



AQS Quarterly Newsletter

October 2003

Volume 1, Issue 4

In This Issue

- AQS Performance
- Status of Historical Summary Data
- Plans for AQS Query
- Status of AQS Web
- New Web Page
- User Support Issues
- New AQS Group
- Access to Data Files
- AQS P & A Transaction Generator
- AIRS/AQS Mainframe
- Tami's Detail
- Barbara's Detail
- User Recommendations – October Status
- Fun AQS Stats
- E-Mails for IMG

Contact Us

USEPA
OAR/OAQPS/ITPID
IMG(MD-C339-04)
RTP, NC 27711

Area Code: 919

Ed Lillis	541-5587
Barbara Hale	541-5586
Virginia Ambrose	541-5454
Bill Frietsche	541-5451
Michael Hamlin	541-5232
Jerry Husketh	541-5449
Chuck Isbell	541-5448
Bonnie Johnson	541-2469
Nick Mangus	541-5549
Janie Samuel	541-5389
Jake Summers	541-5695

Hello again from the AQS Team

Well, we survived the recent Hurricane (Isabel) with far less damage than from Hurricane Fran a few years ago; however, damage to the N.C. Outer Banks (especially to Hatteras Village) was particularly bad.

By the time you read this, all AQS users should be registered to use the new AQS-web application. As Nick explains in his article on page 4, user feedback suggests AQS-web is making it easier for many users to connect to AQS than with SecuRemote. Once everyone is using the web version, we plan to phase-out the client-server version.

We have been converting the historical AQS data from the mainframe to the new AQS format and uploading some of the summary data to the production data base. We have also been working on an update for the AQS Query data base. Please see Jake's articles on pages 2 and 3 for details.



We are also addressing the top 30 recommended improvements you suggested at the Conference. The article on page 8 presents a status report on where we stand on each project.

Lastly, Tami Laplante and Barbara Hale from the AQS Team will each be going on a 6 month rotational assignments within OAR. Please see their articles on page 9.

Hope you enjoy the rest of the newsletter and thank you for your continued support.

Ed Lillis

AQS Performance

Ed Lillis

One of our goals is to operate AQS as efficiently as possible. When AQS operates efficiently, uploads and retrievals run more quickly thereby reducing the turnaround

time for our users. AQS also uses less CPU, reducing the amount of money that OAQPS and the RO's spend each year to operate the system.

The AQS Team has devoted a considerable amount of time to optimize AQS. For example, a number of changes have been made to the upload process which have improved the average upload rate from about 20,000 records an hour to about 80,000 records an hour (on a wall clock time basis), with some individual jobs at over 200,000 records an hour. Improvements have also been made to the AQS standard retrievals and work files which are now operating more efficiently.

The following chart illustrates the monthly amount of CPU used by all AQS users from May 2002 through September 2003. As you can see, it was not unusual for AQS users to consume from 1200-1800 CPU hours a month in 2002. However, more recently, CPU usage has dropped to the 800-1000 range, for about a 40% improvement.

