

Exceptional Events in AQS

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Elevator Pitch

- We have an exceptional event rule
- That rule is under review
- How to process events in AQS now
- How Exceptional Event Data shows up in AQS Data when retrieved



Overview of Exceptional Event Rule

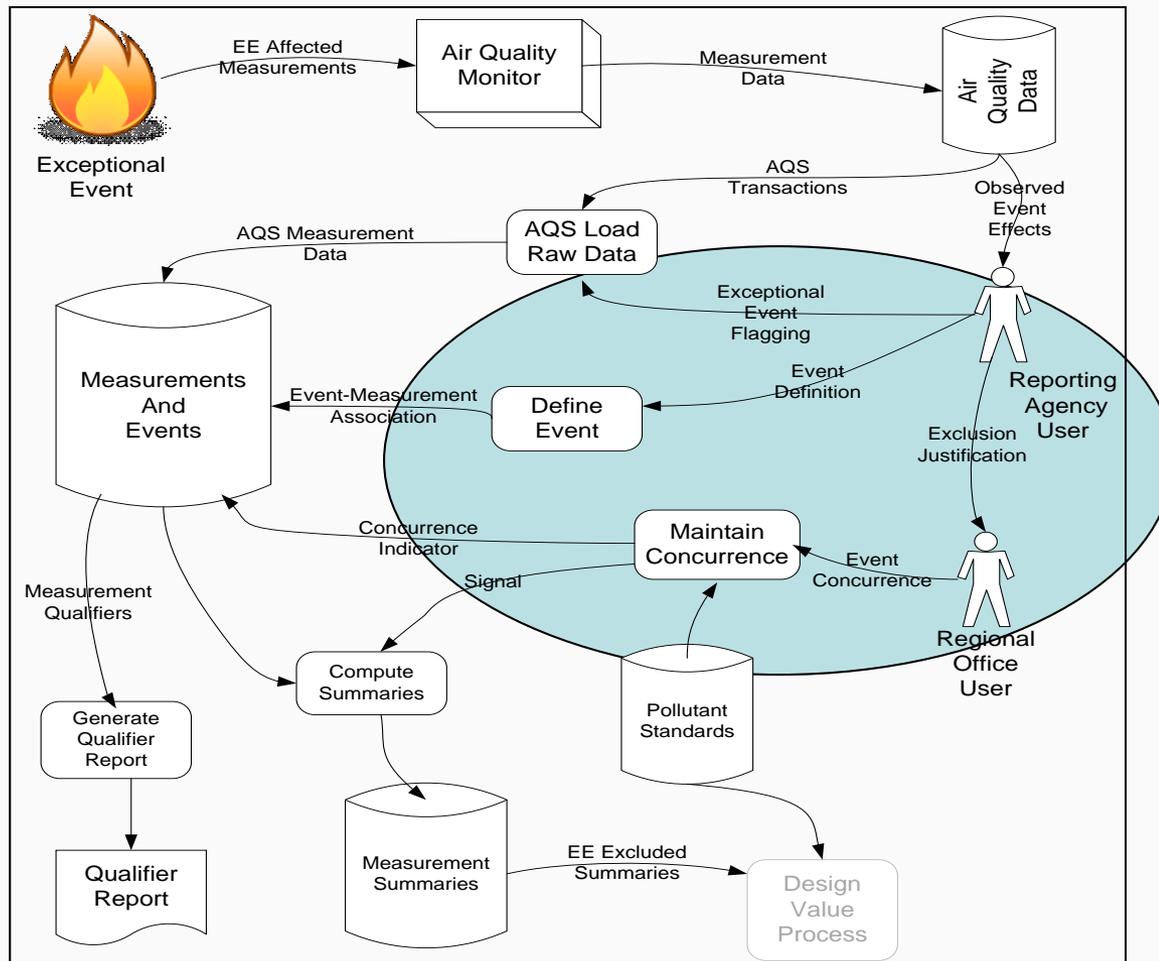
- Promulgated in March 2007, text can be found in 40 CFR 50.14 (2007)
- Two excellent EER resources
 - [EPA: https://www.epa.gov/air-quality-analysis/treatment-data-influenced-exceptional-events](https://www.epa.gov/air-quality-analysis/treatment-data-influenced-exceptional-events)
 - [Westar: http://www.westar.org/exceptionalevents.html](http://www.westar.org/exceptionalevents.html)
- Currently undergoing revision (come back this afternoon for more details)



What does exceptional event rule do?

