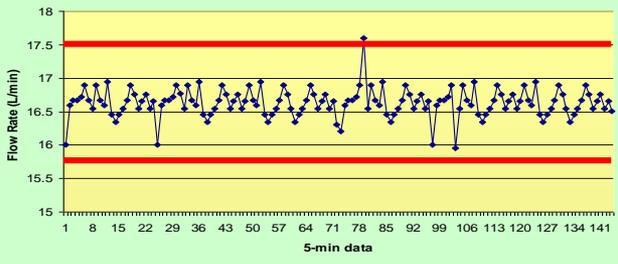
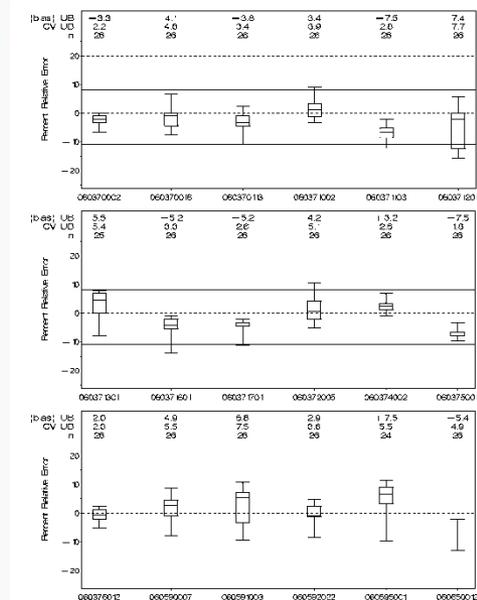


24-Hour, 5-minute Flow Rates



# Quality System For the Ambient Air Monitoring Program



# Training Agenda



- Start out slow....
  - QA Policy/Regs/Guidance
  - Documentation
- and then get rough!
  - Criteria Pollutants
    - Gases – *Mark Shanis*
    - PM2.5/PM10- *Dennis Crumpler*
    - Pb- *Greg Noah*
  - QA Transactions/Reporting – *Robert Coats*
  - Assessments
    - Data Quality Indicator Statistics -*Melinda R. Battista*
    - Technical Systems Audits – *Stephanie McCarthy/Greg Noah*
    - Data Certification- *Mike Papp*

# Clean Air Act



“(2) Establishment of a national network to monitor, collect, and compile data **with quantification of certainty** in the status and trends of air emissions, deposition, **air quality**, surface water quality, forest condition, and visibility impairment and to **ensure the comparability of air quality data** collected in different States and obtained from different nations.”

How do we **quantify certainty** and **ensure comparability**?

Q:\COMP\ENVIR1\CLEANAIR.001

Sec. 103

CLEAN AIR ACT

10

(c) AIR POLLUTANT MONITORING, ANALYSIS, MODELING, AND INVENTORY RESEARCH.—In carrying out subsection (a), the Administrator shall conduct a program of research, testing, and development of methods for sampling, measurement, monitoring, analysis, and modeling of air pollutants. Such program shall include the following elements:

(1) Consideration of individual, as well as complex mixtures of, air pollutants and their chemical transformations in the atmosphere.

(2) Establishment of a national network to monitor, collect, and compile data with quantification of certainty in the status and trends of air emissions, deposition, air quality, surface water quality, forest condition, and visibility impairment, and to ensure the comparability of air quality data collected in different States and obtained from different nations.

(3) Development of improved methods and technologies for sampling, measurement, monitoring, analysis, and modeling to increase understanding of the sources of ozone precursors, ozone formation, ozone transport, regional influences on urban ozone, regional ozone trends, and interactions of ozone with other pollutants. Emphasis shall be placed on those techniques which—

(A) improve the ability to inventory emissions of volatile organic compounds and nitrogen oxides that contribute to urban air pollution, including anthropogenic and natural sources;

(B) improve the understanding of the mechanism through which anthropogenic and biogenic volatile organic compounds react to form ozone and other oxidants; and

(C) improve the ability to identify and evaluate region-specific prevention and control options for ozone pollution.

(4) Submission of periodic reports to the Congress, not less than once every 5 years, which evaluate and assess the effectiveness of air pollution control regulations and programs using monitoring and modeling data obtained pursuant to this subsection.

(d) ENVIRONMENTAL HEALTH EFFECTS RESEARCH.—(1) The Administrator, in consultation with the Secretary of Health and Human Services, shall conduct a research program on the short-term and long-term effects of air pollutants, including wood smoke, on human health. In conducting such research program the Administrator—

(A) shall conduct studies, including epidemiological, clinical, and laboratory and field studies, as necessary to identify and evaluate exposure to and effects of air pollutants on human health;

(B) may utilize, on a reimbursable basis, the facilities of existing Federal scientific laboratories and research centers; and

(C) shall consult with other Federal agencies to ensure that similar research being conducted in other agencies is coordinated to avoid duplication.

(2) In conducting the research program under this subsection, the Administrator shall develop methods and techniques necessary

February 24, 2004



# Quality System

E4- A structured and **documented** management system..... of an organization for ensuring **quality** in its work processes, **products** (items) and services.

A series of management activities – including planning, implementation, and assessment – necessary to provide confidence in the **quality** & **defensibility** of data.

A system of activities whose purpose is to ensure that information derived from measurements are of a **quality** that the decision maker is willing to **risk making an inappropriate decision**.



Some decisions will be inappropriate  
(wrong) due to  
**data uncertainty... (error)**

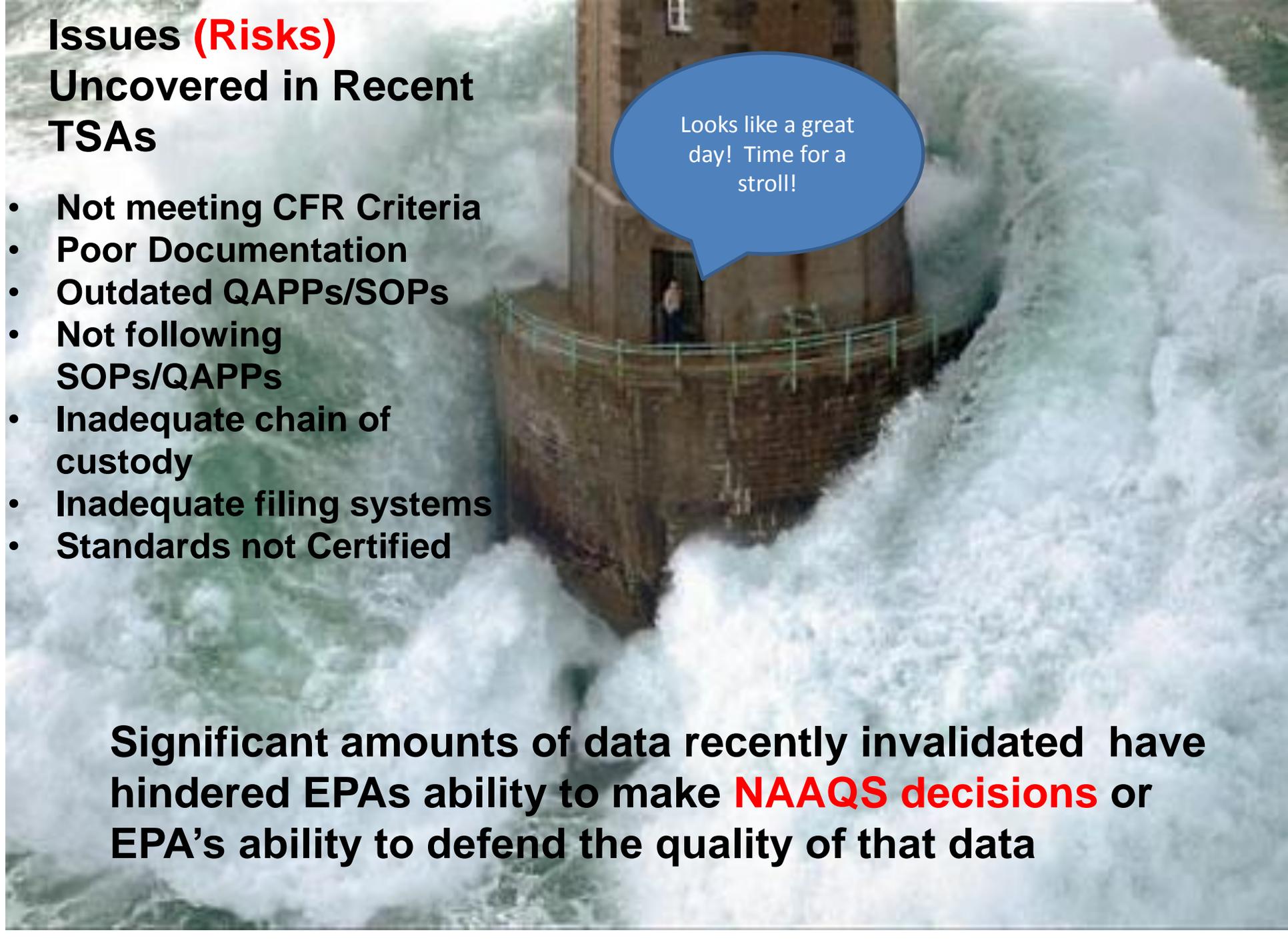
...the difference between  
your measurement (estimate)  
and the “truth”

