ICIS-AFS Requirements Webinar #1

December 6, 2012

Topics

- Welcome
- Overview of Webinar Topics
- Overview of Requirements Review Approach
- Governance Structure
- AFS Modernization Process
- Requirements Review:
  - Web Data Entry
  - Unique Identifiers & Batch Data Entry
  - Facility, including Programs & Pollutants
  - Creating Reports

Welcome

- John Dombrowski, Director
  Enforcement Targeting and Data Division, OECA/OC and
  Chair, AFS Modernization Senior Management Steering Committee (Tier 2)

Overview of Webinar Topics

- Webinar #1: Thursday, 12/6/12; 3-5pm EST
  - Topics: Data Entry, Facility Identifiers, & Creating Reports

- Webinar #2: Wednesday, 12/12/12; 3:30-5:30pm EST
  - Topics: Compliance Monitoring & Permits

- Webinar #3: Thursday, 12/20/12; 3-5pm EST
  - Topics: Alleged Violation Files & Enforcement Actions

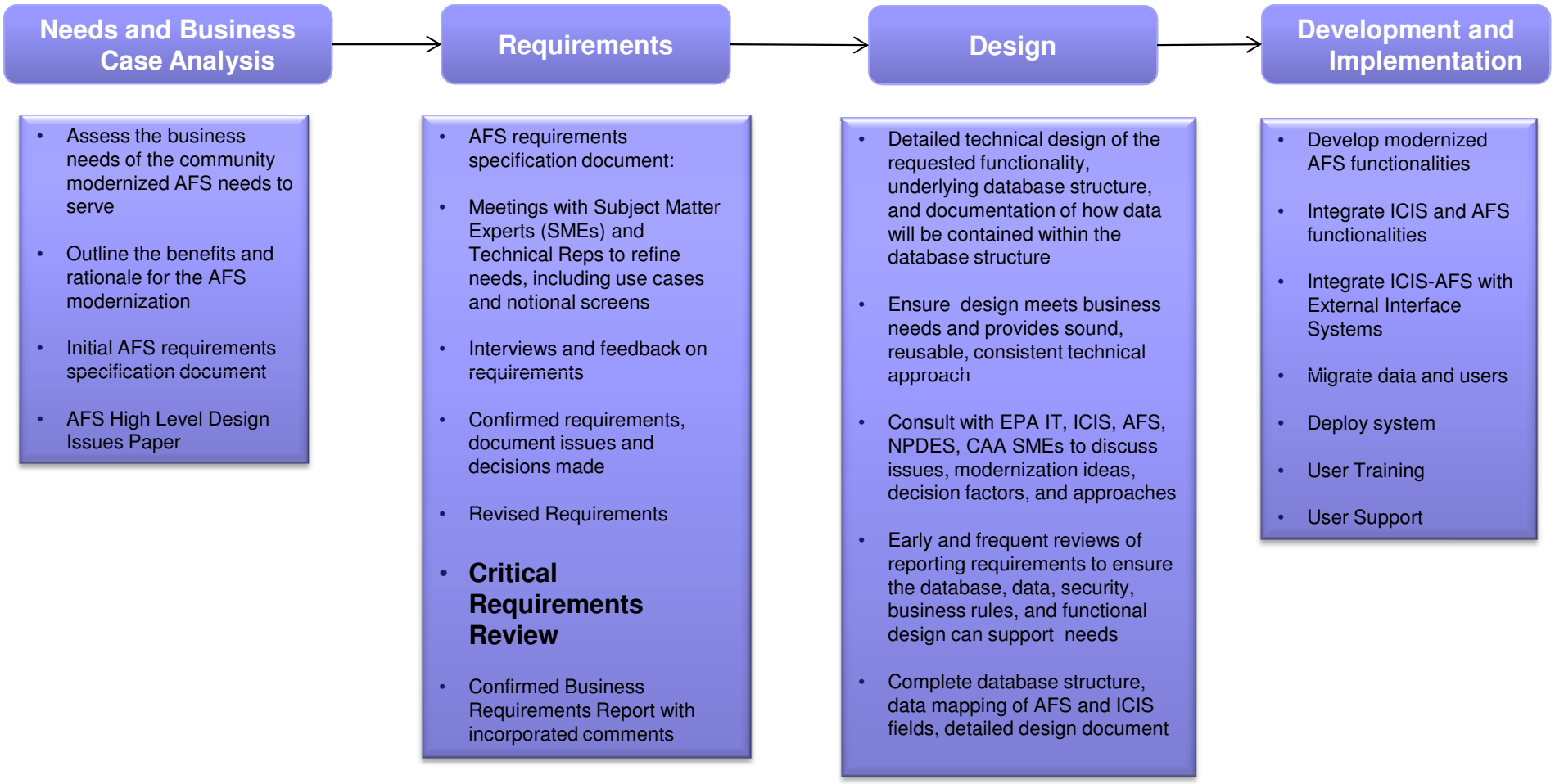
Overview of Requirements Review Approach