- Allows users to identify events (fireworks, prescribed fires as examples) that have a one-time impact on Air Quality
- Submit data to AQS with flag indicating measurement affected by event
- Separately, prepare package and submit to EPA explaining why event is exceptional
- Have those measurements excluded from NAAQS attainment and design value calculations

EER Process





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
 - Add Exceptional Event Qualifier Code and Save



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



Maintain Event Form, Define Event Tab

Maintain Exceptional Events (TRACER MEXICALI)

Define Event | Associate Raw Data with Event

Screen Grp Name: TRACER MEXICALI

Qualifier Code	Qualifier Description	Event Begin Date	Event End Date
RG	Fire - Mexico/Central America	20160101	20161231

Event Description: Test

Comment: Test

Url: 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



Maintain Event Form, Associate Raw Data Tab

Maintain Exceptional Events (TRACER MEXICALI)

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"/>				
<input type="text"/>				
<input type="text"/>				

Monitor Key	Begin Date	End Date	# Associated	# Unassociated	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 (Tracer Mexicali)

Raw Data | Comments

State: 37 | County: 063 | Site: 9999 | Parameter: 44201 | POC: 1 | Begin Date: | End Date: | Standard Units: 007

Raw Data		Stat	Reported	Standard	EPAAction	Exclusion	Null	Uncertainty		
Mp ID	Date	Ind	Sample Value	Sample Value	Ind	Ind	Ind	Data Code	Description	Value
1	20160101 04:00	P	.015	0						
1	20160101 03:00	P	.015	0						
1	20160101 02:00	P	.024	0						
1	20160101 01:00	P	.012	0						

Qualifier Code: RG | Qualifier Desc: FIRE - MEXICO/CENTRAL AMERICA | Qualifier Type: REQEXC

Event Description: Test | Association Date: 28-JUL-2016

Event Comment: Test

Event URL: www.epa.gov

Monitor Protocol: Method: 007 | Unit: 008 | Duration: 1 | Coll Frequency: | Alt Mdl: |



Review Flagged Data Status

- 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: Jul. 28, 2016

Parameter: Ozone (44201)

Standard Units: Parts per million (007)

<u>Monitor Key / Site Address</u>	<u>Sample Date-Time</u>	<u>Value</u>	<u>Sample Qualifier Code Description</u>	<u>Action Date</u>	<u>NAAQS Standard</u>	<u>Concurrence Ind Date</u>
37-063-9999-44201-1 6910 Fayetteville Durham, NC	2016-01-01 01:00	0	RG Fire - Mexico/Central America	2016-07-28		
	Event:		Test	2016-07-28		
	Comment/URL:		www.epa.gov			
37-063-9999-44201-1 6910 Fayetteville Durham, NC	2016-01-01 02:00	0	RG Fire - Mexico/Central America	2016-07-28		
	Event:		Test	2016-07-28		
	Comment/URL:		www.epa.gov			
37-063-9999-44201-1 6910 Fayetteville Durham, NC	2016-01-01 03:00	0	RG Fire - Mexico/Central America	2016-07-28		
	Event:		Test	2016-07-28		
	Comment/URL:		www.epa.gov			
37-063-9999-44201-1 6910 Fayetteville Durham, NC	2016-01-01 04:00	0	RG Fire - Mexico/Central America	2016-07-28		
	Event:		Test	2016-07-28		
	Comment/URL:		www.epa.gov			

Monitor Qualifier Counts: RG Fire - Mexico/Central America

Count: 4



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



EE Data and AQS Reports

▲ SINGLE EVENT PROCESSING EXCLUDE REGIONALLY CONCURRED E ▾

WORKFILE DELIMITER Option Values [X]

USER SITE METADATA

MERGE PDF FILES Find %

QUARTERLY DATA IN WORKFILE

Option_Value

- INCLUDE ALL DATA
- EXCLUDE EVENTS
- EXCLUDE REGIONALLY CONCURRED EVENTS

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