Premise 1 - All estimates have error so all decisions made with estimates have **risks**.  
Premise 2- We can't afford 100% certainty in our decisions

# Issues (Risks)

## Uncovered in Recent TSAs

- Not meeting CFR Criteria
- Poor Documentation
- Outdated QAPPs/SOPs
- Not following SOPs/QAPPs
- Inadequate chain of custody
- Inadequate filing systems
- Standards not Certified



Looks like a great day!  
Time for a stroll!

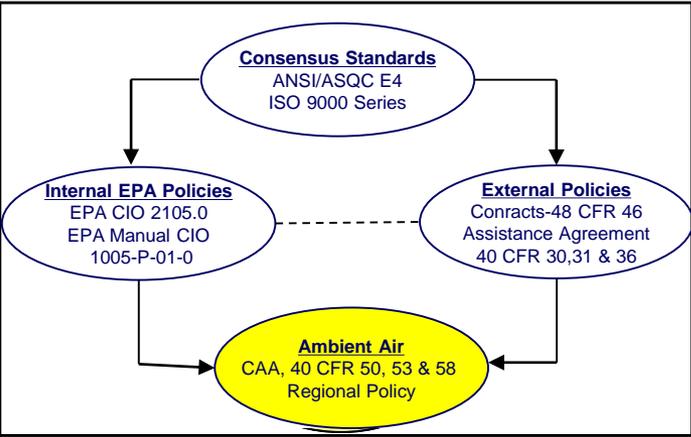
Significant amounts of data recently invalidated have hindered EPA's ability to make **NAAQS decisions** or EPA's ability to defend the quality of that data



# QA Policy, Regulations and Guidance

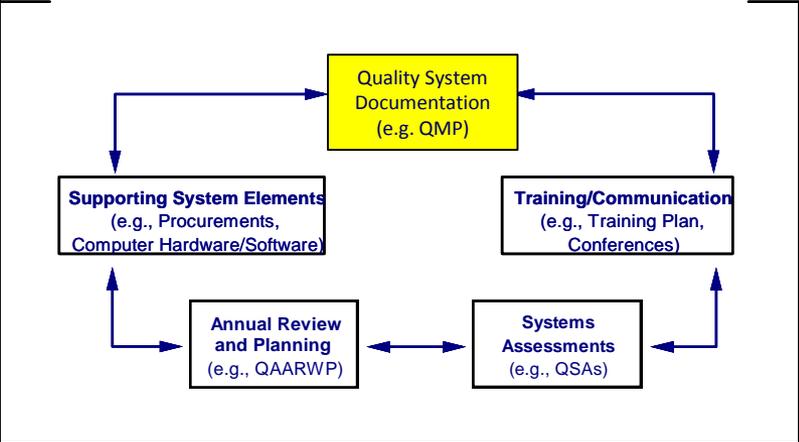
National Ambient Air Monitoring Conference August 2014

