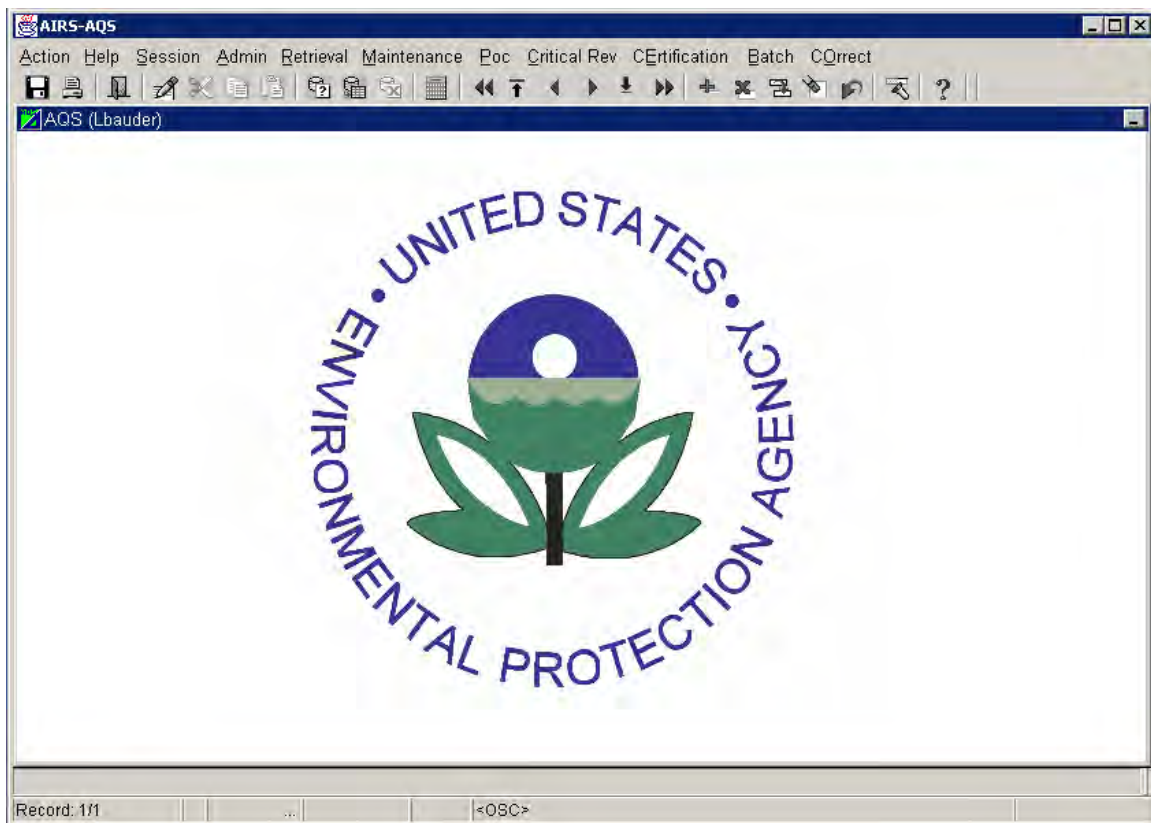


AQS Web New User Training



AQS Basics

Presented by
Jonathan Miller, USEPA

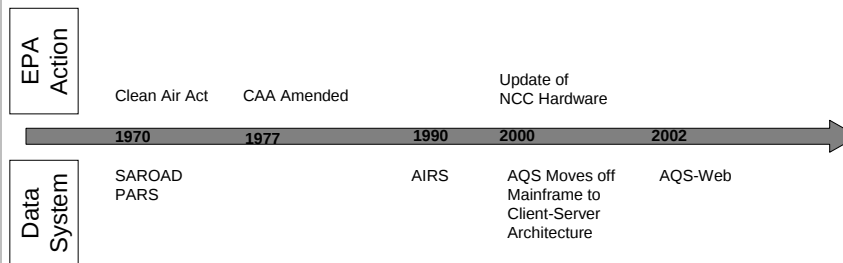


What is AQS?

- EPA's Oracle Database Application used to House and Store Ambient Air Quality Data
- Centralizes the Location of Data
 - Used to Determine if areas are Meeting Air Quality Standard
 - Used by Universities and Institutes to Perform Health Studies



Origins of Air Regulations & AQS



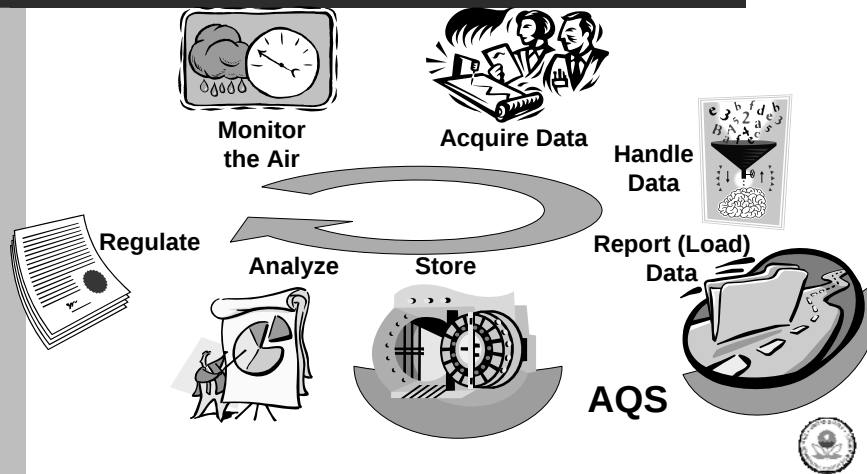
AQS Data at a Glance

Data Table

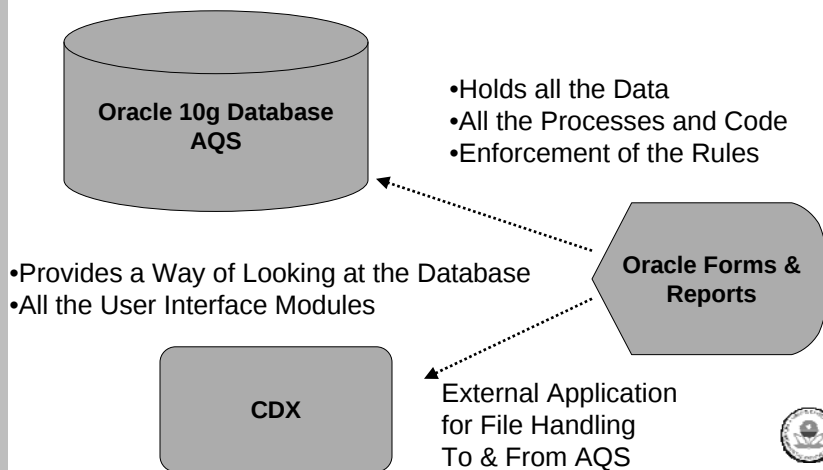
- Raw data (2005) 81,000,000
- Site 18,000
- Monitor 227,000
- Quarterly Summary (2005) 304,000
- Annual Summary (2005) 115,000
- Precision (2005) 197,000
- Accuracy (2005) 18,000



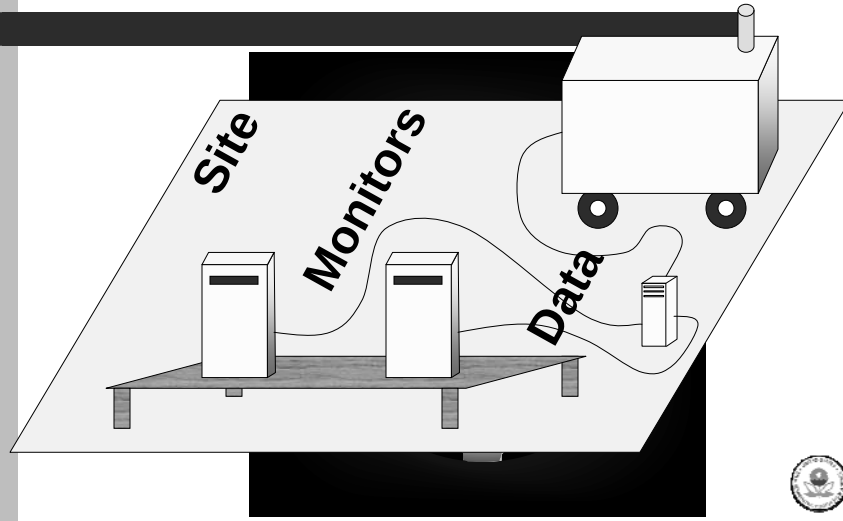
How Does AQS Fit in the Big Picture?



Components of AQS



Types of Data in AQS



Types of Core Data in AQS

- Site
 - Where in the World You Are
 - Identified By
 - State & County & Site ID OR
 - Tribal Area & Site ID
- Monitor
 - What You Are Attempting to Measure
 - Identified by the Site & Pollutant & Occurrence
- Data
 - Results of Your Monitoring
 - Types
 - Sample Data
 - Summary Data
 - Precision & Accuracy Audit Data
 - Identified by the Monitor & the Time the Sample Represents & Availability Status



Reference Data in AQS

- Lots of “Extra” Information about the Data in AQS Available
 - Sets of Codes Available for these Descriptions
 - Standard Codes Used where Available
- Codes are Used to Identify States, Counties, Tribal Lands, Pollutants, Sample Lengths, etc...



Putting The Core & Reference Information Together

- An Ozone (44201) Monitor in Wake County(183), North Carolina (37) May be Represented as
 - 37-183-0001-44201-1
- A PM10 (81102) Monitor for the St. Regis Band of Mohawk Indians of New York (007) May be Represented as
 - TT-007-1234-81102-1



Where Do I Go for Help?

- On-Line
- AQS Portion of the TTN
 - www.epa.gov/ttn/airs/airsaqs
- AQS Helpline
 - Phone: (866) 411-4372
 - Email: epacallcenter@epa.gov
- EPA's National Air Data Group
 - Phone: (919) 541-7738
 - Email: miller.jonathan@epa.gov



About Databases

Jonathan Miller, USEPA

What Is A Database?

- Collection of Information About a Particular Subject Stored in a Manner That Can be Accessed and Organized

How Does it Do That?

- Data are Stored in *Tables*
 - Identifies the Different “Categories” of Information that You Want to Track
 - Tables Consist of *Fields & Records* of Information (Like Spreadsheet Columns & Rows)
 - Fields Defines the Attributes / Characteristics of the Information in a Table
 - Records Are Individual Entries in the Table
- Tables Can Be *Related* to Each Other

OK... What Do You Mean?

How Could We Describe this Person?



- Name: Jane Doe
- Gender: Female
- Occupation: Doctor
- Height: 5' 7"
- Weight: 135
- Phone Number:
(123) 555-1212
- Email Address:
pokenprod@yahoo.com

How This Turns Into a Table

Table Name: **PEOPLE**

FIELDS						
Name	Gender	Occupation	Height	Weight	Phone Num	Email Address
Jane Doe	Female	Doctor	5' 7"	135	(123) 555-1212	Pokenprod@yahoo.com

RECORDS

Primary Key: Field(s) that Makes This Record Unique. An Identifier.

Let's Get to Know Them Better...

What Are Their Hobbies?



- Dr. Doe:
 - Hobby 1: Reading
 - Hobby 2: Skydiving
 - Hobby 3: Gardening
- Uncle Sam:
 - Hobby 1: Reading
 - Hobby 2: Hiking

We Have a Second Table...

Table Name: **People Hobbies**

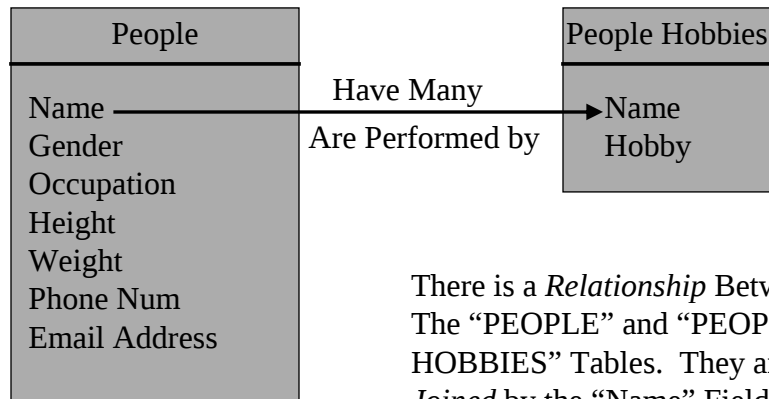
Name	Hobby
Jane Doe	Reading
Jane Doe	Skydiving
Jane Doe	Gardening
Uncle Sam	Reading
Uncle Sam	Hiking

- One Entry For Each Field in a Given Record
- What is the Primary Key Here?

Why the Second Table?

- You Don't Want to Repeat Information if You Can Help it
 - Reduces the Amount of Data Entry
 - Reduces Maintenance of the Records
 - Adds Flexibility

So What Do We Have?



Exercise 1.1

The Local Zoo Wants to Track Which Animals Live in Which Habitats. The Zoo is Divided Into Different Sections and a Habitat Will Exist in only 1 Section. A habitat can hold more than one animal.

The Sections:

- Africa
- Asia
- Antarctica
- North America

Your Assignment:

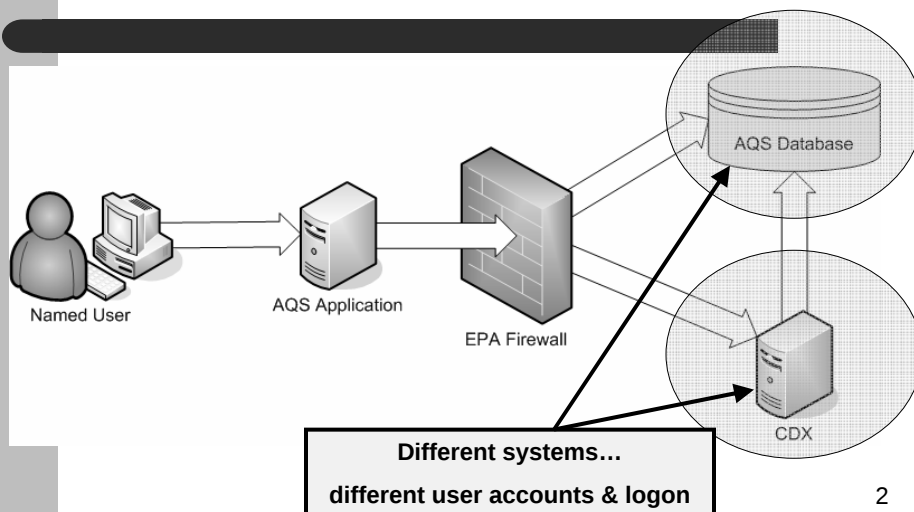
Create a Database with Tables (Fields with Sample Records) and Describe Their Relationships to One Another.

