

AQS Basics

Loading data

Help

Getting Your Data In: Online Updates

Create a Site and Monitor, Define an Exceptional Event

Data Formats

Getting Your Data In: Batch Overview

Getting Your Data In: When All Goes Well

Getting Your Data In: How to Correct What Went Wrong



Help



Helpdesk User Support



EPA Helpdesk

- 866-411-4372 or epacallcenter@epa.gov
- Levels of support
 - ✓ Level 1: password resets for AQSProd; opens a problem ticket
 - ✓ Level 2: AQS-specific issues → Pamela and Donnie
 - ✓ Level 3: server issues → NCC
 - ✓ Level 4: software and data issues → AQS Team
- Exchange Network (EN) Helpdesk
 - 888-890-1995 or nodehelpdesk@epa.cdx.net
 - Supports:
 - ✓ Node (production) password resets / general Node support

When in doubt, call the EPA Helpdesk



AQS Team

AQSTeam@epa.gov

- Robert Coats, team lead
- Bill Frietsche (QA & audits)
- Way Poteat
- Chris Chapman
- Nick Mangus (Data Mart)
- Michael Hamlin (user registration)
- Angie Shatas



AQS Regional Contacts

1: Wendy McDougall

(617) 918-8323

2: Henry Feingersh

(212) 637-3382

3: Pauline DeVose

(215) 814-2186

4: Darren Palmer

(404) 562-9052

5: Jesse McGrath

(312) 886-1532

6: Trisha Curran

(214) 665-8345

7: James Regehr

(913) 551-5063

8: Joe Delwiche

(303) 312-6448

9: Fletcher Clover

(415) 972-3991

10: Jan Noel

(206) 553-1691



AQS Documentation

- Manuals and Guides

<http://www.epa.gov/ttn/airs/airsaqs/manuals/>

- Design Value Report (SO₂) *
 - Submit Automation User Guide *
 - Data Dictionary *
 - Data Coding Manual
 - AQS Input Transaction Formats ***
 - Exceptional Event Tutorial
 - Fundamentals & User Guide **
 - Data Retrieval Manual **
- Codes and Descriptions *
 - Memos and Software Release Notes *
- <http://www.epa.gov/ttn/airs/airsaqs/memos/>



* New/updated

** Near term updates/overhaul

*** Longer term overhaul

From the Application

- “Help” From the Menu
 - Topics
 - Short-Cut Keys
 - Display Error
- Field-Level Help

Help

Help

<u>K</u> ey	Ctrl+F1
<u>D</u> isplay Error	Shift+F1
<u>A</u> bout	

Horizontal Method	012	GPS CARRIER PHASE STATIC RELATIVE POSITION
Horizontal Accuracy (Meters)	3.04	Source Map Scale (Non-GPS) 24000
Vertical Measure (Meters)	Description of the accuracy as a range of the latitude/longitude reported in meters. Only the least accurate measurement needs to be recorded whether is latitude or longitude.	
Vertical Method	000	UNKNOWN
Street Address	HEALTH DEPT, 300 E MAIN STREET	

Enter a valid Dominant Source code that identifies the primary source of the pollutant being monitored.

Record: 1/? ... List of Valu... <OSC>



Getting Your Data In: Online Updates



What can you update online?

What *should* you?

- Data owned by your Screening Group
- Site/Monitor metadata
 - Monitor Begin and End dates
- Exceptional Event definitions
- Exceptional Event & other concurrences (RO only)
- Data -- update online if you can narrow it down
 - Raw Measurements/Precision & Accuracy Data
 - Comments



Where Do I Start?

The screenshot shows a window titled "Select Session Access (Information Management Group) Tribal Mode". Inside, there is a sub-window titled "Select a Screening Group" with the instruction "Select a Screening Group for this session:". A table lists screening groups:

Name	Type
QAOTEST	OTHER

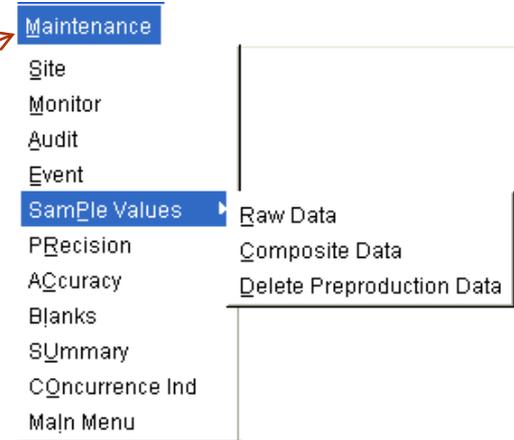
An orange callout box is overlaid on the screenshot, containing the following text:

Session access
You can only see data from monitors YOU OWN
You can change any data that YOU OWN

Below the table, there is an "OK" button and some text: "You have accessed AQSPROD. Raw data for 1993 to present". At the bottom, there is a URL and contact information: "LOOK FOR ANSWERS TO 'Frequently Asked Questions' AT: <http://www.epa.gov/air/air/stair/aqsp/faq/faq.htm>. IF YOU NEED ASSISTANCE, PLEASE CALL THE EPA CALL CENTER AT 1-866-411-4EPA (1-866-411-4372) Hours: 6:00am- 6:30pm Eastern."

How to update data online?

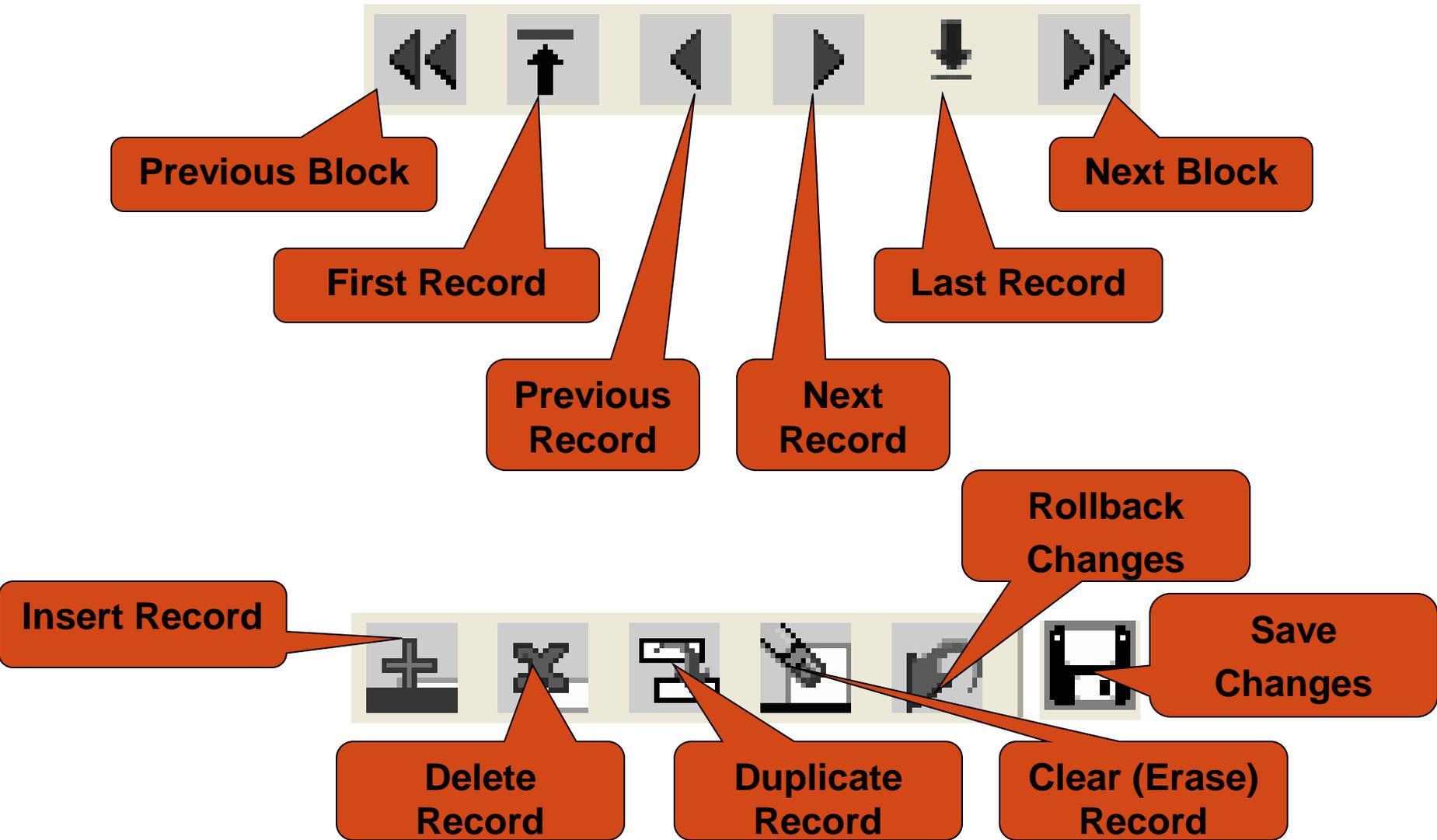
- You are in your Screening Group
- Go to Maintenance tab
- Select the type of data you want
 - Site OR Monitor OR Event OR Sample Values
- Build the query



Tribal Code State Code County Code Site ID Parameter Code POC

- specify “filters” (just like in Browse) to get only the records you want
- Execute the Query 
- Scroll through the records and modify as needed
 - For Site, Monitor, Event or P&A data, can modify directly
 - For Raw Data, must “insert” a new record with a “U” (then go through Stat/CR process)
- Save (Look for confirmation message) 

Form Navigation



Save & Rollback

- Rollback
 - Throws away all changes back to the last time you Saved.
 - Cannot “undo” a Rollback
- Save
 - Your changes do not take effect until you save
 - Look for the confirmation message at bottom left



Online Maintenance:

Create a Site and Monitor; Define an Exceptional Event;
Get Set up for Data



Where Do I Start?

Login

Username: T50

Password:

Database: aqsqqa

Connect Exit

The Air Quality System (AQS) is a United States Environmental Protection Agency (EPA) computer system which may be accessed and used for authorized purposes only. Unauthorized access or use of this computer system may subject violators to criminal, civil, and/or administrative action. All information on this computer system may be monitored, recorded, read, copied, and disclosed to and by authorized personnel for official purposes, including law enforcement. Access or use of this computer system by any person, whether

Screening Group Access

If you are adding information to AQS, you must be in a Screening Group

79 TEST USER SCREENING GRG OTHER

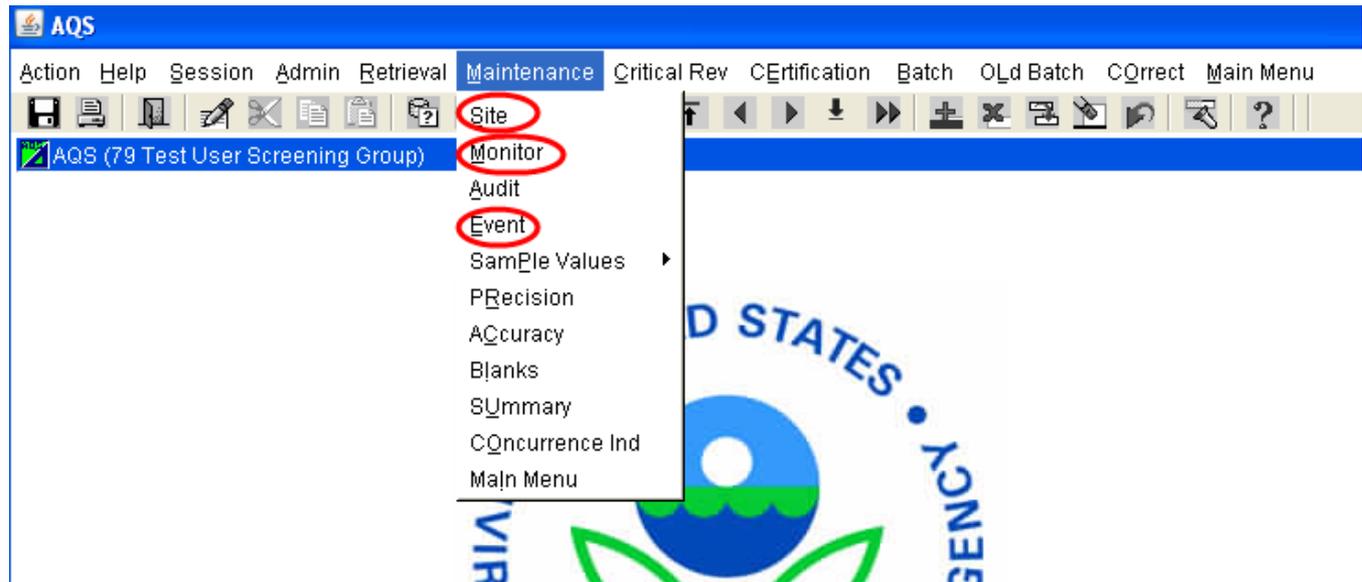
OK

AQSQA database. Refreshed from AQSPROD on May 7, 2012
Configured for Exchange Network Node testing.

