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Facility Registry System

Quality Plan

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Approvals

This document has been reviewed and approved for use in the project development process. Minor changes and corrections may be made to this document without re-approval.

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TABLE OF CONTENTS

1.0 INTRODUCTION..... 4

1.1 Purpose of Document 4

1.2 Project Background..... 7

1.3 Project Organization..... 7

1.4 References..... 9

2.0 PROJECT OVERVIEW 11

2.1 System Description 11

2.2 System Operations..... 11

2.3 System Objectives 13

3.0 DATA SOURCES 15

4.0 DATA CAPTURE AND METRICS..... 18

4.1 Envirofacts Change Files 20

4.2 Exchange Network..... 20

4.3 LRT Refresh..... 23

4.4 ICIS 26

5.0 AUTOMATED DATA VALIDATION PROCEDURES 27

5.1 Refresh and Reconciliation 27

5.1.1 Data Standardization and Parsing..... 28

5.1.2 Data Quality Evaluation..... 29

5.1.3 Automated Integration 30

5.1.4 Creation of FRS Record 31

5.2 Data Quality Reports..... 31

5.3 United States Postal Service (USPS) Validation 32

5.4 Locational Data Validation and Quality 32

5.4.1 Best Pick Process 33

5.4.2 Geocoding 33

5.4.3 Feature Services 34

6.0 MANUAL DATA QUALITY IMPROVEMENTS 36

6.1 Data Steward Network 36

6.2 FRS Linkage Application..... 36

6.3 Site Locator Tool (SLT) 38

6.4 Integrated Error Correction (IEC)..... 39

6.5 Data Analyses 40

7.0 DOCUMENTATION 42

APPENDICES 45

APPENDIX A: FRS SOURCE SYSTEMS 45

APPENDIX B: SERVER CONFIGURATIONS 90

APPENDIX C: ATTRIBUTE DEFINITIONS BY ENTITY..... 92

APPENDIX D: FRS TABLES 106

APPENDIX E: FACILITY RESEARCH WEB SITES..... 109

APPENDIX F: PEER REVIEW FORM..... 111

APPENDIX G: ACRONYMS AND DEFINITIONS 112

1.0 INTRODUCTION

The Facility Registry System (FRS) is a centrally managed database that identifies facilities, sites or places subject to environmental regulations or of environmental interest. To support data integration, the FRS provides a complete and accurate record of key facility identification information, through rigorous verification and data management procedures, incorporating information from program national systems, state master facility records, data collected from the U.S. Environmental Protection Agency (EPA) Central Data Exchange (CDX) registrations, tribal partners, and other federal agencies. In addition, FRS offers Web services, enabling data exchanges with state partners on the Environmental Exchange Network and a number of feature services, which display FRS attribute data on mapped locations.

FRS is integrated with the Locational Data Improvement Project (LDIP), the Error Correction Process, and Envirofacts, a data warehouse of EPA's major database systems. Envirofacts extracts data from program office systems and relies on FRS to link those data together, thus providing users with Internet access to integrated data across media and enforcement programs. In addition to Envirofacts, FRS provides essential support for other public access and enforcement applications that rely on integrated views of facilities.

The goal of FRS is to improve the quality of facility information and provide the Agency with an authoritative source of accurate core information on regulated facilities. The purpose of this document is to describe the Quality Assurance (QA) and Quality Control (QC) procedures that are performed to achieve this goal.

Section 1 describes the purpose of this document and how it satisfies the EPA requirements of a Quality Assurance Project Plan (QAPP). A brief history of FRS, the project organization, references and Web sites used to prepare this document are presented in Section 1. Section 2 provides an overview of FRS, including a description of the system, system operations, and system objectives. Section 3 documents FRS data sources. The Standard Operating Procedures (SOP) and metrics used to retrieve and process the different types of source data are described in Section 4. Section 5 explains the automated data validation and data quality determination procedures, while Section 6 describes the manual procedures used to improve data quality. Section 7 summarizes the types of documentation in place to support the project.

1.1 Purpose of Document

This paper serves as the QAPP for the FRS. The QAPP is a written document that describes the QA procedures, QC specifications, and other technical activities that must be implemented to ensure that the results of the project or task to be performed will meet project specifications. QA refers to the system of management activities, whereas QC refers to the system of technical activities that measure performance against defined standards.

The Uniform Federal Policy (UFP) for QAPP Manual, prepared by the Intergovernmental Data Quality Task Force (IDQTF), was developed to implement the project-specific requirements of the American National Standards Institute/American Society for Quality (ANSI/ASQ) E4 - 2004, Quality Systems for Environmental Data and Technology Programs - Requirements with Guidance for Use. The Manual was developed as a joint initiative between EPA, the Department of Defense (DoD), and the Department of Energy (DoE), for the purpose of providing a single national consensus document for environmental data collection projects. The UFP QAPP is consistent with EPA's existing QAPP guidance (QA/G-5) and QAPP requirements (QA/R-5).

The UFP QAPP Manual pertains primarily to environmental projects that "collect" and analyze field data. Therefore, many of the requirements are not applicable to FRS. An auxiliary document, "*Guidance on Quality Assurance Project Plans for Secondary Research Data*" (<http://www.epa.gov/quality/gapps.html>), outlines a subset of requirements for secondary research projects. This document is available from the EPA "Quality Management Tools – QA Project Plans" Web site. It defined secondary data research projects as follows: "A secondary data research project involves the gathering and/or use of existing environmental data for purposes other than those for which they were originally collected. These

Facility Registry System (FRS) Quality Plan

secondary data may be obtained from many sources, including literature, industry surveys, compilations from computerized databases and information systems, and computerized or mathematical models of environmental processes.” Since this definition more closely aligns with FRS, the guidelines in that paper were used to prepare this FRS Quality Plan. Table 1 shows the required QAPP requirements for Secondary Research Data, cross-referenced to the location (section number and heading) of the required information in this document, as well as other FRS documents applicable to that requirement, if available.

Table 1. Required QAPP Information and Corresponding Sections in FRS Quality Plan

Required QAPP Information	Corresponding Section(s)	Related Documents
Project Objectives, Organization, and Responsibilities		
The purpose of the project shall be clearly stated in the QAPP.	1.0, Introduction 2.3, System Objections	
The project objectives shall be clearly stated in the QAPP.	2.3, System Objectives	
The secondary data needed to satisfy the project objectives shall be identified in the QAPP. Requirements relating to the type of data, the age of data, geographical representation, temporal representation, and technological representation, as applicable, shall be specified.	2.3, System Objectives 3.0, Data Sources Appendix C	
The approach for evaluating project objectives (that is., data analysis), including formulas, units, definitions of terms, and statistical analysis, if applicable, shall be included in the QAPP.	5.0, Automated Data Validation Procedures 6.0, Manual Data Quality Improvements	<i>Data Quality Statistics Report SOP.</i> <i>United States Postal Service (USPS) SOP.</i>
The responsibilities of all project participants shall be identified in the QAPP, meaning that key personnel and their organizations shall be identified, along with the designation of responsibilities for planning, coordination, data gathering, data analysis, report preparation, and quality assurance, as applicable.	1.3, Project Organization Appendix A	
Sources of Secondary Data		
The required sources of the secondary data must be specified in the QAPP. If a hierarchy of sources exists for the gathering of secondary data, that hierarchy must be specified in the QAPP.	3.0, Data Sources Appendix A	
The rationale for selecting the source(s) identified shall be discussed in the QAPP.	3.0, Data Sources Appendix A	
The QAPP shall state that the sources of secondary data gathered will be identified in any project deliverable.	3.0, Data Sources	

Facility Registry System (FRS) Quality Plan

Required QAPP Information	Corresponding Section(s)	Related Documents
Quality of Secondary Data		
<p>Quality requirements of the secondary data must be specified in the QAPP. These requirements must be appropriate for their intended use. Accuracy, precision, representativeness, completeness, and comparability need to be addressed, if applicable.</p>	<p>4.0, Data Capture and Metrics 5.1, Refresh and Reconciliation 5.3, USPS Validation 5.4, Locational Data Validation and Quality 6.0, Manual Data Quality Improvements</p>	<p><i>FRS Refresh Process SOP.</i> <i>Program Crosswalks</i> (http://epa.gov/enviro/html/frs_demo/new_crosswalks.html) <i>Facility Identification Project Team, Facility Identification Flow Configuration Document V1.0, June 18, 2004.</i> <i>Locational Reference Table (LRT) System Refresh Process SOP.</i> <i>Facility Registry System - Integrated Compliance Information System (FRS-ICIS) SOP.</i></p>
<p>Procedures for determining the quality of the secondary data shall be described in the QAPP.</p>	<p>5.1, Refresh and Reconciliation 5.3, USPS Validation 5.4, Locational Data Validation and Quality 6.0, Manual Data Quality Improvements</p>	<p><i>USPS SOP.</i></p>
<p>If no quality requirements exist or if the quality of the secondary data cannot be determined, the QAPP shall require that a disclaimer be added to any project deliverable to indicate that the quality of the secondary data is unknown. The wording for the disclaimer shall be included in the QAPP.</p>	<p>N/A</p>	<p>N/A</p>
Data Reporting, Data Reduction, and Data Validation		
<p>The data reduction procedures specific to the project shall be described, including calculations and equations.</p>	<p>4.0, Data Capture and Metrics</p>	<p><i>FRS Refresh Process SOP.</i> <i>Program Crosswalks</i> (http://epa.gov/enviro/html/frs_demo/new_crosswalks.html) <i>Facility Identification Project Team, Facility Identification Flow Configuration Document V1.0, June 18, 2004.</i> <i>LRT System Refresh Process SOP.</i> <i>FRS-ICIS SOP.</i></p>
<p>The Data validation procedures used to ensure the reporting of accurate project data shall be described.</p>	<p>5.0, Automated Data Validation Procedures 6.0, Manual Data Quality Improvements</p>	<p><i>Data Quality Statistics Report SOP.</i> <i>USPS SOP.</i> <i>SOP for Improving FRS Information.</i></p>
<p>The expected product document that will be prepared shall be specified (for example, journal article, final report, etc.).</p>	<p>7.0, Documentation 5.2, Data Quality Reports</p>	<p><i>FRS Documentation Page</i> (http://www.epa.gov/enviro/html/frs_demo/new_docs.html)</p>

1.2 Project Background

FRS was developed to satisfy the need for effective risk-based decision making, multi-media analysis, improved data quality, and convenient access to the wide range of environmental information being collected and stored about facilities.

In 1990, EPA issued an Agency Order to establish a data standard for unique facility identification codes on facilities regulated by the Agency. The purpose of the Order was to establish a data management standard that would improve the compatibility of all Agency facility data by providing a fundamental piece of “linkable” information for all facility-oriented data collections and records. The Office of Information Resources Management created the Facility INDEX System (FINDS), a central database in which each regulated facility was assigned a unique identifier, and no facility was assigned more than one identifier.

In 1998, FINDS was replaced with a re-engineered Web accessible facility data management application, the Facility Linkage Application (FLA). The history of FINDS and other data-based initiatives had shown that an accurate, national database of facilities could not be established and maintained by analysts at EPA Headquarters (HQ) alone. Therefore, the Agency established a network of regional data stewards, who were more familiar with the facilities that were being regulated, to augment the FLA with manual intervention.

FLA stored place-based data from the program and state source systems and the “best record” was based on a priority ranking of these records. Because the program data could only be changed by the individual program “owner” of the data, the FLA application could not be used to change or improve the data. Changes by the program “owner” were often time-consuming or impossible due to regulations (for example, changes could only be made through official permit applications). Therefore, the need arose for a physical record that could be easily improved by a network of data stewards or through the EPA Error Correction process.

In 1999, EPA initiated the FRS project with the program records of the Toxics Release Inventory (TRI) of 1997 and the Risk Management Plan (RMP) submissions of 1999. In 2000, FRS was built to be in full compliance with the Agency’s *Facility Identification Data Standard* and the *Facility Identification Template for States, Version 2*. This required the data model to expand to include industrial classification codes, affiliated contact and organization information, and locational data. Along with interaction and support with the program system national managers, the FRS database was incrementally built to include all of the major EPA programs. The elicitation of requirements or business rules for FRS was coordinated and managed by the Office of Environmental Information (OEI) Project Team and included the efforts of a wide range of partners including representatives from program offices, Regions, and States. Today, FRS includes data from EPA programs and Regions, the majority of States, tribal partners, and other federal agencies.

While FRS is a registry of facility identification information, the LRT is a registry of geographic coordinate information. This information has been collected and documented as a result of EPA’s LDIP, which was launched in 1996 to improve the Agency’s locational data for facilities and other points of environmental concern. The LRT is a series of tables that store facility-level locational information collected from the program system databases in Envirofacts, EPA regional data stewards, states, and through geocoding efforts. In addition to coordinate data, the LRT includes Method, Accuracy, and Description (MAD) codes, which describe aspects of the collection of that particular location. Agency Geographic Information System (GIS) applications utilize location information from the LRT. Many improvements have been made to locational data through the integrated efforts of the FRS, the LRT, and new mapping technologies. These registries are integrated with each other and with Envirofacts, EPA’s data warehouse of environmental information.

1.3 Project Organization

EPA’s Office of Information Collection (OIC) of the OEI is the organization responsible for the implementation and management of the FRS. Important partners include EPA media programs, EPA regional data stewards, data system coordinators, GIS Teams, state data managers, public interest groups, and regulated facilities. FRS is operated under the ITS-ESE Program, managed by Lockheed Martin (LM).

Facility Registry System (FRS) Quality Plan

A great deal of communication among partners is necessary, as FRS pulls data from over 70 sources, requiring coordination across EPA, State, and Tribal personnel. Contact information, including name, organization, e-mail address, and phone number is listed by source in Appendix A, Table A-1.

FRS is supported by a network of data stewards at the EPA, regional, state, and program level. The data stewards act as “champions” for high-quality facility data, ensuring accurate linkages between facility records. Figure 1 lists the lead data steward for each Region.

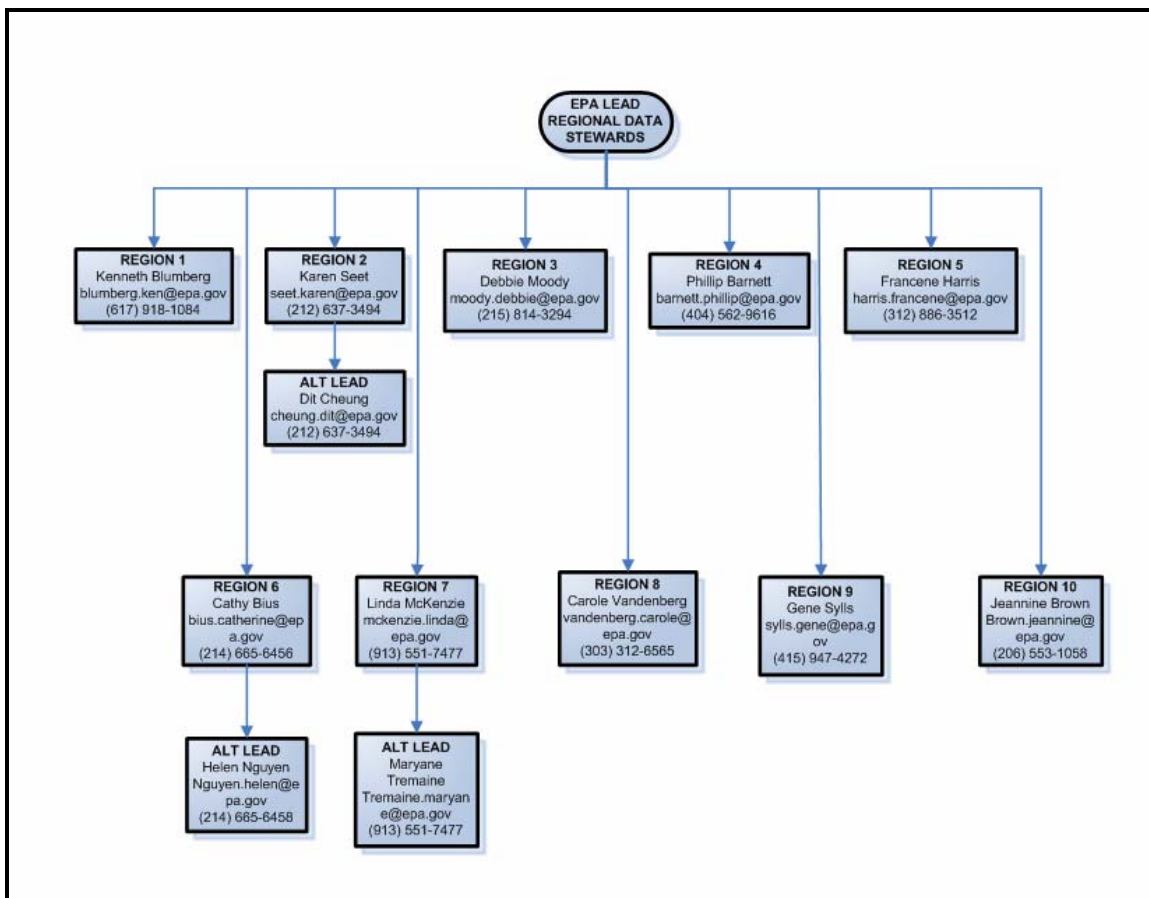


Figure 1.—Lead Regional Data Stewards.

Table 2 lists the roles and responsibilities for different types of data stewards. Also listed in Table 2 are the roles and responsibilities for essential members of the FRS Operations and Development Team. Under the guidance of EPA, the LM contractor team maintains the FRS database and Web application and performs new development, as directed by EPA. Only essential personnel are shown; many other support roles are needed (for example, management, Technical Publications, or QA). Communication among all team members is a prerequisite for efficient operations.

Table 2. FRS Roles and Responsibilities

Role	Organization	Responsibility
EPA Data Stewardship Program Manager	EPA HQ	The central leader, overseeing and coordinating data steward activities and ensuring overall data quality for facility identification across all EPA Regions, Program Offices, and participating States.
Lead Regional Data Steward	EPA Region	Coordinates all data stewardship responsibilities and ensures overall facility data quality within a Region.

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Facility Registry System (FRS) Quality Plan

Role	Organization	Responsibility
Regional Data Steward	EPA Region	Assigned by the EPA to ensure data quality for facility identification throughout their Regions and work with State partners in accordance with procedures agreed upon by the Regional Coordinator and the primary State Data Steward.
EPA Program Data Stewards	EPA Program Office	Assigned by EPA national program managers to maintain quality data within their own program systems by responding to data quality issues identified by data stewards. These program data stewards may be located at Headquarters or the Region, may be programmatic or systems staff, depending on the nature of the program.
State Data Steward	State Environmental Department	States manage the integration of State information collections for their own business reasons, and regulate many more facilities than those covered under Federal regulation. Many have developed their own management practices, procedures, and support systems for facility linkages. States who volunteer to participate in the Facility Data Stewardship Partnership will designate a primary Data Steward to work with EPA.
Regional GIS Team	EPA Region	Ensure locational data quality throughout their Region and provide guidance on the GIS projects.
Systems Engineering Center (SEC) Analyst	LM	Monitor and verify the FRS facility information for accuracy and validity using the FRS Linkage Application and maintain the Error Tracking System (ETS).
Envirofacts/FRS Database Administrator	LM	Maintain database and data file transfers. Send notifications when FRS and LRT change files are ready for integration.
GIS Team Developer	LM	Build spatial layers, verify geographic points, and develop GIS applications.
LRT Team Developer	LM	Run the LRT refresh process and collect QA/QC metrics.
FRS Team Developer	LM	Run the FRS refresh process for national and state data, collect QA/QC metrics, and maintain the FRS Linkage application.

1.4 References

The following documents or Web sites were referenced to prepare this document and/or are good sources of supplementary information:

Contact Information Data Standard, Standard No.: **EX000019.2**, January 6, 2006.

Data Quality Statistics Report Standard Operation Procedures.

Environmental Data Registry Web Site, Uniform Resource Locator (URL): <http://www.epa.gov/edr/>.

Environmental Data Standards Council, URL: <http://www.envdatastandards.net/>

Envirofacts Data Warehouse, URL: <http://www.epa.gov/enviro/>.

Environmental Information Exchange Network Website, URL: <http://www.exchangenetwork.net/>.

Environmental Information Exchange Network - Facility Exchange Website, URL:

<http://www.exchangenetwork.net/exchanges/cross/frs.htm>

Facility Identification Project Team, Facility Identification Flow Configuration Document V1.0, June 18, 2004.

Facility Identification Template for States (FITS), Version 2, February, 2000.

Facility Registry System, URL: [https://iasint.rtpnc.epa.gov/frs/frshome\\$.startup](https://iasint.rtpnc.epa.gov/frs/frshome$.startup)

Facility Registry System Operations and Quality Report, Document No.: **15-FRS-RPT-0137**, July 24, 2007.

Facility Site Identification Data Standard, Standard No.: **EX000020.2**, January 6, 2006.

Federal Geographic Data Committee Data Content Standard for Location and Identification of Facilities, Final Draft, December 1998.

FRS Refresh Process Standard Operation Procedures.

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Facility Registry System (FRS) Quality Plan

FRS ICIS Standard Operation Procedures.

Latitude/Longitude Data Standard, Standard No.: EX000017.2, January 6, 2006.

LRT System Data Refresh Standard Operating Procedures.

Program Crosswalks, URL: http://www.epa.gov/enviro/html/frs_demo/new_crosswalks.html

Representation of Date and Time Data Standard, Standard No.: EX000013.1, January 6, 2006.

Software Requirements Document for the Facility Registry System (FRS), Version 2.2, SDC-0002-013-HB-4022, June 19, 2002.

Standard Industrial Classification (SIC)/North American Industry Classification System (NAICS) Data Standard, Standard No.: EX000022.2, January 6, 2006.

Standard Operating Procedures for Improving FRS Information.

Systems of Registries, URL: <http://www.epa.gov/sor/>.

Tribal Identifier Data Standard, Standard No.: EX000023.2, January 6, 2006.

2.0 PROJECT OVERVIEW

The FRS database has over 2.2 million unique facility records linking to over 3 million program interests (as of December 2007). Of the 2.2 million FRS records, 1.7 million have latitude and longitude coordinates. FRS is based on the creation of a single, complete, authoritative record for each facility, including accurate “linkages” to the individual media program systems. The authoritative facility record is built from different data sources based on the most accurate and current data available and uses a nationally consistent set of well-defined data elements. It can be manually updated by authorized data stewards, who take advantage of the significant new information resources available via the Internet. FRS combines good data management processes, including automated matching protocols, manual intervention, and close partnerships with Regions and States largely responsible for data collection. It was the first project to exchange data with states through CDX for incoming and outgoing data and now includes data from over 35 states.

2.1 System Description

FRS processes and integrates facility data from several EPA, state, and most recently tribal environmental systems. The set of processes used to integrate data include data standardization and parsing, data quality evaluation, and automated name and address matching. For each new program, state, or tribal facility record, FRS either creates a new FRS record or links it to an existing FRS record. Each facility is identified with a unique identifier. Existing program-specific identification numbers are maintained to provide the linkage to media-specific information systems. Each FRS record is assigned a data quality code based on the quality and completeness of the data and whether or not the record has been manually reviewed by a data steward. If one or more FRS records are found to be similar, but not similar enough for an automated match, the FRS records are flagged as “possible duplicates.” If an update to the name and address of a program record is received from the program system, an automated process goes through a series of steps to decide whether to update the parent FRS information with the new data or to flag the record for manual review.

The FRS Linkage application, which requires a secure user ID and password, provides tools that give data stewards the capabilities to resolve possible duplicate facility records, review facility records that have been flagged for manual review, change linkages, improve the data quality of the FRS records, and create new FRS records. Extensive search and reporting capabilities are also provided, as well as access to the Site Locator Tool (SLT), which allows a data steward to verify or change the geographic location of a facility on a map or aerial photograph.

A network of data stewards at EPA and the states review the data records that have been flagged by the automated processes. In addition to their familiarity with places and practices in their home state and/or region, data stewards use various Internet sources to verify and/or improve the FRS record (e.g., Web White/Yellow Pages, U.S. Post Office Web site, Map Quest Web site, Google, Yahoo, MSN, etc.).

Many EPA multimedia applications interact with or depend on FRS to operate properly. In addition to Envirofacts, FRS serves as the facility linkage utility for the mapping applications, which include EnviroMapper (EM), Window to My Environment (WME), Cleanups in My Community (CIMC), Tribal Information Management System (TIMS) and the enforcement and compliance applications such as Integrated Data for Enforcement Analysis (IDEA), Online Targeting Information System (OTIS), Enforcement and Compliance History Online (ECHO), ICIS. These data access tools extract data from FRS on a regular basis (primarily monthly) and FRS provides the integration needed at the facility level to successfully organize the multimedia data presented by these applications.

2.2 System Operations

FRS operates in the Envirofacts production environment at the EPA National Computer Center (NCC) at Research Triangle Park (RTP), North Carolina. Envirofacts extracts data from program office systems and relies on FRS to link those data together, thus providing users with integrated data across media. Envirofacts is Web-based and includes both the intranet version for EPA employees with appropriate access and the Internet version for the general public.

Facility Registry System (FRS) Quality Plan

Updates to EPA program databases and state facility systems are captured on a regular basis and applied to the FRS database through batch processing. Extracts from the majority of EPA program systems occur on a monthly basis. States use Exchange Network Web services to Submit and Query facility data through the EPA CDX.

The FRS Web-based user interface is accessible through a Secure Socket Layer (SSL) to a restricted set of registered users (data stewards). SSL is a protocol for transmitting data securely over the Internet, thus allowing users outside of the EPA network (state partners) to access the application. The users are given certain access rights based on a user category and geographic area. Updates via the user interface are applied immediately to the database. FRS data is also available for “read access” only to the general public through Envirofacts. The FRS tables are replicated on a nightly basis to two different versions of Envirofacts: the Internet version, available to the public; and the intranet version, available to EPA users only. The Envirofacts production and development server configurations are illustrated in Figures 2 and 3 and listed in Appendix B.

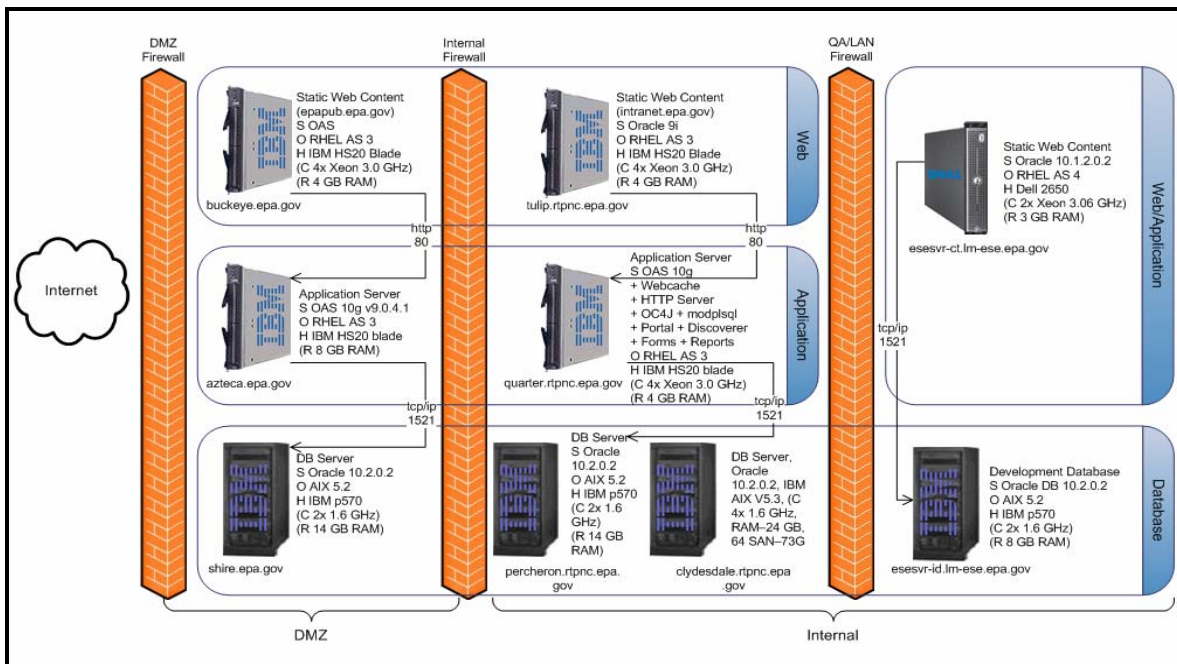


Figure 2.—Production and QA Configurations.

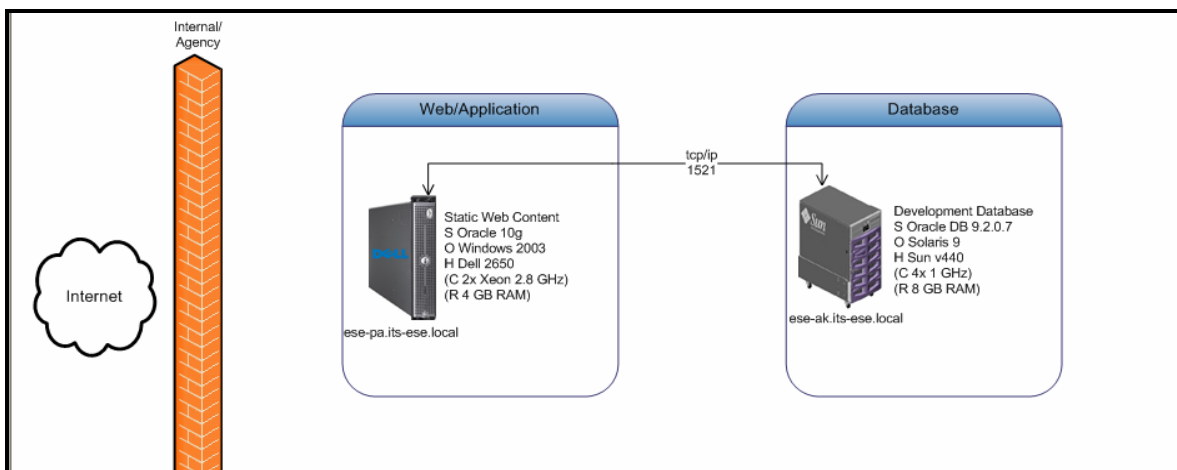


Figure 3.—Development Configuration.

2.3 System Objectives

FRS identifies facilities, sites, or places subject to environmental regulation or of environmental interest. It links facility data across programs, satisfying EPA's business needs to identify:

- All permits and regulations for a facility
- Location of a facility
- All facilities that pertain to a particular corporation
- Regulated facilities within a particular sector

FRS provides the Agency with a centrally managed source of comprehensive and authoritative information on facilities, which achieves the following objectives for the Agency:

- Improves the data quality of facility information by eliminating duplicate records, correcting errors, and filling data gaps.
- Reconciles and integrates facility information using proven verification and management procedures.
- Allows for update or confirmation of the geographic coordinates of a facility on a map or aerial photograph (via the Site Locator Tool).
- Enhances internal and external access to facility identification information and the Agency's environmental information.
- Reduces burden on the regulated community by not having to report identical or similar information on multiple environmental forms.
- Provides regulated entities with an easy way to view EPA information and to correct errors.
- Allows states and EPA to share integrated facility data.
- Provides tools for cross-media environmental analysis.

