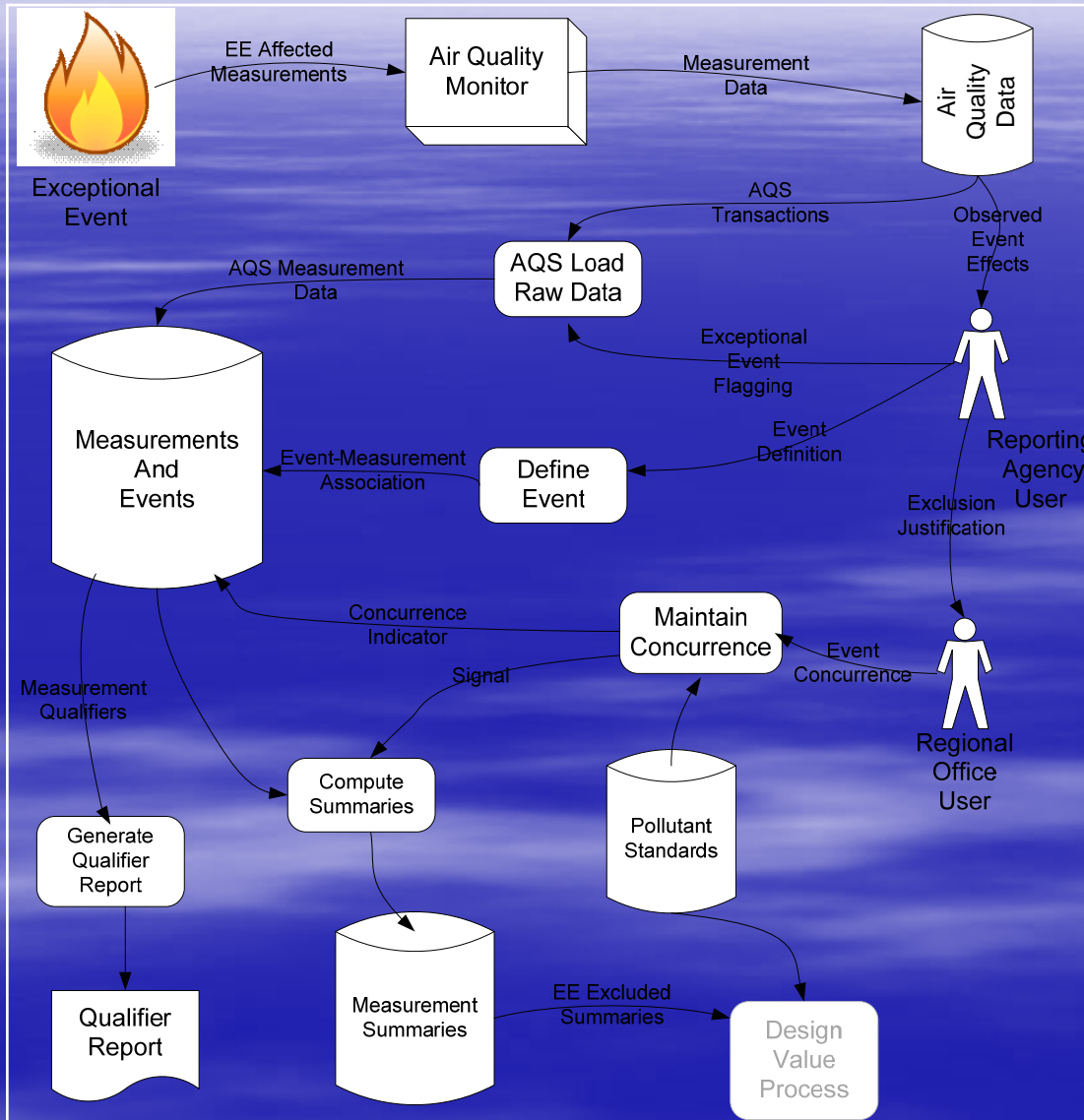


Exceptional Event Rule AQS Impacts

June 2010

EER Process



EER Process Critical Dates

- The EER regulations establish critical dates for the validity of an exclusion request. These are tracked by AQS:
 - Date that an Exceptional Event Qualifier is associated with the sample measurement.
 - Date that an Event is associated with the sample measurement.
- If a sample measurement is updated without changing the value or Exceptional Event Qualifier Code, then the above dates are preserved.