New Exchange Network Service Center (ENSC) URL:
<https://enservicetest.epacdxnode.net/>



Maintain



Maintain Site → Create a new site online

Maintain Monitor → Create new monitor(s) online

Maintain Event → Define exceptional event(s) & Associate Raw Data with an event

AQS Maintain Form hints:

When you enter a form in Maintain with the intent to create a new record, remember to “Cancel Query” before entering any data.

Check “Completeness” will let you know if any required information is missing.

You must add a monitor when adding a new site. Use “Create Monitor.”

To add multiple new monitors, use the “Duplicate Monitor” button.

“Save” before leaving the form. Look for a confirmation message at the bottom left of screen.

Monitoring data to AQS – What is required to set-up a Site?

- Unique Site ID
- Metadata needed:
 - Latitude and longitude (in decimal degrees)
 - Horizontal datum (what datum was used for lat/lon?)
 - Horizontal method (how was lat/lon measured?)
 - Horizontal accuracy (accuracy of lat/lon, in meters)
 - Vertical measure (elevation, in meters)
 - Vertical accuracy (accuracy of elevation, in meters)
 - Vertical method (how elevation measured?)
 - Street address, land use type and location setting
 - Agency Role (agency that is supporting this site)
 - Primary Monitor Period (for PM_{2.5}, lead. SO₂, NO₂)



Maintain Site: how to add a site

- You must create a site in AQS before you can submit raw data
- Identified by
 - State Code-County Code-Site (06-073-5501) OR TT-Tribal Code-Site (TT-587-5501)
- Physical location
 - Latitude and longitude?
 - Street address?
 - Local site name?
- Characteristics of the site
 - Nearby Streets?
 - Open Path Set Up?
 - Need a Primary monitor?
(PM_{2.5}, lead, SO₂ or NO₂)
- Agency Roles
 - Supporting Agency?
- Use the Tabs on the Form:
 - Basic
 - Additional Site Data
 - Agency Roles
 - Tangent Roads
 - Open Paths
 - Comments
 - Primary Monitor Periods

Maintain Site (Tribal School Air Toxics) Tribal Mode

Basic Site Data | Additional Site Data | Agency Roles | Tangent Roads | Open Paths | Comments | Primary Monitor Periods

Site Identification

Tribal Code 587 Rincón Band of Luiseno Mission Indians of the Rincón Reservation, CA

State Code 06 California

County Code 073 San Diego Site Id 5501 Status Ind P

User Coordinates

Horizontal Datum WGS84 Latitude 33.272583 Longitude -116.95675

UTM Zone UTM Easting UTM Northing Lookup Geography

Standard Coordinates: Datum NAD83 Latitude 33.272583 Longitude -116.956750

Horizontal Method 103 GPS

Horizontal Accuracy (Meters) 3 Source Map Scale (Non-GPS)

Vertical Measure (Meters) 280 Vertical Accuracy (Meters) 10 Vertical Datum NAVD88

Vertical Method 001 GPS CARRIER PHASE STATIC RELATIVE POSITION

Street Address West Tribal Rd., Valley Center, CA

Land Use Type RESIDENTIAL Location Setting RURAL

City Code Urban Area Code

AQCR Code 029 SAN DIEGO

Site Established Date (YYYYMMDD) 20110101 Time Zone Name PACIFIC

Check Completeness Create Monitor

AQS Form hints:

“Check Completeness” will let you know if any required information is missing. You must add a monitor when adding a new site. Use “Create Monitor.”



Monitoring data to AQS – What is required to set-up a Monitor?

- An established Site + Parameter code + POC
- Basic Monitor (Instrument) information (optional)
 - Probe location
 - Probe height (height of probe from ground)
 - Probe horizontal distance (distance from probe to support)
 - Probe vertical distance (vert. distance from probe to support)
- Sample period begin date
- Monitor type (SLAMS, Tribal, NCORE, IMPROVE. .) and begin date
- Agency roles and begin date
 - Collecting Agency (who maintains the instrument in the field?)
 - Analyzing Agency (Who (which lab) analyzes the filters?)
 - PQAQ (Primary Quality Assurance Organization) Agency (Who is responsible for QA, audits, etc?)
 - ✓ Required for all pollutants; make start date no earlier than 1/1/2007
 - Reporting Agency (who reports the data to AQS?)
 - ✓ Required for all pollutants
- Monitoring objective and applicable geographical area
- Required collection frequency and begin date
- Tangent Road
- Collocation information



Maintain Monitor: how to add a monitor

- You must create a monitor for each parameter that will supply raw data
- Identified by
 - State Code-County Code-Site-Parameter-Parameter Occurrence Code (06-073-5501-42153-1) OR
 - TT-Tribal Code-Site-Parameter-POC (TT-587-5501-42153-1)
(Think of the POC as a sequence number)
- About the Measurements for that Parameter/Pollutant
 - When did Sampling Begin?
 - Which Network(s) is this monitor in? (Monitor Type)
 - Which Agencies run the Monitor?
 - What are the Monitoring Objectives?
 - Nearby Obstructions?
 - Nearby Roads?
 - If Collocated, which is the Primary?
 - Frequency of Sampling?
- Use the Tabs on the Form:
 - Monitor Basic
 - Sample Periods
 - Monitor Type Assignments
 - Agency Roles
 - Objectives
 - Collocation

The screenshot shows the 'Maintain - Monitors' application window. The 'Monitor Basic' tab is active. The form contains the following fields and values:

Tribal Code	State Code	County Code	Site Id	Parameter Code	POC	Status Ind
587	06	073	5501	42153	1	P

Below the header fields, there are two columns of input fields:

- Left Column:** Project Class, Meas Scale, Probe Location, Probe Vert Dist, Samp Res Time, Close Date.
- Right Column:** Dominant Source, Open Path Num, Probe Height, Surrogate Ind, Last Samp Date, Probe Hor Dist, Unrest Air Flow, Last Post Date.

At the bottom right of the form, there are two buttons: 'Check Completeness' and 'Duplicate Monitor'.



Reference Data

- AQS uses codes
- Codes give Information about the Data in AQS
 - “AQS Codes and Descriptions” on AQS website
 - Standard Codes Used where Available
- Codes are Used to Identify
 - States, Counties, Tribal Lands,
 - Pollutants,
 - Frequency of collection for a sample
 - Length of time a sample represents
 - Sample data (qualify the data or explain a null value)
 - etc...

Parameter Codes

- O₃ = 44201
- NO₂ = 42602
- SO₂ hourly = 42401
- CO = 42101
- PM_{2.5} = 88101
- PM₁₀ STP = 81102
- Lead (TSP) at LC FRM/FEM = 14129
- Lead (PM₁₀) at LC FRM/FEM = 85129

Units of Measure

- 001 = µg/m³
- 007 = ppm (parts per million)
- 008 = ppb (parts per billion)

Collection Frequency Codes

- 1 = Every Day
- 3 = Every 3rd Day
- 6 = Every 6th Day

Duration Codes

- 7 = 24 Hours
- 1 = 1 Hour
- W = 8-Hour Running Avg. *
- X = 24-Hour Block Avg. *
- Y = 3-Hour Block Avg. *



Exceptional Events

- What is an exceptional event?

The Federal Regulations (40 CFR Part 50.14) allow Ambient Air Quality Measurements that are Exceedances or Violations of the National Ambient Air Quality Standards (NAAQS) that are **caused** by an “Exceptional Event” to be excluded from Attainment demonstrations.

- What is the process in AQS?

- Reporting Agency “flags” data with exceptional Event Flag, and submits justification to EPA → you put a “request exclusion” qualifier on your reported Raw Data
- Reporting Agency defines the Exceptional Event → you define an Event in AQS (online only)
- Reporting Agency ties the flagged data to the defined Event → you associate these in AQS (online only)
- Regional office either concurs with exclusion or “non-concurs”

- The result?

- AQS computes different summaries (daily, quarterly, and annual)
- Summaries either include or exclude the flagged data
- Summaries have a unique “Exceptional Data Type ID”

- This affects what shows on reports!

- AQS Reports will show either summary data marked with
 - ✓ EDT ID 0
 - 0 = No data has been flagged OR
 - EDT IDs 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



= You have until July 1st of the year following the event to do these steps

Maintain Event: how to add an event

- Event Identified by
 - Screening Group + Qualifier Code
 - Event Begin and End Dates
 - Event Description
- Define Event
 - What “request exclusion” qualifier?
 - Begin and end dates? (req'd)
 - Description? (req'd)
 - Comment (optional)

RA	African Dust
RB	Asian Dust
RC	Chem. Spills & Indust. Accidents
RD	Cleanup After a Major Disaster
RE	Demolition
RF	Fire - Canadian
RG	Fire - Mexico/Central America
RH	Fireworks
RI	High Pollen Count
RJ	High Winds
RK	Infrequent Large Gatherings
RL	Other
RM	Prescribed Fire
RN	Seismic Activity
RO	Stratospheric Ozone Intrusion
RP	Structural Fire
RQ	Terrorist Act
RR	Unique Traffic Disruption
RS	Volcanic Eruptions
RT	Wildfire-U. S.
RU	Wildland Fire Use Fire-U. S.

AQS Form hints:

Use the dropdowns to help populate the data fields.
“Save” before leaving the form.



Maintain Event: how to add an event

- Event Identified by
 - Screening Group + Qualifier Code
 - Event Begin and End Dates
 - Event Description
- Define Event
 - What “request exclusion” qualifier?
 - Begin and end dates? (req’d)
 - Description? (req’d)
 - Comment (optional)



