♻EPA

WIN/INFORMED: Universe Identification, Waste Activity Monitoring, Program Area Analysis; Final Report

WIN/INFORMED

UNIVERSE IDENTIFICATION
WASTE ACTIVITY MONITORING
PROGRAM AREA ANALYSIS

FINAL REPORT

January 28th, 2000

Acknowledgements

We would like to thank the following individuals for their help with the development of this report:

Beverley Allen	Harriett Jones	Sue Parker
Elizabeth Bols	Scott Latham	Sarah Rasmussen
Leslie Brennan	Dave Levy	Jane Ratcliffe
Paula Cantor	Matt Loesel	Lynn Singleton
Janet Cornelissons	Rusty Lundberg	Allan Tinsley
Walt Derieux	Bud McCarty	Karen Way
Harold "Butch" Dye	John Mitchell	Caroline Westerfer
Debbie Goodwin	Jessica Ogle	
Michael Hillard	Les Otte	

Prepared By

WINDSOR SOLUTIONS, INC.

4000 KRUSE WAY PLACE

BUILDING 2, SUITE 160

LAKE OSWEGO, OR 97035

(503) 675 7833

EXECUTIVE SUMMARY

Background

The WIN/INFORMED initiative is an information reinvention project established jointly by the States and the Environmental Protection Agency (EPA). The objective of this initiative is to reassess the information needs of the hazardous waste management program operating under Subtitle C of the Resource Conservation and Recovery Act (RCRA). Through WIN/INFORMED, EPA and States aim to jointly identify, and share where appropriate, the information needed to effectively manage the RCRA program.

To achieve this goal, strategic planning for the WIN/INFORMED initiative focused on dividing the RCRA program into five logical groupings of program functions and information needs, termed program areas. These are:

- Universe Identification (UID)

- Waste Activity Monitoring (WAM)

- Handler Monitoring and Assistance (HMA)

- Permitting and Corrective Action (PCA)

- Program Evaluation (PE)

This Final Report presents the findings and recommendations resulting from the combined Program Area Analysis (PAA) project conducted for the UID and WAM program areas.

Project Approach

Although originally planned to be undertaken individually, analysis tasks for the UID and WAM program areas were combined to realize significant time and cost savings by conducting national review and implementation planning tasks for these closely related projects at the same time.

A joint team consisting of program staff from States, EPA Regional Offices, and EPA headquarters Office of Solid Waste and Office of Enforcement and Compliance Assurance conducted the PAA project. Program staff participated directly in the project, providing practical experience with the implementation of the RCRA program in their organizations.

Initial information gathering sessions were conducted with participating States and EPA Regional and headquarters offices. Selected program experts reviewed preliminary findings and recommendations through two separate "critical" review processes.

All States, Regions and Offices of EPA then subjected these recommendations to a thorough National Review before the project findings were confirmed by the PAA Team, resulting in three main project deliverables:

Information Needs	The information that must be made available to successfully implement the RCRA program.
Recommended Improvements	The changes to current information collection and management procedures that are necessary to meet the required information needs.
Implementation Plan	An outline for how these recommendations should be organized and further designed and implemented.

This Final Report presents these deliverables. An additional set of *Technical Deliverables* also resulted from this PAA project, including conceptual models of how RCRA program information should be collected and organized. These have been provided under separate cover.

Recommended Information Needs

An important goal of the WIN/INFORMED initiative is to identify information that must be collected and made available to all program staff to support the implementation of the RCRA program. The following recommendations are made with respect to identifying and organizing these information needs.

Common organizing framework

Many of the concerns expressed by PAA participants with respect to current RCRA program information can be attributed to varying interpretations of the information and poor current data quality. Before attempting to resolve these problems the PAA Team first agreed upon a common framework to organize the information needs. This framework is outlined in Table 1.

NATIONAL INFORMATION	SHARED INFORMATION
Has a common, precise definition (i.e., always means the same thing)	
Has *mandatory* creation or collection	Is *optionally* created or collected
Is maintained to a specified level of quality and currency	May be collected in many different ways and is not always current or fully qualified
Relies on Federal rule to support the authority for its collection	Does not depend on Federal authority for its collection
Is always accessible to all regulators from national data systems	Is only submitted to national data systems at the discretion of the implementer.

Table 1: Definition and Principles of National and Shared Information

National systems will accommodate both national and shared information needs

Capabilities will be provided in national implementer systems to support the tracking of both national and shared information needs. This will enable implementers that do not have their own information systems to track and share all important information with other RCRA program staff whether that information is needed by the entire program or a smaller subset of the implementer community.

It is important to note, however, that shared information will, by definition, represent only a partial set of implementers and may hence provide an incomplete picture. Care must be used when interpreting shared information. To avoid potential confusion, the appropriate meta-data should be provided to ensure that program users are aware of the level of completeness for shared information needs and that a consistent level of data quality cannot be assured.

PROGRAM AREA	*Universe Identification*			*Waste Activity Monitoring*
INFORMATION NEED CATEGORY	*RCRA Site Identification*	*RCRA Site Responsibility and Contacts*	*RCRA Site Activity*	*Waste generation, shipment, receipt, and management*
NATIONAL INFORMATION NEEDS	EPA identification number Facility registry identifier Site name Location address (i.e., street address, locality, ZIP, state) Location county Location coordinates Location MAD codes NAICS code Discovery date Notification date Exempt from notification Emergency site Land owner type Mailing address	Owner name Owner type Operator name Operator type Site contact name Site contact phone	State generator status Federal generator status Hazardous waste transporter Hazardous waste fuel marketer Underground injection Used oil transfer station Used oil burners Used oil processor Used oil refiner Used oil marketer Used oil transporter Universal waste handler Hazardous waste import agent Mixed radioactive waste handler GPRA corrective action universe GPRA operating permit universe GPRA post closure universe Annual BOY enforcement universe *TSDF unit type* *TSDF unit commercial type* *TSDF unit operating status* *TSDF unit legal status*	Originating EPA ID Destination EPA ID Federal waste codes State waste codes Quantity Unit of measure Management method Source of waste Destination country Originating country
SHARED INFORMATION NEEDS	Number of employees State identifier Site legal name	D&B number Site contact address	Hazardous waste recycler Hazardous waste transfer station Waste codes *TSDF unit location*	Waste form Mixed radioactive waste Waste description Transporter EPA ID Shipped date Received date Manifest number Foreign recipient Border crossing

Table 2: Program Area Information Needs

National and shared information needs

The PAA Team used this framework to organize the information needs of the UID and WAM program areas into four main categories. Table 2 on the previous page lists these information needs according to the above framework and these four categories.

The following points should be considered when reviewing this table:

- Certain information needs are represented in italicized font in the table. These information needs are all related to the Permitting and Corrective Action program area and include TSDF management system units. These were not considered by the PAA Team to be part of the scope of the UID or WAM PAAs but were captured to provide support for some of the recommended improvements.

- The UID information needs listed have been reconciled with the national "Facility Data Standards" guide recently developed jointly by EPA and States. This will facilitate future cross-media data sharing by the RCRA program.

- The national information needs for the *Waste Generation, Shipment, Receipt, and Management* information need category are only "*national*" for TSDFs and LQGs. For all other types of RCRA Sites[1] these information needs are "*shared*".

Recommended Information Management Improvements

The following recommendations are proposed for improvements to the current RCRA program information collection and management procedures. These recommendations and the current procedures used by the RCRA program for the UID and WAM program areas are illustrated in Figure 1. Each recommendation has been superimposed on the diagram relative to the current procedures that would be affected, and is associated with a number referenced in the text below.

Identification of Sites

Current Situation

Implementing agencies currently assign an EPA identification number to all handlers of hazardous waste that submit an EPA Notification form (8700-12) or equivalent. Although only a single number is typically assigned to a RCRA Site, there are occasions where the same RCRA Site may be assigned several numbers.

Emergency and temporary sites are those for whom waste generation activity is limited to a single, perhaps protracted event. An example of such a site would be one whose waste generation activity is associated with decommissioning of a production process. These RCRA Sites are currently tracked inconsistently in national information systems although all such sites are subject to RCRA regulations governing the handling of wastes that they generate.

Conditionally exempt small quantity generators are not required to notify under RCRA, but despite this, many apply for and are issued an EPA identification number. While these sites are known to the relevant implementing agency, they are rarely tracked in national information systems.

