

AQS Development and Enhancement Plans

AQS CONFERENCE

Jake Summers June 9, 2010

AQS Development/ Enhancement Plans

- System Status
- Development Plan
- Data Improvements
- Software Implemented
- Active Development

IIII System Status

- Operational for over 8 years
 - Average of 8.3 million values per month
- For April 2010
 - 1835 Files loaded with 9.7 million values
 - » 180 users from 108 agencies
 - » 1 to 509,123 records
 - » 1400 files with 1 to 3 months data
 - » 1250 files with no errors (68 %)
 - 997 Post jobs

IIII System Status

- Agencies reporting data (screening groups)
 - State 55
 - Local 42
 - Tribe 60
 - Other 13
- About 8,025 retrievals (31 different reports)
 by 334 users in April 2010
 - Usage order AMP350, 501, 430, 450, 255, 450NC –
 73 %
- 745 Active registered users
 - 101 new users in last year

IIII System Status

- Raw Data
 - Archive 35 yrs 1957 to 1992 500 million rows
 - » Special update only
 - Production 17 yrs 1993 to 2010 1.2 billion rows
 - » Freeze date update latest 4 years
- Mature System
- AQS Disaster Recovery operational
- AQS Data Mart operational

IIII Development Plan

- Funded for 2010
 - Operation and Maintenance
 - » Software bug resolution
 - » Disaster recovery
 - NAAQS Changes
 - » Pb active project
 - » NO2 analysis/implementation
 - » SO₂ analysis

📕 Development Plan

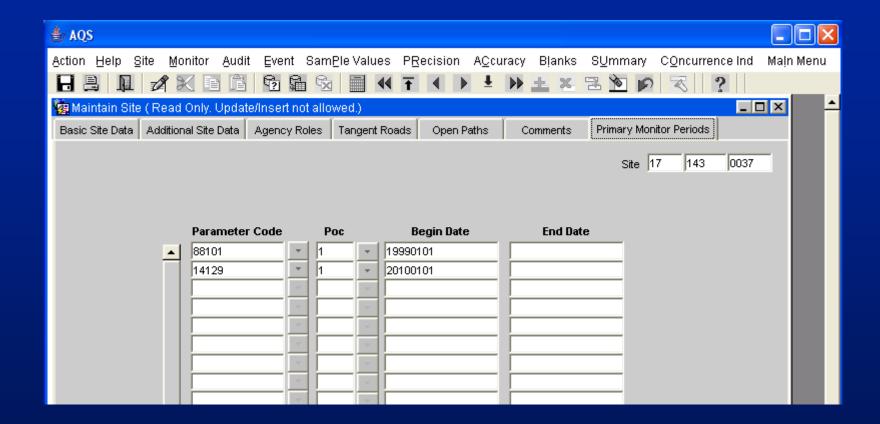
- 2011 Budget Request
 - Funding Proposal
 - » Operation and Maintenance
 - » NAAQS modifications
 - SO₂ primary standard
 - Ozone primary/secondary
 - SO2 & NO2 secondary standards
 - PM primary/secondary
 - » Exchange Network Load Change

Data Improvements

- IMPROVE Data Year 2007
- Update TTN files quarterly by year for criteria parameters and speciation, added continuous PM2.5 data
- Created Pb site primary monitor records

- Combining collocated PM2.5 data values
 - Primary monitor -new user input Maintain Site
 - Initial primary monitor designation
 - » Lowest POC and lowest required sampling frequency
 - » Sent to regional offices for QA
 - » Agency update as sampling changes
 - Created site level combined values
 - » Combines daily and/or 24-hr average of hourly data
 - New report AMP355
 - » Lists combined values
 - » Standard report process

Maintain Site



New Report - AMP355

quarterly statistics displayed in the matrix are solely derived from the values on the report.