- Structure
  - Review data entry methods and common functionality up front, then focus on content in the specific subject areas
  - Within each subject area, discuss:
    - Overview of subject area
    - Summary of proposed changes from Legacy AFS
    - Review of major comments

AFS Modernization Governance Structure

- Tier 1- Senior Executive Council
  - OECA/Office of Compliance (Chair)- Lisa Lund
  - OECA Principal Deputy Assistant Administrator- Lawrence Starfield
  - OAR Deputy Assistant Administrator- Janet McCabe
  - OEI Acting Principal Deputy Assistant Administrator- Renee P. Wynn
  - OCFO Deputy Chief Financial Officer- Maryann Froehlich
- Tier 2- Senior Management Steering Committee
  - OECA -- John Dombrowski (Chair), Ed Messina; Phil Brooks
  - OAR – Chet Wayland (OAQPS/AQAD)
  - OEI- Connie Dwyer (OIC/IESD) & David Updike (OTOP/NCC)
  - OCFO- David Bloom, (Office of Budget)
  - Regions-- Kimberly Burch (R8-Denver); Sara Breneman (R5-Chicago)
  - States- Michael Pjetraj (NC); Eddie Terrill (OK),
  - Local-- Richard Steadman (CA – Monterey Bay)
- Tier 3- Modernization Workgroup
  - OECA -- AFS Modernization Core Project Team
  - EPA AFS Regional Compliance Managers
  - Approximately 45 State and local volunteers