Put it into practice – Exercise 2.1



Data Formats

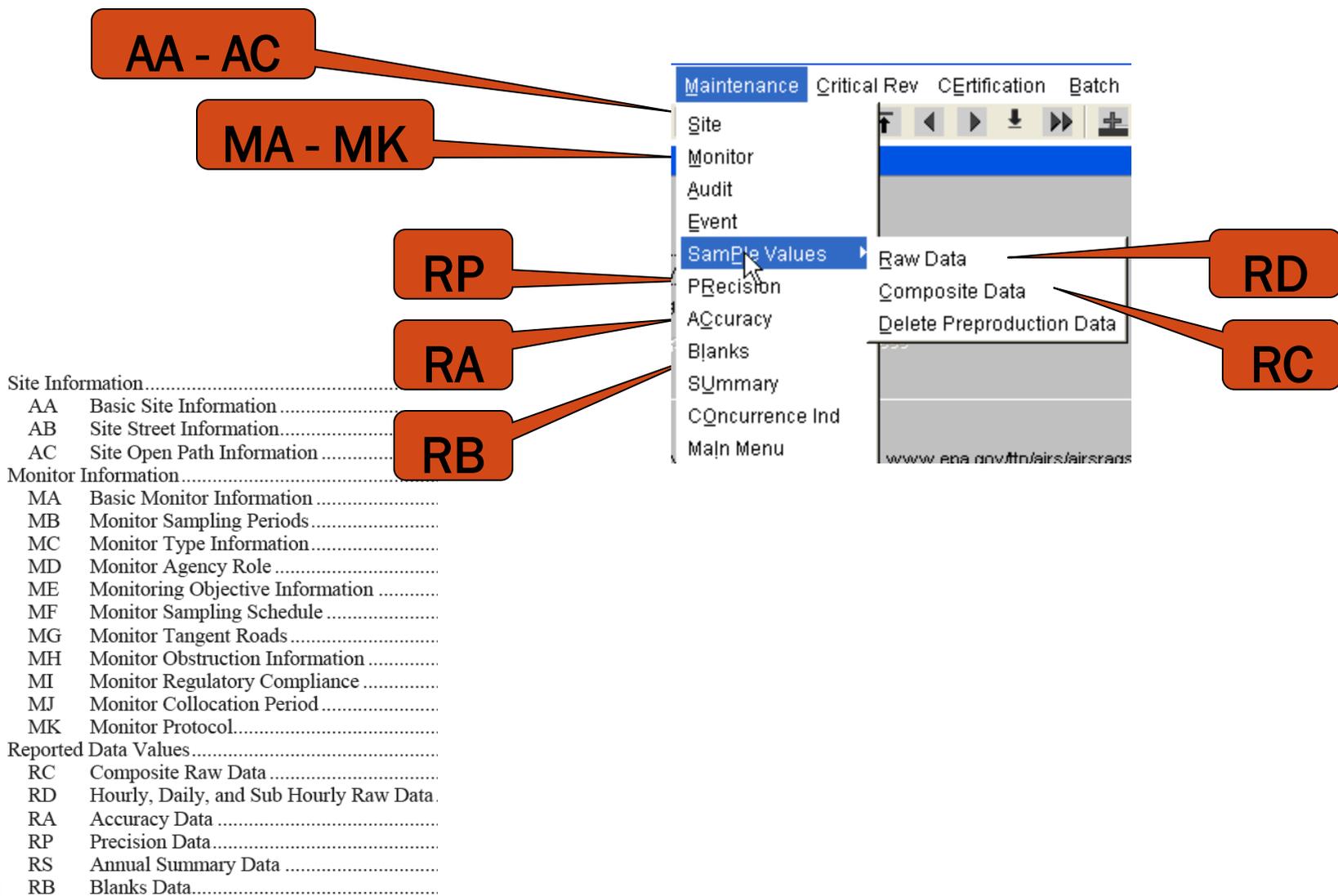


Data Formats Overview

- 2 types supported
 - “Pipe-delimited” format
 - ✓ “|”
 - ✓ 19 different formats; one for each type of data supported through the system
 - ✓ “Data Input Formats for the Re-engineered AQS”
 - ✓ <http://www.epa.gov/ttn/airs/airsaqs/manuals/>
 - XML
 - ✓ AQS XML Schema definition can be found at <http://www.exchangenetwork.net/exchanges/air/aqs.htm>



Map AQS Transaction Types to AQS screens



Transaction Types (Site)

Site Information.....

- AA Basic Site Information
- AB Site Street Information.....
- AC Site Open Path Information



Transaction Types (Monitor)

MB

MD

MF

MK = Monitor Protocols

MA

MC

ME

MA

MG

MH

MI

MJ

Maintain - Monitor (Information Management Group) Tribal Mode

Monitor Basic | Sample P... | Type... | Agenc... | Objec... | Pollu... | Req F... | Tange... | Probe... | Reg C... | Collo...

Tribal Code	State Code	County Code	Site Id	Parameter Code	POC	Status
	5		0002	44		P

Project Class: 03
 Meas Scale: REGIONAL SCALE
 Probe Location: TOP OF BUILDING
 Probe Vert Dist: 1
 Samp Res Time:
 Close Date:
 Dominant Source: AREA
 Open Path Num:
 Probe Height: 4
 Surrogate Ind:
 Last Samp Date: 20060630
 Probe Hor Dist: 1
 Unrest Air Flow: Y
 Last Post Date: 20060907

MA|I|23|001|0002|44201|1|03|AREA|REGIONAL SCALE||TOP OF BUILDING|4|1|1||Y||2|||||2399||||

Monitor Information.....
 MA Basic Monitor Information



Transaction Types (Raw Data)



RD Hourly, Daily, and Sub Hourly Raw Data

#	Field Name	Formatting Rule
1	Transaction Type ^R	RD = Raw Data Type
2	Action Indicator ^R	Must = I, U, or D
3	State Code / Tribal Indicator ^R	Must exist in STATES Reference Table or be 'TT' for Tribal Site
4	County Code / Tribal Code ^R	Must exist in COUNTIES or TRIBAL_AREAS Reference Table
5	Site ID ^R	Must exist in SITES table with the {State Code, County Code} or Tribal Code
6	Parameter ^R	Must exist in PARAMETERS Reference Table
7	POC ^R	Must exist in MONITOR table with Parameter
8	Duration Code ^{R(D)}	Must exist in SAMPLE_DURATIONS Reference Table
9	Reported Unit ^{R(D)}	Must exist in UNITS Reference Table
10	Method Code ^{R(D)}	Must exist in SAMPLING_METHODOLOGIES Reference Table
11	Sample Date ^R	YYYYMMDD format
12	Sample Time ^R	hh:mm format
13	Reported Sample Value ^{X(L,U)}	Number - 5.5 format
14	Null Data Code ^{X(L,U)}	Must exist in QUALIFIERS Reference Table, if valued
15	Collection Frequency Code	Must exist in COLLECTION_FREQUENCIES Reference Table
16	Monitor Protocol ID (MP ID)	Must exist in Monitor Protocols Table for the Monitor
17	Qualifier Code -1	Must exist in QUALIFIERS Reference Table, if valued
18	Qualifier Code -2	Must exist in QUALIFIERS Reference Table, if valued
19	Qualifier Code -3	Must exist in QUALIFIERS Reference Table, if valued
20	Qualifier Code -4	Must exist in QUALIFIERS Reference Table, if valued
21	Qualifier Code -5	Must exist in QUALIFIERS Reference Table, if valued
22	Qualifier Code -6	Must exist in QUALIFIERS Reference Table, if valued
23	Qualifier Code -7	Must exist in QUALIFIERS Reference Table, if valued
24	Qualifier Code -8	Must exist in QUALIFIERS Reference Table, if valued
25	Qualifier Code -9	Must exist in QUALIFIERS Reference Table, if valued
26	Qualifier Code -10	Must exist in QUALIFIERS Reference Table, if valued
27	Alternate Method Detectable Limit	Number - 5.5 format
28	Uncertainty Value	Number - 6.5 format

- Virtually all RD is submitted via batch
- Add qualifiers to explain data
- Comments are not supported on RD transaction
- Only way to enter a comment is online



Delimited Transaction Common Fields

- Transaction Type - always the 1st column
- Action Indicator - always the 2nd column
 - I = INSERT
 - U = UPDATE
 - D = DELETE
- State Code - always the 3rd column
- County Code - always the 4th column
- Site ID - always the 5th column

MA|I|23|001|0002|44201|1|03|AREA|REGIONAL SCALE||TOP OF BUILDING|4|1|1||Y||2|||||2399||||



Pipe-Delimited vs XML Example

- AQS Site ID: 01-001-9999
- Pollutant Measured: Ozone
- POC (assigned as part of the monitor ID): 1
- Does this value already exist in the system? No
- What time period does this sample represent (the duration)? hour
- What kind of instrument was used? Dasibi 1008-AH
- When was the sample collected? June 10, 2006
- What time did sample begin (local standard time): 1:00 PM
- Sample Concentration: 0.050 parts per million
- Other qualifiers that you want to apply to data? No
- Would you like to specify an alternate Minimum Detection Limit for this sample? No
- Would you like to specify an uncertainty value with this sample? No



Pipe-Delimited Format

```
RD|I|01|001|9999|44201|1|1|007|056|20060610|13:00|0.050| | | | | | | | | | | | | | | | | | | | | |
```

XML Format

```
<SiteIdentifierDetails>  
  <StateCode>01</StateCode>  
  <CountyCode>001</CountyCode>  
  <SiteIdentifier>9999</SiteIdentifier>  
</SiteIdentifierDetails>  
<MonitorIdentifierDetails>  
  <ParameterCode>44201</ParameterCode>  
  
<ParameterOccurrenceCode>1</ParameterOccurrenceCode>  
</MonitorIdentifierDetails>  
<TransactionProtocolDetails>  
  <DurationCode>1</DurationCode>  
  <MethodCode>056</MethodCode>  
  <UnitCode>007</UnitCode>  
</TransactionProtocolDetails>  
<TransactionRDInsertDetails>  
  <ObservationDate>20060610</ObservationDate>  
  <ObservationStartTime>13:00</ObservationStartTime>  
  <RawValueInsertDetails>  
    <SampleValue>0.050</SampleValue>  
  </RawValueInsertDetails>  
</TransactionRDInsertDetails>  
</ActionRawDataInsert>
```



XML Format

- As you can see, XML looks like HTML, but with some changes:
 - The HTML standard defines a fixed set of “tags” that define the data content and formatting.
 - XML allows you to create your own tags, with the meanings that you define.
- XML Tradeoffs:
 - XML files are “self describing”
 - XML files are bigger (100 X bigger, but compressible.)
- ENSC will “wrap” your flat (text) file with an XML header



Getting Your Data In: Batch Overview



What Do You Mean By Batch Updates?

- Mass entry of data, so faster
- Data in AQS format (from datalogger, Agency system, other)
- Send the file to AQS
- Processing of the data happens without your interaction
- AQS notifies you via email on job completions
- AQS provides reports at the end of each process



Overall Process/Big Picture

- Collect Samples
- Validate the Data
- Format the Data
- Send data file to AQS Using the Exchange Network (ENSC)
- Load the data to AQS (includes error checking)
- Correct any errors & reprocess
- Metadata & non-raw data process is finished
- Raw data (sample measurements) are posted
- Data is then available to the public

Happens Outside of AQS

**Raw Data
Only**

What Can Be Input by Batch?

Can batch load:

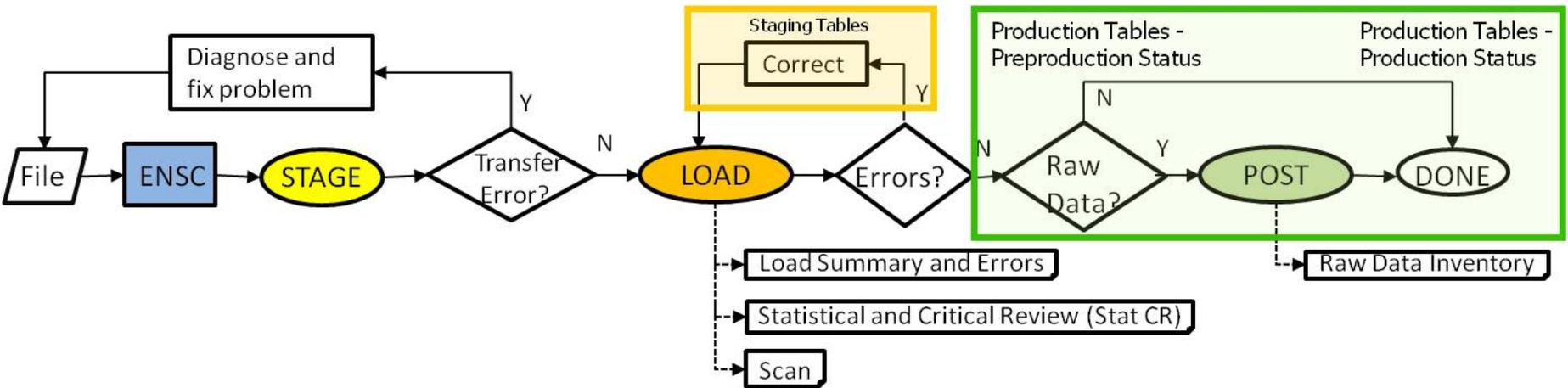
- Site information (all)
- Monitor information (all)
- Raw data
- Audit (precision & bias) data
- Blanks and composite data

Cannot batch load:

- Comments (add'l info on sites, monitors, audits, raw data values)
- Exceptional event definitions
- EPA concurrences (Regional user only)
- Primary monitor period designations (PM2.5)



File Processing with Batch Flow



1. Create file of ambient air data.
2. Transfer the file using the ENSC (Stage)
3. Automatically or manually process the file.
4. Either way, same processing steps in AQS.
 - Raw Data (Load, Post)
 - Non-raw Data (Load)

Where Do I Start?

Register for the 2012 AQS Conference!! Visit the AQS web page at www.epa.gov/tn/airs/airsraqs/

You have accessed AQSPROD. Raw data for 1957 to present is now available for access. Raw data is available for update for 2007 to present.

IF YOU NEED ASSISTANCE, PLEASE CALL THE EPA CALL CENTER AT 1-866-411-4EPA (1-866-411-4372) Hours: 6:00am- 6:30pm Eastern.