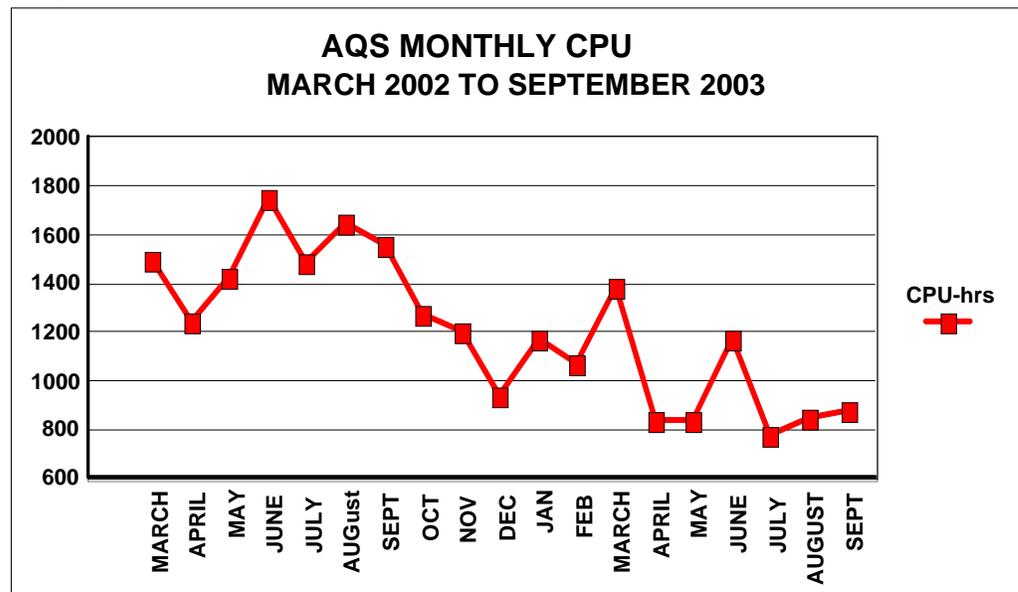


Figure 1

We hope that these optimization efforts have also resulted in noticeable performance improvements at your end.

Status of Historical Summary Data

Jake Summers

When we put AQS into production in January 2002, it contained 10 years of raw and summary data. Over the past few months, we have been working to convert the data from the old AQS format to the new AQS format and add all earlier summary data (back to the 1950's) to the AQS database.

In May 2003, ozone summary data was converted and loaded into AQS for 1982 to 1991. The data conversion for other pre 1992 years has been active since late June. Most of the data loading to AQS has been done on weekends to minimize any negative impact on AQS user's ability to load new data. So far, summary data for all pollutants is available from 1981 to present.

The process is taking longer than initially expected because of some data problems that have been uncovered at a few sites. These problems need to be resolved before the data conversion process can proceed. Data loading of all summary data is expected to be completed by December 2003. A message will be maintained on the initial system screen to keep the status up to date.

Once all of the summary data have been converted and uploaded into AQS, our plan is to retire the old AQS-mainframe system that currently stores the summary and raw data (see separate article of our plans to retire AQS-mainframe). Prior to the mainframe system being retired, all of the historical raw data will be moved from the mainframe, converted to the new AQS format, and stored on another server (AQSARCH). Data on AQSARCH will not be accessible by AQS users or the public. Requests for historical AQS data will have to be made to IMG staff using the request form that will be available on our web site (<http://www.epa.gov/ttn/airs/airsaqs>). Our goal is to respond to most requests within 1-2 business days.

Users of the following reports need to be aware that these reports will not retrieve data for pre 1993 since that raw data is not available on the AQSProd database.

AMP350 – Raw Data Report

AMP350WF – RawData Work File

AMP501 – Extract Raw Data

Plans for AQS Query

Jake Summers

AQS Query is a database for public access of air quality data from AQS. The web address is:

<http://www.epa.gov/aqspubl1/select.html> or it is

available through a link from:

<http://www.epa.gov/air/data/index.html>. The database

and web queries, which were developed before the current AQS database went into production, have not been updated since December 2001.



By the end of November, the current AQS Query will be updated with summary data from the current AQSPROD database used by state, local, and tribal agencies to report and retrieve the data. The queries capabilities and report formats will remain the same as they are now. Once the new AQS Query is in place, we plan to refresh this summary database on a monthly basis from AQSPROD. The process to replace the database has been tested, and the queries that access the new database are ready to test.

Our longer term plan is to make AQS Query more user friendly and more consistent with the query processing for *AirData*. This change might also include making some raw data available for the most recent three or four years for some pollutants (e.g., PM2.5 and PM2.5 speciation data). This effort has not yet begun and the schedule and extent of the project may be impacted by the FY 2004 budget.

Status of AQS Web

Nick Mangus

The initial transition to AQS Web is complete!

We have registered all active AQS users to CDX and given you access to web version of AQS. The last mailing was September 25th, so some of you may still be waiting on your letter, but rest assured, "it's in the mail."

We phased in the transition by geographic area starting in July. Figure 2 shows the total number of submissions to AQS using CDX by month. May and June numbers are from EPA HQ staff doing "production testing". As you can see, the volume is growing exponentially right now.