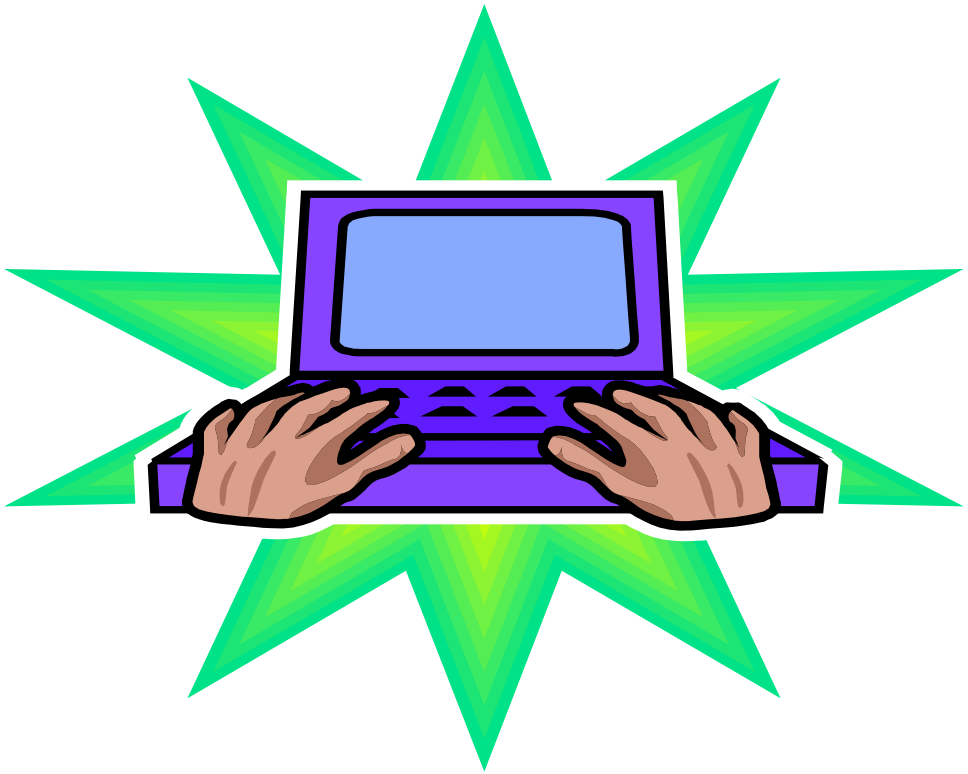
AFS Modernization Process



Requirements Review

- Web Data Entry
- Unique Identifiers & Batch Data Entry
- Facility, including Programs & Pollutants
- Creating Reports

Web Data Entry - This section summarizes key requirements for data entry into modernized AFS.



Overview of Web Data Entry

- ICIS-AFS will have a role-based access model that will grant access to functionality and data based on user profile, geography, and program
- Screens and reference data will be specific to the Air Program - as opposed to being shared with other non-CAA ICIS modules
- The system will default certain data based on users' profiles to minimize data entry
  - For example, Agency will default to the user's agency, based on the user's profile

Summary of Proposed Changes from Legacy AFS

- In Legacy AFS (on the EPA mainframe), users could navigate by entering a number to "jump to" a target screen
  - In ICIS-AFS (on the web), users will be able to navigate through the home page, breadcrumbs, tabs, and links

- In Legacy AFS, actions and activities were entered through the use of codes, requiring the user to either know the required code or look it up in a reference guide outside the system
  - In ICIS-AFS, newer technology will allow users to utilize lists and drop down boxes of available values to select when adding or editing data

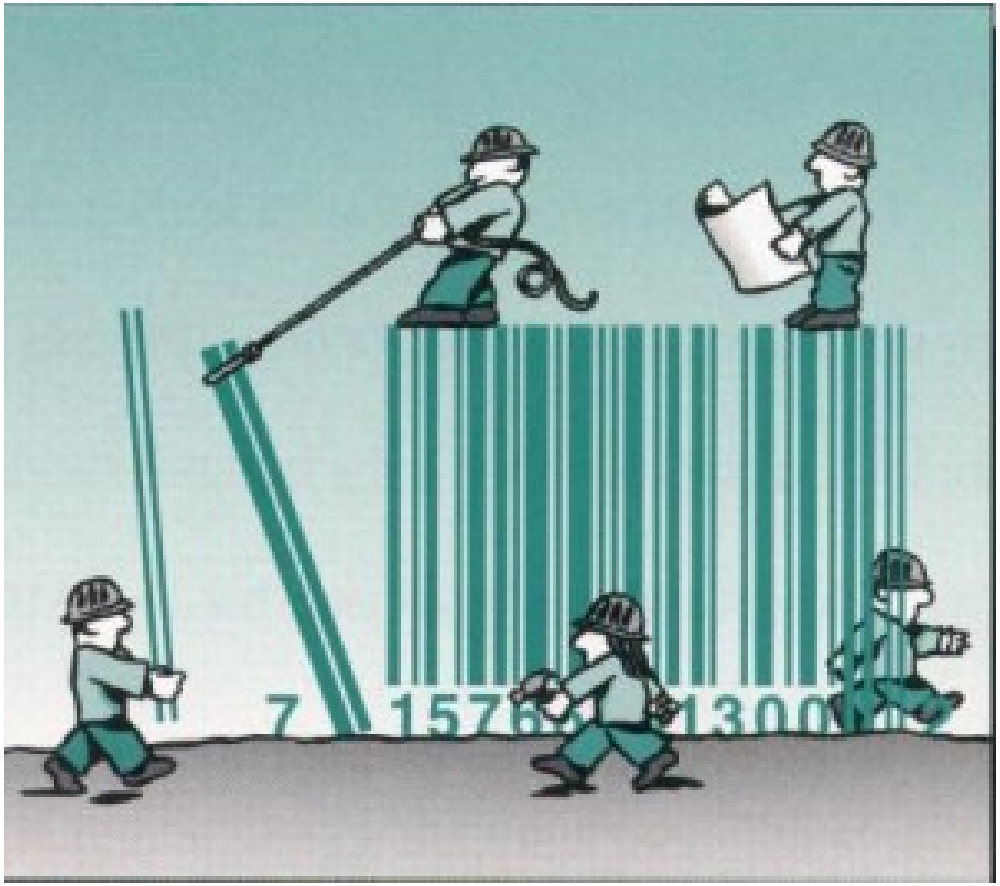
- In Legacy AFS, users were limited to a small number of NAICS, SIC, pollutant codes, etc.
  - In ICIS-AFS, users will be able to list as many values as they desire for such data fields

