

SPECIAL
POINTS OF IN-
TEREST:

- August 2014 National Ambient Air Monitoring Conference
- RP transactions going away for collocated data in 2015

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The QA EYE

ISSUE 16



JUNE, 2014

National Ambient Air Monitoring Conference Update

The EPA, in conjunction with the National Association of Clean Air Agencies (NACAA), is continuing to firm up the agenda for the National Ambient Air Monitoring Conference the week of August 11-14 in Atlanta Georgia.

A draft agenda is currently posted on [AMTIC](#) and we have received abstracts for the QA presentation sessions. Acceptance emails for the presentations went out the week of June 9th. From the QA side we are working on the Monday QA101 training session and we plan on restructuring it a little. First, we have a whole day instead of the half-day we had in Denver. The extra time will allow us to provide more detail on our topics. We

don't plan on focusing as much on the regulations (however they will be discussed) but on the overall quality system and those areas needing close attention. In addition we plan to provide more time for questions and answers after each training topic. On Tuesday afternoon we are trying something new with what is called the Program Breakout Discussion Centers. Some have considered this session the "speed-dating for scientists". It will be an opportunity to ask questions in a group forum. This looks to be a busy activity and we look forward to your feedback on this session. As mentioned, the half-day QA presentation session has a full speaker list with the first afternoon session focused on PM2.5 and the second session a mix of topics.

The conference will be held at the Atlanta Marriott Marquis, located in Downtown Atlanta, GA. The hotel conference rate is \$133 a night for a single or double room, plus applicable taxes (currently 16% per room per night). All reservations must be made by Monday, July 21, 2014. After this date, reservations are subject to space and rate availability. To make your reservation, please call the national reservation number at 1-800-228-9290 and reference NAAMC or EPA and the Atlanta Marriott Marquis to receive the group rate. Reservations can also be made online by [clicking here](#). For additional information, go to AMTIC

Technical Systems Audits Will be Reported to AQS

As part of the development of new QA transactions, AQS has now included a QA transaction for reporting technical systems audits (TSA). At a minimum any EPA-funded TSAs will be reported to AQS. This includes NATTS, CSN and the EPA Regional TSAs. The QA transaction includes:

- Performing agency
- Monitoring Agency
- Begin date

- End date
- Closeout date

The closeout date represents the date when all corrective actions (if any corrective action required) have been implemented. Monitoring organizations are encouraged to use this reporting feature for internal TSAs.

Zero Drift Guidance Changed

EPA has had some monitoring organizations express concern about the zero drift requirements in the validation templates in the *2013 QA Handbook for Air Pollution Measurement Systems Volume II Ambient Air Quality Monitoring Program*. EPA will revise this Handbook to provide zero drift acceptance criteria guidance for 24-hour and 14-day intervals as follows in Table I.

Zero Drift	Units	SO ₂	O ₃	NO ₂	CO
24-hour	ppm	0.003	0.003	0.003	0.4
14-day	ppm	0.005	0.005	0.005	0.6

Background

The zero/span implementation frequency and acceptance criteria are not identified in CFR and are considered guidance. As such, during revision of QA Handbook guidance, the EPA is able to work with the monitoring organizations to change guidance as needed. Over the years the zero guidance has changed in the following ways:

1985-1998- No validation template developed but the EPA espoused a 0-30 ppb requirement and a 0-15 ppb requirement based on two different but acceptable calibration techniques.

1998-2008 - Creation and use of a measurement quality objectives (MQO) table. Acceptance was ± 20 -30 ppb if calibration updated at each zero/span or ± 10 -15 ppb if fixed calibration used.

2008-2013- First validation template and acceptance criterion of $\leq \pm 3\%$ of full scale.

2013-present- Due to the use of better technologies and trace gas instruments the zero drift guidance criterion was changed to ± 1.5 ppb.

In 2008, the QA Handbook used a three percent of **full scale** criterion for the zero which relates to the concentration scale that the monitor operates. Many gaseous analyzers have scales of either 1000 ppb or 500 ppb. Therefore 3% of full scale for 1000 ppb would provide an acceptance criterion of 30 ppb and 500 ppb would provide an acceptance criterion of 15 ppb (similar to older Handbook guidance). So up until the 2013 document, the

zero drift acceptance criteria were fairly wide.