AIR QUALITY SYSTEM

(99101) PM2.5 - Local Conditions

COMBINED SITE SAMPLE VALUES

CAS HUNGER: LATITUDES 34.760556 LONGITUDE: -97.650556

May. 24, 2010

SITE ID: 01-033-1002 COUNTY: (033) Colbert

CITY: (53016) Muscle Shoals SITE ADDRESS: WILSON DAM RD AND 28D ST. SITE COMMENTS: ADJ TO TWA SITE 024

STATE: (01) Alabama (007) TERRESSEE RIVER VALLEY-CUMBERLAND MOUNTAINS

URBANISED AREA: (0000) NOT IN AN URBAN AREA LAND USE: INDUSTRIAL

LOCATION SETTING: SUBURBASI

SUPPORT AGENCY: (0013) Al Dept Of Env Mgt MOSITOR TYPE: SLAMS

PQAO: (0013) Al Dept Of Boy Ngt

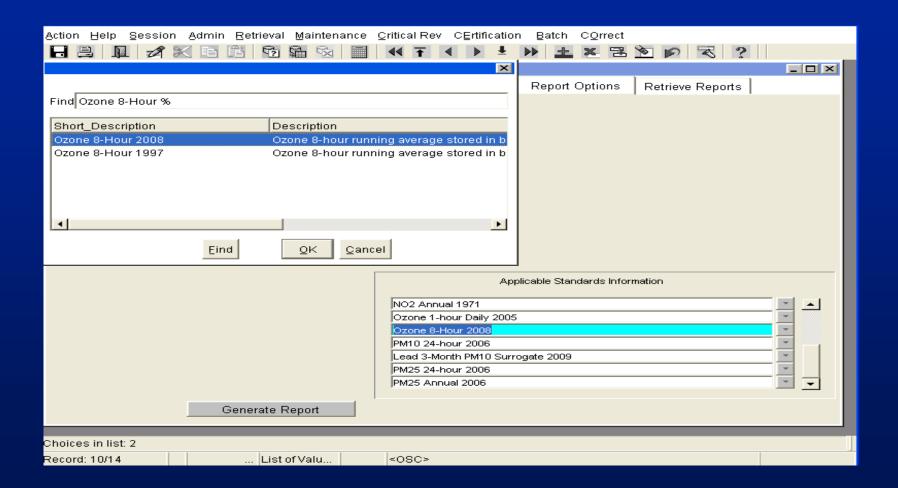
REPORT FOR: 2009 UNITS: 105

	MOSTEL													
Day	JASUARY	FREEZ	ARY	MARCE	APRIL 5	GAY .	JUSE.	SULY	AUGUST	SEC	PTEMBER	OCTOBER	SOVENEER	DECEMBER
1		5			6	6	10*	9*	3*		11		7*	10*
2				7	10*	3*	14*	7*			17*	3*	9.*	4*
3			5		9*	2*	19	9	9*		13*	7*	7	14*
4		7			9	4	10*	13*	19*		12	6	11*	16*
5				15	11*	7*	9.4	6*	5		9.4	5*	9*	12*
6			10		4*	3.4	13	14	7*		7*	9*	6	11
7		4			5	7	14*	15*	21*		15	4	17*	14*
				10	11*	14*	16*	19*	21		9.4	11*	16*	11*
9					12*	6*	15	17	11*		5*	7*	10	9
10	1	.3			13	7	11*	22*	5*		14	4	9*	7*
11				5	17*	7*	9.4	24*	6		17*	5*	14*	7*
12			6		15*	12*	11	14	9*		16*	6*	3	7
13	1	.0			9	17	5*	5*	13*		16	5	9*	5*
14				7	6*	13*	4*	9.*	16		13*	4*	13*	6-
15			10		15 *	13*	10	12	14*		6*	5*	11	13*
16		6			15	9.4	11*	2*	11*		11	5	21*	15*
17				11	12*	7*	13*	7*	7		1*	9*	6*	14*
19			9		12*	7*	15	6	1*		3*	9*	5	4
19		7			7	9.4	11*	7*	7*		4	9	11*	14*
20				5	5*	9.4	12*	7*	6		5*	11*	13*	20 ★
21					6*	7*	14	11	4*		1*	14*	16*	19*
22	1	4			7	7	13*	6*	7*		10	12*	14*	15*
23				19	9*	9.*	14*	13*	7		4*	4*	13*	12*
24					11*	6*	15	13	12*		10*	5*	12*	11*
25	1	.6			11	9	16*	9*	22*			6*	6*	6*
26				5	12*	7*	24*	7*	21		0.	10*	5*	5*
27			9		10*	9*	21	13	20*			11*	7*	11
29		7			14*	9	19*	5*	10*		7	4	10*	7*
29				4	10*	9*	7*	4*	11		-1*	9*	13*	12*
30					11*	10*	9	10	12*		-1*	13*	12*	12*
31		6				11		9.4	9*			4		9*
80.:	1	1	6	10	30	31	30	31	31		29	31	30	31
NAX:	1	6	10	19	17	17	24	24	22		17	14	21	20
NEAR	9.	-6		9.7	10.1	9.1	12.6	10.4	10.7		9.3	7.1	10.5	10.6
Note	: Missing sa	aples fro	n the pu	rimary monitor t	hat have been au	gmented with a	amples from	collocated moni	tors	800	MAX MEAS	CRED DAYS	% CBS	
are:	flagged with								QTR 1:	27	19 9.		30	ASSUAL CREDET DA
Moha	. The marks	-1	news 1 m	tatistics displa	und in the foots			ica for those	QTR 2:	91	24 10.	2 91	100	ASSUAL & CRS:
				range specifie					QTR 3:	91	24 9.		99	ASSUAL MEIGHTED :
				n the matrix are					QTR 4:	92	21 9.	4 92	100	ASSUAL 99%:

- Implement the Exceptional Event Rule
 - Archive database combined with AQSPROD
 - Convert to new exceptional event codes
 - » Not converted D, E, I, J, K, L, M, N, P
 - » Converted to RL (other) if concurred
 - Develop process to create/manage events
 - Regional concurrence based on standard

- Implement the Exceptional Event Rule
 - Re-compute all summary records
 - » Multiple records with standard defined
 - » NAAQS average, Daily summaries, Quarterly and Annual Summaries
 - New retrieval Raw Data Qualifiers
 - Date tracking to ensure time schedule met
 - Reports Modification
 - » R31 change
 - » Single record displayed
 - Discoverer EUL changes
 - » Saved queries may be invalid

Reports Modification



 Implement the design value report for ozone, PM10, & PM2.5

IIII Active Development

- Implement the lead NAAQS
 - Create primary monitor designation
 - Sent to regional offices for QA
 - Create site level combined records
 - Create monthly summary records
 - Compute 3-month running averages
 - Modify data completeness report