Name	Type
REGION 10 SEATTLE	REGION
NATIONAL AIR DATA GROUP	ADMIN
CALIFORNIA 3	STATE
SCAQMD, CA PAMS	LOCAL
USER_SUPPORT	OTHER
NAVAJO NATION	TRIBE



Where To Go Next?

Action Help Session Admin Retrieval Maintenance Critical Rev Certification **Batch** OLd Batch CQrrect Main Menu

BATCH (School Air Toxics Met)

Process by File History

HISTORY AND STATUS						LOAD			POST		
Submission Date	File Name	User Name	Records In File	Date (last)	Process Status	Recs Loaded	Recs Failing to Load	Stat/CR Finding Count	Records to Post	Skip'd Monitors	Records Posted

PROCESS CONTROL

Process selected file through:

Results and Reports:

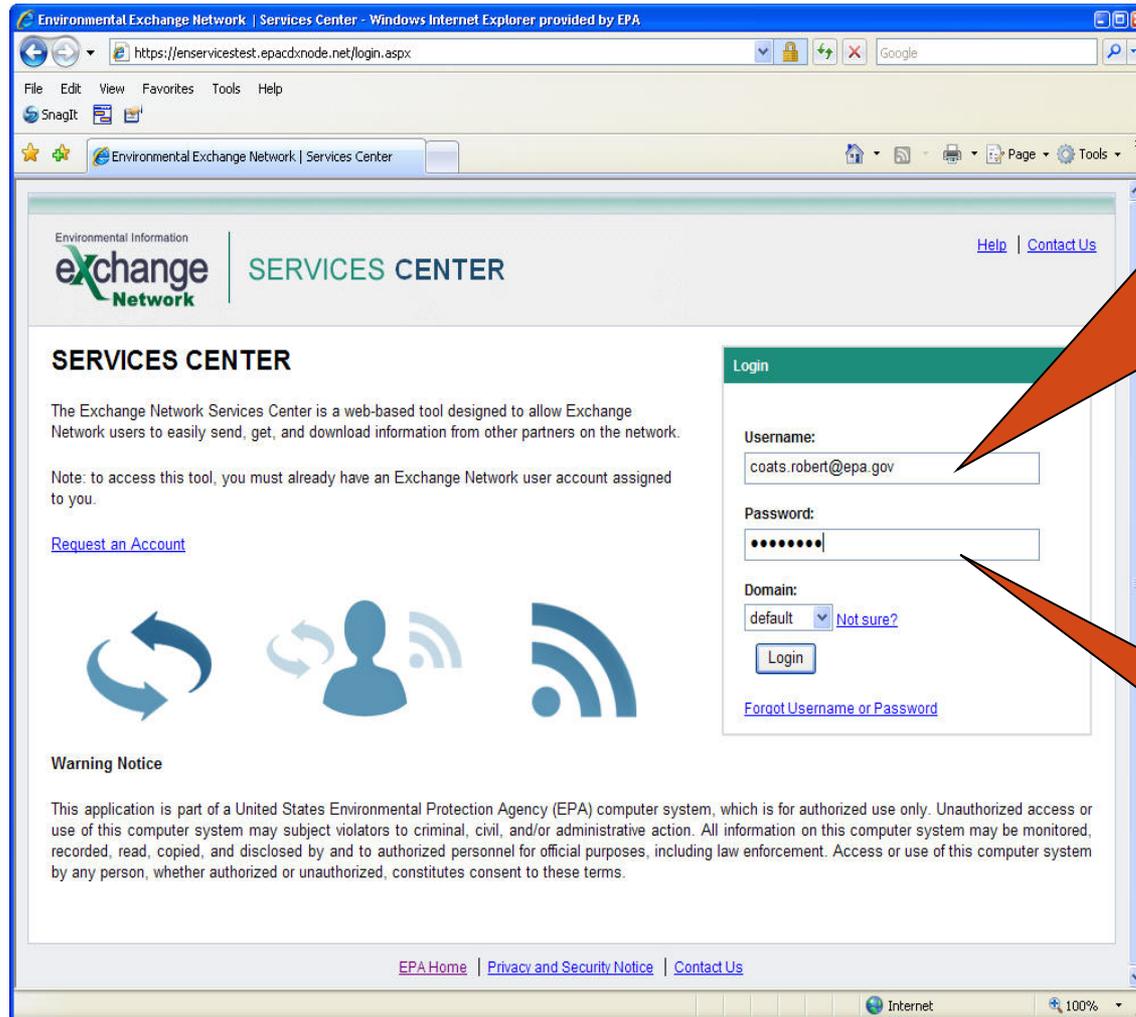
Next step is to transfer your file



ENSC

<https://enservices.epa.gov/login.aspx>

Step 1:
login



You can go directly here and bypass AQS

EN user ID is **not** your AQS ID; it is the email address on your AQS Security Profile (you supplied it when you got your AQS account)

Change in Email address? Call the EN Helpdesk.

Not your AQS pw (unless you manually synced them)

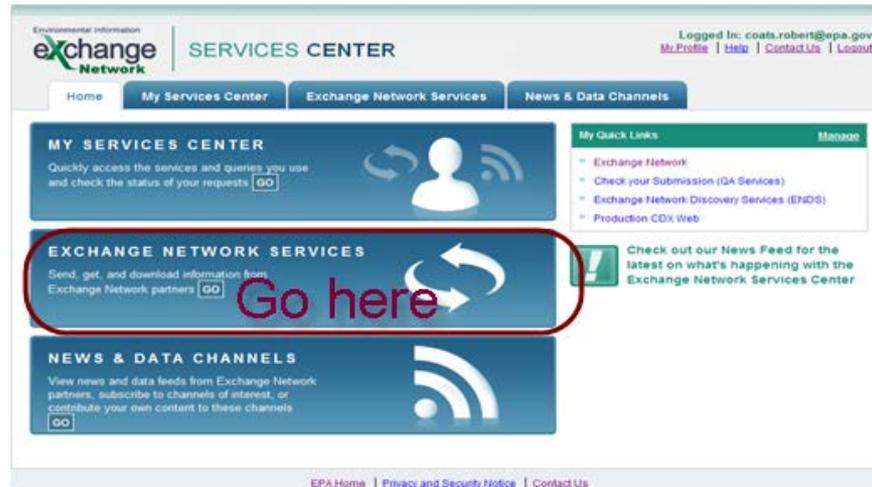
Need a pw reset? Call the EN Helpdesk.



ENSC (One time setup)

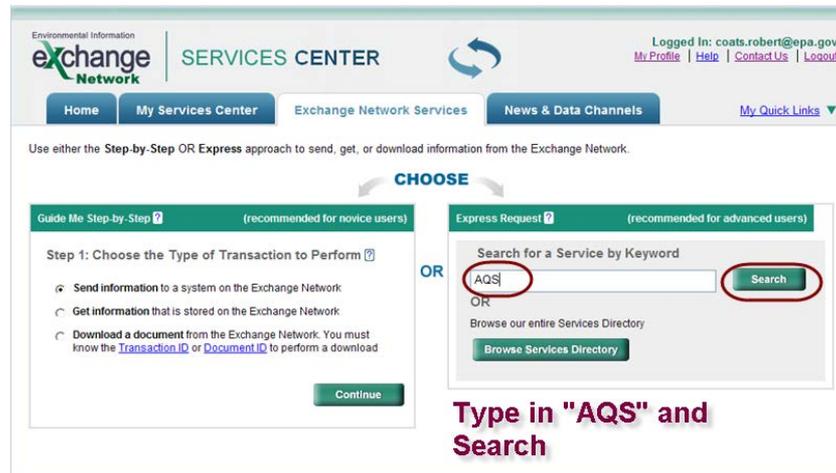
Step 2:

On your first login:



Step 3:

From the Express Register box, type in AQS and click on the Search button.



ENSC (One time setup)

Step 4:

Choose “Send Info” to establish AQS as the service that will receive the files.

The screenshot shows the 'Services Directory' page. At the top, there are navigation tabs: Home, My Services Center, Exchange Network Services, and News & Data Channels. Below the navigation is a search filter section with 'Filter By: Keyword(s)' set to 'AQS'. A table lists services with columns: Service Transaction, Dataflow, Service Name, Service Description, Node, and Service Provider. The 'AQS Submit' service is highlighted with a red circle around its 'Send Info' link.

Service Transaction	Dataflow	Service Name	Service Description	Node	Service Provider
Get Info	AQDE	AQDERawData	Queries or Solicits the Raw Data for the AQDE Flow. The return is an XML file that conforms to the AQS Version 2.0 Schema.	NewJerseyNodeV1_Prod	NJDEP
Send Info	AQS	AQS Submit	Air Quality System Document Submissions	NGNProd2.0	U.S. Environmental Protection Agency
Get Info	AQS	DNR.AQSSubmitRawData	DNR.AQSSubmitRawData	WDNRnode2	Wisconsin DNR
Get Info	FRS	DNR.AQSSubmitRawData	DNR.AQSSubmitRawData	WDNRnode2UAT	Wisconsin DNR

Step 5: Suggest (optional but recommended) that you go to the “My Services Tab” and check “Make this my Start page.” This will then be your starting point each time.

The screenshot shows the 'My Services' page. At the top, there is a header with 'Exchange Network SERVICES CENTER' and a user profile for 'coats.robort@epa.gov'. Below the header are navigation tabs: Home, My Services Center, Exchange Network Services, and News & Data Channels. A 'My Services' section has a checked checkbox for 'Make this my Start page'. Below this is a 'My Services' table with columns: Service Name, Service Description, Publisher, RSS: enabled, and Last Used. The 'AQS Submit' service is listed.

Service Name	Service Description	Publisher	RSS: enabled	Last Used
NGNTest2.0/AQS/AQS Submit	AQS Submit: Send files to the Air Quality System (AQS).	U.S. Environmental Protection Agency	No	3/21/2012 2:59:25 PM



ENSC (Express Request)

Each time you submit a file, you will fill out an “Express Request: AQS Submit”

File to be submitted – must be zipped

Supply if you want email notifications separately from ENSC * or if you want emails sent to a 3rd party; emails automatically go to the address in your AQS profile

AQS ID

Screening group (“owner” of data”)

Final Processing Step - Automate the process by choosing the last step you want done - Default is “Post”

Can choose Post for both non-Raw and Raw Data. If you do not have any errors during the AQS processing, you are DONE.

Stop on Error – Applies to Post. If an error is encountered, AQS stops processing the file. If you aren't taking Raw Data through POST then this setting is ignored.