For the 2013 QA Handbook revision, instead of using a percentage of the scale of the instrument, we used a straight ppb (O₃, SO₂ and NO₂) or ppm (CO) difference. This seems to make sense since we should control zero drift at an absolute value rather than depending on instrument scale. However, we drastically reduced the drift from 30 or 15 ppb to 1.5 ppb for O₃, SO₂ and NO₂. In retrospect we may have been using 12- and 24-hour performance specifications described in 40 CFR Part 53 for Federal Reference Methods (FRMs) and Federal Equivalent Methods (FEMs) without considering that EPA guidance allows for bi-weekly (14-day) zero checks. Greater allowance for zero drift may be expected over two weeks compared to a 12- or 24-hour time period. After the Handbook was posted, EPA received an email that the CO acceptance criterion was incorrect. The criterion for CO was unintentionally listed at 0.03 ppm rather than 0.3 ppm

EPA asked the EPA Regions and monitoring organizations to submit zero data from instruments they operate. EPA received data from monitoring organizations in Regions 1, 7, 8 and 9 and evaluated the information by two approaches

Approach 1 (absolute value SD)

1. For each site, take the absolute value of each zero result and calculate a site mean (Avg ABS Zero). In this manner positive values and negative values do not cancel each other out.
2. Calculate the standard deviation of the absolute value zero (ABS SD)
3. Multiply the standard deviation by 2 or 3 and add this value to the site mean. This is the biweekly zero acceptance criterion. (2*SD+Avg, or 3*SD+Avg)

Continued on page 3

Zero Drift Guidance Changed (continued from Page 2)

Approach 2 (Pos/Neg SD)

1. For each site, take the absolute value of each zero result and calculate a site mean (Avg ABS Zero). In this manner positive values and negative values do not cancel each other out. This is the same as in approach #1
2. Calculate the standard deviation of the zero data using the positive and negative values (P/N SD).
3. Multiply the P/N SD by 2 or 3 and add this value to the site mean. This is the biweekly zero acceptance criterion.

In cases where there are positive and negative zero values, Approach 2 will create a higher biweekly acceptance value.

Table 2 provides an aggregate of the data we evaluated using the two approaches. Realizing the data set is very limited and using Approach #2:

CO - The average zero daily drift is 0.09 ppm (within the 0.3 ppm 12- to 24-hour acceptance criterion) and the 3* SD of the positive/negative is 0.4 ppm. We propose to revise the 24-

hour zero drift to 0.4 ppm and allow a bi-weekly drift of 0.6 ppm

NO2- The average zero daily drift is 0.38 ppb (within the 1.5 ppb validation template acceptance criterion) and the 3* SD of the positive/negative is 2.14 ppb. We propose to revise the 24-hour zero drift to 3.0 ppb and allow a bi-weekly drift of 5.0 ppb.

SO2 -The average zero daily drift is 0.39 ppb (within the 1.5 ppb validation template acceptance criterion) and the 3* SD of the positive/negative is 1.73 ppb. We propose to revise the 24-hour zero drift to 3.0 ppb and allow a bi-weekly drift of 5.0 ppb.

O3 (Table 6)- The average zero daily drift is 0.58 ppb (within the 1.5 ppb validation template acceptance criterion) and the 3* SD of the positive/negative is 2.6. We propose to revise the 24-hour zero drift to 3.0 ppb and allow a bi-weekly drift of 5.0 ppb.

Based on the data received and adding for a small margin of error, we feel these are reasonable acceptance criteria. The new acceptance values will take place immediately. A technical memo has been posted on AMTIC at: <http://www.epa.gov/ttn/amtic/cpreldoc.html>

www.epa.gov/ttn/amtic/cpreldoc.html with more details of the data used in the evaluation. In addition, we will be providing a spreadsheet on changes we are making to the Handbook on AMTIC at <http://www.epa.gov/ttn/amtic/qalist.html> . We have a document called "Validation Template Tracking Table" that we will use to update changes.

We strongly encourage monitoring networks to perform the zero/span checks (and one-point QC) more frequently than bi-weekly. The information that we used for the evaluation demonstrated that most organizations are performing these checks at higher frequencies than the required minimum and with the advent of the automated zero/span/precision delivery systems, it will help keep data quality within acceptable levels and reduce the potential for data invalidation.

NOTE: Some monitoring organizations operating trace gas instruments have asked if they can continue to use the current more restrictive acceptance criteria. **The answer is yes.** Monitoring organizations can implement "tighter" criteria as they see fit.