About Your User ID & User Profile

Jonathan Miller
U.S. EPA

1

AQS Architecture



2

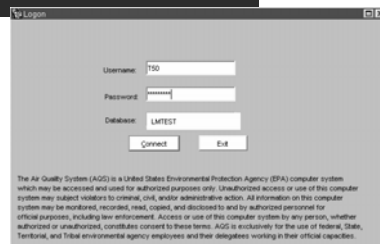
Registering for a User ID

- Get forms from TTN
 - User Registration
 - AQS User Security Guidelines
 - www.epa.gov/ttn/airs/airsaqs/registration.htm
- Send completed form to your EPA regional contact
- Account is set Up on AQS as well as CDX as part of process

3

Logging On To AQS

- Username = 3-character ID obtained from registration process
- Password = your assigned password
- Database=?
 - Usually = “AQSPROD”
 - This Week :“AQSTRNG”



The screenshot shows a 'Login' window with the following fields and buttons:

- Username: TSD
- Password: [masked]
- Database: LMTEST
- Buttons: Connect, Exit

Below the form, there is a disclaimer text:

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 authorized or unauthorized, constitutes consent to these terms. AQS is exclusively for the use of Federal, State, Tribal, and Tribal environmental agency employees and their delegates working in their official capacities.

4

Changing Your Password

- Change every 90 days (For AQS & CDX)
- After 180 days of inactivity, your user account is locked
- Since AQS & CDX communicate, their passwords must be the same

5

New Password Rules

- Must be at least 8 characters long
- Must contain at least 1 number
- Must contain at least 1 character
- Must begin with a character
- Can only contain A – Z; 0-9 (no special characters)
- You cannot reuse an old password
- Cannot Use “Common Words”

6

Where to Change Your Password

Admin
Security
Reference
User Statistics
Appl Audits
Export Ca Dump Bucket
Maintain Monitoring Season

Step 1: Select “Admin” → “Security” from the Main Menu

Security - Change Password

-20459: Password changed.

OK

Step 2: Fill in the “New Password” & “Confirm Password Fields

AQS New Password: Confirm password: OK

CDX Current CDX Password: Synchronize CDX

Step 3: Click “OK”

Synchronize Your CDX Password

Security - Change Password

-20708: Password changed to lower case version of current Oracle password.

OK

Change Your Oracle Passwords

AQS New Password: Confirm password: OK

CDX Current CDX Password: Synchronize CDX

Step 2: Click “Synchronize CDX”

Step 1: Enter “Old” CDX Password

About Your User Profile

- Cannot change
 - Agency Code
 - User ID
 - User Type
 - AQS Contact
 - Status Ind
- Tribal user
 - Determines how you see AQS Site IDs

The screenshot shows the 'User Profile' window with the following fields and values:

Field	Value
First Name	JOHN THOMAS
Last Name	MILLER
Phone	202-521-2728
Email	john.thomas@epa.gov
Street Address 1	2771
City	WASH DC
State	DC
Zip Code	20503
Country Code	US
User ID	142
User Type	1
Status Ind	1
AQS Contact	1
Agency Code	1108
AQS Region Code	14
Tribal User	1

Change Your Oracle Passwords:

AQS: New Password: [] Current Password: [] OK

CDX: Current CDX Password: [] Synchronize CDX

Tribal User "ON"
TT-549-0001
Tribal User "OFF"
36-001-0001

Student Exercise 1.1

Day 1 – User Profile

Purpose: Access and change information associated with your user id

Step 1. Start AQS & Logon* using your training user id and password

Step 2. From the menus select Admin > Security

Step 3. You should see a form filled out with information pertaining to your user id

Step 4. Change the “First Name” and “Last Name” fields to reflect your name (feel free to change any of the other information on the form as well).

Step 5. Click on Save 

Step 6. Click on Exit . Click “Yes” when prompted if you are sure that you want to exit.

****Instructions for Accessing AQS for the Training Course***

1. Open Internet Explorer
2. Click on “Favorites”
3. Select “AQS Training Application”
4. Enter your Training User ID (Located on the sticker on your materials) in the “Username” field. Press the <Tab> key.
5. Enter your Password for the Training User ID (also located on the sticker on your materials). Press the <Tab> key.
6. Enter “AQSTRNG” in the “Database” field. Press “Connect” button.

Questions:

1. Name the three components that comprise AQS: _____, _____, _____.
2. What is the primary purpose of CDX as it relates to AQS?
3. How often do you have to change your password for AQS?
4. Which of the following is a valid password for the AQSPROD connection? (Circle one):
a) 4tunate1 b) aqspod1 c) aqsisgr8 d) carolina_panthers

On-Line vs. Screening Group Access

Jonathan Miller
USEPA

Yea! I've Logged On.... Now What?

Select Session Access (Read Only) Tribal Mode

☒ Read Only User
☐ Screening Group Access
☐ User Support Screening Group Access

**** AGS Basics Training Class scheduled! ****
WHERE? RTP, NC
WHEN? November 13 - 15, 2006
How do I register? Contact Jonathan Miller (miller.jonathan@epa.gov)

You have accessed AQSPROD. Raw data for 1993 to present is now available for access. Raw data is available for update for 2000 to present.

LOOK FOR ANSWERS TO "Frequently Asked Questions" AT: <http://www.epa.gov/ttn/airs/airsaqs/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.

The Three S's

- Session
- Screening Groups
- Status

AQS Terminology - Session

- A *Session* is a Set of Information the System Assigns After You Log On
- Your Session is Defined by:
 - Who you are
 - When you logged on
 - If you selected “Read-Only” Access or Access a Screening Group
- Your Session Settings Define Where in the Application You are Allowed to Go and What you Can Do Once You Get There

What is the Difference Between “Read Only” & Screening Group Access?

Read Only

- Allows you to Look at Any Data That has Been Deemed “Ready for the Public”
- You Cannot Change Any Data as “Read-Only”

Screening Group

- Allows You to Look at Only the Data You Own (Whether it is Ready for the Public or Not)
- Allows You to Change Any Data That You Own

Types of Access Allowed by Session Type

Menu Item	Type of Access		
	Read Only	Screening Group	Admin
Action (Any Item)	✓	✓	✓
Help (Any Item)	✓	✓	✓
Session	✓	✓	✓
Admin – Security	✓	✓	✓
Admin – All Other Options	✖	✖	✓
Retrieval (Any Item)	✓	✓(Extra Reports)	✓
Maintenance (Any Item)	✓	✓ (Can Update)	✓
Critical Rev (Any Item)	✖	✖	✓
Certification (Any Item)	✖	✖	✓
Batch	✖	✓	✓
Correct (Any Item)	✖	✓	✓

Screening Groups

- Defines What Group Owns a Monitor
- Only One Group Can Own a Monitor
- Only the Data Owner Can Change Data for This Monitor
- Users Are Assigned to One or More Screening Groups
- You Must Select a Screening Group in the Session If You Want to Change Data

In this Class....

- Everyone Has Their Own Screening Group
 - Everyone has their own set of monitors that they can change
 - “TRAININGGROUPxx”, where “xx” are the Last Two Digits of Your Training ID

Status Of Records

- “P” = Production Status
 - Can be Seen by Everyone
- “S” = Statistically Evaluated
 - Only for Raw Data
 - Only viewable by the Data Owner
- “R” = Relationally Valid
 - Only for Raw Data
 - Only Viewable by the Data Owner
- “F” = Field Level Error
 - Something Needs to be Fixed Before the Record is “Production Status”
 - Can Only be Seen / Changed by the Data Owner

What If I Want to Change From “Read Only” to “Screening Group” Access?

- From the “Main Menu”

Action Help Session Admin Retrieval Maintenance Critical Rev Certification Batch Correct



- From a “Sub Menu”

Action Help Site Monitor Audit Event Sample Values Precision Accuracy Blanks Summary Concurrence Ind Main Menu



Action Help Session Admin Retrieval Maintenance Critical Rev Certification Batch Correct



Browsing Data in AQS

Jonathan Miller
USEPA

What Can I Browse?

- Reference Information
 - Codes Used in the System
 - Seasonal Definitions
- Data Supplied to AQS in Small Groups of Information
 - Site
 - Monitor
 - Sample Data
 - Summary Data

Where Do I Start?

Select Session Access (Read Only) Tribal Mode

☒ Read Only User
☐ Screening Group Access
☐ User Support Screening Group

What does this Mean?

- You can see all "Production" data from Anyone
- You cannot change any data

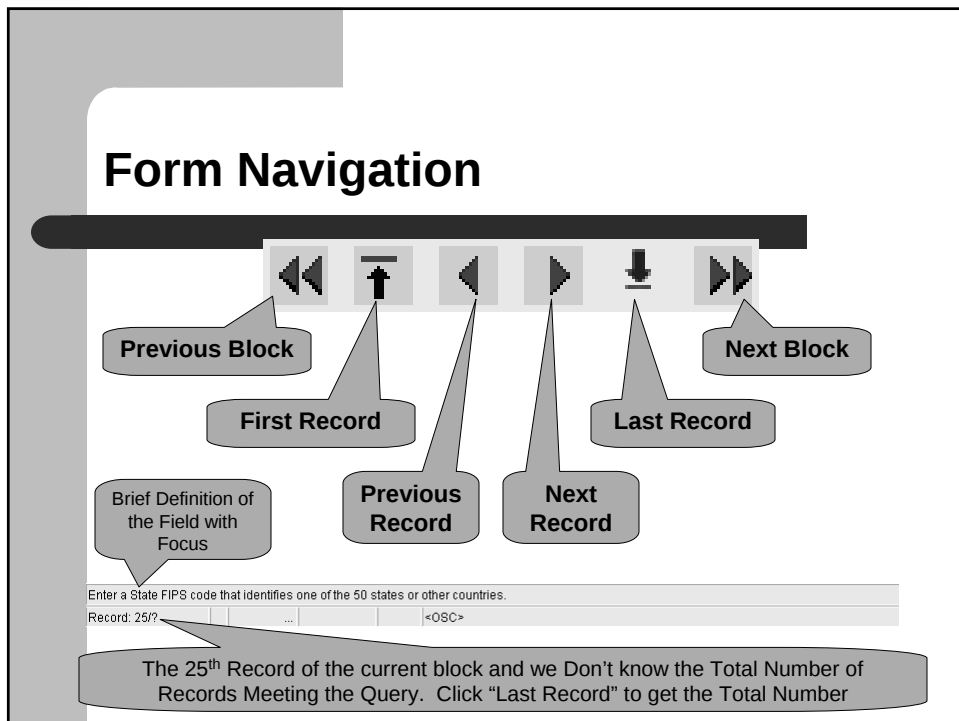
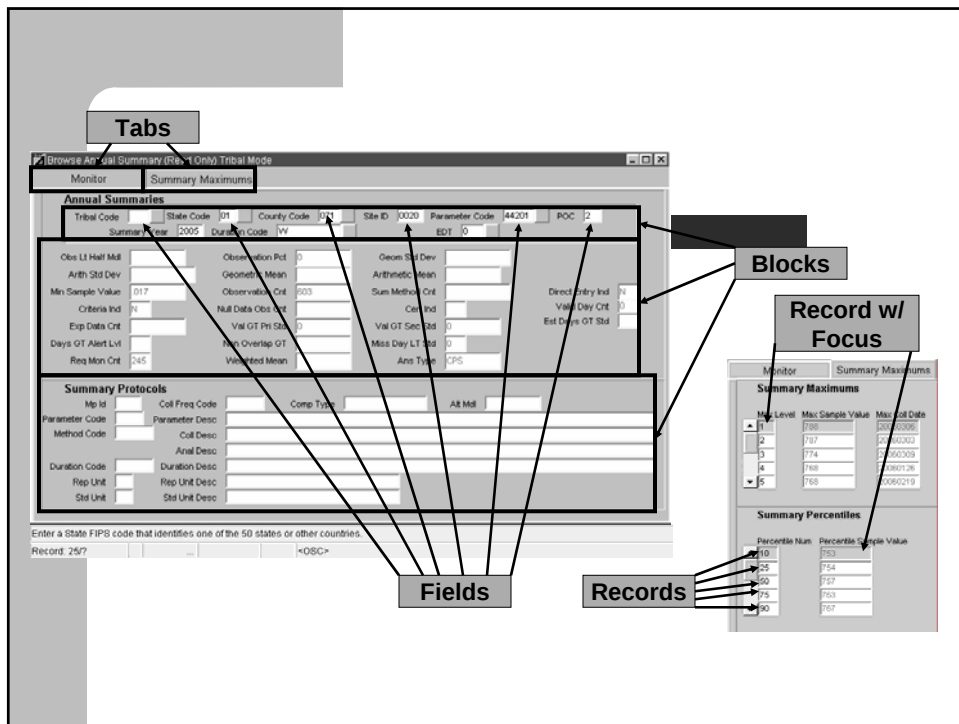
Action Help Session Admin Retrieval Maintenance Critical Rev Certification Batch CQrect

Reference Information

Core Information

What's the Big Idea?

- Select the Type of Data you Want
- Get Only the Records You Need by Specifying Filters
- Execute the Query
- Scroll Through the Records



Student Exercise 1.2

Day 1 – Browsing Data in AQS

Purpose: Look at various types of Data available in AQS

Part 1

Step 1. Start AQS & Logon using your training user id and password

Step 2. From the menus select Retrieval > Browse Annual Summary

Step 3. You should see an empty form

Step 4. Enter the following Query selections:

- State = North Carolina (State “37”)
- Parameter = Ozone (“44201”)
- Year = 2004

Step 5. Execute the Query

Questions:

1. What is the total number of records returned by the query outlined in “Part 1”?
2. What is the 4th Highest 8-hour Running Average (Duration = W) Value for site 37-063-0013-44201-1 for 2004?

Part 2

Step 1. Select Maintenance > Site from the menu

Step 3. You should see an empty form

Step 4. Enter the following Query selections:

- State = Georgia (State “13”)
- County = DeKalb (“089”)

Step 5. Execute the Query

Questions:

1. What is the total number of Sites registered in DeKalb County?
2. What does the field “Vertical Method” mean?
3. What is the Supporting Agency code associated with Site 13-089-0002?