FRS plays a vital role in the Agency's Enterprise Architecture (EA). It serves as a critical Data Registry providing the foundation for integration across the Agency. It provides essential support for public access and enforcement applications that rely on integrated views of facilities, including

- Envirofacts
- EnviroMapper (EM)
- Window to My Environment (WME)
- Cleanups in My Community (CIMC)
- Tribal Information Management System (TIMS)
- Integrated Data for Enforcement Analysis (IDEA)
- Online Targeting Information System (OTIS)
- Enforcement and Compliance History Online (ECHO)
- Integrated Compliance Information System (ICIS)

FRS works concurrently with the Agency's data standards developments and technology initiatives, conforming to Federal and EPA standards for data, data format, and state network exchange. Table 3 shows the Environmental Data Standards Council (EDSC) Data Standards applicable to FRS. FRS uses a nationally consistent set of well-defined data elements, which includes all data elements specified in the Facility Site Identification Data Standard, plus more, responding to its multitude of customer needs.

Table 3. EPA Data Standards Applicable to FRS

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Facility Registry System (FRS) Quality Plan

Data Standard	Description
Contact Information Data Standard (Version 2) EX000019.2, January 6, 2006	Data groupings that describe a point of contact (POC) including address and communication information. http://www.epa.gov/edr/ContactInfo_01062006.pdf
Facility Site Identification Data Standard (Version 2) EX000020.2, January 6, 2006	Following a similar model as FRS, consists of core data elements that identify the location, affiliated organizations, individual business activities, and environmental interests of a facility site. http://www.epa.gov/edr/FacilitySite_01062006.pdf
Latitude/Longitude Data Standard (Version 2) EX000017.2, January 6, 2006	Data elements used for recording horizontal and vertical coordinates and associated metadata that define a point on the earth. http://www.epa.gov/edr/LatLongStandard_08112006.pdf
Representation of Date and Time Data Standard (Version 1) EX000013.1, January 6, 2006	Representation of dates in the Gregorian calendar and representation of periods of time; adds Coordinated Universal Time (UTC) to existing Date data standard and is adopted from an international standard. http://www.epa.gov/edr/RepDateTime_01062006.pdf
SIC/NAICS Data Standard (Version 2) EX000022.2, January 6, 2006	Data elements for classifying economic activities of business establishments; supports conversion of the 1987 Standard Industrial Classifications (SIC) to the North American Industry Classification System (NAICS) adopted by Canada, Mexico, and the U.S. in 1997. http://www.epa.gov/edr/SICNAICS_01062006.pdf
Tribal Identifier Data Standard Data Standard (Version 2) EX000023.2, January 6, 2006	Data elements for the use of common names and codes to identify federally recognized Tribal entities. http://www.epa.gov/edr/TribalIden_01062006.pdf

FRS was the first project to exchange data with states through the CDX for incoming and outgoing data. Its integrated searches are accessible through the System of Registries and through Envirofacts, providing information about environmental activities, as well as enforcement and compliance actions that may affect air, water, and land anywhere in the United States. In addition to EPA and State environmental managers, FRS has proven invaluable to other Agencies in need of information about facilities, including the Department of Homeland Security (DHS) and other first responder agencies reacting to disasters such as 9/11 and the Katrina and Rita hurricanes.

3.0 DATA SOURCES

FRS integrates data from many different federal, state, and tribal data sources and serves as the facility linkage utility for several federal data access tools. These data sources represent a wide range of environmental interests across environmental media. Appendix A, Table A-1 lists all FRS data sources including the program system acronym, program system name, public indicator (Yes/No), organization type (“F” for federal, state acronym for state systems, and “T” for tribal), contact information, transfer method, and refresh frequency. Federal sources are listed first. Appendix A, Table A-2 provides a description of each source system, as well as the environmental interests (that is, regulatory programs) and the type(s) of facility or site tracked by that system.

As shown in Appendix A, Table A-1, RMP is the only data source restricted from public access. In addition, locational (that is, latitude/longitude) data is excluded for the Safe Drinking Water Information System (SDWIS). Transfer Methods will be described in more detail in Section 4. A listing of the most recent update date for each source system can be accessed by clicking “Facility Information Updates” from the FRS Linkage Application Main Menu ([https://iasint.rtpnc.epa.gov/frs/frsmenu\\$.startup](https://iasint.rtpnc.epa.gov/frs/frsmenu$.startup)). The most recent update date and the refresh frequency are important measures in determining the currency and relevancy of the data.

The FRS database requirements are captured in a logical data model, as illustrated by the Entity Relationship Diagram (ERD) shown in Figure 4. The ERD shows the entities (boxes) and the relationships (lines) between entities. On the diagram, an identifying relationship is shown as a solid line, while a non-identifying relationship is represented by a dashed line. An identifying relationship is a relationship between two entities in which an instance of the child entity is identified through the values of the attributes of the parent entity. In other words, an instance of the child entity is dependent on the parent entity for identity and cannot exist without an instance of the parent. A *non-identifying relationship* is a relationship between two entities in which an instance of the child entity is not identified through its association with a parent entity. The “P” at the end of the relationship line indicates a cardinality of one or more instances, whereas the closed circle by itself indicates zero, one, or more instances. Attribute definitions, by entity, are provided in Appendix C.

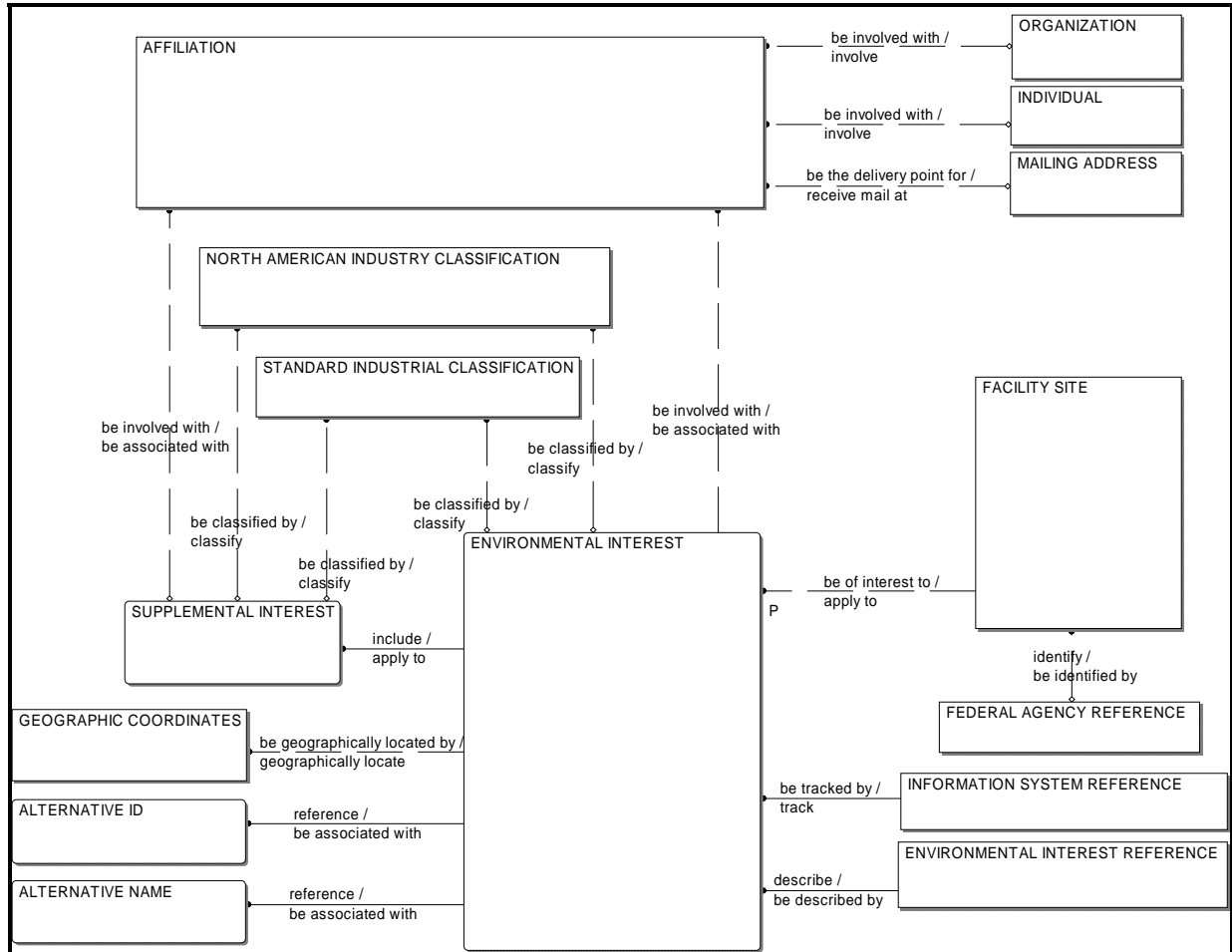


Figure 4.—FRS Entity Relationship Diagram.

Note that these entities represent logical objects. The physical representations of these objects comprise the “core” FRS data tables. FRS is actually comprised of approximately 80 Oracle tables resulting from the complexity of processing and tracking that takes place within the FRS application. The majority of the core tables have companion history tables with parallel structures to keep logs of changes that occur over time. In addition, a series of temporary tables are used to load and process data and several lookup or reference tables are used to evaluate data quality and derive certain data elements. See Appendix D for a list of FRS tables.

The Facility Site and Environmental Interest entities form the core of the FRS logical model. The Facility Site entity contains place-based identification information for a facility or site, including the facility registry identifier, geographic address, and geopolitical descriptors. It contains one authoritative FRS record for each facility or site. The name and address information from program and state facility records are maintained in a separate table and are accessible only by the FRS automated integration processes and the FRS Linkage application used by data stewards involved in linking programs and improving FRS data.

The Environmental Interest contains the environmental permits, regulatory programs, and system identifiers that apply to a facility site. The Environmental Interest Reference entity stores the permitted values for the *Environmental Interest Type*, or the environmental permits or regulatory programs that apply to the facility site (for example, Air Major, Air Minor, National Pollutant Discharge Elimination System (NPDES) Major, Hazardous Waste Large Quantity Generator (LQG), TRI Reporter). The Information System Reference entity maintains permitted values for *Information System Abbreviated Name*, which represents the name of an information management system for an environmental program. The Environmental Interest entity includes data for the following three different types of records:

Facility Registry System (FRS) Quality Plan

- Federal programs (for example, Resource Conservation and Recovery (Act) Information System (RCRIS) Handler_ID, PCS NPDES)
- State Master Facilities (for example, PA-EFACTS State Facility Identifier)
- FRS record (for example, FRS Registry ID)

Including an occurrence for each FRS record in the Environmental Interest entity allows the child data (affiliations, geographic coordinates, industrial classification, alternative names, alternative identifiers) to be related at the facility site level (using the Facility Registry Identifier), as well as at the federal environmental interest level (using the program information system identifier). The state master records are included in the Environmental Interest entity because a 1:1 relationship does not always hold up between state master facilities and FRS records. The states may define facilities differently from FRS, resulting in one or more state master records that link to one FRS record. The Environmental Interest entity has optional one-to-many relationships with other entities, including:

- Supplemental Interest(s)
- SIC
- NAICS
- Affiliation(s)
- Alternative Name(s)
- Alternative Identification(s)
- Geographic Coordinate(s)

The Supplemental Interest entity includes programs or activities related to Environmental Interests as “children.” The relationships maintained between Supplemental Interest (child) and Environmental Interest (parent) include state program interests related to parent state master records, enforcement activities related to facilities or to program interests at facilities, and general permits related to facilities or program interests at facilities. If an enforcement activity or general permit is related at the facility level, it will be related to the FRS occurrence in the Environmental Interest table. Enforcement activities and general permits may be related to more than one facility or more than one program interest at a facility. This many-to-many relationship is implemented by repeating the enforcement activity or general permit occurrence in the Supplemental Interest entity for each related FRS facility or program interest. Just like its parent Environmental Interest, the Supplemental Interest entity also includes optional one-to-many relationships to the SIC, NAICS, and Affiliation entities to allow these data to be captured at the state program, enforcement activity, and general permit level.

4.0 DATA CAPTURE AND METRICS

FRS captures and processes many different types of data, which must be reformatted and restructured so that it may be compared and integrated. For the program systems that are stored in the Envirofacts Warehouse, FRS uses the existing Envirofacts “change file” processing, which captures changes to the program system data on a scheduled basis (normally monthly). Envirofacts change file processing determines which facility data has changed since the last update and determines whether the changes represent updates, inserts or deletes to the database. Facility data captured from EPA data sources that are not in Envirofacts are received in various formats (for example, ASCII flat files, Microsoft (MS) Access data files, or MS Excel spreadsheets) and updated on an irregular basis. These facility data files are processed manually, using custom-made scripts. Facility data from the ICIS are processed through the use of custom-built staging tables. Many states have developed their own facility systems, similar to FRS, where state master facility records are created and linked to state program records. States exchange data with FRS using pre-defined Extensible Markup Language (XML) formats via the CDX node of the Environmental Information Exchange Network (Exchange Network). Update schedules are coordinated with each state individually.

Figure 5 provides a simple view of the FRS data capture processes. Data flows into Envirofacts/FRS from federal program systems as flat files and from state data sources as XML files through the CDX, EPA’s Node on the Exchange Network. The facility identification data flows into the FRS automated processes and the geospatial data flows into the LRT automated processes. The data captured from other EPA data sources and ICIS also flows into the FRS automated processes for reconciliation and integration. The facility data is processed through the automated reconciliation routines and then applied to the FRS database, which resides on the EPA secure server. Using the secure FRS Linkage application, data stewards can update the database manually on a daily basis. The updates applied to the FRS Linkage Application by the data stewards are replicated nightly to the Internet, or public, version of FRS, which resides with Envirofacts. The LRT is processed through a series of verification procedures (see Section 4.3), including the “Best Pick” process and applied to Envirofacts and FRS. The LRT is a spatially enabled database used by Envirofacts/FRS mapping applications, including WME, EnviroMapper, and the SLT.

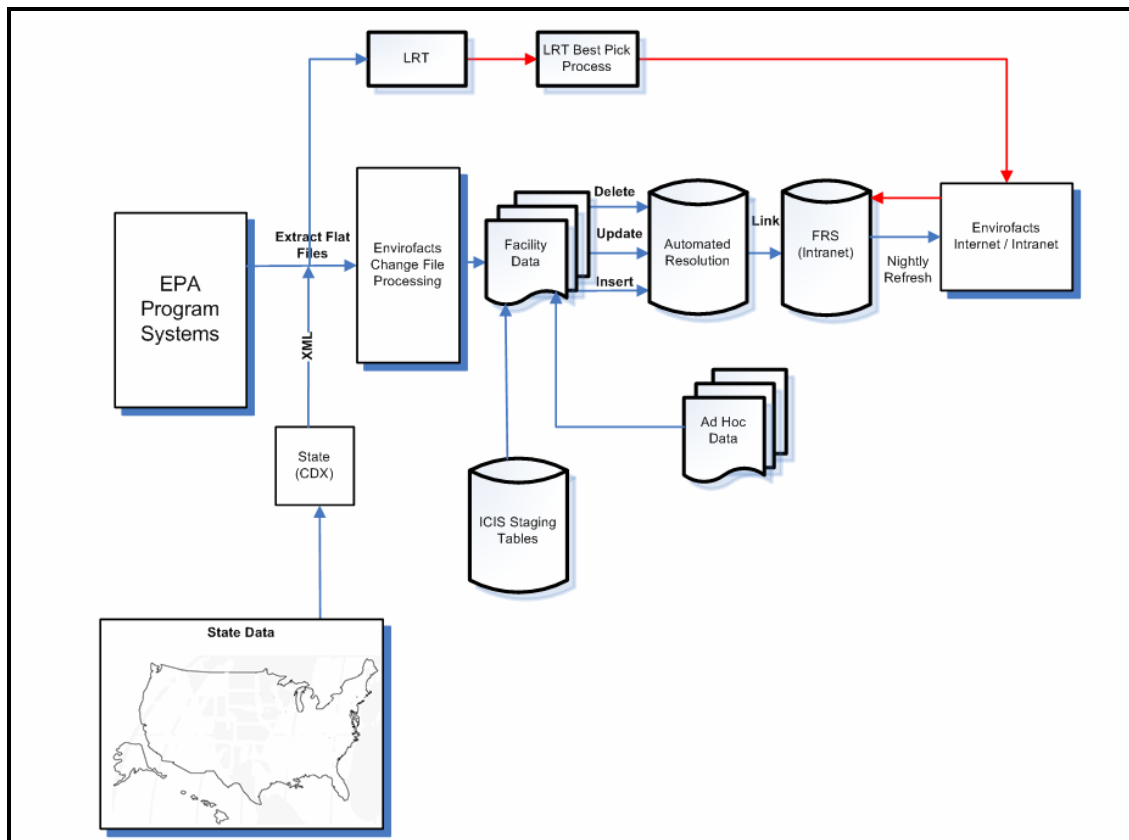


Figure 5.—FRS Data Capture Process.

The FRS database refresh process involves a series of tasks (primarily scripts) that must be performed sequentially. The procedures are described in “*FRS Refresh Process Standard Operating Procedures (SOP)*.” The SOP lays out the refresh procedures for both State and National data and for both change files and full refreshes. The metrics collected during the refresh process are shown in Table 4.

Table 4. FRS Refresh Process Measures

Metric Name and Description	When Recorded	Metric Type
Date and time change files available for download.	Upon receipt notification.	Process Measure
Date and time of refresh operations.	Refresh start and end date.	Process Measure
Date and time data issue(s) encountered and resolved.	Date refresh scripts stopped due to format errors and date restarted.	Process Measure
Date and time refresh process temporarily suspended and then resumed due to external issue(s).	Date refresh scripts stopped due to data quality or other processing problems and date restarted.	Process Measure
Number of records deleted, updated, and inserted.	Before and after data are imported from change files to FRS staging tables.	Product Measure
Confirm number of records that are deleted, updated, and inserted.	After oper_type in staging tables are changed from 'XX' to 'XD', 'XU', or 'XI'.	Product Measure

Metric Name and Description	When Recorded	Metric Type
Number of records successfully updated.	After running the recon on records that have an oper_type of 'XU'.	Product Measure

4.1 Envirofacts Change Files

Figure 6 illustrates the Envirofacts to FRS change file processing. The Envirofacts Team extracts data from the source systems located at the NCC at RTP or the Program sends a data extract to Envirofacts, which may be in several different formats. The Envirofacts Team performs validity checks and reformats the data into the proper formats for both the Envirofacts and the FRS tables. Mappings between the major EPA database systems and the FRS data structures were discussed and approved by the EPA program system managers of the database systems, and can be found by selecting the "Program Crosswalks" option from the FRS public Web site (http://epa.gov/enviro/html/frs_demo/new_crosswalks.html).

Once the files are processed and properly formatted, they are compared to last month's data files and the changes are identified as being updates, additions, or deletions. Each data file is separated into three, one to hold update records, one to hold insert records, and one to hold records to be deleted. The change files are then submitted to FRS for processing.

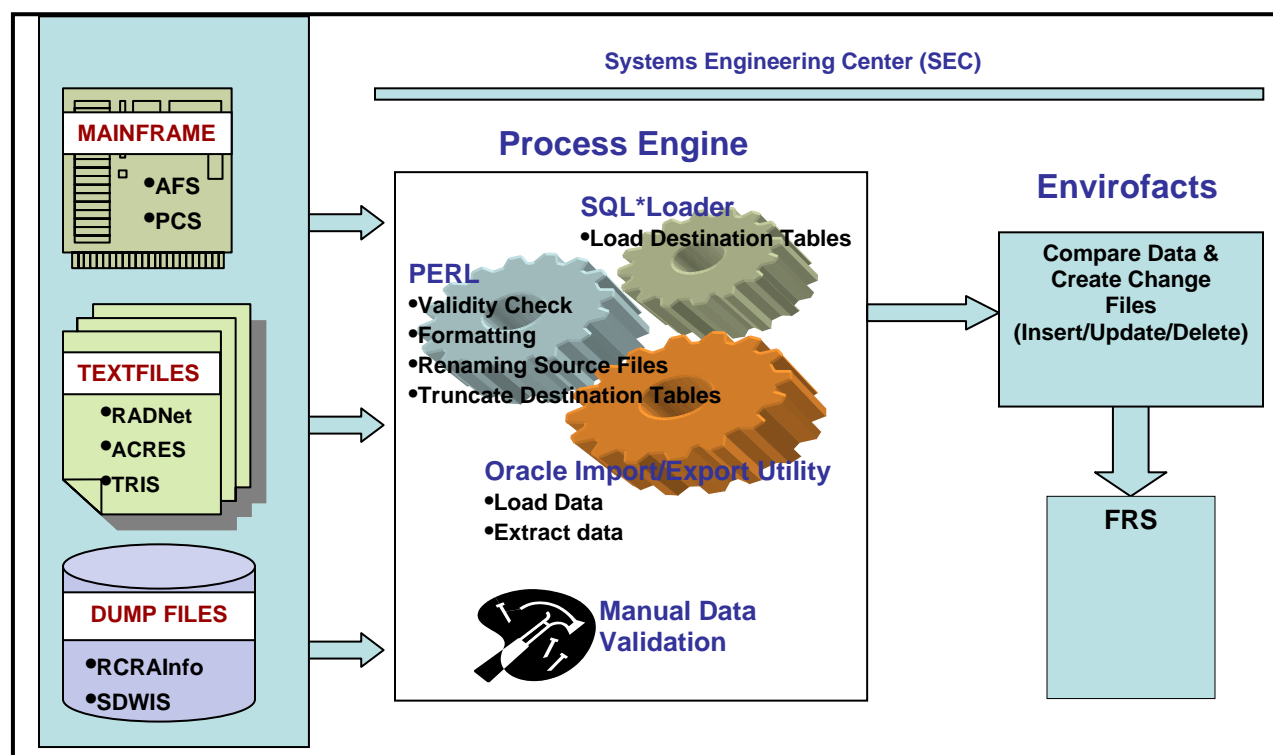


Figure 6.—Envirofacts to FRS Processing.

4.2 Exchange Network

The exchange of FRS information with partner states and tribes is accomplished by the definition of a Flow Configuration Document (FCD) and the CDX network of nodes. These are components of the Environmental Information Exchange Network (Exchange Network), a partnership between state and tribal environmental departments and EPA. The Exchange Network (<http://www.exchangenetwork.net/>) allows Partners to share data efficiently and securely over the Internet.

The FCD provides the majority of the design information needed for the data exchange. It defines the process and allowable information to be exchanged and documents the specific approaches recommended for the data flow. Agencies interested in establishing the Facility Network Exchange should

view this document as a set of instructions. The state/EPA Facility Integrated Project Team (Facility IPT) prepared the FCD and is in the process of updating the document to implement the Facility XML Schema, Version 3.0.

The Exchange Network - Facility Exchange Website

(<http://www.exchangenetwork.net/exchanges/cross/frs.htm>) should always be consulted for the most recent version of the FCD and other important reference materials for facility exchange (see Table 5). These documents are also available on the FRS Documentation Page

(http://www.epa.gov/enviro/html/frs_demo/new_docs.html).

Table 5. Facility Flow Reference Documents

Document Type	Acronym	Purpose
Data Exchange Template	DET	A spreadsheet outlining each data element, the XML Tag Name, description, and permitted values. This is a more readable version of the XML Schema.
Flow Configuration Document	FCD	Describes HOW the exchange of data should occur. This should be the first document to consider.
Model Trading Partner Agreement	Model TPA	A template (or example document) formally adopted by two or more trading partners for the purpose of defining the responsibilities of each party, the legal standing (if any) of the proposed exchange, and the technical details necessary to initiate and conduct electronic information exchange.
XML Schema		The formal definition of the structure and format of the data.

EPA's CDX (<http://www.epa.gov/cdx/>) is the point of entry on the Exchange Network for environmental data submissions to the Agency. The CDX enables fast, efficient and more accurate environmental data submissions from state and local governments, industry and tribes to the EPA and participating program offices.

Figure 7 provides an overview of how submitters interact with FRS via the CDX and Web services. To submit new records or change data, a partner may prepare a submission for the FRS by running a quality assessment tool provided by the FRS team. This pre-processing of the payload ensures a successful submission into the FRS. Once the payload is ready and the submitter has prepared the payload in the proper format, it is submitted to the CDX via a Submit Web service and an XML or flat-file attachment or payload. The CDX receives the request, authenticates the submitter, records the transaction, and forwards the Web services to the FRS system for insert or update as required by the payload data.

To query the FRS and associated LRT data, the submitter sends the appropriate Query Web services along with the appropriate search criteria. The submitter is authenticated by CDX and the query is passed to the FRS for processing. If the payload is small and can be responded to with an immediate response, the submitter will use the "QUERY ()" Web service. If the payload is large and the submitter prefers to have a message sent when the payload processing is finished and ready for shipment, the submitter will use the "SOLICIT ()" Web service.

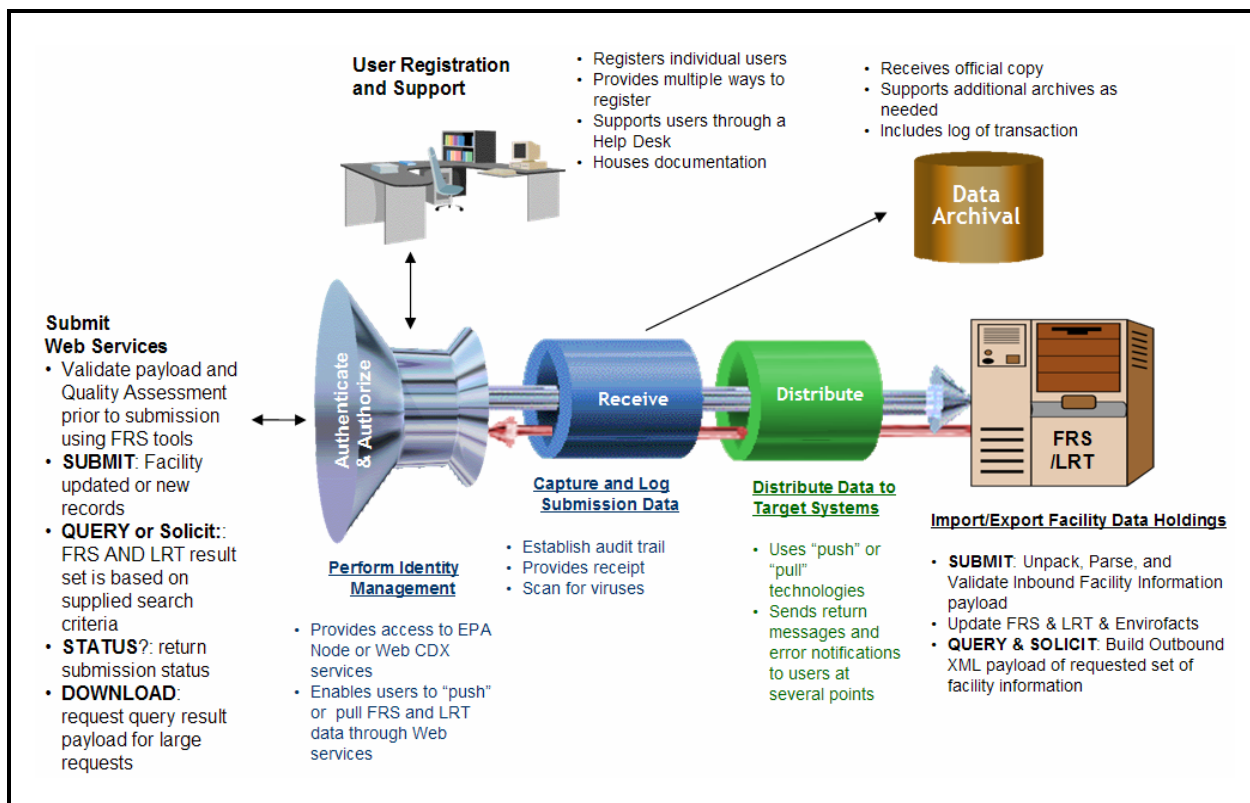


Figure 7.—Web Services through CDX.

Before sending a submission to FRS, States are encouraged to upload their file(s) for validation against the Schema Validation tool, which is available on the FRS (http://epa.gov/enviro/html/frs_demo/new_docs.html) and Exchange Network (<http://www.exchangenetwork.net/exchanges/cross/index.htm>) Web sites. The Tool checks the file for proper formatting against the Schema to ensure a successful submission into the FRS. Once the payload is submitted to the CDX Node and then forwarded to the FRS node, FRS performs a second validation using a combined Schema/Data validation tool (see Figure 8). The Data Validation tool checks the data in the submission against the data constraints set in the FRS database. An example of a data validation check is the data element field length. If a field tag in the XML file contains a set of values that are longer than the column length in the FRS database, the submission will fail the data validation.

If the submission passes the data validation, data is loaded into FRS temporary tables (for integration) and a message is sent back to CDX indicating that FRS received a valid submission from the State. If it fails the validation, the data will not be loaded, a log file will be created on the application server with error details, and a message will be sent back to CDX indicating that the submission failed the validation. FRS, States and CDX communicate through e-mails and phone calls regarding the status of the submission.

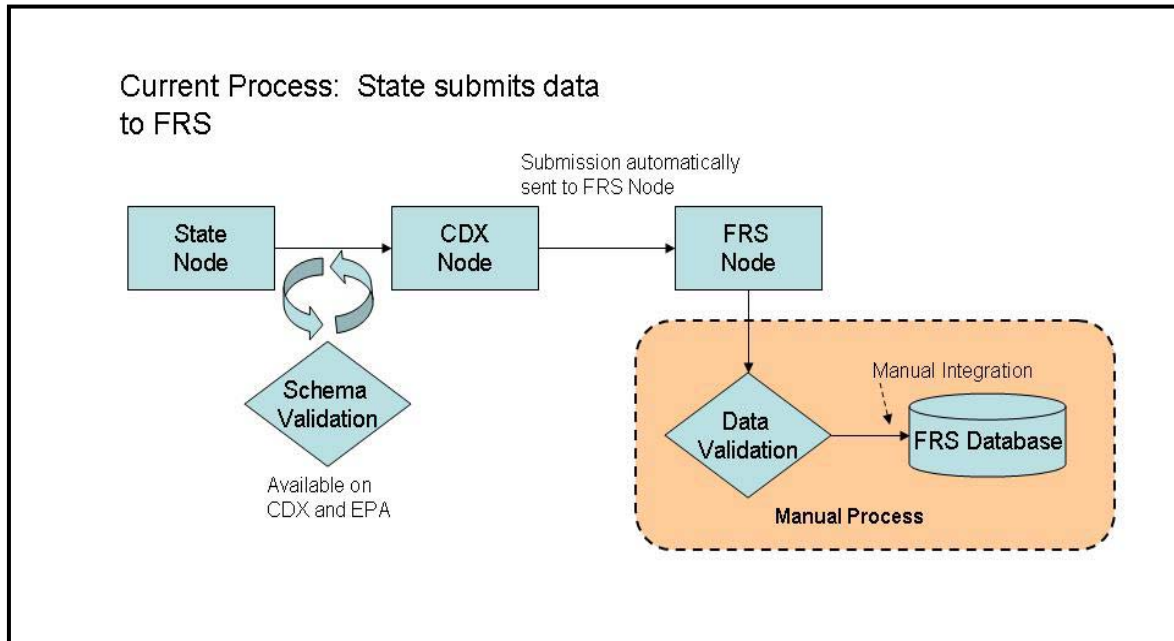


Figure 8.—Schema Validation.

