Ambient Monitoring Update

Lewis Weinstock
Office of Air Quality Planning and Standards

Outline

- Selected NAAQS Updates
- Data Certification Process
- Notable monitoring program issues
- Quality Assurance Topics

NAAQS Summary Table

Pollutant [final rule cite]		Primary/ Secondary	Averaging Time	Level	Form	Monitoring Changes
Carbon Monoxide [76 FR 54294, Aug 31, 2011]		primary	8-hour	9 ppm	Not to be exceeded more than once per year	Near-road 2015, 2017
			1-hour	35 ppm		0.5/1.0 TPY sites Airport study Added at NCore
Lead [73 FR 66964, Nov 12, 2008]		primary and secondary	Rolling 3 month average	0.15 µg/m^3 (1)	Not to be exceeded	Near-road Area-wide S/V sites 2013+/TBD
Nitrogen Dioxide [75 FR 6474, Feb 9, 2010] [61 FR 52852, Oct 8, 1996]		primary	1-hour	100 ppb	98th percentile, averaged over 3 years	
		primary and secondary	Annual	53 ppb (2)	Annual Mean	
Ozone [73 FR 16436, Mar 27, 2008]		primary and secondary	8-hour	0.075 ppm (3)	Annual fourth-highest daily maximum 8-hr concentration, averaged over 3 years	Under Review
Particle Pollution [71 FR 61144, Oct 17, 2006]	$PM_{2.5}$	primary and secondary	Annual	15 µg/m^3	annual mean, averaged over 3 years	NAAQS proposed on Jun 14, 2012
			24-hour	35 µg/m^3	98th percentile, averaged over 3 years	
	PM_{10}	primary and secondary	24-hour	150 µg/m^3	Not to be exceeded more than once per year on average over 3 years	None
Sulfur Dioxide [75 FR 35520, Jun 22, 2010] [38 FR 25678, Sept 14, 1973]		primary	1-hour	75 ppb (4)	99th percentile of 1-hour daily maximum concentrations, averaged over 3 years	PWEI - 2013 Stakeholder process
		secondary	3-hour	0.5 ppm	Not to be exceeded more than once per year	Pilot Study SOx/NOx

as of October 2011

Link to Key Footnotes

PM NAAQS – Update on Current Review

- On June 14, 2012, in accordance with a court deadline, EPA proposed to strengthen the primary and secondary National Ambient Air Quality Standards (NAAQS) for fine particles, or $PM_{2.5}$
  - Proposed rule was published in the *Federal Register* on June 29, 2012
  - http://www.gpo.gov/fdsys/pkg/FR-2012-06-29/pdf/2012-15017.pdf
- The proposed standards would be more protective of public health and welfare than the current standards
- Federal rules already issued will make tremendous progress toward meeting the stronger health and welfare standards
  - 99 percent of counties are projected to meet the proposed standards without the need for additional local measures
- This proposal reflects consideration of advice from the Clean Air Scientific Advisory Committee (CASAC), the agency's independent science advisors

Specifically, EPA Is Proposing To

- Strengthen the annual primary $PM_{2.5}$ standard from 15.0 micrograms per cubic meter ($\mu g/m^3$) to within a range of 12.0 to 13.0 $\mu g/m^3$
  - EPA also is seeking comment on alternative levels, down to 11.0 $\mu g/m^3$
- Retain the existing 24-hour primary fine particle health standard level of 35 $\mu g/m^3$
- Set a distinct secondary standard for $PM_{2.5}$ to address visibility effects associated with particles, primarily in urban areas. EPA is proposing two options for the level of this secondary 24-hour standard: 30 deciviews or 28 deciviews
  - EPA is also proposing to retain the current secondary standards to address non-visibility welfare effects
- Retain the primary 24-Hour PM_{10} (coarse particle) standard
- Update the Air Quality Index (AQI) for $PM_{2.5}$, consistent with the proposed primary $PM_{2.5}$ standards
- Update certain monitoring, data handling and permitting requirements for fine particles
  - EPA is not proposing to expand the number of monitors

Opportunities to Comment on EPA's PM NAAQS Proposal

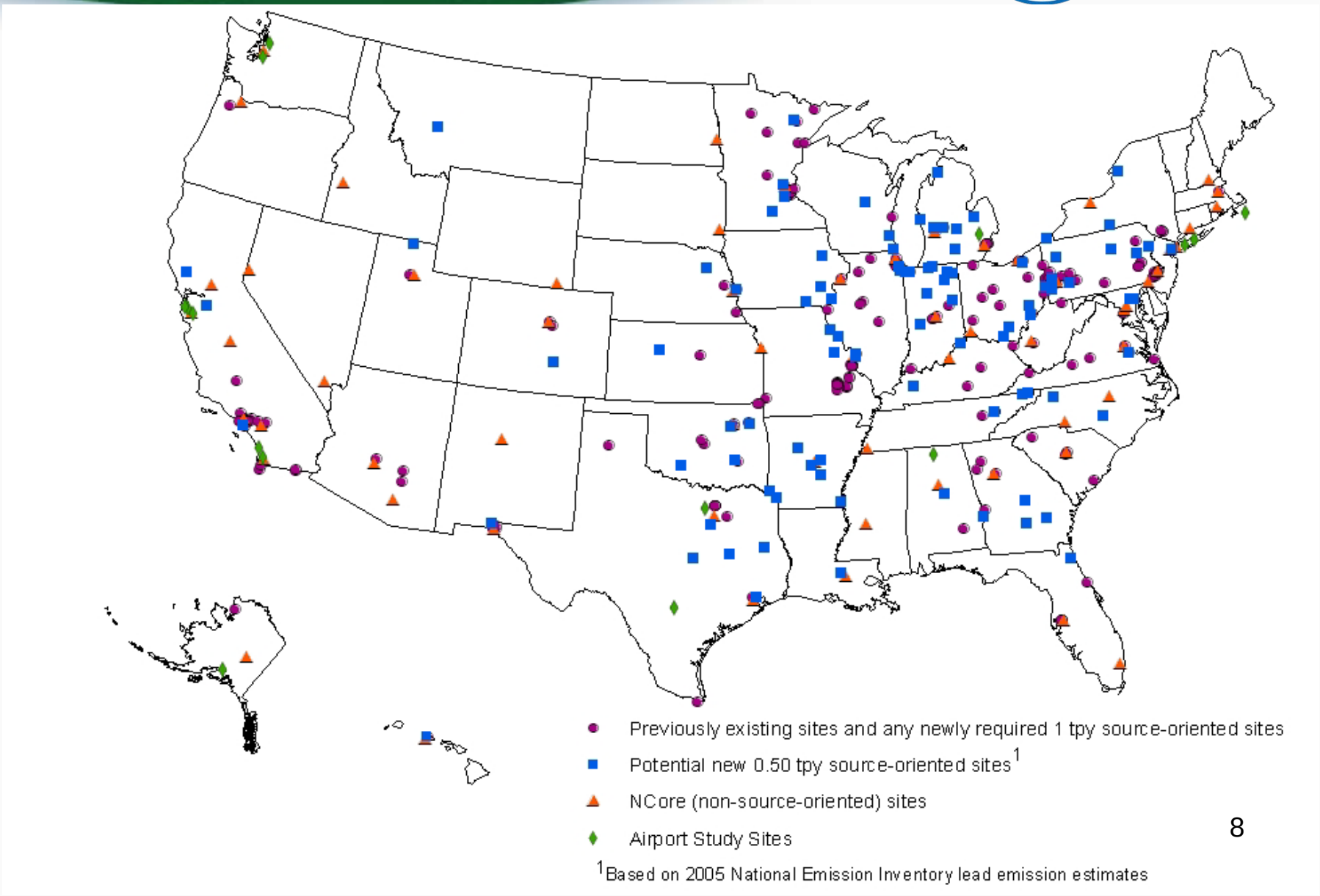
- Before issuing final standards, EPA will take comment
  - Public comments due by August 31, 2012
  - Comments should be labeled with Docket ID number EPA-HQ-OAR-2007-0492
  - Public hearings were held in Philadelphia (July 17) and in Sacramento, Calif. (July 19)
- EPA will issue final standards by the court-ordered deadline of December 14, 2012
- For more information on the rule and how to comment, go to http://www.epa.gov/pm