---

[1] A specific location that is currently, or has in the past, conducted waste handling activities of interest to the RCRA Subtitle C program, as promulgated in either the Federal Register or by individual State or Territory statutes.
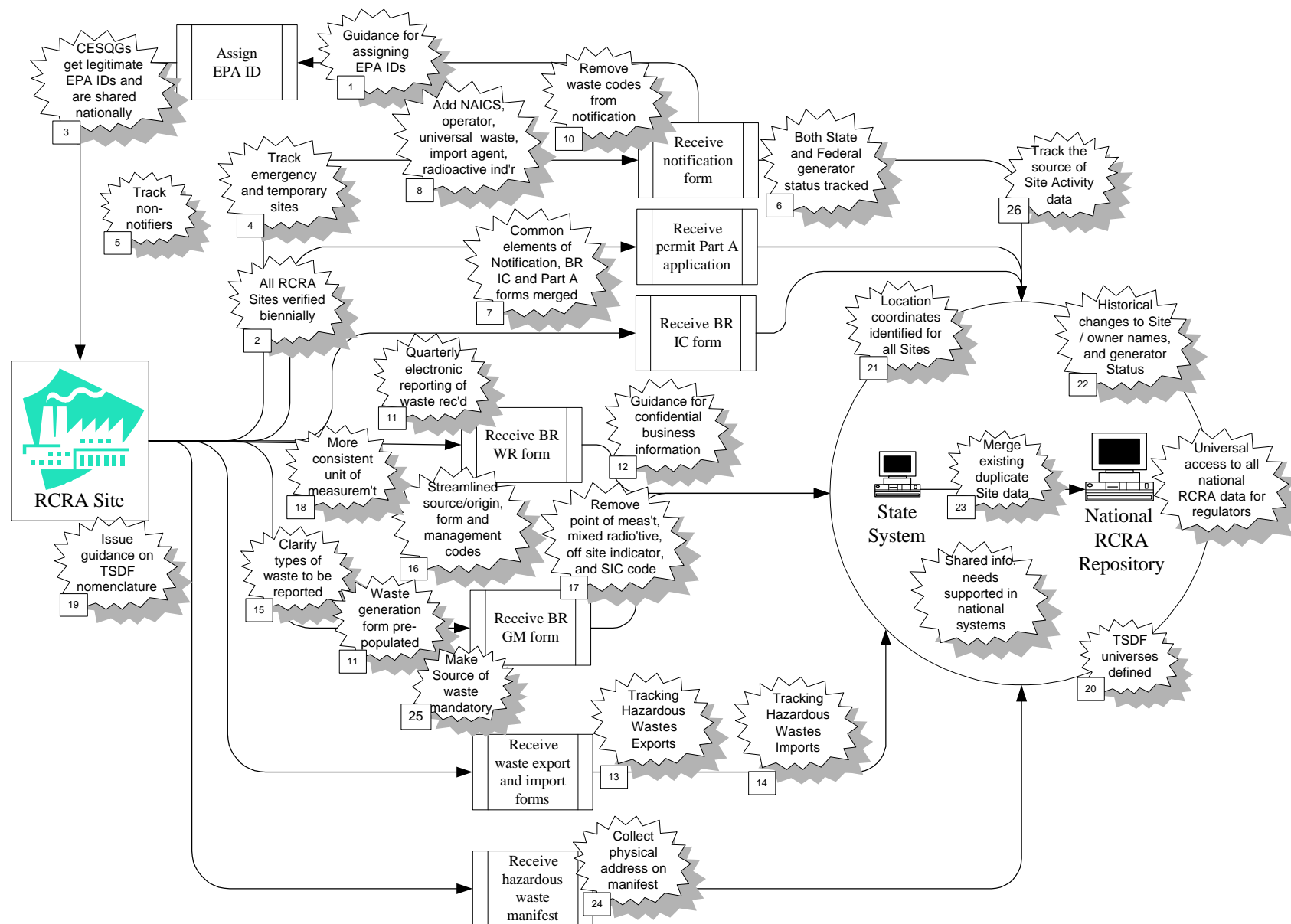
Figure 1: Recommended Improvements to Current Information Management

The RCRA program has a need to be able to identify RCRA Sites that at some time in the past failed to notify the relevant implementing agency of their RCRA regulated activities according to the regulations.

Recommendations (1, 3, 4, 5)

The Team recommends that all sites of interest to the RCRA program that notify the implementing agency of their activity will be assigned an EPA identification number and will be tracked in the national information system, including emergency, temporary and conditionally exempt sites. This identification number will be retained over time regardless of activity or ownership changes at the RCRA Site, except under exceptional circumstances that will be documented in national guidance. Sites will be tracked in the national information system as soon as they are known to the implementing agency and will be flagged if found subsequently to have no need to have notified. Emergency sites will also be identified specifically.

Identification of Universes

Current Situation

All RCRA regulatory agencies have a clear need to be able to identify groups of RCRA Sites that share certain regulatory characteristics, for example:

- those RCRA Sites that must meet the requirements imposed on generators of large quantities of hazardous wastes

- those RCRA Sites that must meet the requirements of an operating waste management facility

- those RCRA Sites that are subject to regulations governing sites that store hazardous wastes

Currently, the various organizations that implement the RCRA program often vary in their reporting of these groupings of RCRA Sites, which leads to confusion and misunderstanding. In some cases this is due to differences in program implementation between the organizations, for example, with respect to the definition of a "large quantity generator", and in others, due to lack of consistent terminology.

Recommendations (6, 19, 20)

To enable improved information sharing and to ensure consistency, the PAA Team recommends a number of improvements.

Given the differing regulatory application of generator status definitions and the difficulty in translating these, the Team recommends that any applicable generator status designation be recorded for a RCRA Site, whether Federally or State-defined. If State-specific regulations result in a different regulatory status for a generator, then both State and Federal statuses would be collected and made available nationally.

Sites involved in the management of hazardous wastes should be defined consistently both with respect to the type of management activity being performed, for example, treatment, but also with respect to the regulatory oversight under which they operate, for example, subject to corrective action.

Revise Notification Form

Current Situation

Currently, RCRA Site identification data is collected on several different forms, with a single RCRA Site being required to submit very similar information several times on each form with inconsistent data element definitions and instructions.

During the PAA project, RCRA program staff identified a number of areas in which the basic identification information collected about a RCRA Site could be enhanced to provide significant benefit. In some cases, additional information needs were identified that are not met by the current data collection procedures, and in others, redundant information appears to be collected.

Recommendations (7, 8, 10)

A new reporting form will be developed to harmonize the RCRA Site identification information that is required by the RCRA program. This form will include consolidated and standardized field definitions. This standardized form will replace site information collection mechanisms used on the Notification form, Permit Part A form, and Biennial Reporting forms.

At the same time, the opportunity will be taken to enhance the information collected on the forms. A number of additional data elements will be collected, including:

- An indication that the RCRA Site is a handler of large quantities of universal waste.

- The operator name (in addition to the owner name).

- The relevant North American Industrial Classification System (NAICS) code.

- An indication that the RCRA Site handles radioactive wastes.

- An indication that the RCRA Site imports hazardous wastes.

Additionally, the waste code information that is currently collected will eventually be removed from the Notification form. The waste code information is of limited use given that it is not updated regularly and the accuracy of reporting by generators. Waste activity information will be better served through the PAA Team's recommendation to collect quarterly TSDF data electronically, discussed later in this section.

Study feasibility of periodic verification of RCRA Site information

Current Situation

Effective implementation of the RCRA program requires accurate information about the universe of RCRA Sites regulated under the program. This information supports a variety of activities including resource planning, inspection targeting, regulatory impact analysis and assessment of program effectiveness.

RCRA Sites are required to notify the implementing agency when RCRA regulated activities commence, however, there is no regulatory requirement for RCRA Sites to provide updated information at any time, even if the RCRA Site identification information changes. Thus, much of the information available to the program is outdated, with some having not been verified since the original 1980 notification.

Recommendation (2)

The RCRA program should conduct a design study to evaluate the feasibility of requiring some kind of periodic verification process for basic information about all RCRA regulated sites. While

this practice may represent an additional reporting burden for some members of the regulated community and the implementer at the outset, the improved quality of data available to the RCRA program that would result would significantly enhance the effectiveness of the program.

The feasibility study should consider the mechanism by which such verification could be performed, the nature of the requirement, mandatory or optional, the most cost-effective frequency of information collection and the universe of RCRA Sites to be affected.

Study feasibility of quarterly electronic TSDF waste reporting

Current Situation

The current biennial submission of information concerning the generation and management of hazardous wastes is considered insufficient by many program staff (although some States have increased the frequency of collection of this information). More timely access to current, high quality waste generation and management information would provide significant benefits to the program for such activities as inspection planning and waste minimization.