Table 2. Zero Drift Results from Monitoring Organization Data Submittals

Pollutant	Number of Monitors	Using Absolute Value SD				Using SD Pos/Neg		
		Avg ABS Zero	ABS SD	2*SD+Avg	3*SD+Avg	P/N SD	2*SD+Avg	3*SD+Avg
CO (ppm)	17	0.091	0.098	0.288	0.386	0.112	0.321	0.436
NO2 (ppb)	10	0.377	0.519	1.414	1.933	0.586	1.549	2.135
SO2 (ppb)	16	0.386	0.410	1.209	1.614	0.449	1.283	1.732
O3 (ppb)	49	0.585	0.571	1.716	2.282	0.675	1.936	2.612

Correction in Issue 15

An article in Issue 15 Page 8 titled AQS Monitor Type Changes and Identifying Monitors for NAAQS exclusion had a typographical error. One monitor type was listed "SPM-Other" this is incorrect and should be listed as "Other".

Pb-PEP QAPP and SOP Revisions

Over the past few months, all of the critical Pb-PEP documents, including the QAPP and SOPs, have been reviewed, modified, and revised or are in the process of revision. A big thanks to all of those in the Pb-PEP community who have devoted time to this effort. The QAPP has been revised to include the major changes that have occurred in the program such as: using a contract laboratory to support 46mm Teflon® filter analysis using XRF, including the use of the AIRQA

website for data submittal and approval, and the approval process itself. The SOPs are being updated to reflect the changes in the QAPP and to include some information that we have learned in the field to make the procedure better.

The EPA Regions are presently going through the signatures approval process for the documents as they are completed and once completed they will be posted on AMTIC.

Another Performance Evaluation Program Re-Certification in the Books!

During the week of April 7th, QA staff from California to Puerto Rico gathered at the OAQPS office in RTP, NC for the Performance Evaluation Program (PEP) Re-Certification. Our Performance Evaluation Program includes the PM2.5 Performance Evaluation Program (PM2.5 PEP), National Performance Audit Program (NPAP), and the Lead Performance Evaluation Program (Pb-PEP). The staff at the re-

certification represented Regional QA program leads, state auditors, Puerto Rico QA staff, Environmental Services Assistance Team (ESAT) contractors, and support contractors. The re-certification included extended days of activities including hands-on demonstrations of proficiency, written testing, discussions of changes and issues in the programs, and upcoming challenges within the programs.

This training had previously been held annually until 2012, but has since moved to every two years due to funding limitations. The expectation for the future is that we will continue to offer this re-certification every two years, but we will also re-evaluate the frequency as needed. For those participating in the PEP programs, this re-certification is a

required element that must be completed before conducting these audits to keep consistency across the programs. As a note, new staff members can be trained and certified by Regional EPA Leads for the QA programs in the off years when this training is not offered at OAQPS. However, in the years this re-certification is offered, we strongly encourage attendance.

I would like to give a **special thanks** to the veteran auditors who assisted the re-certification by participating as station leaders during the hands on portion of the process. We couldn't have pulled it off without the great help and expertise that you provided. **Thanks again!** See you again in 2016... Greg Noah



Mesa Labs Acquires BGI Instruments

For those that have purchased or used BGI equipment, they have recently been acquired by Mesa Labs. An article on this can be found at the [Mesa Lab website](#).

EPA Developing Different Evaluation Techniques for NATTS Proficiency Test Data

Since the development of the NATTS Proficiency Test (PT) Program, EPA has had some issues related to the evaluation of VOC PT data. This paper identifies another potential evaluation tool that does not use an “assigned” concentration to compare laboratories against but uses the data from the NATTS Laboratories to evaluate whether certain labs might be considered outliers from the population.

What is a proficiency test? The following is a definition from the Mayo Clinic Glossary:

A program in which multiple specimens are periodically sent to a group of laboratories for analysis and/or identification. Each laboratory’s results are compared with those of other laboratories in the group and/or with an assigned value and reported to the participating laboratory and others (CLSI GP27-A2). The PT is an evaluation of the ability of a laboratory to achieve a correct test result when compared with other laboratories using the same methodology. This is accomplished using the laboratory’s materials, personnel, equipment, environmental conditions, and procedures through the analysis of unknown specimens distributed at periodic intervals by an external source

In reviewing a number of descriptions of proficiency testing it is clear that there are two potential ways for evaluating PT data: 1) evaluation against an assigned value (referee lab result), and 2) evaluation against all other labs in the study. EPA has attempted to use an evaluation against an assigned value for a few reasons:

- Laboratories participating are using different methods which may produce different results, and
- Canisters sent to the contractor for filling may be contaminated at different levels which is out of the control of the PT program. The PT, it was thought, could be helpful in identifying this issue.
- Using a lab mean approach would require averaging the potential measurement uncertainties described above into the evaluation that might mask specific laboratory issues that need to be resolved.