$PM_{2.5}$ Ambient Air Monitoring Topics

- Remove Population-Oriented as a restriction for monitoring sites to be compared to the $PM_{2.5}$ NAAQS
- Consider requiring $PM_{2.5}$ monitoring in near-road locations
- Clarify applicability of monitors in Middle- and Micro-Scale Environments to the Annual $PM_{2.5}$ standard
- Use existing CSN/IMPROVE monitoring network to support a new secondary standard for $PM_{2.5}$ to address PM-related visibility impairment

- Additional topics clarifying the ambient air monitoring requirements; primarily of interest to S/l monitoring agencies:
  - Revise the term Community-Oriented for consistency with other NAAQS; prefer to use "area-wide monitoring sites"
  - $PM_{2.5}$ Methods – State our position on FRM and use of continuous FEM data
  - Use of monitoring data that has *not* met "all Quality Assurance Requirements" for comparison to the NAAQS?
  - Other data handling and monitoring topics

Lead NAAQS Monitoring Network



Lead – Key Messages

- Consider use of new FEM's
  - National contract (ICP-MS for TSP, XRF for PM_{10})
- Check that AQS data are coded properly
  - parameter codes 14129 (TSP LC), 85129 (PM10 LC)
  - correct method code
- Agencies with special study airport monitors should be discussing end of sampling issues with their regions before 12 month period is up