To decouple the database system from the external transport mechanism the FRS Node is based on the Exchange Network Demonstrated Node Configuration (DNC) and Node Protocol (Web Service Definition Language (WSDL)). This approach allows CDX, or other systems through CDX, to call the registry using standard Web services rather than a more tightly coupled Structured Query Language (SQL) or other messaging mechanism. It also allows for future services to be added to the protocol without impacting external users or requiring changes to CDX or other requesting applications. The published Web Service utilizes Direct Internet Message Encapsulation (DIME) to package attachments within a Simple Object Access Protocol (SOAP) message (See Figure 9). WSDL is an XML-based language specification defining how to describe a Web service in computer readable form. SOAP is an XML-based Protocol for exchanging information between computers.

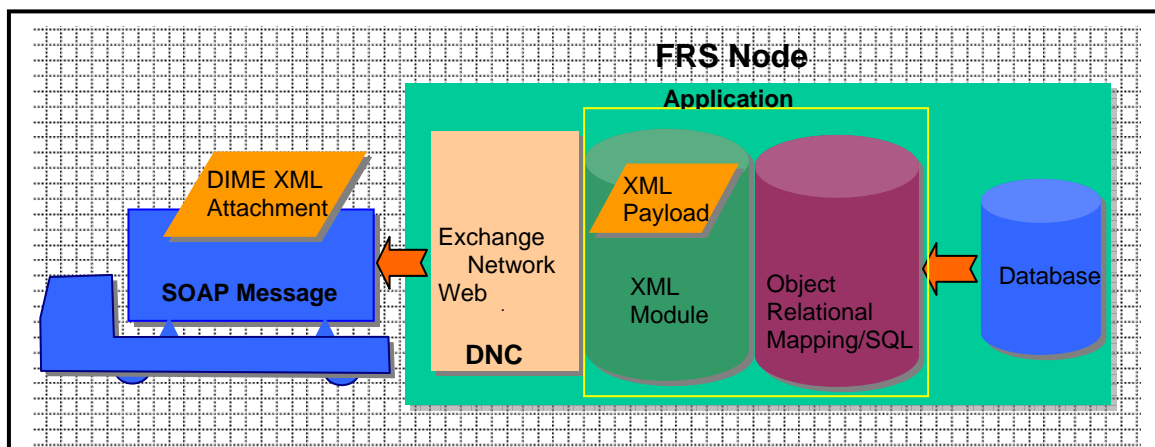


Figure 9.—FRS Node Configuration.

4.3 LRT Refresh

A key facility identifier is geospatial data, the latitude and longitude and accompanying method, accuracy, and description data needed to record the location of the facility on the earth. National program systems, Regions, and States all collect locational values for facilities and/or specific features of facilities (for example, front doors, tanks, stacks, or water release pipes). The LRT refresh procedures include

extracting and loading data files into staging tables, validation and verification procedures, and the creation of spatial layers.

The detailed LRT refresh procedures are discussed in “LRT System Data Refresh Standard Operating Procedures” and illustrated in Figure 10.

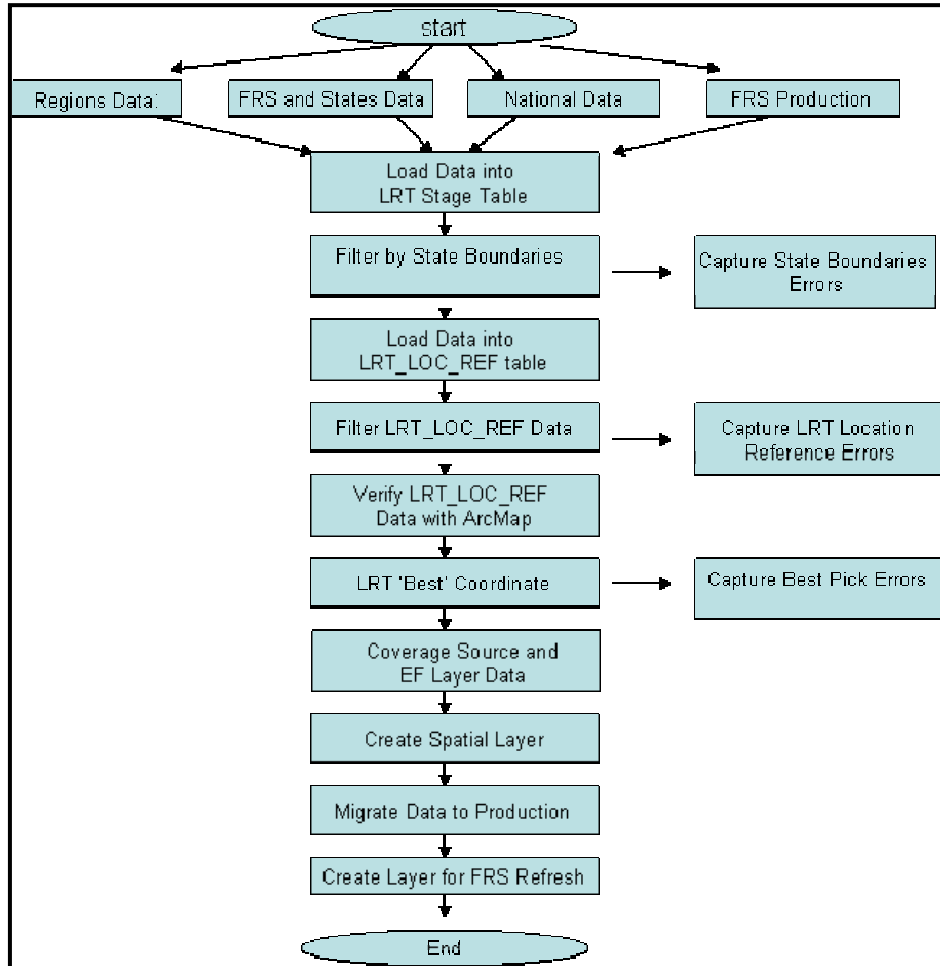


Figure 10.—LRT Data Refresh Process.

The “Load Data into LRT_LOC_REF table” procedure includes automated verification checks of the incoming data against both ZIP code and county polygon and bounding box spatial layers. The verification logic is illustrated in Figure 11. The results of these checks are populated in a data field (VERIFY_CODE) and later used in the Best Pick Process.

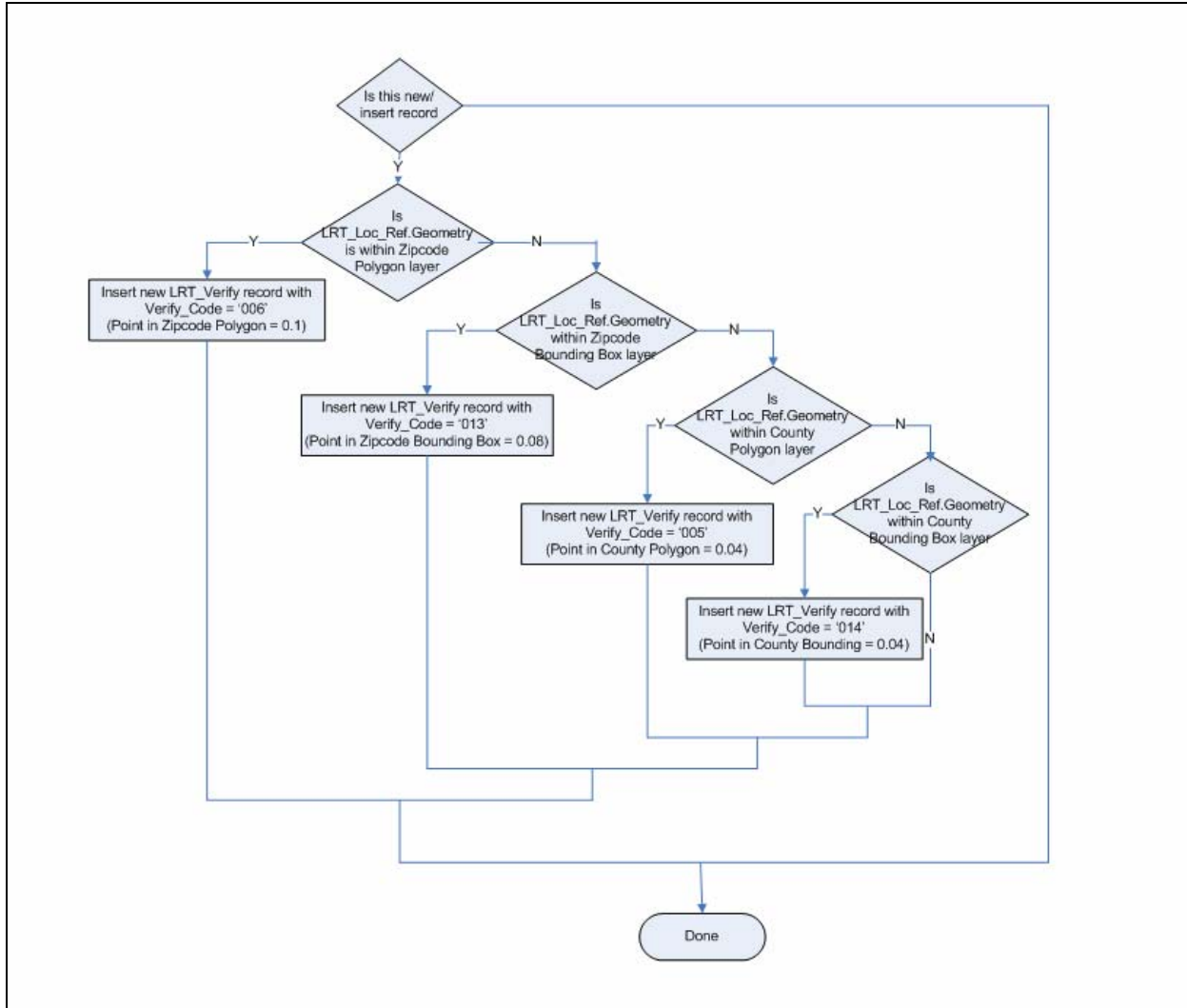


Figure 11.—Verify Geometry (ZIP Code and County)

The metrics collected during the LRT refresh process are listed in Table 6.

Table 6. LRT Data Refresh Measurements

Metric Name and Description	When Recorded	Type of Metric
Date and time change files available for download.	Upon receipt notification.	Process Measure
Date and time of refresh operations.	Refresh start and end date.	Process Measure
Date and time data issue(s) encountered and resolved.	Date refresh scripts stopped due to format errors and date restarted.	Process Measure
Date and time refresh process temporary suspended and then resumed due to external issue(s).	Date refresh scripts stopped due to data quality or other processing problems and date restarted	Process Measure
Number of records deleted, updated, and inserted.	Before and after data processed from LRT staging tables to the LRT_LOC_REF table.	Product Measure

Metric Name and Description	When Recorded	Type of Metric
Confirm each task is performed successfully.	Each monthly data refresh.	Product Measure

4.4 ICIS

The ICIS integrates enforcement and compliance data from several separate data systems, including (most recently) the Permit Compliance System (PCS). ICIS uses the FRS database to establish linkages of enforcement and compliance activities to FRS records and environmental interests. Information is shared between ICIS and FRS on a regular basis through the use of staging areas. Both systems populate their respective staging areas with changes (additions, updates, deletions) that have occurred since the last data transfer. Both systems then retrieve each others changes from the staging areas for incorporation into their own system. The overall process of the FRS and ICIS data exchange is illustrated in Figure 12 and the procedures are described in detail in *FRS-ICIS Standard Operating Procedures*.

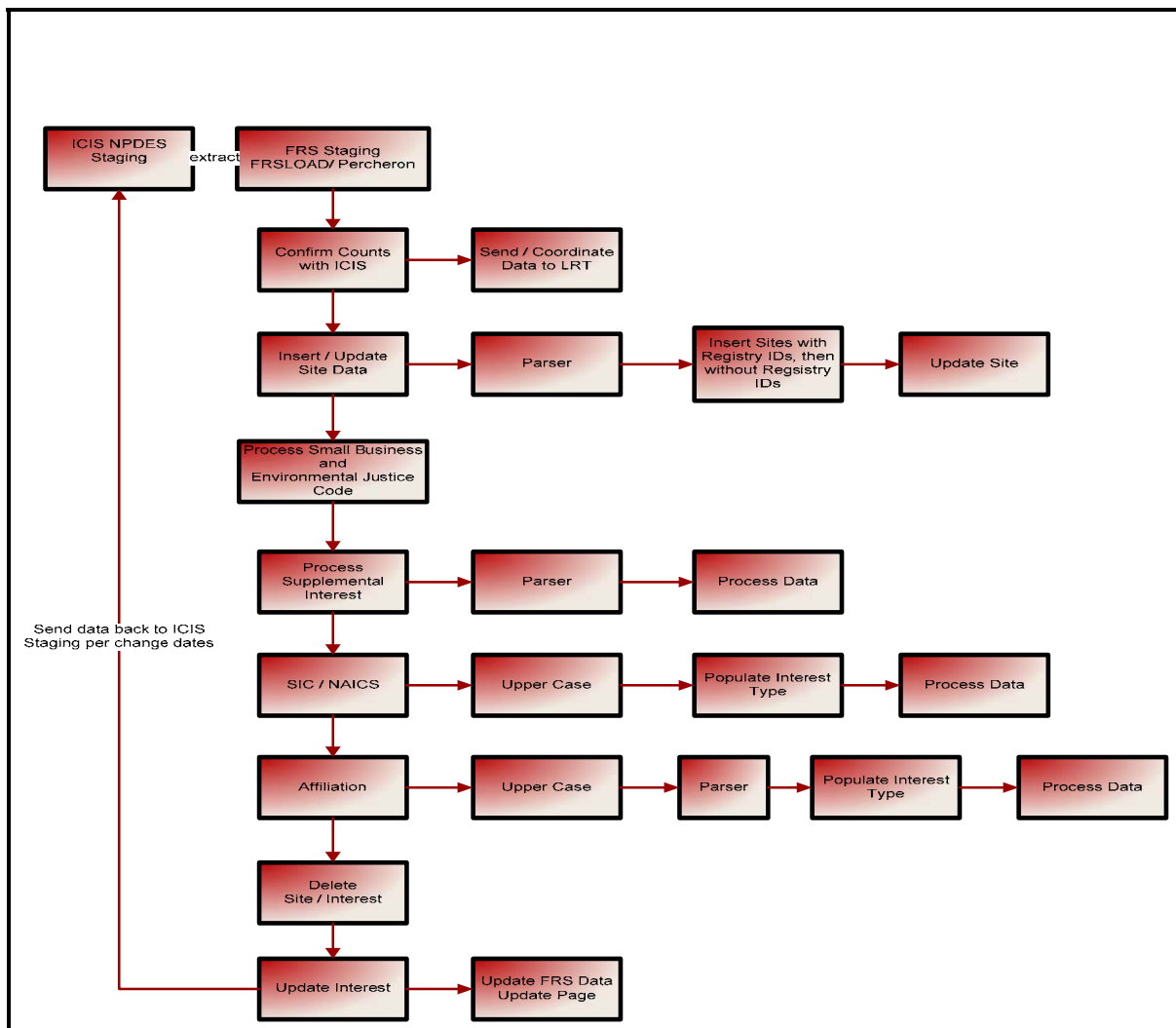


Figure 12.—FRS/ICIS Data Exchange.

5.0 AUTOMATED DATA VALIDATION PROCEDURES

This section lays out the automated validation and verification processes applied to each facility record prior to the record being created in the FRS. These procedures include checking for completeness, consistency, and validity. The standardization applied to the facility site name and address data elements to aid in the automated matching processes, the role of standard reference tables in checking for data quality, the rules pertaining to derived data values, and the rules governing updates or changes to FRS records are also discussed. The procedures specify the comparison that records undergo and the formulas that govern the linkage process, how and when new linkages are created or broken, and the specific conditions that will trigger manual intervention by the data stewards. Manual validation and verification procedures are discussed in Section 6.

5.1 Refresh and Reconciliation

Specific rules govern updates or changes to FRS records. The facility site and environmental interest data are never truncated as part of the refresh process so that the work entered by the data stewards can be preserved. Processing depends on whether the changes represent additions, updates, or deletions from the source environmental information system. The deletes are applied prior to the updates and additions. One source system is processed at a time and FRS maintains an audit trail of all changes from information system data sources. Update procedures vary by data element and whether the facility record is linked to one or more program system records. The rules governing updates, additions, and deletions and the validation and verification processes that are applied to each facility record prior to the record being created are described in the following paragraphs.

Delete Transaction

If a facility has been deleted from a source information system and the information system identifier for that source facility record exists in the FRS database, FRS archives the environmental interest record in the history file. If no other environmental interests remain linked to the parent FRS record, the parent FRS record is archived in the history file.

Update Transaction

FRS updates all information related to an information system identifier that currently exists in the FRS database, when data related to that information system identifier has been changed by the data source. If there is a change in the facility site name and/or address, city, or county and the change does not match the name, address, city, or county of the parent FRS record, then the automated process goes through business logic to decide whether to update the parent FRS information with the new data or to flag the FRS record for manual review. If there are no other program information systems linked to the parent FRS record, and the parent FRS record has not been updated manually, then the parent FRS data is updated with the new data.

If there are other program information systems linked to the parent FRS record (that is, multimedia) or the parent FRS record has been updated manually, the data quality code of the FRS record is evaluated next. If it is valid, no change is made to the FRS address. If it is invalid and the data quality code of the program record is valid, the FRS address is updated with the program data. If the data quality code of both the FRS record and the program record are invalid, no change is made to the FRS address. If the FRS and program Facility Names do not match, the FRS Facility Name is updated based on the following priority order: State, ICIS, Toxics Release Inventory System (TRIS), the record (any source) with the most recent date. Finally, if the updated program record includes data that is either missing or erroneous in the FRS record, the FRS record is updated with the new program data.

Add Transaction

If a facility record has been added to an information system source and the information system identifier for that source facility record does not exist in the FRS database, FRS processes the facility record through the data standardization and parsing, data quality evaluation, and automated integration processes, as described in the following paragraphs. Once the facility record has been processed (resulting in either the creation of a new FRS record or a linkage to an existing FRS record), FRS

integrates the remaining facility identification information submitted along with the new facility from the data source (that is, SIC, NAICS, Alternative Identification, Alternative Name, Affiliated Organization, Affiliated Contact, and Mailing Address). FRS assigns a unique identifier to each organization, person, and mailing address affiliated with a facility site or an environmental interest at a facility site. The unique identifier is generated using the same algorithm as is used to generate the Facility Registry Identifier.

5.1.1 Data Standardization and Parsing

Because the data reported to FRS comes from various environmental information systems, the manner in which a name and address are reported can vary. Company names may be abbreviated or represented by an acronym (for example, IBM or International Business Machines). Addresses reported by a state can contain locally known names instead of formal names reported on permit forms (for example, Old Route 15 is the same as Route 15). To compensate for the lack of data reporting standards, FRS attempts to remove superfluous characters, identify like or equivalent location information, and standardize the name and address for the purposes of comparing and matching these data elements with existing data in the database. FRS standardizes the facility site name, location address, city name, and county name for every program system record, as well as every FRS master record, according to the following rules:

- Special characters are removed (for example, - , _ , . , @ , / , (,) , +).
- Individual words are replaced with standardized words (for example, Assoc. becomes Association, Ave becomes Avenue).
- Certain components of the name are dropped (for example, Inc, Company, Corporation).
- State names are replaced with state abbreviations.
- Spelled out numerals are replaced with their numeric form (for example, Twenty First becomes 21st).
- Buzz words are removed (for example, City of, Town of, South of).
- Certain words are standardized (for example, Rural Route, Old Route, R Route, State Route, ST Route, and Route No are all standardized to Route).
- CO is distinguished between representing County and Colorado (for example, Fairfax Co interpreted as Fairfax County, Co Springs interpreted as Colorado Springs).
- LA is distinguished between representing the City of Los Angeles (for example, LA) and an article in Spanish named cities (for example, La Plata).

Standardized words are compiled in two separate tables, one for name and the other for address. These tables have developed over time, and are now quite comprehensive. FRS stores, but does not display, these standardized data elements. After standardization, the location address is parsed into key words, street number, street name, street suffix, pre-directional code, and post-directional code. Key word examples include Hwy, PR, Interstate, Unit, Blk, Lot, Route, Road, SR, POBOX CR, Cnty, and Bldg.

The key word and the number following the key word are placed into the key word field. Key words are identified and separated out for two reasons. First, this process isolates the urban address in cases where both the urban-style address and Post Office Box information have been included. Secondly, this process accommodates places not located by urban-style addresses, such as rural routes and highway contract numbers. After the data has been standardized and parsed, the location address is classified as one of the following types:

- REGULAR URBAN - the location address contains a regular urban address, which consists of a street number and a street name.
- REGULAR URBAN, HWY - the location address contains a regular urban address, as well as a reference to a Highway.
- REGULAR URBAN, HWY, POBOX - the location address contains a regular urban address, a reference to a highway, and a Post Office (PO) Box.

Facility Registry System (FRS) Quality Plan

- REGULAR URBAN, POBOX - the location address contains a regular urban address, as well as a PO Box.
- POBOX - the location address contains a PO Box number.
- DIRECTION - the location address contains directions to the facility site.
- IRREGULAR - the location address contains something other than a regular urban address, a PO Box number, or directions.
- NO ADDRESS - the address is missing.

Figure 13 shows an example of data before and after it has been standardized and parsed.

<u>STANDARDIZATION AND PARSING DATA EXAMPLE</u>	
<u>Raw data</u>	
Site Name = Congressional Schl	
Location Address = 6565 Arlington Blvd, (Route 50 W)	
City Name = City of Falls Church	
County Name = Fairfax County	
<u>Processed data</u>	
Standardized Name = Congressional School	
Standardized Location Address = 6565 Arlington Blvd Route 50 W	
Parsed Street Number = 6565	
Parsed Street Name = Arlington	
Street Suffix = Blvd	
Street Post Directional Code = W	
Key Word = Route 50	
Standardized City Name = Falls Church	
Standardized County Name = Fairfax	
Address Type = REGULAR URBAN, HWY	

Figure 13.—Standardization & Parsing Data Example.

5.1.2 Data Quality Evaluation

FRS evaluates the quality of each record’s core data elements (facility site name, location address, city name, county name, state code, and Zone Improvement Plan (ZIP) Code) and assigns a data quality code based on the accuracy and completeness of the data. The data quality is evaluated as follows:

- The facility site name and location address are checked against a table consisting of known anomalies (for example, checking for occurrences of words such as "MISSING" or "UNKNOWN").
- The standardized city name, county name, state code, and ZIP code are validated for consistency across data fields using data extracted from the *USPS AIS ZIP+4 National File* data product.
- If the combination of city name, county name, state code, and ZIP code is invalid, the invalid data elements are identified.
- The location address is validated by processing it through a geocoding application, which performs address matching on the given address and returns latitude and longitude coordinates only if the location address is valid.

If any of the data values are missing or invalid, they are identified by the data quality code. Records that are valid have the value “V.” The lower case letters identify the type of problem identified, and the upper case letters identify which data element has been identified as having the problem. Figure 14 lists the available data quality codes. Note that more than one pair of codes can be strung together to form one

data quality indicator. For example, a data quality code of “mAiZ” indicates that the record is missing an address and has an invalid ZIP code. A data quality code of “eNiOmZ” indicates an erroneous name, an invalid county, and a missing ZIP code.

Code	Description
i	Invalid: used for ZIP codes, County names and City names that do not correspond with one another.
e	Erroneous: Used for facility names and addresses that contains anomalies.
m	Missing: Used for any core data element containing no information (Facility Name, Address, City, County, State or ZIP Code).
A	Street Address
N	Facility Name
C	City Name
O	County Name
S	State
Z	ZIP Code
M	Combination of city and county
V	Valid Data

Figure 14.—Data Quality Codes.

5.1.3 Automated Integration

Once the data for a new program system or state facility record has been standardized, parsed, and evaluated for data quality, the FRS application must either find an existing FRS record to link it to, or create a new FRS record based on the new information. FRS performs dynamic searches of the existing database using automated name and address matching algorithms, based on the following rules:

- The algorithms used to match the name and address data result in a score based on the number of elements that match.
 - If the standardized city name, standardized county name, state, and ZIP code match, the score is set to 50.
 - If the parsed street number and parsed street name match or parsed street number and key word equivalency match, 25 is added to the score.
 - If the standardized name or alternative name matches, 25 is added to the score.
- If the score equals 100 (meaning that the facility site already exists in the FRS database), FRS creates an Environmental Interest record for that source system facility record and associates it to the matched (parent) FRS record. If the value of the facility site name or location address does not exactly match the values in the FRS record, FRS executes the series of decision steps undertaken for the *Update Transaction* to decide whether to update the parent FRS information with the new data.

Facility Registry System (FRS) Quality Plan

- If the score is below 30, meaning that the facility does not already exist in the FRS database, FRS creates both a new FRS record and a new associated Environmental Interest record.
- If the score is between 50 and 100 (meaning potential matches have been found), FRS creates a new FRS record and a new associated Environmental Interest record and identifies the FRS record as requiring a manual review as it may be a possible duplicate.

5.1.4 Creation of FRS Record

An FRS record will be created for every information system identifier that is not already linked to an existing FRS record. The FRS record is populated with the values provided by the source system and with derived values, as follows:

- If one of three address data elements (for example, city name, county name, ZIP code) is missing or invalid and the other two data elements are valid, FRS derives the value of the missing or invalid data element, if there are no data conflicts. For example, if the city name and county name represent a valid combination, and that combination has only one ZIP code associated with it, the ZIP code will be derived. If that combination has more than one ZIP code, the ZIP code will not be derived.
- FRS assigns the FRS record a Facility Registry Identifier (FRI), which is used to uniquely identify the facility site. The FRI, a non-intelligent (for example, no information is encoded in the number itself beyond its own unique value) 12-digit identification number, is generated using the algorithm described in Appendix D of the *Facility Location and Identification Data Content Standard*, Federal Geographic Data Committee (FGDC), Final Draft, December, 1999.
- FRS derives the state code or state name depending on which value is given by the data source.
- FRS derives the EPA Region code using the state code.
- FRS derives the Federal Information Processing Standard (FIPS) code using the state code and county name.
- FRS derives the Hydrologic Cataloging Unit Code (HUC), congressional district, and tribal land name using the latitude and longitude coordinates and the Geographic Data Technology (GDT) spatial dataset.

5.2 Data Quality Reports

At the end of each monthly refresh, the FRS Team runs a script to generate the data statistics used to generate the Data Quality Reports. The procedures are described in “*Data Quality Statistics Report Standard Operating Procedures*.” The “Data Quality Statistics Report” displays data quality distribution or overall data quality for either FRS records only or for program system records. These reports are used by EPA data stewards to evaluate data quality in their Regions or programs and set priorities accordingly.

The Overall Data Quality report displays the number and percentage of valid and invalid records and the total number of records for a specified time period. The Data Quality Distribution report shows a distribution of data quality for the selected program system, as well as the data quality code distribution for the month and year. The sum of all the percentages may not be equal to 100, since each data quality code may exist in combination with other data quality codes. For example, a program record that has Invalid ZIP and Invalid County is counted twice. Two other reports, “Data Quality by Region” and “Data Quality by Program System” display total counts of facilities within each data quality grouping either by region or by program system.

Data Quality Statistics Reports can be accessed via the FRS Linkage Application by clicking on “Generate Reports” located on the Main Menu and then selecting one of the three data quality reports (“Data Quality by Program System”, “Data Quality by Region”, “Data Quality Statistics”) from the Reports Menu. Depending on which report is selected, the user enters criteria to run the report (FRS Data vs. Program System Data, Data Quality Distribution vs. Overall Data Quality, Refresh Month & Year, and EPA Region). Figure 15 shows a portion of a “Data Quality by Region” Report.

The following table displays the Data Quality Codes for FRS data by Region.

Data Quality Code	NoRegion	01	02	03	04	05	06	07	08	09	10	ALL
V	45	97670	260869	134359	268609	349930	156973	124456	88131	129234	91974	1702250
iCiZ	0	18	990	379	681	369	1057	843	1448	70	229	6084
mOiZ	0	465	550	315	1804	226	570	473	434	168	150	5155
mCiZ	0	3	51	200	7	53	136	4	1	16	91	562
mAiZiC	0	0	2	0	0	2	6	0	1	0	0	11
iC	0	109	8483	1131	1025	519	729	250	978	40	240	13504
mNiSiOiCmZ	3	0	0	0	0	0	0	0	0	0	0	3
mAmCmZiO	0	0	0	1	34	0	1	1	1	60	0	98
mNiOiCmZ	0	1	0	0	0	0	0	0	0	0	0	1
mZiO	0	0	1	1	27	0	0	0	0	0	2	31
iOiCmZ	0	0	1	2	4	7	9	1	4	1	104	133
mSiOiC	7	0	0	0	0	0	0	0	0	0	0	7
mNiCiZ	0	0	0	1	0	0	0	0	0	0	0	1
mNmAmSmOmCmZ	31	0	0	0	0	0	0	0	0	0	0	31
mAmSmCmZ	492	0	0	0	0	0	0	0	0	0	0	492
mAiSmOmCmZ	976	0	0	0	0	0	0	0	0	0	0	976
mNmAmOmC	0	1	0	0	0	0	0	0	0	0	0	1
iSmOmCmZ	2	0	0	0	0	0	0	0	0	0	0	2
iSmOiCiZ	28	0	0	0	0	0	0	0	0	0	0	28
mAmSmZ	31	0	0	0	0	0	0	0	0	0	0	31
mNmAiCmZ	0	0	0	0	0	0	0	0	1	0	0	1

Figure 15.—FRS Data Quality Report by Region.

Also available from the FRS Linkage Application Main Menu, the Data Steward Progress report shows individual progress by data steward (for example, the amount and type of work data stewards have been performing over a specified time period). A “Supervisor” user can see information for all users in FRS and a primary data steward can view information for users within their designated region or state. Non-primary data stewards can only view their own information.

5.3 United States Postal Service (USPS) Validation

FRS uses the USPS “City/State” product to validate the standardized city name, county name, state code, and ZIP code for consistency across data fields and to correct invalid data, if possible. The USPS product is purchased through a subscription, which must be renewed annually. This product contains city, county, state, and ZIP Code information for the United States and its territories (for example, American Samoa, Federated States of Micronesia, Guam, Marshall Islands, Northern Mariana Islands, Palau, Puerto Rico, and the Virgin Islands). This information is used to update FRS on a quarterly basis. The USPS file must be formatted properly and loaded into an FRS reference table. Step-by-step procedures for accomplishing this task, as well as licensing restrictions, are described in “USPS Standard Operating Procedures”. Each time new USPS information is loaded, the entire FRS database needs to be reevaluated and the data quality reports rerun, because some records that are currently labeled as invalid may actually be valid based on the latest information.