Recommendation (11,12)

Two closely related recommendations are proposed to address this issue:

1. Require all TSDFs to report waste receipt information electronically on a regular basis to a central nationally available data repository.

2. Produce pre-populated waste generation forms to be sent to generators of hazardous waste for verification and amendment to become the generator's Biennial Reporting form submission.

Both of these recommendations would require national rule implementation and consistent CBI guidance to be completely effective.

Improve reported waste data

Current Situation

PAA participants identified a number of desirable changes to the type of waste generation and management information that is collected by the Biennial Reporting forms or State equivalents.

There is a clear need to understand the types of industrial or waste management processes from which hazardous wastes originate, for use in analysis, targeting and outreach activities.

The requirement for RCRA Sites to biennially report wastes that are not used in their generator status determination is unclear, resulting in significant confusion on the part of the regulated community.

The use of density information for weight unit conversion on waste reports is also confusing and has been shown to result in data quality issues.

Several project participants suggested that the existing Source, Origin, Form and Management code structures used in the Biennial Reporting forms could benefit from streamlining.

The Uniform Manifest Document does not currently require the physical address from which the waste shipment was collected. The generator's mailing address is required, but this can often be very different to the generating RCRA Site's physical address. This can make it difficult to tie the manifest to the point of generation.

Certain data elements are currently collected redundantly on the Biennial Reporting forms or equivalents.

Recommendations (16, 17, 18, 24, 25)

The Team recommends that the Biennial Reporting forms or State equivalents be revised to require that generators report only those wastes that they use in their generator status determination.

Generators will specify the source of waste generation.

All waste reporting should be performed using weight units.

A more streamlined set of waste reporting codes should be adopted.

The Uniform Manifest Document and associated instructions should be revised to record the physical site address including country of the originating generator of the waste shipment, replacing the reporting of mailing address on the manifest.

Redundant data elements should be removed from waste reporting forms.

Improved Import and Export Reporting

Current Situation

States currently have only limited visibility to information about wastes that are shipped out of the country. Similarly, States also have only limited knowledge of wastes imported since the "generator" from whom waste is received is often an agent company located in the State.

Recommendation (13, 14)

Provide States with a reliable source of export information by making the existing waste export data collected by OECA, available to the RCRA program.

Require import agents to indicate their import activities when they notify and require that TSDFs reporting waste receipts from such agents indicate the importer and the country of origin of the waste.

Supporting improvements to the RCRA program information systems

Current Situation

Various general improvements were identified during the course of the PAA project to improve the quality and completeness of the information available to the RCRA program. These improvements could be implemented without requiring additional data collection from the regulated community.

Recommendation (21, 22, 23, 26)

Provide a single source of information to support the RCRA program by integrating the existing information systems.

Provide functionality to automatically derive location coordinate information from the physical address of a RCRA site.

Provide historical tracking capability for important information such as site name, owner and operator name and generator status.

Provide improved information access capabilities to RCRA program staff.

Provide enhanced capabilities to track the source of waste handling activity information about a RCRA Site.

Implementation Plan

An implementation plan has been developed to outline a possible approach to the further development and implementation of the report's recommendations.

Implementation Planning Considerations

The methodology employed by this PAA calls for the project's recommendations to be further developed by one or more subsequent Program System Design (PSD) projects. The PAA recommendations have been organized into smaller discrete groupings allowing the design process to be more manageable. Care has been taken to ensure that the scope of each design project takes account of inter-dependencies between recommendations.

There are two primary drivers for the planning and scoping of PSD projects.

1. Inter-dependencies between recommendations may be significant enough to require that recommendations be developed in parallel with each other.

2. Some recommendations require modification of national reporting mechanisms and consequent regulatory change. Given the formal and time dependent processes required for regulatory change, recommendations with similar regulatory impacts should clearly be implemented together.

Implementation Projects

The PAA Team identified four implementation projects based on logical groupings of the recommendations. Each has been described in terms of the recommendations included in the project and the inter-dependencies between the projects. Each project will be lead by either States or EPA, where the lead organization will be expected to provide a greater level of support to the project.

Project 1: ICR Reliant System Changes

This project will design the policies/procedures, reporting mechanisms, and information system changes required by those PAA recommendations that require *only* ICR changes. By grouping these recommendations together, the changes to the reporting forms, data entry screens and regulations can be accomplished in unison, allowing for coordinated ICR changes and ensuring consistent design and implementation.

This design project will commence as soon as possible, to ensure that those recommendations that are effected by the Biennial Report ICR will be implemented within the 2000 ICR process. If this is not accomplished, then these recommendations will not be implemented until the 2002 Biennial Report ICR cycle. The project will also implement changes to the ICRs for the Notification form, Part A Permit Application, Uniform Manifest Document, and Export Report. Associated information systems functionality will also be redesigned to ensure consistency with paper forms.

The project will be led by EPA with design expected to take approximately five months to complete and the anticipated ICR changes expected to take approximately six months to complete.

Project 2: Site Verification and TSD Quarterly Reporting

This project groups those recommendations that have the greatest impact to existing regulatory and/or information management practices together with other recommendations that are critically dependent on these. These have been segregated from the other recommendations due to their need for further feasibility study and also due to length of time required perform the studies.

Site Verification

The project will study the feasibility of alternative mechanisms by which site identification data can be verified by RCRA Sites. The project will estimate the costs and burden that would be imposed upon the regulated community and RCRA implementers for several different types of implementation. Considerations will include; the affected program universe, the nature of the requirement (optional or mandatory), and optionality. Extensive use will be made of benchmarking studies and industry outreach.

TSDF Quarterly Electronic Reporting

The project will study the feasibility of the quarterly electronic reporting of waste receipt data from the nation's TSDFs. This would include the evaluation and design of the reporting mechanism, a national repository and State/EPA data interchange mechanisms, and the pre-population of generators biennial hazardous waste reports.

Again, extensive outreach to TSDFs will be included to gauge support and burden.

States will lead this project. The feasibility study for this project would take six months to complete and would include a national review with subsequent design tasks taking approximately four months and nine months respectively. The anticipated regulatory change would take approximately two years to implement.

Project 3: Data Integration into RCRAInfo

This project will include those recommendations that impact information management systems only, and do not require changes to data collection mechanisms. The project will determine how the RCRAInfo data and functionality for site identification information will be integrated and modified.

The project will be EPA lead and would take approximately six months to complete, including a national review.

Project 4: New Guidance

This project groups the remaining recommendations that either require new guidance to be developed or encompass practices that when implemented will improve the quality of information that is currently inconsistently reported.

This project will be EPA lead and will take approximately six months to complete.

Implementation Schedule

An implementation plan has been developed that takes into consideration the inter-dependencies between the four projects discussed above and the EPA and State resources available to support the performance of these projects. This is outlined in Figure 2: Schedule of Implementation Projects on the following page. Four types of implementation task are shown:

1. PSD projects -will examine and detail the manner in which existing regulations, reporting forms, and information management systems will change.

2. Feasibility studies – will further consider the implications of the most significant changes to existing reporting mechanisms and will determine the most practical mechanisms for implementing the recommendations.