However, EPA also recognizes that there are issues with using one referee lab to provide an “assigned” value to the constituents (pollutants) tested in the PT. The 2014 Quarter I VOC PT test seemed to indicate the referee lab results were lower than all but one of the NATTS laboratories participating in the program. EPA is looking to increase the number of referee labs in future PTs and is also planning on some additional studies. For example, the referee laboratories receive new cleaned canisters from one source while, as explained earlier, the PT labor-

atories have different cleaning techniques and different ages of the canisters sent for filling which could potentially cause issues. EPA is thinking of testing a portion of laboratory canisters by the referee labs prior to shipping them back to their home laboratories in order to perform additional evaluations.

Although using the laboratory mean of all PT labs participating in the program is a viable option for evaluating and comparing labs, another process has been used in the past and is succinctly explained in the paper by W.J. Youden called “Ranking Laboratories by Round Robin Tests”. The procedure is used to evaluate the performance of laboratories by ranking them according to the magnitude of the results they report in a series of test samples. The test is used to identify laboratories that consistently report low or high results. This procedure was utilized for the CY 2013 (Quarters 1 and 3) and 2014 (Quarter #1) VOC PT results.

Procedure.

This ranking procedure is very straight forward. In the Quarter I PT there were 14 NATTS laboratories and 15 pollutants measured:

1. For each pollutant measured, sort the pollutant from lowest concentration to highest.
2. Assign the laboratory with the lowest concentration #1 and the highest #14. If you add all the ranks up, a total of 105 points are assigned to a pollutant if all labs report the pollutant. For some pollutants a lab did not report a value so in that case 13 labs will be ranked and the total points for that pollutant will be 91.
3. Once all the pollutants are ranked for each lab, total the points for each laboratory.
4. Evaluate the points against Table III in the Youden Report which is the approximate 5 percent probability limits for ranking scores. Table I is a partial section of Youden’s Table from the report. *(Continued on page 6)*

Number of Labs	Number of Materials														
	3	4	5	6	7	8	9	10	11	12	13	14	15		
3	....	4	5	7	8	10	12	13	15	17	19	20	22		
	....	12	15	17	20	22	24	27	29	31	33	35	38		
4	....	4	5	8	10	12	14	16	18	20	22	24	26		
	....	16	19	22	25	38	31	34	37	40	43	46	49		
5-13	Removed for convenience														
14	4	8										50	56	61	67
	41	52										130	129	149	158
15	4	8										53	50	65	71
	44	55										139	149	159	169

NATTS PT Evaluation Technique (continued from page 5)

Results

Table 2 provides the results of steps 1-3 of the procedure for the Q1 2014 data. Since the name of some of the pollutants are quite long, Table 3 provides a crosswalk of the pollutant numbers provided in Table 2. The total points in the study were 1505 with an average score of 107.5.

NATTS Lab identified and so had a total of 15 labs. The probability limits around 15 labs with 15 constituents is 71 for the low limit and 169 for the high limit. Notice that in all three evaluations labs 10-2 and 4-02 are identified as producing consistently low concentrations compared to the population of laboratories. In Table 6, lab 01-03 which was the additional laboratory in that quarter (not in tables 4 or 5) is identified as reporting consistently high results.

Table 2 NATTS Lab Concentration Ranking Quarter 1 2014 VOC PT

NATTS Lab	Pollutant															Total
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
01-01	5	4	10	4	3	6	7	2	2	7	6	10	10	7	8	91
01-02	10	12	12	10	6	9	8	9	9	10	9	12	11	8	10	145
01-04		9	8	9	8	10	4	4	4	5	10	5	12	6	3	97
02-01	8	5	2	6	14	4	10	10	5	4	4	6	8	13	6	105
03-01	9	8	13	8	4	1	12	5	6	3	2	2	4	9	7	93
03-02	1	13	11	11	7	14	13	7	13	6	5	7	14	14	13	149
04-01	7	7	5	5	5	8	5	3	7	9	7	8	7	5	4	92
04-02	12	1	3	1	2	3	2	1	8	1	1	4	3	3	2	47
04-04	3	3	4	13	13	13	3	13	10	8	11	13	13	4	9	133
05-03	11	14	14	2	10	5	14	14	12	12	12	3	1	10	14	148
06-01	2	10	9	12	11	11	9	6	3	13	13	11	5	12	11	138
09-03	13	6	6	7	9	12	6	12					2	2	12	87
10-02	4	2	1	3	1	2	1	11	1	2	3	1	6	1	1	40
11-01	6	11	7	14	12	7	11	8	11	11	8	9	9	11	5	140