Express Request: AQS Submit

Select a Document to Upload (max. size 1 GB): *

Enter Sender's Email Address to Notify of Transaction Status Changes:

AQS User ID: *

Additional Data Flow Specific Information:

Screening Group: *

File Type: * Flat/XML

Final Processing Step: Stage/Load/Post

Stop On Error: Yes/No

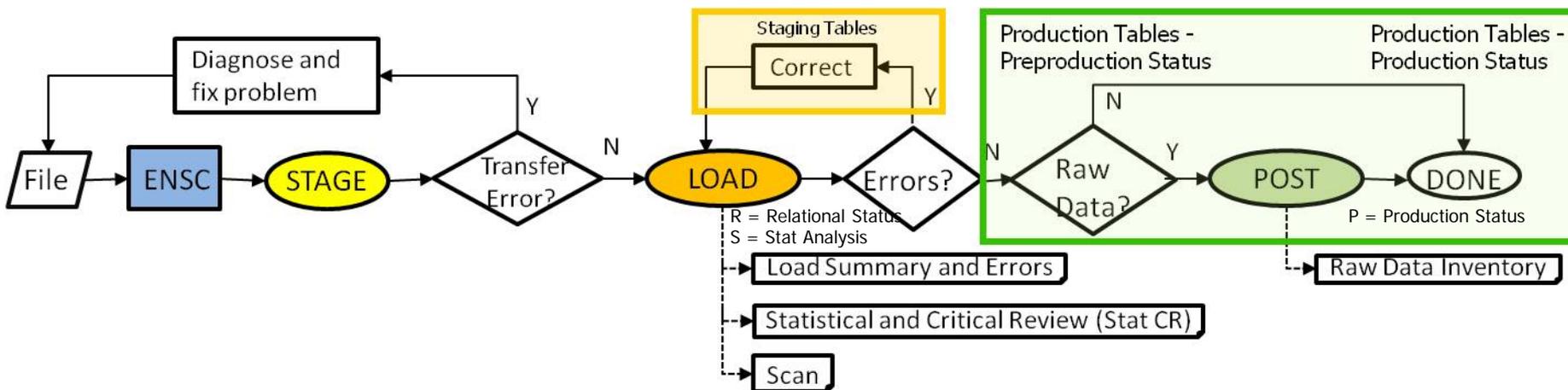
► [Provide information \(metadata\) about this Document \(recommended\)](#)

* **required**

Send Data – the last step



File Processing of Data



“Automatic” file processing :

- Minimizes time needed to handle a file; “Submit Automation” project; don’t even have to log in to AQS
- Final Processing Step = Post (ENSC default) supports automatic file handling
- Stop on Error = Yes (ENSC default) is user preference

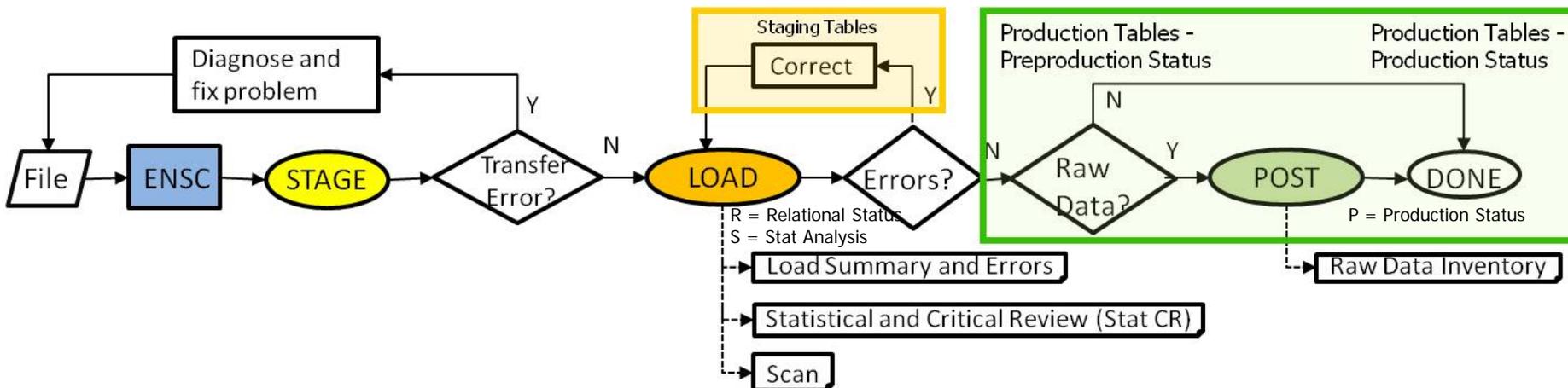
“Manual” file processing

- You must change the defaults on ENSC form
 - Final Processing Step = Stage or Load
 - Then kickoff each subsequent process (Load and/or Post) in AQS

Getting your Data In: File processing when all goes well non Raw data



File Processing of non-Raw Data



At ENSC, you specify "Final Processing Step" of	At ENSC, you specify "Stop on Error" of	Did your file have Errors? ¹	You will see this "Process Status" on the AQS Batch form	What does it mean?
File only contains non-Reported data (RP, RA, M*, or A* transactions but no RD)				
STAGE	No/Yes ²	No	STAGE-COMPLETED	File is ready for LOAD.
		Yes	STAGE-ERROR	File had errors in transfer. Fix errors in file on your end and resubmit.
LOAD	No/Yes ²	No	LOAD-COMPLETED	Done.
		Yes	LOAD-ERROR	Records w/errors in Correct (review reports to see reason). Other records are done.
POST ³	No/Yes	No		POST process only runs against Reported Data.
		Yes		



Batch form - Process by File

AQS

Action Help Session Admin Retrieval Maintenance Critical Rev Certification **Batch** Old Batch Correct Main Menu

Process by file tab: Only shows the last process performed on a file

Process by File History

HISTORY AND STATUS						LOAD			POST		
Submission Date	File Name	User Name	Records In File	Date (last)	Process Status	Recs Loaded	Recs Failing to Load	Stat/CR Finding Count	Records to Post	Skip'd Monitors	Records Posted
20120725 09:15	RIIR TSAT RD DATA.zip	JAIME HAUSER	142	20120725 09:16	CRST-COMPLETED	142	0	13	142	0	
20120725 09:12	POMN TSAT RD DATA.zip	JAIME HAUSER	55	20120725 09:12	CRST-COMPLETED	55	0	4	55	0	
20120720 11:48	RIIR TSAT RD DATA.zip	JAIME HAUSER	387	20120720 11:50	CRST-COMPLETED	387	0	1	387	0	
20120720 10:14	RIIR TO-15 monitor transacti	JAIME HAUSER	520	20120720 10:19	LOAD-COMPLETED	513	0				
20120720 10:10	RIIR TO-11 monitor transacti	JAIME HAUSER	117	20120720 10:10	LOAD-COMPLETED	117	0				
20120525 09:08	TSAT RD DATA 20120525.zij	JAIME HAUSER	11	20120525 10:27	POST-COMPLETED	11	0	0	11	0	11

PROCESS CONTROL

Process selected file through:

Results and Reports:



Batch form - History

AQS

Action Help Session Admin Retrieval Maintenance Critical Rev Certification **Batch** Old Batch Correct Main Menu

BATCH (Tribal School Air Toxics)

Process by File History

History tab: Shows all processes performed on a file

PROCESS HISTORY

Session Date	Job Type	User Name	File Name	File Status	Successful Transactions	Failed Transactions
20120725 09:15:45	STAGE	JAIME HAUSER	RIIR TSAT RD DATA.zip	COMPLETED	142	0
20120725 09:12:23	CRST	JAIME HAUSER	POMN TSAT RD DATA.zip	COMPLETED	55	4
20120725 09:12:10	LOAD	JAIME HAUSER	POMN TSAT RD DATA.zip	COMPLETED	55	0
20120725 09:12:08	STAGE	JAIME HAUSER	POMN TSAT RD DATA.zip	COMPLETED	55	0
20120720 11:50:00	CRST	JAIME HAUSER	RIIR TSAT RD DATA.zip	COMPLETED	387	1
20120720 11:48:55	LOAD	JAIME HAUSER	RIIR TSAT RD DATA.zip	COMPLETED	387	0
20120720 11:48:52	STAGE	JAIME HAUSER	RIIR TSAT RD DATA.zip	COMPLETED	387	0
20120720 10:19:29	LOAD	JAIME HAUSER	RIIR TO-15 monitor transaction	COMPLETED	0	0
20120720 10:14:37	LOAD	JAIME HAUSER	RIIR TO-15 monitor transaction	ERROR	513	7
20120720 10:14:34	STAGE	JAIME HAUSER	RIIR TO-15 monitor transaction	COMPLETED	520	0
20120720 10:10:17	LOAD	JAIME HAUSER	RIIR TO-11 monitor transaction	COMPLETED	117	0
20120720 10:10:13	STAGE	JAIME HAUSER	RIIR TO-11 monitor transaction	COMPLETED	117	0
20120525 10:27:49	POST	JAIME HAUSER	TSAT RD DATA 20120525.zip	COMPLETED	11	0
20120525 10:27:39	CRST	JAIME HAUSER	TSAT RD DATA 20120525.zip	COMPLETED	11	0
20120525 10:27:36	LOAD	JAIME HAUSER	TSAT RD DATA 20120525.zip	COMPLETED	0	0
20120525 09:08:16	CRST	JAIME HAUSER	TSAT RD DATA 20120525.zip	COMPLETED	11	0
20120525 09:08:07	LOAD	JAIME HAUSER	TSAT RD DATA 20120525.zip	COMPLETED	11	0
20120525 09:08:05	STAGE	JAIME HAUSER	TSAT RD DATA 20120525.zip	COMPLETED	11	0
20120427 11:35:00	CRST	JAIME HAUSER		COMPLETED	12132	13
20120427 11:34:00	FILE	JAIME HAUSER	Tribal SAT RD Data 20120427.tx	COMPLETED		

Historical reports:

Re Run Reports



Put it into Practice: Exercise 2.2

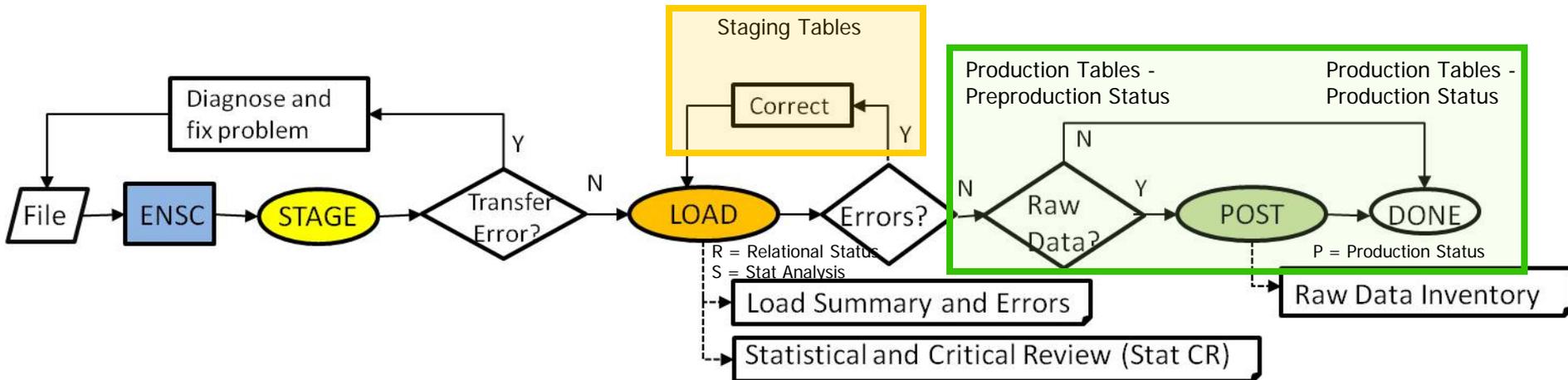
- You will submit a file containing non-raw data
 - You will use the “Automatic” process
 - Final processing step = “Post”
- Review the File Processing



Getting Your Data In: File Processing when all goes well Raw data



File Processing of Raw Data



At ENSC, you specify "Final Processing Step" of	At ENSC, you specify "Stop on Error" of	Did your file have Errors? ¹	You will see this "Process Status" on the AQS Batch form	What does it mean?
File contains Raw Data (RD transactions)				
STAGE	No/Yes ²	No	STAGE-COMPLETED	File is ready for LOAD or POST
		Yes	STAGE-ERROR	File had errors. Fix errors in file on your end and resubmit.
LOAD	No/Yes ²	No	CRST-COMPLETED	File through LOAD and STAT/CR -- ready for POST.
		Yes	CRST-COMPLETED	File through LOAD and STAT/CR. Check Recs Failing to Load count. Records w/errors are in <u>Correct</u> ; all others ready for POST.
POST	No	No	POST-COMPLETED	Done. Check Records Posted.
		Yes	POST-COMPLETED	File processing stops. Records w/errors in <u>Correct</u> . Other records <u>POSTED</u> .
	Yes	No	POST-COMPLETED	Done. Check Records Posted.
		Yes	RAW CRST-COMPLETED	File processing stops. Review reports to see reason.