3. Regulatory change tasks – will perform the Rulemaking or ICR Processes required by some PAA recommendations.

4.   Implementation projects – will institute the changes as specified by the PSD projects.
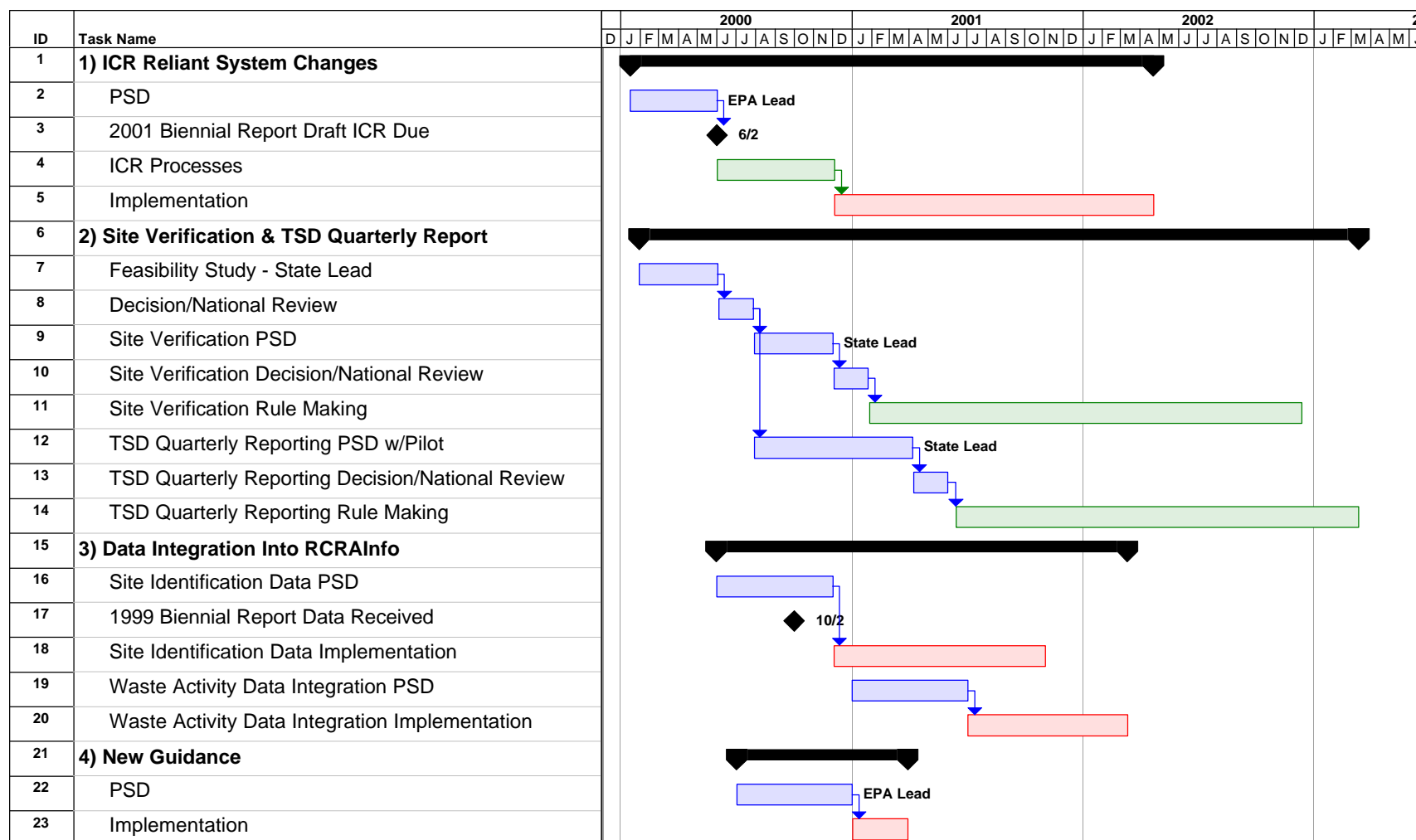
ID	Task Name	2000	2001	2002	2
		D J F M A M J J A S O N D	J F M A M J J A S O N D	J F M A M J J A S O N D	J F M A M J
1	**1) ICR Reliant System Changes**				
2	PSD	EPA Lead			
3	2001 Biennial Report Draft ICR Due	6/2			
4	ICR Processes				
5	Implementation				
6	**2) Site Verification & TSD Quarterly Report**				
7	Feasibility Study - State Lead				
8	Decision/National Review				
9	Site Verification PSD	State Lead			
10	Site Verification Decision/National Review				
11	Site Verification Rule Making				
12	TSD Quarterly Reporting PSD w/Pilot	State Lead			
13	TSD Quarterly Reporting Decision/National Review				
14	TSD Quarterly Reporting Rule Making				
15	**3) Data Integration Into RCRAInfo**				
16	Site Identification Data PSD				
17	1999 Biennial Report Data Received	10/2			
18	Site Identification Data Implementation				
19	Waste Activity Data Integration PSD				
20	Waste Activity Data Integration Implementation				
21	**4) New Guidance**				
22	PSD	EPA Lead			
23	Implementation				

Figure 2: Schedule of Implementation Projects

Table of Contents

APPENDIX I: **PROGRAM AREA ANALYSIS PROCESS**

APPENDIX II: **PROGRAM SYSTEM DESIGN TASKS**

APPENDIX III: **INFORMATION NEED DEFINITIONS**

APPENDIX IV: **CURRENT SYSTEMS ASSESSMENT**

APPENDIX V: **TSDF UNIVERSE DEFINITIONS**

APPENDIX VI: **RELATED INITIATIVE STATUS**

APPENDIX VII: **SUPPLEMENTARY POLICY PROCEDURAL ISSUES**

REPORT ORGANIZATION

The remainder of this Final Report is organized into the following sections:

Glossary of Terms

Presents descriptions of a number of acronyms and specific technical and programmatic terms used throughout this report.

Introduction

Describes the background to the WIN/INFORMED initiative and the combined Universe Identification and Waste Activity Monitoring Program Area Analysis, including the scope of the project and the participating organizations.

WIN/INFORMED Approach

Outlines the approach being used to conduct the WIN/INFORMED initiative with specific reference to the purpose and outputs of the Program Area Analysis phase.

Findings and Recommendations

This section presents the findings from the project's analysis and provides recommendations on how the existing information collection and management procedures should be improved and streamlined. This section also describes how access to RCRA program information should be enhanced to be able to answer the types of questions typically asked by or of program staff.

Implementation Plan

Provides a high-level outline of the system design project that should be undertaken to consider each of the project's recommendations and which would result in implementation of new system functionality

Appendices

A number of appendices are attached to this report, which provide supporting materials.

Appendix I: Program Area Analysis Process

Appendix II: Program System Design Tasks

Appendix III: Information Need Definitions

Appendix IV: Current Systems Assessment

Appendix V: TSDF Universe Definitions

Appendix VI: Related Initiative Status

Appendix VII: Supplementary Policy Procedural Issues

THIS PAGE INTENTIONALLY LEFT BLANK

GLOSSARY OF TERMS AND ACRONYMS

Glossary of terms

The following terms have been used throughout the report.

Biennial Report	Report generated by EPA summarizing data submitted by respondents to the Hazardous Waste Report (EPA form 8700-13A, or State equivalent). The content of this report is used to summarize and understand waste generation management activities, as well as for communication to the public.
Biennial Reporting Forms	The Hazardous Waste Report instructions and forms federally required to be submitted by LQGs and TSDFs every other (odd) year (i.e., EPA form 8700-13A/B).
Broader in Scope	Provisions that (1) allow State to regulate more entities or wastes than the federal code or (2) add an aspect to a state's statute or regulations for which there is no federal counterpart.
Form Elements	The fields that allow data to be entered on a reporting form.
Generator	An abbreviation for Hazardous Waste Generator.
GM Form	An abbreviation for the Waste Generation and Management Form of the Biennial Reporting Forms.
Implementer	The State agency or EPA Region responsible for implementing the RCRA program in a given state.
Information Need	A type of information that is required to support programmatic activities, decisions and analyses. For example, Site name.
Information system	A combination of regulations, data collection mechanisms (e.g. paper forms), computer data systems, and manual procedures that together support the collection, management and use of information.
Key Question	A question that is regularly asked of program staff by external entities, or asked by program staff to support their programmatic activities.
Management Method	Describes the type of system used to treat, store or dispose of hazardous waste. This term is synonymous with System Type Code.
More Stringent Than	State implemented rules that subsume RCRA, but which applies more stringent regulation to the same population as would be regulated under Federal authority.
PAA Participants	The members of the PAA Team and other knowledgeable staff from their agencies (that assisted during INA Sessions and draft report Critical Reviews), and a few other organizations' staff that also assisted during the Critical Review.

PAA Recommendation	A proposed improvement to what RCRA information is collected and the way in which it would best be collected and managed in the future.
PAA Team	The core team that developed the recommendations and findings made up of one RCRA program expert from each of a small set of States, EPA Regions and EPA OSW and OECA.
RCRA Site	A specific location that is currently, or has in the past, conducted waste handling activities of interest to the RCRA Subtitle C program, as promulgated in either the Federal Register or by individual State or Territory statutes. The location may be described by physical address, by description or by geographic coordinates.
Region	An abbreviation for EPA Region, i.e., one of the ten Regional offices of EPA.
Regulator	A State or federal agency that defines or implements rule under RCRA.
State	An abbreviation for "State environmental agency".
Transporter	An abbreviation for Hazardous Waste Transporter.
Waste	An abbreviation for Hazardous Waste as defined under RCRA.
WR Form	An abbreviation for the Waste Received From Off Site Form of the Biennial Reporting Forms

Acronyms

The following acronyms are used throughout the report.