Part 3

Step 1. Start AQS & Logon using your training user id and password

Step 2. From the menus select Maintenance → Sample Value → Raw Data

Step 3. You should see an empty form

Step 4. Enter the following Query selections:

- State = Pennsylvania (State “42”)
- County = Allegheny (County “003”)
- Parameter = Ozone (“44201”)
- Begin Date = 20040101
- End Date = 20041231

Step 5. Execute the Query

Questions:

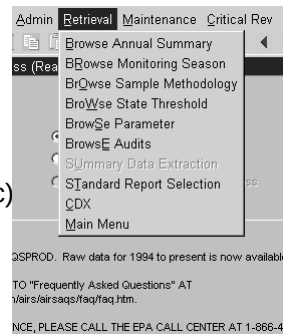
1. How many blocks are on the Raw Data form?
2. Can you tell how the data is sorted? Describe:
3. What method code is associated with the first record that you can find?
4. ****BONUS****: What does this method code mean / where would you go to find information out about this method?

Introduction to Standard Reports

Jonathan Miller
USEPA

Reports

- Browse Reports
- Standard Reports
 - Create standard reports
 - Report formats
 - Printable Formats (.pdf, .rtf, etc)
 - Workfiles (Text files)
 - XML



Create Standard Report Criteria Set

1. Select report
2. Specify Output type (Report, Workfile, XML)
3. Establish report-selection criteria
4. Modify report Sort Order criteria where available
5. Modify output Report Options where available
6. Generate Report
7. When you leave Reports form, prompt to save report Criteria Set.

Types of Reports

- Site / Monitor Metadata
- Data Reports
 - “Raw” Data
 - Extraction Reports
 - Reports useful for duplicating and reloading data (especially duplicating site/mon)
 - Reports create data files in batch load format
 - AMP500 - Extract Site/Monitor Data
 - AMP501 - Extract Raw Data
 - AMP502 - Extract Precision and Accuracy Data
 - AMP503 - Extract Blanks Data
 - Summary Data
- Precision & Accuracy Data

General Issues

- Do NOT run reports without specifying some limiting selection criteria
- Almost all reports require date-selection criteria
- Sort Order and Report Options available on reports where data structure allows
- Oracle provides output in several formats. PDF generally most reliable.
- Do not use IE window that started AQS for any other purpose. If not blank gray, reports will not run properly

Batch vs. On-Line

- With web delivery, no appreciable difference in cost of delivery between online and batch creation of reports. Delivery method is only decision
 - Online: Web browser window display, save from browser window
 - Batch/CDX: Separate CDX transfer of report to local disk
 - Batch/email: Email delivery of report as Link

Standard Reports: Criteria Set

Standard Report Criteria Selection (T50) AMP410 Tribal Mode

Criteria Set | Monitor Selection | Area Selection | Sort Order | Report Options | Retrieve Reports

Criteria Set: [Dropdown] Desc: [Dropdown]

Owner: [LARRY] [BALDER] Type: [PRIVATE]

Report Code: [AMP410] Report Name: [AIR QUALITY INDEX REPORT]

☐ Run Online
☒ Send via Email
☐ Send to CDX

Report Outputs
☒ REPORT
☐ WORKFILE
☐ XML

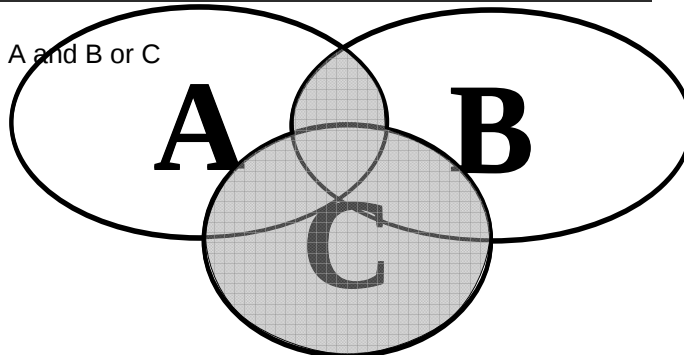
Print Format: [PDF] File Name: [Text Box]

Report Selection Mode
☒ Monitor Selection(detail)
☐ Area Selection

[Generate Report] [CDX to Retrieve Batch Reports]

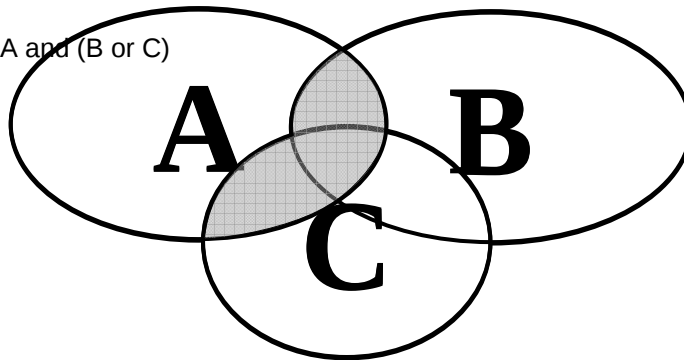
Standard Reports: and/or Selection Logic

- A and B or C



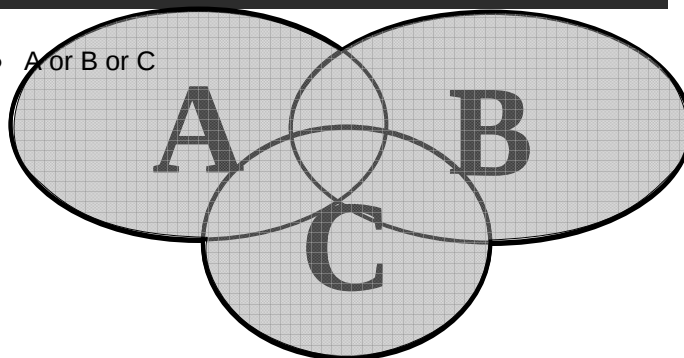
Standard Reports: and/or Selection Logic (cont.)

- A and (B or C)



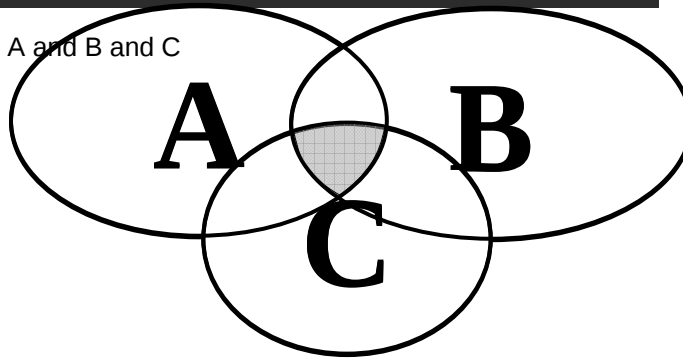
Standard Reports: and/or Selection Logic (cont.)

- A or B or C



Standard Reports: and/or Selection Logic (cont.)

- A and B and C



Standard Reports: and/or in Selections Tab Rows/Blocks

Standard Report Criteria Selection (T50) AMP350

Criteria Set | Monitor Selection | Area Selection | Sort Order | Report Options | Retrieve Reports

Site-Monitor Criteria												
State Code	County Code	Site Id	Parameter Code	POC	Method Code	Duration Code	Start Date			End Date		
							YYYY	MM	DD	YYYY	MM	DD

Global Report Criteria				Global Date Range					
Pollutant Type	Parameter Code	Method Code	Duration Code	Start Date			End Date		
				YYYY	MM	DD	YYYY	MM	DD

Generate Report

- AND within a row
 - State and county AND site AND parameter...
 - Parameter AND method AND duration...
- OR between rows in block
 - State/County OR State/County or...
- AND between blocks
 - State AND Pollutant AND date...

Standard Reports: and/or in Selections Tab Rows/Blocks (cont.)

Standard Report Criteria Selection (Read Only) AMP350

Criteria Set | **Monitor Selection** | Area Selection | Sort Order | Report Options | Retrieve Reports

Geographical Criteria

State Code	County Code	City Code	Aqcr Code	Uar Code	Msa Code	Cmsa Code	Epa Region Code	Zip Code
19								

Monitor Type: ALL | Land Use Type: | Reporting Organization: 1080 UNIVERSITY HYGIENIC LABORATORY

Protocol Criteria

Pollutant Type	Parameter Code	Method Code	Duration Code

Date Criteria

Start Date			End Date		
YYYY	MM	DD	YYYY	MM	DD
1998	01	01	1998	01	31

Generate Report

- All monitors in Iowa reported by University Hygienic Laboratory during January '98
- State 19 and reporting agency 1080 and all pollutants and (>19980101 and <19980131)

Standard Reports: and/or in Selections Tab Rows/Blocks (cont.)

Standard Report Criteria Selection (Read Only) AMP350

Criteria Set | **Monitor Selection** | Area Selection | Sort Order | Report Options | Retrieve Reports

Geographical Criteria

State Code	County Code	City Code	Aqcr Code	Uar Code	Msa Code	Cmsa Code	Epa Region Code	Zip Code
36							01	

Monitor Type: | Land Use Type: | Reporting Organization: |

Protocol Criteria

Pollutant Type	Parameter Code	Method Code	Duration Code
CRITERIA			

Date Criteria

Start Date			End Date		
YYYY	MM	DD	YYYY	MM	DD
1998	01	01	1998	01	01

Generate Report

- All criteria monitors in New York or New England during January '98
- (State 36 or region 01) and (only criteria pollutants) and (>19980101 and <19980131)

Standard Reports: and/or in Selections Tab Rows/Blocks (cont.)

Standard Report Criteria Selection (Read Only) AMP350

Criteria Set | Monitor Selection | Area Selection | Sort Order | Report Options | Retrieve Reports

Geographical Criteria

State Code	County Code	City Code	Aqcr Code	Uar Code	Msa Code	Cmsa Code	Epa Region Code	Zip Code
36							01	

Monitor Type: Land Use Type: Reporting Organization:

Protocol Criteria

Pollutant Type	Parameter Code	Method Code	Duration Code
	44201		
	42401		

Date Criteria

Start Date			End Date		
YYYY	MM	DD	YYYY	MM	DD
1998	01	01	1998	01	31

Generate Report

- Ozone or sulfur dioxide monitors in New York and Region 1 during January '98
- (State 36 and region 01) and (44201 or 42401) and (>19980101 and <19980131)
- This is a Null dataset, "No Data found"

Standard Reports: Selections

Standard Report Criteria Selection (Read Only) AMP350 Tribal Mode

Criteria Set | Monitor Selection | Area Selection | Sort Order | Report Options | Retrieve Reports

Geographical Criteria

Tribal Code	State Code	County Code	Site Id	AGCR Code	UAR Code	MSA Code	CMSA Code	EPA Region Code

Monitor Type: Land Use Type: Reporting Organization:

Protocol Criteria

Pollutant Type	Parameter Code	Method Code	Duration Code

Date Criteria

Start Date			End Date		
YYYY	MM	DD	YYYY	MM	DD

Screening Group Name: Screening Group:

Generate Report

Standard Reports: Sort Order

Standard Report Criteria Selection (Lbauden AMP350)

Criteria Set | Monitor Selection | Area Selection | **Sort Order** | Report Options | Retrieve Reports

Sort Order

Order	Column Name	Allowed Range	
		Lo	Hi
1	STATE_CODE	1	5
2	COUNTY_CODE	1	5
3	SITE_ID	1	5
4	PARAMETER_CODE	1	5
5	POC	1	5

Standard Reports: Report Options

AQS

Action Help Session Admin Retrieval Maintenance Critical Rev Certification Batch Correct

Standard Report Criteria Selection (Read Only) AMP350

Criteria Set | Monitor Selection | Area Selection | Sort Order | **Report Options** | Retrieve Reports

RAW DATA EVENTS: INCLUDE EVENTS
 INCLUDE NULLS: YES
 DAILY STATISTICS: MAXIMUM
 MERGE PDF FILES: YES
 UNITS: STANDARD

ALTERNATE STANDARDS

Parameter	Duration	Primary Std	Secondary Std

Standard Reports: Progress Popup

Report Progress

8 Percent Complete

Report Stage: Formatting Report

Refresh Cancel Report Exit Report Progress

Standard Reports: Retrieve Reports

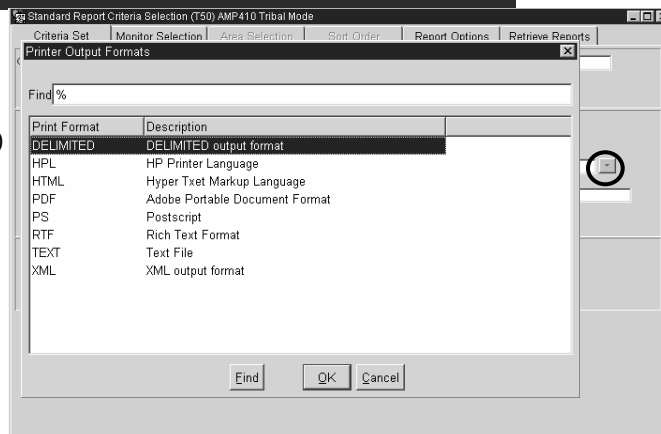
Standard Report Criteria Selection (Lbauden) AMP350

Criteria Set	Monitor Selection	Area Selection	Sort Order	Report Options	Retrieve Reports
User Id	Report Code	Request Type	Request Date	Report Stage	% Complete
BIB	AMP350	ONLINE	03/30/2004 08:25 PM	Cancelled	100
BIB	AMP501	ONLINE	03/30/2004 07:25 PM	Completed	100
BIB	AMP500	ONLINE	03/30/2004 07:19 PM	Completed	100
BIB	AMP440	BATCH	03/30/2004 11:17 AM	Completed	100
BIB	AMP440	BATCH	03/30/2004 11:17 AM	Completed	100
BIB	AMP440	BATCH	03/30/2004 11:17 AM	Completed	100
BIB	AMP440	BATCH	03/30/2004 11:17 AM	Completed	100
BIB	AMP440	BATCH	03/30/2004 11:17 AM	Completed	100
BIB	AMP440	BATCH	03/30/2004 11:17 AM	Completed	100
BIB	AMP440	BATCH	03/30/2004 11:17 AM	Completed	100
BIB	AMP440	BATCH	03/30/2004 11:17 AM	Completed	100
BIB	AMP440	BATCH	03/30/2004 11:17 AM	Completed	100
BIB	AMP260	BATCH	03/30/2004 11:16 AM	Completed	100
BIB	AMP260	BATCH	03/30/2004 11:16 AM	Completed	100
BIB	AMP260	BATCH	03/30/2004 11:16 AM	Completed	100
BIB	AMP260	BATCH	03/30/2004 11:16 AM	Completed	100