5.4 Locational Data Validation and Quality

Before the locational data improvement efforts began in 2004, only 27 percent of all FRS records had latitude and longitude values. This increased to 49 percent in May 2005. In September, 2007, out of 2,212,214 total FRS records, 1,673,455 now have latitude and longitude coordinates. This represents 75.6 percent of all places, which can now be mapped. This steady increase over the last couple of years is due to increased verification and validation efforts and increasingly sophisticated geocoding methods.

As described in section 4.3, the LRT are a series of tables that store facility-level locational information collected from the program system databases in Envirofacts, EPA regional data stewards, states, and through geocoding efforts. The LRT are synchronized with the Envirofacts refresh process to be updated monthly, and serve as the source for spatial data used to depict EPA-regulated facilities in GIS applications developed within EPA. In addition to the coordinate data, the LRT includes MAD codes. The MAD codes, which conform to the Latitude/longitude Data Standard, describe aspects of the collection of that particular location. The MAD codes make it possible to determine the quality of a particular set of coordinates, how accurate they are, and what they actually represent. The data elements that represent a set of coordinates and associated MAD codes are shown in Appendix C under the subcategory "Geographic Coordinates."

The LRT validation process uses an ArcGIS script to select the boundary of each state; points within the LRT layer within the selected boundary are then selected. The state abbreviation record for each point is compared against the State abbreviation record of the selected State polygon. If a point does not have the correct State abbreviation, it fails validation and becomes part of the rejected point set. Points found outside any State boundary are also rejected. The script creates a GIS layer of rejected points that are then visually inspected using GIS data boundaries and a high-resolution MS Virtual Earth (VE) Web service.

5.4.1 Best Pick Process

Because the LRT data may come from different sources, may have been determined by different methods, or may represent different locations within the facility boundary (for example, front door, discharge pipe), multiple sets of coordinates may exist for one facility. The LRT rely on FRS to determine which different sets of coordinates apply to the same facility. In order to map a facility, a process was developed to pick the "best" coordinates from a group to represent the facility based on a series of business rules. The business rules evaluate the values of the latitude and longitude, collection method, accuracy, and reference point and assign scores to prioritize the records. The major steps in the Pick-Best process are outlined below.

1. Evaluate compliance
 - Verify latitude/longitude lies within North America.
 - Check for existence of values of mandatory data elements (See Environmental Data Registry (EDR) for Latitude/Longitude Data Standard <http://www.epa.gov/edr/>).
2. Verify geometric boxes
 - Automated checks compare the reported location to the reported state, county, and postal code using Oracle Spatial.
3. Calculate a prioritization score
 - A score is calculated, which is based on the assigned accuracy value of the collection method and the validation from the previous step.
4. Prioritization
 - The group of records is searched for the minimum score.

The LRT best coordinate points are plotted in an ArcMAP project showing state boundaries and a buffer extending 150 Meters outside of the boundary. Points within the 150 Meter boundary are validated for accuracy by the analyst team.

5.4.2 Geocoding

For those records that do not have latitude and longitude points, automated geocoding is performed. Geocoding is the process of converting non-geographic data, such as street addresses, into geographic data (latitude and longitude). A geocoding process accepts a complete urban style address as input (from FRS) and compares that address to a geographic "street network" database. If a match is found, the process returns the latitude and longitude coordinates for that address, thus allowing the address to be

mapped and geographically analyzed. Geocoding processes have been available since the LDIP was started; however, early efforts were considered low-resolution, resulting from ZIP code centroid latitude and longitude values derived from a low quality address dataset (for example, TIGER). Since then, geocoding processes have been enhanced by refining both the address database and the geocoding service. The address database was improved by replacing the TIGER street address data source with address, street, and ZIP code layers from the GDT dataset.

Several software vendors provide geocoding services, with each being suitable for a particular use (for example, Oracle Spatial for large rows of records, ArcIMS Route Server® for Web-based, and ArcGIS Server® for ad-hoc interactive geocoding).

5.4.3 Feature Services

A mapping feature service is an intranet or Internet service that can display data in a map enabled context. FRS mapping services are spatially enabled database views of FRS locations, available to EPA users from the EPA intranet. Synchronized with the Envirofacts refreshes, data is extracted from the EPA Percheron data server to the Alaska data server in the ITS-ESE development environment on a monthly basis. The FRS_FACILITY_SITE, FRS_INTEREST, and FRS_PROGRAM_FACILITY tables are exported using the Oracle Export utility. The GIS team creates a copy of the FRS_FACILITY_SITE layer and constructs GIS data point locations using the coordinate data held by this table's GEOCODE_LATITUDE and GEOCODE_LONGITUDE fields. The process generates a spatial table containing the combined locations and attributes for approximately 2 million FRS facilities.

A filtering quality control process eliminates records without appropriate coordinate values and assures that point locations are on the correct side of the United States (US) border. Additional tests are used to assure facility locations fall into the correct state, county, and ZIP code.

A view presents itself as a table, but is actually a persistent SQL query of its target table, which selectively filters for a desired subset of data. Currently, 28 views are accessible by filtering on the Information System Abbreviated Name field in the FRS INTEREST LAYER table. The FRS INTEREST LAYER table is the result of a join between the FRS INTEREST and the FRS FACILITY SITE table using the REGISTRY ID. Table 7 describes the selection criteria for each view. See Appendix A, Table A-2, for a description of each Source System.

Table 7. FRS Feature Services

Service	Selection Criteria
ACRES	Information System Acronym = "ACRES" or "TBA".
AIRS AFS	Information System Acronym = "AIRS/AFS".
AIRS AFS MAJOR	Information System Acronym "AIRS/AFS" and Interest Type = "AIR MAJOR".
AIRS AQS	Information System Acronym = "AIRS/AQS".
BIA	Information System Acronym = "BIA INDIAN SCHOOL".
BRAC	Information System Acronym = "BRAC".
CAMDBS	Information System Acronym = "CAMDBS".
SDWIS	Information System Acronym = "SDWIS".
CERCLIS NPL	Information System Acronym = "CERCLIS" and Interest Type = "SUPERFUND NPL".
CERCLIS	Information System Acronym = "CERCLIS".
FRP	Information System Acronym = "FRP".
ICIS	Information System Acronym = "ICIS".
NCDB	Information System Acronym = "NCDB".
NCES	Information System Acronym = "NCES".

Lockheed Martin Enterprise Solutions & Services**Facility Registry System (FRS) Quality Plan**

Service	Selection Criteria
NEI	Information System Acronym = "NEI".
NEPT	Information System Acronym = "NEPT".
PCS	Information System Acronym = "PCS".
PCS MAJOR	Information System Acronym = "PCS" and Interest Type = "NPDES MAJOR".
RADINFO	Information System Acronym = "RADINFO".
RBLC	Information System Acronym = "RBLC".
RCRA	Information System Acronym "RCRAINFO".
RCRA LQG	Information System Acronym = "RCRAINFO" and Interest Type = "LQG".
RCRA TRANS	Information System Acronym = "RCRAINFO" and Interest Type = "TRANSPORTER".
RCRA TSD	Information System Acronym = "RCRAINFO" and Interest Type = "TSD" or "STATE REGULATED TSD" or "CORRECTIVE ACTION".
RMP	Information System Acronym = "RMP".
SDWIS	Information System Acronym = "SDWIS".
SWIS	Information System Acronym = "SWIS".
TRIS	Information System Acronym = "TRIS".
FRS ALL SITES	A compilation view of all feature service views.

6.0 MANUAL DATA QUALITY IMPROVEMENTS

A major goal of FRS is to improve the *quality* of facility information and provide the Agency with an authoritative source of accurate core information on regulated facilities. FRS has been quite successful at achieving this goal. This is largely due to the fact that there is a physical authoritative record owned by FRS that can be corrected by data stewards and through the error correction process. In October, 2007, out of 1.1 million *invalid* program records, 681 thousand linked to *valid* FRS records. In addition, more and more state data exchanges are occurring, with over 35 states now sharing data with FRS.

There are several layers of data quality weaved throughout the FRS record, from the time it is built continuing through to its life under public scrutiny. It is built from a combination of data sources and by both automated and manual procedures. The automated procedures were described in Sections 5, while the manual procedures (performed by Data Stewards) will be discussed in this section. A wide network of data stewards, covering both geographic and programmatic areas of expertise, use FRS automated tools to improve FRS records and fix linkages between FRS records and program records.

6.1 Data Steward Network

FRS is supported by a network of data stewards who are familiar with the data at many levels including regional, state, program, and even down to the data element level. The data stewards and a group of data analysts at the SEC monitor and verify the FRS facility information for accuracy and validity. These analysts and data stewards are responsible for resolving possible duplicate facilities, improving data quality, and reviewing facilities flagged for manual review. These tasks are accomplished within the FRS Linkage application.

The analysts and data stewards use multiple resources on the Internet to verify and validate information in the FRS database. Internet resources continually change as more and more information becomes available and some resources are rendered outdated (see Appendix E for a current listing). Data stewards, who are familiar with facilities in their home state or Region, can cross-check the existing facility identification data (that is, affiliated organizations and contacts, alternative names, mailing addresses, SIC Codes, NAICS Codes) from within the FRS application. Additionally, data stewards are able to cross-check the wealth of environmental and geographic information available through Envirofacts from within the FRS application. For example, if a TRIS facility record reports releases of a certain chemical to air, a linkage to an Air Facility System (AFS) facility record is expected. If a potential match has an AFS linkage and the environmental data for the AFS facility supports releases of the same chemical, additional weight is added in support of matching the two sites together. Based on the similarities, differences, and other pertinent data, a judgment is made. The resulting FRS records (and associated linkages) are merged together, if they are determined to be the same facility.

Some individuals are the stewards of particular data elements or code sets. For example, the Office of Enforcement and Compliance Assurance (OECA) monitor the Environmental Justice Code and Small Business Indicator data elements. Special code sets are maintained for Tribal Land Name, Federal Agency Code, and other types of geopolitical identifiers.

As part of EPA's data steward network, the analysts are also responsible for addressing error notifications that are routed to them through the ETS regarding any facility errors in the FRS database. The analysts review the error notification to determine if it is a valid or invalid error based on research. If the error is found to be valid, the analyst will change the facility record as necessary. If it is invalid, the facility record will remain unchanged. The ETS is discussed in more detail in Section 6.4.

6.2 FRS Linkage Application

The FRS Linkage application provides a secure Web interface, which allows users to conduct searches, view and improve facility site data, generate reports, and maintain the database. An online User's Guide, which guides a user through the application tools, and a Data Dictionary are available anywhere within the application from the navigation bar at the top of the screen. The FRS Main Menu is shown in Figure 16.

The "Improve FRS Information" option from the Main Menu links to the "Improve FRS Records" submenu, which allows data stewards to improve the data quality of the facility data, resolve possible duplicate

facilities, or review facility records that have been marked for manual review (see Figure 17).

Each option first requires the user to enter search criteria on a facility search screen and then select facilities from the resulting list, one at a time, based on their individual priorities. Procedures, guidelines, and examples for reviewing and improving facility information are described in “*Standard Operating Procedures for Improving FRS Information.*”

Because of the stringent matching criteria for automated name and address matching, the possibility of creating duplicate FRS records is the highest after each monthly refresh. Therefore, resolving duplicate facilities is a priority for data stewards during that time period.



Figure 16.—FRS Main Menu.

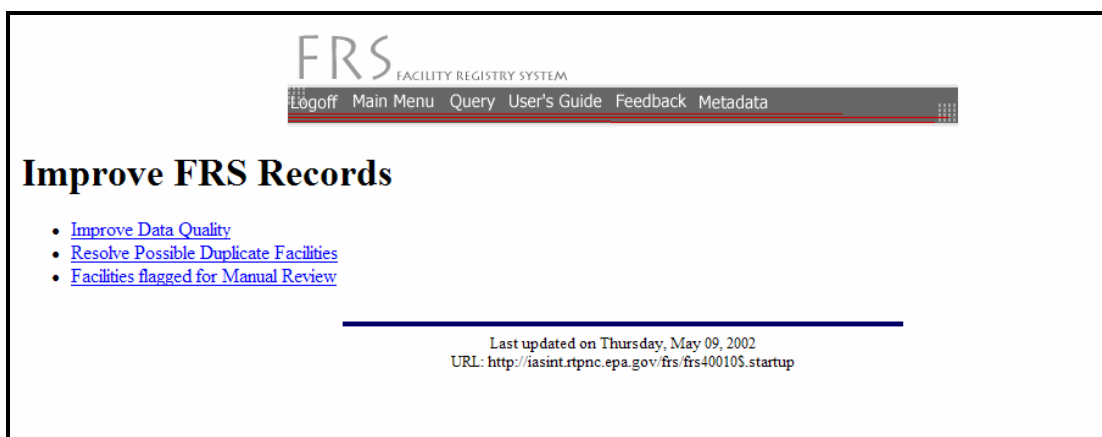


Figure 17.—Improve FRS Records Menu.

The “Resolve Possible Duplicate Facilities” function allows users to select FRS records that have been created by the automated processes and marked as possible duplicates. Once a facility is selected, a candidate list of possible matches is built (that is, facilities with similar name and addresses), ordered by degree of similarity (with the highest first). The user reviews the candidate list and checks any facility or facilities that are duplicates. The user must then decide which FRS record to retain. The objective is to retain the one with the best data quality. Because this is not always known, general guidelines based on the known quality of the program data are generally followed. These guidelines place TRIS at the top, followed by state programs, and then the other national programs are based on the most recent update date. The user selects the comment “Duplicate Facilities” from the drop-down comment list to keep a record of merged facilities. All linkages under the duplicate records are re-linked under the retained record. Note that this function is also accessible from both the Query Results and the Facility Detail pages.

The “Improve Data Quality” option allows users to select FRS records that have been assigned a data quality code that indicates missing or erroneous information. Anytime the quality of an existing FRS record is improved by filling in data gaps and/or correcting values for the core facility site data elements, the new data is processed through the *Data Standardization and Parsing* and *Data Quality Evaluation* routines that were described in Sections 5.1.1 and 5.1.2. If the data quality evaluation results in inconsistencies, the user is notified online. In addition, to prevent the creation of duplicate facilities, the updated FRS record is also run through the *Automated Integration* process (see Section 5.1.3). Note that this function is also accessible from the Facility Detail page.

If the automated integration processes result in one or more potential matches, the list of candidate matches is displayed on the screen. The user has the option of either linking to one of the existing candidates, proceeding with updating the existing FRS record, or creating a new FRS record.

The “Facilities Flagged for Manual Review” option allows users to select FRS records that have updated program system records that do not match the FRS information. The Facility Detail Screen displays the specific reason the facility was flagged. Users must then determine the course of action to take to resolve the discrepancy. Note that this function is also accessible from the Facility Detail page.

6.3 Site Locator Tool (SLT)

The EPA Site Locator Tool (SLT) is a Web-based tool, which combines interactive maps, aerial photography, and satellite imagery to enable users to verify and update existing facility latitude and longitude information. Two links to SLT are available from the FRS Linkage application; one from the Main Menu page and the other from the Facility Detail page.

From the SLT Main Page, search options for locating the facility on a map and obtaining the latitude and longitude coordinates include the facility's full or partial name, FRS Facility ID, facility's address, ZIP code, or city/town and state. Once the user enters the search criteria, the SLT locates the facility on a map similar to one shown in Figure 18. Instructions for the user are given at the bottom of the screen.

The goal is to either confirm the existing location by pressing the “Confirm Existing Site” button, or to modify the location by moving the facility to the proper location and then pressing the “Confirm New Site” button. The latitude and longitude coordinates are displayed under the map window on the bottom left-hand side. Next to the coordinates, the user may select the most appropriate reference point (that is, Plant Entrance, Facility Centroid, or Process Unit Area Centroid).



Figure 18.—Site Locator Tool Map Page.

6.4 Integrated Error Correction (IEC)

The Integrated Error Correction Process (IECP) implements an Agency-wide approach to the processing and analysis of errors that are submitted by the public through several EPA Web applications. It offers a formalized network comprised of regional and state data stewards (to ensure concerns are heard and appropriate action is taken) and the ETS, a Web-based management tracking tool. The ETS is an Agency accountability tool managed by FRS analysts (via a valid User ID and Password).

Analysts capture the error notifications in the system, send e-mail acknowledgments, route the error notifications to the appropriate state or regional action officers for review, track actions taken to correct or resolve data disputes, and inform all concerned parties of error resolution. Reports are available to display information about error corrections that may be sorted by date, processing status, origination, or reported error type. In addition, error notifications are classified into five different categories depending on the type of data error: Facility Characteristics, Enforcement, Inspection, Environmental Data, and Other.

The Error Correction notification is available to the public throughout the EPA Web site (www.epa.gov), including EPA Home-Contact Us, all major national systems in the Envirofacts Warehouse, including FRS, Region 10 Enforcement and Compliance Online (EC-Online), AIRData, EnviroMapper, Online Tracking Information System (OTIS), and Pesticide Data Submitters List (PDSL). For example, if the user clicks on the red Report Error button, as shown on Figure 19 (on the Query Results navigation bar), the Error Notification form is subsequently displayed.

U.S. Environmental Protection Agency
Facility Registry System (FRS)
Recent Additions | Contact Us | Print Version EF Search: GO
EPA Home > Envirofacts > FRS > Query Results
Query Results
Report an Error
Name: Containing: Fibervision
State Abbreviation: GA

Figure 19.—Query Results - Report Error Button.

The Error Notification Form, shown in Figure 20, allows users to report errors by describing the error and providing contact information so that EPA staff may acknowledge the reported error and subsequent error resolution.

U.S. Environmental Protection Agency
Error Notification
Recent Additions | Contact Us | Print Version EF Search: GO
EPA Home > Envirofacts > Error Notification
Error Notification
Instructions
Submitter Information
You must enter personal identifying information so that we may keep you involved in the error correction process. This information is not made available for any other purposes (see [Notice of Use](#)). EPA will notify you of the progress of your reported error and may ask for additional information or documentation, if it is needed. [Customer Support Standards](#).
Required fields are marked with an asterisk (*).
First Name:* Last Name:*
E-mail: Phone (Area Code): Number:
Phone Extension:
Preferred Contact Method: E-mail Phone
Affiliation: Select the affiliation type which best describes your role or interest in this error notification.
Organization: Enter the organization you are representing
Describe the data error, where you identified the error, and what you believe to be the correct value. See [Tips on how to successfully describe an error](#).
Error Information:*
Send Clear Print Close

Figure 20.—Error Notification Form.

Error notifications related to Facility Characteristics may affect both program and FRS data. Typically, programs have established sets of procedures and forms for facility owners or contacts to correct facility identification information. Because of regulatory limitations, data errors typically must be corrected by the facility owner or contact submitter using the appropriate forms. EPA or states do not own this data and cannot make the appropriate changes. FRS, however, is owned and managed by EPA. Changes can be made right away to reflect “actual” data and information because EPA owns the record. FRS is not restricted by regulatory procedures but rather by the challenge to verify that notifications are accurate and correct.

6.5 Data Analyses

Data analyses and periodic internal assessments of the FRS database are performed to identify certain patterns in the data (that is, data gaps) or data anomalies. The Data Quality Reports (see Section 5.2), which show the completeness and validity of the FRS records, may be used to determine issues or trends. For example, if one program system consistently fails to report the county, an investigation should take place, starting with a call to the program system manager. If one Region or State is having a problem, this should be brought to the attention of the FRS Data Steward Program Manager.

FRS has three indicators: Federal Facility Indicator, Tribal Facility Indicator, and U.S. - Mexico Border. If the value of the Federal Facility Indicator is 'Y' for Yes, the Federal Agency Code data element should have a value representing the Federal Agency/Bureau. If not, the value should be populated. Likewise, if the name of the facility indicates it is clearly federal (for example, LANGLEY AIR FORCE BASE) and the Federal Facility Indicator is a value other than 'Y', the Federal Facility Flag should be corrected. The same kind of check may be performed with the Tribal Facility Indicator and Tribal Land Name.

Using the metrics captured during data refresh (see Section 4), comparative analysis may be used to identify data anomalies. For example, if a program system typically sends ten delete records a month, and this month 1,000 delete records are received, the program system manager should be contacted to verify the record counts before refreshing the FRS database.

As a general rule, facilities that report to TRI should also report to other programs; therefore, all standalone TRI facilities should be investigated and a baseline created. Once a baseline is created, new TRI standalone facilities should be investigated periodically. Additional types of multimedia analysis can be performed with the universe of TRIS records using the Envirofacts environmental data. If the TRIS record reports releases to air, water, or ground, then linkages to the respective air, water, or hazardous waste program systems should be expected.

In addition to the data, the documentation displayed on the FRS Web site, as well as internal documentation, must be reviewed and kept current. The data analysis and documentation reviews will lead the way to "process" improvements. Processes can be improved to achieve greater efficiency and accuracy through incorporating more automation and by refining business rules. Business rules for the FRS/LRT change processes and the LRT Best Pick process are now being reworked. New rules for defining "bad" data will allow records of poor quality to be archived through automated processes.

Ad hoc data analysis played a big role in the LRT cleanup process. For example, a significant number of points were corrected simply by reversing the latitude and longitude coordinates. The FRS Team will continue to find new ways to improve the quality of FRS through continued data analysis.

7.0 DOCUMENTATION

The FRS Home Page (<http://www.epa.gov/enviro/html/fii/index.html>), available to the public from Envirofacts, provides an overview of FRS, including a description of its accomplishments, benefits, and stakeholders. The left-hand side bar provides links to two query forms, the Envirofacts Home Page, the FRS Model, a Documentation Page, Program Crosswalks, Presentations and a Form to Contact FRS Owners (see Figure 21). The same page is available to EPA users from the EPA intranet.

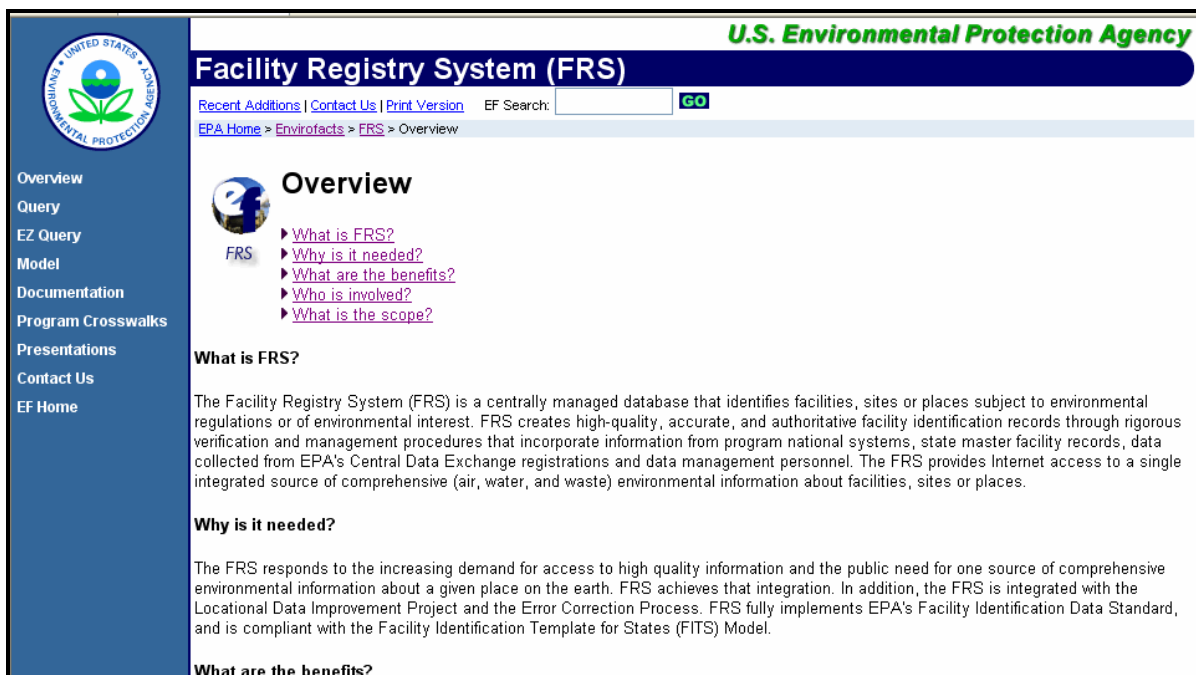


Figure 21.—FRS Home Page.

The FRS Documentation Page (http://www.epa.gov/enviro/html/frs_demo/new_docs.html) is shown in Figure 22. It provides useful links, including the data exchange specifications required for data exchanges between States and FRS and the Schema Design Tool that may be used to validate a user supplied schema. Documents such as Environmental Interest Type Definitions, Program Category Definitions, and FRS Data Elements are available for reference. A template for a TPA is provided in both Word and Portable Document Format (PDF) formats.



Figure 22.—FRS Documentation Page.

Figure 23 shows the crosswalks or mappings that have been developed between the National Program Systems and FRS. Selecting any one of the program mappings brings up a table showing which data element in the source system maps to which data element in FRS.

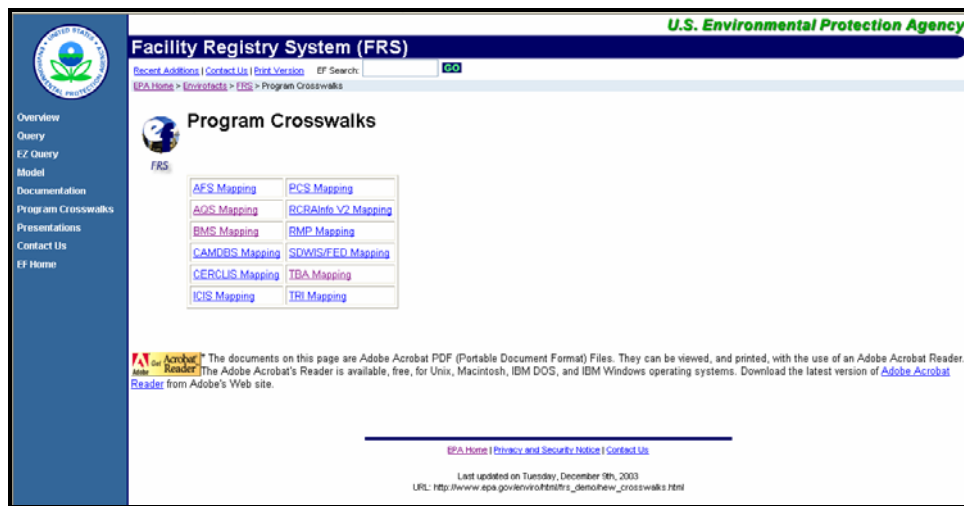


Figure 23.—FRS Program Crosswalks.

In addition to the Web documents, several internal documents (for example, SOPs, Checklists, Change

Control Board (CCB) meeting minutes) are used by the contractor staff responsible for the operations and maintenance of the FRS database and application. SOPs and Checklists are important reference materials and training tools. CCB and other types of meeting minutes record decisions affecting workload priorities and operating procedures. Current and comprehensive documentation is critical to data quality to ensure all changes are documented and all processes are performed in a timely, repeatable, and accurate manner. All deliverables undergo a peer review and are then reviewed by the Technical Publications and Quality Assurance Teams. A sample Peer Review Form is shown in Appendix F.

APPENDICES

APPENDIX A: FRS SOURCE SYSTEMS

TABLE A - 1. FRS DATA SOURCES - CONTACT INFORMATION							
PROGRAM SYSTEM ACRONYM	PROGRAM SYSTEM NAME	PUBLIC	ORG ¹ TYPE	CONTACT NAME ² / ORGANIZATION	CONTACT EMAIL / TELEPHONE	TRANSFER METHOD	REFRESH FREQUENCY
ACRES	ASSESSMENT, CLEANUP AND REDEVELOPMENT EXCHANGE SYSTEM	Y	F	Stacy Swartwood, EPA HQ	Swartwood.Stacy@epa.gov 202-566-1391	Envirofacts	Monthly
AIRS/AFS	AIR FACILITY SYSTEM	Y	F	Akachi Imegwu, EPA HQ Betsy Metcalf, EPA HQ	imegwu.akachi@epa.gov 202-564-0045 metcalf.betsy@epa.gov 202-564-5962	Envirofacts	Monthly
AIRS/AQS	AIR QUALITY SYSTEM	Y	F	Nick Mangus, EPA RTP	mangus.nick@epa.gov 919-541-5549	Ad Hoc	Per Request
BIA INDIAN SCHOOL	BUREAU OF INDIAN AFFAIRS INDIAN SCHOOL	Y	F	Ana Greene, EPA HQ	greenes.ana@epamail.epa.gov 202-566-1695	Ad Hoc	Per Request
BRAC	BASE REALIGNMENT AND CLOSURE	Y	F	Brendan Roache, EPA HQ	roache.brendan@epa.gov 703-603-8704	Ad Hoc	Per Request
CAMDBS	CLEAN AIR MARKETS DIVISION (CAMD) BUSINESS SYSTEMS	Y	F	Alexander Salpeter, EPA HQ	salpeter.alexander@epa.gov 202-343-9157	Ad Hoc	Per Request
CERCLIS	COMPREHENSIVE ENVIRONMENTAL RESPONSE, COMPENSATION AND LIABILITY INFORMATION SYSTEM	Y	F	Robert King, EPA HQ	king.robert@epa.gov 703-603-8792	Envirofacts	Monthly

¹ F is for Federal, T is for Tribal, and States are represented by the two-character state acronym the data source represents (for example, VA for the State of Virginia).

² For State Systems, the first name listed is the Primary Exchange Network Contact and the second name is the Node Contact. Where only one name is listed, that person assumes both roles.