- In Legacy AFS, users were required to list pollutants by program on facility, activity, and action records
  - In ICIS-AFS, users will associate pollutants at the facility/source level and no longer link pollutants to programs, since the latter is not a current requirement

Review of Major Comments Received

- Font size on screens- too small to read
- States having to cite federal air programs and subparts- having state/local write-in option is critical
- Web approach is time consuming/burdensome for navigation - need to minimize mouse clicks

Unique Identifiers – This section summarizes key requirements related to associating data for the same facility between Delegated Agency systems and modernized AFS



Overview of Unique Identifiers in Legacy AFS

- Legacy AFS requires users to submit unique identifiers for the following types of data elements as key data:
  - Facility Identifier: State-County-PCDS #
  - Permit Identifier: User defined value, 15 alphanumeric characters
  - Action Numbers: 5 character number, with ranges dedicated to different organizations

- In Legacy AFS, the action number generator allowed AFS to generate the next available action number if the user did not provide an action number
  - The action number generator required agencies to submit the number generator trigger (all 9's) and let AFS generate the next available action identifier
  - This resulted in discrepancies between the action number data stored in delegated agency systems and in AFS

- Legacy AFS unique identifiers were embedded with information
  - For example, in Legacy AFS the AFS ID is embedded with information regarding the facility's geographic location (State Code + County Code)

Summary of Proposed Changes from Legacy AFS

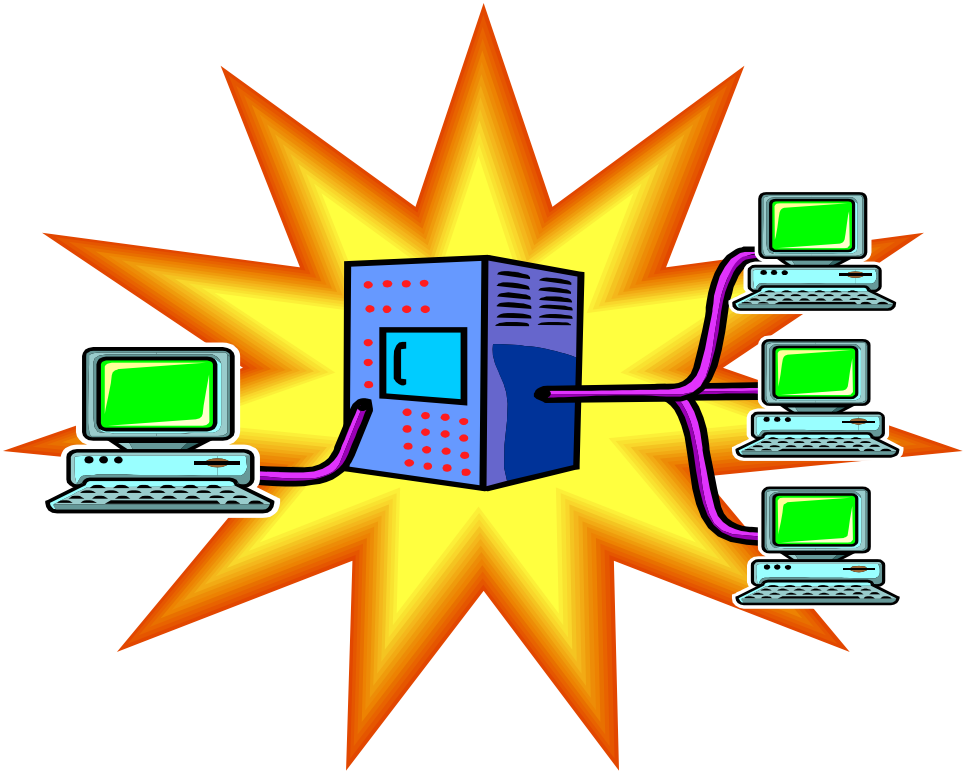
- ICIS-AFS will require agencies to submit unique identifiers following a common format
  - Identifiers must be unique within an agency's geography
  - Unique identifiers will no longer be embedded with information
    - Agencies may continue to use the old nomenclature; however, it will no longer be required
    - For example, in ICIS-AFS, users will be able to change a county name without needing to update identifiers or to have their systems' identifiers stored in AFS, as is the case today