Retrieve Report Refresh Query Cancel Report Delete Report

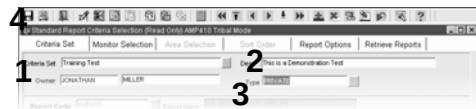
Standard Reports: Create Different Report Output Formats

- Delimited
- HPL
- Html
- Pdf (default)
- PS
- RTF
- Text
- XML



Saving a Criteria Set

- Saves the Query... Not the Results of the Query
- Go to the "Criteria Set" Tab
- 1) Enter a Name
- 2) Enter a Description
- 3) Mark as
 - "Private" (Just for You)
 - "Public" (For Anyone)
- 4) Save / Commit



Student Exercise 1.3

Day 1 – Standard Retrievals

Purpose:

- Generate a Standard Report from the system
- Create and save a criteria set for later use

Part 1 – Run the Quick-Look Report (AMP450)

- Step 1. Start AQS & Logon using your training user id and password
- Step 2. From the menus select “Retrieval” → “Standard Report Selection”
- Step 3. Enter (or select from Drop-Down) “AMP450” in the “Report Code” field
- Step 4. Click on the “Monitor Selection” tab
- Step 5. Select at least 1 state and one county in the “Site Monitor Criteria” section;
Begin year of 2005; End year of 2005
- Step 6. Select “Criteria” under the Pollutant Type in the “Global Report Criteria” section
- Step 7. Click on the “Report Options” tab
- Step 8. Select “Yes” under Merge PDF files
- Step 9. Generate the report
- Step 10. When the report comes back, review the report
- Step 11. Close Acrobat.
- Step 12. Click on the “Criteria Set” tab

Part 2 – Generate a Raw Data Listing Report & Save Selection Criteria

- Step 1. Enter (or select from Drop-Down) “AMP350” in the “Report Code” field;
Make sure both “Workfile” and “Report” output types are checked.
- Step 2. Click on the “Monitor Selection” tab
- Step 3. Select State = 51; County = 510; Site id = 0009; Begin Date = 20050101; End Date = 20051231
- Step 4. Select “Criteria” under the Pollutant Type and “44201” under the Parameter Code in the “Global Report Criteria” section
- Step 5. Click on the “Report Options” tab
- Step 6. Select “Yes” under Merge PDF files; Change the Daily Statistic to “Mean” (also answer Question #1 while you are here)
- Step 7. Generate the report
- Step 8. When the report comes back, review the report (both the workfile and the pdf versions)
- Step 9. Close the report.
- Step 10. Click on the “Criteria Set” tab
- Step 11. Enter “Training Sample CS” under the “Criteria Set” field; Enter “This is a test criteria set” under “Desc”.

Step 12. Click “Commit”

Step 13. Click on the “Session” selection from the main menu

Questions:

1. In the Report Options screen, what do you think the “Alternate Standards” section of the report means?
2. What is the difference between saving criteria set as “PRIVATE” vs. “PUBLIC”?
3. In the workfile, what do you think the “#” symbol means in the first few lines of the workfile?

Part 3 – Generate a Report from a Saved Selection Criteria

Step 1. Select “Training Sample CS” from the Criteria Set Drop-Down

Step 2. Generate the report

Step 3. Click on the “Exit AQS” Icon

Step 4. Select “No” when it asks you if you want to commit your changes

Part 4 – Generate a Report from a Public Saved Selection Criteria

Step 1. Select “Public” from the “Type” (“PUBLIC” vs “PRIVATE”)

Step 2. Select “Jons Class Sample” from the Criteria Set Drop-Down

Step 3. Generate the report

Step 4. Click on the “Exit AQS” Icon

Step 5. Select “No” when it asks you if you want to commit your changes

Screening Groups and Updating Data On-Line

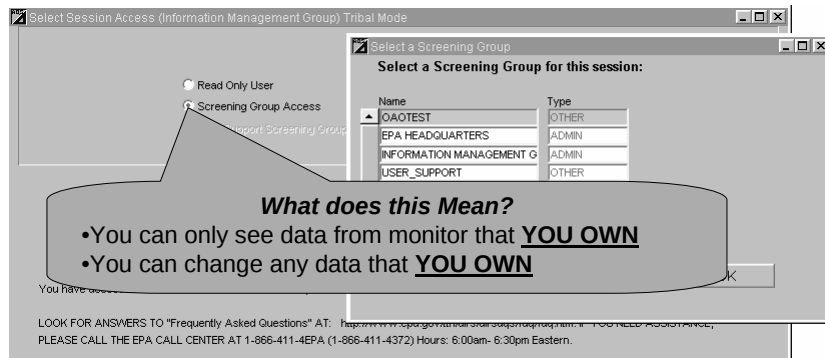
Jonathan Miller
USEPA

What Can I Maintain On-Line?

Data Supplied to AQS in Small Groups of
Information

- Site
- Monitor
- Sample Data
- Precision & Accuracy Data
- Summary Data
- Comments

Where Do I Start?

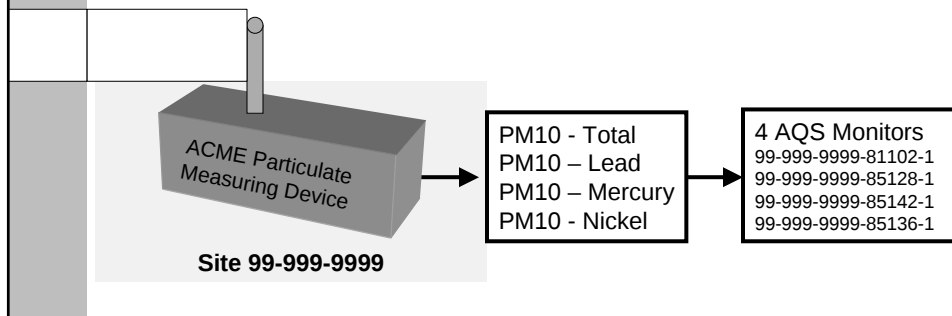


Screening Groups

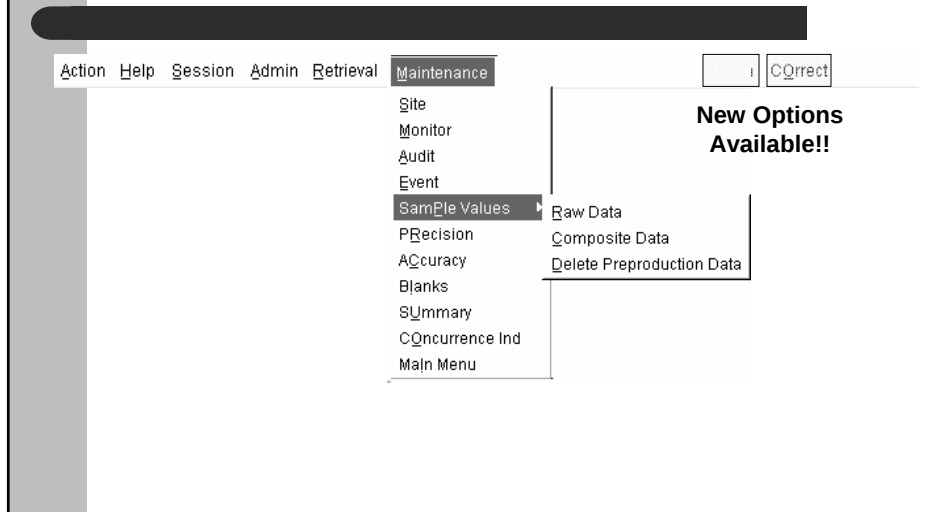
- Main Security Mechanism in AQS
- You Have a List of Screening Groups To Which You Have Access
 - Different Levels of Access Possible
 - Access Defined at the Time You Get Your User ID. Can Be Changed If Needed.
- A MONITOR Can Only Be "Owned" by One Screening Group

Monitor

- In AQS, A Monitor Refers To a Sampling For a Single Item At a Site... Not to a Measuring Device!



Where To Go From Here



What's the Big Idea?

- Select the Type of Data you Want
- Get Only the Records You Need by Specifying Filters
- Execute the Query
- Modify the Records as Needed

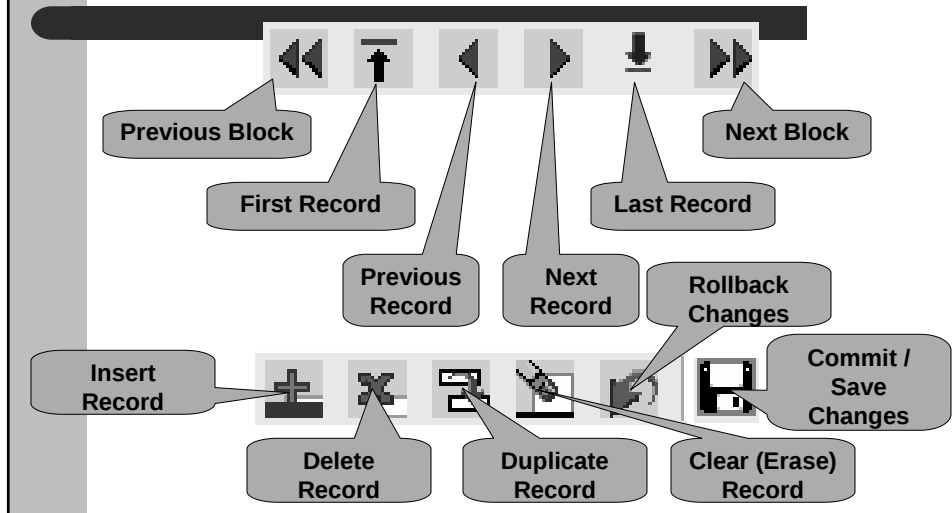
How Do I Do That?

- Select the Type of Data you Want
- Get Only the Records You Need by Specifying Filters

The screenshot shows a web-based data management interface. At the top, there is a horizontal bar with several filter fields: 'Tribal Code', 'State Code' (with the value '01'), 'County Code', 'Site ID', 'Parameter Code' (with the value '44201'), and 'POC'. Below these fields, a dropdown menu is open, displaying a list of options: 'Maintenance', 'Site', 'Monitor', 'Audit', 'Event', 'PBdecision', 'Accuracy', 'Blanks', 'Summary', 'Concurrence Ind', and 'Main Menu'. To the right of the dropdown, there are two buttons: 'Composite Data' and 'Delete Preproduction Data'.

- Scroll Through the Records, Up or Down as Needed

Form Navigation



Commit & Rollback

- Rollback
 - Throws away all changes back to the last time you Committed. You cannot “UNDO” a Rollback
- Commit
 - Can be thought of as a “Save”. None of the changes you make take effect until you COMMIT.

Demonstration

Recap

- Screening Groups OWN a Set of Monitors
- Signing on With a Screening Group Allows You Into New Areas of the Application
- When You Use Maintenance with a Screening Group, You Only Have Access to Monitors You Own
- Monitors are Not Physical Devices in AQS: Site – Pollutant measurement combos

Student Exercise 2.1

Day 2 – Creating Records On-Line in AQS

Purpose: Use the On-Line Maintenance Forms to create new site and monitors.

Part 1 – Create a New Site

Step 1. Start AQS & Logon using your training user id and password

Step 2. Select your screening Group

Step 3. From the menus select “Maintenance” → “Site”

Step 4. Click on the “Cancel Query” icon

Step 5. Create a new site with the following information: (If a field is not specified, leave it blank)

State Code: 37 (North Carolina)

County Code: 073 (Gates County)

Site: xx01; where “xx” are the last two digits of your training id. So T50 would use a site ID of 5001 for example.

User Coordinates Site Latitude = +36.4136

User Coordinates Site Longitude = -76.758

User Coordinates Datum = NAD83

Step 6. Click on “Lookup Geography” Button. Wait for values to be returned.

Step 7. Fill out remaining fields with the following information:

Horizontal Method = 103

Source Map Scale = {Blank}

Accuracy Value = 10

Vertical Measure = 50

Vertical Accuracy = 10

Vertical Method = 001

Vertical Datum = NAVD88

Street Address = Test Site for Training Class

AQCR Code = 168 {Use the Drop-Down to Pick}

Land Use Type = Agricultural

Location Setting = RURAL

Site Etab Date = 20060101

Time Zone Name = EASTERN

Step 8. Click on the “Agency” tab and enter the following information:

Agency Code = 001

Role = “SUPPORTING”

Begin Date = 20060101

Step 9. Click on the “Basic Site Data” Tab

Step 10. Click on the “Create Monitor” button and continue with “Part 2”

Part 2 – Create a New Monitor

Step 1. Enter the following information in the “Monitor Basic” tab:

Parameter: 44201 (Ozone)

POC: 1

Probe Height = 3

Horizontal distance = 0

Vertical distance = 2

Probe Location: Top of Building

Step 2. Click on the “Sample Periods” tab

Step 3. Enter a Begin Date of “20060101”

Step 4: Click on the “Type Assign.” Tab

Step 5: Enter a Monitor Type of “Special Purpose” and a Begin Date of “20060101”

Step 6: Click on the “Agency Roles” tab

Step 7: Enter an Agency Role of “Reporting”; Agency Code = 0776; Begin Date = “20060101”. Repeat this step for agency roles of “COLLECTING” and “ANALYZING”. Enter an Agency Role of “PQAO”; Agency Code = 0776; Begin Date = “20070101”

Step 8: Click on the “Objectives” Tab

Step 9: Select “GENERAL/BACKGROUND” for Monitor Objective Type; MSA Represented = “6640” (Raleigh-Durham-Chapel Hill)

Step 10: Click on the “Monitor Basic” tab

Step 11: Click the “Commit” (Save) icon.

Step 12: Exit AQS.

Questions:

1. What do you think it means when we leave the “End Dates” on these tabs blank?
2. Please let us know if there were any confusing issues with entering this information:

Batch Process Overview

Jonathan Miller
USEPA

What Do You Mean By Batch Processing?