ASTSWMO	Association of State and Territorial Solid Waste Management Officials
BIF	Boilers and or Industrial Furnaces
BIS	Broader In Scope
BRS	Biennial Reporting System
BSD	Business Systems Design
CEI	Compliance and Evaluation Inspection
CESQG	Conditionally Exempt Small Quantity Generator
ESC	Executive Steering Committee
EPA	Environmental Protection Agency
FOIA	Freedom of Information Act
GEMS	General Enforcement Management System
GPRA	Government Performance and Review Act
GPS	Global Positioning System
HSWA	Hazardous and Solid Waste Amendments

IC	Identification and Certification
INA	Information Needs Assessment
ISP	Information Strategy Plan
LQG	Large Quantity Generator
MAD	Method Accuracy Descriptor
MST	More Stringent Than
NAICS	North American Industrial Classification System
NCAPS	National Corrective Action Prioritization Systems
NGA	National Governors Association
NPDES	National Pollutant Discharge Elimination System
OECA	Office of Enforcement and Compliance Assurance
OSW	Office of Solid Waste
PAA	Program Area Analysis
PBT	Persistent, Bioaccumulative and Toxic
PE	Program Evaluation
PMG	Project Management Group
PMP	Project Management Plan
RCRA	Resource Conservation and Recovery Act (for this report the specific reference is to Subtitle C only)
RCRIS	RCRA Information System
SEES	State Electronic Commerce/Electronic Data Interchange (EC/EDI) Steering Committee
SIC	Standard Industrial Classification
SQG	Small Quantity Generator
TSDF	Treatment, Storage, or Disposal facility
TUG	TSDF Universe Group
UID	Universe Identification PAA Project
USPS	United States Postal Service
WAM	Waste Activity Monitoring PAA
WIN/INFORMED	Waste Information Needs / Information Needs for Making Environmental Decisions

THIS PAGE INTENTIONALLY LEFT BLANK

INTRODUCTION

Project Background

The WIN/INFORMED initiative was established jointly by the States and the Environmental Protection Agency (EPA). WIN stands for Waste Information Needs and derives from planning work undertaken by the EPA. INFORMED stands for Information Needs for Making Environmental Decisions and derives from State planning work.

The objective of this initiative is to reassess the information needs of the hazardous waste management program operating under Subtitle C of the Resource Conservation and Recovery Act (RCRA). With WIN/INFORMED, EPA and States aim to jointly identify, and share where appropriate, the information needed to manage the RCRA program effectively.

The goal of WIN/INFORMED is to improve the collection, use and management of hazardous waste information at the national level, to make that information readily available to EPA, States, Tribes, and the public, and to support the effective implementation of the hazardous waste program.

To achieve this goal, the WIN/INFORMED initiative has been organized into four discrete phases. Each phase will consist of a number of inter-dependent projects, structured to allow constant progress to be made towards the objectives without the risks associated with a very large-scale redevelopment effort. The four phases are *planning*, *analysis*, *design,* and *implementation*.

States and EPA conducted separate *planning* projects to broadly document their own information needs. Completed in late 1996, these efforts resulted in two Information Strategy Plans (ISPs), both of which identified priority improvements to be made to the information collection and management systems used to support program implementation.

An ISP identifies natural groupings of program functions and information needs, which are referred to as "program areas." The State ISP identified three priority program areas for analysis. These were Universe Identification (UID), Waste Activity Monitoring (WAM), and Handler Monitoring and Assistance. These areas all address program implementation activities. The EPA ISP identified the Permitting and Corrective Action program area, which addresses implementation activities, and the Program Evaluation program area. States and EPA agreed to form a partnership to conduct the remaining phases of these five program areas beginning with the analysis of each program area. Analysis of the Program Evaluation program area was completed early in 1999.

UID WAM Program Area Analysis Project

The UID Program Area Analysis (PAA) began in October 1998 and the project's preliminary findings and recommendations were presented for review by selected program experts during March 1999. The development of clear definitions for certain programmatic universes of RCRA Sites was considered to be part of the scope of the UID program area. A small sub-group from the PAA Team was formed to review the existing programmatic universes and to develop a draft set of revised universe definitions based on current program priorities and known concerns with the current definitions.

In January 1999, the WIN/INFORMED Executive Steering Committee asked the UID PAA Team to begin the analysis of the WAM program area in parallel to the analysis of the UID program area. This strategy was designed to realize significant time and cost savings by conducting the

national review and later systems implementation planning stages of these closely related projects at the same time.

Analysis of the WAM program area began in February 1999 with the project's preliminary findings and recommendations for this program area presented for review by selected program experts during June 1999. Following the completion of this review, the UID and WAM analysis projects were combined.

Having been reviewed, the preliminary findings and recommendations from both projects were refined and then presented in the form of a Draft Report for national review by all States, Territories, EPA Regional Offices and the EPA Offices of Solid Waste and Enforcement and Compliance Assistance. Following this national review, which took place during September and October of 1999, the project findings were updated to reflect input from reviewers. A plan was also developed to guide the design and implementation of the recommendations from the project.

This Final Report presents the PAA project's confirmed recommendations for future RCRA program information management, together with an implementation plan.

The following table summarizes the key milestones for the combined UID and WAM project.

Milestone	Date
UID Project start	8/31/98
UID INA Sessions	10/12/98 - 12/4/98
UID Critical Review	3/1/99 – 4/2/99
WAM Project start	1/4/99
WAM INA Sessions	3/15/99 – 4/15/99
WAM Critical Review	6/14/99 – 7/9/99
Present draft final report to ESC	8/16/99
National Review	9/6/99 - 10/29/99
Present Final Report to ESC	12/9/99
Release Final Report	1/28/99

Project Involvement

A fundamental element of the WIN/INFORMED initiative is the regular and timely involvement of a wide range of stakeholders. Each WIN/INFORMED project is directed by a PAA Team consisting of program staff from States, EPA Headquarters Program Offices and EPA Regional Offices, who participate directly in the projects, providing practical experience with the implementation of the RCRA program in their organizations.

The PAA Team responsible for directing this PAA project and for developing this Final Report included the following organizations:

State of Kansas (UID program area)

State of Michigan (WAM program area)

State of New Hampshire

State of New York

State of North Carolina

State of South Carolina

State of Utah

EPA Region V

EPA Region VII

EPA Office of Solid Waste

EPA Office of Enforcement and Compliance Assurance

Representatives from each of these organizations participated in the project, with the project being led jointly by Bud McCarty from the State of North Carolina and Les Otte from the EPA Office of Solid Waste.

Additional feedback was provided by the States of Kansas, Ohio, Maryland, Texas, EPA Region 6, and the Facility Data Standards workgroup during earlier critical reviews of the PAA findings.

Cross-project management and communication was provided by a Coordinating Committee which helped to establish schedules and milestones, manage resources, and coordinates the various PAA teams. Representatives are again drawn from both State and EPA organizations.

High-level direction and policy-making support was provided to the project by an Executive Steering Committee that includes representatives from senior EPA and State management.

Figure 3 illustrates the project organization.

Executive Steering Committee

Mike Savage	OH
Catherine Sharp	OK
Mike Bussell	Region 10
Elizabeth Cotsworth	OSW
Mike Stalh	OECA
Mark Day	OIRM

Coordinating Committee

Allan Tinsley	SC
Rusty Lundberg	UT
Matt Loesel	Region 6
Kevin Phelps	OSW
Sara Rasmussen	OSW
David Meredith	OECA
Sue Parker	OSW
Scott Latham	OSW

Windsor Solutions

Guy Outred
Kevin Jeffery
Norman Read
Steve Rosenberger

UID / WAM PAA Team

Bud McCarty	NC (State Lead)
Les Otte	OSW (EPA Lead)
Allan Tinsley	SC
Debbie Goodwin	OECA
Harriett Jones	Region 7
Jane Ratcliffe	Region 5
John Mitchell	KS
Leslie Brennan	NY
Rusty Lundberg	UT
Karen Way	NH
Walt Derieux	OECA
Dave Levy	OSW
Beverly Allen	OSW
Elizabeth Bols	MI
Mike Hillard	OSW

PAA Project Management Group

Allan Tinsley	SC
Bud McCarty	NC
Les Otte	OSW
Sue Parker	OSW
Scott Latham	OSW

Figure 3: Project Organization Chart

Project Scope

The goal of this PAA project was to examine the information needs of the UID and WAM program areas, and to consider how current information collection and management procedures meet those needs. The project then sets out to recommend improvements for specific areas where existing procedures do not meet current or anticipated information needs.
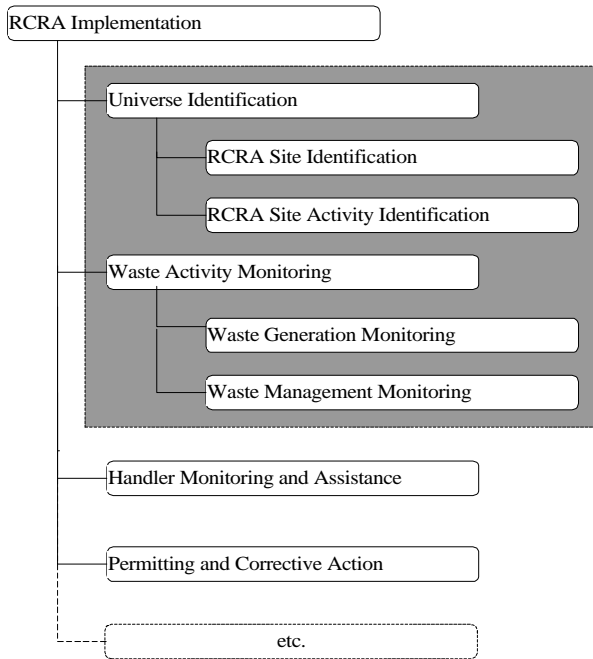
Figure 4: UID/WAM Functional Scope

The scope of the UID and WAM program areas was broadly defined during the States' ISP. This is illustrated in Figure 4: UID/WAM Functional Scope, with the shaded area encompassing the scope of these two program areas.