Lockheed Martin Enterprise Solutions & Services

Facility Registry System (FRS) Quality Plan

TABLE A - 1. FRS DATA SOURCES - CONTACT INFORMATION							
PROGRAM SYSTEM ACRONYM	PROGRAM SYSTEM NAME	PUBLIC	ORG ¹ TYPE	CONTACT NAME ² / ORGANIZATION	CONTACT EMAIL / TELEPHONE	TRANSFER METHOD	REFRESH FREQUENCY
ECRM	ENFORCEMENT CRIMINAL RECORDS MANAGEMENT	Y	F	Gray Fernandez, EPA RTP	Fernandez.Gray@epamail.epa.gov 919-541-3105	Ad Hoc	Per Request
EGRID	EMISSIONS & GENERATION RESOURCE INTEGRATED DATABASE	Y	F	Art Diem, EPA HQ, Office of Air and Radiation (OAR)	diem.art@epa.gov 202-343-9340	Ad Hoc	Per Request
FRP	FACILITY RESPONSE PLANS	Y	F	Peter Gattuso, EPA HQ	gattuso.peter@epa.gov 202-564-7993	Ad Hoc	Per Request
ICIS	INTEGRATED COMPLIANCE INFORMATION SYSTEM	Y	F	Gerald Stubbs (ICIS, Federal Insecticide, Fungicide and Rodenticide Act (FIFRA), Toxic Substances Control Act (TSCA)), EPA HQ George Lawrence, EPA HQ Michael Mundell, EPA HQ Mario Jorquera, Clean Air Act (CAA Stationary - AIR, AFS, Air Quality System (AQS) only), EPA HQ Christine McCulloch (Resource Conservation and Recovery Act (RCRA)), EPA HQ	stubbs.gerald@epa.gov 202-564-4178 lawrence.george@epa.gov 202-564-1307 mundell.michael@epa.gov 202-564-7069 jorquers.mario@epa.gov 202-564-1079 mcculloch.christine@epa.gov 202-564-4008	Staging Table/ Database Link	Quarterly
NCDB	NATIONAL COMPLIANCE DATABASE	Y	F	James Johnson, EPA HQ	johnson.jamesa@epa.gov 202-564-2501	Ad Hoc	Per Request
NCES	NATIONAL CENTER FOR EDUCATION STATISTICS	Y	F	Tai Phan, U.S. Education	tai.phan@ed.gov 202-502-7431	Ad Hoc	Per Request
NEI	NATIONAL EMISSIONS INVENTORY	Y	F	Sally Dombrowski, EPA RTP	dombrowski.sally@epa.gov 919-541-3269	Ad Hoc	Per Request

Lockheed Martin Enterprise Solutions & Services
Facility Registry System (FRS) Quality Plan

TABLE A - 1. FRS DATA SOURCES - CONTACT INFORMATION							
PROGRAM SYSTEM ACRONYM	PROGRAM SYSTEM NAME	PUBLIC	ORG¹ TYPE	CONTACT NAME²/ ORGANIZATION	CONTACT EMAIL / TELEPHONE	TRANSFER METHOD	REFRESH FREQUENCY
NEPT	NATIONAL ENVIRONMENTAL PERFORMANCE TRACK	Y	F	Julie Spyres, EPA HQ	spyres.julie@epa.gov 202-566-2885	Ad Hoc	Ad Hoc
NPDES	NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (ICIS-NPDES)	Y	F	Shane Knipschild, EPA HQ Glendora Spinelli, EPA HQ	knipschild.shane@epa.gov 202-564-6189 spinelli.glendora@epa.gov 202-564-5042	Staging Table/ Database Link	Quarterly
PCS	PERMIT COMPLIANCE SYSTEM	Y	F	Jeffrey Clark, EPA HQ	clark.jeffreyf@epa.gov 202-564-2494	Envirofacts	Monthly
RADINFO	RADIATION INFORMATION SYSTEM	Y	F	Jacolyn White, EPA HQ	dziuban.jacolyn@epa.gov 202-343-9474	Ad Hoc	Per Request
RBLC	RACT/BACT/LAER CLEARINGHOUSE	Y	F				
RCRAINFO	RESOURCE CONSERVATION AND RECOVERY ACT INFORMATION SYSTEM	Y	F	Beverly Allen, EPA HQ Lauren Way, EPA HQ Christine McCulloch, EPA HQ Roger Howard, EPA HQ Debbie Goodwin, EPA HQ	allen.beverly@epa.gov 202-564-0389 way.lauren@epa.gov 202-564-0389 mcculloch.christine@epa.gov 202-564-4008 howard.roger@epa.gov 202-564-9907 goodwin.debbie@epa.gov 703-308-7877	Envirofacts	Monthly
RMP	RISK MANAGEMENT PLAN	N	F	Dorothy McManus, EPA HQ	mcm Manus.dorothy@epa.gov 202-564-8606	Envirofacts	Monthly
SDWIS	SAFE DRINKING WATER INFORMATION SYSTEM	Y	F	Abraham Siegel, EPA HQ Lee Kyle (backup), EPA HQ Roger Howard, EPA HQ	siegel.abraham@epa.gov 202-564-4637 kyle.lee@epa.gov 202-564-4622 howard.roger@epa.gov 202-564-9907	Ad Hoc	Per Request

Lockheed Martin Enterprise Solutions & Services

Facility Registry System (FRS) Quality Plan

TABLE A - 1. FRS DATA SOURCES - CONTACT INFORMATION							
PROGRAM SYSTEM ACRONYM	PROGRAM SYSTEM NAME	PUBLIC	ORG ¹ TYPE	CONTACT NAME ² / ORGANIZATION	CONTACT EMAIL / TELEPHONE	TRANSFER METHOD	REFRESH FREQUENCY
TBA	TARGETED BROWNFIELDS ASSESSMENTS	Y	F	Stacy Swartwood, EPA HQ	swartwood.stacy@epa.gov 202-566-1391		
TRIS	TOXIC RELEASE INVENTORY SYSTEM	Y	F	Tim Antisdell, EPA HQ Cory Wagner, EPA HQ	antisdell.timothy@epa.gov 202-566-0733 wagner.cory@epa.gov 202-566-1555	Envirofacts	Monthly
ACES	AGENCY COMPLIANCE AND ENFORCEMENT SYSTEMS	Y	IL	Bruce Carlson, Hae-Jan Su, Illinois Environmental Protection Agency	bruce.carlson@epa.state.il.us 217-782-5544 hao-jan.su@epa.state.il.us 217-782-9830	CDX	Quarterly
AZURITE	ARIZONA UNIFIED REPOSITORY FOR INFORMATIONAL TRACKING OF THE ENVIRONMENT	Y	AZ	Randy Jackson, Arizona Department of Environmental Quality	rj2@azdeg.gov 602-771-4224	CDX	Bi-Weekly
CEDS	VIRGINIA - COMPREHENSIVE ENVIRONMENTAL DATA SYSTEM	Y	VA	Phani Eтуру, Virginia Department of Environmental Quality	pketuru@deg.virginia.gov 804-698-4568	CDX	Monthly
CIM	UTAH - COMMON IDENTIFIER MECHANISM	Y	UT	Bob Shipman Dan Schuyler, Utah Department of Environmental Quality	bshipman@utah.gov 801-536-4455 dschuyler@utah.gov 801-536-4487	CDX	Bi-Weekly
CNFRS	CHEROKEE NATION FACILITY REGISTRY SYSTEM	Y	T	Randall Gee, Cherokee Nation (OK)	rgee@cherokee.org 918-453-5088	CDX	Bi-Weekly
CaSWIS	CALIFORNIA SOLID WASTE INTEGRATING SYSTEM	Y	CA	Gary Arstein Kerslake, California Environmental Protection Agency	garstein@ciwmb.ca.gov	CDX	Bi-Weekly

Lockheed Martin Enterprise Solutions & Services

Facility Registry System (FRS) Quality Plan

TABLE A - 1. FRS DATA SOURCES - CONTACT INFORMATION							
PROGRAM SYSTEM ACRONYM	PROGRAM SYSTEM NAME	PUBLIC	ORG¹ TYPE	CONTACT NAME²/ ORGANIZATION	CONTACT EMAIL / TELEPHONE	TRANSFER METHOD	REFRESH FREQUENCY
ECOMAP	COLORADO FACILITY INFORMATION	Y	CO	Andrew Putnam, David Holmes, Colorado Department of Public Health & Environment	andrew.putnam@state.co.us 303-692-3424 David.Holmes@po.state.ct.us 860-424-3149	CDX	Bi-Weekly
FDM	FLORIDA - FIESTA DATA MAINTENANCE	Y	FL	John Willmott, Barbara Kennedy, Florida Department of Environmental Protection	John.Willmott@dep.state.fl.us 850-245-8238 Barbara.Kennedy@dep.state.fl.us 850-245-8238	CDX	Monthly
FIS	NEW YORK - FACILITY INFORMATION SYSTEM	Y	NY	Leslie Brennan, Gerry Ela, New York Department of Environmental Conservation	lbrennan@gw.dec.state.ny.us gxela@gw.dec.state.ny.us	CDX	Bi-Weekly
GEIMS	GEORGIA - GEOGRAPHIC ENVIRONMENTAL INFORMATION MANAGEMENT SYSTEM	Y	GA	Bill Boyd, Steve Allison, Georgia Department of Natural Resources	wboyd@dnr.state.ga.us 404-463-0077	CDX	Bi-Weekly
HEER-FRS	HAWAII - HAZARD EVALUATION AND EMERGENCY RESPONSE-FACILITY REGISTRY SYSTEM	Y	HI	John Diehm, Hawaii Department of Health	john.diehm@doh.hawaii.gov 808-586-4527	CDX	Occasionally
HI-ECS	HAWAII ENGINE CONTROL SYSTEM	Y				CDX	Per Request
HI-SW	HAWAII OFFICE OF SOLID WASTE	Y				CDX	Per Request
HI-UST	HAWAII - UNDERGROUND STORAGE TANK	Y				CDX	Per Request

Lockheed Martin Enterprise Solutions & Services
Facility Registry System (FRS) Quality Plan

TABLE A - 1. FRS DATA SOURCES - CONTACT INFORMATION							
PROGRAM SYSTEM ACRONYM	PROGRAM SYSTEM NAME	PUBLIC	ORG¹ TYPE	CONTACT NAME²/ ORGANIZATION	CONTACT EMAIL / TELEPHONE	TRANSFER METHOD	REFRESH FREQUENCY
HWTS-DATAMART	HAZARDOUS WASTE TRACKING SYSTEM - DATAMART	Y	CA	Gary Arstein Kerslake, John Yonemura, California Environmental Protection Agency	garstein@ciwmb.ca.gov JYonemura@CALEPA.ca.gov 916-324-8425	Ad Hoc	Per Request
IDNR_EFD	IOWA DEPARTMENT OF NATURAL RESOURCES - EMISSION FACTOR DOCUMENTATION	Y	IA	Gail George, Geoffrey Gu, Iowa Department of Natural Resources	Gail.George@dnr.state.ia.us 515-281-8928 Geoffrey.Gu@dnr.state.ia.us 515-281-8376	CDX	Bi-Weekly
IN-FRS	INDIANA - FACILITY REGISTRY SYSTEM	Y	IN	Laurie Beamish, Cheryl Franklin, Indiana Department of Environmental Management	lbeamish@idem.in.gov 317-232-7010 cfrankli@idem.in.gov 317-233-5518	CDX inbound Database Dump File outbound	Monthly
ISD	WYOMING – INDUSTRIAL SITING DIVISION	Y	WY	Georgia Cash Hoenig, Wyoming Department of Environmental Quality	GCASH@state.wy.us 307-777-7047	CDX	Bi-Weekly
KS-FP	KANSAS - FACILITY PROFILE	Y	KS	Terry Franklin, Kansas Department of Health and Environment	tfranklin@kdhe.state.ks.us 785-296-5658	CDX	Bi-Weekly
LA-TEMPO	LOUISIANA - TOOLS FOR ENVIRONMENTAL MANAGEMENT AND PROTECTION ORGANIZATIONS	Y	LA	Melissa Lantz, Derek Williams, Louisiana Department of Environmental Quality	Melissa.Lantz@la.gov 225-219-3618 derek.williams@la.gov 225-219-3338	CDX	Monthly
MA-EPICS	MASSACHUSETTS - ENVIRONMENTAL PROTECTION INTEGRATED COMPUTER SYSTEM	Y	MA	Deborah A. Quinn, Daniel Scavezze, Massachusetts Department of Environmental Protection	Deborah.Quinn@state.ma.us 617-292-5911 Dan.Scavezze@state.ma.us 617-574-6821	CDX	Bi-Weekly
MD-EPSC	MARYLAND - ENVIRONMENTAL PERMIT SERVICE CENTER	Y	MD	Shahbaz Raza, Maryland Department of the Environment	sraza@mde.state.md.us 410-537-3692	CDX	Bi-Weekly

Lockheed Martin Enterprise Solutions & Services
Facility Registry System (FRS) Quality Plan

TABLE A - 1. FRS DATA SOURCES - CONTACT INFORMATION							
PROGRAM SYSTEM ACRONYM	PROGRAM SYSTEM NAME	PUBLIC	ORG ¹ TYPE	CONTACT NAME ² / ORGANIZATION	CONTACT EMAIL / TELEPHONE	TRANSFER METHOD	REFRESH FREQUENCY
MD-PEMIS	MARYLAND - PERMANENT (AIR) EMISSION	Y				CDX	Bi-Weekly
MD-RCRA	MARYLAND-RESOURCE CONVERSATION AND RECOVERY ACT DATABASE	Y				CDX	Bi-Weekly
ME-EFIS	MAINE - ENVIRONMENTAL FACILITY INFORMATION SYSTEM	Y	ME	David Maxwell, David Ellis, Maine Department of Environmental Protection	david.w.maxwell@maine.gov 207-287-7872 David.H.Ellis@maine.gov 207-624-9484	CDX	Monthly
MN-DELTA	MINNESOTA - PERMITTING, COMPLIANCE, AND ENFORCEMENT INFORMATION MANAGEMENT SYSTEM	Y	MN	Gerald Schwandt, Minnesota Pollution Control Agency	gerald.schwandt@pca.state.mn.us 651-297-8468	CDX	Monthly
MO-DNR	MISSOURI DEPARTMENT OF NATURAL RESOURCES	Y	MO	Tom Hoer, Missouri Department of Natural Resources	tom.hoer@dnr.mo.gov 573-751-8393	CDX	Monthly
MS-ENSITE	MISSISSIPPI - TOOLS FOR ENVIRONMENTAL MANAGEMENT AND PROTECTION ORGANIZATIONS	Y	MS	Melanie Morris, Brian Shows, Mississippi Department of Environmental Quality	Melanie_Morris@deq.state.ms.us 601-961-5044 Brian_Shows@deq.state.ms.us 601-961-5317	CDX	Bi-Weekly
MT-CEDARS	MONTANA - CONSOLIDATED ENVIRONMENTAL DATA ACQUISITION AND RETRIEVAL SYSTEM	Y	MT	Robin Trenbeath, Jason Newton, Montana Department of Environmental Quality	rtrenbeath@state.mt.gov 406-444-4201 jnewton@state.mt.gov 406-444-5245	CDX	Monthly

Lockheed Martin Enterprise Solutions & Services

Facility Registry System (FRS) Quality Plan

TABLE A - 1. FRS DATA SOURCES - CONTACT INFORMATION							
PROGRAM SYSTEM ACRONYM	PROGRAM SYSTEM NAME	PUBLIC	ORG ¹ TYPE	CONTACT NAME ² / ORGANIZATION	CONTACT EMAIL / TELEPHONE	TRANSFER METHOD	REFRESH FREQUENCY
NC-FITS	NORTH CAROLINA - FACILITY IDENTIFICATION TEMPLATE FOR STATES	Y	NC	Randy Moody, Richard Marshall, North Carolina Department of Environment and Natural Resources	randy.moody@ncmail.net richard.marshall@ncmail.net 919-715-0326	CDX	Bi-Weekly
ND-FP	NORTH DAKOTA - FACILITY PROFILE	Y	ND	Gary Haberstroh, Allen Johnson, North Dakota Department of Health	ghaberst@state.nd.us 701-328-5206 ajohnson@state.nd.us 701-328-5155	CDX	Bi-Weekly
NE-IIS	NEBRASKA INTEGRATED INFORMATION SYSTEM	Y	NE	Dennis Burling, Nebraska Department of Environmental Quality	dennis.burling@ndeq.state.ne.us 402-471-4214	CDX	Bi-Weekly
NH-DES	NEW HAMPSHIRE - DEPARTMENT OF ENVIRONMENTAL SERVICES	Y	NH	Chris Simmers, New Hampshire Department of Environmental Services	chris.simmers@oit.nh.gov 603-271-2961	CDX	Monthly
NJ-NJEMS	NEW JERSEY - NEW JERSEY ENVIRONMENTAL MANAGEMENT SYSTEM	Y	NJ	Mike Matsko, New Jersey Department of Environmental Protection	Mike.Matsko@dep.state.nj.us 609-292-3211	CDX	Bi-Weekly
NM-TEMPO	NEW MEXICO-TOOLS FOR ENVIRONMENTAL MANAGEMENT AND PROTECTION ORGANIZATIONS	Y	NM	Anna Richards, Tom McMichael, New Mexico Environment Department	anna.richards@state.nm.us 505-476-1619 tom_mcmichael@nmenv.state.nm.us 505-827-0260	CDX	Bi-Weekly
NNEMS	NAVAJO NATION ENVIRONMENTAL MANAGEMENT SYSTEM	Y	T	Deb Misra, Navajo Nation (AZ)	sdebmisra@yahoo.com 928-871-7701	CDX	Per Request

Lockheed Martin Enterprise Solutions & Services

Facility Registry System (FRS) Quality Plan

TABLE A - 1. FRS DATA SOURCES - CONTACT INFORMATION							
PROGRAM SYSTEM ACRONYM	PROGRAM SYSTEM NAME	PUBLIC	ORG¹ TYPE	CONTACT NAME²/ ORGANIZATION	CONTACT EMAIL / TELEPHONE	TRANSFER METHOD	REFRESH FREQUENCY
NV-FP	NEVADA - FACILITY PROFILE	Y	NV	David Emme, Kathleen Fox-Williams, Nevada Division of Environmental Protection	demme@ndep.nv.gov 775-687-9307 kfox@ndep.nv.gov 775-687-9361	CDX	Bi-Weekly
OH-CORE	OHIO - CORE FACILITY INFORMATION	Y	OH	Paula Canter, Nathan Norris, Ohio Environmental Protection Agency	paulacanter@epastate.oh.us (614) 644-2923 nathannorris@epastate.oh.us 614-644-2990	CDX	Twice a year
OK-FMS	OKLAHOMA - FACILITY MANAGEMENT SYSTEM	Y	OK	Roy Walker, Rene Roy, Oklahoma Department of Environmental Quality	roy.walker@deg.state.ok.us 405-702-1104 rroy@deg.state.ok.us 405-702-1182	CDX	Bi-Weekly
OR-DEQ	OREGON - DEPARTMENT OF ENVIRONMENTAL QUALITY	Y	OR	Mitch West, Glen Carr, Oregon Department of Environmental Quality	west.mitch@deg.state.or.us 503-229-6295 carr.glen@deg.state.or.us 503-229-5576	CDX	Monthly
PA-EFACTS	PENNSYLVANIA - ENVIRONMENTAL FACILITY APPLICATION COMPLIANCE TRACKING SYSTEM	Y	PA	Jennifer Gumert, Pennsylvania Dept. of Environmental Protection	jgumert@state.pa.us 717-772-1621	CDX	Bi-Weekly
PDS	PERMIT DATA SYSTEM	Y	AR	Robert Gage, Arkansas Department of Environmental Quality	gage@adeq.state.ar.us 501-682-0672	CDX	Monthly
PERMIT TRACKING	ALBAMA - PERMIT TRACKING	Y	AL	David Hutchinson	dwh@adem.state.al.us 334-271-7921	CDX	Monthly
RI-PLOVER	RHODE ISLAND – PERMITS, LICENSES AND OTHER VITAL ENVIRONMENTAL RECORDS	Y	RI	Pam Galli, Rhode Island Department of Environmental Management	pam.galli@dem.ri.gov 401-222-4700	CDX	Monthly

Lockheed Martin Enterprise Solutions & Services
Facility Registry System (FRS) Quality Plan

TABLE A - 1. FRS DATA SOURCES - CONTACT INFORMATION							
PROGRAM SYSTEM ACRONYM	PROGRAM SYSTEM NAME	PUBLIC	ORG¹ TYPE	CONTACT NAME²/ ORGANIZATION	CONTACT EMAIL / TELEPHONE	TRANSFER METHOD	REFRESH FREQUENCY
SC-EFIS	SOUTH CAROLINA - ENVIRONMENTAL FACILITY INFORMATION SYSTEM	Y	SC	Stephen Robinson, South Carolina Department of Health and Environmental Control (DHEC)	Robinsssl@dhec.sc.gov 803-896-8951	CDX	Monthly
SIMS	CT SITE INFORMATION MANAGEMENT SYSTEM	Y	CT	David Holmes, Connecticut Department of Environmental Protection	David.Holmes@po.state.ct.us 860-424-3149	CDX	Bi-Weekly
SRPMICEMS	SALT RIVER PIMA-MARICOPA INDIAN COMMUNITY ENVIRONMENTAL MANAGEMENT SYSTEM	Y	T	B. Bob Ramirez, Salt River Pima-Maricopa Indian Community (AZ)	b2.Ramirez@srpmic-nsn.gov 480-550-8045	CDX	Per Request
STATE	STATE SYSTEMS	Y	S	N/A	N/A	FRS User Input	Rarely
SWIS	SOLID WASTE INVENTORY SYSTEM	Y	CA			Ad hoc	One time
UORS	CALIFORNIA - USED OIL RECYCLING SYSTEM	Y	CA	Gary Arstein Kerslake, California Environmental Protection Agency	garstein@ciwmb.ca.gov	CDX	Bi-Weekly
UST	UNDERGROUND STORAGE TANK	Y	TN	Ajay Chigurupati Tennessee Department of Environment and Conservation	ajay.chigurupati@state.tn.us 615-253-1673	Ad Hoc	Per Request
WA-DOEFSIS	WASHINGTON - DEPARTMENT OF ECOLOGY FACILITY / SITE IDENTIFICATION SYSTEM	Y	WA	Debbie Stewart, Bill Kellum, Washington Department of Ecology	dste461@ecy.wa.gov 360-407-7048 bkel461@ecy.wa.gov 360-407-6421	CDX	Bi-Weekly
WI-ESR	WISCONSIN - ENVIRONMENTAL SYSTEM REGISTRY	Y	WI	Tom Aten, Wisconsin Department of Natural Resources	Thomas.Aten@dnr.state.wi.us 608-267-7638	CDX	Bi-Weekly

TABLE A - 2. FRS DATA SOURCES – DESCRIPTION INFORMATION				
SYSTEM ACRONYM	SYSTEM DESCRIPTION	INTEREST TYPES	SUPPLEMENTAL INTEREST TYPES	FACILITY TYPES
ACRES	The Assessment, Cleanup and Redevelopment Exchange System (ACRES) stores information reported by EPA Brownfields grant recipients on Brownfields properties assessed or cleaned up with grant funding, as well as information on Targeted Brownfields Assessments (TBA) performed by EPA Regions.	Brownfields Property		Stationary Brownfields Site Potentially Contaminated Site
AIRS/AFS	The Air Facility System (AFS) contains compliance and permit data for stationary sources of air pollution regulated by the EPA, state, and local air pollution agencies.	Air Major Air Minor Air Synthetic Minor	Enforcement/Compliance Activity Formal Enforcement Action	Stationary
AIRS/AQS	The Air Quality System (AQS) contains ambient air pollution data collected by EPA, State, Local, and Tribal air pollution control agencies from thousands of monitoring stations.	Air Monitoring Site		Monitoring Station Stationary Facility
BIA INDIAN SCHOOL	The Bureau of Indian Affairs (BIA) school data on Indian land. The BIA is responsible for the administration and management of 55.7 million acres of land held in trust by the United States for American Indians, Indian Tribes, and Alaska natives and provides education services to approximately 48,000 Indian students.	Compliance Assistance	Enforcement/Compliance Activity	Stationary
BRAC	Base Realignment and Closure (BRAC) is a process used to close excess military installations and realign the total asset inventory in order to save money on operations and maintenance.	BRAC		Stationary Potentially Contaminated Site
CAMDBS	The Clean Air Markets Division Business System (CAMDBS) supports the implementation of market-based air pollution control programs administered by the EPA Clean Air Markets Division, within the Office of Air and Radiation. Programs include the Acid Rain Program and	Air Program	Enforcement/Compliance Activity Formal Enforcement Action	Stationary

Facility Registry System (FRS) Quality Plan

TABLE A - 2. FRS DATA SOURCES – DESCRIPTION INFORMATION				
SYSTEM ACRONYM	SYSTEM DESCRIPTION	INTEREST TYPES	SUPPLEMENTAL INTEREST TYPES	FACILITY TYPES
	regional programs designed to reduce the transport of ozone.			
CERCLIS	The Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) is EPA's inventory of abandoned, inactive, or uncontrolled hazardous waste sites regulated under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). It records information about all aspects of hazardous waste sites from initial discovery to listing on the National Priorities List (NPL).	Superfund Superfund National Priorities List (NPL)	Enforcement/Compliance Activity Formal Enforcement Action	Contaminated Site Contamination Addressed Potentially Contaminated Site
ECRM	The Enforcement Criminal Records Management System, now the Criminal Case Reporting System (CCRS), is the Criminal Investigation Division's "official record" of all criminal investigation activities. The system maintains and tracks case-specific program and investigative information on over 8,200 active and archived criminal cases. CCRS is an EPA-only system and data entry is performed directly by CID employees. The Public is allowed to obtain only select defendant data fields for closed, convicted cases via the Freedom of Information Act.	Closed Criminal Enforcement Case		Stationary Facility
EGRID	The Emissions & Generation Resource Integrated Database (EGRID) contains data on emissions and resources mix for virtually every power plant and company that generates electricity in the United States.	Electrical Power Generation		Stationary Facility
FRP	The Facility Response Plans (FRP) database contains plans for responding to a worst case discharge of oil (to the maximum extent practical).	Oil Control	Enforcement/Compliance Activity	Stationary

Lockheed Martin Enterprise Solutions & Services

Facility Registry System (FRS) Quality Plan

TABLE A - 2. FRS DATA SOURCES – DESCRIPTION INFORMATION				
SYSTEM ACRONYM	SYSTEM DESCRIPTION	INTEREST TYPES	SUPPLEMENTAL INTEREST TYPES	FACILITY TYPES
ICIS	The Integrated Compliance Information System (ICIS) contains integrated enforcement and compliance information across most of EPA's programs.	Formal Enforcement Action	Formal Enforcement Action	Potentially Contaminated Site Stationary
NCDB	The National Compliance Database (NCDB) supports implementation of the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) and the Toxic Substances Control Act (TSCA).	Compliance Activity	Enforcement/Compliance Activity Formal Enforcement Action	Stationary
NCES	The National Center for Education Statistics is the primary federal database for collecting and analyzing data related to education in the United States and other Nations. It is located in the U.S. Department of Education, within the Institute of Education Sciences.	Unspecified Universe	Enforcement/Compliance Activity Formal Enforcement Action Unspecified Universe	Stationary
NEI	The National Emissions Inventory contains information about stationary and mobile sources that emit criteria air pollutants and their precursors, as well as hazardous air pollutants (HAPs).	Criteria And Hazardous Air Pollutant Inventory	Enforcement/Compliance Activity	Stationary
NEPT	The National Environmental Performance Track (NEPT) is designed to recognize facilities that consistently meet their legal requirements and have implemented high-quality environmental management systems.	Performance Track		Stationary Facility
NPDES	The National Pollutant Discharge Elimination System (NPDES) module of the Integrated Compliance Information System (ICIS). Under NPDES, all facilities that discharge pollutants from any point source into waters of the United States are required to obtain a permit. The permit will likely contain limits on what can be discharged, impose monitoring and reporting requirements, and include other provisions to ensure that the discharge does not adversely	ICIS-NPDES Major ICIS-NPDES Unpermitted	Enforcement/Compliance Activity	Stationary

TABLE A - 2. FRS DATA SOURCES – DESCRIPTION INFORMATION				
SYSTEM ACRONYM	SYSTEM DESCRIPTION	INTEREST TYPES	SUPPLEMENTAL INTEREST TYPES	FACILITY TYPES
	affect water quality.			
PCS	The Permit Compliance System (PCS) tracks National Pollutant Discharge Elimination System (NPDES) surface water permits issued under the Clean Water Act. This system is being incrementally replaced by the NPDES module of ICIS.	NPDES Major NPDES Non-Major	Enforcement/Compliance Activity Formal Enforcement Action	Stationary
RADINFO	Radiation Information System (RADINFO) contains information about facilities that are regulated by US EPA for radiation and radioactivity.	RAD National Emission Standards for Hazardous Air Pollutants (NESHAPS) RAD NPL RAD Waste Isolation Pilot Plant (WIPP)		Stationary Contaminated Site
RBLC	The RACT/BACT/LAER Clearinghouse (RBLC) database contains case-specific information on the "best available" air pollution technologies that have been required to reduce the emission of air pollutions from stationary sources. RACT, or Reasonably Available Control Technology, is required on existing sources in areas that are not meeting national ambient air quality standards. BACT, or Best Available Control Technology, is required on major new or modified sources in clean areas. LAER, or Lowest Achievable Emission Rate, is required on major new or modified sources in non-attainment areas.	Air Major	Enforcement/Compliance Activity	Stationary

TABLE A - 2. FRS DATA SOURCES – DESCRIPTION INFORMATION				
SYSTEM ACRONYM	SYSTEM DESCRIPTION	INTEREST TYPES	SUPPLEMENTAL INTEREST TYPES	FACILITY TYPES
RCRAINFO	Resource Conservation and Recovery Act Information System (RCRAInfo) is EPA's comprehensive information system in support of the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. It tracks many types of information about generators, transporters, treaters, storers, and disposers of hazardous waste.	Treatment, Storage, and Disposal (TSD) LQG Small Quantity Generator (SQG) Conditionally Exempt Small Quantity Generator (CESQG) Transporter Used Oil Program Converter Corrective Action Recycler Universal Waste Handler State Regulated TSD Other State-Specific Waste Activities Other Hazardous Waste Activities Underground Injection Control (UIC) Hazardous Waste Biennial Reporter	Enforcement/Compliance Activity Formal Enforcement Action	Stationary
RMP	The Risk Management Plan (RMP) database stores the risk management plans reported by companies that handle, manufacture, use, or store certain flammable or toxic substances, as required under section 112(r) of the Clean Air Act (CAA).	RMP Reporter	Enforcement/Compliance Activity Formal Enforcement Action	Stationary

Facility Registry System (FRS) Quality Plan

TABLE A - 2. FRS DATA SOURCES – DESCRIPTION INFORMATION				
SYSTEM ACRONYM	SYSTEM DESCRIPTION	INTEREST TYPES	SUPPLEMENTAL INTEREST TYPES	FACILITY TYPES
SDWIS	The Safe Drinking Water Information System contains information about public water systems and their violations of EPA's drinking water regulations.	Community Water System Water Treatment Plant	Enforcement/Compliance Activity Formal Enforcement Action	Stationary Water System
TBA	EPA's Targeted Brownfields Assessment (TBA) program is designed to help states, tribes, and municipalities—especially those without EPA Brownfields Assessment Pilots/Grants—minimize the uncertainties of contamination often associated with Brownfields. Targeted Brownfields Assessments supplement and work with other efforts under EPA's Brownfields Program to promote the cleanup and redevelopment of Brownfields.	Targeted Brownfields Assessment		Stationary Brownfields Site Potentially Contaminated Site
TRIS	The Toxic Release Inventory System (TRIS) is a publicly available EPA database reported annually by certain covered industry groups, as well as federal facilities. It contains information about more than 650 toxic chemicals that are being used, manufactured, treated, transported, or released into the environment, and includes information about waste management and pollution prevention activities.	TRI Reporter	Enforcement/Compliance Activity Formal Enforcement Action	Stationary
ACES	The Agency Compliance and Enforcement Systems (ACES) application supports the compliance and enforcement activities that exist primarily within the Illinois Bureaus of Air, Water, and Land, the Division of Legal Counsel, and the Office of Chemical Safety. The intent of the system is to track compliance and enforcement processes and to share the information throughout the agency, the public and with other entities.	State Master	Air Program Drinking Water Program Formal Enforcement Action Hazardous Waste Program NPDES Permit Scrap Tire Management Solid Waste Program Solid Waste-Solid Waste Generator	Stationary