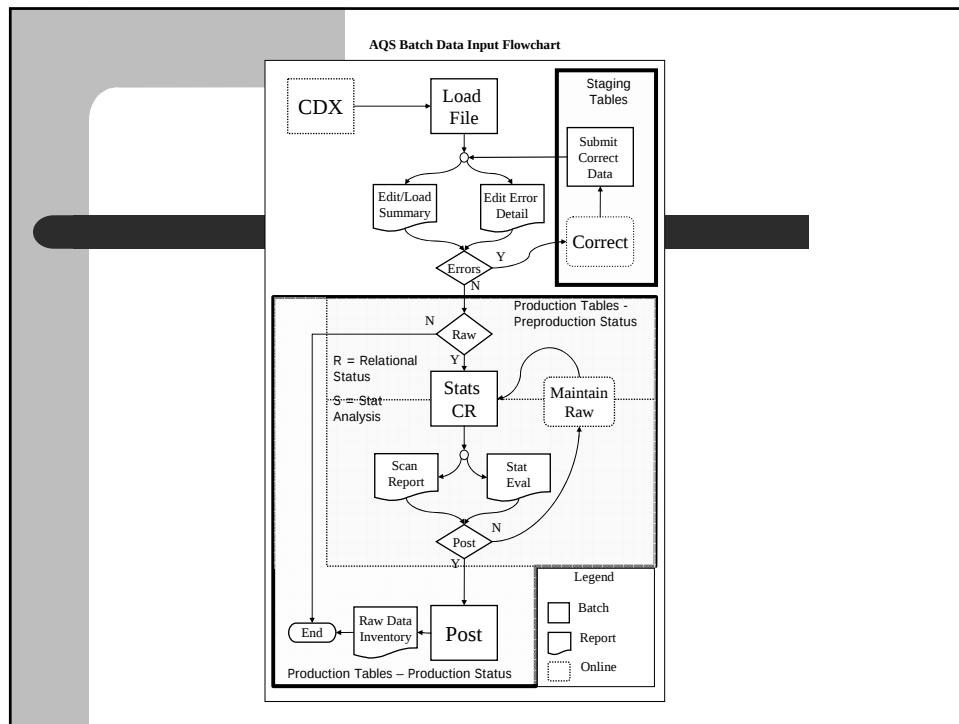
- Allows for Mass Entry of Data
- All Processing of the Data Happens Without Your Interaction
- The System Will Tell You When the Job Has Completed and Provide You With Reports at the End of Each Process

What Can Be Input by Batch?

- Just About Everything
 - Site & Site Subordinate Info
 - Monitor & Monitor Subordinate Info
 - Raw Data (Regular & Composite)
 - Precision & Accuracy Data
 - Blanks Data

What Cannot Be Input by Batch

- Comments
 - Free-Format Text Describing Special Information for Sites, Monitors, Audits, and Raw Data Values
- Technical Systems Audits
- Wide-spread Event Descriptions
- EPA Concurrence (For Regional People Only)



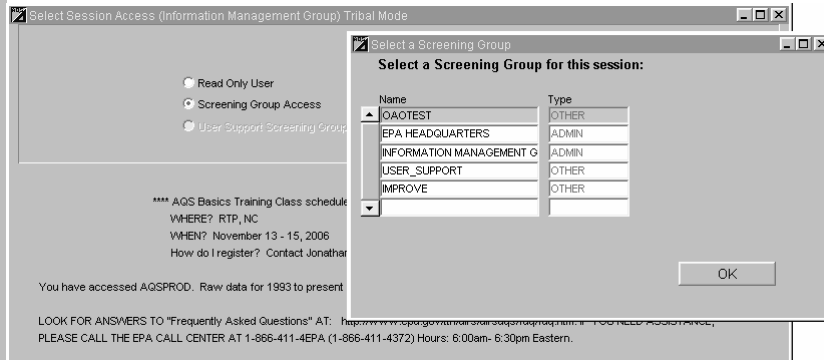
What's the Big Picture?

- Collect Samples
- Format the Data
- Send the Data so AQS Can See it (CDX)
- Load the Data (Includes Error Detection)
- Correct Any Errors & Reprocess
- Analyze and Approve Sample Data
- Make Available to Everyone

Happens Outside of AQS

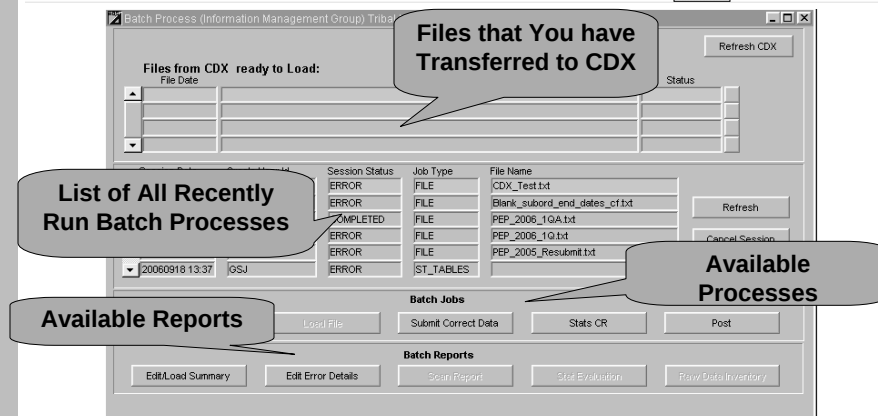
Raw Data Only

Where Do I Start?



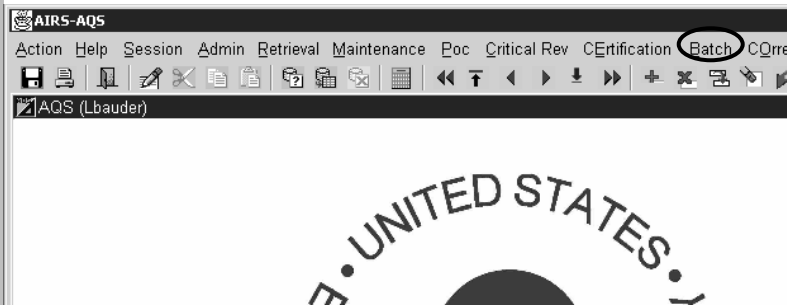
Where To Go From Here

Action Help Session Admin Retrieval Maintenance Critical Rev Certification Batch Correct



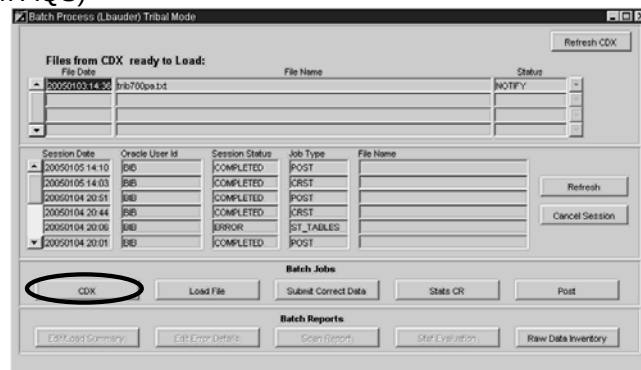
Batch Load: Use CDX to transfer data from their PC to the server

1. Start AQS, Login and select Screening Group.
2. Choose Batch Menu option



Batch Load: Use CDX to transfer data from their PC to server (cont.)

3. Click CDX button on batch process Screen (CDX is separate tool from AQS)



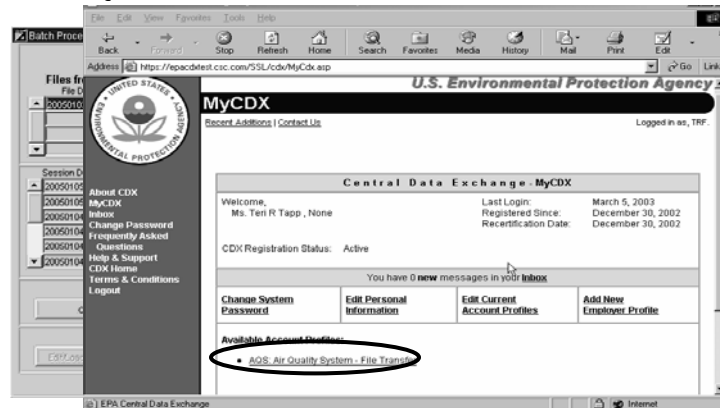
Batch Load: Use CDX to transfer data from their PC to server (cont.)

4. Enter user name, CDX password and Login



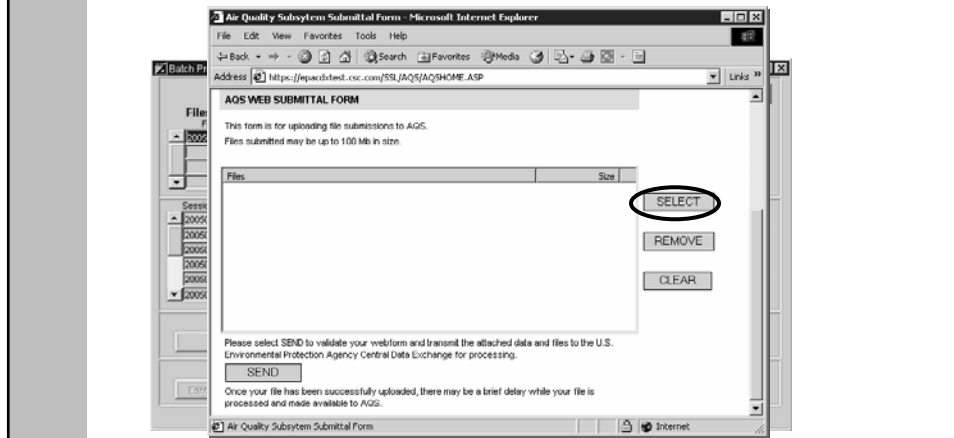
Batch Load: Use CDX to transfer data from their PC to server (cont.)

5. Select AQS File Transfer



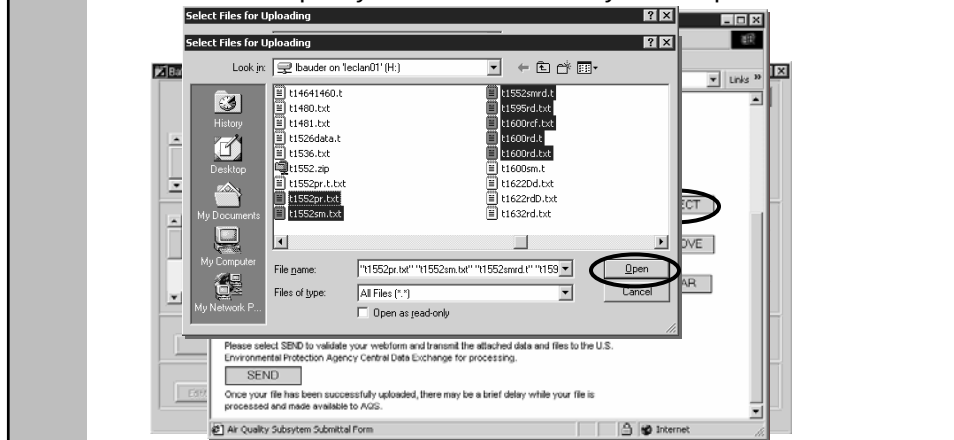
Batch Load: Use CDX to transfer data from their PC to server (cont.)

6. Click on Select and Specify files to collect from your computer



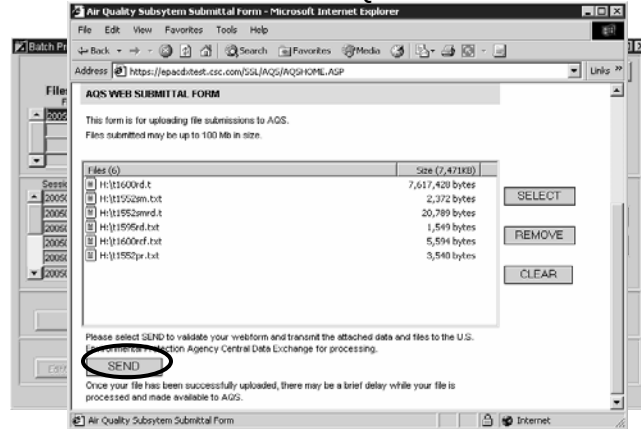
Batch Load: Use CDX to transfer data from their PC to server (cont.)

6. Click on Select and Specify files to collect from your computer



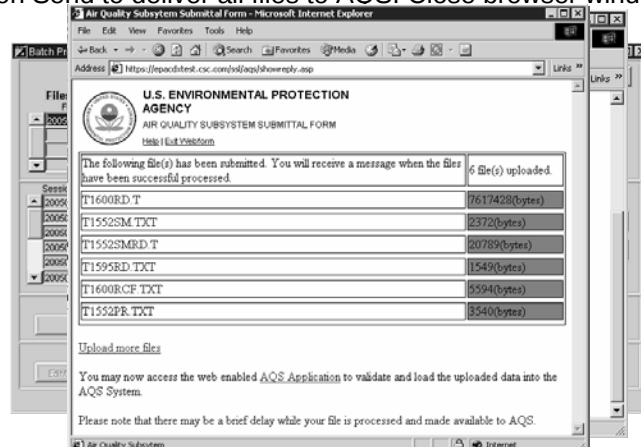
Batch Load: Use CDX to transfer data from their PC to server (cont.)

7. Click on Send to deliver all files to AQS. Close browser window.



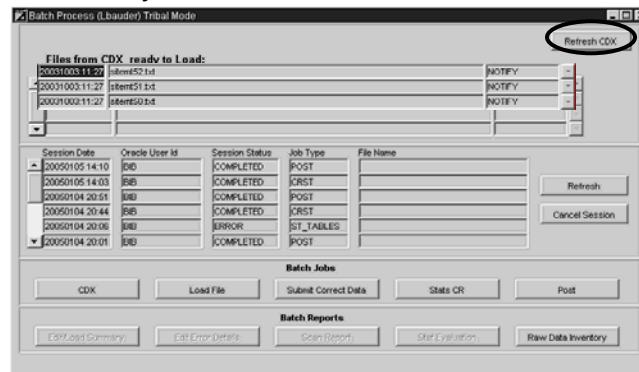
Batch Load: Use CDX to transfer data from their PC to server (cont.)

7. Click on Send to deliver all files to AOS. Close browser window.



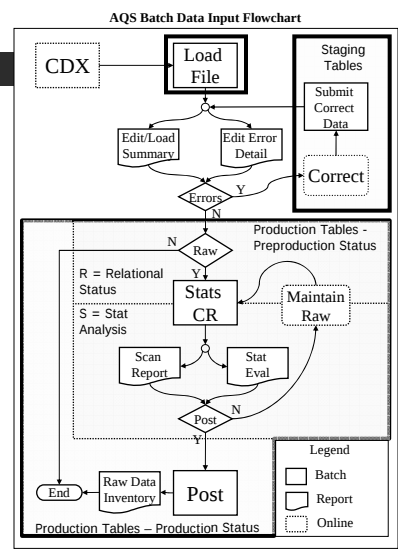
Batch Load: Use CDX to transfer data from their PC to server (cont.)