CDX Submissions to AQS

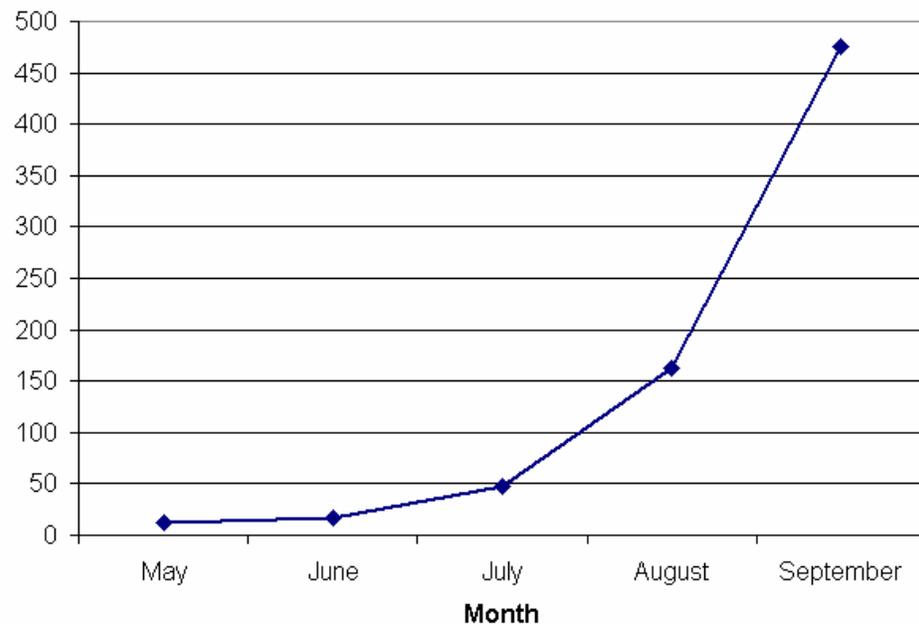


Figure 2

Figure 3 on the next page shows the percent of AQS file uploads that were made via CDX each day during August and September. Also shown is the 30 day running average. Note that the average is steadily increasing and broke through the 30% mark near the end of September.

The feedback from people who have made the change has been overwhelmingly positive. SecuRemote is not necessary to access AQS Web and it was holding back more people than we were aware of. Some people are also reporting improved response time for on-line reports. And, as we've already done, the application can be updated without the necessity of downloading patches.

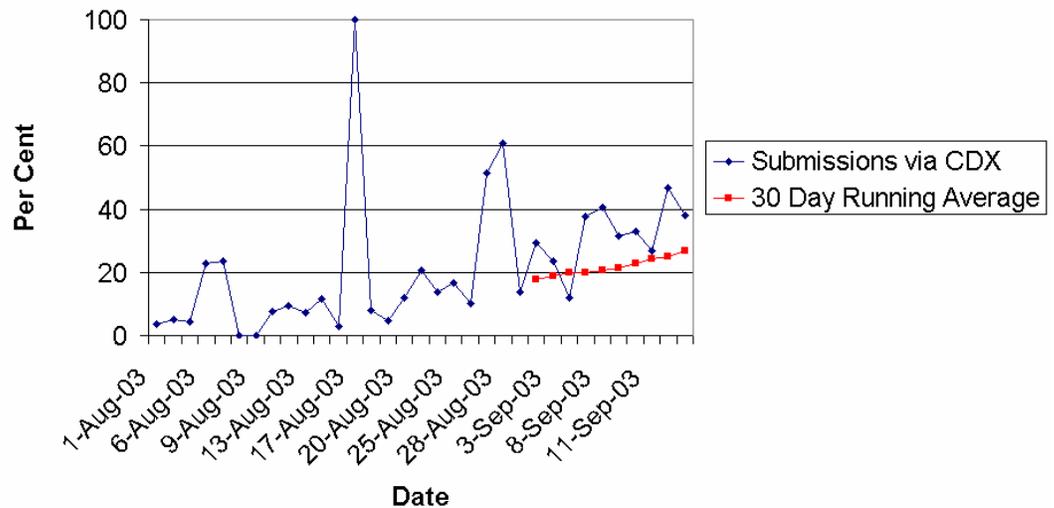


Figure 3

We have experienced a few problems maintaining the connection between AQS and CDX. While these problems were “minor technical glitches” we realize that no problem is minor for you when you are trying to get your job done in a limited amount of time. Thank you for notifying the help desks when you have a problem and working with us until we can get them resolved.

We are in the process of updating the user registration process and forms for the web. There are some major differences in what we have to do now, so we encourage the regional contacts to frequently check out the “user registration” page on the TTN for updates. Thanks for your patience and cooperation during the transition!

