



# **Simplifying Reporting of QA Data to AQS**

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# Project Overview

- **Scope**

- What is QA Data and why should you care?
- Mike Papp is the leader of a workgroup with EPA OAQPS, EPA Regional, State and Tribal members.
- CFR 40 Part 58, Appendix A (App A) covers QA assessment.

- **Goals**

- Enhance AQS to handle new QA assessments that do not map into historical RP and RA transactions (e.g., lead strips).
- Make QA Data Reporting easy to understand and implement.
- Remove ambiguities about the meaning, requirement and permissibility of fields in AQS QA transactions.



## Four Takeaways

1. QA data collection at the monitor level is unchanged.
2. Assessment types will drive transactions, which should make the process easier.
3. Workgroup currently drafting new AQS transactions.
4. New Transactions drafted and published by AQS Conference (August 2012). AQS revised by 1<sup>st</sup> Quarter 2013.



# Presentation Overview

1. Process Overview: Current and Future
2. New Transaction Types
3. Timeline
4. Influencing/Participating in the Process
5. Questions and Answers



## Process Overview: Current

- RP and RA transactions cover a dozen types of QA Assessments. This means:
  - Transaction field names not always appropriate for the assessment being reported.
  - Transactions include fields that are inappropriate for some assessments.
  - Different processing by data pattern submitted.



## Process Overview: Future

- One transaction type for Quality Assurance:
  - RP and RA transaction types go away.
- Assessment types drive transactions (i.e., each assessment type will have a uniquely configured QA transaction).
- Appropriate fields only with appropriate field names.



# What's Changing and What's Not

## Changing

- Format of transactions reported to AQS.
  - QA transaction type will replace RP and RA.
- Assessment type drives transaction.
- Handling of collocated precision.

## Not Changing

- QA reporting governed by App A.
- Monitor level data collection.
  - You will still perform same assessments (i.e. span check, 1 point QC, flow audits)



# Assessment Types:

## Driving the QA Transactions

1-Point QC	Annual PE	Flow Rate Verification	Flow Rate Audit
Collocation	PM2.5 PEP	NPAP-TTP	NPAP-back of analyzer
Pb-PEP	PB-PEP Colo	Pb strip audit	Proficiency Test
Zero	Span	Replicate	Duplicate
Ozone-SRP	Round Robin	TSA	ADQ

Only fields necessary for each assessment type would appear once that assessment type was selected. New assessment types can be added.

## Assessment Type– 1-Point QC Check

Field No.	Proposed Field Name	Description
1	Transaction Type	New transaction type QA. In conjunction with Assessment Type, defines new QA transactions. character code to identify the transaction to the AQS batch load process
2	Action Indicator	1 character code specifying Insert (I), Update (U) or Delete (D) data processing
3	Assessment Type- <b>1-Point QC</b>	A code specifying the assessment for which data is being submitted.
4	Performing Agency Code	Agency Code of organization performing assessment
5	State Code / Tribal Indicator	The FIPS state code of the monitor being assessed, or “TT” to indicate that the next field on the transaction is a Tribal code.
6	County Code / Tribal Code	The FIPS County Code of the monitor being assessed. If the previous field on the transaction contains “TT”, then the Tribal Code of the monitor being assessed.
7	Site Id	The AQS site ID of the monitor being assessed.
8	Parameter Code	A pollutant or parameter code assigned to the monitor in AQS as part of the monitor id and for which the assessment is being performed
9	POC	The Parameter Occurrence Code is used to allow more than one monitor for the same parameter to exist at a site. A unique monitor is identified in AQS by use of state code – county code – site id – parameter code – POC
10	Assessment Date	Date that the assessment was performed
11	Assessment Number	A unique number associated with an assessment performed at a site on a given day. This number can be incremented to allow reporting of more than one of the same assessment on the same day for the same parameter at the same site. Value is commonly reported as “1”.
12	Monitor Method Code	The sampling methodology of the monitor being assessed at the time of assessment. The monitor’s method code is needed because monitors can report data under multiple methodologies, and AQS stores them all. In order to know which methodology was in use at the time of the assessment, the methodology code must be reported along with the assessment data.
13	Reported Unit	Units associated with the assessment concentrations (Monitor Conc.and Check Standard Conc.)
14	<b>Monitor Concentration</b>	The concentration value provided by the monitor being assessed.
15	<b>Check Standard Concentration</b>	The value of the known gas standard concentration.

Determines what fields become identified for the transaction

No longer would term “actual” and “Indicated” be used. Term would change to reflect Assessment Type being reported.



## New Transaction Types

- Future process will include twenty new transaction types.
  - Seven have draft formats.
- Review six or seven at each monthly Workgroup call.
- Transactions correspond to Table A-2 in App A.



## Status of Requirements - Draft

Assessment (from Appendix A)	Appendix A Section	Status of Requirements
1-Point QC (Automated)	§3.2.1	Draft Proposed
Annual performance evaluation (Automated)	§3.2.2	Draft Proposed
Flow rate verification (Automated and manual)	§ 3.2.3, 3.3.2 and 3.3.4.1	Draft Proposed
Semi-annual flow rate audit (Automated and manual??)	§ 3.2.5, 3.2.6, 3.3.1, and 3.3.4.3	Draft Proposed
Collocated sampling (Automated and manual)	§ 3.2.5, 3.2.6, 3.3.1, and 3.3.4.3	Draft Proposed (maybe Raw)



## Status of Requirements - Draft (cont'd)

Assessment (from Appendix A)	Appendix A Section	Status of Requirements
Performance Evaluation Program (Automated and Manual)	§ 3.2.7 and 3.3.7	Draft Proposed
NPAP through the probe (Automated???)	§ 2.4	Draft Proposed



## Status of Requirements – No Draft

Assessment (from Appendix A)	Appendix A Section	Status of Requirements
Pb PEP	§3.3.4.4	In Process
Pb PEP Lab Audit (Collocated Pb PEP)	§3.3.4.4	In Process
NPAP-BOA (Back of Monitor)	§2.4	In Process
PT	NA	In Process
Replicate	NA	In Process
Duplicate	NA	In Process



## Status of Requirements – No Draft (cont'd)

Assessment (from Appendix A)	Appendix A Section	Status of Requirements
Pb Strip	§3.3.4.2	In Process
AA – PGVP (USEPA Ambient Air Protocol Gas Verification Program)	§2.6.1	In Process
Ozone SRP	§2.6.2	In Process
TSA (Technical Systems Audit)	§2.5	In Process
ADQ (Audit of Data Quality)	NA	In Process
Round Robin	NA	In Process



## Timeline

Activity	Status	Expected Completion
Workgroup Drafting Assessment Transactions	In Process (1 <sup>st</sup> 7 reviewed on 5/8)	August 2012
AQS Changes to handle new Transactions	In Planning Stages	1 <sup>st</sup> Quarter 2013
Existing Data Reconciliation	Following Design	1 <sup>st</sup> Quarter 2013
Required Cutover to new Transaction Types	Will be set after AQS changes in production	December 2013?



# QA Transaction Workgroup

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# Questions and Answers