Batch: Load step for Raw Data includes Stat CR

- Raw data goes through Statistical Evaluation & Critical Review
- Evaluates data and flags anomalies.
 - anomalies are not necessarily errors
 - real errors that fit the rest of the data are not necessarily captured
- You are notified of the results of these through
 - Stat CR Report
 - ✓ Compares pre-production data to existing production data*
 - ✓ Statistical findings
 - ✓ Critical Review findings
 - ✓ Link to report is emailed to you
 - ✓ Also available via Process by File or History tabs
 - Scan Report
 - ✓ Information on maximum values and validity flags for raw data
 - ✓ Link to report is emailed to you
 - ✓ Available via History tab



Batch: Post step for Raw Data

- Raw data must go through Post step
- Makes data “production status” and publicly available
- Required when Raw Data is added or changed
 - Online → “Save” → AQS will generate a file that you must process using the Batch form
 - Batch → Raw data requires the Post step
- You are notified of what was posted through
 - Raw Data Inventory Report
 - ✓ Information on data fields that were updated
 - ✓ Reviewed by many submitters; some save each report
 - ✓ Link to report is emailed to you
 - ✓ Also available via History tab



Tracking a file: Process by File vs. History

Process by file tab: shows the last process performed on a file

Process by File History

Current Screening Group (Click Button to Change) Jane Doe's Screening Group

Show Python Log Show Output Log

Submission Date	File Name	User Name	In File	Date (last)	Last process & status	LOAD			POST		
						Recs Loaded	Recs Failing to Load	Stat/CR Finding Count	Records to Post	Skip'd Monitors	Record Posted
20120725 08:07	LYNNOzoneJune2012.zip	JANE DOE	744	20120725 08:11	POST-COMPLETED	744	0	0	744	0	744

Record counts for LOAD

Record counts for POST

Total record counts for all jobs performed on this file, not just the last job.

History tab: Shows all processes performed on a file

Process by File History

PROCESS HISTORY

Session Date	Job Type	User Name	File Name	File Status	Successes		Failures	
					Successful Transactions	Failed Transactions		
20120725 08:07:22	POST	Jane Doe	LYNNOzoneJune2012.zip	COMPLETED	744			
20120725 08:07:08	CRST	Jane Doe	LYNNOzoneJune2012.zip	COMPLETED	744	0		
20120725 08:06:12	LOAD	Jane Doe	LYNNOzoneJune2012.zip	COMPLETED	744	0		
20120725 08:06:07	STAGE	Jane Doe	LYNNOzoneJune2012.zip	COMPLETED	744			

Date and time of process

Process run

File name



History

History tab: Shows all processes performed on a file

Process by File **History**

PROCESS HISTORY

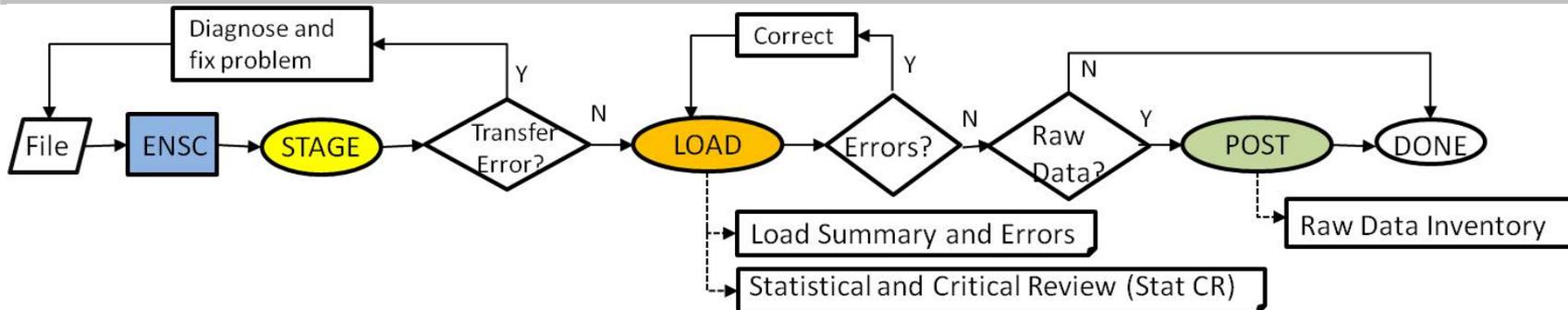
Session Date	Job Type	User Name	File Name	File Status	Successes	Failures
					Successful Transactions	Failed Transactions
20120725 08:07:22	POST	Jane Doe	LYNNOzoneJune2012.zip	COMPLETED	744	
20120725 08:07:08	CRST	Jane Doe	LYNNOzoneJune2012.zip	COMPLETED	744	0
20120725 08:06:12	LOAD	Jane Doe	LYNNOzoneJune2012.zip	COMPLETED	744	0
20120725 08:06:07	STAGE	Jane Doe	LYNNOzoneJune2012.zip	COMPLETED	744	

Historical reports:

- Load Summary and Errors
- Stat CR Report
- Raw Data Inventory

Re Run Reports

- Rerun Load Summary and Errors
- Rerun Stat CR Report
- Rerun Raw Data Inventory
- Rerun Scan Report
- Refresh History



Stat CR Report

- Stat CR is automatically run after Load for Raw Data submissions
- If Job Type is "CRST" → Stat CR Report is available

BATCH (National Air Data Group)

Process by File History

Session Date

- 20120809 14:06:13
- 20120809 14:05:59
- 20120809 14:03:51
- 20120809 13:46:03
- 20120809 13:43:11
- 20120809 13:43:09
- 20120809 11:48:24
- 20120809 09:32:00
- 20120809 09:31:55
- 20120808 14:41:24
- 20120703 09:05:18
- 20120703 09:05:15
- 20120702 11:32:45
- 20120702 11:30:11
- 20120702 11:24:05
- 20120702 11:06:25
- 20120702 09:40:54
- 20120625 16:58:38
- 20120625 16:58:16
- 20120618 13:46:00



Air Quality Subsystem STATISTICAL EVALUATION and CRITICAL REVIEW REPORT

Aug. 13, 2012 

Statistical Findings

Screening Group Name : National Air Data Group

File Name : IOWA_SITE_DATA-0.zip

Monitor Id	Date:Time	Error	Above Gap Cnt	Slot Below Gap Cnt	Total Gap Cnt
19-153-9999-42602-1	Feb. 18, 2009 :0	Fails Dixon Ratio test.			

Critical Review Findings

No Critical Review Findings

Job ID	Job Name	File Name	Status	Count	Gap
20120702 11:30:11	CRST	CHRIS CHAPMAN IOWA_SITE_DATA-0.zip	COMPLETED	35088	1
20120702 11:24:05	LOAD	CHRIS CHAPMAN IOWA_SITE_DATA-0.zip	COMPLETED	35088	0
20120702 11:06:25	LOAD	CHRIS CHAPMAN IOWA_SITE-0.zip	ERROR	14	2
20120702 09:40:54	LOAD	CHRIS CHAPMAN IOWA_SITE-0.zip	ERROR	0	16
20120625 16:58:38	STAGE	CHRIS CHAPMAN IOWA_SITE_DATA-0.zip	COMPLETED	35088	0
20120625 16:58:16	STAGE	CHRIS CHAPMAN IOWA_SITE-0.zip	COMPLETED	16	0
20120618 13:46:00	FILE	ROBERT COATS do_nothing_unix.txt	ERROR		

Historical reports:

Re Run Reports

Only records that fail a test are reported

Report is stored for 15 days

After 15 days, must rerun



Scan Report

- Stat CR is automatically run after Load for Raw Data submissions
- If Job Type is "CRST" → Scan Report is available

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
AIR QUALITY SYSTEM
SCAN REPORT (AMP120)

Aug. 13, 2012

Monitor Id	Unit	D	Year	Q	Hist Max	Date-Time	1st		V 2nd		V 3rd		V 4th		V		
							Max	Date-Time	Loc	F	Max	Date-Time	Loc	F		Max	Date-Time
19-153-9999-42602-1	008	1	2008	-1			43	02/22:20		40	02/22:22		40	02/27:20		39	01/23:08
19-153-9999-42602-1	008	1	2008	-2			50	05/21:20		49	04/22:21		48	04/22:20		47	05/21:21
19-153-9999-42602-1	008	1	2008	-3			39	08/18:20		38	09/17:19		38	09/20:20		37	09/24:18
19-153-9999-42602-1	008	1	2008	-4			54	10/31:17		53	10/31:18		49	10/31:19		43	10/29:17
19-153-9999-42602-1	008	1	2009	-1			47	01/30:07		46	01/28:01		45	01/28:02		45	01/30:06
19-153-9999-42602-1	008	1	2009	-2			51	05/22:22		51	05/29:20		49	05/03:20		49	05/22:20
19-153-9999-42602-1	008	1	2009	-3			46	09/15:19		45	09/14:19		44	09/13:19		44	09/15:20
19-153-9999-42602-1	008	1	2009	-4			45	12/11:18		41	12/11:07		39	12/11:08		38	12/11:19
19-153-9999-42602-1	008	1	2010	-1			62	03/04:09		53	03/04:08		52	03/04:07		52	03/31:19
19-153-9999-42602-1	008	1	2010	-2			53	04/20:20		53	04/20:21		46	04/20:22		46	04/27:21
19-153-9999-42602-1	008	1	2010	-3			36	09/14:20		33	07/09:20		33	07/09:21		33	09/14:19
19-153-9999-42602-1	008	1	2010	-4			51	10/10:18		47	10/10:19		45	10/10:20		42	10/11:19
19-153-9999-42602-1	008	1	2011	-1			45	03/31:06		42.3	03/10:22		42.1	03/10:21		41.7	03/10:20
19-153-9999-42602-1	008	1	2011	-2			41.8	05/17:22		41.2	06/04:22		39.3	04/05:19		39.2	05/17:21
19-153-9999-42602-1	008	1	2011	-3			34.5	09/28:18		34.4	08/25:21		34.3	09/19:18		34.2	09/19:19
19-153-9999-42602-1	008	1	2011	-4			46.3	10/21:18		43.3	10/21:20		43.1	10/21:19		39.6	10/21:21
19-153-9999-42602-1	008	1	2012	-1			2.9	01/01:20		2.7	01/01:00		2.7	01/01:16		2.7	01/01:17

20120702 11:30:11	CRST	CHRIS CHAPMAN	IOWA_SITE_DATA-0.zip	COMPLETED	35088	1
20120702 11:24:05	LOAD	CHRIS CHAPMAN	IOWA_SITE_DATA-0.zip	COMPLETED	35088	0
20120702 11:06:25	LOAD	CHRIS CHAPMAN	IOWA_SITE-0.zip	ERROR	14	2
20120702 09:40:54	LOAD	CHRIS CHAPMAN	IOWA_SITE-0.zip	ERROR	0	16
20120625 16:58:38	STAGE	CHRIS CHAPMAN	IOWA_SITE_DATA-0.zip	COMPLETED	35088	0
20120625 16:58:16	STAGE	CHRIS CHAPMAN	IOWA_SITE-0.zip	COMPLETED	16	0
20120618 13:46:00	FILE	ROBERT COATS	do_nothing_unix.txt	ERROR		

Historical reports:

Load Summary and Errors

Stat CR Report

Raw Data Inventory

Re Run Reports

Rerun Load Summary and Errors

Rerun Stat CR Report

Rerun Raw Data Inventory

Rerun Scan Report

Refresh History



Raw Data Inventory Report

- Job Type is "POST" → Raw Data Inventory Report is available

BATCH (National Air Data Group)

Process by File History

PROCESS HISTORY

Session Date	Job Type	User Name	File Name	File Status	Successful Transactions	Failed Transactions
--------------	----------	-----------	-----------	-------------	-------------------------	---------------------



United States
Environmental Protection Agency

Air Quality Subsystem

Raw Data Inventory Report

Aug. 13, 2012

Screening Group: National Air Data Group

File Name: IOWA_SITE_DATA-0.zip

Monitor ID	Duration	Year	# Inserts	# Updates	# Deletes
19-153-9999-42602-1	1 HOUR	2008-1	744	0	0
19-153-9999-42602-1	1 HOUR	2008-2	696	0	0
19-153-9999-42602-1	1 HOUR	2008-3	744	0	0
19-153-9999-42602-1	1 HOUR	2008-4	720	0	0
19-153-9999-42602-1	1 HOUR	2008-5	744	0	0
19-153-9999-42602-1	1 HOUR	2008-6	720	0	0
19-153-9999-42602-1	1 HOUR	2008-7	744	0	0
19-153-9999-42602-1	1 HOUR	2008-8	744	0	0
19-153-9999-42602-1	1 HOUR	2008-9	720	0	0

Historical reports:

Re Run Reports

← Report is stored for 15 days

← After 15 days, must rerun



Put it into Practice: Exercise 2.3

- You will submit a mixed file with non-Raw data and Raw data
 - You will use the “Automatic” process
 - Final processing step = “Post”
 - Go into AQS and look at the Batch form
 - ✓ Process by File
 - ✓ History



Getting Your Data In: How to Correct What Went Wrong



Batch load: When your file has errors

- AQS checks all incoming data
- Load process looks for relational and formatting anomalies
- Any data with errors goes to the “Staging Tables”
- Data with errors are prevented from getting all the way through to the “Production Tables”



What to do with failed transactions?