New Web Page Describes Changes to AQS Web

Nick Mangus

As you may recall, one of the advantages of moving to a web-based version of AQS is that EPA could make updates and fixes to AQS without you having to download a patch or version update. Since the application can now change at any time, we've added a page to the TTN AQS site to describe major changes as they are made. The page's URL is http://www.epa.gov/ttn/airs/airsags/aqsweb/AQSWeb_Mods/aqswebmods.htm. There is a link to it on the AQS Web Home Page, just above the “proceed to AQS” link.

When we make a major update to AQS, we will post a description of the change and how it will impact your use of the system. A summary list of changes and the effective date will be added to the top of the web page so you can quickly check it for possible impacts to your processing, so check in regularly!

User Support Issues

Chuck Isbell

User Documentation

We appreciate your patience as we continue to work on improving user documentation. Three of the Top 30 User Recommendations from the AQS Conference deal with user documentation (see #6, 9, and 15 within Ed's Top 30 article).

In the next release you will find that the Data Coding Manual text has been enhanced to expand the reference information on the EPA Locational Data Policy fields (i.e., latitude, longitude, horizontal datum, source scale, accuracy, etc.). The hope is that the expanded text will help users understand what the EPA is requiring for the locational fields as defined in the EPA Locational Data Policy. The next release of the Data Dictionary has all the acronyms spelled-out and a list of all the acronyms (from both the Coding Manual and Dictionary) has been added to the Appendix document. The next release of the Data Coding Manual and Data Dictionary will be posted on the AQS TTN website within the next few weeks at: <http://www.epa.gov/ttn/airs/airsaqs/manuals/manuals.htm>.

In addition to the above enhancements, we are working with our contractor to provide the business rules and field-level edits for all the batch transactions and input data fields. These edits will be incorporated into the Data Coding Manual. Our contractor is also putting together all the formulas and algorithms that are used by AQS to calculate the summary data. These formulas will be incorporated into the Data Dictionary. Our goal is to have these enhancements incorporated into the user manuals by the end of the calendar year.

We continue to welcome your comments and suggestions on how we can improve user documentation to better meet your needs.

Communication with the Help Desk staff

I believe the AQS User Community can help improve user support by improving communication between you and the Help Desk staff when reporting a problem. Better communication will assist the Help Desk staff in resolving your problem, enable the Call Center specialist to more accurately document your problem in the Remedy system; and at the same time, reduce the amount of user-level frustration.



One problem results from the use of the term AIRS rather than AQS (many of us old-timers find it hard to not refer to ourselves as AIRS users). Users should now refer to themselves as AQS users when reporting a problem to the Call Center. "AIRS" refers to the legacy application that exists on the mainframe. Please do not use "AIRS" when reporting a problem unless the

problem specifically is related to the old mainframe application. The AIRS/AQS legacy application will be retired at the end of the year (see my newsletter article on the retirement of AIRS/AQS). We have made the Call Center folks aware of the history of AQS as part of AIRS, but we also recommend that AQS users not use the term AIRS when reporting problems with AQS.

Another area of concern (and frustration on our users' part) is that the EPA Call Center staff (Level 1) are expected by some users to be expert in the air monitoring program, as well as all of the details of the AQS application itself. This expectation can result in unnecessary frustration. In reality, the primary purpose of the Call Center folks is to screen calls, reset passwords for a variety of applications across EPA (not just AQS), and refer calls requiring detailed help to the Level 2 or 3 AQS specialists.

Also, when calling in a problem to the Call Center, please describe your problem without a lot of technical air quality terms (i.e., simple terms). For example, let's say you are having problems loading your data. Begin by saying "I'm having problems loading data into AQS," and then go into more detail as the Call Center person asks for more details. Please be patient with the Call Center staff as they obtain your information and enter it in the Remedy system. You will have an opportunity to discuss your problem in more technical detail with the Level 2 or 3 support staffs when their help is needed to resolve a problem.

New AQS Group Established

Bonnie Johnson

One of the "top 30" requests from the AQS Conference was for the establishment of a user support network. We created it; no one came. Due to changes in MSN's setup, we decided to create a new group on Yahoo and give it one more try. So, if you're interested, you can find it at <http://groups.yahoo.com/group/AQSUsers/>

Instructions for use of the group are available from Yahoo. It's up to you to determine if this is a useful tool. For at least the next few months, the IMG staff will regularly check the site. If it is not being used, we'll drop it. Please realize that use of Yahoo for the group does not imply any endorsement of Yahoo by the US EPA.