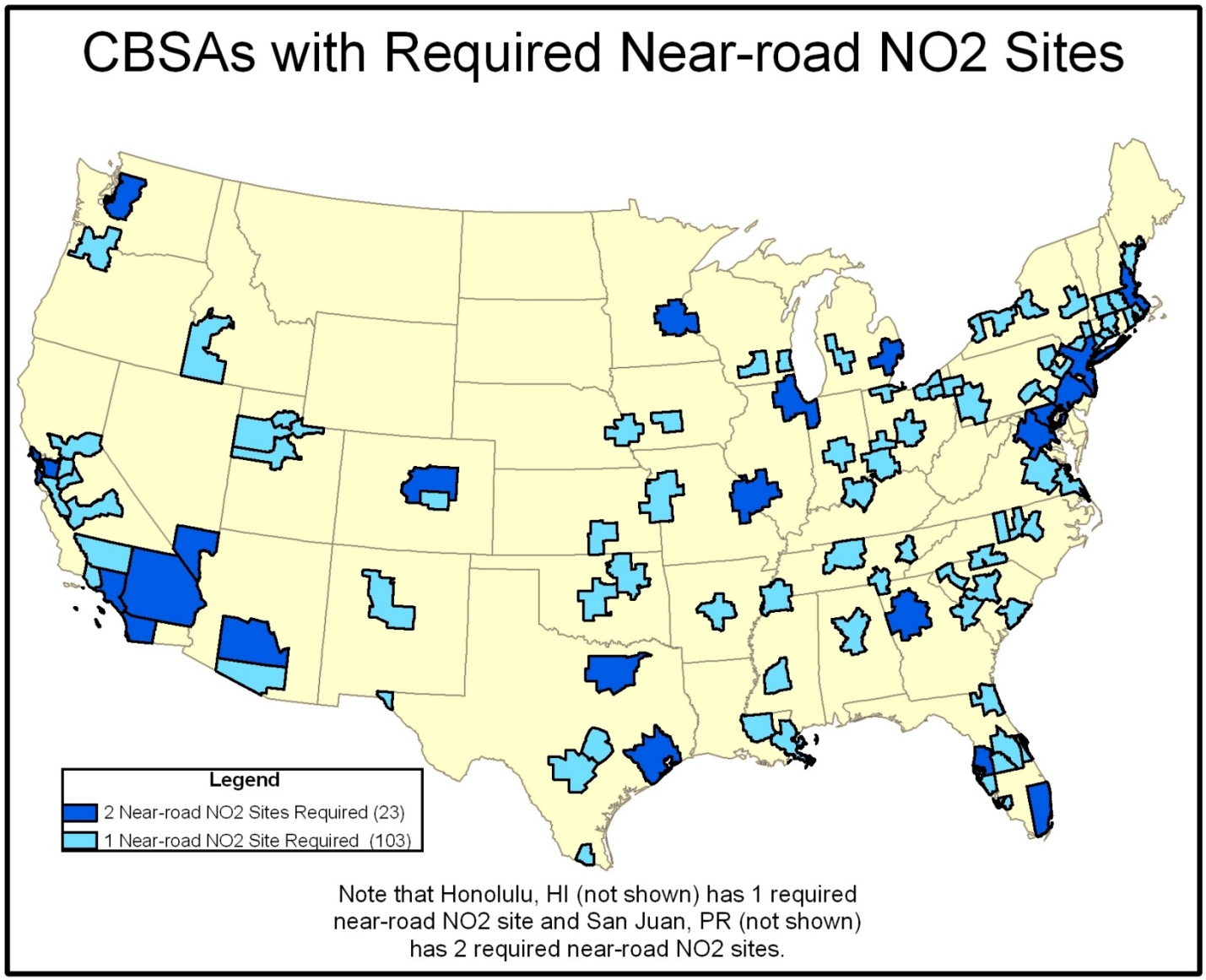
Lead – Recently Approved Methods

Inductively Coupled Plasma- Mass Spectrometry (Eastern Research Group, Inc.)
Manual Equivalent Method: EQL–0512–201
"Determination of Lead in TSP by Inductively Coupled Plasma Mass Spectrometry (ICP-MS) with Hot Block Dilute Acid and Hydrogen Peroxide Filter Extraction." In this method, total suspended particulate matter (TSP) is collected on glass fiber filters according to 40 CFR Appendix G to part 50, EPA Reference Method for the Determination of Lead in Suspended Particulate Matter Collected From Ambient Air. The filter samples are extracted in a hot block at 95°C with a solution of dilute hydrochloric acid and nitric acid and two aliquots of hydrogen peroxide, for a total of two and a half hours extraction time. The samples are brought to a final volume of 50 mL and the lead content of the sample extract is analyzed by Inductively Coupled Plasma-Mass Spectrometry (ICP-MS) based on EPA Compendium Method IO-3.5 and SW-846 Method 6020A.

Federal Register: Vol. 77, page 32632, 06/01/2012
Inductively Coupled Plasma- Mass Spectrometry (Eastern Research Group, Inc.)
Manual Equivalent Method: EQL–0512–202
"Determination of Lead in PM10 by Inductively Coupled Plasma Mass Spectrometry (ICP-MS) with Hot Block Dilute Acid and Hydrogen Peroxide Filter Extraction." In this method, PM10 particulate matter is collected on Teflon® membrane filters according to 40 CFR Appendix Q to part 50, EPA Reference Method for the Determination of Lead in Particulate Matter as PM10 Collected From Ambient Air. The filter samples are extracted in a hot block at 95°C with a solution of hydrochloric acid, nitric acid, and hydrofluoric acid and an aliquot of hydrogen peroxide for a total of two and a half hours extraction time. Samples are brought to a final volume of 50 mL and analyzed by Inductively Coupled Plasma-Mass Spectrometry (ICP-MS) based on EPA Compendium Method IO-3.5 and SW-846 Method 6020A.
Federal Register: Vol. 77, page 32632, 06/01/2012

http://www.epa.gov/ttn/amtic/files/ambient/criteria/reference-equivalent-methods-list.pdf

NO_2 – Near-road requirement



126 monitors in 102 CBSA's w/ population ≥500k

2nd site in CBSA's w/ population ≥2.5M or very high AADT ≥ 250k

Referenced in network plans due July 1, 2012

Operational by January 1, 2013*

*EPA is working with NACAA and the states to implement a common-sense plan to phase in these sites

NO_2 – Near-road rulemaking

- OAQPS has developed a draft proposal that would phase in the near-road monitoring deadlines over a longer term period. Our current thinking is as follows (annual monitoring network plans due 6 months earlier):
  - CBSA's ≥ 1M (52 sites): January 1, 2014
  - CBSA's ≥ 2.5M or AADT ≥ 250K (23 sites): January 1, 2015
  - CBSA's ≥ 500K (51 sites): January 1, 2017
- Please work with your regions on the submittal and review of the 2012 annual monitoring network plans
- Technical resources:
  - http://www.epa.gov/ttn/amtic/nearroad.html

O_3 – NAAQS Review Update

- Milestones
  - Second draft of the Ozone ISA released September 30, 2011
  - Second draft reviewed by CASAC January 9-10, 2012
  - CASAC Letter to the Administrator provided March 13, 2012
  - CASAC recommended development of a third draft of the ISA
  - Third draft of ISA in June 2012
  - First drafts of REA and PA will follow
  - CASAC review of third draft ISA and first drafts of REA and PA is planned for September 2012
  - NPRM (proposal) expected 2013
  - Final rule expected 2014
- Monitoring issues under consideration for NPRM
  - Ozone seasons and other network design requirements
  - PAMS
  - Methods (with ORD)
  - Data handling

Process review:
Annual air monitoring data certification

Key parts in red

Background - § 58.15 CFR Language

§ 58.15 Annual air monitoring data certification.

(a) The State, or where appropriate local, agency shall submit to the EPA Regional Administrator an annual air monitoring data certification letter to certify data collected at all SLAMS and at all FRM, FEM, and ARM SPM stations that meet criteria in appendix A to this part from January 1 to December 31 of the previous year. The senior air pollution control officer in each agency, or his or her designee, shall certify that the previous year of ambient concentration and quality assurance data are completely submitted to AQS and that the ambient concentration data are accurate to the best of her or his knowledge, taking into consideration the quality assurance findings.

(1) Through 2009, the annual data certification letter is due by July 1 of each year.

(2) Beginning in 2010, the annual data certification letter is due by May 1 of each year.

