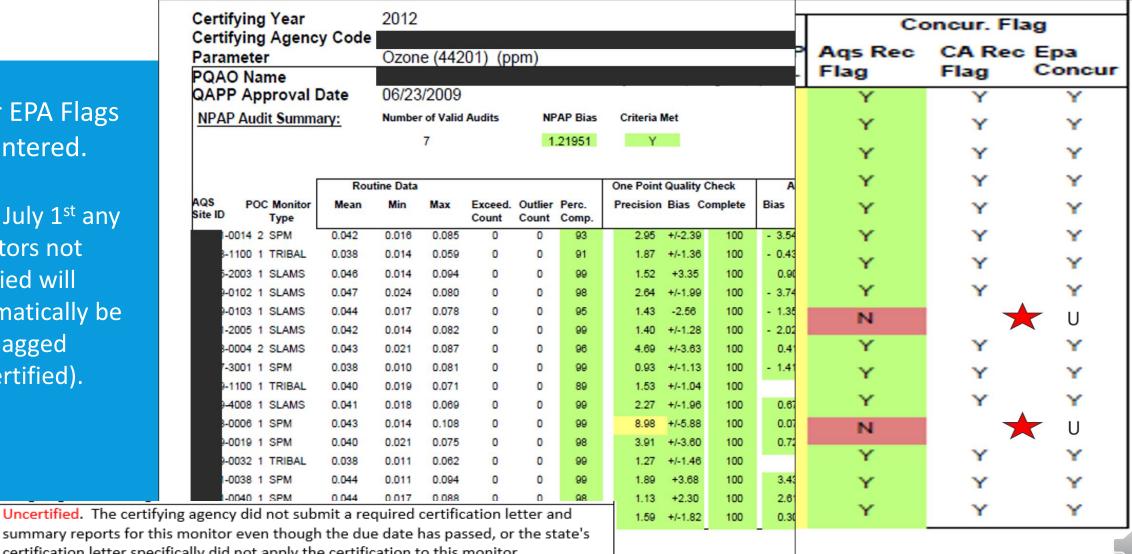
2. Sign the cover letter and AMP600 report and submit with AMP reports or other documentation.

NOTE: EPA Evaluation Flags are not Concurrence Flags!

## THE AMP600 POLLUTANT PAGE

After EPA Flags are Entered.

After July 1st any monitors not certified will automatically be "U" flagged (uncertified).



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.

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## CERTIFICATION PROCESS: THOUGHTS AND STEPS FORWARD



 Use the certification process often - don't wait until May to run the reports!

• Think of it like taxes! The IRS recommends not waiting until the last minute to file - same for certification.



For more Q&A please see the guidance and webinars posted on the AMTIC Certification webpage.

### Questions:

1. What to do if data values are changed (removed or corrected). What happens to the data if it isn't recertified?

#### **Answers:**

1. Recertification is needed. Please work with your Regional Office contact on recertification packages Uncertified data is identified as questionable and may or may not be used for determinations.

- 2. How to handle issues at the PQAO level and not at the local level such as collocation not being met at PQAO level?
- 2. Work with your regional office contact. They can help determine what requirements are needed and which flags/comments would be appropriate.

For more Q&A please see the guidance and webinars posted on the AMTIC Certification webpage.

### Questions:

3. How are issues corrected?

#### Answers:

3. This depends on the issue and how much data may be affected. If data is changed, please see the answer to Question #1. If issues are identified, work with your Regional Office contact to identify a resolution.

- 4. Are there rules for the comments in AQS, especially for any issues identified?
- 4. There is no limit to the number of characters/words that can be entered into the comment section of the AQS Certification Form/AMP600 Comment area.

## **RESOURCES**

### 40 CFR Part 58

### **AMTIC QA**

**Data Certification Webpage** 

### **AQS** Webpage

- Questions or Problems with AQS:
  - Your EPA Regional Office AQS Contact:
    - R9 Fletcher Clover
  - The Exchange Network Services Center (ENSC)
    - 8:00 AM 6:00 PM (EST)
    - 1-888-890-1995 choose option 2 for Node Helpdesk Support
    - nodehelpdesk@epacdx.net