Certification

- Concurrent with this change, AQS' handling of certification was updated to be more user friendly. Specifically, certification will be preserved after an update if the reported value and reported units have not changed. I.e. Actions such as adding a qualifier, changing a method code, or EPA concurrence with an exclusion request will not cause certification to be lost.

AQS-EER Business Processes

- Flag sample measurements
- Define Event
- Associate Event with flagged measurements
- Off-line: Submit justification to EPA
- EPA: Concur/Non-concur with exceptional event exclusion.
- Review flagged data status

Flag Sample Measurements

- No Change to prior processes
- Batch Mode:
 - Submit flags with data on Insert transactions
 - Submit flags on Update transactions
 - Warning: All qualifier codes replaced
- Interactive – Maintain Raw Data
 - Duplicate existing record as update
 - Add Exceptional Event Qualifier Code
 - Save, Execute Stat/CR and Post

Define Event

- Maintain Event Form: Enter the following:
 - Qualifier Code (required)
 - Begin Date (optional but recommended)
 - End Date (optional but recommended)
 - Event Description (required)
 - Text comments (optional)
 - URL of web page documenting event (optional)
- Event must be unique by Screening Group, Qualifier Code, and Event Description

Define Event Form

Maintain Exceptional Events (National Air Data Group)

Define Event Associate Raw Data with Event

Screen Grp Name North Carolina PM25

Qualifier Code	Qualifier Description	Event Begin Date	Event End Date
RC	Chem. Spills & Indust. Accidents	20080401	20080430

Event Description Test event for R. Coats

Comment This is an example event created for the 2010 AQS conference.

Url <http://www.epa.gov>

Associate Event with Flagged Measurements

- Maintain Event

- Query (or create) event (first tab)
- Query affected monitors (second tab)
 - Can select by monitor key fields
- Can subset measurements affected by date range
- Can Associate/Disassociate by Monitor or all retrieved data
- Counts will be updated when action is saved

Associate Raw Data Tab

Maintain Exceptional Events (National Air Data Group)

Define Event | Associate Raw Data with Event

Event Description

Screen Grp Name:
 Qualifier Code:
 Qualifier Description:
 Event Begin Date:
 Event End Date:

State Code	County Code	Site ID	Parameter	POC
<input type="text" value="37"/>	<input type="text" value="147"/>	<input type="text" value="0006"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Monitor Key	Begin Date	End Date	# Associated	# Unassociated	Action
<input type="text" value="37-147-0006-88101-1"/>	<input type="text" value="20080411"/>	<input type="text" value="20080411"/>	<input type="text" value="0"/>	<input type="text" value="1"/>	<input type="text" value="No Action"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Find %

Action	
Associate	
Disassociate	
No Action	

Associate Via Maintain Raw

- Query Monitor and date range
- Select flagged measurement
- In Event Description Block, click on LOV to select existing event, or create new event
- Can remove existing association by selecting “No Event”
- Click save (Stat/CR and Post not required)

Maintain Raw Event Association

Maintain - Raw Data (National Air Data Group)

Raw Data | Comments

State: 37 | County: 147 | Site: 0006 | Parameter: 88101 | POC: 1 | Begin Date: 20080411 | End Date: 20080411 | Standard Units: 105

Raw Data Mp ID	Date	Time	Stat Ind	Reported Sample Value	Standard Sample Value	EPA Ind	Action Ind	Exclusion Ind	Null Ind	Data Code	Description
1	20080411	00:00	P	3.56	3.5						

Find %

Event Description

CREATE EVENT

NO EVENT

Test event for R. Coats

Find OK Cancel

Qualifier Code	Qualifier Desc	Qualifier Type
RC	CHEM. SPILLS & INDUST. ACCIDENTS	REQEXC