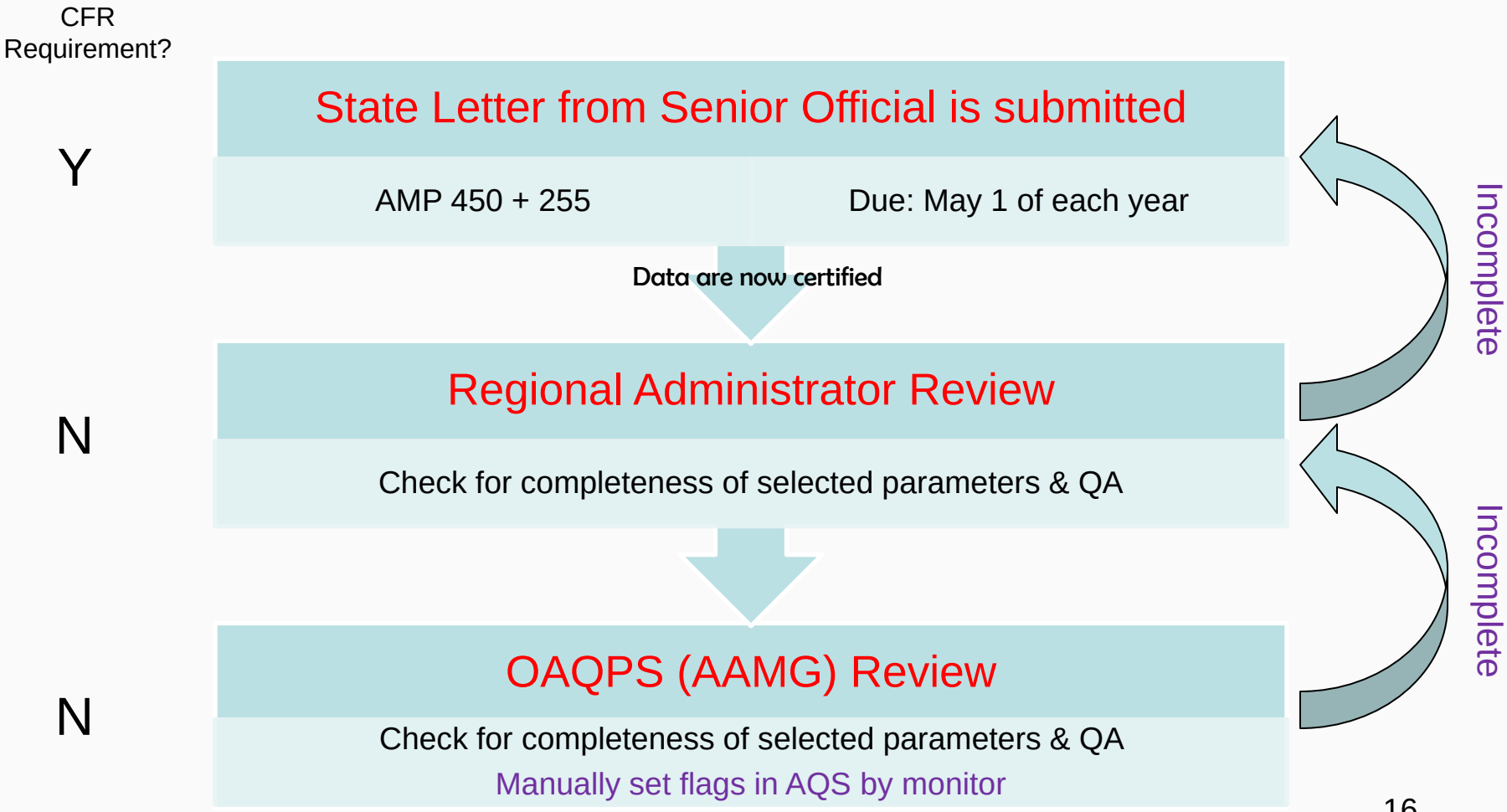
AMP 450

(b) Along with each certification letter, the State shall submit to the Administrator (through the appropriate Regional Office) an annual summary report of all the ambient air quality data collected at all SLAMS and at SPM stations using FRM, FEM, or ARMs. The annual report(s) shall be submitted for data collected from January 1 to December 31 of the previous year. The annual summary report(s) must contain all information and data required by the State's approved plan and must be submitted on the same schedule as the certification letter, unless an approved alternative date is included in the plan. The annual summary serves as the record of the specific data that is the object of the certification letter.

AMP 255

(c) Along with each certification letter, the State shall submit to the Administrator (through the appropriate Regional Office) a summary of the precision and accuracy data for all ambient air quality data collected at all SLAMS and at SPM stations using FRM, FEM, or ARMs. The summary of precision and accuracy shall be submitted for data collected from January 1 to December 31 of the previous year. The summary of precision and accuracy must be submitted on the same schedule as the certification letter, unless an approved alternative date is included in the plan.

§ 58.15 Current Process



Example State Letter

DAQEM

DEPARTMENT OF AIR QUALITY & ENVIRONMENTAL MANAGEMENT

500 S Grand Central Parkway 1st Floor · Box 555210 · Las Vegas, NV 89155-5210
(702) 455-5942 · Fax (702) 383-9994
Lewis Wallenmeyer Director · Tina Gingras Assistant Director

February 28, 2012

Mr. Jared Blumenfeld, Regional Administrator
Environmental Protection Agency - Region 9
Technical Support Office, Air Division
75 Hawthorne Street
San Francisco, CA 94105

Dear Mr. Blumenfeld:

This letter is intended to satisfy the monitoring data subject to certification for State and Local Air Monitoring Stations (SLAMS) that meet criteria in 40 CFR 58 Appendix A from January 01, 2011 to December 31, 2011. The ambient concentration data and the quality assurance data are completely submitted to Air Quality System (AQS) by Primary Quality Assurance Organization (PQAO) 0226 Clark County, NV, Department of Air Quality and Environmental Management (DAQEM).

Attached are the following AQS generated reports:

- AMP450 (Quick Look Criteria Parameters) report covers CO, NO2, SO2, O3, PM10, and PM2.5 (FRM).
- AMP255 (Quality Indication Summary) report summarizes the quality assurance data for each of the AMP450's pollutants.
- AMP450NC (Quick Look Non-Criteria Parameters) report covers NO, NOy, SO2 (five minute), and PM2.5 (continuous C-14 88502 method).
- AMP450NC for Speciation report covers PM2.5 speciation data submitted to AQS by the laboratory contractor.

Summer Ozone Study

Ozone parameter 44201 POC 4 does not meet 40 CFR Part 58 Appendix A and DAQEM is excluding those seasonal monitors from this certification. This was a special purpose effort to measure ozone transport at higher elevation levels into and out of Clark County.