TABLE A - 2. FRS DATA SOURCES – DESCRIPTION INFORMATION				
SYSTEM ACRONYM	SYSTEM DESCRIPTION	INTEREST TYPES	SUPPLEMENTAL INTEREST TYPES	FACILITY TYPES
AZURITE	The Arizona Unified Repository for Informational Tracking of the Environment (AZURITE) is a database used by the Arizona Department of Environmental Quality (ADEQ) for environmental enforcement and compliance reporting to the Permit and Compliance System (PCS) and to the Air Facility System Universal Interface (AFS-UI).	State Master	Air Major Air Minor Air Program Asbestos Abatement Program Drinking Water Program Groundwater Program Hazardous Waste Program Leaking Storage Tank Livestock Waste Control Multimedia Programs Not In A Universe NPDES Permit Oil Control Pesticides Program Refuse Disposal Scrap Tire Management Solid Waste Program Surface Water Standards TSD Underground Storage Tank Program Waste Wastewater Facility Wastewater Program	Stationary
CEDS	The Comprehensive Environmental Data System (CEDS) is the Virginia Department of Environmental Quality's (DEQ) electronic data system for maintaining data on sources of pollutants in all media.	State Master	Air Program	Stationary

Facility Registry System (FRS) Quality Plan

TABLE A - 2. FRS DATA SOURCES – DESCRIPTION INFORMATION				
SYSTEM ACRONYM	SYSTEM DESCRIPTION	INTEREST TYPES	SUPPLEMENTAL INTEREST TYPES	FACILITY TYPES
CIM	The Common Identifier Mechanism (CIM) is the Utah Department of Environmental Quality's (UDEQ) data system for compliance and permitting data.	State Master	CESQG Drinking Water System Groundwater Program Incinerator LQG NPDES Stormwater Permit Post Closure Care Site Radioactive Waste Refuse Disposal Tri Reporter Underground Storage Tank Program Used Oil Program Wood Waste Recycling X-Ray Equipment	Stationary
CNFRS	The Cherokee Nation Facility Registry System (CNFRS) is a data flow system that validates existing FRS data and exchanges data about tribal open dump sites.	Tribal Master	Air Program CESQG Community Water System Compliance Activity Compliance Assistance Enforcement Compliance Enforcement Compliance Activity Formal Enforcement Action Not In A Universe State Master	Stationary
CaSWIS	California Solid Waste Integrating System (CaSWIS) is California's solid waste facility list that contains information on solid waste facilities, operations, and open and closed disposal sites throughout the state.	State Master	Refuse Disposal	Stationary

Facility Registry System (FRS) Quality Plan

TABLE A - 2. FRS DATA SOURCES – DESCRIPTION INFORMATION				
SYSTEM ACRONYM	SYSTEM DESCRIPTION	INTEREST TYPES	SUPPLEMENTAL INTEREST TYPES	FACILITY TYPES
ECOMAP	ECOMAP, Colorado's Web-based facility master database, managed by the Colorado Department of Public Health and Environment (CDPHE), allows environmental program managers to edit facility locations and allows other users to view the information read-only.	State Master	Air Major Enforcement/Compliance Activity Groundwater Program Hazardous Waste LQG Material Recycling NPDES Major NPDES Non-Major Radioactive Waste Refuse Disposal Solid Waste Program SQG Superfund NPL TSD Wood Waste Recycling	Stationary
FDM	The Florida Integrated Environmental System Today (FIESTA) Data Maintenance (FDM) System maintains entity, environmental interest, and affiliation data.	State Master	Domestic Wastewater Program Hazardous Waste Regulation Program Industrial Wastewater Program NPDES Stormwater Permit NPDES Stormwater Program Phosphate Management Wastewater Program Power Plant Wastewater Program	Facility
FIS	The New York Department of Environmental Conservation Facility Information System (FIS) database houses all information about facilities that are regulated or of environmental interest to the state of New York.	State Master	205g Number (USEPA) 401 Certification Air Facility Registration Air Major Air Program Air State Facility	Stationary

TABLE A - 2. FRS DATA SOURCES – DESCRIPTION INFORMATION				
SYSTEM ACRONYM	SYSTEM DESCRIPTION	INTEREST TYPES	SUPPLEMENTAL INTEREST TYPES	FACILITY TYPES
			Aquatic Pesticides Coastal Erosion Coastal Erosion Management Dam Site Docks, Platforms & Moorings Drinking Water System Enforcement/Compliance Activity EPCRA/CESQG Excavation & Fill In Navigable Waters Floodplains Freshwater Wetlands Grants And Planning Groundwater Program Hazardous Waste Program Industrial SPDES - Groundwater Discharge Industrial SPDES - Surface Discharge Long Island Well Mine Operating Permit Mined Land Id (NYSDEC) Mined Land Reclamation Municipal SPDES - Groundwater Discharge Municipal SPDES - Surface Discharge NPDES Permit NPDES Stormwater Permit Open Burning P/C/I SPDES - Surface Discharge P/C/I SPDES- Groundwater Discharge	

TABLE A - 2. FRS DATA SOURCES – DESCRIPTION INFORMATION				
SYSTEM ACRONYM	SYSTEM DESCRIPTION	INTEREST TYPES	SUPPLEMENTAL INTEREST TYPES	FACILITY TYPES
			Pesticide General Process, Exhaust, Ventilation (Construct) Process, Exhaust, Ventilation (Operate) Radioactive Materials Refuse Disposal Resource Conservation Recovery Act ID (USEPA) Rivers And Harbors Permitting Section 404 Permitting Solid Waste Program Stage II Vapor Recovery (Operate) State Pollutant Discharge Elimination System ID (USEPA) Stationary Combustion (Construct) Stationary Combustion (Operate) Stream Disturbance Tidal Wetlands TSD Underground Storage Of Gas Underground Storage Tank Program Waste Transporter ID (NYSDEC) Water Quality Certification Water Supply Wild, Scenic & Recreational Rivers	

Facility Registry System (FRS) Quality Plan

TABLE A - 2. FRS DATA SOURCES – DESCRIPTION INFORMATION				
SYSTEM ACRONYM	SYSTEM DESCRIPTION	INTEREST TYPES	SUPPLEMENTAL INTEREST TYPES	FACILITY TYPES
GEIMS	Georgia's Geographic Environmental Information Management System (GEIMS) provides the EPA and the public a single point of access to core data for all facilities and sites regulated or monitored by the EPA and a single system for the reporting of all environmental data.	State Master	Enforcement/Compliance Activity Formal Enforcement Action Underground Storage Tank Program	Stationary
HEER-FRS	The Hawaii Hazard Evaluation and Emergency Response Facility Registry System (HEER-FRS) maintains basic information for facility/sites of interest to the Hawaii Department of Health, Hazard Evaluation and Emergency Response. It is used to index sites for hardcopy file retrieval and to present limited site status information.	State Master	None	Stationary Facility Potentially Contaminated Site
HI-ECS	The Hawaii Environmental Compliance System (HI-ECS) supports the Hawaii state environmental compliance and hazardous materials regulatory program, which ensures that program areas and facilities are in compliance with environmental regulations.	State Master	Enforcement/Compliance Activity	Stationary
HI-SW	The Hawaii Office of Solid Waste (HI-SW) coordinates a statewide P2 workgroup to enhance information sharing regarding solid waste.	Solid Waste Program	None	Stationary
HI-UST	Hawaii's Underground Storage Tank program regulates underground storage tanks, which store petroleum or hazardous substances, and offers documents and data products for downloading.	Underground Storage Tank Program	Enforcement/Compliance Activity	Stationary
HWTS-DATAMART	California's Hazardous Waste Tracking System Data Mart (HWTS-DATAMART) provides information on hazardous waste shipments for generators, transporters, and treatment, storage, and disposal facilities.	State Master	Enforcement/Compliance Activity Hazardous Waste Program	Stationary

Facility Registry System (FRS) Quality Plan

TABLE A - 2. FRS DATA SOURCES – DESCRIPTION INFORMATION				
SYSTEM ACRONYM	SYSTEM DESCRIPTION	INTEREST TYPES	SUPPLEMENTAL INTEREST TYPES	FACILITY TYPES
IDNR_EFD	The Iowa Department of Natural Resources Emission Factor Documentation (IDNR_EFD) provides information about existing emission factors.	State Master	Brownfields Site Drinking Water System Formal Enforcement Action State Environmental Assessment Area State Site Assessed For Superfund Superfund Targeted Brownfield Assessment	Stationary
IN-FRS	The Indiana Department of Environmental Management (IDEM) implemented the Indiana Facility Registry System (I-FRS), which provides an interface and processes to link facility data monitored by multiple state and EPA program systems. In addition, I-FRS enables IDEM to reconcile environmental data and exchange it with EPA FRS using the electronic data exchange over the network node.	State Master	Air Major Air Program Air Stack Testing Brownfields Site CESQG Compliance Activity Compost Site Drinking Water Program Enforcement/Compliance Activity EPCRA Facility Formal Enforcement Action Groundwater Program Hazardous Waste Program Leaking Storage Tank LQG Not In A Universe NPDES Major NPDES Non-Major NPDES Permit Refuse Disposal Release Assessment	Brownfields Site Contaminated Site Contamination Addressed Monitoring Station Potentially Contaminated Site Stationary Water System

TABLE A - 2. FRS DATA SOURCES – DESCRIPTION INFORMATION				
SYSTEM ACRONYM	SYSTEM DESCRIPTION	INTEREST TYPES	SUPPLEMENTAL INTEREST TYPES	FACILITY TYPES
			Scrap Tire Management Site Investigation Solid Waste Landfill Solid Waste Processing Facility Solid Waste Program SQG State Cleanup Site State Master Superfund Tri Reporter Underground Storage Tank Program Voluntary Clean Up Program Waste Tire Site	
ISD	The Industrial Siting Division (ISD) administers the Wyoming Industrial Information and Siting Act, which requires permits for all projects with construction costs of \$168 million or more and for certain business types regardless of cost, including waste incineration or disposal facilities capable of receiving greater than 500 short tons per day of household refuse or mixed household and industrial refuse, commercial facilities which incinerate or dispose of regulated quantities of hazardous wastes which are subject to hazardous waste shipping manifest requirements under subtitle C of the Resource Conservation and Recovery Act, and commercial radioactive waste management facilities.	State Master	Industrial Sites Mine Operating Permit	Stationary
KS-FP	The Kansas Facility Profiler (KS-FP) is a geographically-based data warehouse that presents information about facilities and locations of interest to the Kansas Department	State Master	Air Major Air Minor Air Program Air Quality State Permittee - Minor	Stationary

TABLE A - 2. FRS DATA SOURCES – DESCRIPTION INFORMATION				
SYSTEM ACRONYM	SYSTEM DESCRIPTION	INTEREST TYPES	SUPPLEMENTAL INTEREST TYPES	FACILITY TYPES
	of Health and Environment (KDHE). It has in excess of twenty environmental interests which contain information on closed facilities, completed cleanups, and past operations, as well as data on current operations and activities.		Source Air Quality Title V Permittee - Major Source Air Quality U.S. Record Keeping Requirement Only AQ Air Quality CAFO (Confined Animal Feeding Operation) Drinking Water Program Dry Cleaners Enforcement/Compliance Activity EPCRA Facility Has Storage Tanks Onsite Formal Enforcement Action Hazardous Waste Program Identified Sites Live Stock Waste Control Mine Operating Permit NPDES Permit NPDES Stormwater Permit Refuse Disposal Residual Waste Right-To-Know Solid Waste Facility Solid Waster Program State Cleanup Site Underground Injection Control (UIC) Underground Injection Control (Class I Wells) Underground Injection Control (Class III Wells)	

TABLE A - 2. FRS DATA SOURCES – DESCRIPTION INFORMATION				
SYSTEM ACRONYM	SYSTEM DESCRIPTION	INTEREST TYPES	SUPPLEMENTAL INTEREST TYPES	FACILITY TYPES
			Underground Storage Tank Program Unspecified Universe Wastewater Facility Wastewater Treatment Federal/State Facility Wastewater Treatment State Facility WMHW WM Hazardous Waste WPC Water Pollution Control	
LA-TEMPO	The Louisiana - Tools For Environmental Management And Protection Organizations (LA-TEMPO) is Louisiana's central repository for all facility data and includes permits, surveillance, enforcement, and remediation information.	State Master		
MA-EPICS	The Massachusetts - Environmental Protection Integrated Computer System (MA-EPICS) is the central repository for all environmental protection data for the State of Massachusetts.	State Master	Air Program Criteria And Hazardous Air Pollutant Inventory Enforcement/Compliance Activity Formal Enforcement Action Generator Of Hazardous Waste Hazardous Waste Program	Stationary

TABLE A - 2. FRS DATA SOURCES – DESCRIPTION INFORMATION				
SYSTEM ACRONYM	SYSTEM DESCRIPTION	INTEREST TYPES	SUPPLEMENTAL INTEREST TYPES	FACILITY TYPES
MD-EPSC	The Maryland Department of the Environment (MDE) Environmental Permits Service Center (MD-EPSC) promotes multi-media pollution prevention and provides permit assistance to business and industries.	State Master	Enforcement/Compliance Activity Formal Enforcement Action Groundwater Program Incinerator NPDES Major NPDES Non-Major NPDES Permit NPDES Stormwater Permit Oil Control Refuse Disposal Scrap Tire Management Sewage Sludge Utilization Wood Waste Recycling	Stationary
MD-PEMIS	The Maryland Permanent Emission (MD-PEMIS) database houses data related to air emissions.	State Master	Air Major Air Minor Enforcement/Compliance Activity	Stationary
MD-RCRA	Maryland’s Resource Conservation and Recovery Act (RCRA) database houses data related to hazardous waste.	State Master	Hazardous Waste Program	Stationary
ME-EFIS	The Maine Department of Environmental Protection (DEP) Environmental Facility Information System (ME-EFIS) integrates information on environmental facilities, permits, violations, enforcement actions, and compliance activities needed to support regulatory requirements and target environmental quality improvements for the water, air, solid waste, and hazardous waste program areas.	State Master	NPDES Permit	Stationary

TABLE A - 2. FRS DATA SOURCES – DESCRIPTION INFORMATION				
SYSTEM ACRONYM	SYSTEM DESCRIPTION	INTEREST TYPES	SUPPLEMENTAL INTEREST TYPES	FACILITY TYPES
MN-DELTA	MN-DELTA is the Minnesota Pollution Control Agency's (MPCA) permitting, compliance, and enforcement information management system, which facilitates the issuance of permits and manages compliance.	State Master	Air Major Air Program Air Synthetic Minor CESQG Enforcement/Compliance Activity Formal Enforcement Action General Permit Storm Water Ind Hazardous Waste Program Incinerator Livestock Waste Control LQG Not In A Universe NPDES Major NPDES Non-Major NPDES Permit NPDES Pretreatment Program NPDES Stormwater Permit Post Closure Care Site Refuse Disposal Solid Waste Program SQG Transporter TSD	Stationary

TABLE A - 2. FRS DATA SOURCES – DESCRIPTION INFORMATION				
SYSTEM ACRONYM	SYSTEM DESCRIPTION	INTEREST TYPES	SUPPLEMENTAL INTEREST TYPES	FACILITY TYPES
MO-DNR	The Missouri Department of Natural Resources (MO-DNR) involves a resource assessment and monitoring program, biological criteria development, monitoring of targeted sites to determine compliance with the designated use of aquatic life protection in the standards, monitoring for 303(3) purposes, and the development of a stream classification framework.	State Master	Air Major Air Minor Air Monitoring Site Air Program Air Synthetic Minor Brownfields Property Brownfields Site CESQG Compliance Activity Enforcement/Compliance Activity Formal Enforcement Action Hazardous Waste Program LQG Not In A Universe NPDES Major NPDES Non-Major Performance Track SQG State Master Superfund Superfund NPL Transporter TRI Reporter TSD Used Oil Program	Stationary

TABLE A - 2. FRS DATA SOURCES – DESCRIPTION INFORMATION				
SYSTEM ACRONYM	SYSTEM DESCRIPTION	INTEREST TYPES	SUPPLEMENTAL INTEREST TYPES	FACILITY TYPES
MS-ENSITE	The Mississippi Department of Environmental Quality (MDEQ), Office of Pollution Controls (OPC) maintains ENSITE, the Electronic Environmental Site Information System that regulates compliance assurance, permitting, activity tracking, and maintenance of a single agency interest-link to master file.	State Master	Air Major Air Minor Air Program Air Synthetic Minor CESQG Enforcement/Compliance Activity Formal Enforcement Action Hazardous Waste Program Live Stock Waste Control LQG NPDES No Exposure Certification NPDES Non-Major NPDES Permit NPDES Pretreatment Program NPDES Stormwater Permit Refuse Disposal Scrap Tire Management SQG Transporter TSD Wastewater Facility	Stationary
MT-CEDARS	The Montana Department of Environmental Quality (DEQ) Consolidated Environmental Data Acquisition and Retrieval System (MT-CEDARS) allows facilities throughout the state to quickly and easily report daily air and water quality data.	State Master	Air Program Asbestos Coal Formal Enforcement Action Hazardous Waste Program Mineral Exploration Open Cut Underground Storage Tank Program	Stationary

TABLE A - 2. FRS DATA SOURCES – DESCRIPTION INFORMATION				
SYSTEM ACRONYM	SYSTEM DESCRIPTION	INTEREST TYPES	SUPPLEMENTAL INTEREST TYPES	FACILITY TYPES
NC-FITS	The North Carolina Facility Identification Template for States (NC-FITS) derives FRS data for submittal to EPA via the central data exchange.	State Master	Air Program Brownfields Site Dam Site Drinking Water Program Enforcement/Compliance Activity Formal Enforcement Action Groundwater Program Hazardous Waste Program State Cleanup Site Under Ground Storage Tank Program Wastewater Facility Wastewater Program Water Capacity Use/Groundwater Use	Stationary
ND-FP	North Dakota Facility Profile (ND-FP)	State Master	Air Major Air Minor Air Synthetic Minor Community Water System Incinerator LQG Non-Community Water System NPDES Permit SQG Transporter TSD Underground Storage Tank Program Used Oil	Stationary

TABLE A - 2. FRS DATA SOURCES – DESCRIPTION INFORMATION				
SYSTEM ACRONYM	SYSTEM DESCRIPTION	INTEREST TYPES	SUPPLEMENTAL INTEREST TYPES	FACILITY TYPES
NE-IIS	The Nebraska Department of Environmental Quality (DEQ) Integrated Information System (IIS) maintains the EPA facility files.	State Master	Air Program Asbestos Abatement Program Enforcement/Compliance Activity Environmental Assistance Emergency Planning & Community Right-To-Know Act (EPCRA) Formal Enforcement Action Grants And Planning Hazardous Waste Program Leaking Storage Tank Legal Services Livestock Waste Control Low Level Radioactive Waste Mineral Exploration NPDES Permit Onsite Wastewater Treatment Operator Certification Refuse Disposal Release Assessment Remedial Action Plan Monitoring Scrap Tire Management Superfund Surface Water Site Title 200 Reimbursement Fund TRI Reporter UIC Wastewater Facility	Stationary

Facility Registry System (FRS) Quality Plan

TABLE A - 2. FRS DATA SOURCES – DESCRIPTION INFORMATION				
SYSTEM ACRONYM	SYSTEM DESCRIPTION	INTEREST TYPES	SUPPLEMENTAL INTEREST TYPES	FACILITY TYPES
NH-DES	The New Hampshire Department of Environmental Services (NHDES) ensures high levels of water quality for water supplies, regulates the emissions of air pollutants, and fosters the proper management of municipal and industrial waste.	State Master	Air Minor Air Program Community Water System Drinking Water Program Drinking Water System Formal Enforcement Action Hazardous Waste Program Leaking Storage Tank Oil Control Refuse Disposal State Cleanup Site	Stationary
NJ-NJEMS	The New Jersey Department of Environmental Protection (NJDEP) Environmental Management System (NJEMS) is an integrated system that manages large databases of environmental information.	State Master	See Comment 1.	Stationary
NM-TEMPO	New Mexico's -Tools For Environmental Management and Protection Organizations (NM-TEMPO) is New Mexico's integrated environmental management system.	State Master	Air Program Asbestos Abatement Program Brownfields Site Enforcement/Compliance Activity Ground Water Program Leaking Storage Tank Superfund UIC Underground Storage Tank Program Voluntary Clean Up Program	Stationary
NNEMS	The Navajo Nation Environmental Management System (NNEMS)	Tribal Master	None	Stationary

TABLE A - 2. FRS DATA SOURCES – DESCRIPTION INFORMATION				
SYSTEM ACRONYM	SYSTEM DESCRIPTION	INTEREST TYPES	SUPPLEMENTAL INTEREST TYPES	FACILITY TYPES
NV-FP	The Nevada Facility Profile (NV-FP)	State Master	Air Major Air Minor Air Program Air Quality State Permittee - Minor Source Air Quality U.S. Record Keeping Requirement Only Drinking Water Program EPCRA Facility Has Storage Tanks Onsite Live Stock Waste Control Mine Operating Permit NPDES Stormwater Permit Refuse Disposal Right-To-Know Solid Waste Facility Solid Waster Program State Cleanup Site UIC Underground Injection Control (Class I Wells) Underground Storage Tank Program Unspecified Universe Wastewater Facility	Stationary

TABLE A - 2. FRS DATA SOURCES – DESCRIPTION INFORMATION				
SYSTEM ACRONYM	SYSTEM DESCRIPTION	INTEREST TYPES	SUPPLEMENTAL INTEREST TYPES	FACILITY TYPES
OH-CORE	The OH-CORE database contains information commonly shared among the Ohio EPA environmental programs. The information is facility-based, general in nature, and used to support specific programmatic systems while simultaneously maintaining an inventory of common facility-related data. Specific programmatic details are maintained in programmatic databases.	State Master	Air Major Drinking Water Program Enforcement/Compliance Activity EPCRA Formal Enforcement Action Hazardous Waste Program NPDES Permit Refuse Disposal TRI Reporter	Stationary
OK-FMS	The Oklahoma Facility Management System (OK-FMS) is an application, used primarily by the Land Protection Division, and secondarily by the Water Quality Division, to track environmental compliance activities.	State Master	None	Stationary

TABLE A - 2. FRS DATA SOURCES – DESCRIPTION INFORMATION				
SYSTEM ACRONYM	SYSTEM DESCRIPTION	INTEREST TYPES	SUPPLEMENTAL INTEREST TYPES	FACILITY TYPES
OR-DEQ	The Oregon Department of Environmental Quality (DEQ) is a regulatory agency tasked with protecting the quality of Oregon’s environment. DEQ uses a combination of technical assistance, inspections, and permitting to help public and private facilities and citizens understand and comply with state and federal environmental regulations.	State Master	Air Contaminant Discharge Permit (ACDP) Regular Air Major Air Program CESQG Enforcement/Compliance Activity Environmental Cleanup Study Area Formal Enforcement Action Leaking Storage Tank LQG Material Recycling NPDES Major NPDES Non-Major NPDES Stormwater Permit Onsite Wastewater Treatment Refuse Disposal Sewage Sludge Utilization SQG Superfund Superfund NPL SW Transfer Municipal TSD Underground Storage Tank Program Wood Waste Recycling	Water System Contaminated Site Stationary

Facility Registry System (FRS) Quality Plan

TABLE A - 2. FRS DATA SOURCES – DESCRIPTION INFORMATION				
SYSTEM ACRONYM	SYSTEM DESCRIPTION	INTEREST TYPES	SUPPLEMENTAL INTEREST TYPES	FACILITY TYPES
PA-EFACTS	Pennsylvania’s Department of Environmental Protection’s (DEP) Environmental, Facility, Application, and Compliance Tracking System (PA-EFACTS) is a department-wide database that provides a holistic view of clients and sites (including facilities) that DEP regulates.	State Master	Air Program Drinking Water Program Hazardous Waste Program NPDES Permit Oil And Gas Refuse Disposal Residual Waste	Stationary
PDS	The Arkansas Permit Data System (PDS) is an integrated system maintaining data on air quality, mining, tires, solid waste, tank, water and hazardous waste, as well as inspections, invoicing and complaints.	State Master	Air Major Air Minor Air Program Facility Hazardous Waste Program Incinerator Livestock Waste Control Material Recycling Mine Operating Permit Mineral Exploration NPDES General Permit NPDES Major NPDES Permit NPDES Stormwater Permit Oil And Gas Refuse Disposal Scrap Tire Management Sewage Sludge Utilization Surface Water Site UIC Underground Storage Tank Program	Facility Mobile Pipeline Stationary

Facility Registry System (FRS) Quality Plan

TABLE A - 2. FRS DATA SOURCES – DESCRIPTION INFORMATION				
SYSTEM ACRONYM	SYSTEM DESCRIPTION	INTEREST TYPES	SUPPLEMENTAL INTEREST TYPES	FACILITY TYPES
PERMIT TRACKING	The Alabama Department of Environmental Management (ADEM) Permit Tracking system provides data entry, retrieval, and accounting functions and includes brief general data about facilities, their ADEM permits and fees owed and/or paid.	State Master	None	Stationary
RI-PLOVER	Rhode Island – Permits, Licenses and Other Vital Environmental Records (RI-PLOVER) is Rhode Island’s Department of Environmental Management’s regulatory programs’ integrated information management system.	State Master	Air Compliance Inspections Annual Emissions Inventory Approval To Burn Alternative Fuel Closure Leaking Underground Storage Tank (LUST) Minor Source New Permit Minor Source Permit Modification New UST Tank Registration OC&I - Site Specific Information Site Remediation - Voluntary Cleanup Program (VCP), NID, Hazardous Waste Management (HWM) Stage II Inspections	Stationary
SC-EFIS	The South Carolina Department of Health and Environmental Control (DHEC) Environmental Facility Information System (SC-EFIS) integrates information on environmental facilities, permits, violations, enforcement actions, and compliance activities needed to support regulatory requirements and target environmental quality improvements for the water, air, solid waste, and hazardous waste program areas.	State Master	401 Certification Air Major Air Program Asbestos Abatement Program Beach Monitoring Dam Site Drinking Water Program Drinking Water System Enforcement/Compliance Activity Formal Enforcement Action Hazardous Waste Program	Stationary

TABLE A - 2. FRS DATA SOURCES – DESCRIPTION INFORMATION				
SYSTEM ACRONYM	SYSTEM DESCRIPTION	INTEREST TYPES	SUPPLEMENTAL INTEREST TYPES	FACILITY TYPES
			Laboratory Certification Livestock Waste Control Material Recycling Mine General Permit Mine Operating Permit Mineral Exploration NPDES Permit Oil And Gas Oil Control Radioactive Materials Radioactive Waste Refuse Disposal Scrap Tire Management Superfund Transporter TRI Reporter TSD Underground Storage Tank Program Wood Waste Recycling X-Ray Equipment	

TABLE A - 2. FRS DATA SOURCES – DESCRIPTION INFORMATION				
SYSTEM ACRONYM	SYSTEM DESCRIPTION	INTEREST TYPES	SUPPLEMENTAL INTEREST TYPES	FACILITY TYPES
SIMS	A suite of Web-based applications designed to allow the Connecticut Department of Environmental Protection (DEP) staff to harmonize environmental interest information from disparate systems into a single agency-wide data repository (known as CFI). The Site Information Management System (SIMS) provides tools for identifying and resolving duplicate data, querying data (using both tabular and geospatial methods), and viewing and maintaining documents associated to the data.	State Master	401 Certification Air Major Air Minor Air Program Air Synthetic Minor Ground Water Program Groundwater Program Material Recycling NPDES Permit NPDES Pretreatment Program NPDES Stormwater Permit Oil Control Pesticides - Application Refuse Disposal Sediments Solid Waste Program Surface Water Site Toxics Cleanup TSD UIC Underground Storage Tank Program	Stationary
SRPMICEMS	The Salt River Pima-Maricopa Indian Community Environmental Management System	Tribal Master	None	Stationary

Facility Registry System (FRS) Quality Plan

TABLE A - 2. FRS DATA SOURCES – DESCRIPTION INFORMATION				
SYSTEM ACRONYM	SYSTEM DESCRIPTION	INTEREST TYPES	SUPPLEMENTAL INTEREST TYPES	FACILITY TYPES
STATE	Information that has been manually entered into FRS by a state user.	Air Program Drinking Water Program EPCRA Leaking Storage Tank Navigable Waters NPDES General Permit NPDES Permit NPDES Stormwater Permit Underground Storage Tank Program	Enforcement/Compliance Activity Formal Enforcement Action	Stationary
SWIS	The Solid Waste Information System (SWIS) database contains information on solid waste facilities, operations, and disposal sites throughout the State of California. The types of facilities found in this database include landfills, transfer stations, material recovery facilities, composting sites, transformation facilities, waste tire sites, and closed disposal sites. For each facility, the database contains information about location, owner, operator, facility type, regulatory and operational status, authorized waste types, and local enforcement agency.	Refuse Disposal	None	Stationary
UORS	The Used Oil Recycling System (UORS) is managed by the California Integrated Waste Management Board (CIWMB). The CIWMB helps communities establish and promote convenient collection opportunities for used oil and used oil filters.	State Master	Used Oil Program Used Oil Recycling	Stationary
UST	The Underground Storage Tank (UST) system manages information on underground storage tanks and any underground piping connected to the tanks that have at least 10 percent of its combined volume underground. The federal	State Master	Underground Storage Tank Program UST	Facility

Facility Registry System (FRS) Quality Plan

TABLE A - 2. FRS DATA SOURCES – DESCRIPTION INFORMATION				
SYSTEM ACRONYM	SYSTEM DESCRIPTION	INTEREST TYPES	SUPPLEMENTAL INTEREST TYPES	FACILITY TYPES
	UST regulations apply only to underground tanks and piping storing either petroleum or certain hazardous substances.			
WA-DOEFSIS	The Washington Department of Ecology Facility / Site Identification System (WA-DOEFSIS) provides a means to query and display data maintained by the Department of Ecology. The system contains key information for each facility/site that is currently, or has been, of interest to the departments air quality, dam safety, hazardous waste, toxic cleanup, and water quality programs.	State Master	401czm Mitigation Site 401czm Project Site Air Major Air Minor Air Program Air Qual Annual Reg Source Air Synthetic Minor Beach Monitoring CESQG Dairy Dam Site Emergency/Haz Chem Rpt Tier2 Enforcement Final Enforcement/Compliance Activity EPCRA Formal Enforcement Action General Permit Industrial General Permit Storm Water Ind Groundwater Program Haz Waste Management Activity Haz Waste Transfer Facility Hazardous Waste Generator Hazardous Waste Program Independent Cleanup Industrial Sites Leaking Storage Tank Livestock Waste Control	Stationary