POLICY/REGULATIONS



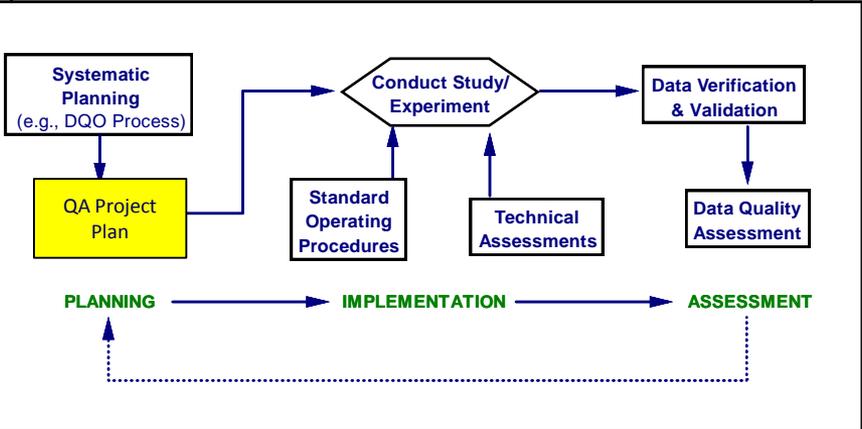
← Policy & Regulations

ORGANIZATION/PROGRAM



← Program

PROJECT

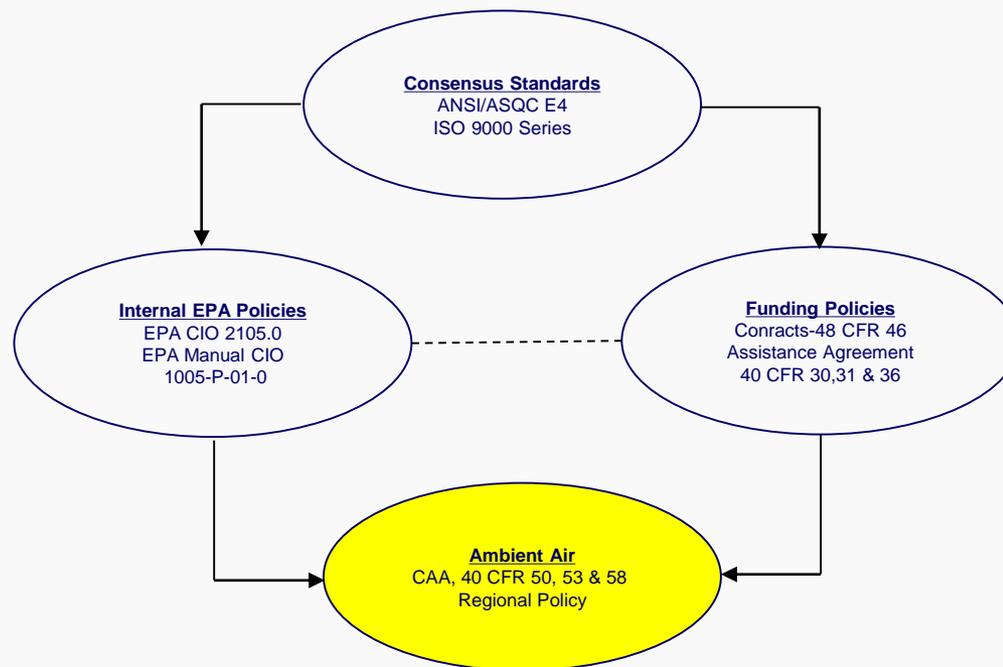


← Project

Defensible Products and Decisions

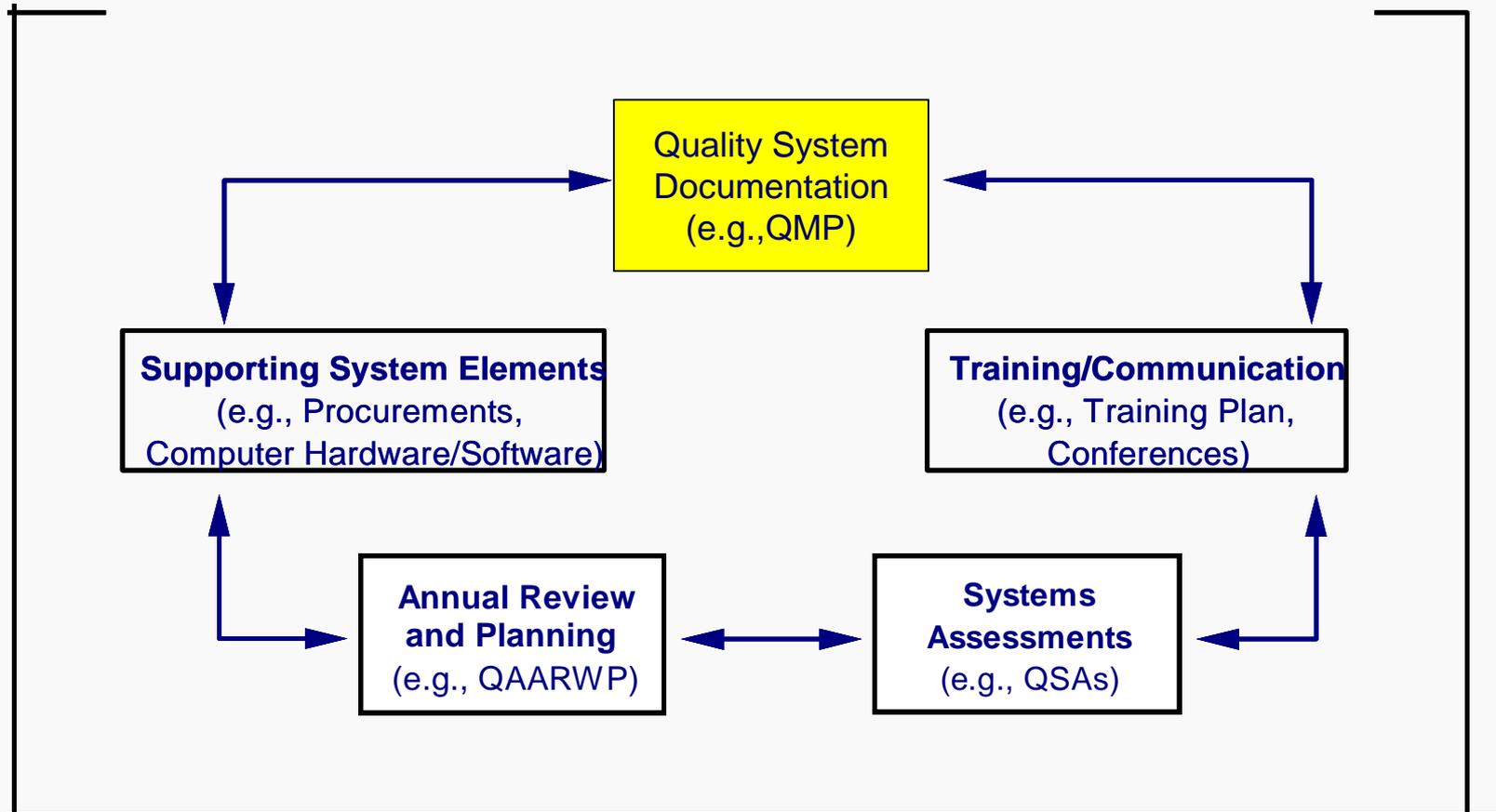
Defensible- able to withstand any reasonable challenge