Speciation

DAQEM operates the PM2.5 monitors associated with speciation. DAQEM does not submit data for the operation of these samplers to AQS. DAQEM has submitted all filters, QC data, and relevant operational data for the certifying period to Research Triangle Institute (RTI). Review of data reported to AQS by RTI has been completed and any corrections noted have been submitted to DEPO (Delivery Order Project Officer).

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Certification

After reasonable inquiry and review of the attached reports, DAQEM attests that all the ambient data required for certification is submitted and meets criteria in appendix A of 40 CFR part 58 and DAQEM applicable Quality System, excluding the exceptions presented above. Additionally, DAQEM attests that the 2011 ambient concentration data is representative of the sampled ambient condition, taking into consideration the quality assurance findings.

Should you have any questions related to the above matters, please contact Mike Sword, P.E., Air Quality Engineering Manager (Quality System Manager) at (702) 455-1615.

Sincerely,

L. Wallenmeyer

Lewis Wallenmeyer
Director

Attachments: AMP450
AMP255
AMP450NC
AMP450NC QL Speciation

Example OAQPS Response

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
AIR QUALITY SYSTEM
QUICK LOOK REPORT (AMP450)

Mar. 26, 2012

Ozone (44201) — Nevada — Parts per million (007)

1-HOUR

SITE ID	POC	PQAO	CITY	COUNTY	ADDRESS	YEAR	METH	VALID DAYS MEAS	NUM DAYS REQ	1ST MAX 1-HR	2ND MAX 1-HR	3RD MAX 1-HR	4TH MAX 1-HR	DAY MAX> STD	EST DAYS> STD	MISS DAYS< STD	CERT	EDT
32-003-0022	1	0226	North Las Vegas	Clark	NE OF CITY-12101 HWY 93/115	2011	087	125	365	.086	.086	.080	.080	0	0.0	0	Y	5
32-003-0023	1	0226	Mesquite	Clark	465 E. OLD MILL ROAD, MESQUITE, NV	2011	087	139	365	.073	.067	.066	.066	0	0.0	0	Y	0
32-003-0043	1	0226	Las Vegas	Clark	4525 NEW FOREST DRIVE	2011	087	363	365	.102	.091	.089	.086	0	0.0	2	Y	5
32-003-0071	1	0226	Las Vegas	Clark	7701 DUCHARME AVE	2011	087	362	365	.108	.088	.088	.087	0	0.0	1	Y	5
32-003-0073	1	0226	Las Vegas	Clark	333 PAVILION CENTER DRIVE	2011	087	361	365	.104	.089	.086	.085	0	0.0	4	Y	5
32-003-0075	1	0226	Las Vegas	Clark	6651 W. AZURE AVE	2011	087	356	365	.092	.091	.090	.089	0	0.0	3	Y	5
32-003-0538	2	0226	Las Vegas	Clark	5483 CLUBHOUSE DR-WINTERWOOD, LAS VEGAS	2011	087	360	365	.086	.082	.081	.080	0	0.0	2	Y	5
32-003-0540	1	0226	Las Vegas	Clark	4250 Karen Ave	2011	087	346	365	.086	.083	.082	.079	0	0.0	6	Y	0
32-003-0601	1	0226	Boulder City	Clark	1005 INDUSTRIAL ROAD	2011	087	358	365	.084	.076	.075	.075	0	0.0	1	Y	5
32-003-1019	1	0226	Jean	Clark	T25S R59E S10	2011	087	363	365	.085	.085	.084	.083	0	0.0	2	Y	5
32-003-2002	1	0226	Las Vegas	Clark	1301B EAST TONOPAH	2011	087	359	365	.086	.082	.082	.081	0	0.0	3	Y	0
32-003-7771	4	0226	Not in a city	Clark	Ries Rd, Spring Mountain Youth Camp, Mt. Charleston	2011	087	244	365	.091	.091	.088	.086	0	0.0	1		0
32-003-7776	4	0226	Not in a city	Clark	Mt. Pass	2011	087	126	365	.086	.086	.084	.081	0	0.0	0		0
32-003-7777	4	0226	Not in a city	Clark	Sandy Valley	2011	087	135	365	.074	.073	.071	.071	0	0.0	0		0
32-003-7778	4	0226	Not in a city	Clark	Arden Peak	2011	087	125	365	.090	.088	.088	.088	0	0.0	1		0

Note: The * indicates that the mean does not satisfy summary criteria.

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Process Issues

- Current OAQPS process is inefficient and unsustainable
  - OAQPS review and flag setting process is manually intensive
    - Too many parameters to review per CFR (includes non FRM/FEM, PAMS, met data)
      - Flags get removed by subsequent state data edits (and EPA is not notified when this happens in AQS)
    - States and regions perform inconsistent oversight of submittal process creating “do loops” of documentation review that rarely impact data validity
  - Net result: certification reviews are haphazardly completed based on state and EPA priorities
    - Squeaky wheel gets the grease - early certification requests - proactive states or regions who notice missing flags
  - Options are under discussion to revise process to reduce oversight burden and potentially become more reliant on regions and/or states

Gaseous Pollutant Data and QA Summary Report

QA Report - Pollutant- Ozone

Region	State	state name	county	County name	cbsa	cbsa name	AQS Site Id	Monitor Type	PQAO
9	06	California	019	Fresno	23420	Fresno, CA	06-019-0008	S	0012

POC	Begin Date	End Date	App A Ind	4th max 2007	4th max 2008	4th max 2009	Design Value	# exc* 2007	# exc 2008	# exc 2009
1	01-JAN-07	31-DEC-09	Yes	0.094	0.108	0.1	0.101	13	30	28

Routine Data Review

Routine Data Completeness %			Completeness Acceptable	Comments
2007	2008	2009		
99	97	98	Y	

Appendix A QA Data Review

Regionally Approved Documentation and Audits			
QMP Approval Date	QAPP Approval Date	Date of Last TSA	Comments
?	?	?	