EPA Plans to implement this approach to provide additional insight into the PT results. In the future it may decide to report three or four versions of the information:

1. Comparison to NATTS Lab mean
2. Comparison to nominal spiking value provided by the PT contractor
3. Comparison by referee lab
4. Comparison using Youden Ranking Technique

Since the goals of the NATTS program is to detect trends in toxic pollutants, it is important to be able to ensure data being used in these trend assessments are comparable. Evaluating the PT results in a number of ways can help ensure this comparability.

Table 3. Pollutant Descriptions

Number	Pollutant
1	Acrolein
2	Benzene
3	1,3-Butadiene
4	Carbon Tetrachloride
5	Chloroform
6	1,2-Dibromoethane
7	1,2-Dichloroethane
8	Dichloromethane
9	1,2-Dichloropropane
10	1,3-Dichloropropene - cis
11	1,3-Dichloropropene - trans
12	1,1,2,2-Tetrachloroethane
13	Tetrachloroethylene
14	Trichloroethylene
15	Vinyl chloride

The 5 percent probability limits for a 14 lab study with 15 pollutants (“materials” described in the Youden Report) is 67 for the low limit and 158 for the high limit. Table 4 illustrates that based on the evaluation, labs 10-2 and lab 4-02 consistently report low results (< 67) compared to the population. No lab was considered to report consistently high results (>158). EPA decided to evaluate the process using the 2013 Quarter 1 and Quarter 3 VOC results. Tables 5 and 6 are the summary results of the evaluation. Table 6 had one additional

results in a number of ways can help ensure this comparability.

Table 4. 2014 Q1 95% PL 67-158

Lab	Score
10-02	40
04-02	47
09-03	87
01-01	91
04-01	92
03-01	93
01-04	97
02-01	105
04-04	133
06-01	138
11-01	140
01-02	145
05-03	148
03-02	149

Table 5. 2013 Q1 95% PL 67-158

Lab	Score
01-04	50
04-02	54
10-02	60
03-01	61
11-01	92
01-01	98
04-01	115
04-04	121
02-01	124
09-08	137
09-03	139
06-01	149
03-02	152
05-03	153

Table 6. 2013 Q3 95% PL 71-169

Lab	Score
10-02	18
04-02	62
01-04	81
03-01	84
04-01	97
09-03	97
06-01	111
01-01	119
09-08	123
04-04	125
11-01	130
02-01	139
03-02	158
05-03	162
01-03	205

When does the Clock Start on a Certified Instrument



Recent discussions among OAQPS and the EPA Regions brought to light some information regarding the date to use for certification and recertification of standards, particularly in regard to flow rate standards. Some vendors may be manufacturing flow rate devices and certifying them on some specific day (e.g., 01/01/2014). The instruments could sit on the shelf for some period of time before being purchased (e.g., 06/01/2014). There is at least one vendor that provides paperwork suggesting that the certification period for the purchased instrument can start on the date the monitoring organization operator first puts the standards into service and provides paperwork with the following entries:

Date Placed in Service _____

(To be filled in by operator)

Recommended Recalibration Date _____

(12 months from date placed in service)

EPA believes that the certification date is the date the instrument is officially certified and not the date placed into service. This includes both new purchases as well as re-certifications. For new purchases, we suggest you work with the vendor to include a certification along with the purchase price or minimally ask what the certification date is of the instrument you are purchasing.

WARNING...Primary Monitors Are Identified in Two Places... and Really Have the Same Meaning

The term "Primary Monitor" has replaced the use of identifying the NAAQS monitor with the pollution occurrence code (POC). The primary monitor is the monitor now identified for use in NAAQS designations when data for that monitor is available. For any pollutant there can be one and only one primary monitor designated at a site for any given time period. As we wrote in QA EYE Issue 14, if the primary monitor does not operate for the day it was supposed to sample or collect data, other monitors at the site can

substitute for the primary. If there is only one monitor at a site for a particular pollutant, AQS will designate this monitor as the primary. If a second monitor is added, and the monitoring organization decides the second monitor needs to be the primary, it must go into the [Maintain Site Form](#) and identify the second monitor as the primary.