Access to Nationwide Data Files

Bonnie Johnson

We are continuing to add and update data files to the link on the web at http://www.epa.gov/ttn/airs/airsaqs/archived_data/download_aqs_data.htm. The files posted contain data for the entire nation. Now that we've entered the 3rd calendar quarter of 2003, we have started posting data from the 1st and 2nd quarters of 2003. Feel free to refer researchers, statisticians, and any other requestors to this page.

AQS Precision and Accuracy Transaction Generator (AQSP&A)

Bill Frietsche



The AQSP&A transaction generator is a MicroSoft Excel file that creates AQS batch transaction files for precision and accuracy data input. Some editing and lookups are included in an effort to improve user friendliness.

We posted version 3.3 of AQSP&A on the AQS TTN website on September 11, 2003. This version refreshed the included "look-up" tables and fixed a couple of minor bugs. The URL to get to our software download page is: <http://www.epa.gov/ttn/airs/airsags/software/software.htm>.

This spreadsheet comes in 10 different versions, one for each EPA region. Use the one for the region that your agency is located in. If your transactions span multiple regions, please call me for a copy that is set up for your screening group(s).

New versions of the spreadsheet are posted to our AQS TTN website on an as needed basis. If bugs are identified, they are fixed and a new "minor" version release is posted. If new functions are added, then a new "major" release is posted. Also, every two months the lookup tables are refreshed... this is a minor version increment.

So, for example, Version 3.0 was a "major" release from Version 2 because Version 3 provided new MS Word document report functionality. Version 3.3 was a minor release because it fixed a bug in the "add new monitor/ method" function button, and included a refresh of the look-up tables. We are considering keeping a log of versions and associated changes available on the web for your information.

The AQSP&A files are developed using MS Excel 2000, so if you use an earlier version of Excel (MS Excel 97), you will have to "reference" a valid Word object library for the spreadsheet to run properly. This is found under tools from the visual basic editor. Please give me a call if you are using Excel 97 and want help with this. We are considering improving the application to avoid this manual set up step for Excel 97 users, depending upon the number of Excel 97 users, so please let me know.

AIRS/AQS Mainframe Application to be Retired

Chuck Isbell

Our plan is to retire the legacy AIRS/AQS mainframe application from the EPA National Computer Center's Enterprise Server on December 31, 2003. Beginning in 2004, we plan to remove users ability to access the legacy

AIRS/AQS mainframe application. Agencies have until 12/31/2003 to retrieve data from the old system if they want. After 12/31/2003, requests for historical data can be made to the IMG staff using a request format that will be available from our AQS TTN website (<http://www.epa.gov/ttn/airs/airsaqs>). Our goal is to respond to most requests within 1-2 days. Please be sure to read Jake's article on the conversion and loading of historic data.

Please feel free to contact me if you have any questions or concerns about the retirement of the old mainframe AQS. (Should we give AIRS/AQS a gold watch for its 16 years of service?)

The Details on Tami's Detail

Tami Laplante

Hi ya'll. I am going on a detail for 6 months to the EPA office in Las Vegas, Nevada! I'll be working with the Office of Indoor Air and Radiation. I started on the 6th of October. My new address is:

EPA, OAR, ORIA, CIE
P. O. Box 98517
Las Vegas, NV 89193-8517



I can be reached by phone at 702-784-8255 or at my same e-mail address laplante.tami@epa.gov should you ever need me or have any questions. Jerry Husketh and Virginia Ambrose will be taking over the accounts management for AQS so if you have any questions, please contact them. To move monitors or add new screening groups you may contact Jake Summers or Bonnie Johnson. Of course, if all else fails, you may certainly contact me if you need help or just want to chat, especially those on the west coast since I'll be on your time zone then. I will miss the AQS team and all the users because you are the best!

Another Detail for IMG!

Barbara Hale



Yes, Barbara is going on a detail for 6 months to the Planning, Resources and Regional Management Office here at RTP! I will be working with the Group that is responsible for the overall budget for Office of Air Quality Planning and Standards here at RTP. My detail will start on the 2nd of November and is due to end May 1st.

(As there will not be a specific individual replacement for me while I am on this detail, any of you with a need to contact IMG should contact Jake Summers, Ed Lillis or other members of the AQS team.) I can still be reached at my e-mail address hale.barbara@epa.gov should you ever need me or have any questions. I will miss the staff in Information Management Group and members of the Information Transfer and Program Integration Division, and those users I've had the pleasure to spend time with at the past three conferences, because you guys are the best! I'll not say good bye, just so long, as none of us know what the future holds.