Process by File **History**

PROCESS HISTORY

Session Date	Job Type	User Name	File Name	File Status	Successful Transactions	Failed Transactions
20120725 08:07:22	POST	Jane Doe	LYNNOzoneJune2012.zip	COMPLETED	720	
20120725 08:07:08	CRST	Jane Doe	LYNNOzoneJune2012.zip	COMPLETED	720	0
20120725 08:06:12	LOAD	Jane Doe	LYNNOzoneJune2012.zip	COMPLETED	720	24
20120725 08:06:07	STAGE	Jane Doe	LYNNOzoneJune2012.zip	COMPLETED	744	

Historical reports:

- Load Summary and Errors
- Stat CR Report
- Raw Data Inventory

Re Run Reports

- Rerun Load Summary and Errors
- Rerun Stat CR Report
- Rerun Raw Data Inventory
- Rerun Scan Report
- Refresh History

Final Processing Step = "Post"

File had errors:

Stop on Error = "Yes" → all processing stops;

Stop on Error = "No" → "good" data posts; "bad" data in Correct

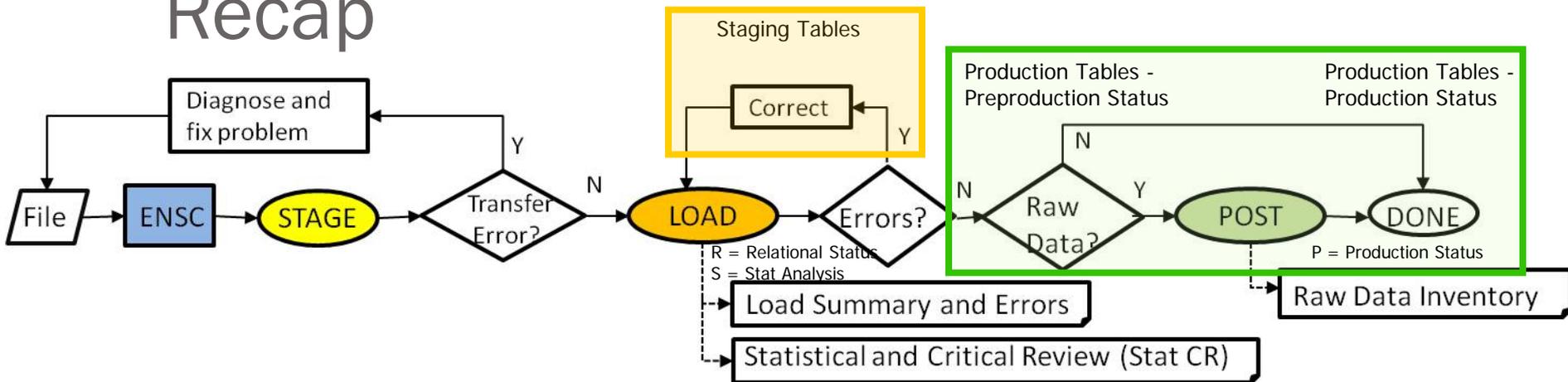


Caveats:

- A batch load job can end with a status of “WARNING” or “ERROR”
- “WARNING” does not prevent data from going into AQS
 - E.g. “Urbanized Area Code replaced by Geospatial Lookup”
- “ERROR” does prevent data from going into AQS
 - E.g., “Invalid Protocol”
 - *You must fix the data before it will go in.*
- Some errors are typos/missing metadata
- Some errors require additional knowledge
 - E.g., certain parameters (PM_{2.5}, lead, SO₂, NO₂) require a primary monitor designation on the Maintain Site form because their data is combinable by site



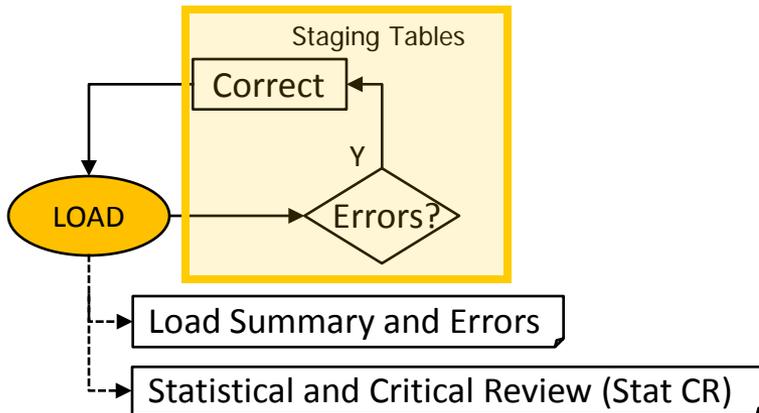
Recap



- Steps:
 - If There is No Raw Data and No Errors
 - ✓ ENSC → Load
 - If There is No Raw Data and Errors
 - ✓ Load → Load → Correct → Load
 - If There is Raw Data and No Errors
 - ✓ ENSC → Load (includes Stat/CR) → Post
 - If There is Raw Data and Errors
 - ✓ ENSC → Load (includes Stat/CR) → Correct → Load → Post
- Status of records will change with the steps run:

Status = R
→
Status = S
→
Status = P

Batch load: When your file has errors



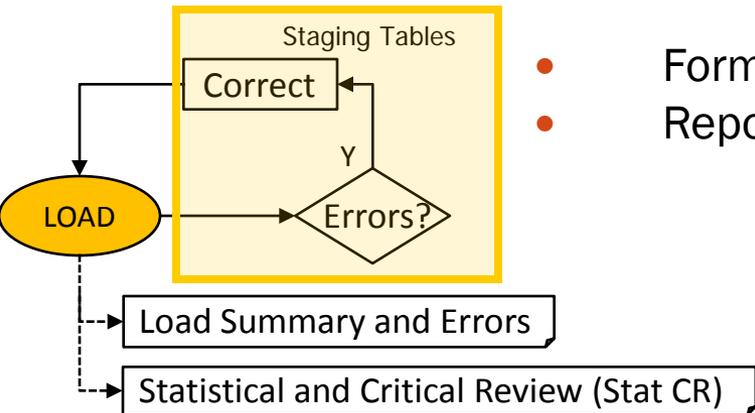
- How to fix the data?

Option 1: Use Correct (online editor that works against Staging)

Option 2: Use Preproduction Report to get data back out in the delimited transaction format; delete Preproduction data; fix the transactions outside of AQS and resubmit

Batch load: Using Correct to fix Data

- Form available to correct every type of data input record
- Reports available



EPA United States Environmental Protection Agency

Air Quality Subsystem
Edit/Load Summary Report

Jun. 5, 2002

Screening Group Name : INSTRUCTOR1

Transaction Type	Transaction Type Description	Errors	Exclusions	Edits	Posts	Total
AA	SITE BASIC	0	0	0	1	1
MA	MONITOR BASIC	0	0	0	1	1
MB	MONITOR SAMPLING	0	0	0	1	1
MC	MONITOR TYPE INFORMATION	1	0	0	1	2
MD	MONITOR AGENCY ROLE	3	0	0	3	6
ME	MONITORING OBJECTIVE INFORMATION	0	0	0	1	1
RD	RAW DATA	12	0	48	0	60
Totals		16	0	48	8	72



Batch load: Using Correct Forms

The screenshot shows the AIRS-AQS software interface. The main window is titled "Correct - Monitor Types (Lbauder)". It contains several data entry fields and a table. Callouts provide instructions and warnings:

- Save:** A callout points to the save icon in the toolbar.
- Execute Query:** A callout points to the execute query icon in the toolbar, stating: "This will load all of this type of data in the Staging tables for your Screening Group. If you want to limit selection you must put in selection values before the execute query."
- Read the error message(s):** A callout points to the error message table, stating: "Error messages are the same as in the error details report. Many chose to go straight to the Correct screens rather than run a report. The column name is sometimes informative."
- Find, Analyze and fix the data:** A callout points to the error message table, stating: "Fixing the data often requires knowledge of the nature of the data and may require going back to data sources."
- Exclude unfixed data:** A callout points to the "Exclusion Ind" checkbox in the table, stating: "Excluding unfixed data will keep it from raising error flags during load."

County Code	Site Id	Parameter Code	POC	Type	Type Begin Date	Type End Date	Exclusion Ind
141	9954	81102	2	19700101		<input type="checkbox"/>	

Column Name	Error Code	Error Message
MULTIPLE COLUMNS	-20775	Monitor_type_begin_date not within valid sampl period.



Correct Features

- New transactions may be entered using Correct forms
- After making changes/additions on Correct screen, **SAVE** changes
- “Delete All Selected” button will delete according to “Execute Query” selection criteria for the form; it will ignore subsequent changes.
- If you are a Screening Group Administrator, can use “Delete by screening group” to completely eliminate all records in staging tables for your screening group

Be sure this is what you want to do. It works quickly and it deletes **EVERYTHING** for the screening group, including data entered by other users in your screening group.



Batch load: Using Correct Forms

Deleting Data (cont.)

The screenshot shows the AQS software interface. At the top is a menu bar with options: Action, Help, Site Data, Monitor Data, Raw, Precision, Accuracy, Blanks, Composite, Annual Summary, Batch, Main Menu. Below the menu is a toolbar with various icons. The main window title is 'Correct - Monitor Types (Lbauder) Tribal Mode'. It contains a data table with columns: Tribal Ind, Tribal Code, Site Id, Para Code, Type Begin Date, Type End Date, Exclusion Ind, and Exclusion Date. A 'Delete All Selected' button is located at the bottom of the table. A dialog box titled 'Forms' is open, displaying a warning icon and the text: 'This will delete all of selected records. Do you want to continue?' with a 'No' button. Three callout boxes provide instructions: one points to a highlighted row in the table, another points to the dialog box, and a third points to the 'Delete All Selected' button.

The highlighted record can be deleted from the form.

This dialog box asks for confirmation to delete all selected records.

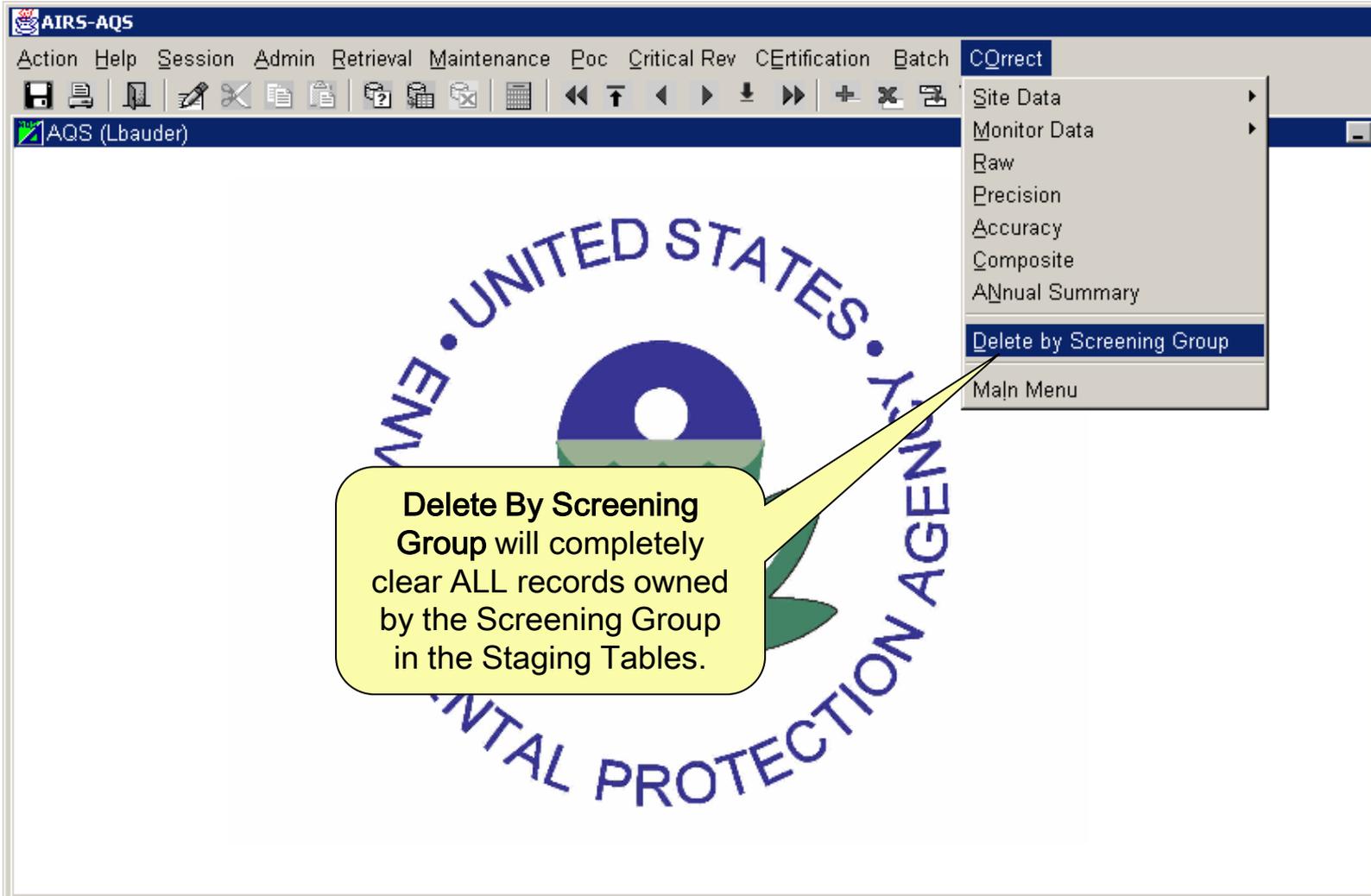
All selected records will be deleted.