1-Point QC Check Data								
QC Data Completeness			CV			Bias		
2007	2008	2009	2007	2008	2009	2007	2008	2009
100	100	100	2.51	3.17	3.01	-4.33	-2.77	-4.16

Annual Performance Evaluation Audit										
Year	Level 1 Avg D	Level 2 Avg D	Level 3 Avg D	Level 4 Avg D	Level 5 Avg D	Q1 Obs	Q2 Obs	Q3 Obs	Q4 Obs	Criteria Met
2007		-2.63	-1.4	-0.84		0	0	3	0	Y
2008		0	1.41	1.67		0	0	3	0	Y
2009		5.26	2.05	2.05		0	0	0	3	Y

NPAP Audits		
NPAP Audit Performed at Required Frequency	NPAP Aceptance Criteria Met	Comments on NPAP Audits

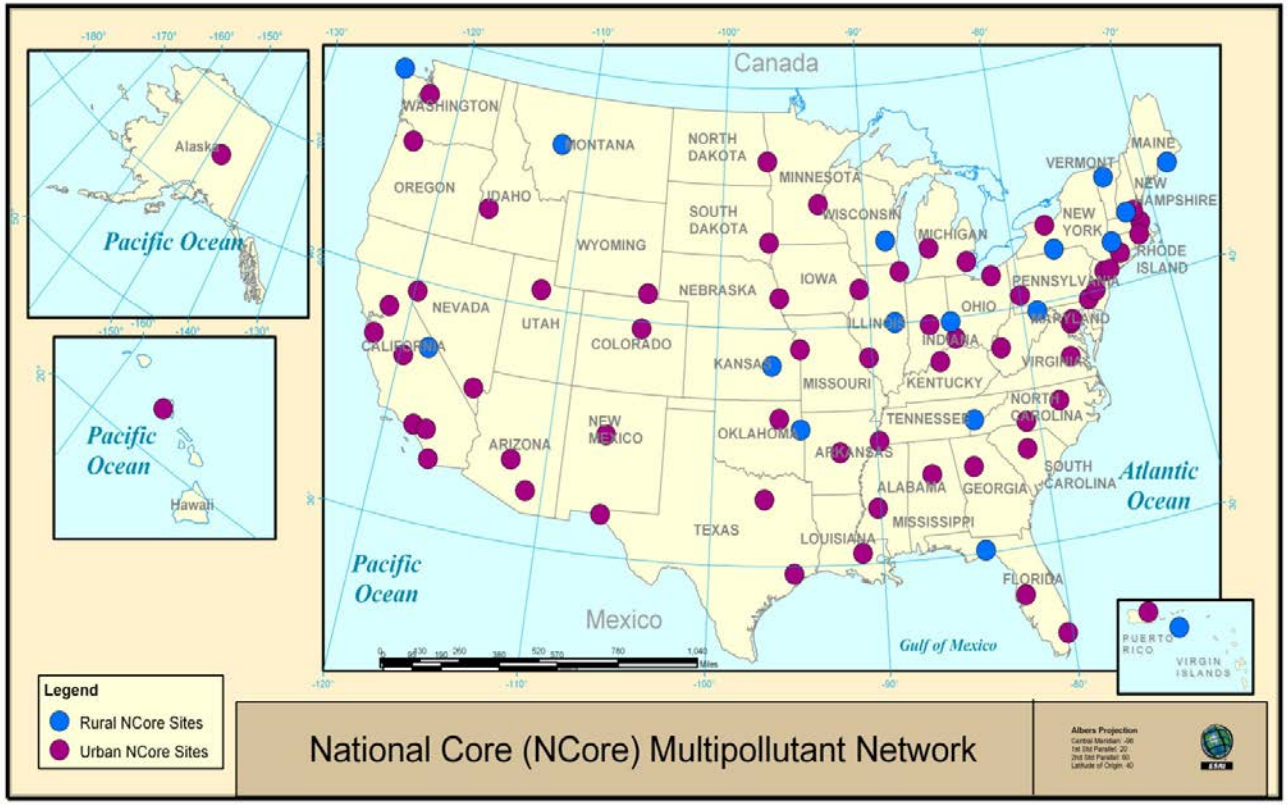
Prototype QA Report Card

- Possibly developed within AQS or Air Data framework, tapping Data Mart
- Check for completeness (concentrations, QA)
- Evaluate performance relative to DQO's
- Other App A requirements
- Option to set AQS certification flag (by state or region) based on results

Notable monitoring program issues

- ✓NCore
- ✓NATTS
- ✓Carbon measurements
- ✓PAMS

NCore Update



Most sites are operational and reporting data

Ensure monitor type is NCORE for all required measurements

Ensure use of correct AQS method code for trace gas monitors

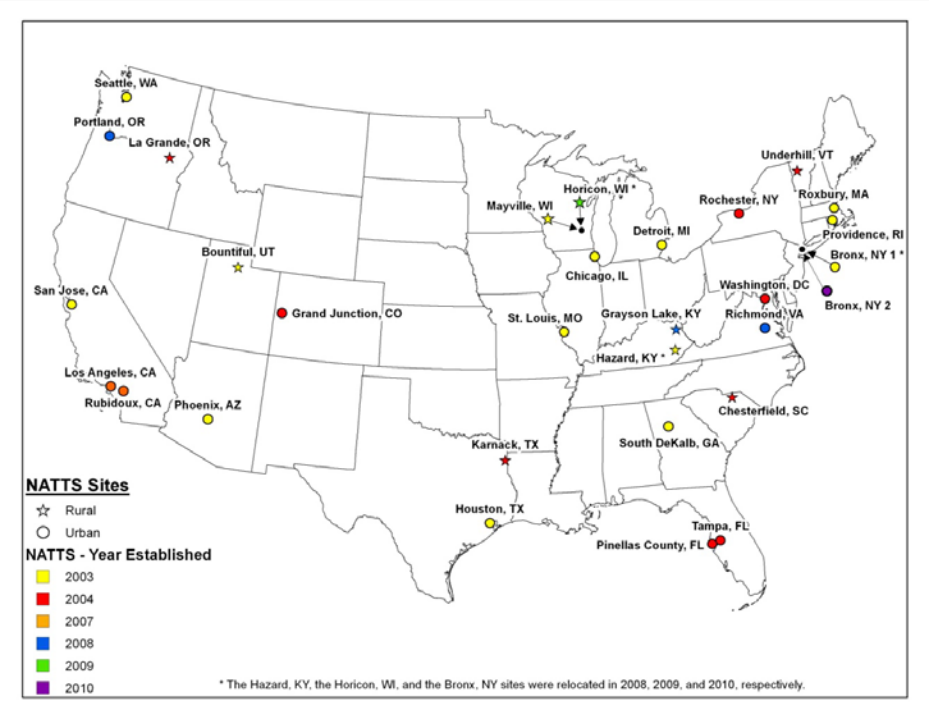
Check on parameter code reporting for $PM_{10-2.5}$ mass (86101), Pb-PM_{10} (85129), and met parameters (61103, 61104, 62101, 62201)