# Level 1-QA Policy and Regulations

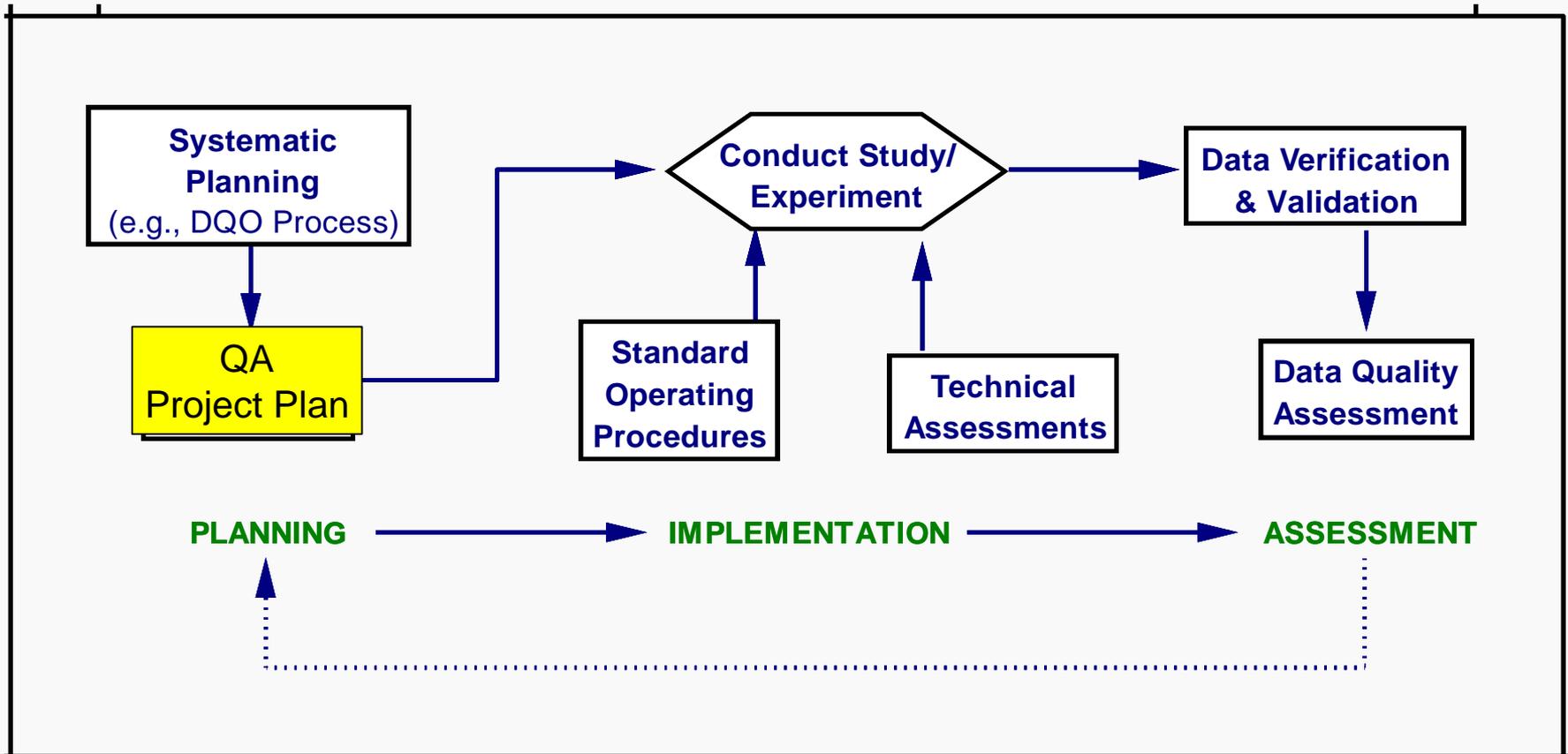


- CFR- Code of Federal Regulations
  - Part 50-National Ambient Air Standards (NAAQS) and Reference Methods
  - Part 53- Federal Reference Method and Equivalency Program
  - **Part 58 – Ambient Air Quality Surveillance**
    - Appendix A- Quality System

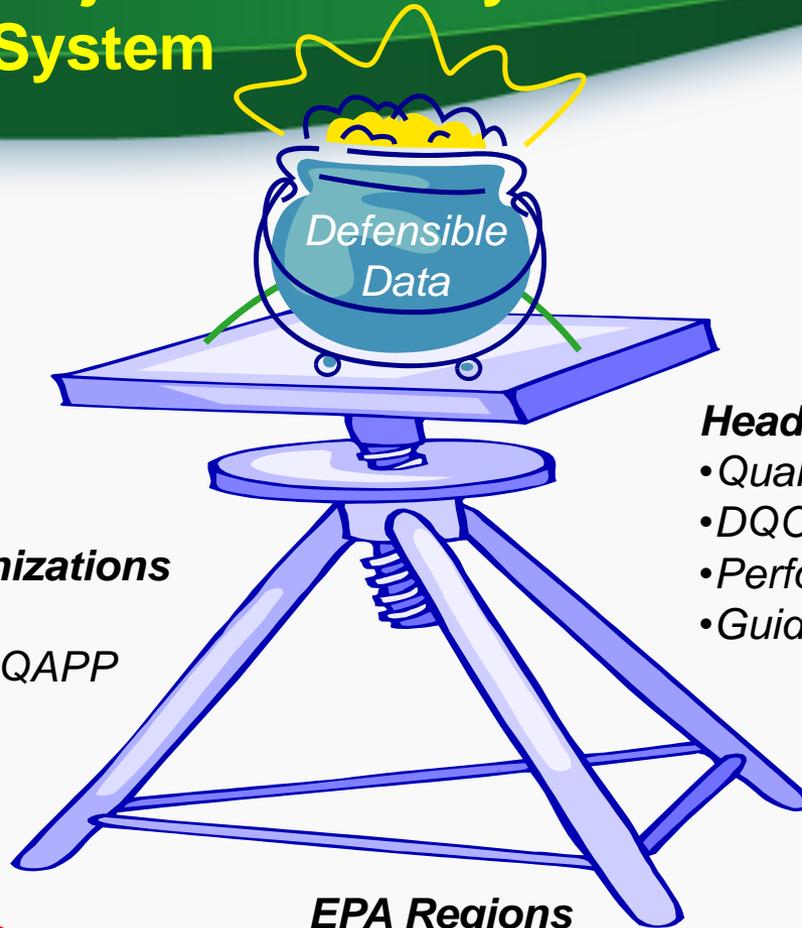
# Level 2 -Program



# Level 3- Monitoring



# Balanced/Objective Quality System



## Monitoring Organizations

- QMP
- Network Specific QAPP
- SOPs
- Quality Control
- Data Validation

## Headquarters – OAQPS

- Quality System Requirements
- DQOs
- Performance Evaluation Programs
- Guidance/Technical Memos/QA EYE

## EPA Regions

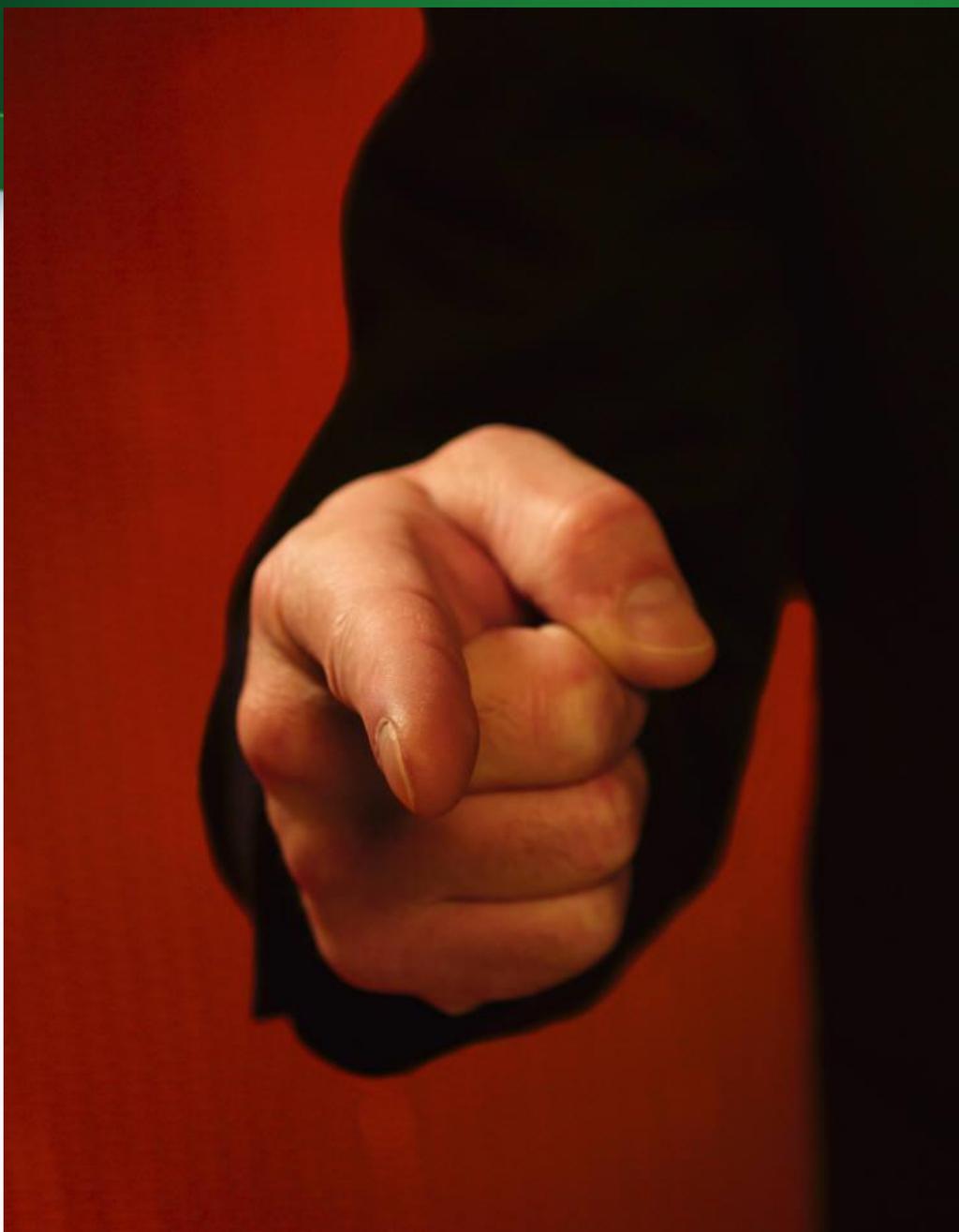
- QMP/QAPP Approval
- Technical Systems Audits
- Performance Evaluation Programs
- Technical Assistance

communication

communication



However, the ultimate responsibility for data quality rests with



# 40 CFR Pt. 58 App. A QA Requirements



## \* EPA QA Policy

### • Section 1

- General Info
- PQAO
- Applicability
- Definitions

### • Section 2

- QMPs/QAPPs\*
- Independent quality management function\*
- DQOs- (EPA)
- NPAP/PEP
- TSAs-(EPA Regions)
- NIST Traceable Standards