- After receiving email notice of delivery, click on Refresh CDX to see the newly loaded files.



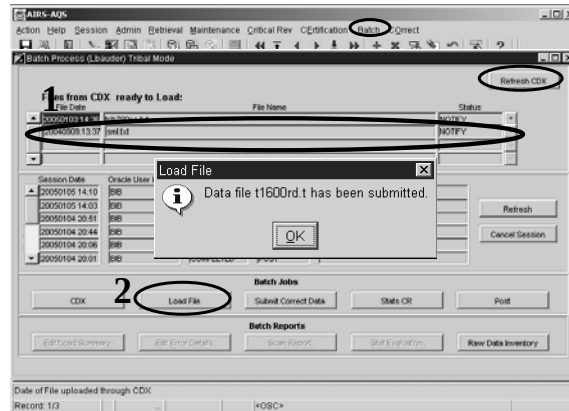
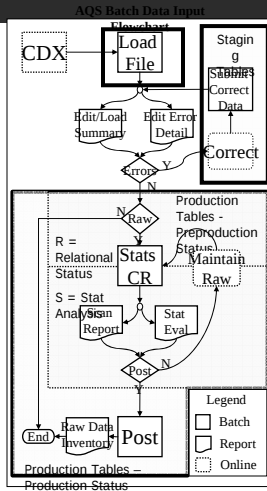
OK, We are finished with CDX, so it's on the server...

How do we load it?



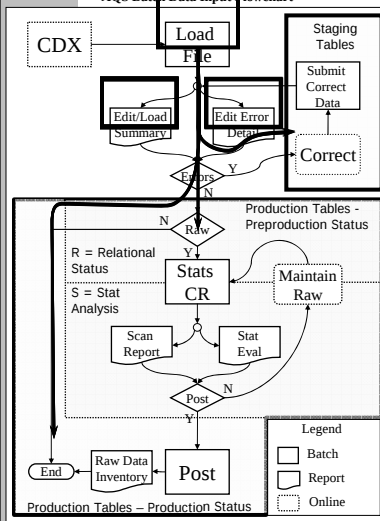
Batch Load: Use Batch Load to Install Data

1. Select file (highlight) to load in CDX block
2. Click Load File
3. Wait for email or Refresh in session block for ERROR/COMPLETE status.



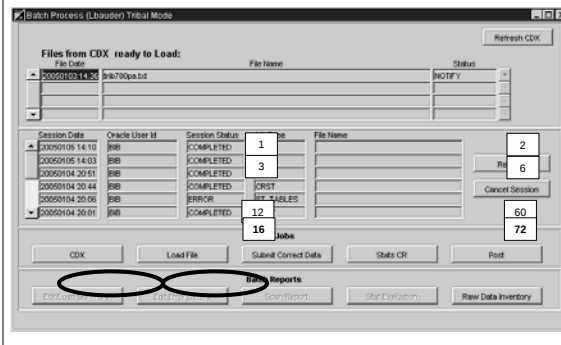
Batch Load: Use Batch Load to Install Data

AQS Batch Data Input Flowchart



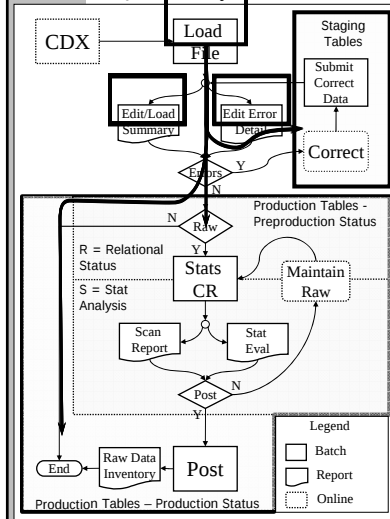
Possible Results of Load

- COMPLETED load
 - Load with ERROR
- No data in Staging tables,
Summary reports successes
Data in Staging tables,
Reports successes and failures



Batch Load: Use Batch Load to Install Data

AQS Batch Data Input Flowchart



Possible Results of Load

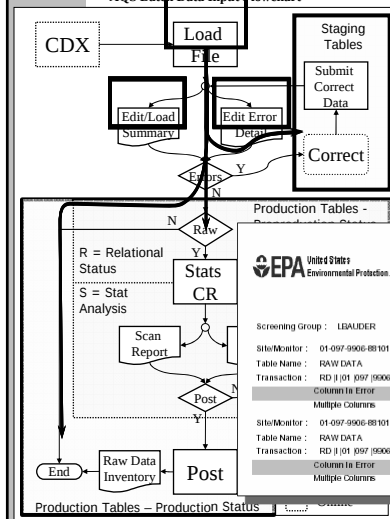
- COMPLETED load
 - No data in Staging tables, Summary reports successes
- Load with ERROR
 - Data in Staging tables, Reports successes and failures

Air Quality Subsystem Edit/Load Summary Report
 Jun. 5, 2002

Transaction Type	Transaction 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 PERIODS	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	0	72

Batch Load: Use Batch Load to Install Data

AQS Batch Data Input Flowchart



Possible Results of Load

- COMPLETED load
 - No data in Staging tables, Summary reports successes
- Load with ERROR
 - Data in Staging tables, Reports successes and failures

Air Quality Subsystem Edit Error Report
 Aug. 28, 2003

Screening Group: LBAUDER User ID: BDB Session Date: Aug. 28, 2003 13:00

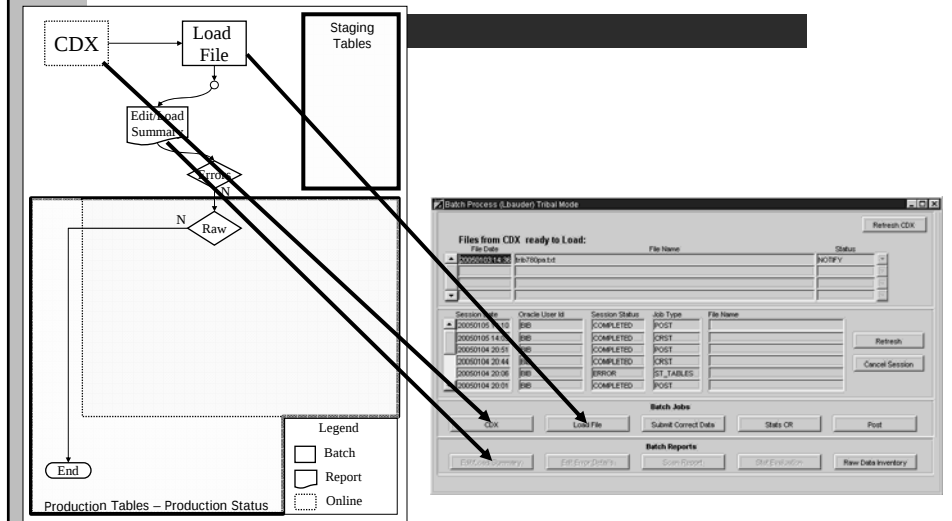
Site/Monitor: 01-097-9906-88101-1
 Table Name: RAW DATA
 Transaction: RD 1101 997 9906 88101 1 7 105 785 19000900 00:00 11 16 111111111111

Column in Error	Error Description	Error Code
Multiple Columns	Monitor ID (State, County, Site, Parameter, POC) not in database	-20405

Site/Monitor: 01-097-9906-88101-1
 Table Name: RAW DATA
 Transaction: RD 1101 997 9906 88101 1 7 105 785 19000900 00:00 11 16 111111111111

Column in Error	Error Description	Error Code
Multiple Columns	Monitor ID (State, County, Site, Parameter, POC) not in database	-20405

Batch Load: Use Batch Load to Install Non-Raw Data



Recap

- Steps:
 - If There is No Raw Data and No Errors
 - CDX → Load
 - If There is No Raw Data and Errors
 - CDX → Load → Correct → Submit Correct Data
 - If There is Raw Data and No Errors
 - CDX → Load → Stat/CR → Post
- Status = R
 → Status = S
 → Status = P

Data Formats

Jonathan Miller
U.S. EPA



Data Formats Overview

- 2 types supported
 - “Pipe-delimited” format
 - 19 different formats; one for each type of data supported through the system
 - “|”
 - Formats can be found at:
<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>



Pipe-Delimited Transaction Types

Maintain - Site Data (Information Management Group) Tribal Mode

Basic Site Data Agency Roles Tangent Roads Open Paths Comments

AA Tribal Code AB State Code AC County Site Id 0001 Status Ind P

Required Optional

Site Latitude +32.437222 Site Longitude -86.472778
 Utm Zone Num 16 UTM Easting 549550 UTM Northing 3588840
 LDP Coll Method 027 LDP Horiz Datum UNKNOWN
 LDP Src Scale 0 LDP Accr Value 0
 LDP Vert Meas 64 LDP Vert Accr Value 0
 LDP Vert Method 000 LDP Vert Datum UNKNOWN
 Street Address KING ARTHUR TRAILER COURT, PRATTVILLE, AL
 City Code 62328 UA Code 0000 AQCR Code 002
 Land Use Type RESIDENTIAL Loc Setting SUBURBAN
 Site Estab Date 19740501 Time Zone CENTRAL

Create Monitor

Pipe-Delimited Transaction Types (Cont)

MB MD MF MK = Monitor Protocols

Maintain - Monitor (Information Management Group) Tribal Mode

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

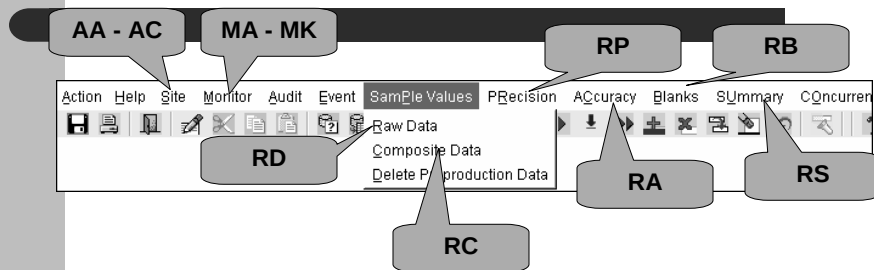
MA Tribal Code MC State Code ME County Site Id 0002 Parameter Cor 4 MG POC MH Status P MJ

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

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

Check Completeness Duplicate Monitor

Pipe-Delimited Transaction Types (cont.)



Pipe-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



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
- How long did it take to form sample (the duration): 1 hour
- What kind of instrument was used? Dasibi 1008-AH
- When was the sample collected? June 10, 2006

(continued on next slide)



Pipe-Delimited vs XML Example (cont.)

- 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 sampler? NO
- Would you like to specify an uncertainty value with this sample? NO



Student Exercise 2.2

Day 2 – Batch Loading Data in AQS (Clean Run)

Purpose: See how the batch load process works when there are no errors in the file

Part 1

- Step 1. Start AQS & Logon using your training user id and password
- Step 2. Select your screening Group
- Step 3. From the menus select “Batch”
- Step 4. Click on the CDX button
- Step 5. Select the file “Ex2_2_Txx” where “Txx” is your training id from the instructor-provided directory.
- Step 6. Close CDX and Return to the Batch screen
- Step 7. Click the “Refresh CDX” button until your file appears on the list.
- Step 8. Click on “Load File” and wait for the status of the submitted job to read “COMPLETE”.
- Step 9. Click the “Edit/Load Summary” button on the bottom of the screen.

PLEASE NOTE

If the status of your job says “ERROR”, please advise the instructor or an assistant immediately.

Questions:

1. Using the “Edit/Load Summary” report, how many records were in the file that you loaded? How many were “Raw Data” types of records?
2. If you were to run the “Edit Error Detail” report, how many records would you guess would appear on this report based on the results of the “Edit/Load Summary” report?

Part 2

- Step 1. Using Windows Explorer, locate the “Ex2_2_Txx” file.
- Step 2. Open the file.
- Step 3. Using the “*Data Input Formats for the Re-engineered Air Quality Subsystem*” document, see how the layouts of the transactions apply to the entries in the text file.

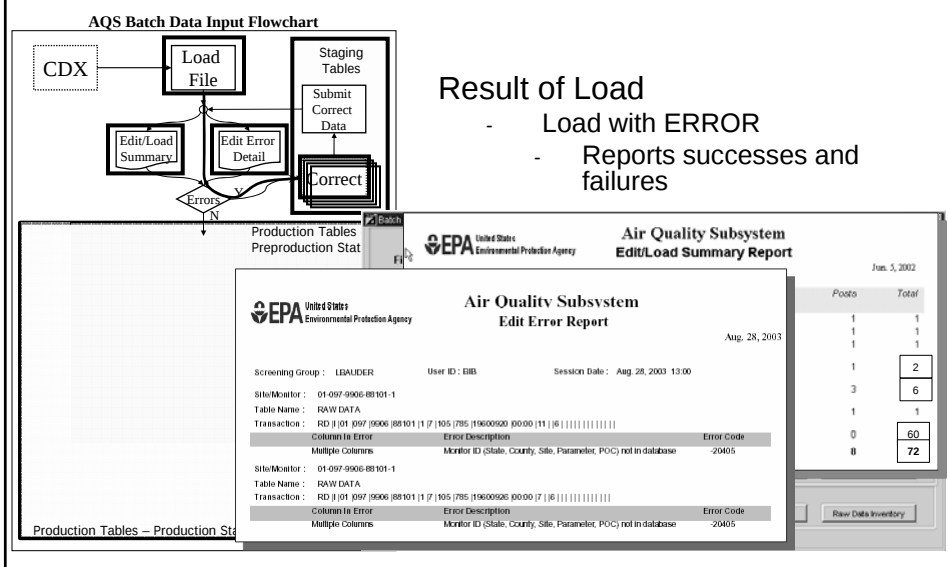
Questions:

1. What field is contained in the 10th field of one of the “RD” transactions? What is the value?
2. What is the monitor ID we are entering data for in this file?