Using this broad outline, the PAA Team defined this scope more explicitly using the following three dimensions:

- the information needed to support these program areas

- the collection mechanisms used to gather this information

- the specific policy and procedure issues that pertain to the information collection and management procedures

Care was taken during the scope refinement stage of the project to ensure that the project scope was kept straightforward, setting realistic goals for the resources and budgets available to the PAA Team. In some cases, information needs, collection mechanisms and issues were excluded from the combined project scope to be addressed as part of separate initiatives at a later time.

The following paragraphs outline the scope of the project that was used by the PAA Team when developing the findings documented in this Final Report.

Information Needs

The PAA Team focused on the following areas of information needed to support the UID and WAM program areas. Examples of some of the needs are provided here. A more detailed

discussion of the specific information needs may be found in the Findings and Recommendations section of this Final Report.

Site Identification   EPA identification number, mailing address, location coordinates.

Site Activities   generator status, used oil activities, industry type.

Site Contacts   owner name, site contact name.

Waste Generation   waste codes, quantity, generating process.

Waste Shipment   shipment date, border crossing, manifest number.

Waste Receipt   waste codes, transporter EPA identification number.

Waste Management   waste description, management method.

A number of needs were identified by the team during the information gathering phase of the project that are required by individual organizations to implement the RCRA program. These needs, while important to the specific organization, have been excluded from the PAA project recommendations included in this Final Report. This report focuses instead only on the national and shared RCRA program needs.

Data Collection Mechanisms

The project scope included the following data collection mechanisms for universe identification and waste activity information. It should be noted that many of these mechanisms collect or update additional information that is outside of the scope of either the UID or WAM program areas. These will be further detailed during subsequent analysis efforts, for example, the "Part A Application" gathers various permitted unit information and will be further evaluated as part of the Permitting and Corrective Action PAA.

> Notification forms
>
> Part A Applications
>
> Periodic Waste Activity Reports (i.e., Biennial Reporting forms and other State derivatives)
>
> Export Reports
>
> Manifests
>
> Transporter Permit Applications
>
> Emergency Site Notification

Policy / Procedural Issues

During the initial information gathering phases for the UID and WAM program areas, and throughout the combined project, a number of important policy and procedural issues were identified that impact information collection and use within the program areas. The PAA project developed resolutions for many of these issues which have been incorporated into the recommendations presented in this Final Report.

A number of issues were excluded from consideration during the PAA project for one or more of the following reasons:

1. Resolution of the issue was not believed to be critical to the success of the PAA project.

2. The issue is specific to a small number of organizations and is not considered significant for national resolution.

3. The issue will affect design and/or implementation of the project's recommendations but does not have a bearing on information needs and management.

These excluded issues are detailed in Appendix VII.

Related Initiatives

Finally, during the course of the project, the PAA team identified and tracked a number of initiatives related to the UID and WAM program areas being undertaken by EPA and States under various frameworks. The impact of these initiatives on the combined project was assessed and the project's recommendations address these impacts as appropriate. A full listing of the initiatives tracked by the PAA Team may be found in Appendix VI.

WIN/INFORMED APPROACH

Introduction

The WIN/INFORMED initiative is employing a structured approach called the Information Engineering Methodology (IEM) to analyze, design and implement information management systems to support the RCRA program. This full life-cycle methodology is well suited to the development of complex, enterprise-wide information systems, particularly those that require a high degree of data sharing.

Implementation of the RCRA program is complex requiring multiple organizations to share large amounts of information. By applying IEM principles to break down the complexity of the entire RCRA program into a number of discrete "program areas", the WIN/INFORMED initiative is able to focus attention and resources effectively.

As discussed briefly in the *Introduction* section of this Final Report, the first IEM phase, *Information Strategy Planning* defined the program areas that make up the RCRA program and provided a logical order in which they should be addressed. The remainder of this section describes the three subsequent phases of the IEM that must be conducted for each program area to realize the WIN/INFORMED goal of improved information management.

Program Area Analysis (PAA)	Understand the program's needs for information, consider how well those needs are supported by existing systems, and identify improvements.
Program System Design (PSD)	Describe how the existing systems should change to effect the improvements. Provide an understanding of the costs and effort involved in implementing program changes.
Program System Implementation (PSI)	Implement the necessary changes to the current information management environment, including automated and manual procedure improvements.

Figure 5: The Phases of WIN/Informed Projects on the following page, shows how these three phases interrelate for a given program area. The rounded boxes represent the three sequential phases. The core deliverables are described for each phase, and are shown being passed between the phases, illustrating the progressive detailing of the program area as initial findings lead to implementation of real information management changes. The final deliverable, a new or modified information management system, is represented at the bottom right corner of the diagram.

National consensus on the findings of each phase is sought before the next phase begins.

Program Area Analysis (PAA)

This phase of the IEM results in an analytical assessment of the program's needs for information management and a set of general recommendations for both data management and process improvements. This is achieved by identifying program needs for information management, and comparing those needs to the support provided by the current systems. This comparison helps to identify which needs are currently poorly supported and allows recommendations to be developed to improve this support.
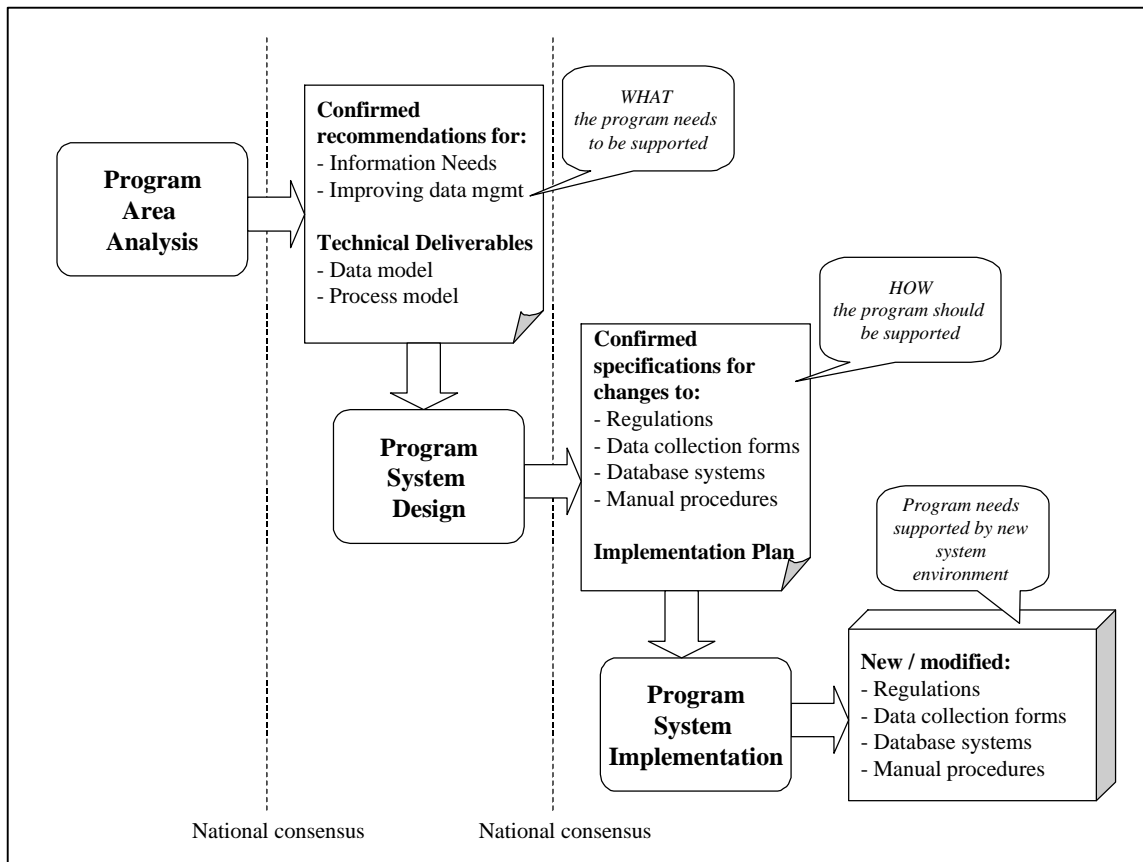
Figure 5: The Phases of WIN/Informed Projects

The products of a PAA include a set of nationally confirmed recommendations, together with a set of technical deliverables that provide a conceptual model of the program information management needs..