			<p>full use of the option. So, we have created a new group on Yahoo named "AQSUsers". To join, follow the instructions from Yahoo at http://groups.yahoo.com/group/AQSUsers/</p> <p>b) We will continue to update the FAQ area on the TTN.</p>	<p>b) ongoing</p>
6	<p>Documentation- Coding manual needs clarification (e.g. include examples especially locational, lat/long). Standardized form.</p>	<p>Enhance Data Coding Manual to provide better info on Locational type data. Provide examples.</p> <ul style="list-style-type: none"> - Look into how other EPA applications are providing end-user documentation for this LDP info. - Research guidance from other sources (such as OEI standards folks, etc.) 	<p>Material on locational type data has been drafted and is being added to the Manual. This project should be completed in the Nov-Dec time period.</p>	
7	<p>Error Messages Clarify error messages, especially numerically coded errors. (e.g. site shutdown - clarify monitor ID not in database error). Better explanation of Oracle error messages</p>	<p>Users need to notify us on specific unclear messages they would like clarified</p>	<p>Users need to bring unclear messages to our attention.</p>	
8	<p>Reports - Ability to change sort data order.</p>	<p>The screens to create reports will be redesigned to include this function.</p>	<p>This change will be made in 2 steps. The first step is to change the report format screens. This change is part of the "R-31" project and should be completed in Nov. Once this change is made, the 2nd step is to modify the individual reports to implement this function.</p>	
9	<p>Documentation -</p> <ol style="list-style-type: none"> 1) Data dictionary should <ol style="list-style-type: none"> (a) spell out acronyms. and (b) include list of acronyms and (c) definitions needed for required fields. 2) Document and define all algorithms in a separate document or index to the Data Dictionary & Coding Manual. 	<ol style="list-style-type: none"> 1) <ol style="list-style-type: none"> a) Spell out acronyms within text. b) Add list of acronyms as an appendix. c) need more info on need. 2) Obtain the algorithms from either the (a) case tool, (b) old data dictionary, (c) Federal Register, or (d) EMAD. 	<ol style="list-style-type: none"> 1a) and b) Work on acronyms has been drafted and will be added to the data dictionary. This project should be completed in the Nov-Dec time period. 1c) under review 2) Draft report on algorithms has been received from contractor but more work is needed. Project should be completed in Dec. 	
10	<p>New Feature AQS needs a cancel report / cancel session should immediately cancel.</p>	<p>Oracle will determine the software design to perform the function and LMIT will implement the solution.</p>	<p>This feature will be added along with other changes as part of the "R 31" changes that should be completed in November.</p>	

11	Training-Training needs to include supporting documents or references - should all be in one place, e.g., on web site	agree	3 months
12	Training- Training in states to increase # of knowledgeable users in using AQS. Train on data requirements; i.e. POC #s, Site moves, data form (PN); Also, what are data used for –esp. if public has access.(L)		10 user training sessions conducted in July-October 2003
13	Reports- Raw data report that shows monitor, pollutant, date.	Report is similar to the speciation report and might be developed as part of it.	This report should be available in November.
14	New Features- Gray out unavailable options (e.g. query). Button selected should gray out or change color while system is working - hourglass symbol, message bar.	Oracle will investigate to see if feasible.	We believe that the web version of AQS eliminated most of this problem.
15	Documentation- Need guidance for reference tables GeoCommon data. (In general, need better guidance for fields with complex functionality. Need field edits added to Coding Manual.)	a) Enhance Data Coding Manual by providing better guidance for fields with complex functionality. b) Add field edits	a) Ongoing b) Contractor is working to add field edits to the Coding Manual. Draft document expected in January.
16	Reports- Separate column for null codes and flags in raw data reports.		Completed
17	Documentation- Need to define description - on line documentation for method, null data qualifiers. (Do this as part of upgrading AQSQuery to provide interactive lookup of all AQS codes on a public website.)	Enhance AQSQuery to provide public access to all AQS reference codes and online help for how to choose which reference code (such as Method) is applicable.	In the short term, we added some static code descriptions on the AQS web site http://www.epa.gov/ttn/airs/airsags/manuals/codedescs.htm Longer-term, we plan to have dynamic look-up tables as part of the revised AQSQuery which should be available late FY-04.
18	Reports- Add parameter code and name to all reports.	This will be done as reports are optimized and converted to text format.	Will begin to add on report-by-report basis after the "R-31" project is completed in Nov.
19	Reports Paging down in a query is slow. (on-line?)	This function will be evaluated after the conversion to the web.	Under review.
20	New Feature - Site history viewer (see what	See Reports discussion below	No action planned on this report in FY-04 at this