- Unique Identifiers and the Web
  - Web users will have the option of either having the system generate the identifier or submitting the identifier themselves

Review of Major Comments Received

- Migration from legacy- potential mismatch or loss of existing identifiers
- Elimination of the action number generator utility - concern over number generation
- Format of action identifiers- What numbering format will be used?

Batch Data Entry – This section summarizes our understanding of key requirements for batch data entry to modernized AFS.



Overview of Batch Data Entry

- Legacy AFS has a “Compare Pre-processor” that generates add and change transaction codes for transactions; the resulting file is submitted by the user

- Legacy AFS contains an optional Edit step that performs data validation to identify potential errors before committing data to the database; if errors are found, submitters can correct the data in their systems, regenerate the data file, and repeat the submission process

- Legacy AFS has a Universal Interface (UI) middleware application to help users compose batch transactions in flat file formats for AFS; this software contains a duplicate set of business rules to AFS

Summary of Changes from Legacy AFS to ICIS-AFS

- ICIS-AFS will offer a more streamlined process through the use of the Replace transaction type, which requires only one submittal
  - A Replace transaction will add a new record if one does not exist, or it will overwrite all the data in an existing record with the data submitted in the XML when a record already exists
  - The Compare Pre-processor two step process will no longer be needed

- ICIS-AFS will require that submitters designate the type of transaction (e.g., Replace) through the assignment of a transaction code, embedded within the XML file for each parent record
  - In ICIS-AFS, data validation for batch submissions will be directly performed by the application using a single instance of business rules
  - ICIS-AFS will have a test environment for submissions

- ICIS-AFS will incorporate the key features available to agencies through the legacy AFS Universal Interface (UI); a separate UI application will no longer be necessary

- Agencies will use the National Environmental Information Exchange Network to send & receive data to/from ICIS-AFS

Review of Major Comments Received

- Agencies want the “Before and After” reports from the legacy AFS Compare Pre-Processor as a quality control tool- users indicated the utility of seeing errors before submitting batch data

- Files having to be converted to XML- may require agency system changes

Facilities – This section summarizes key requirements associated with air facility data.

Overview of Facility & Summary of Changes from Legacy AFS

- Legacy AFS had a specific compliance status indicating whether facilities were “In Compliance”
  - ICIS-AFS will no longer have a compliance status; separate indicators will track CMS status and whether a facility has an active HPV

- Legacy AFS, does not keep historical records of air program operating status
  - ICIS-AFS will provide a historical record of the operating status of an air program, defined by startup and shutdown dates

- Legacy AFS does not track air program subpart operating status
  - ICIS-AFS will provide a historical record of the operating status of an air program subpart, defined by startup and shutdown dates
    - The parent air program will not be affected by the closure of individual child air program subparts
    - ICIS-AFS will provide the ability to reopen a shutdown air program or air program subpart, should a facility renew a previously shut down program
    - Closure of a parent air program will automatically shut down its subparts

Overview of Facility & Summary of Changes from Legacy AFS, cont.