The project recommendations are presented towards the end of the PAA project allowing for national consensus with respect to:

- the program needs

- the problems with the existing systems

- the envisioned improvements (e.g., recommendations)

Although the implications of the recommendations for change are understood only at a high level at the end of the PAA, they should provide an indication of the likely effects of such change. This allows reviewers to determine whether or not each recommendation should be considered further during the subsequent design phase.

Following the national review of the findings and recommendations of the PAA, the PAA Team organizes the recommendations into logical groups based on their priorities and dependencies. The WIN/INFORMED Coordinating Committee and Executive Steering Committee reviews these groups with consideration given to funding and other resource constraints before determining which groups should be further evaluated in the next phase, Program System Design.

A more detailed description of the tasks that make up this phase can be found in Appendix I.

Program System Design (PSD)

This phase is concerned first with determining the feasibility of the recommendations from the PAA, and then developing detailed plans and specifications needed to implement the necessary changes to national information systems. Using techniques such as prototyping, the PSD project evaluates the specific implications of each PAA recommendation. By exploring these implications in greater detail, the PSD project may identify complexities that were not identified during the PAA.

This "reality check" may require some of the PAA recommendations to be modified or even deferred for future consideration. For example, costs, complexity and appropriateness of the recommendation will be considered in the light of current program operating constraints.

A PSD project results in a nationally confirmed "blueprint" for implementation, including designed data collection form changes, new system functionality and/or existing system change specifications, and an implementation plan with resource estimates.

A more detailed description of the tasks that make up this phase can be found in Appendix II.

Program System Implementation (PSI)

This final phase in the WIN/INFORMED application of the IEM uses the specifications developed during the previous phase to build new system functionality or modify existing systems. The PSI project will result in actual changes to the existing systems environment, including database systems, data collection forms, manual procedures and, if necessary, regulations.

Summary

The IEM provides a framework for information systems development that allows improvements to be made incrementally and the project to be undertaken in discrete manageable steps. This framework allows a complete picture of the information systems needs to be built from high-level business requirements to specific implementation details.

THIS PAGE INTENTIONALLY LEFT BLANK

FINDINGS AND RECOMMENDATIONS

Introduction

As stated previously, the goal of the PAA project is to conduct a fundamental reappraisal of information collection and management procedures needed to support the program. This includes consideration of three components:

- the types of information needed to effectively implement the program,

- the activities required to collect that information, and,

- the capabilities required to access the information.

Draft recommendations were developed for the combined UID and WAM program area addressing each of these three components.   Following a national review of these draft recommendations the PAA Team made a number of changes and clarifications resulting in a set of confirmed recommendations. A *confirmed* recommendation, therefore:

1. Is an improvement to the management of RCRA program information that is believed to be the most effective way of adequately supporting critical program needs.

2. Appears to have no major implementation obstacles.

3. Has been subjected to a national consensus review.

This section of the Final Report presents the confirmed recommendations from the PAA project.

Recommended Information Needs

An important goal of the WIN/INFORMED initiative is to identify those information needs that must be collected and made available to all program staff to support the implementation of the RCRA program. The following recommendations are proposed with respect to RCRA program information needs.

1)   Common organizing framework

Many of the concerns expressed by PAA participants with respect to current RCRA program information can be attributed to varying interpretations of that information and poor current data quality. Before attempting to resolve these problems the PAA Team first agreed upon a common framework to organize the information needs. This framework is outlined in Table 3.

NATIONAL INFORMATION	SHARED INFORMATION
Has a common, precise definition (i.e., always means the same thing)[2]	
Has *mandatory* creation or collection[3]	Is *optionally* created or collected
Is maintained to a specified level of quality and currency[4]	May be collected in many different ways and is not always current or fully qualified
Relies on Federal rule to support the authority for its collection[5]	Does not depend on Federal authority for its collection
Is always accessible to all regulators from national data systems [6]	Is only submitted to national data systems at the discretion of the implementer.

Table 3: Definition and Principles of National and Shared Information

In the past, the existing RCRA information systems have referred to data elements as "core" or "non-core" to indicate similar concepts to those described in Table 3. These terms have been intentionally excluded from this Final Report in an attempt to avoid some of the confusion and misinterpretation that many PAA participants have experienced with their use.

---

[2] Implementers, particularly the States, value the ability provided by the RCRA statute to tailor their programs to fit their own needs and situations. On the other hand, information systems are by definition highly structured and rigid and must remain so if their data content is to be shared by all implementers. As a consequence, even careful definitions may limit flexibility. At a minimum, some implementers may be unable to track certain information in national systems, because their business definition of that data does not conform to the national definitions. Implementers will thus be faced with the difficult choice of tracking the information in some other way, or changing their own program practices. Where a common, precise definition cannot be agreed, information cannot be either *national* or *shared*.

[3] National information must be tracked except where the implementer is not authorized for that aspect of the RCRA program; i.e., some national information will remain essentially voluntary, either on the part of the implementer (as in the case of the Universal Waste rules) or the affected entity (as in the case of CESQGs).

[4] Putting in place standards for data currency and quality will enable useful sharing, but requires additional attention from all implementers.

[5] This is true for all national information needs that are collected from the regulated community, however, a Federal rule is not required in cases where the information is identified directly by the program (e.g., RCRA Site discovery date, location coordinates, notification date).

[6] As implementers begin to share information, certain standards for use and dissemination must be defined to prevent misunderstanding, especially if the data is to be made publicly available.

---

2) National systems will accommodate both national and shared information needs

Capabilities will be provided in national implementer systems to support the tracking of both national and shared information needs. This will enable implementers that do not have their own information systems to track and share all important information with other RCRA program staff whether that information is needed by the entire program or a smaller subset of the implementer community.

It is important to note, however, that shared information will, by definition, represent only a partial set of implementers and therefore provides an incomplete picture. Care must be used when interpreting shared information. To avoid potential confusion, the appropriate meta-data must be provided to ensure that program users are aware of the level of completeness for shared information needs and that a consistent level of data quality cannot be assured.

National Review Feedback

Most States and Regions currently collect some of the information needs designated as shared needs and would be able and willing to share this information with other implementers.

3) National and shared information needs

The PAA Team employed this framework to organize the information needs of the UID and WAM program areas into four main categories. Table 4 on the following page lists these information needs according to the above framework and these four categories.

The following points should be considered when reviewing this table:

-   Certain information needs are represented in italicized font in the table. These information needs are all related to the Permitting and Corrective Action program area and include TSDF management system units. These were not considered by the PAA Team to be part of the scope of the UID or WAM PAAs but were captured to provide support for some of the recommended improvements.

-   The UID information needs listed have been reconciled with the national "Facility Data Standards" guide recently developed jointly by EPA and States. This will facilitate future cross-media data sharing by the RCRA program.

-   The national information needs for the *Waste Generation, Shipment, Receipt, and Management* information need category are only "*national*" for TSDFs and LQGs. For all other types of RCRA Sites these information needs are "*shared*".

Definitions for each of the information needs in Table 4 can be found in Appendix III.

National Review Feedback

During the National Review of the Draft Report from this project, States and Regions were asked to comment on the set of needs defined by the PAA Team in Table 4. These comments were reviewed and evaluated by the PAA Team who subsequently made a number of revisions to the sets of information needs which are presented in Table 4.

The PAA team acknowledged that some of the data elements targeted for removal from forms may continue to be collected by implementing agencies. As a result several of these information needs were designated as shared needs, to provide a means to store this data for those who choose to do so.