However, there is another form that is used to designate what monitor the required QA collocated monitor needs to be compared to. Our 40 CFR Appendix A requirements also defines the primary monitor as the NAAQS monitor.

In order to identify the correct collocation pairing, the primary and the collocated monitor must be identified in the [Monitor Collocation Form](#).

For any site the primary monitor should be the same in both forms. EPA has found some discrepancies so please be mindful of this. AQS is aware of this issue and is looking for ways to use the primary monitor identified in the Maintain Site Form for QA purposes.

Reminder #3 Elimination of RP Transactions for Collocated Data in 2015

Since 2006 (see QA EYE Issue 2 page 5) EPA has been advocating the use of primary monitors and the identification of the CFR required collocated monitor to be identified in the collocations table allowing the collocated data to be submitted as raw data and eliminating the need for monitoring organizations submission of a precision transaction (RP) for this information. Once the new QA transactions are completed (2014), use of the RP

transaction for collocated data will be eliminated in December 2014.

In order to implement this reporting procedure, the primary monitor and the collocated monitor must be identified in the "Monitor Collocation Form" using the "MJ" transaction for the primary and collocated monitor. NADG provided a review of use of both methods and discovered that most organizations are using the raw data transaction.

HOWEVER out of the 49 monitoring organizations that were using RP transactions almost 50% (23) were also entering the collocated data as raw data, so either they are using both entry methods for the same data, which is not necessary, or they have different entry people entering the data differently.

Contact the AQS helpline for further information and help setting this up.

AQS QA Transactions for QAPP Entries

A number of new entries are becoming available for submission of QA Data. A few new and very simple entries involve the tracking of quality management plans (QMPs), quality assurance project plans (QAPPS) and technical system audits (TSAs). The QA EYE reported some information on this back in the Issue 14 (June, 2013).

Since QAPP data for the criteria pollutants was entered into AQS last year it is ready for updates as necessary and it is the farthest along reporting-wise. For entry, as well as editing, the following are a simple set of procedures:

1. Select maintenance tab from the menu and then select QA Assessments and finally QA Project Plans.
2. Query the 4 digit Agency Code. Select a Parameter Classification. The default is "Criteria" for the criteria pollutants but other parameters can be entered.
3. Upon execution of the query, records for each criteria pollutant monitored (active at the time or within the begin and end date of the query) will be retrieved. Depending on whether this is an initial entry there may or may not be any information in the "Submission Date" "Evaluation Date" or "Status" fields. If the QAPP is a new submission, in most cases, the monitoring agency will supply the submission date information.

4. The EPA Regions will provide an evaluation date when the QAPP was reviewed and a status. Status codes are provided in the figure below. Once a QAPP has a status of "approved" the evaluation date will be the date of final QAPP approval.
5. When entry or edits are completed click the SAVE icon.

Entry for QMPs follow a similar procedure with the exception that parameters are not identified since the QMP represents the monitoring agencies overall quality system not individual parameters.

For both QMPs and QAPPs, it is assumed that EPA Regional offices will enter the evaluation dates and the status. In cases where QAPP approval have been delegated back to monitoring organizations, the monitoring organizations can enter this data but it is expected that the EPA Regions will concur with the information submitted to AQS.

In the case of the TSAs (see page 1):

- The Performing Agency is the Agency responsible for conducting the audit and/or follow-up.
- The Monitoring Agency is the Agency being audited.
- The begin and end date are the dates of the audit.
- The closeout date is the date when all corrective action (if necessary) has been implemented.

Query Criteria

Agency: 0635 | Maine D.E.P. Bureau Of Air Quality Control, Augusta | Begin Date: YYYYMMDD | End Date: YYYYMMDD

Parameter Classification: CRITERIA | Criteria Pollutants

Parameter: []

Project Plans

Agency Code	Parameter Classification	Parameter Code	Submission Date	Evaluation Date	Status
0635		42101	20090623	20090623	Approved
0635		42401	20090623	20090623	Approved
0635		42602	20090623	20090623	Approved
0635		44201	20090623	20090623	Approved
0635		81102	20111015	20111015	Approved
0635		88101	20111015	20111015	Approved

Status dialog box:

Find: %

- Approved
- Conditionally Approved
- Disapproved
- Not yet reviewed

Buttons: Find, OK, Cancel

We are committed to producing a level of consistency and quality in the NATTS program which will provide data that is defensible, precise, and useful for making decisions.