	parameters are connected to a site, with dates of site operation, etc.)		time.
21	Correct - Be able to pull a batch file of data in "Correct".	This function may be possible at a later date.	No action yet, later in FY-04.
22	Reports - Be able to save queries and standard criteria cross report.	The screens to create reports will be redesigned to include this function.	This function will be added as part of "R-31" changes in November.
23	Reports - Data Completeness report not working well. - Add seasonal indicator to monitor to correctly calculate data completeness.		Completed in Version 2.6.
24	P and A data - P&A Monitor/Site data loads without giving users a chance to see it. Need PARS output report so results can be reviewed before loading to AQS.	Likely will not do this in short-term. It is a major change. Prefer to address other issues first.	No action planned in FY-04
25	New Feature - A. Current status of database should be on login page. B. Send out an email as soon as the system goes down.	A. A web page may be designed to easily include this information before accessing the database. B. Emails are currently sent out when system is down.	A. We explored the possibility of putting the real-time utilization rate of CPU usage Canyon on a web site and decided not to do it. In recent months, there have been few occasions when Canyon has been overloaded. When it has, we have alerted users and recommended certain actions. We believe that unless conditions warrant an alert from us, that users should not be concerned with the utilization rate on Canyon. In other words, submit jobs to AQS as you normally would unless we alert you to an overload problem B. Ongoing
26	Training- Need for information and guidance on what data should go into AQS - Basic training issues.	Agree	6 months
27	Duplicate Monitor - Duplicate Monitor function should only copy skeletal/ correct info since details on what fields/info need to be changed for the new site.		not yet scheduled
28	Reports - Some reports (e.g., Quick Look for non-criteria) need to show higher level of precision to display data-- user should	Report optimization will include this review. Users will not have option to specify number of decimals.	Ongoing. Some reports have been modified and others will be (e.g., QuickLook for non-criteria

	choose # of decimal places.		pollutants).
29	Monthly data matrix viewer.	See Reports discussion below	No plan to develop this report in FY-04
30	Discoverer- Raw data accessible thru Discoverer.	Looking into this but probably not before new web version of Discoverer is available	NCC is expected to install the software/ hardware needed to operate web version later this year.

In addition, users also recommended that we develop a number of new reports. These included:

- Design Value Report
- Exceptional Event Report
- Network Review Report
- Data Histogram Report
- Quarterly Report
- Speciation Report
- Toxics Data Report
- Data Inventory Report
- Monitor Precision and Accuracy Summary Report

At this time, we plan to develop the speciation report, the toxic report and the quarterly report over the next 6-9 months. We will reassess the other reports once these have been completed.

We also plan to continue to modify the existing AQS reports so that they are available in text formats (AMP250, the AMP440, and the AMP450NC) and, in some cases, work files including the AMP440 and either the AMP230 or 260.

Fun AQS Stats for 3rd Quarter 2003

Total Users active since 7/1/03: 239

Region 1: 24	Region 4: 35	Region 7: 14	Region 10: 9
Region 2: 10	Region 5: 14	Region 8: 20	Others: 22
Region 3: 20	Region 6: 20	Region 9: 51	

Total Records Submitted thru Screening Groups during 3rd quarter:

R1: 1,479,061	R4: 2,212,391	R7: 816,635	R10: 841,113
R2: 947,995	R5: 3,417,236	R8: 1,658,392	
R3: 2,293,366	R6: 4,282,678	R9: 6,114,739	

Top Requested Reports in 3rd quarter:

AMP 350 Raw Data Report	AMP 450 Quicklook Criteria Parameters
Amp 501..Extract Raw Data	AMP 430 Data Completeness Report

Reaching IMG Staff by E-Mail

Lillis.Ed@epa.gov	Summers.Jake@epa.gov	Isbell.Chuck@epa.gov
Frietsche.Bill@epa.gov	Husketh.Jerry@epa.gov	Johnson.Bonnie@epa.gov
Hamlin.Michael@epa.gov	Mangus.Nick@epa.gov	Ambrose.Virginia@epa.gov
Hale.Barbara@epa.gov		