TABLE A - 2. FRS DATA SOURCES – DESCRIPTION INFORMATION				
SYSTEM ACRONYM	SYSTEM DESCRIPTION	INTEREST TYPES	SUPPLEMENTAL INTEREST TYPES	FACILITY TYPES
			LQG LUST Facility Minor Industrial Non Enforcement Final NPDES Major NPDES Non-Major NPDES Permit NPDES Stormwater Permit Refuse Disposal Release Assessment Remedial Action Plan Monitoring SQG State Cleanup Site Superfund NPL Toxics Cleanup Transporter TRI Reporter TSD Underground Storage Tank Underground Storage Tank Program Voluntary Clean Up Program Voluntary Cleanup Sites	
WI-ESR	The Wisconsin Environmental Site Register (WI-ESR) is a database that contains core information about facilities, organizations, and people related to the Wisconsin Department of Natural Resources (DNR).	State Master	Air Program CESQG Drinking Water System Hazardous Waste Program LQG SQG Transporter Tri Reporter	Stationary

TABLE A - 2. FRS DATA SOURCES – DESCRIPTION INFORMATION				
SYSTEM ACRONYM	SYSTEM DESCRIPTION	INTEREST TYPES	SUPPLEMENTAL INTEREST TYPES	FACILITY TYPES
			TSD Wastewater Facility	

Comment 1: New Jersey Supplemental Interests

- | | |
|--|--|
| Air – Air | Air - Air Mobile Source |
| Air - Air Non-Regulated | Air - Air Operating Permits |
| Air Program | DPCC - DPCC Major Facilities |
| DPCC - DPCC Non-Major Facilities | DPCC - DPCC Non-Regulated |
| DPCC - DPCC Transmission Pipelines | Drinking Water Program |
| Enforcement/Compliance Activity | EPCRA |
| Formal Enforcement Action | Ground Water Program |
| Groundwater Program | Hazardous Waste - HW Generator |
| Hazardous Waste - HW Generator and Transporter | Hazardous Waste - HW Generator and TSD |
| Hazardous Waste - HW Generator, Trans. and TSD | Hazardous Waste - HW Non Regulated |
| Hazardous Waste - HW Transporter | Hazardous Waste - HW Transporter - Transfer Facility |
| Hazardous Waste - Recycling Center - Used Oil | Hazardous Waste Program |
| Lab Certification - Commercial Environmental Lab | Lab Certification - Environmental Lab |
| Lab Certification - Non-Commercial Environmental Lab | Laboratory Certification |
| Land Use - Coastal and Land Use | Land Use - Land Use Non-Regulated |
| Material Recycling | Mineral Exploration |
| Not In a Universe | NPDES Permit |
| NPDES Stormwater Permit | Onsite Wastewater Treatment |
| Pesticides – Application | Pesticides - Aquatic Permits |
| Pesticides - Commercial Entity | Pesticides - Distribution |
| Pesticides – Farm | Pesticides - General |
| Pesticides - Government Entity | Pesticides - Manufacture |
| Pesticides - Pesticide Applicator Business | Pesticides - Pesticide Dealer Business |
| Pesticides - Pesticide Producer | Pesticides-Application |
| Radiation - Non-Ion Radiation Medical Facility | Radiation - Rad Materials Government Facility |
| Radiation - Rad Materials Hospital Facility | Radiation - Rad Materials Industrial Facility |

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Radiation - Rad Materials Medical Facility
Radiation - Radon Measurement Business
Radiation - X-Ray Ed Prog Dental Radiography
Radiation - X-Ray Ed Prog Podiatric Radiography
Radiation - X-Ray Facility Dental
Radiation - X-Ray Facility Hospital
Radiation - X-Ray Facility Medical
Radiation - X-Ray Facility School
Radiation - X-Ray Machine Source Installer
Radon Mitigation
Release Assessment
Right-To-Know - Rppr &
RMP Reporter
Site Remediation - Child Care Facility
Site Remediation - SRP-PI
Site Remediation - UST Transporters
Solid Waste - Medical Waste Facility
Solid Waste - Medical Waste Transporter
Solid Waste - Recycling Center
Solid Waste - Solid Waste Generator
Solid Waste - Solid Waste Transporter
TCPA - TCPA Facilities
TSD
Used Oil Program
Water Quality - Chapter 199 Alternate Design
Water Quality - Non-NIPDES SQAR
Water Quality - Stormwater Collection System
Water Supply - Physical Connection
Water Supply - Water Allocation
Watershed Management - Wastewater Management Planning Area
X-Ray Equipment

Radiation - Rad Materials Mobile Nuclear Med
Radiation - Radon Mitigation Business
Radiation - X-Ray Ed Prog Diagnostic Radiography
Radiation - X-Ray Facility Chiropractor
Radiation - X-Ray Facility Government
Radiation - X-Ray Facility Industrial
Radiation - X-Ray Facility Podiatric
Radiation - X-Ray Facility Veterinary
Radioactive Materials
Refuse Disposal
Right-To-Know - Pollution Prevention/Right-To Know
P2 Planning
Sewage Sludge Utilization
Site Remediation - LNA-PI
Site Remediation - UST Firm Certification
Solid Waste - Maintenance Facility
Solid Waste - Medical Waste Generator
Solid Waste - Rail Transfer Facility
Solid Waste - Solid Waste Facility
Solid Waste - Solid Waste Non-Regulated
State Cleanup Site
Transporter
Underground Storage Tank Program
Wastewater Facility
Water Quality - NIPDES
Water Quality - Sanitary Collection System
Water Quality - Water Quality Non-Regulated
Water Supply - Safe Drinking Water
Water Supply - Well Drilling Company
Watershed Management - Water Quality Management Planning Area

APPENDIX B: SERVER CONFIGURATIONS

NCC Production Environment at EPA Internet		
BUCKEYE (or EPAPUB) - Static Content Web Server	SHIRE (DB Server)	AZTECA (Oracle Application Server 10g v9.0.4.1 hosting dynamic Web pages, Java apps, etc.)
<p>Hardware</p> <ul style="list-style-type: none"> • IBM HS20 Blade Servers • # of Processors: 4 • Processor Speed: 3.0 GHz Intel Xeon • Amount of Memory: 4 GB 	<p>Hardware</p> <ul style="list-style-type: none"> • IBM Power 5 ML70 with 2 1.6 GHz processors and 14 GB RAM 	<p>Hardware</p> <ul style="list-style-type: none"> • IBM HS20 Blade Servers • # of Processors: 4 • Processor Speed: 3.0 GHz Intel Xeon • Amount of Memory: 8 GB
<p>Software</p> <ul style="list-style-type: none"> • Operating System: Red Hat Enterprise Linux Advanced Server Release 3 • URL: www.epa.gov 	<p>Software</p> <ul style="list-style-type: none"> • Operating System: IBM AIX v5.2 • Database Server: Oracle 10G v10.2.0.2 	<p>Software</p> <ul style="list-style-type: none"> • Operating System: Red Hat Enterprise Linux Advanced Server Release 3 • OAS 10g Mid-tier Components (Webcache, HTTP Server, OC4J, modplsql, Portal, Discoverer, Forms, Reports) • URL: http(s)://iaspub.epa.gov
NCC Production Environment at EPA Intranet		
TULIP (Static Content Web Server)	PERCHERON (DB Server)	QUARTER (Oracle Application Server 10g v9.0.4.1 hosting dynamic Web pages, Java apps, etc.)
<p>Hardware</p> <ul style="list-style-type: none"> • IBM HS20 Blade Servers • # of Processors: 4 • Processor Speed: 3.0 GHz Intel Xeon • Amount of Memory: 4 GB 	<p>Hardware</p> <ul style="list-style-type: none"> • IBM Power 5 ML70 with 2 1.6 GHz processors and 14 GB RAM 	<p>Hardware</p> <ul style="list-style-type: none"> • IBM HS20 Blade Servers • # of Processors: 4 • Processor Speed: 3.0 GHz Intel Xeon • Amount of Memory: 4 GB
<p>Software</p> <ul style="list-style-type: none"> • Operating System: Red Hat Enterprise Linux Advanced Server Release 3 • Oracle 9i Client. • URL: http(s)://intranet.epa.gov 	<p>Software</p> <ul style="list-style-type: none"> • Operating System: IBM AIX v5.2 • Database Server: Oracle 10G v10.2.0.2 	<p>Software</p> <ul style="list-style-type: none"> • Operating System: Red Hat Enterprise Linux Advanced Server Release 3 • OAS 10g Mid-tier Components (Web cache, HTTP Server, Oracle Containers for J2EE (OC4J), MODPLSQL, Portal, Discoverer, Forms, Reports) • URL: http(s)://iasint.rtpnc.epa.gov

NCC Production Environment at EPA -Staging		
CLYDESDALE(DB Server)		
<p>Hardware</p> <ul style="list-style-type: none"> • IBM powerpc (9117-570) with 1654 Mhz processors and 24 GB RAM • HDD - 2 INTERNAL 68 G each, 64 SAN – 73G • CPU – 4 • IP ADDRESS: 134.67.221.64 		
<p>Software</p> <ul style="list-style-type: none"> • Operating System: IBM AIX v5.3 • Database Server: Oracle 10G v10.2.0.2 		
QA LAN Environment at SEC		
IDAHO (or SECENV) - Static Content Web Server	IDAHO (DB Server)	CONNECTICUT (Oracle Application Server 10G v (9.0.4.1) hosting dynamic Web pages, Java apps, etc.)
<p>Hardware</p> <ul style="list-style-type: none"> • IBM Power 5 ML70 with 2 1.6 GHz processors and 8 GB RAM <p>Software</p> <ul style="list-style-type: none"> • Operating System: IBM AIX v5.2 • Database Server: Oracle 9iR2 (9.2.0.7) • URL: secenv.epa.gov 	<p>Hardware</p> <ul style="list-style-type: none"> • IBM Power 5 ML70 with 2 1.6 GHz processors and 8 GB RAM <p>Software</p> <ul style="list-style-type: none"> • Operating System: IBM AIX v5.2 • Database Server: Oracle 10G v10.2.0.2 	<p>Hardware</p> <ul style="list-style-type: none"> • DELL PF2650 2X3.06 GHz processors and 3 GB RAM <p>Software</p> <ul style="list-style-type: none"> • Operating System: Red Hat Enterprise Linux Advanced Server Release 4 • Database Server: Oracle 10G v10.1.2.0.2 • OAS 10G 10.1.2.02 Mid-tier Components (Webcache, HTTP Server, OC4J, MODPLSQL, Portal, Discoverer, Forms, Reports) • URL: http://secoas.epa.gov
Development Environment at SEC		
ALASKA (Enviro DB Server)	ESE-PA (Application Server)	
<p>Hardware</p> <ul style="list-style-type: none"> • Sun Fire v440 with 4X1GHz Sparc Processors and 8MB RAM <p>Software</p> <ul style="list-style-type: none"> • Operating System: Solaris 9 • Database Server: Oracle v9.2.0.7 server (Enterprise Edition) • Geodatabase Server: ArcSDE 8.3 	<p>Hardware</p> <ul style="list-style-type: none"> • Dell PowerEdge 2650 with 2.8 GHz Processor and 4GB RAM <p>Software</p> <ul style="list-style-type: none"> • Operating System: Windows Server 2003 Standard Edition • Oracle 10g Application Server v9.0.4.1 	

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Facility Registry System (FRS) Quality Plan

ATTRIBUTE NAME	ATTRIBUTE DEFINITION
Create Date	A system-generated value that represents the calendar date and time that the corresponding information was posted to the database.
User ID	The user ID of the person who entered the data or the method by which the data was entered into the system.
Sensitivity Indicator	Indicates whether or not the associated data is enforcement sensitive.
Public Indicator	Indicates whether or not the associated data is accessible by the public on the Internet.
ALTERNATIVE NAME	
An alternative, historic or program-specific name for the facility site.	
Alternative Name	An alternative, historic or program-specific name for the facility site.
Alternative Name Type	The type of the alternative, historical, or program-specific name for the facility site (e.g., primary, legal, historical, local).
Source of Data	The source of the associated alternative name data.
Last Reported Date	The most recent date the corresponding alternative name data was reported to the Source of Data.
Create Date	A system-generated value that represents the calendar date and time that the corresponding information was first posted to the database.
Update Date	A system-generated value that represents the most recent calendar date and time the corresponding information was updated in the database.
User ID	The user ID of the person who entered the data or the method by which the data was entered into the system.
Sensitivity Indicator	Indicates whether or not the associated data is enforcement sensitive.
Public Indicator	Indicates whether or not the associated data is accessible by the public on the Internet.
ENVIRONMENTAL INTEREST	
The environmental permits and regulatory programs that apply to the facility site.	
Information System Identifier	The identification number, such as the permit number, assigned by an information management system that represents a facility site, waste site, operable unit, or other feature tracked by that Environmental Information System.
Federal/State Source Indicator	A flag which indicates whether the environmental interest data was provided by a federal or state environmental information system. <i>Allowable Values: 'F' or 'S'</i>
Environmental Interest Start Date	Date the agency became interested in the facility site for a particular environmental interest type (YYYYMMDD).
Environmental Interest Start Date Qualifier	The qualifier that specifies the meaning of the date being used as an approximation for the environmental interest start date. <i>Allowable Values: (examples)</i> First Reporting Year Date of First Report Date Operations Commenced Date Permit Issued Date of Permit Application Date Monitoring Started
Environmental Interest End Date	Date the agency ceased to be interested in the facility site for a particular environmental interest type (YYYYMMDD).

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Facility Registry System (FRS) Quality Plan

ATTRIBUTE NAME	ATTRIBUTE DEFINITION						
Environmental Interest End Date Qualifier	<p>The qualifier that specifies the meaning of the date being used as an approximation for the environmental interest end date.</p> <p><i>Allowable Values: (examples)</i></p> <p>Date Last Submission Received Date of last report</p> <p>Date Permit Ended Date Operations Ended</p>						
Active Code	<p>A code that indicates whether the environmental interest is active at the facility or site (currently applies only to RCRAInfo).</p> <p><i>Allowable Values:</i></p> <table border="0"> <tr> <td><u>Value</u></td> <td><u>Meaning</u></td> </tr> <tr> <td>Y</td> <td>Yes, the environmental interest is active.</td> </tr> <tr> <td>N</td> <td>No, the environmental interest is not active.</td> </tr> </table>	<u>Value</u>	<u>Meaning</u>	Y	Yes, the environmental interest is active.	N	No, the environmental interest is not active.
<u>Value</u>	<u>Meaning</u>						
Y	Yes, the environmental interest is active.						
N	No, the environmental interest is not active.						
Source of Data	The source of the associated environmental interest data.						
Last Reported Date	The most recent date the corresponding environmental interest data was reported to the Source of Data.						
Link Method	The method used to determine the association or "linkage" of this environmental interest to a particular facility site (for example, automated match, data steward).						
Create Date	A system-generated value that represents the calendar date and time the corresponding information was posted to the database.						
Update Date	A system-generated value that represents the most recent calendar date and time that the corresponding information was updated in the database.						
User ID	The user ID of the person who entered the data or the method by which the data was entered into the system.						
Sensitivity Indicator	Indicates whether or not the associated data is enforcement sensitive.						
Public Indicator	Indicates whether or not the associated data is accessible by the public on the Internet.						
Refresh Date	The date the data was last extracted from the data source.						
Compliance Indicator	Indicates whether or not one or more compliance or enforcement activities exist against this environmental interest in the Integrated Compliance Information System (ICIS).						
Parent Program System Identifier	The unique identification number assigned by an information management system to the parent facility or site (e.g., the SDWIS water system).						
ENVIRONMENTAL INTEREST TYPE REFERENCE							
The name and description of an environmental permit or regulatory program.							

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Facility Registry System (FRS) Quality Plan

ATTRIBUTE NAME	ATTRIBUTE DEFINITION																																		
Environmental Interest Type	<p>The environmental permit or regulatory program that applies to the facility site. <i>Allowable Values: (examples)</i></p> <table border="0"> <tr> <td><u>Value</u></td> <td><u>Meaning</u></td> </tr> <tr> <td>TRI Report</td> <td>Toxic Release Inventory Report</td> </tr> <tr> <td>NPDES Major</td> <td>Clean Water Act NPDES Major</td> </tr> <tr> <td>NPDES Non-Major</td> <td>Clean Water Act NPDES Minor</td> </tr> <tr> <td>Air Major</td> <td>Clean Air Act Stationary Source Major</td> </tr> <tr> <td>Air Synthetic Minor</td> <td>Clean Air Act Stationary Source Synthetic Minor</td> </tr> <tr> <td>Air Minor</td> <td>Clean Air Act Stationary Source Minor</td> </tr> <tr> <td>RMP Facility</td> <td>Clean Air Act RMP Facility</td> </tr> <tr> <td>TSD</td> <td>Hazardous Waste Handler - Treatment, Storage, Disposal (TSD)</td> </tr> <tr> <td>LQG</td> <td>Hazardous Waste Handler - Large Quantity Generator (LQG)</td> </tr> <tr> <td>SQG</td> <td>Hazardous Waste Handler - Small Quantity Generator (SQG)</td> </tr> <tr> <td>CESQG</td> <td>Hazardous Waste Handler - Conditionally Exempt Small Quantity Generator (CESQG)</td> </tr> <tr> <td>Transporter</td> <td>Hazardous Waste Handler - Transporter</td> </tr> <tr> <td>UIC</td> <td>Underground Injection Control Well (UIC)</td> </tr> <tr> <td>UST</td> <td>Underground Storage Tank (UST)</td> </tr> <tr> <td>Superfund</td> <td>Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Site</td> </tr> <tr> <td>Superfund NPL</td> <td>CERCLA National Priorities List (NPL) Site</td> </tr> </table>	<u>Value</u>	<u>Meaning</u>	TRI Report	Toxic Release Inventory Report	NPDES Major	Clean Water Act NPDES Major	NPDES Non-Major	Clean Water Act NPDES Minor	Air Major	Clean Air Act Stationary Source Major	Air Synthetic Minor	Clean Air Act Stationary Source Synthetic Minor	Air Minor	Clean Air Act Stationary Source Minor	RMP Facility	Clean Air Act RMP Facility	TSD	Hazardous Waste Handler - Treatment, Storage, Disposal (TSD)	LQG	Hazardous Waste Handler - Large Quantity Generator (LQG)	SQG	Hazardous Waste Handler - Small Quantity Generator (SQG)	CESQG	Hazardous Waste Handler - Conditionally Exempt Small Quantity Generator (CESQG)	Transporter	Hazardous Waste Handler - Transporter	UIC	Underground Injection Control Well (UIC)	UST	Underground Storage Tank (UST)	Superfund	Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Site	Superfund NPL	CERCLA National Priorities List (NPL) Site
<u>Value</u>	<u>Meaning</u>																																		
TRI Report	Toxic Release Inventory Report																																		
NPDES Major	Clean Water Act NPDES Major																																		
NPDES Non-Major	Clean Water Act NPDES Minor																																		
Air Major	Clean Air Act Stationary Source Major																																		
Air Synthetic Minor	Clean Air Act Stationary Source Synthetic Minor																																		
Air Minor	Clean Air Act Stationary Source Minor																																		
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Superfund	Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Site																																		
Superfund NPL	CERCLA National Priorities List (NPL) Site																																		
Interest Description	A description of the environmental permit or regulatory program.																																		
Program Category	A higher level classification consisting of program categories that group similar environmental interest types together.																																		
Program Category Description	A description of the program category.																																		
Query Flag	A flag which indicates whether or not the associated environmental interest is available as a selection criteria within the Environmental Interest Query.																																		
Public Indicator	Indicates whether or not the associated data is accessible by the public on the Internet.																																		
Create Date	A system-generated value that represents the calendar date and time that the corresponding information was posted to the database.																																		
Update Date	A system-generated value that represents the most recent calendar date and time the corresponding information was updated in the database.																																		
FACILITY SITE																																			
Basic identification information for a facility site, including the facility registry identifier, geographic address, and geopolitical descriptors.																																			
Facility Registry Identifier	The identification number assigned by the EPA Facility Registry System to uniquely identify a facility site.																																		
Facility Site Name	The public or commercial name of a facility site (that is., the full name that commonly appears on invoices, signs, or other business documents, or as assigned by the state when the name is ambiguous).																																		
Location Address Text	The address that describes the physical (geographic) location of the front door or main entrance of a facility site, including urban-style street address or rural address.																																		

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ATTRIBUTE NAME	ATTRIBUTE DEFINITION						
Supplemental Location Text	The text that provides additional information about a place, including a building name with its secondary unit and number, an industrial park name, an installation name or descriptive text where no formal address is available.						
Locality Name	The name of the city, town, village or other locality, when identifiable, within whose boundaries (the majority of) the facility site is located. This is not always the same as the city used for USPS mail delivery.						
County and State FIPS Code	The code that represents the county or county equivalent and the state or state equivalent of the United States.						
County Name	The name of the U.S. county or county equivalent in which the facility site is physically located.						
State USPS Code	The U.S. Postal Service abbreviation that represents the state or state equivalent for the U.S. and Canada.						
State Name	The name of a principal administrative subdivision of the United States, Canada, or Mexico.						
Country Name	The name that represents a primary geopolitical unit of the world. <i>Default:</i> USA						
Postal Code	The combination of the five-digit Zone Improvement Plan (ZIP) code and the four-digit extension code (if available) that represents the geographic segment that is a subunit of the ZIP Code, assigned by the U.S. Postal Service to a geographic location; or the postal zone specific to the country, other than the U.S., where the facility site is located.						
Location Description	A brief explanation of where the facility site is located, including navigational directions and/or more descriptive information about the location of the facility site.						
Federal Facility Indicator Code	Code indicating whether or not the facility is the property of the Federal Government. <i>Allowable Values:</i> <table border="0" data-bbox="513 1108 1424 1213"> <tr> <td><u>Value</u></td> <td><u>Meaning</u></td> </tr> <tr> <td>Y</td> <td>Yes, the facility is the property of the Federal Government.</td> </tr> <tr> <td>N</td> <td>No, the facility is not the property of the Federal Government.</td> </tr> </table>	<u>Value</u>	<u>Meaning</u>	Y	Yes, the facility is the property of the Federal Government.	N	No, the facility is not the property of the Federal Government.
<u>Value</u>	<u>Meaning</u>						
Y	Yes, the facility is the property of the Federal Government.						
N	No, the facility is not the property of the Federal Government.						
Tribal Land Indicator Code	Code indicating whether or not the facility site is located on tribal land.						
Tribal Land Name	The name of the Tribal Reservation, statistical area, or Public Domain Allotment. If the tribal entity has no land base, the name of the tribal entity is used as the Tribal Land Name. Examples: Colorado River Indian Reservation, Ponca Tribal Designated Statistical Area, Wampanoag Tribe of Gay Head (Aquinnah) of Massachusetts.						
Congressional District Number	The number that represents a Congressional District for a state within the United States.						
Legislative District Number	The number that represents a Legislative District within a state.						
Hydrologic Cataloging Unit (HUC) Code	The Hydrologic Unit Code (HUC) that represents a geographic area representing part or all of a surface drainage basin, a combination of drainage basins, or a distinct hydrologic feature.						
EPA Region Code	The code that represents an EPA Region.						
Airshed Code	An area of varying size that is dependent on a single air mass and that is uniformly affected by the same sources of air pollution.						
Census Block Code	The smallest entity for which the Census Bureau collects and tabulates decennial census information; bounded on all sides by visible and non-visible features shown on Census Bureau maps.						

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ATTRIBUTE NAME	ATTRIBUTE DEFINITION								
Facility Site Type Name	<p>The descriptive name for the type of site the facility occupies.</p> <p><i>Allowable Values:</i></p> <table border="0"> <tr> <td>Stationary</td> <td>Contamination Addressed</td> </tr> <tr> <td>Monitoring Site</td> <td>Contaminated Site</td> </tr> <tr> <td>Brownfields Site</td> <td>Potentially Contaminated Site</td> </tr> <tr> <td>Water System</td> <td></td> </tr> </table>	Stationary	Contamination Addressed	Monitoring Site	Contaminated Site	Brownfields Site	Potentially Contaminated Site	Water System	
Stationary	Contamination Addressed								
Monitoring Site	Contaminated Site								
Brownfields Site	Potentially Contaminated Site								
Water System									
Environmental Interest Status Code	<p>The status of the facility in relation to regulatory interest.</p> <p><i>Allowable Values:</i> 'A' for Active or 'I' for Inactive</p>								
Small Business Indicator	<p>Code indicating whether or not a business is requesting relief under EPA's Small Business Policy, which applies to businesses having less than 100 employees.</p>								
Environmental Justice Code	<p>The code that identifies the type of environmental justice concern affecting the facility or enforcement action.</p>								
Geo-coded Latitude Measure	<p>The measure of the angular distance on a meridian north or south of the equator, derived by geocoding (that is, calculating a coordinate value for an entity based on the reported full location address for that entity).</p>								
Geo-coded Longitude Measure	<p>The measure of the angular distance on a meridian east or west of the prime meridian, derived by geocoding (that is, calculating a coordinate value for an entity based on the reported full location address for that entity).</p>								
Horizontal Accuracy Measure	<p>The measure of the accuracy (in meters) of the geo-coded latitude and longitude coordinates.</p>								
Data Quality Code	<p>A code assigned by the automated integration process to indicate whether the address data are missing, invalid, or non-standard.</p>								
Sensitivity Indicator	<p>Indicates whether or not the associated data is enforcement sensitive.</p>								
Public Indicator	<p>Indicates whether or not the associated data is accessible by the public on the Internet.</p>								
Review Flag	<p>A flag that indicates the record requires a manual review due to changes from a data source.</p>								
Review Reason	<p>The reason the record is flagged for manual review.</p>								
Last Reported Date	<p>The most recent date the corresponding facility site data was reported to the Source of Data.</p>								
Create Date	<p>A system-generated value that represents the calendar date and time that the corresponding information was first posted to the database.</p>								
Update Date	<p>A system-generated value that represents the most recent calendar date and time the corresponding information was updated in the database.</p>								
User ID	<p>The user ID of the person who entered the data or the method by which the data was entered into the system.</p>								
Parent Registry ID	<p>The unique identification number, assigned by the EPA Facility Registry System, to the parent facility site (for example, the SDWIS water system).</p>								
U.S. - Mexico Border Indicator	<p>An indicator that the facility is located within 62.5 miles (100 km) of the United States - Mexico Border. The indicator is only applicable to facilities in California, Arizona, New Mexico, and Texas.</p> <p><i>Allowable Values:</i></p> <table border="0"> <tr> <td><u>Value</u></td> <td><u>Meaning</u></td> </tr> <tr> <td>Y</td> <td>Yes, the facility is located within 100 km of the U.S. - Mexican Border.</td> </tr> <tr> <td>N</td> <td>No, the facility is not located within 100 km of the U.S. - Mexican Border.</td> </tr> </table>	<u>Value</u>	<u>Meaning</u>	Y	Yes, the facility is located within 100 km of the U.S. - Mexican Border.	N	No, the facility is not located within 100 km of the U.S. - Mexican Border.		
<u>Value</u>	<u>Meaning</u>								
Y	Yes, the facility is located within 100 km of the U.S. - Mexican Border.								
N	No, the facility is not located within 100 km of the U.S. - Mexican Border.								

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Facility Registry System (FRS) Quality Plan

ATTRIBUTE NAME	ATTRIBUTE DEFINITION																
FEDERAL AGENCY REFERENCE																	
The code and name of a Federal Agency/Bureau.																	
Federal Agency Code	The Federal Agency/Bureau code. The five-character code consists of a letter followed by four numbers. There are four possible letters that can occupy the first character position: 'C' for Civilian Federal Agency; 'D' for Department of Defense; 'E' for Department of Energy; 'X' for Unknown. The second and third characters represent the agency code, while the fourth and fifth characters represent the bureau code.																
Federal Agency Name	The Federal Agency/Bureau name.																
GEOGRAPHIC COORDINATES																	
A geographic point or set of points, defined by latitude and longitude coordinates used to locate a facility site, usually the front door or centroid, including the associated method, accuracy, and description data.																	
Location Reference Identifier	A system generated number used to uniquely identify a latitude and longitude coordinate pair.																
Latitude Measure	The measure of the angular distance on a meridian north or south of the equator.																
Longitude Measure	The measure of the angular distance on a meridian east or west of the prime meridian.																
Horizontal Accuracy Measure	The measure of the accuracy (in meters) of the latitude and longitude coordinates.																
Geometric Type Code	The code that represents the geometric entity represented by one point or a sequence of latitude and longitude points. <i>Allowable Values:</i> <table border="0"> <thead> <tr> <th><u>Value</u></th> <th><u>Meaning</u></th> <th><u>Value</u></th> <th><u>Meaning</u></th> </tr> </thead> <tbody> <tr> <td>003</td> <td>Area</td> <td>004</td> <td>Region</td> </tr> <tr> <td>002</td> <td>Line</td> <td>005</td> <td>Route</td> </tr> <tr> <td>001</td> <td>Point</td> <td></td> <td></td> </tr> </tbody> </table>	<u>Value</u>	<u>Meaning</u>	<u>Value</u>	<u>Meaning</u>	003	Area	004	Region	002	Line	005	Route	001	Point		
<u>Value</u>	<u>Meaning</u>	<u>Value</u>	<u>Meaning</u>														
003	Area	004	Region														
002	Line	005	Route														
001	Point																
Horizontal Collection Method Code	The code that represents the method used to determine the latitude and longitude coordinates for a point on the earth.																
Horizontal Reference Datum Code	The code that represents the reference datum used in determining latitude and longitude coordinates. <i>Allowable Values:</i> <table border="0"> <thead> <tr> <th><u>Value</u></th> <th><u>Meaning</u></th> </tr> </thead> <tbody> <tr> <td>001</td> <td>NAD27</td> </tr> <tr> <td>002</td> <td>NAD83</td> </tr> <tr> <td>003</td> <td>WGS84</td> </tr> </tbody> </table>	<u>Value</u>	<u>Meaning</u>	001	NAD27	002	NAD83	003	WGS84								
<u>Value</u>	<u>Meaning</u>																
001	NAD27																
002	NAD83																
003	WGS84																
Geographic Reference Point Code	The code that represents the place for which geographic coordinates were established.																
Source Map Scale Number	The number that represents the proportional distance on the ground for one unit of measure on the map or photo. <i>Remarks:</i> Mandatory for all horizontal data collection methods except for methods using Global Positioning System (GPS).																
Vertical Measure	The measure of elevation (that is, the altitude), in meters, above or below a reference datum.																
Vertical Collection Method Code	The code that represents the method used to collect vertical measure (that is, the altitude) of a reference point.																