### • Section 3

- Quality Control and Assessment

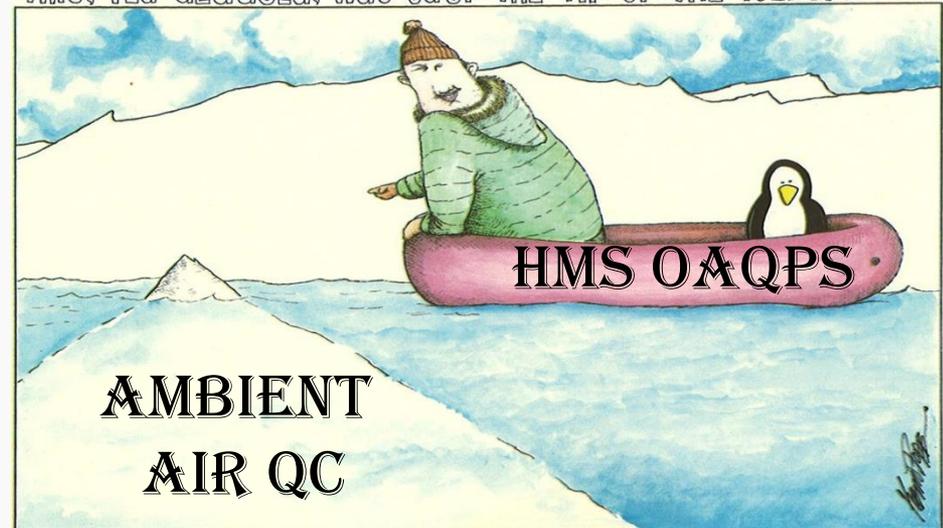
### • Section 4

- QA Stats

### • Section 5-

- Reporting Req.

THIS, TED deduced, was just the tip of the ICEBERG.



**Current Appendix A Format**

**Proposed Appendix A Format**

1. GENERAL INFORMATION

- ~~1.1 Similarities and Differences Between SLAMS and PSD Monitoring.~~
- ~~1.2 Measurement Uncertainty.~~
- 1.3 Measurement Quality Checks.
- 1.4 Assessments and Reports.

1. GENERAL INFORMATION

- 1.1 Applicability
- 1.2 Primary Quality Assurance Organization
- 1.3 Definitions (precision, bias etc)
- 1.4 Measurement Quality Checks
- 1.5 Assessments and Reports.

2 QUALITY SYSTEM REQUIREMENTS

- 2.1 Quality Management Plans and Quality Assurance Project Plans
- 2.2 Independence of Quality Assurance.
- 2.3. Data Quality Performance Requirements.
- 2.4 National Performance Evaluation Programs.
- 2.5 Technical Systems Audit Program.
- 2.6 Gaseous and Flow Rate Audit Standards.
- 2.7 Primary Requirements and Guidance.

2. QUALITY SYSTEM REQUIREMENTS

- 2.1 Quality Management Plans and Quality Assurance Project Plans.
- 2.2 Independence of Quality Assurance.
- 2.3. Data Quality Performance Requirements.
- 2.4 National Performance Evaluation Programs.
- 2.5 Technical Systems Audit Program.
- 2.6 Gaseous and Flow Rate Audit Standards.
- 2.7 Primary Requirements and Guidance.

3 MEASUREMENT QUALITY CHECK REQUIREMENTS

- 3.1 Primary Quality Assurance Organization.
- 3.2 Measurement Quality Checks of Automated Methods.
  - 3.2.1 One-Point Quality Control Check for SO<sub>2</sub>, NO<sub>2</sub>, O<sub>3</sub>, and CO.
  - 3.2.2 Annual performance evaluation for SO<sub>2</sub>, NO<sub>2</sub>, O<sub>3</sub>, and CO.
  - 3.2.3 Flow Rate Verification for Particulate Matter
  - 3.2.4 Semi-Annual Flow Rate Audit for Particulate Matter.
  - 3.2.5 Collocated Sampling Procedures for PM<sub>2.5</sub>.
  - 3.2.6 Collocated Sampling Procedures for PM<sub>10-2.5</sub>.
  - 3.2.7 PM<sub>2.5</sub> Performance Evaluation Program (PEP) Procedures.
  - 3.2.8 PM<sub>10-2.5</sub> Performance Evaluation Program
- 3.3 Measurement Quality Checks of Manual Methods:
  - 3.3.1 Collocated Sampling Procedures for PM<sub>10</sub>.
  - 3.3.2 Flow Rate Verification for Particulate Matter.
  - 3.3.3 Semi-Annual Flow Rate Audit for Particulate Matter.
  - 3.3.4 Pb Methods.
  - 3.3.5 Collocated Sampling Procedures for PM<sub>2.5</sub>.
  - ~~3.3.6 Collocated Sampling Procedures for PM<sub>10-2.5</sub>.~~
  - 3.3.7 PM<sub>2.5</sub> Performance Evaluation Program (PEP) Procedures.
  - ~~3.3.8 PM<sub>10-2.5</sub> Performance Evaluation Program (PEP) Procedures.~~

3. MEASUREMENT QUALITY CHECK REQUIREMENTS

- 3.1 Gaseous Analyzers of SO<sub>2</sub>, NO<sub>2</sub>, O<sub>3</sub>, and CO.
  - 3.1.1 One-Point Quality Control Check for SO<sub>2</sub>, NO<sub>2</sub>, O<sub>3</sub>, and CO.
  - 3.1.2 Annual performance evaluation for SO<sub>2</sub>, NO<sub>2</sub>, O<sub>3</sub>, and CO
  - 3.1.3 National Performance Audit Program
- 3.2 PM<sub>2.5</sub>
  - 3.2.1 Flow Rate Verification
  - 3.2.2 Semi-Annual Flow Rate Audit
  - 3.2.3 Collocated Sampling.
  - 3.2.4 PM<sub>2.5</sub> Performance Evaluation Program (PEP) Procedures.
- 3.3 PM<sub>10</sub>
  - 3.3.1 Flow Rate Verification for Low Volume Samplers
  - 3.3.2 Flow Rate Verification for High Volume Samplers
  - 3.3.3 Semi-Annual Flow Rate Audit.
  - 3.3.4 Collocated Sampling for Manual PM<sub>10</sub>
- 3.4 Pb Methods
  - 3.4.1 Flow Rate Verification for Low Volume Samplers
  - 3.4.2 Flow Rate Verification for High Volume Samplers
  - 3.4.3 Semi-Annual Flow Rate Audit.
  - 3.4.4 Collocated Sampling for TSP
  - 3.4.5 Collocated Sampling for Pb-PM<sub>10</sub>
  - 3.4.6 Pb Analysis Audits
  - 3.4.7 Performance Evaluation Program (PEP) Procedures