$PM_{10-2.5}$ FRM/FEM Methods

86101	Pm10-2.5 - Local Conditions	105	173	24 HOUR	Micrograms/cubic meter (LC)	BGI Inc Model PQ200 PM10-2.5 Sampler Pair			
86101	Pm10-2.5 - Local Conditions	105	175	24 HOUR	Micrograms/cubic meter (LC)	Thermo Scientific Partisole Model 2000 Sampler Pair			
86101	Pm10-2.5 - Local Conditions	105	176	24 HOUR	Micrograms/cubic meter (LC)	Thermo Scientific Partisole-Plus Model 2025 Sequential Sampler Pair			
86101	Pm10-2.5 - Local Conditions	105	178	24 HOUR	Micrograms/cubic meter (LC)	Thermo Scientific Partisole 2000-D Dichot.			
86101	Pm10-2.5 - Local Conditions	105	180	24 HOUR	Micrograms/cubic meter (LC)	Thermo Scientific Dichot. Partisole-Plus Model 2025-D Seq.			
86101	Pm10-2.5 - Local Conditions	105	185	1 HOUR	Micrograms/cubic meter (LC)	Met One BAM-1020 System			
86101	Pm10-2.5 - Local Conditions	105	185	24 HOUR	Micrograms/cubic meter (LC)	Met One BAM-1020 System			

NATTS Network Assessment

- Completed First 6-year Review of the NATTS Network
  - Program Older than 6-years, however initial sites were not sampling consistently until 2005
  - Today, Network Consists of 27 Sites (20 Urban / 7 Rural) Required to Sample for 19 Analytes (VOCs, Carbonyls, PAHs, PM_{10} Metals & TSP Hexavalent Chromium)
  - Report Includes National and Site Level Statistics, Urban vs. Rural Statistics, Inter-Comparison of Sites Close in Proximity (e.g. LA & Rubidoux) and Trends Analysis for Require NATTs Analytes (data from 2006-2010)



NATTS Data Reporting

- The following observations were made during the Network Assessment process:
  - "Questionable data" found in AQS despite QA prior to submission
    - Blank samples incorrectly entered as collocated data
    - Spiked samples incorrectly entered as primary data
    - Pollutants incorrectly coded under wrong AQS Site Code
    - Samples that should have been invalidated due to analytical error or contamination
  - Expected datasets missing from AQS
    - NATTS data must be submitted 120 calendar days after the end of the quarter
  - Sites with MDLs available that were not reported to AQS
    - As of July 1, 2011, MDLs must be submitted to AQS with the concentration records
  - Missing data not always reported
    - Missing data should be reported as Null Data
  - Less frequent reporting of analytical precision than overall precision
    - Sites should report both analytical and overall precision data
  - POCs associated with NATTS not always consistent over the assessment period (2005-2010)
    - POCs associated with NATTS should not change

Sunset Carbon Evaluation Project

- OAQPS Committed to Evaluation of New Continuous Monitoring Technologies in an Effort to:
  - Move Towards Continuous, Higher Time Resolution Samples
  - Reduce Need for Expensive, Time Consuming, Filter Based Sampling & Subsequent Lab Analysis
- Semi-Continuous OC/EC Instrument is Field Deployable Alternative
- Eight Sunset Instruments Have/Will be Deployed Throughout United States to Evaluate the Instrumentation in Routine Monitoring Settings
  - AIRS (RTP, NC) - October 2010 & January 2011
  - Blair Street (St. Louis, MO) - December 2011
  - Deer Park (Houston, TX) - December 2011
  - McMillan Reservoir (DC) - January 2012
  - Rubidoux (Los Angeles, CA) - February 2012 (Temporarily at HWY 710)
  - Com Ed (Chicago, IL) - June, 2012
  - Jerome Mack Middle School (Las Vegas, NV) – August 2012
- Sunset data will be compared with URG 3000N 24-hr filters & Aethalometers (where present)

