Exceptional Events in AQS

Chris Chapman, US EPA
National Air Quality Conference
Atlanta, Georgia
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Overview of Exceptional Event Rule

- Took effect in 2007 and implemented in AQS in March 2010
- The EER:
  - Allows air quality data to be flagged and where appropriate, excluded from calculations in determining whether or not an area has attained the NAAQS standard.
  - Affects both submission and retrieval of data

National Ambient Air Monitoring Conference August 2014
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.
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
  - 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
<table>
<thead>
<tr>
<th>Screen Grp Name</th>
<th>Qualifier Code</th>
<th>Qualifier Description</th>
<th>Event Begin Date</th>
<th>Event End Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>North Carolina PM25</td>
<td>RC</td>
<td>Chem. Spills &amp; Indust. Accidents</td>
<td>20080401</td>
<td>20080430</td>
</tr>
</tbody>
</table>

**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)
    • By default, all monitors with raw data with event flag in date range will be queried.
    • Can subset/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 Via Maintain Raw Form (only for very small sets)

- 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)
Review Flaged Data Status

• AQS report, AMP360 – Raw Data Qualifier Report
  – 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)
### 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)

<table>
<thead>
<tr>
<th>Monitor Key / Site Address</th>
<th>Sample Qualifier</th>
<th>Action Date</th>
<th>NAAQS Standard</th>
<th>Concurrence Ind Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>37-147-0006-88101-1</td>
<td>AN Machine Malfunction</td>
<td>2008-07-05</td>
<td></td>
<td></td>
</tr>
<tr>
<td>403 Government Circle</td>
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<td>403 Government Circle</td>
<td></td>
<td></td>
<td>PM25 Annual 2006</td>
<td>N 2010-05-12</td>
</tr>
</tbody>
</table>

**Event:** Test event for R. Coats

**Comment/URL:** http://www.epa.gov

**Monitor Qualifier Counts:**
- RC Chem. Spills & Indust. Accidents Count: 1
- AN Machine Malfunction Count: 2
Report Options for Summary Reports

- AQS Reports contain an option to show summary data with or without exceptional events using the EDT_ID:
  - 0 – No data has been flagged
  - 1, 2, and 5
    - 1 – The summary excludes all flagged data
    - 2 – The summary does not exclude any data
    - 5 – The summary excludes regionally concurred flagged data
Standard Reports: Report Options