# Important Proposed Reg Changes



- Removed PSD sent it back to App B
- Removed QA Requirements for:
  - $PM_{10-2.5}$  and Pb at non-source NCore.
- PQAOs
  - Added oversight language
    - “the agency identified as the PQAO (usually the state agency) will be responsible for overseeing that the Appendix A requirements are being met by all consolidated locals within the PQAO”*
  - Think about whether consolidation is appropriate
    - Are all locals within a PQAO producing the same quality data?
    - All QAPPS should mention all locals within a PQAO

# Weight of Evidence (WOE) (in current App A Reg)



Failure to conduct or pass a required check or procedure, or a series of required checks or procedures, does not by itself invalidate data for regulatory decision making. **Rather, monitoring agencies and EPA shall use the checks and procedures required in this appendix in combination with other data quality information, reports, and similar documents showing overall compliance with part 58. Accordingly, EPA and monitoring agencies shall use a “weight of evidence” approach when determining the suitability of data for regulatory decisions. The EPA reserves the authority to use or not use monitoring data submitted by a monitoring organization when making regulatory decisions based on the EPA's assessment of the quality of the data.** Generally, consensus built validation templates or validation criteria already approved in Quality Assurance Project Plans (QAPPs) should be used as the basis for the weight of evidence approach.

# Weight of Evidence (WOE)



- Number of validation issues on the rise
  - Data quality issues in 5 Regions in 2014 affecting NAAQS decisions
- Included in reg to provide some level of evaluation into the validation process
  - Not every check is a show stopper
    - 1 point QC
    - Flow rate verification
- Not a get out of jail card
- Regs and validation template are still drivers
- Make it easy on yourself and EPA.. follow the regs and your QAPP



# Independence of Quality Assurance

The monitoring organization must provide for a quality assurance management function:

- The management system that determines and implements the quality policy defined in a monitoring organization's QMP
- **must have sufficient technical expertise and management authority to conduct independent oversight**
- **should be organizationally independent of environmental data generation activities.**



Ya gotta be able to make the tough calls!

National Ambient Air Monitoring Conference August 2014



# Quality System Parts: QMPs, QAPPS and SOPs

## QMP \*\*

- Describes orgs quality system
- Establishes capability/commitment

Ford

*Quality is Job 1*



## QA Project Plan \*\*

- Identifies the reasons for collecting data and for collecting it in a specific way
- Documents how the data are collected and how quality is maintained
- Is now part of data certification. QAPP should be updated every 5 years. <5 (G); 5-10 (Y); >10 R

Mustang



## SOP

- Ensures consistency
  - From day to day
  - From one person to the next

Engine



\*\* Will be Reported to AQS (Proposed in Reg) including courtesy submission to Regions that allow QAPP self-approval

# QAPP Data on AQS

<https://aqs.epa.gov/aqsweb/codes/data/QAPP.html>



## Quality Assurance Project Plans (QAPPS)

Sorted On: Agency Code

Last Updated on 7/23/2014 at 14:13:48

[Download Delimited Version of the Code Table](#)

[Return to TTN Code Pages](#)

Page: 1 of 4

[First Page](#) [Previous Page](#) [Next Page](#) [Last Page](#)

<a href="#">&lt; Agency Code &gt;</a>	<a href="#">&lt; Agency Desc &gt;</a>	<a href="#">&lt; Parameter Code &gt;</a>	<a href="#">&lt; Parameter Desc &gt;</a>	<a href="#">&lt; Parameter Class &gt;</a>	<a href="#">&lt; Status &gt;</a>	<a href="#">&lt; Submission Date &gt;</a>	<a href="#">&lt; Evaluation Date &gt;</a>
		42401	Sulfur dioxide	None	Approved	2013-02-27	2013-02-27
		42101	Carbon monoxide	None	Approved	2013-02-27	2013-02-27
		88101	PM2.5 - Local Conditions	None	Approved	2013-02-27	2013-02-27
		44201	Ozone	None	Approved	2013-02-27	2013-02-27
		42401	Sulfur dioxide	None	Approved	2010-01-15	2010-11-02
		14129	Lead (TSP) LC	None	Approved	2010-01-16	2010-11-02
		88101	PM2.5 - Local Conditions	None	Approved	1999-01-01	1999-01-01
		85129	Lead PM10 LC FRM/FEM	None	Approved	2010-01-16	2010-11-02
		81102	PM10 Total 0-10um STP	None	Approved	2010-01-15	2010-11-02
		44201	Ozone	None	Approved	2010-01-15	2010-11-02
		12128	Lead (TSP) STP	None	Approved	2010-01-16	2010-11-02

**QMPs will be posted soon**



# Policies on the Horizon

## FEM and FOG

# Forum on Environmental Measurements (FEM) and Field Operations Group Guidelines (FOG)



- **FEM-** assure organizations have effective quality systems and technical competence to generate valid environmental data.
- Submission of documentation of competency as part of grants process.
- Demonstrations can include:
  - Participation in accreditation or certification programs
  - **Participation in proficiency testing (PT) or round robin programs;**
  - **Ongoing U.S. EPA accepted demonstrations and audits/assessments of proficiency; and**
  - Other pertinent documentation that demonstrates competency (e.g., past performance to similar statement of work [SOW]).
- **FOG-** minimum requirements for establishing a quality management system to support field activities
- Ten activities to address:
  - Personnel Training
  - Document control
  - Records Management
  - Evidence Management/Sample Handling
  - Field Documentation
  - Field Equipment
  - Field Inspections
  - Reports Internal Audits
  - Corrective Actions
- A good QAPP will cover these.
- Not presently required for grantees ....but

See QA EYE Issue 14 for more details

# FEM Competency Table

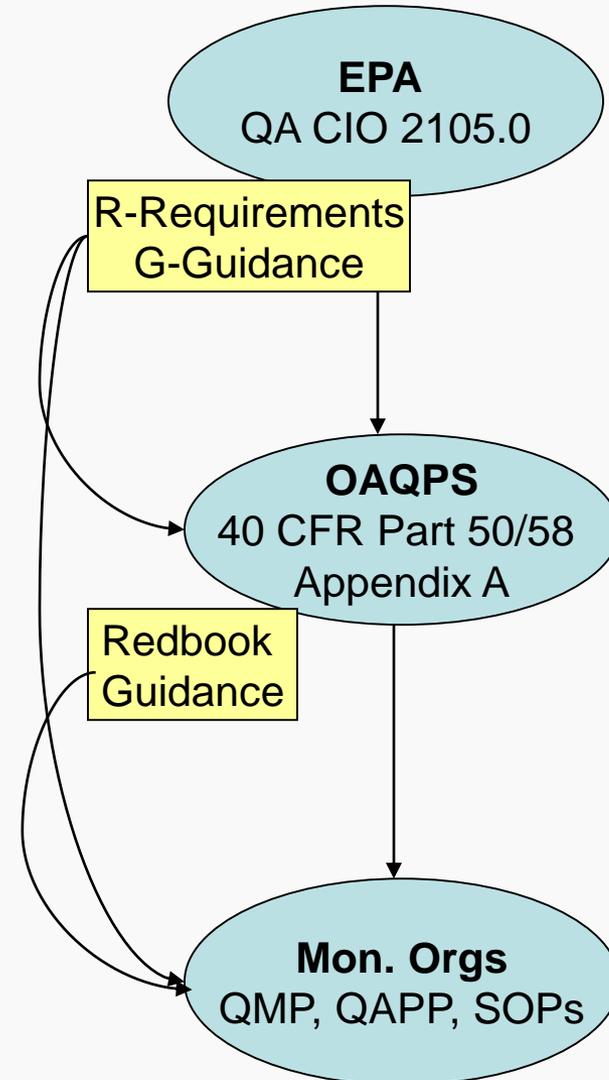


Example Competency Table for Ambient Air Monitoring Activities												
Pollutant/Program	Past Performance	QMP/QAPP Approval Dates		Performace Evaluation Programs						Other TSAs	EPA TSA	Training/ Certification
		QMP	QAPP	NPAP	PEP	PT	Round Robin	SRP	AA-PGVP	Date	Date	
Criteria -O3												
Criteria- CO												
Criteria -NO2/Noy/NOx												
Criteria -SO2												
Criteria -PM2.5												
Criteria -PM10												
Criteria -Pb												
PM10-2.5												
NATTS												
CSN												
PAMS												