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ATTRIBUTE NAME	ATTRIBUTE DEFINITION																																				
Vertical Reference Datum Code	The code that represents the reference datum used to determine the vertical measure (that is, the altitude). <i>Allowable Values:</i> <table border="0"> <thead> <tr> <th><u>Value</u></th> <th><u>Meaning</u></th> <th><u>Value</u></th> <th><u>Meaning</u></th> </tr> </thead> <tbody> <tr> <td>004</td> <td>Local Tidal Datum</td> <td>001</td> <td>NAVD88</td> </tr> <tr> <td>003</td> <td>Mean Sea-Level</td> <td>002</td> <td>NGVD29</td> </tr> </tbody> </table>	<u>Value</u>	<u>Meaning</u>	<u>Value</u>	<u>Meaning</u>	004	Local Tidal Datum	001	NAVD88	003	Mean Sea-Level	002	NGVD29																								
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004	Local Tidal Datum	001	NAVD88																																		
003	Mean Sea-Level	002	NGVD29																																		
Vertical Accuracy Measure	The measure of the accuracy (in meters) of the vertical measure (that is, the altitude) of a reference point.																																				
Coordinate Data Source Code	The code that represents the party responsible for providing the latitude and longitude coordinates.																																				
Data Collection Date	The calendar date when data was collected.																																				
Sub-Entity Identifier	Identification number for the operable unit.																																				
Sub-Entity Type Code	The code for an operable unit. <i>Allowable Values:</i> <table border="0"> <thead> <tr> <th><u>Value</u></th> <th><u>Meaning</u></th> <th><u>Value</u></th> <th><u>Meaning</u></th> </tr> </thead> <tbody> <tr> <td>2</td> <td>Boundary Point</td> <td>50</td> <td>Sludge</td> </tr> <tr> <td>52</td> <td>Emergency Overflow</td> <td>40</td> <td>Spills</td> </tr> <tr> <td>4</td> <td>End of Discharge Point</td> <td>20</td> <td>Stack</td> </tr> <tr> <td>7</td> <td>Grid Origin</td> <td>12</td> <td>Surface Water Intake</td> </tr> <tr> <td>53</td> <td>Incinerator</td> <td>6</td> <td>Transect Origin</td> </tr> <tr> <td>13</td> <td>Land Application Site</td> <td>11</td> <td>Water Treatment Plant</td> </tr> <tr> <td>51</td> <td>Landfill</td> <td>5</td> <td>Well Head</td> </tr> <tr> <td>1</td> <td>Point of Record</td> <td>3</td> <td>Sampling Point</td> </tr> </tbody> </table>	<u>Value</u>	<u>Meaning</u>	<u>Value</u>	<u>Meaning</u>	2	Boundary Point	50	Sludge	52	Emergency Overflow	40	Spills	4	End of Discharge Point	20	Stack	7	Grid Origin	12	Surface Water Intake	53	Incinerator	6	Transect Origin	13	Land Application Site	11	Water Treatment Plant	51	Landfill	5	Well Head	1	Point of Record	3	Sampling Point
<u>Value</u>	<u>Meaning</u>	<u>Value</u>	<u>Meaning</u>																																		
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13	Land Application Site	11	Water Treatment Plant																																		
51	Landfill	5	Well Head																																		
1	Point of Record	3	Sampling Point																																		
Comment Text	The text that provides additional information about the geographic coordinates																																				
Geometry	Coordinates that define the geometry of the point feature.																																				
Compliant Flag	Identifies whether a latitude/longitude coordinate set is MAD code compliant.																																				
Preferred Flag	Identifies the recommended coordinates for a program ID based on the following criteria: EPA verification (where applicable); Desirable collection method, reference point, conveyor and mod score; and Coordinate conformance to NW-quadrant.																																				
Mod Score	Mod score is a calculated score primarily based on the accuracy of the collection method, but modified by verifications of the coordinates to geometric ZIP/county polygons/boxes using Oracle Spatial. In general, low values are more desirable. Mod score is calculated: $MOD_SCORE = [15 + ACCURACY_VALUE^{0.61}] * [1 - VERIFY_WEIGHT]$.																																				
Conveyor	Identification of the party that transmitted the latitude and longitude coordinates for inclusion in the Locational Reference Tables.																																				
User ID	The user ID of the specific person who entered the data or the method by which the data was entered into the system (for example, 'REFRESH').																																				
Source of Data	The source of the associated geographic coordinate data.																																				
Timestamp	A system-generated value that represents the calendar date and time the corresponding information was posted to the database.																																				
Sensitivity Indicator	Indicates whether or not the associated data is enforcement sensitive.																																				

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Facility Registry System (FRS) Quality Plan

ATTRIBUTE NAME	ATTRIBUTE DEFINITION																				
Public Indicator	Indicates whether or not the associated data is accessible by the public on the Internet.																				
INDIVIDUAL																					
An individual person who has some responsibility or role at the facility site.																					
Individual Identifier	A system-generated number that uniquely identifies an individual person.																				
Individual Full Name	The complete name of a person, potentially including first name, middle name or initial, and surname.																				
Individual Title Text	The title held by a person in an organization.																				
Company Division Name	The name of a division or a department of a company.																				
Telephone Number	The primary telephone number for an individual person.																				
FAX Number	The telephone number to which a facsimile can be sent to an individual person.																				
E-mail Address Text	The text that describes an electronic mail address of an individual person.																				
Alternate Telephone Number	An alternate telephone number for an individual person.																				
Source of Data	The source of the associated individual data.																				
Last Reported Date	The most recent date the corresponding individual data was reported to the Source of Data.																				
Create Date	A system-generated value that represents the calendar date and time that the corresponding information was first posted to the database.																				
Update Date	A system-generated value that represents the most recent calendar date and time the corresponding information was updated in the database.																				
User ID	The user ID of the person who entered the data or the method by which the data was entered into the system.																				
Sensitivity Indicator	Indicates whether or not the associated data is enforcement sensitive.																				
Public Indicator	Indicates whether or not the associated data is accessible by the public on the Internet.																				
INFORMATION SYSTEM REFERENCE																					
An information management system for an environmental program.																					
Information System Abbreviated Name	<p>The abbreviated name that represents the name of an information management system for an environmental program.</p> <p><i>Allowable Values: (examples)</i></p> <table border="0"> <thead> <tr> <th><u>Value</u></th> <th><u>Meaning</u></th> </tr> </thead> <tbody> <tr> <td>TRIS</td> <td>Toxic Chemical Release Inventory System</td> </tr> <tr> <td>RCRAInfo</td> <td>Resource Conservation Recovery Act Information System</td> </tr> <tr> <td>PCS</td> <td>Permit Compliance System</td> </tr> <tr> <td>CERCLIS</td> <td>Comprehensive Environmental Response, Compensation and Liability Information System</td> </tr> <tr> <td>SDWIS</td> <td>Safe Drinking Water Information System</td> </tr> <tr> <td>DOCKET</td> <td>Enforcement Docket System</td> </tr> <tr> <td>NCDB</td> <td>National Compliance Data Base</td> </tr> <tr> <td>RMP</td> <td>Risk Management Plans</td> </tr> <tr> <td>NEI</td> <td>National Emissions Inventory</td> </tr> </tbody> </table>	<u>Value</u>	<u>Meaning</u>	TRIS	Toxic Chemical Release Inventory System	RCRAInfo	Resource Conservation Recovery Act Information System	PCS	Permit Compliance System	CERCLIS	Comprehensive Environmental Response, Compensation and Liability Information System	SDWIS	Safe Drinking Water Information System	DOCKET	Enforcement Docket System	NCDB	National Compliance Data Base	RMP	Risk Management Plans	NEI	National Emissions Inventory
<u>Value</u>	<u>Meaning</u>																				
TRIS	Toxic Chemical Release Inventory System																				
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NCDB	National Compliance Data Base																				
RMP	Risk Management Plans																				
NEI	National Emissions Inventory																				
Information System Name	The full name of an information management system for an environmental program.																				

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Facility Registry System (FRS) Quality Plan

ATTRIBUTE NAME	ATTRIBUTE DEFINITION
Information System Description	A description of an information management system for an environmental program.
Federal State Code	A flag which indicates whether the information management system is federal or state.
Public Indicator	Indicates whether or not the associated data is accessible by the public on the Internet.
Create Date	A system-generated value that represents the calendar date and time that the corresponding information was first posted to the database.
Update Date	A system-generated value that represents the most recent calendar date and time the corresponding information was updated in the database.
MAILING ADDRESS	
The standard address used to send mail to an individual or organization affiliated with the facility site.	
Mailing Address Identifier	A system-generated number that uniquely identifies a mailing address.
Mailing Address Text	The exact address where a mail piece is intended to be delivered, including urban-style street address, rural route, and PO Box.
Supplemental Address Text	The text that provides additional information to facilitate the delivery of a mail piece, including building name, secondary units, and mail stop or local box numbers not serviced by the U.S. Postal Service.
Mailing Address City Name	The name of the city, town, or village where the mail is delivered.
Mailing Address State Code	The U.S. Postal Service abbreviation that represents the state or state equivalent for the U.S. and Canada.
Mailing Address State Name	The name of the state where mail is delivered.
Mailing Address Country Name	The name of the country where the addressee is located. <i>Default: United States</i>
Mailing Address Postal Code	The combination of the five-digit Zone Improvement Plan (ZIP) code and the four-digit extension code (if available) that represents the geographic segment that is a subunit of the ZIP Code, assigned by the U.S. Postal Service to a geographic location to facilitate mail delivery; or the postal zone specific to the country, other than the U.S., where the mail is delivered.
Source of Data	The source of the associated mailing address data.
Last Reported Date	The most recent date the corresponding mailing address data was reported to the Source of Data.
Create Date	A system-generated value that represents the calendar date and time that the corresponding information was first posted to the database.
Update Date	A system-generated value that represents the most recent calendar date and time the corresponding information was updated in the database.
User ID	The user ID of the person who entered the data or the method by which the data was entered into the system.
Sensitivity Indicator	Indicates whether or not the associated data is enforcement sensitive.
Public Indicator	Indicates whether or not the associated data is accessible by the public on the Internet.
NORTH AMERICAN INDUSTRY CLASSIFICATION	
The North American Industry Classification System (NAICS) code or type of industrial activity, occurring at the facility site.	

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Facility Registry System (FRS) Quality Plan

ATTRIBUTE NAME	ATTRIBUTE DEFINITION										
North American U.S. National Industry Classification System (NAICS) Code	The code that represents a subdivision of an industry that accommodates user needs in the United States (six-digits).										
NAICS Primary Indicator	<p>The name that indicates whether the associated NAICS Code represents the primary activity occurring at the facility site.</p> <p><i>Allowable Values:</i></p> <table border="0"> <thead> <tr> <th data-bbox="513 478 695 506"><u>Value</u></th> <th data-bbox="695 478 1424 506"><u>Meaning</u></th> </tr> </thead> <tbody> <tr> <td data-bbox="513 506 695 569">Primary</td> <td data-bbox="695 506 1424 569">The NAICS Code represents the primary activity occurring at the facility site.</td> </tr> <tr> <td data-bbox="513 569 695 632">Secondary</td> <td data-bbox="695 569 1424 632">The NAICS Code represents a secondary activity occurring at the facility site.</td> </tr> <tr> <td data-bbox="513 632 695 699">Unknown</td> <td data-bbox="695 632 1424 699">It is not known whether the NAICS Code represents the primary or secondary activity at the facility site.</td> </tr> </tbody> </table>	<u>Value</u>	<u>Meaning</u>	Primary	The NAICS Code represents the primary activity occurring at the facility site.	Secondary	The NAICS Code represents a secondary activity occurring at the facility site.	Unknown	It is not known whether the NAICS Code represents the primary or secondary activity at the facility site.		
<u>Value</u>	<u>Meaning</u>										
Primary	The NAICS Code represents the primary activity occurring at the facility site.										
Secondary	The NAICS Code represents a secondary activity occurring at the facility site.										
Unknown	It is not known whether the NAICS Code represents the primary or secondary activity at the facility site.										
Source of Data	The source of the associated NAICS data.										
Last Reported Date	The most recent date the corresponding NAICS data was reported to the Source of Data.										
Create Date	A system-generated value that represents the calendar date and time that the corresponding information was first posted to the database.										
Update Date	A system-generated value that represents the most recent calendar date and time the corresponding information was updated in the database.										
User ID	The user ID of the person who entered the data or the method by which the data was entered into the system.										
Sensitivity Indicator	Indicates whether or not the associated data is enforcement sensitive.										
Public Indicator	Indicates whether or not the associated data is accessible by the public on the Internet.										
ORGANIZATION											
A company, government body, or other type of organization that has some responsibility or role at the Facility Site.											
Organization Identifier	A system-generated number that uniquely identifies an organization.										
Organization Formal Name	The legal, formal name of an organization that is affiliated with the facility site.										
Organization DUNS Number	The Data Universal Numbering System (DUNS) number assigned by Dun and Bradstreet to identify unique business establishments.										
Organization Type Text	<p>The type of organization.</p> <p><i>Allowable Values (examples):</i></p> <table border="0"> <tbody> <tr> <td data-bbox="513 1465 695 1493">Federal</td> <td data-bbox="695 1465 1424 1493">Private</td> </tr> <tr> <td data-bbox="513 1493 695 1520">GOCO</td> <td data-bbox="695 1493 1424 1520">County</td> </tr> <tr> <td data-bbox="513 1520 695 1547">District</td> <td data-bbox="695 1520 1424 1547">Tribal</td> </tr> <tr> <td data-bbox="513 1547 695 1575">Municipal</td> <td data-bbox="695 1547 1424 1575">Other</td> </tr> <tr> <td data-bbox="513 1575 695 1602">State</td> <td></td> </tr> </tbody> </table>	Federal	Private	GOCO	County	District	Tribal	Municipal	Other	State	
Federal	Private										
GOCO	County										
District	Tribal										
Municipal	Other										
State											
Company Division Name	The name of a division or a department of a company.										
Telephone Number	The primary telephone number for an organization.										
FAX Number	The telephone number to which a facsimile can be sent to an organization.										
Email Address Text	The text that describes an electronic mail address of an organization.										
Alternate Telephone Number	An alternate telephone number for an organization.										

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Facility Registry System (FRS) Quality Plan

ATTRIBUTE NAME	ATTRIBUTE DEFINITION								
Employer Identifier	The unique tax identification number issued by the Internal Revenue Service to the employer.								
State Business Identifier	The uniform business number assigned to an official business by a state.								
Ultimate Parent Name	The legal, formal name of the ultimate parent company of the organization affiliated with the facility site.								
Ultimate Parent DUNS Number	The Data Universal Numbering System (DUNS) number assigned by Dun and Bradstreet to identify unique business establishments, in this case the ultimate U.S. parent company of the organization affiliated with the facility site								
Source of Data	The source of the associated organization data.								
Last Reported Date	The most recent date the corresponding organization data was reported to the Source of Data.								
Create Date	A system-generated value that represents the calendar date and time that the corresponding information was first posted to the database.								
Update Date	A system-generated value that represents the most recent calendar date and time the corresponding information was updated in the database.								
User ID	The user ID of the person who entered the data or the method by which the data was entered into the system.								
Sensitivity Indicator	Indicates whether or not the associated data is enforcement sensitive.								
Public Indicator	Indicates whether or not the associated data is accessible by the public on the Internet.								
STANDARD INDUSTRIAL CLASSIFICATION									
<i>Definition:</i> The Standard Industrial Classification (SIC) or type of business activity, occurring at the facility site.									
Standard Industrial Classification (SIC) Code	The code that represents the economic activity of a company (four-digits).								
SIC Primary Indicator	The name that indicates whether the associated SIC Code represents the primary activity occurring at the facility site. <i>Allowable Values:</i> <table border="0"> <tr> <td><u>Value</u></td> <td><u>Meaning</u></td> </tr> <tr> <td>Primary</td> <td>The SIC Code represents the primary activity occurring at the facility site.</td> </tr> <tr> <td>Secondary</td> <td>The SIC Code represents a secondary activity occurring at the facility site.</td> </tr> <tr> <td>Unknown</td> <td>It is not known whether the SIC Code represents the primary or secondary activity at the facility site.</td> </tr> </table>	<u>Value</u>	<u>Meaning</u>	Primary	The SIC Code represents the primary activity occurring at the facility site.	Secondary	The SIC Code represents a secondary activity occurring at the facility site.	Unknown	It is not known whether the SIC Code represents the primary or secondary activity at the facility site.
<u>Value</u>	<u>Meaning</u>								
Primary	The SIC Code represents the primary activity occurring at the facility site.								
Secondary	The SIC Code represents a secondary activity occurring at the facility site.								
Unknown	It is not known whether the SIC Code represents the primary or secondary activity at the facility site.								
Source of Data	The source of the associated SIC data.								
Last Reported Date	The most recent date the corresponding SIC data was reported to the Source of Data.								
Create Date	A system-generated value that represents the calendar date and time that the corresponding information was first posted to the database.								
Update Date	A system-generated value that represents the most recent calendar date and time the corresponding information was updated in the database.								
User ID	The user ID of the person who entered the data or the method by which the data was entered into the system.								
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Facility Registry System (FRS) Quality Plan

ATTRIBUTE NAME	ATTRIBUTE DEFINITION						
Public Indicator	Indicates whether or not the associated data is accessible by the public on the Internet.						
<p>SUPPLEMENTAL INTEREST</p> <p>The supplemental environmental permits and regulatory programs that apply to the facility site or the environmental interest at the facility site. For the purposes of FRS, supplemental program interests include state programs, compliance and enforcement programs, and National Pollutant Discharge Elimination Systems (NPDES) general permits.</p>							
Supplemental Interest Identifier	A system-generated number that uniquely identifies a supplemental interest record.						
Supplemental Environmental Information System Abbreviated Name	The abbreviated name that represents the name of a supplemental information management system. For the purposes of FRS, supplemental systems include state program systems, compliance and enforcement systems, and program systems that include general permits.						
Supplemental Environmental Information System Identifier	The unique identification number assigned to a judicial or formal administrative enforcement action, a compliance monitoring activity, a general permit, or a state environmental program.						
Supplemental Environmental Interest Type	The supplemental environmental permit or regulatory program that applies to the facility site or the environmental interest at the facility site. For the purposes of FRS, supplemental program interests include state programs, compliance and enforcement programs, and general permits.						
Environmental Interest Start Date	Date the agency became interested in the facility site for a particular environmental interest type (YYYYMMDD).						
Environmental Interest Start Date Qualifier	<p>The qualifier that specifies the meaning of the date being used as an approximation for the environmental interest start date.</p> <p><i>Allowable Values: (examples)</i></p> <table data-bbox="513 1077 1424 1186"> <tr> <td>First Reporting Year</td> <td>Date of First Report</td> </tr> <tr> <td>Date Operations Commenced</td> <td>Date Permit Issued</td> </tr> <tr> <td>Date of Permit Application</td> <td>Date Monitoring Started</td> </tr> </table>	First Reporting Year	Date of First Report	Date Operations Commenced	Date Permit Issued	Date of Permit Application	Date Monitoring Started
First Reporting Year	Date of First Report						
Date Operations Commenced	Date Permit Issued						
Date of Permit Application	Date Monitoring Started						
Environmental Interest End Date	Date the agency ceased to be interested in the facility site for a particular environmental interest type (YYYYMMDD).						
Environmental Interest End Date Qualifier	<p>The qualifier that specifies the meaning of the date being used as an approximation for the environmental interest end date.</p> <p><i>Allowable Values: (examples)</i></p> <table data-bbox="513 1360 1424 1434"> <tr> <td>Date Last Submission Received</td> <td>Date of Last Report</td> </tr> <tr> <td>Date Permit Ended</td> <td>Date Operations Ended</td> </tr> </table>	Date Last Submission Received	Date of Last Report	Date Permit Ended	Date Operations Ended		
Date Last Submission Received	Date of Last Report						
Date Permit Ended	Date Operations Ended						
Reported Supplemental Interest Type	The name of the environmental permit or regulatory program, as reported by the supplemental information system.						
Source of Data	The source of the associated environmental interest data.						
Last Reported Date	The most recent date the corresponding environmental interest data was reported to the Source of Data.						
Create Date	A system-generated value that represents the calendar date and time that the corresponding information was first posted to the database.						
Update Date	A system-generated value that represents the most recent calendar date and time the corresponding information was updated in the database.						
User ID	The user ID of the person who entered the data or the method by which the data was entered into the system.						
Sensitivity Indicator	Indicates whether or not the associated data is enforcement sensitive.						

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Facility Registry System (FRS) Quality Plan

ATTRIBUTE NAME	ATTRIBUTE DEFINITION
Public Indicator	Indicates whether or not the associated data is accessible by the public on the Internet.

APPENDIX D: FRS TABLES

FRS TABLES

FRS_ACCESS_REGISTRY
FRS_ACCESS_REGISTRY_HISTORY
FRS_AFFILIATION
FRS_AFFILIATION_HISTORY
FRS_AGENCY_REF
FRS_ALTERNATIVE_ID
FRS_ALT_NAME
FRS_ALT_NAME_HISTORY
FRS_CHK_DATA_QUALITY
FRS_CHK_DATA_QUALITY_REGION
FRS_CODE_DESCRIPTION
FRS_COMMENT
FRS_CONTACT
FRS_CONTACT_HISTORY
FRS_COUNTY_NAME
FRS_DATA_QUALITY
FRS_DATA_QUALITY_STATS
FRS_DATA_QUALITY_STATS_REGION
FRS_DATA_UPDATE_STATS
FRS_DUNS_NUMBER
FRS_ERRORS
FRS_FACILITY_SITE
FRS_FACILITY_SITE_LAYER
FRS_FAC_SITE_OS
FRS_FAC_SITE_SDE
FRS_FED_FAC_DSCRIP
FRS_INTEREST
FRS_INTEREST_HISTORY
FRS_INTEREST_REF
FRS_LOC_KEY
FRS_LRT_BEST_COORDINATE
FRS_LRT_COLLECT_MTH_LK
FRS_LRT_GEOMETRIC_TYPE_LK
FRS_LRT_HORIZ_DATUM_LK

FRS TABLES

FRS_LRT_LOC_REF
FRS_LRT_LOC_REF_ID
FRS_LRT_LOC_REF_WEBSERVICES
FRS_LRT_REF_POINT_LK
FRS_LRT_SOURCE_LK
FRS_LRT_SUB_TYPE_LK
FRS_LRT_VERT_DATUM_LK
FRS_LRT_VERT_METHOD_LK
FRS_MAILING_ADDRESS
FRS_MAILING_ADDRESS_HISTORY
FRS_MENU
FRS_NAICS
FRS_NAICS_HISTORY
FRS_ORGANIZATION
FRS_ORG_HISTORY
FRS_PGM_FACILITY_HISTORY
FRS_PROGRAM_FACILITY
FRS_PROGRAM_SUMMARY
FRS_RES_ALTERNATIVE_ID
FRS_RES_ALT_NAME
FRS_RES_ANOMALIES
FRS_RES_CONTACT
FRS_RES_ERROR
FRS_RES_INTEREST
FRS_RES_LOC_KEY
FRS_RES_MAIL
FRS_RES_NAICS
FRS_RES_ORG
FRS_RES_PGM_AFS
FRS_RES_PGM_FACILITY
FRS_RES_SIC
FRS_RES_SUP_INTEREST
FRS_SERVICE_AREA
FRS_SIC
FRS_SIC_HISTORY
FRS_SITE_HISTORY

FRS TABLES

FRS_SOURCE_REF
FRS_STATE_NAME
FRS_STATE_REF
FRS_STD_ADDRESS
FRS_STD_CITY_CNTY
FRS_STD_INTEREST_REF
FRS_STD_NAME
FRS_SUPPLEMENTAL_INTEREST
FRS_SUP_INTEREST_HISTORY
FRS_SYSTEM_REF
FRS_TAB_SOURCE
FRS_TAB_SOURCE_HISTORY
FRS_TRIBAL_ENTITY_REF
FRS_TRIBAL_LAND_REF
FRS_USERID_HISTORY
FRS_USER_REGISTRY
FRS_USER_REGISTRY_HISTORY
FRS_ZIP_CODE_REF

APPENDIX E: FACILITY RESEARCH WEB SITES

Commonly Used Facility Research Web Sites By Category
Business Search/Address
http://smallbusiness.dnb.com/default.asp
http://www.melissadata.com/Lookups/index.htm
http://www.google.com
http://www.superpages.com/
http://www.switchboard.com/
http://www.usps.com/
http://www.co.ba.md.us/Agencies/myneighborhood/facilities.html (For Baltimore County)
ZIP Code Listings
http://www.zipinfo.com/search/zipcode.htm
http://www.melissadata.com/Lookups/index.htm
http://maps.google.com
http://www.usps.com/
http://www.mongabay.com/igapo/zip_codes/CO.htm (Colorado)
http://www.mongabay.com/igapo/zip_codes/GA.htm (Georgia)
http://www.louisville.edu/~easchn01/kentucky/1citylist.html (Kentucky)
http://www.mongabay.com/igapo/zip_codes/PA.htm (North Carolina)
http://www.mongabay.com/igapo/zip_codes/TX.htm (Texas)
Latitude / Longitude
http://geocoder.us/
http://www.maporama.com/share/
http://www.ajmsoft.com/ac/geocode.php
http://www.zipmgr.com/geocodeo.aspx
http://terraserver.microsoft.com/default.aspx
http://www.geocode.com/modules.php?name=TestDrive_Eagle
http://worldatlas.com/aatlas/imageg.htm
http://www.hmssurprise.org/Resources/whereami.html
Counties
http://stuff.mit.edu/cqi/geo
http://www.zipinfo.com/search/zipcode.htm
http://www.naco.org/Template.cfm?Section=Find_a_County&Template=/cfiles/counties/usamap.cfm
California State Association of Counties
http://www.csac.counties.org/default.asp
http://www.campbellslist.com/county_seats/select_county_seat.html
Other

Commonly Used Facility Research Web Sites By Category
http://www.circlek.com/CircleK/FindAStore.aspx
http://www.7-eleven.com/storelocator/PrxInput.aspx
http://www.chevron.com/products/locator/locmap_query.asp
http://www.texaco.com/findatexaco/
http://ccionline.org/counties_map.htm
http://www.automotive.com/gas-prices/index.html
http://www.cumberlandfarms.com/store/index.php
http://www.infomine.com/companies-properties/detailsearch.asp

APPENDIX F: PEER REVIEW FORM

Generic Peer Review				
1. Application/Project Name:		2. Change Request #:	3. Date:	
4. Work Product Name:		5. Version or Release#:		
6. Type Of Peer Review: <input type="checkbox"/> Inspection <input type="checkbox"/> Structured Walkthrough <input type="checkbox"/> Other				
7. Participants				
Name	Role/Responsibility	Date Reviewed	Time Spent	
	Leader/Facilitator			
	Recorder			
	Reviewer			
	Reviewee			
8. Objective Criteria (See attachment(s) or fill in with project standards)		(Yes , No, N/A)		
a.				
b.				
c.				
d.				
e.				
9. Summary (Attach Red lines, Suggested Corrections, and Issue Action Item Form as needed)				
Issues / Suggestions / Concerns / Defects	Defect Y/N	Reviewer / Assignee	Priority	Closed Date
a.				
b.				
c.				
d.				
e.				
f.				
g.				
10. Total Defect Count:				
11. Follow-Up Review Required?: <input type="checkbox"/> No <input type="checkbox"/> Yes (Date: _____)				

APPENDIX G: ACRONYMS AND DEFINITIONS[♦]

Acronym	Definition
ACDP	Air Contaminant Discharge Permit
ACRES	Assessment, Cleanup, and Redevelopment Exchange System
AFS	Aerometric Facility System
AIRS	Aerometric Information Retrieval System
ANSI	American National Standards Institute
ASQ	American Society for Quality
CAA	Clean Air Act
CCB	Change Control Board
CDX	Central Data Exchange
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CESQG	Conditionally Exempt Small Quantity Generator
CIMC	Cleanups in My Community
CR	Change Request
CTM	Contract Task Manager
DET	Data Exchange Template
DHS	Department of Homeland Security
DIME	Direct Internet Message Encapsulation
DNC	Demonstrated Node Configuration
DoD	Department of Defense
DoE	Department of Energy
DUNS	Data Universal Numbering System
EA	Enterprise Architecture
ECHO	Enforcement and Compliance History Online
EDSC	Environmental Data Standards Council
EDR	Environmental Data Registry
EM	EnviroMapper
EPA	U.S. Environmental Protection Agency
ERD	Entity Relationship Diagram
ETS	Error Tracking System
FCD	Flow Configuration Document
FGDC	Federal Geographic Data Committee
FINDS	Facility INDEX System
FIPS	Federal Information Processing Standard
FITS	Facility Identification Template for States

[♦] This list of acronyms does not include the Program System Acronyms provided in Appendix A, Table A-1, *FRS Data Sources Contact Information* and Table A-2, *FRS Data Sources Description Information*.

Lockheed Martin Enterprise Solutions & Services**Facility Registry System (FRS) Quality Plan**

Acronym	Definition
FLA	Facility Linkage Application
FRA	Federal Registration Identifier
FRS	Facility Registry System
GDT	Geographic Data Technology
GIS	Geographical Information Systems
HQ	Headquarters
HUC	Hydrologic Cataloging Unit Code
ICIS	Integrated Compliance Information System
IDEA	Integrated Data for Enforcement Analysis
IDQTF	Intergovernmental Data Quality Task Force
IEC	Integrated Error Correction
IECP	Integrated Error Correction Process
ICIS	Integrated Compliance Information System
IPT	Integrated Project Team
ITS-ESE	Information Technology Solutions – Environmental Systems Engineering
LDIP	Locational Data Improvement Project
LM	Lockheed Martin
LQG	Large Quantity Generator
LRT	Locational Reference Table
MAD	Method, Accuracy, and Description
MS	Microsoft
NAICS	North American Industry Classification System
NCC	National Computer Center
NEI	National Emissions Inventory
NPDES	National Pollutant Discharge Elimination System
NPL	National Priorities List
OC4J	Oracle Containers for Java 2 Enterprise Edition
OECA	Office of Enforcement and Compliance Assurance
OEI	Office of Environmental Information
OIC	Office of Information Collection
OTIS	Online Targeting Information System
PCS	Permit Compliance System
PDF	Portable Document Format
PDSL	Pesticide Data Submitters List
PO	Post Office
POC	Point of Contact
QA	Quality Assurance
QAPP	Quality Assurance Project Plan

Lockheed Martin Enterprise Solutions & Services**Facility Registry System (FRS) Quality Plan**

Acronym	Definition
QC	Quality Control
RCRIS	Resource Conservation and Recovery (Act) Information System
RMP	Risk Management Plan
RTP	Research Triangle Park, North Carolina
SDWIS	Safe Drinking Water Information System
SEC	Systems Engineering Center
SIC	Standard Industrial Classification
SLT	Site Locator Tool
SOAP	Simple Object Access Protocol
SOP	Standard Operating Procedures
SQL	Structured Query Language
SSL	Secure Socket Layer
TIMS	Tribal Information Management System
TO	Task Order
TPA	Trading Partner Agreement
TRI	Toxics Release Inventory
TRIS	Toxics Release Inventory System
TSCA	Toxic Substances Control Act
TSD	Treatment, Storage, Disposal
UFP	Unified Federal Policy
UIC	Underground Injection Control
URL	Uniform Resource Locator
US	United States
USPS	United States Postal Service
UST	Underground Storage Tank
UTC	Coordinated Universal Time
VE	Virtual Earth
WME	Window to My Environment
WSDL	Web Service Definition Language
XML	Extensible Markup Language
ZIP	Zone Improvement Plan