NATTS Technical Systems Audits Coming to a Lab Near You...

Dave Shelow and I are finally teeing up the 2014 NATTS Technical Systems Audits (TSAs) and driving them to a lab near you! Beginning in June and continuing throughout the year, our contractor, Battelle, will be conducting TSAs at a third of the NATTS labs and sites in the network. Each year we plan on auditing a third of the network with a goal of completing the network in three years. Last year, we had a transition period where we only completed three audits, but we are back on track. Battelle has compiled a tentative schedule for the audits and will make every attempt to coordinate with the agencies and Regions to allow participation for both parties.

A primary goal in conducting these audits is to foster cooperation between OAQPS the EPA Regions and the monitoring organizations participating in the NATTS program. This is important because my priority is to push hard for corrective action to address the major findings in the TSAs. We spend a great deal of time and resources in conducting these audits and it doesn't make sense to identify shortcomings and potential improvements if we aren't going to follow up. I'll be expecting the Regions to play the primary role along with us at OAQPS in ensuring corrective actions take place.

As we all know, audits reveal findings with varying impact on the data, and it is sometimes difficult to determine where to focus limited time and resources. We have developed a ranking system for the findings to help identify priorities for corrective action. OAQPS and the Regions will review the findings together and will rank them accordingly in

the audit report. The three categories and the definitions are listed below:

- 1) **Findings-** those findings that the audit team felt were a major concern to the data collection activity.
- 2) **Observations-** findings that are of less immediate concern but should be thought about when revising or improving the agency's quality system
- 3) **Recommendations-** those observations that could improve the quality system but would not appear to affect data quality.

Using this convention, the audit results are organized such that the "Findings" category should be addressed first, then the "Observations", and finally the "Recommendations". Our expectation is that the Regions will take the lead and work with the agencies to focus on and resolve the audit results as recommended above.

Yes, this is NATTS. There will be discussions, opinions, and the occasional argument over audit results. One of the ancillary purposes of the audits is to facilitate discussion and find out where the NATTS Technical Assistance Document needs work. We are always open to listen to ideas that will improve the NATTS program. Most of all, we are committed to producing a level of consistency and quality in the NATTS program which will provide data that is defensible, precise, and useful for making decisions. Our hope is that the TSAs will move us forward to this goal. *Greg Noah*

Making the Best Use of Limited PEP Data ... the Primary Substitute

In 2006 we reduced the requirements for the PM2.5 PEP program from 25% of each method designation 4 times a year to a requirement of to 5 or 8 audits a year. This reduction has put a premium on the PEP values since we have much less data to make bias assessment's with adequate levels of confidence. Therefore, when we

perform a PEP and then find out that the primary sampler did not produce a valid sample, we try to perform another PEP in order to meet data completeness criteria. Since we are not always aware that this invalidation has occurred, EPA is contemplating substituting a second monitor (if one exists) at a site on days when the primary has not produced a

valid sample. OAQPS will be working with the Regions on the most appropriate process for doing this. We may attempt to pair with like method designations first or pair with the next lowest POC. A similar procedure may be used for the 2011-2013 PM2.5 QA Report that is currently under development.

Posting CSN Flow Audit Data in AQS

We have made progress preparing a streamlined procedure for monitoring organization QA staff to post CSN sampler flow audits into AQS. The National Air Data Group has devised an input transaction to place the data in tables designed to “feed” the newly developed QA transactions. The audit result for each channel will be populated for each of the analytes that are currently being routinely quantified and reported. This will also include audit values for the more automated but less deployed samplers such as the Sunset Carbon, the Thermo Electron Model 5020 sulfate, and Magee aethalometers.

We are reviewing the current AQS tables to make sure there are no incorrect or misleading combinations of

analyte codes, sampler ID and method codes. If your agency is using something other than a URG 3000N, Met One SASS or SuperSASS, Sunset Carbon, the Thermo Electron Model 5020 sulfate, or Magee aethalometer for analytes that you are posting to coincide with a PM2.5 CSN analyte code (88xxx) please contact Dennis Crumpler or Robert Coats (see address below)

It is extremely important that SLT agencies review metadata that has been entered into AQS for their CSN sites and samplers. NATT's analytes (metals) values should not be loaded under PM2.5 chemical speciation analyte codes unless they have been acquired with PM2.5 chemical speciation samplers and analytical methods, i.e., the values are serving two roles. In reality low-volume NATT's metals should derive from PM-

10 samples so the proper “method code” will create a delineation that prevents PM2.5 CSN audit data from pairing with NATT's routine data. Four agencies have just been given the green light to try to post their CSN audit data for 2014 using the new input transaction template. If successful we will prepare a webinar to push the template out to all the CSN operating agencies.