# Regulations vs Guidance



- Regulations
  - Must be followed
  - Usually minimum requirements.. more is better
- Guidance
  - More details on regulations
  - Provides additional suggestions or strongly suggests
  - Are not mandatory, but you need an acceptable alternative
  - You can help- QA Handbook Revision Workgroup



# QA Handbook Changes

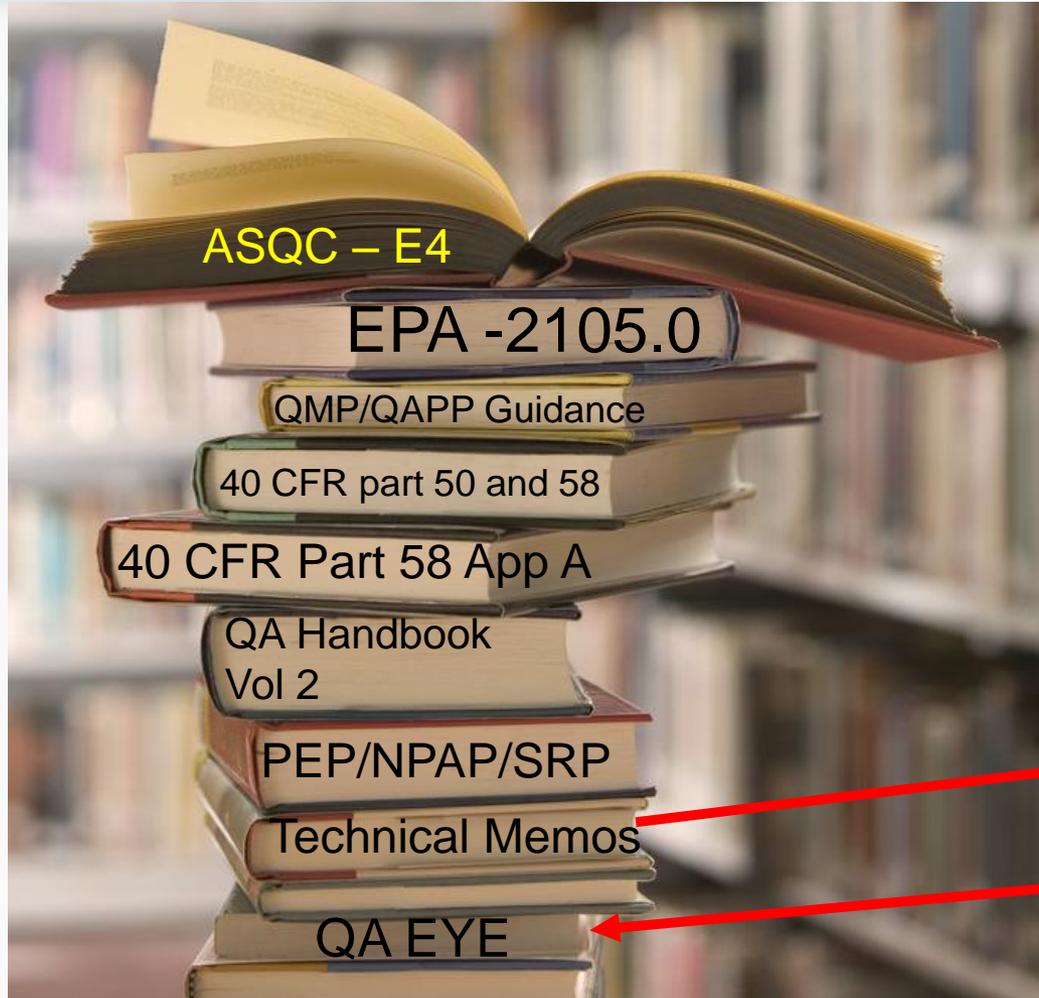


Suggested and Implemented Changes to the Validation Template. Posted on AMTIC 7/2014

Template Title	Criteria	Field changed	Original Value	Revised Value	Importance	Date of Change	Comment
PM <sub>2.5</sub> Filter Based Local Conditions Validation Template	Collocated Samples	Information/ Action	App A Sec 2.3.1.3	App A Sec 2.3.1.1	Low		Initial reference for acceptance value was for PM10-2.5 DQO which was incorrect and should be PM2.5.
Pb High Volume TSP Validation Template		Template Title	Pb High Volume TSP Validation Template	Pb High Volume TSP Local Conditions Validation Template	Low		
NO <sub>2</sub> , NO <sub>x</sub> , NO Validation Template	Zero/span check	Acceptance criteria	Zero drift < + 1.5 ppb	Zero drift $\leq \pm 3.0$ ppb (24 hr) $\leq \pm 5.0$ ppb (>24hr-14 day)	High	6/3/2014	See Technical Guidance at <a href="http://www.epa.gov/ttn/amtic/cpreldoc.html">http://www.epa.gov/ttn/amtic/cpreldoc.html</a>
O3 Validation Template	Zero/span check	Acceptance criteria	Zero drift < + 1.5 ppb	Zero drift $\leq \pm 3.0$ ppb (24 hr) $\leq \pm 5.0$ ppb (>24hr-14 day)	High	6/3/2014	See Technical Guidance at <a href="http://www.epa.gov/ttn/amtic/cpreldoc.html">http://www.epa.gov/ttn/amtic/cpreldoc.html</a>
SO2 Validation Template	Zero/span check	Acceptance criteria	Zero drift < + 1.5 ppb	Zero drift $\leq \pm 3.0$ ppb (24 hr) $\leq \pm 5.0$ ppb (>24hr-14 day)	High	6/3/2014	See Technical Guidance at <a href="http://www.epa.gov/ttn/amtic/cpreldoc.html">http://www.epa.gov/ttn/amtic/cpreldoc.html</a>
CO Validation Template	Zero/span check	Acceptance criteria	Zero drift < + 0.03 ppm	Zero drift $\leq \pm 0.4$ ppm (24 hr) $\leq \pm 0.6$ ppm (>24hr-14 day)	High	6/3/2014	See Technical Guidance at <a href="http://www.epa.gov/ttn/amtic/cpreldoc.html">http://www.epa.gov/ttn/amtic/cpreldoc.html</a>
Continuous PM10 STP Conditions Validation Template		Template Title	Continuous PM10 STP Conditions Validation Template	Continuous PM10 STP Conditions Validation Template	Low		misspelling
Number of Low Volume PM		In Comment #1 sections	Comment about < 80	Revised comment to use	Low		Bottom of Template explaining the use of external