Event Description: _____

Association Date: _____

Event Comment: _____

Event URL: _____

Monitor Protocol	Method	Unit	Duration	Coll Frequency	Alt Mdl
118	105	7	3		

Review Flaged Data Status

- New AQS report, AMP360 – Raw Data Qualifier Report added
 - Report options to select specific qualifier types (Request Exclusion, Informational, Null Data Codes, QA Qualifiers, Comment Qualifiers, or all)
 - Report option to select specific qualifier code
 - Report option to select specific Exceptional Event Concurrence state (Concurred, Non-concurred, null – not yet reviewed)

Review Flagged Data Example

United States Environmental Protection Agency

Air Quality System

Raw Data Qualifier Report (v 1.1)

Report Date: May. 13, 2010

Parameter: PM2.5 - Local Conditions (88101)

Standard Units: Micrograms/cubic meter (LC) (105)

Monitor Key / Site Address	Sample Date-Time	Sample Qualifier Value	Code	Description	Action Date	NAAQS Standard	Concurrence Ind Date
37-147-0006-88101-1 403 Government Circle	2008-04-06 00:00		AN	Machine Malfunction			
37-147-0006-88101-1 403 Government Circle	2008-04-09 00:00		AN	Machine Malfunction			
37-147-0006-88101-1 403 Government Circle	2008-04-11 00:00	3.5	RC	Chem. Spills & Indust. Accidents		PM25 24-hour 2006 PM25 Annual 2006	Y 2010-05-12 N 2010-05-12
	Event:			Test event for R. Coats	2010-05-12		
	Comment/URL:			http://www.epa.gov		Justification does not meet requirements	
Monitor Qualifier Counts:							
	RC			Chem. Spills & Indust. Accidents			Count: 1
	AN			Machine Malfunction			Count: 2

Data Retrievals -- Complications

- What happened to the summaries?
 - There are now multiple summaries for each Exceptional Data Type, one for each NAAQS standard that might apply. (Where the standard does not apply the summary is not computed. e.g. There are no duration 1 Ozone summaries with an 8-Hour standard id.)
- All retrievals must select by “Pollutant Standard ID” to get unique values.
 - Applies to both “Standard Reports” and ad-hoc retrievals (e.g. Discoverer)

Standard Reports

- New block on Report Options: Applicable Standard:
 - Quick Look example:

The image shows two overlapping windows from a software application. The left window, titled 'Applicable Standards Information', contains a list of standards. The right window is a search dialog with a search bar and a table of results.

Applicable Standards Information

NO2 Annual 1971
Ozone 1-hour Daily 2005
Ozone 8-Hour 2008
PM10 24-hour 2006
Lead 3-Month PM10 Surrogate 2009
PM25 24-hour 2006
PM25 Annual 2006

Search Dialog

Find: Ozone 8-Hour %

Short_Description	Description
Ozone 8-Hour 2008	Ozone 8-hour running average stored in b
Ozone 8-Hour 1997	Ozone 8-hour running average stored in b

Buttons: Find, OK, Cancel

- Where there is a “new” standard and an “old” standard, the default is the new standard.

Ad-Hoc Retrievals

- All of the summary tables (and Discoverer “folders”) have Pollutant Standard ID as part of their key.
- This means to get a specific value when there are multiple standards, you must select which standard you want.
 - Example PM 2.5 Duration 7 Daily Summary:
 - Data could be flagged and concurred for either the 24-Hour standard or the annual standard; therefore there are two summary records for each day/EDT_ID. To get a unique value, you must select which standard.
- Implication: Many old workbooks accessing summaries now produce duplicate rows (or incorrect results) where they used to produce correct results.

Ad-Hoc Retrievals (2)

- Example: How many PM 2.5 exceedance days are there for 37-183-0014-88101-1 in July 2008?
 - Previously the workbook would have had conditions for Monitor-ID, Date, and EDT_ID. If the (correct) result had been 3, before EER was implemented, that workbook will now (incorrectly) return 6. To fix it you need to add a condition for Pollutant_Standard_Desc = 'PM25 24-hour 2006'