Correct Function

Jonathan Miller
USEPA

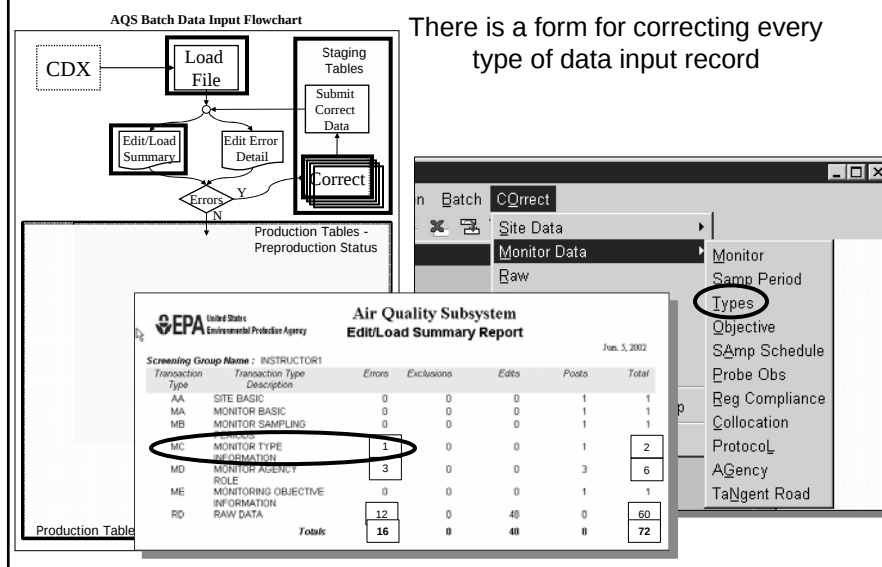
Batch load: Error Process



Correct Process

- CORRECT is a Type of On-Line Editor That Works Against the “Staging Tables”
- Staging Tables are in the format of the Pipe-Delimited Transactions and are Not the “Real” Table (Because There is an Error that Prevents Them From Getting to the “Real” Table)

Batch load: Correct Forms



Batch load: Using Correct Forms

Save

Execute Query
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)
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
Fixing the data often requires knowledge of the nature of the data and may require going back to data sources.

Exclude unfixed data
Excluding unfixed data will keep it from raising error flags during load.

Column Name	Error Code	Error Message
MULTIPLE COLUMNS	-20775	monitor_type_begin_date not within valid sample period

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Batch load: Using Correct Forms Deleting Data (cont.)

The highlighted record can be deleted from the form.

The record will be deleted

All selected records will be deleted.

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

Forms

This will delete all selected records. Do you want to continue?

Yes No

Delete All Selected

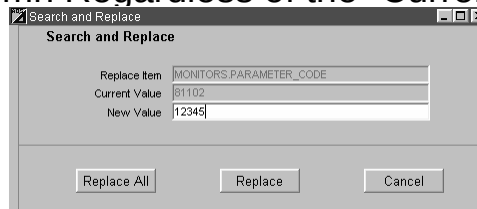
Batch load: Using Correct Forms

Deleting Data (cont.)



Search & Replace

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

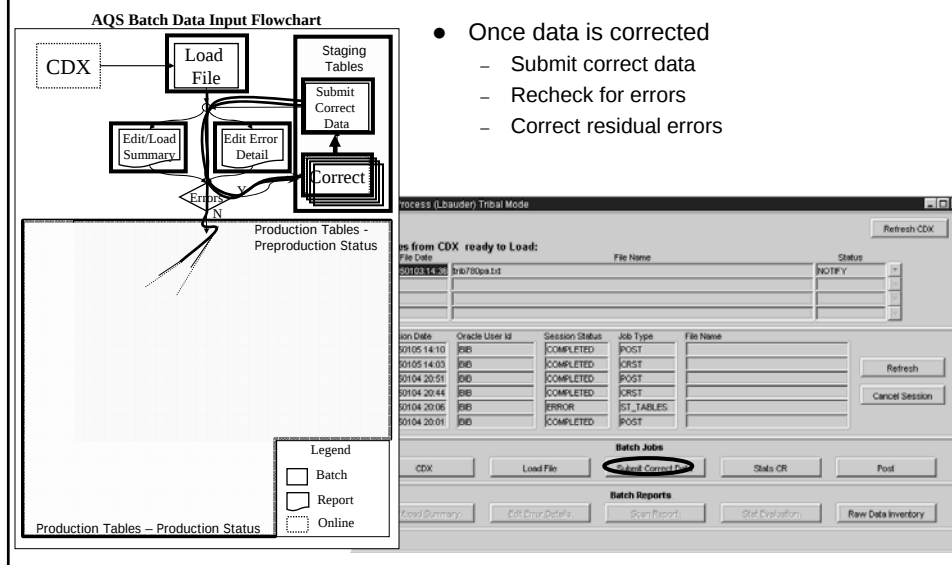


Correct Features

- 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.
- 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: Submit Correct Data



Complete Exercise 2.3

- Analyze and correct the following Batch load error types
 - Site/mon does not exist
 - Overlapping data
 - Inactive monitor on date of entry
 - Value not found in reference table

Student Exercise 2.3

Day 2 – Batch Loading Data in AQS (With Errors)

Purpose: See how the batch load process works when there are errors in the file

Part 1

- Step 1. Start AQS & Logon using your training user id and password
- Step 2. Select your screening Group
- Step 3. From the menus select “Batch”
- Step 4. Click on the CDX button
- Step 5. Select the file “Ex2_3_Txx” where “Txx” is your training id from the instructor-provided directory.
- Step 6. Close CDX and Return to the Batch screen
- Step 7. Click the “Refresh CDX” button until your file appears on the list.
- Step 8. Click on “Load File” and wait for the status of the submitted job to read “ERROR”.
- Step 9. Click the “Edit/Load Summary” button on the bottom of the screen.
- Step 10. Click the “Edit Error Detail” button on the bottom of the screen and review. The instructor will provide a sheet outlining each of the errors, what they mean, and how to correct them.

PLEASE NOTE

If the status of your job says “COMPLETE”, please advise the instructor or an assistant immediately.

Part 2 – Correct Utility

- Step 1. Click on “Correct” → “Raw” from the menu.
- Step 2. Follow the instructions provided by the instructor’s sheet as how to identify and resolve the issues using functions in CORRECT.
- Step 3. After all corrections have been made, click on “Batch”
- Step 4. Click on “Submit Correct Data” to process the records from CORRECT
- Step 5. Repeat Steps 1 – Step 4 until all errors have been corrected. You will know this when the status of the “Submit Correct Data” job says “COMPLETE”
- Step 6. Exit from AQS.

Error Corrections

Error #1

You will see that you have 1 record that has an error because of “Monitor Inactive”

Why?: The record was entered with a start year of 2002. The monitor was not active until 2003.

How do I fix it?: Do a query to find all records that start with the year 2002. Change the year to 2006.

Error #2

You will see that you have 1 record that has an error because of “Invalid Monitor ID”

Why?: You own monitor 37-073-90xx, where “xx” is the last 2 digits of your screening group. There is one record with a value of 37-073-00xx.

How do I fix it?: Do a query to find all records that start with the site id of “00xx”. Change the site id to “90xx”.

Error #3

You will see that you have 1 record that has an error because of “Value may not overlap another sample”.

Why?: The record has a start time of “05:30” and a duration of 1 hour. There is another record that did pass that has a start hour of “06:00”. So the value that started at 05:30 couldn’t be 1 hour because it would bump into the sample that started at 06:00.

How do I fix it?: Do a query to find all records that start with the hour of “05:30”. Change the value of the hour to “05:00”

Error #4

You will see that you have 16 records that has an error because of “Invalid Protocol”

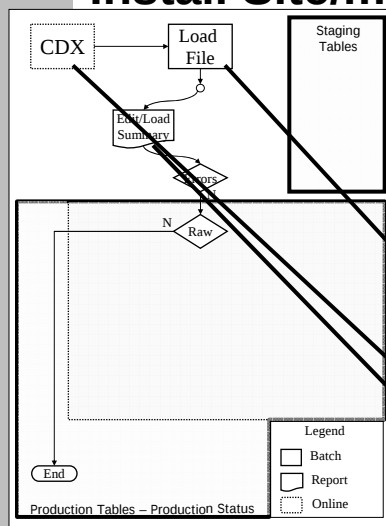
Why?: The record references an invalid method code (currently “919”)

How do I fix it?: Using “Search & Replace”, change all of the method code values of “919” to “019”.

Post Data

Jonathan Miller
USEPA

Batch Load: Use Batch Load to Install Site/monitor Data



Batch Process (Standard) Trial Mode

Files from CDX ready to Load:

File Date	File Name	Status
20050514 14:05	Job780px1.d	NOTIFY

Refresh CDX

Session Date	Oracle User Id	Session Status	Job Type	File Name
20050514 14:05	RB	COMPLETED	POST	
20050514 14:05	RB	COMPLETED	POST	
20050514 20:07	RB	COMPLETED	POST	
20050514 20:44	RB	COMPLETED	POST	
20050514 20:06	RB	ERROR	ST_TABLES	
20050514 20:06	RB	COMPLETED	POST	

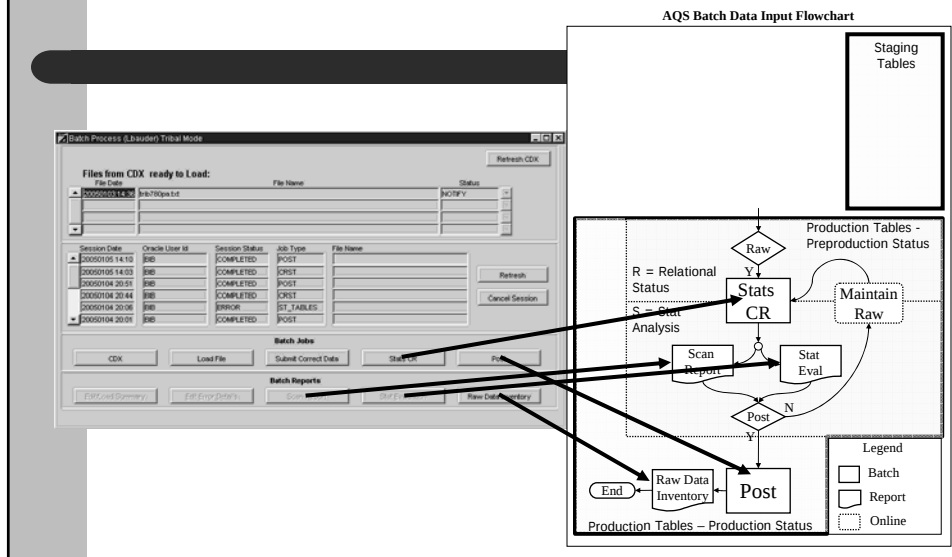
Batch Jobs

Submit Correct Data Status OK Post

Batch Reports

Edit Error Data Submit Report Submit Data View Data Inventory

Batch: Stat CR and Post



Stat CR

- Stat CR = Statistical Critical Review
 - Evaluation of data to discover possible but unlikely data Results available in Scan and Stat Evaluation Reports
- Scan Report
 - Provides information on maximum values and validity flags for raw data
- Stat Evaluation Report
 - Compares pre-production data to existing production data using Shewhart test, Patterns test, and Gap test
- Additional information found in <http://www.epa.gov/ttn/airs/aqs/softw/AQSUserGuide.pdf>

Critical Reviews

- Once data posted, accessible by public. Stat CR and Post activities help flag data anomalies prior to release
- Real errors that fit with rest of data not captured
- Anomalies found are not necessarily errors
- Stat CR and Post must always be run when raw data is added to or changed in database

Batch: Stat CR

- Simply push button, wait for completion (e-mail/ refresh for notification)

Batch Process (Lbauder) Tribal Mode

Files from CDX ready to Load:

File Date	File Name	Status
20050103 14:43	frb780pa.txt	NOTIFY

Session Date	Oracle User Id	Session Status	Job Type	File Name
20050105 14:10	BIB	COMPLETED	POST	
20050105 14:03	BIB	COMPLETED	CRST	
20050104 20:51	BIB	COMPLETED	POST	
20050104 20:44	BIB	COMPLETED	CRST	
20050104 20:06	BIB	ERROR	ST_TABLES	
20050104 20:01	BIB	COMPLETED	POST	

Refresh

Refresh

Cancel Session

Batch Jobs

CDX Load File Submit Correct Data Stat CR Post

Batch Reports

Edit Load Summary Edit Error Details Scan Report Stat Evaluation Raw Data Inventory

Batch: Statistical Evaluation Report



Air Quality Subsystem STATISTICAL EVALUATION REPORT

Screening Group Name LBAUDER			
Monitor Id	Date-Time	Error	Above Gap Cnt
48-141-9954-12128-2	Apr. 01, 1999 :00	Fails Shewhart test.	
48-141-9954-12128-2	Apr. 06, 1999 :00	Value exceeds relative maximum level defined for parameter.	