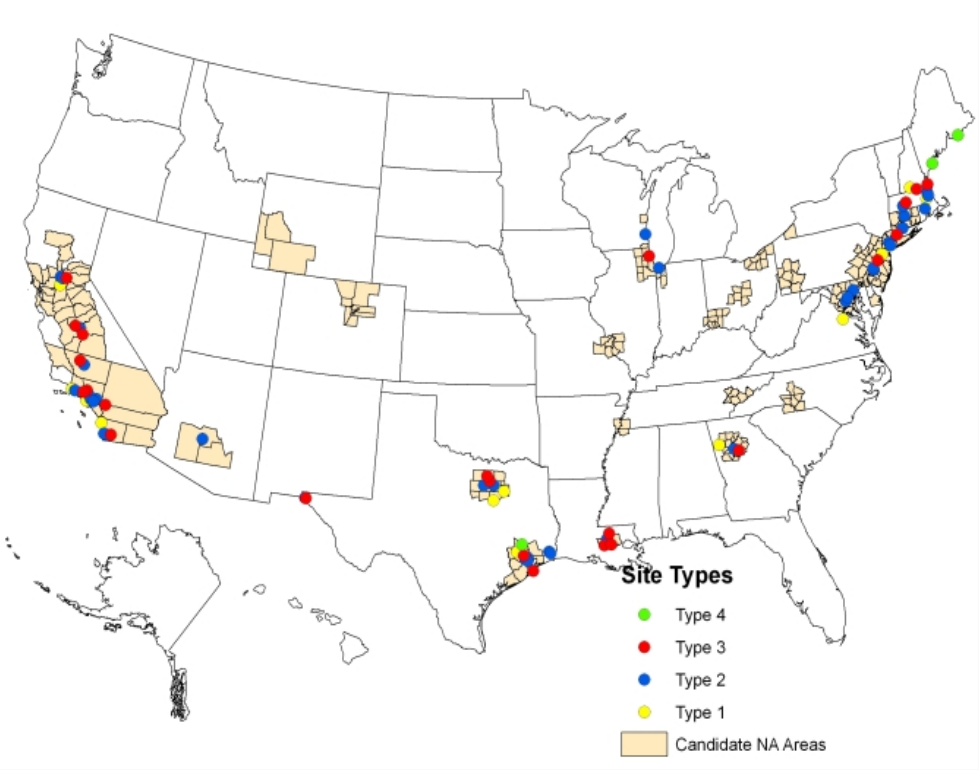
Sunset Data AQS Reporting

- Currently aware of 25 Sunset Semi-Continuous OC/EC instruments operating in the US
- Instruments factory calibrated to measure final sample collection volume at STP (20ºC, 760 mm Hg)
- Data should be converted to LC to be consistent with other PM measurements that are required to be reported at LC ($PM_{2.5}$ chemical species, $PM_{2.5}$ mass, $PM_{10-2.5}$, Pb-TSP and Pb-PM_{10}) and reported to AQS using the following parameter codes for local conditions:

Parameter Code	*Parameter Name*	*Method Code*	*Sample Analysis Description*	*Sample Collection Description*	*Unit Code*	*Unit Description*
88305	OC CSN Unadj. $PM_{2.5}$ LC TOT	867	TOT	Sunset Labs	105	µg/m^3 (LC)
88307	EC CSN $PM_{2.5}$ LC TOT	867	TOT	Sunset Labs	105	µg/m^3 (LC)
88312	Total Carbon $PM_{2.5}$ LC TOT	867	TOT	Sunset Labs	105	µg/m^3 (LC)
88316	Optical EC $PM_{2.5}$ LC TOT	895	Optical absorp. at 660nm	Sunset Labs	105	µg/m^3 (LC)

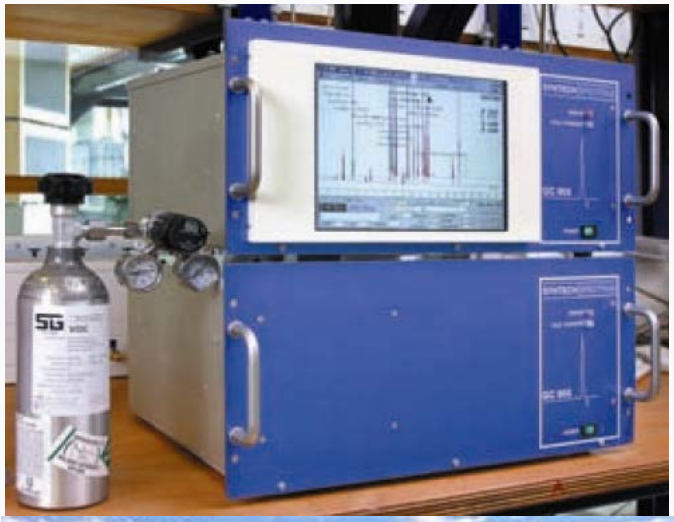
PAMS Re-Engineering: Rationale

- Changes have occurred since PAMS program first started
  - Ozone standard has been revised to a level of 0.075 ppm based on 3-year average of the annual 4th highest 8-hour average
  - Ozone concentrations have decreased in many areas of the country
- Equipment is old and in need of replacement
  - New technologies available that should be considered
- Concerns about data not being used enough
  - Improvements may make data more useful



PAMS Re-Engineering: Objectives

- Network Design
  - Consider flexibility by reducing # of required sites in an area
  - Broaden geographical applicability as needed
  - Extend period to match O_3 season
  - Support regional focus
- Sharpen VOC target list and consider modernized GC's for field evaluation
- Improve carbonyl methods
- Flexible and more affordable meteorological requirements
- Next Steps
  - Development and implementation of equipment testing plan
  - Briefings with EPA and state/local management level stakeholders
  - Inclusion of options in ozone NAAQS proposal scheduled for 2013



QA Slides

CSN Primary Quality Assurance Organization (PQAO) Reassignments

- PQAOs came into existence in 2006
- In most case the “Reporting Agency” became the PQAO
- Since RTI was the “Reporting Organization” for CSN data, an oversight allowed them to the assigned as the PQAO
- EPA is reassigning PQAO using the PQAO of the primary PM2.5 monitors at the CSN Site
- NEXT Step… reassigning NATTS sites from ERG to the appropriate monitoring organization

QA Transaction Revision Process

Current:

RP and RA transactions cover a dozen types of QA Assessments. This means:

- Transaction field names not always appropriate
- Transactions include fields that are inappropriate for some assessments
- Different processing by data pattern submitted

Future:

One transaction type for Quality Assurance

- QA Transaction Type RP and RA go away.
- Assessment types drive transactions
- Appropriate fields only with appropriate field names

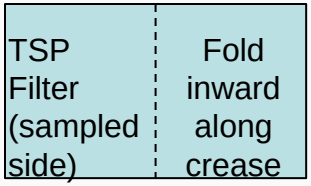
- Workgroup formed to review the appropriate fields for each assessment type
- Will provide more data evaluation opportunities & assist in automating data certification
- Plan to have this available for review in Sept-Oct 2012 time frame

Reporting Pb Analysis Audits (Some confusion abounds)

- Only need to report the Pb analysis audit data (RA transaction) for **One** of the sites within your PQAO
- Need to report all 6 values (3 at each concentration) per quarter
- Some contract labs may be providing replicate analysis for XRF analysis audits.
  - You can report the means of the replicates

Pb TSP Filter Shipping

- Filters being shipped to contract labs are arriving unfolded and unprotected
- Fold filter in half (sampled side folded inward)
  - Filter ID should be showing if filter was properly placed in sampler (filter ID side should not be the “sampled side”)
- Place in glassine envelope and then place in second envelope.



Ambient Air –Protocol Gas Verification Program

- Reporting to survey is a requirement
  - 75% success in 2010, 67% last year, 70% this year (so far)
  - Helps to ensure every producer is verified
  - We don't know who you are using until you tell us
  - One point of contact for each monitoring org gets a reminder about every two week
- Better participation (sending in cylinder for verification) is needed
  - Your participation keeps the program "blind" to the producer
  - If you don't help we have to ask the producers
  - You basically get a gas standard verified for free
- 2010 and 2011 Annual Reports on AMTIC