The records will be deleted from the Staging Table database when the button is clicked.



Batch load: Using Correct Forms

Deleting Data (cont.)



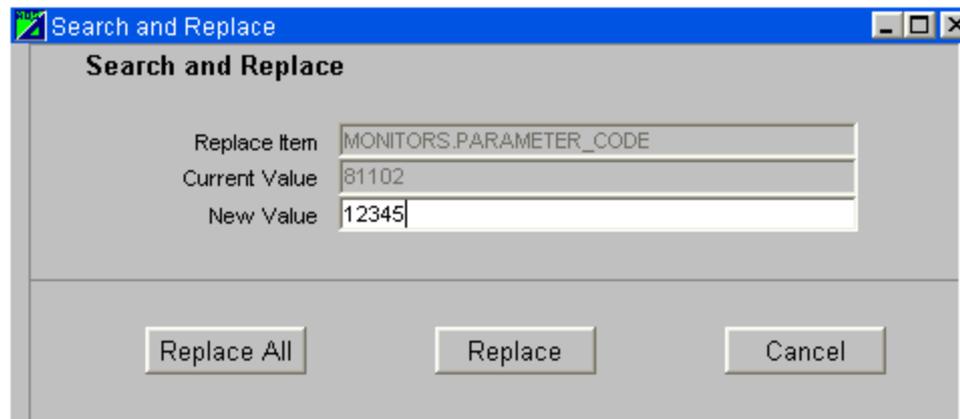
The screenshot shows the AIRS-AQS software interface. The menu bar includes Action, Help, Session, Admin, Retrieval, Maintenance, Poc, Critical Rev, Certification, Batch, and Correct. The 'Correct' menu is open, showing options: Site Data, Monitor Data, Raw, Precision, Accuracy, Composite, Annual Summary, Delete by Screening Group (highlighted), and Main Menu. A callout box points to the 'Delete by Screening Group' option with the text: 'Delete By Screening Group will completely clear ALL records owned by the Screening Group in the Staging Tables.'



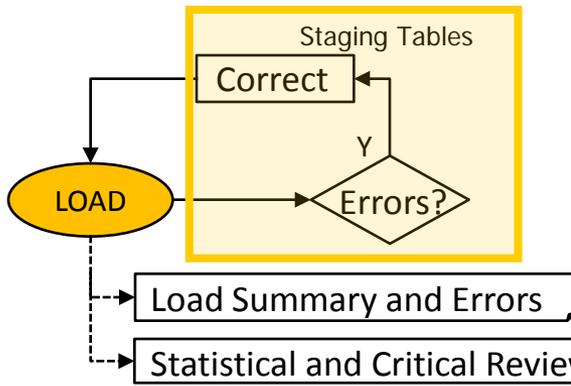
Search & Replace



- Not “Search & Replace” as you may know it!
- Replaces ALL Queried Values in a given column Regardless of the “Current Value”



Load Corrected Data - Process by File tab



Once data is corrected

- Load the file again
- Recheck for errors (“Recs Failing to Load” column”)
- Identify errors using Load Summary and Error report
- Correct residual errors (Correct)
- Repeat until no errors occur

Action Help Session Admin Retrieval Maintenance Critical Rev Certification Batch OLd Batch **Correct** Main Menu

BATCH (National Air Data Group)

Process by File History

Current Screening Group (Click Button to Change) National Air Data Group

HISTORY AND STATUS						LOAD			POST		
Submission Date	File Name	User Name	Records In File	Date (last)	Process Status	Recs Loaded	Recs Failing to Load	Stat/CR Finding Count	Records to Post	Skip'd Monitors	Records Posted
20120809 14:05	NCore_MCInsertrecordsfromC	ANGIE SHATAS	46	20120809 14:06	LOAD-ERROR	0	46				
20120809 13:43	NCore_MCrecordstobeconver	ANGIE SHATAS	244	20120809 14:03	LOAD-COMPLETED	244	0				
20120809 13:46	NCore_MCInsertrecordsfromC	ANGIE SHATAS	46	20120809 13:46	STAGE-COMPLETE						
20120809 09:31	NCore_MCrecordstobeconver	ANGIE SHATAS	1079	20120809 11:48	LOAD-ERROR	835	244				
20120703 09:05	MDtest.zip	ANGIE SHATAS	1	20120808 14:41	LOAD-ERROR	0	1				
20120625 16:58	IOWA_SITE_DATA-0.zip	CHRIS CHAPMAN	35088	20120702 11:32	POST-COMPLETED	35088	0	1	35088	0	35088
20120625 16:58	IOWA_SITE-0.zip	CHRIS CHAPMAN	16	20120702 11:06	LOAD-ERROR	14	2				
		CHRIS CHAPMAN		20120524 15:32	LOAD-COMPLETED	0	0				
		CHRIS CHAPMAN		20120524 15:32	LOAD-COMPLETED	0	0				

PROCESS CONTROL

Load: **Load File** (highlighted with a red box)

Post: Post File

Other: Show User Log, Goto ENSC, Refresh Sessions

Results and Reports: Load Summary and Errors, Stat CR Report, Raw Data Inventory



Exceptional Events

- What is an exceptional event?

The Federal Regulations (40 CFR Part 50.14) allow Ambient Air Quality Measurements that are Exceedances or Violations of the National Ambient Air Quality Standards (NAAQS) that are **caused** by an “Exceptional Event” to be excluded from Attainment demonstrations.

- These steps are now done:



- Reporting Agency “flags” data with exceptional Event Flag, and submits justification to EPA → you put a special qualifier on your Raw Data value



- Reporting Agency defines the Exceptional Event → you defined an Event in AQS using Maintain Event

- Time to do the last necessary step for the Reporting Agency

- Reporting Agency ties the flagged data to the defined Event → you associate these in AQS using Maintain Event (online)

- When this step is complete, then the EPA Regional Office can take AQS action.

- Regional office either concurs with exclusion or “non-concurs”

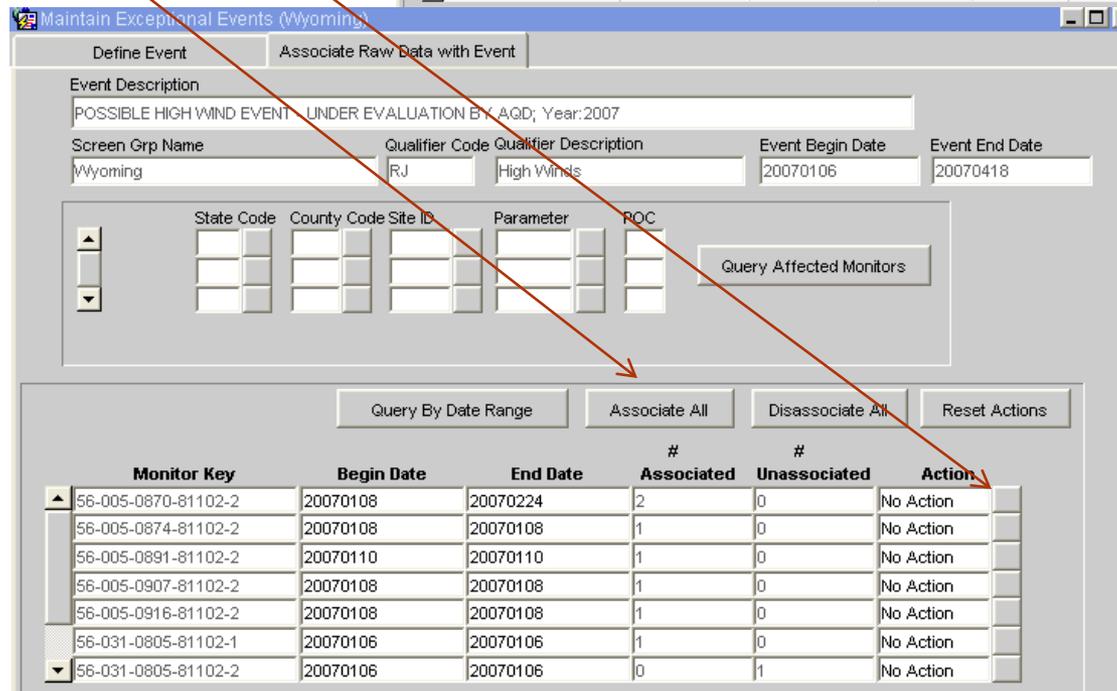
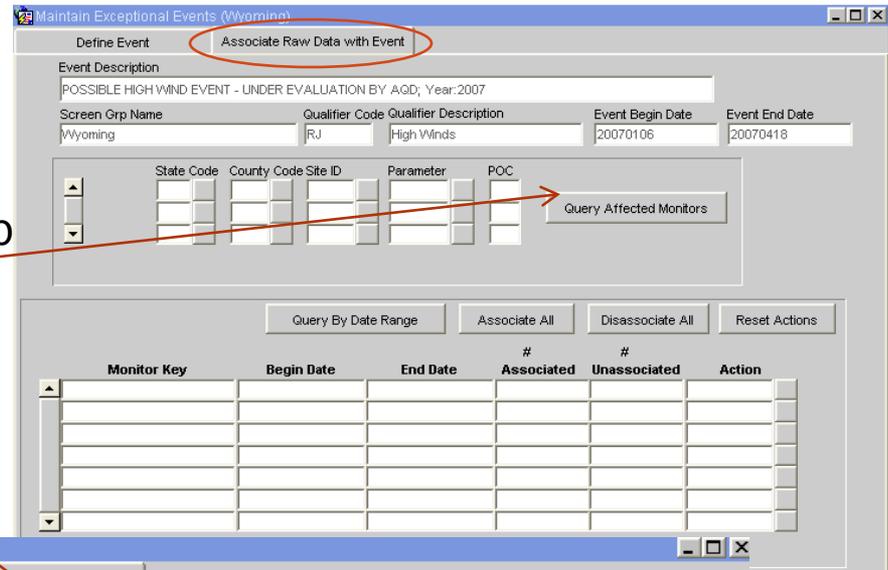


= You have until July 1st of the year following the event to do these steps



Maintain Event: how associate data

- Query in the Event
 - Screening Group + Qualifier Code
 - Event Begin and End Dates
- Go to “Associate Raw Data with Event” tab
 - Query Affected Monitors
- Associate Raw Data
 - Use Associate All button or
 - Do individually using “Action” dropdown



Put it into Practice: Exercise 2.4

- You will submit a file with Raw data
 - You will use the “Automatic” process
 - Final processing step = “Post”
 - Go into AQS and look at the Batch form
 - ✓ Process by File
 - ✓ History
- Use the report and Correct to analyze and fix the errors
 - Site/monitor does not exist
 - Overlapping sample data
 - Inactive monitor on date of entry
 - Invalid Protocol
- Associate Raw data with an Event