- Legacy AFS accepted user entry of attainment/non-attainment information
  - ICIS-AFS will import attainment/non-attainment status from the EPA Greenbook via an FRS transfer; user entry will no longer be necessary

- Legacy AFS rolls up the most stringent pollutant classification value to the facility record level
  - ICIS-AFS will continue to display the most stringent pollutant classification at the facility record level
  - There will also be two separate classifications values: EPA and State
  - A history of changes in classification value will be kept at both the facility and pollutant level

Review of Major Comments Received

- Relationship to the Facility Registry System (FRS)- users expressed concern about changes to the facility in FRS and if these changes would be automatically reflected in the modernized system

- Desire to enter and search for company name as well as facility name

- Data entry for pollutants is burdensome when the list is 1,000s of chemicals long

Reports - **This section summarizes key requirements associated with getting data out of modernized AFS.**

Overview of Reports in Legacy AFS

- The reporting function in legacy AFS allows users to retrieve and display data in either standard reports or through ad hoc reporting and querying
- Standard reports are pre-defined and are run to display widely used information
- Ad hoc reporting allows users to define their own report parameters, displaying information that caters to their specific needs or requirements
  - Ad hoc reporting uses a set of predefined objects to develop reports
  - Users can create customized queries and format the retrieved information to facilitate data analysis
- Ad hoc and standard reports can be shared directly between users
  - There is no common library available for widespread sharing or browsing for existing reports

Summary of Proposed Changes from Legacy AFS

- Legacy AFS Ad hoc reporting capability does not provide users the ability to use “or” in report criteria, forcing users to run multiple reports to obtain desired data sets
  - ICIS-AFS will support Boolean logic to allow conditions to be set and linked by “AND” and “OR” operators to create filters on geographic locations, dates, actions, and other data fields to limit and focus data for accurate reporting
  - ICIS-AFS also will support complex “Where” clause logic to assist users in defining complex selection criteria for ad hoc reporting generation

- In Legacy AFS, ad hoc report criteria are shared directly between users, requiring the person sending the report criteria to know the receiving account username; there is no common library available for widespread sharing
  - ICIS-AFS will give users the ability to store queries used for ad hoc reporting in an online library as well as share queries with other ICIS-AFS users
  - ICIS-AFS users also will have the ability to use any standard report as a starting template for an ad hoc report

Summary of Proposed Changes from Legacy AFS (continued)

- Legacy AFS derives reports directly from the transaction database

  - ICIS-AFS ad hoc and standard reports will be executed against a reporting data warehouse
    - An Extract, Transform, and Load (ETL) process will be used to convert data from the transactional database to a reporting database
    - The ETL will run as close to real-time as possible, so reports will accurately reflect the operational data

  - The ICIS-AFS data warehouse will be designed based upon expected standard reports and ad hoc report activity
    - The design will de-normalize data to optimize retrieval performance and calculate appropriate summary statistics that can support periodic, managerial reporting

Summary of Proposed Changes from Legacy AFS (continued)

- Legacy AFS automatically shifts reports that take longer than six Central Processing Units (CPU) to run later in the evening or terminates them, depending on a priority code
  - ICIS-AFS will remove the necessity to move CPU-intensive reports to off peak hours. Report performance will function based upon established Service Level Agreements and online user performance will not be impacted by report execution.

- Legacy AFS is limited to mainframe formatting functionality- flat file reports. This report format must be manually converted into other formats useful for data analysis.
  - ICIS-AFS will allow users to export report results to common data exchange formats such as Excel, CSV, PDF and XML

Summary of Proposed Changes from Legacy AFS (continued)

- Below is a list of reporting requirements that the selected reporting solution will support:
  - User-friendly interface
  - Ability to schedule, share, and send reports
  - Ability to share report queries
  - Drill-down reporting
  - Complex “where” clause logic
  - Ability to export report results to formats such as PDF, Excel, Comma-Separated Value (CSV)
  - Ability to create permanent and temporary variables
  - Ability to view object definitions
  - Ability to view valid values

Review of Major Comments Received

- Concern over usability of ad hoc reporting for those not familiar with SQL

- Users noted that the current ICIS reporting tool inhibits extraction of data if relationships are not created in the universe

- Users inquired if the search functions could also be used to pull reports