# Summer Reading List

## What should be in your Library?



# QA EYE Issues/Articles Sorter



Issue	Page	Title	Category
1	1	Revival of the EPA Protocol Gas Program	AA-PGVP
4	3	Status on the resurrection of the Protocol Gas Verification Program (PGVP)	AA-PGVP
8	5	Ambient Air Protocol Gas Verification Program –Getting Ready	AA-PGVP
9	2	Ambient Air Protocol Gas Verification Program Operational	AA-PGVP
10	2	Ambient Air Protocol Gas Verification Program Wraps up for the Year-Improvements on the Way	AA-PGVP
11	1	Ambient Air Protocol Gas Verification Completes Year 1 Annual Report Posted	AA-PGVP
13	7	Ambient Air Protocol Gas Verification Program-2nd Report Published	AA-PGVP
14	10	Ambient Air Protocol Gas Verification Program Completes 3rd Year	AA-PGVP
15	14	Ambient Air Protocol Gas Program Update	AA-PGVP
2	4	AQS Issue—PM2.5 Flow Rate Unit Codes May be Incorrect	AQS/PM2.5
2	4	AQS Issue- “Actual” vs. “Indicated”... Confusion Still Abounds	AQS
2	5	AQS Issue—Need for Monitor Collocated Data in AQS	AQS
4	4	Number of Primary Monitor Definitions in AQS on the Rise, but Corrections Still Needed	AQS
4	5	WebEx Training on the P&A Transaction Generator	AQS
5	5	AQS Issue-Two Local Primary Standards Codes Replaced	AQS
5	5	AQS Training Increasing to Support Tribal Needs	AQS

<http://www.epa.gov/ttn/amtic/qanews.html>



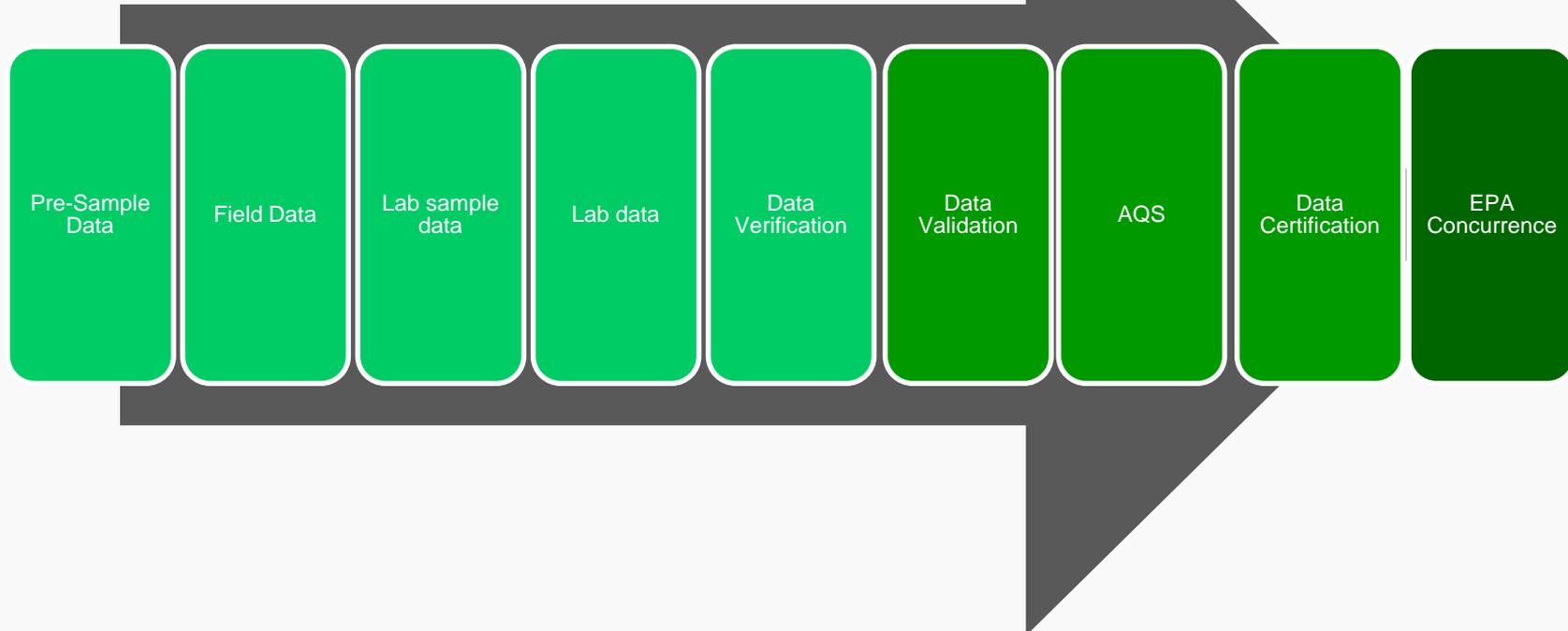
# Documents and Records

Document, Document, Document....

File, File, File....

**If it's not documented, it did not happen!**

# Data flows...



**Each data point is influenced by numerous people and processes. Thorough documentation is needed to ensure accurate data validation.**

# Documents/Records Questions?



## What are your records?

- QMP/QAPPS/SOPs
- Training and certifications
- Logbooks
- Forms
  - Calibrations/Precision/QC-Checks
  - Maintenance
- Electronic and/or Paper Charts
  - Minute data
- Chain-of-Custody (CoC) forms
- Databases
- See QA Handbook (Table 5-1)

## Are they organized?

- Documented filing procedure (QMP)
- Could someone find what they were looking for with little effort?

**Do your records have enough detail to recreate an unusual event without staff having to add information years later?**

## Where are your records?

- In the field, in the office
- Within the office, are they in one central location, or spread out across many offices?
- Avoid records being stored in the offices of individual employees

## Are your records safe?

- Electronic back-up and in two systems/media
- Official files write-protected?



# The 5 Documentation W's



- **Who** is performing the work?
  - All data records should be signed and dated
- **What** pollutant, procedure, analyzer, calibrator?
  - Equipment IDs, makes & models
- **When** is the activity occurring?
  - Time and date, please!
- **Where** is the data being collected?
  - Identify the location of the site/data acquisition
- **Why** is the activity needed?
  - Be specific! Is it time for an annual recalibration per SOP, or has an instrument malfunctioned?



- Bound
- Page numbered
- Entries should be written in ink, signed, and dated.
- Corrections should be made with a single line through the incorrect entry, the site operator's initials, and the date of the correction.
- Do not leave large blank spaces in logbooks.
- Place an X in space that is unused.
- Do not back-fill!
- You can enter past information in your logbook, but enter it with today's date (and an explanation)!

Recommend that logbooks be scanned on some routine frequency; protects the written information, especially in the event of a disaster

**What about Electronic Logbooks????**



# **Cross-Media Electronic Reporting Regulation CROMERR**

Provides the legal framework for electronic reporting to the Environmental Protection Agency (EPA) and states, tribes, and local governments that are authorized to administer EPA programs

<http://www.epa.gov/cromerr/states.html>

# CROMERR



CROMERR is a performance-based regulation to evaluate electronic reporting systems and address a number of topics, including:

- Criteria for establishing a copy of record
- Integrity of electronic documents
- Opportunity to review and repudiate copy of record
- Validity of electronic signature
- Determination of the identity of the individual uniquely entitled to use a signature device



A large, faint watermark of the Environmental Protection Agency (EPA) logo is centered in the background. The logo features a stylized flower with three leaves and a circular head, surrounded by the text "UNITED STATES ENVIRONMENTAL PROTECTION AGENCY".

**Electronic Logbooks????**

**Stay Tuned**