A similar template will exist for posting monthly verifications as well. Note this will not work for audits of IMPROVE samplers. That may come in the future. For more information contact crumpler.dennis@epa.gov or coats.robert@epa.gov

Dennis Crumpler

2013 PM2.5 PEP DATA is Available in AQS

Hopefully most agencies have tried to generate AMP256 reports which provide the “Performance Evaluation Program” bias measurements for 2013. We successfully posted results for a about 500 sampling events out of a possible 560. The error report for the 50+ unpaired results has some recurrent themes. We think there were a few human errors in recording the correct AQS site ID number on our PEP field data sheets or entering the data in our data base. These will be identified and corrected by our PEP contractors or the EPA Regional PEP Leads. But a significant number of failed pairings were due to the absence of data posted for the

primary sampler. Where the SLT primary sampler failed during an event and it was the only sampler at the site during that sampling event, or the SLT invalidated the data for that sampling day, the data loss is irrecoverable. If however, on the sampling day, another collocated FRM or FEM sampler was generating data that the monitoring agency could legitimately use for design values, we have a chance to pair those together. The problem at the moment is that the AMP 256 report algorithm does not know to look for another value. The National Air Data Group and the QA team is investigating a solution, but it may not be implemented for some time. In these cases we recommend that the

EPA Regional PEP lead provide the PEP data that is unmatched to the respective monitoring agency. The agency can then use the data for certification, if it can find a data point from another sampler that operated on that date at that site. Remember the network Data Quality Objective calculation is based on 3 years of data. If the PQAO does not have 15 data points per ≤5 sites or 24 for >5 sites, they can discuss getting additional PEP data points in the next year with the Regional PEP lead. For more information contact Crumpler.Dennis@epa.gov.

Dennis Crumpler



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The Office of Air Quality Planning and Standards is dedicated to developing a quality system to ensure that the Nation's ambient air data is of appropriate quality for informed decision making. We realize that it is only through the efforts of our EPA partners and the monitoring organizations that this data quality goal will be met. This newsletter is intended to provide up-to-date communications on changes or improvements to our quality system. Please pass a copy of this along to your peers and e-mail us with any issues you'd like discussed.

Mike Papp

Important People and Websites

Since 1998, the OAQPS QA Team has been working with the Office of Radiation and Indoor Air in Montgomery and Las Vegas and ORD in order to accomplish it's QA mission. The following personnel are listed by the major programs they implement. Since all are EPA employees, their e-mail address is: last.name.first.name@epa.gov.

The **EPA Regions** are the primary contacts for the monitoring organizations and should always be informed of QA issues.

Program

STN/IMPROVE Lab Performance Evaluations
Tribal Air Monitoring
Speciation Trends Network QA Lead
OAQPS QA Manager
Standard Reference Photometer Lead
National Air Toxics Trend Sites QA Lead
Criteria Pollutant QA Lead
NPAP Lead
PM2.5 PEP Lead
Pb PEP Lead
Ambient Air Protocol Gas Verification Program
STN/IMPROVE Lab PE/TSA/Special Studies
STN/IMPROVE Lab PE/TSA/Special Studies

Person

Eric Bozwell
Emilio Braganza
Dennis Crumpler
Joe Elkins
Scott Moore
Greg Noah
Mike Papp
Mark Shanis
Dennis Crumpler
Greg Noah
Solomon Ricks
Jewell Smiley
Steve Taylor

Affiliation

ORIA- Montgomery
ORIA-LV
OAQPS
OAQPS
ORD-APPCD
OAQPS
OAQPS
OAQPS
OAQPS
OAQPS
OAQPS
ORIA-Montgomery
ORIA-Montgomery

Websites

Website

EPA Quality Staff
AMTIC
AMTIC QA Page

URL

[EPA Quality System](http://www.epa.gov/ttn/amtic/)
<http://www.epa.gov/ttn/amtic/>
<http://www.epa.gov/ttn/amtic/quality.html>

Description

Overall EPA QA policy and guidance
Ambient air monitoring and QA
Direct access to QA programs