- Only records that fail a test are reported

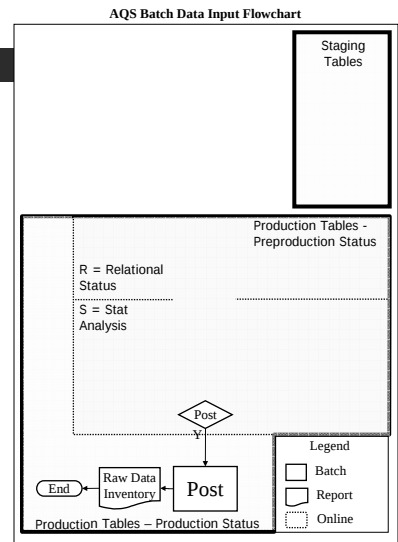
Batch: Scan Report

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY AIR QUALITY SYSTEM SCAN REPORT (AMP120)														
Monitor Id	Unit	D	Year	Q	1st Max	Date-Time	1st Max	Date-Time	V Loc	2nd Max	Date-Time	V Loc	3rd Max	Date-Time
15-001-9991-42401-1	007	1	2003	2			.839	04/07/05		.724	04/02/16			
19-153-9955-16822-1	078	7	2002	1			.03	01/20:00		.03	02/01:00			
19-153-9955-16822-1	078	7	2002	2			.03	04/02:00		.03	04/14:00			
19-153-9955-16822-1	078	7	2002	3			.03	07/07:00		.03	07/19:00			
19-153-9955-16822-1	078	7	2002	4			.03	10/23:00		.03	11/04:00			
19-153-9955-16822-3	078	7	2002	2			.03	06/01:00		.03	06/13:00			
19-153-9955-16822-3	078	7	2002	3			.03	07/07:00		.03	07/19:00			
19-153-9955-16822-4	078	7	2002	1			.03	01/20:00		.03	02/01:00			
19-153-9955-16822-4	078	7	2002	2			.03	04/02:00		.03	04/14:00			
19-153-9955-16822-4	078	7	2002	3			.03	07/07:00		.03	07/19:00			
19-153-9955-16822-4	078	7	2002	4			.03	10/23:00		.03	11/04:00			
48-141-9954-12128-2	001	7	1999	2	104	1999/01/10:00 *	200	04/06:00	104	04/10:00	D			

- Report flags "sports" in the data with *

Batch: Post

- Post is final process in batch update process
- One last chance to verify that data is ready for the world
- Raw Data Inventory Report is available after Post batch job runs



Batch: Post form

Review Statistical Data (Lbauder) Tribal Mode

Raw Overview | Raw Data

Monitor ID	Year - Quarter	CR Exists	Stats Exist
TT-780-9003-42401-3	2003-3	Y	Y
TT-780-9003-42401-3	2003-4	Y	Y

Post Data to Production
Return to Batch Processing

This information is in the Scan Report

This information is in the Statistical Evaluation Report

Action	Std Samp Value	Samp Begin Date	Comp Samp Value	Comp Date	Error Date
10	11	20030716 05:00	148	20030810 09:00	

Review Raw Data

Statistical Data

Total Gap	Value Above Gap	Num Below Gap	Error Date	Statistical Test
89	11	102	20030701 00:00	Fails Gap test
			20030716 00:00	Fails Dixon Ratio test

Batch: Post Form Raw Data Tab

Raw Data display allows verification that incidents that “qualify” (explain) unusual value are entered before data is posted to public. Qualifier information cannot be entered in this form

Batch: Post Form, Raw Data

Post Data to Production
Return to Batch Processing

Critical Review Raw Data

Action	Std Samp	Samp	Comp Samp	Comparison	Error
Ind	Value	Begin Date	Value	Date	Desc
U	1	20030716 05:00	148	20030810 09:00	Value >> 3-Yr Historical Max

Statistical Data

Total Gap	Value Above Gap	Num Below Gap	Error Date	Statistical Error
89	1	102	20030701 00:00	Fails Gap test.
			20030716 00:00	Fails Dixon Ratio test.

Remember, though aberrations look like “errors” they may be perfectly acceptable data values for posting

Batch: Post Form, Raw Data

Review Statistical Data (Lbauder) Tribal Mode

Raw Overview Raw Data

Monitor ID TT-780-9003-42401-3

Raw Data

Sample Begin Date	Std Sample Value	Rptd Sample Value	Data Code	Unit	Ind	Exist	Method Code	Unit	Duration Code	Coll Freq Code	Composite Type	Alt Mdl
20031001 00:00	3	3	007	U	Y	009	007	1				
20031001 07:00	3	3										

Posting

Screening Group LBAUDER records are scheduled for posting.

OK

Qualifier Details

Qualifier Code	Qualifier Type	Qualifier Desc
P	EX	ROOFING OPERATIONS

Return to Batch Processing Post Data to Production

Remember, ALL records belonging to screening group are posted. It doesn't matter who loaded data

Batch: Raw Data Inventory Report

SEPA United States Environmental Protection Agency

Air Quality Subsystem

Raw Data Inventory Report

Aug. 28, 2003

Screening Group: LBAUDER

Monitor Id	Duration	Year-Mon	Inserts	Updates	Deletes
19-153-9955-16822-1	24 HOURS	2002-1	1	0	0
19-153-9955-16822-1	24 HOURS	2002-2	3	0	0
19-153-9955-16822-1	24 HOURS	2002-3	2	0	0
19-153-9955-16822-1	24 HOURS	2002-4	3	0	0
19-153-9955-16822-1	24 HOURS	2002-5	2	0	0
19-153-9955-16822-1	24 HOURS	2002-6	2	0	0
19-153-9955-16822-1	24 HOURS	2002-7	3	0	0
19-153-9955-16822-1	24 HOURS	2002-8	1	0	0
19-153-9955-16822-1	24 HOURS	2002-9	3	0	0
19-153-9955-16822-1	24 HOURS	2002-10	2	0	0
19-153-9955-16822-1	24 HOURS	2002-11	3	0	0
19-153-9955-16822-1	24 HOURS	2002-12	2	0	0
19-153-9955-16822-3	24 HOURS	2002-6	2	0	0
19-153-9955-16822-3	24 HOURS	2002-7	3	0	0
19-153-9955-16822-4	24 HOURS	2002-1	1	0	0
19-153-9955-16822-4	24 HOURS	2002-2	3	0	0

Student Exercise 2.4

Day 2 – Post Process

Purpose: Post pre-production data to a production status

Part 1 – Run the Statistical Report

- Step 1. Start AQS & Logon using your training user id and password
- Step 2. Select your screening Group
- Step 3. From the menus select “Batch”
- Step 4. Click on the “Stats / CR” Button
- Step 5. Wait until the status of the job = “COMPLETE”
- Step 6. Click the “Scan Report” Button. Review the report when it completes
- Step 7. Close the report
- Step 8. Click the “Stat Evaluation” Button. Review the report when it completes
- Step 9. Close the report

Questions:

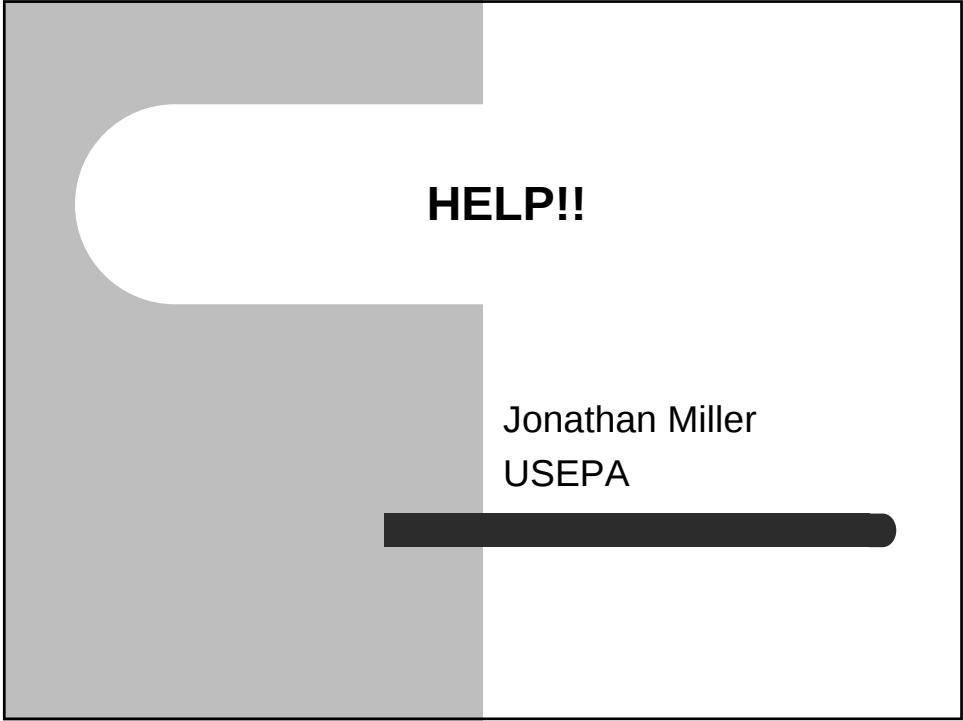
- 1. What types of records are being evaluated in this process?
- 2. What is the status of the records BEFORE and AFTER running the Statistical processes?
BEFORE:
AFTER:
- 3. If you did find strange data identified by the statistical process, how would you go about correcting the problem?

Part 2 – Post the Data

- Step 1. Click on the “Post” button
- Step 2. Select any of the lines on the “Raw Overview” tab
- Step 3. Click on the “Raw Data” tab. **Question:** What does this data represent?
- Step 4. Click the “Post Data to Production” button
- Step 5. Click “OK” on your job being processed
- Step 6. Click the “Return to Batch Processing” button
- Step 7. When the Post job completes, click the “Raw Data Inventory” button.
Review the report. **Question:** How many records were updated in this job?
- Step 8. Close the report
- Step 9. Exit AQS

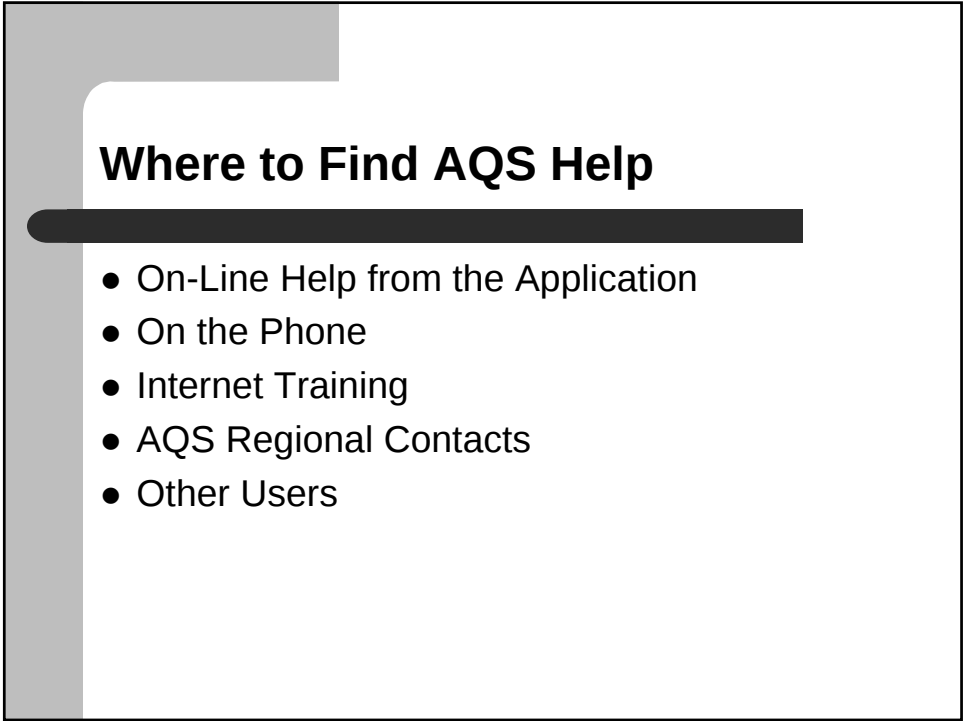
Questions:

- 1. Don’t forget the question in “Step 2”
- 2. Don’t forget the question in “Step 7”
- 3. What is the status of the raw data records after this process completes?



HELP!!

Jonathan Miller
USEPA



Where to Find AQS Help



- On-Line Help from the Application
- On the Phone
- Internet Training
- AQS Regional Contacts
- Other Users

From the Application

- “Help” From the Menu

- Topics
- Short-Cut Keys
- Display Error

Help

Help

Keys	Ctrl+F1
Display Error	Shift+F1
About	

- Field-Level Help

Horizontal Method: 012 GPS CARRIER PHASE STATIC RELATIVE POSITION

Horizontal Accuracy (Meters): 3.04 Source Map Scale (Non-GPS): 24000

Vertical Method: 000 Description of the accuracy as a range of the latitude/longitude reported in meters. Only the least accurate measurement needs to be recorded whether it is latitude or longitude.

Vertical Accuracy (Meters): UNKNOWN

Street Address: HEALTHDEPT, 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>

Application Help

AQS Help - Microsoft Internet Explorer provided by EPA - version 6

Address: https://www.epa.gov/aqsweb/helpfiles/helpfile.htm

Index Search

Type in the keyword to find:

A

- Accuracy Report
- Ad-Hoc Reports
- Add A New Role
- Add A New User
- Admin Message of the Day
- Air Quality Index Report
- Air Quality Index Summary Report (AMP4100)
- Air Quality Index Worldwide format
- Air Quality Report
- All Parameters Format
- All Parameters Quick Look Work File Format
- All Roles
- Annual Summary
- Application Administrator
- Application Audits
- AGI

B

- Batch
- Batch Load formats
- Browse

C

- CA Dump
- California Dump Bucket
- Carbon Monoxide Format
- Carbon Monoxide Work File Format
- CDX
- CDX Application
- Certification
- Comment Form
- Comments File

Data Completeness Workfile

When user requests a work file, two separate files will be produced:

- Summary level information on a per EPA Region, State, Reporting Organization, Parameter, and Monitor Type basis.
- Monitor level information, which contains month-by-month counts and percentages of samples collected by the monitor.

Field	Summary Workfile Format
1	EPA REGION
2	STATE
3	REPORTING ORGANIZATION NAME
4	MONITOR TYPE
5	PARAMETER NAME
6	NUMBER MONITORS EVALUATED
7	AVERAGE COMPLETENESS
8	NUMBER NOT REPORTING

Field	Monitor Workfile Format
1	MONITOR TYPE
2	SITE_ID (ST-CNT-SITE)
3	PARAMETER CODE
4	POC
5	REGION

On the Phone

- CDX Helpline
 - 1-888-890-1995
 - epacdx@csc.com
- EPA Helpdesk
 - 1-866-411-4372
 - epacallcenter@epa.gov
 - 2 “Levels” of Support
 - Level 1: Reset Passwords
 - Level 2: AQS Specific Issues



Internet Training From NADG

- Monthly “New User Orientation” – Lewis/McIntyre
 - 3rd Wednesday of Each Month
 - Walk-Through Basic Functions via Genesys
- AQS P&A Data Entry Program – Frietsche
 - Available Anytime
 - (919) 541-5451
- Oracle Discoverer Training - Poteat

AQS Regional Contacts

- Wendy McDougall (I)
 - (617) 918-8323
- Henry Feingersh (II)
 - (212) 637-3382
- Pauline DeVose (III)
 - (215) 814-2186
- Darren Palmer (IV)
 - (404) 562-9052
- Michael Compher (V)
 - (312) 886-5745
- Pamela Phillips (VI)
 - (214) 665-7160
- James Regehr (VII)
 - (913) 551-7167
- Ken Distler (VIII)
 - (303) 312-6043
- Katherine Brown (IX)
 - (415) 947-4137
- Jan Noel (X)
 - (206) 553-1691

Other Resources

- AQS Yahoo! User's Group
 - <http://groups.yahoo.com/group/AQSUsers/>
- Tami LaPlante (EPA's Tribal Liaison)
 - laplante.tami@epa.gov
 - (919) 541-1915