PROGRAM AREA	*Universe Identification*			*Waste Activity Monitoring*
INFORMATION NEED CATEGORY	*RCRA Site Identification*	*RCRA Site Responsibility and Contacts*	*RCRA Site Activity*	*Waste generation, shipment, receipt, and management*
NATIONAL INFORMATION NEEDS	EPA identification number Facility registry identifier Site name Location address (i.e., street address, locality, ZIP, state) Location county Location coordinates Location MAD codes NAICS code Discovery date Notification date Exempt from notification Emergency site Land owner type Mailing address	Owner name Owner type Operator name Operator type Site contact name Site contact phone	State generator status Federal generator status Hazardous waste transporter Hazardous waste fuel marketer Underground injection Used oil transfer station Used oil burners Used oil processor Used oil refiner Used oil marketer Used oil transporter Universal waste handler Hazardous waste import agent Mixed radioactive waste handler GPRA corrective action universe GPRA operating permit universe GPRA post closure universe Annual BOY enforcement universe *TSDF unit type* *TSDF unit commercial type* *TSDF unit operating status* *TSDF unit legal status*	Originating EPA ID Destination EPA ID Federal waste codes State waste codes Quantity Unit of measure Management method Source of waste Destination country Originating country
SHARED INFORMATION NEEDS	Number of employees State identifier Site legal name	D&B number Site contact address	Hazardous waste recycler Hazardous waste transfer station Waste codes *TSDF unit location*	Waste form Mixed radioactive waste Waste description Transporter EPA ID Shipped date Received date Manifest number Foreign recipient Border crossing

Table 4 : Program Information Needs

Recommended Information Management Improvements

Introduction

The PAA project seeks to contrast the program's information needs with the support provided by existing information systems. Where the existing systems were found to inadequately support the needs, a "policy/procedural issue" was identified. The PAA Team considered each of these policy/procedural issues, and the alternatives for how they might be resolved. This section provides a discussion of the improvements that the PAA Team has proposed to resolve these issues.

For some issues, the PAA Team concluded that the current practice represented the most workable solutions to the given problem. In other cases, issues were not considered due to time, budget and/or scope constraints on the project. Both of these type of issues are listed in Appendix VII.

Figure 6: Recommended Improvements to Current Information on the following page is intended to place each of the PAA project's recommendations in the overall context of the information collection process employed by the RCRA program. The figure describes a simplified picture of the main mechanisms currently used for collecting UID and WAM information. For a more complete description of these mechanisms please refer to Appendix IV. Each of the PAA project's recommendations has been superimposed upon the diagram, and has been placed relative to the area of the current system where a change is being recommended.

Each recommendation has been documented as follows:

Summary	provides the major elements of the recommendation.
Program Need	describes the underlying RCRA program needs that the recommendation addresses.
Problem Analysis	describes why the program need is not currently being supported by the existing systems.
Recommendation	describes the PAA Team's recommendation of how the current situation should change to better support the program need.
Design Considerations	describes the anticipated benefits, concerns, and likely steps required to implement the recommendation. These implications will be further evaluated during the PSD phase subsequent to PAA.
Other Options Considered	lists the alternative options that were considered during the PAA to resolve the issue.
Dependencies	describe how implementation of the recommendation is reliant upon the implementation of other specified PAA recommendations.
National Review Feedback	summarizes any key observations or corrections proposed by reviewers of the Draft Report recommendations.

The recommendations that follow are ordered based generally on their appearance in the following figure. No specific importance or priority should be inferred from this ordering.
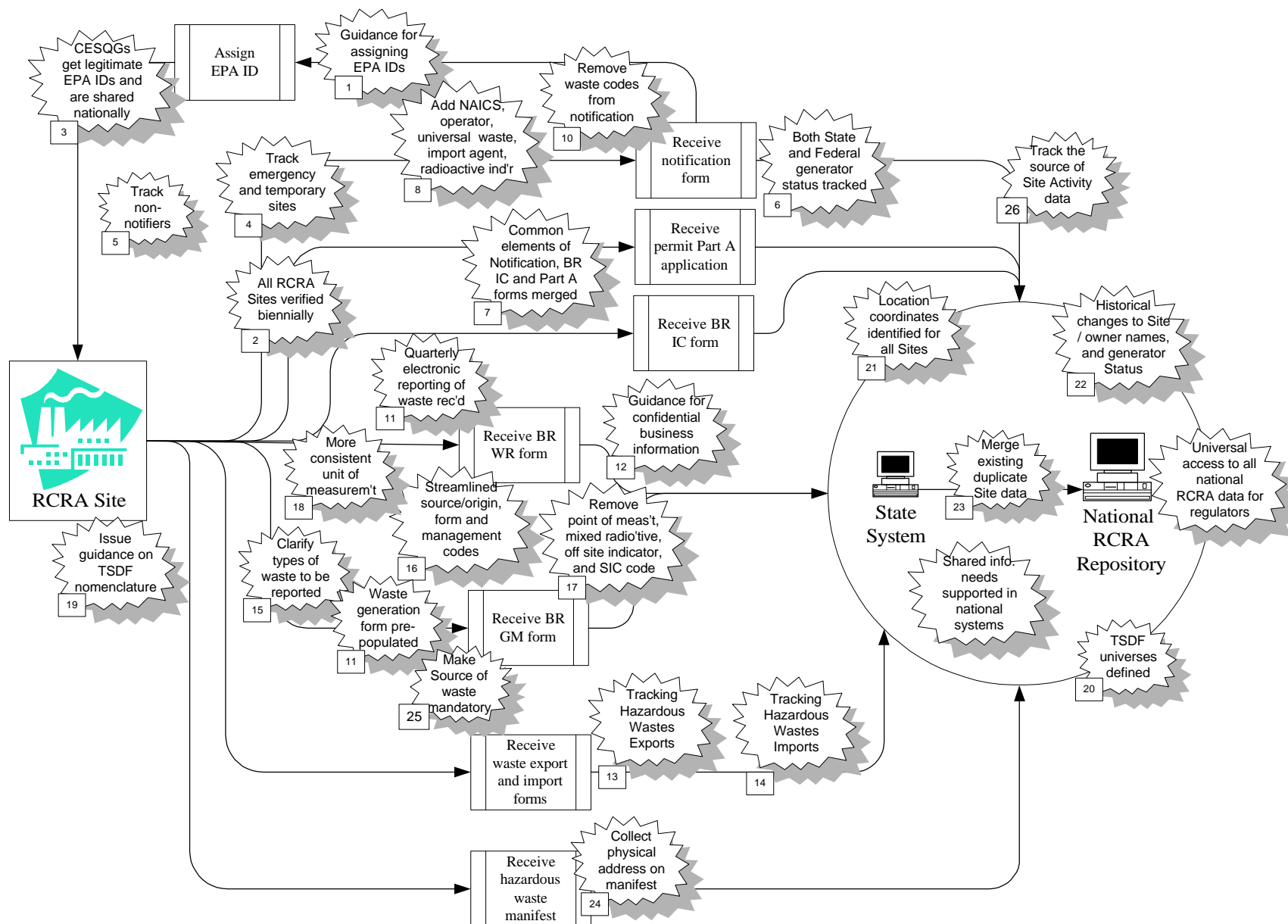
Figure 6: Recommended Improvements to Current Information

1) Issue guidance on EPA identification number assignment

Summary

Combine and make available all current guidance indicating that as a general rule, a single EPA identification number will be assigned to a specific RCRA Site and retained regardless of changes in ownership or activity.

Program Need

RCRA regulations require persons handling hazardous waste to submit EPA Form 8700-12 or a State equivalent to obtain an EPA identification number. The implementing agency then assigns an EPA identification number to the applicant (i.e., technically, the owner or operator; owner is used below to mean both). This number is then used to consistently identify an individual RCRA Site.

EPA's Office of Solid Waste has published a number of memos and letters to facilities detailing how EPA identification numbers should be assigned. The general understanding among State and EPA program staff is that for any given location, only one EPA identification number should be issued. However, EPA has not issued comprehensive guidance on this issue and the basis for the policy is not stated in Federal regulation.

Effective data sharing requires a consistent national practice with respect to the assignment of EPA identification numbers to RCRA Sites.

Problem Analysis

Existing documentation covering EPA identification number assignment is not currently compiled into a clear accessible format for implementers' reference. EPA identification numbers have generally been assigned to a specific RCRA Site location with the intention that this number should not change over time. Not having clear guidance has resulted in inconsistent assignment of identification numbers for the same RCRA Site. For example some companies request that the implementer assign a new EPA identification number when they take over an existing RCRA Site, to avoid association with the previous owner's environmental record. As a result of this, companies that have taken ownership of an existing RCRA Site have complained that EPA's Envirofacts system (or other reports) includes the prior owner's compliance record.

Documentation that is available has not addressed the many practical situations that may *require* the implementing agency to assign a new EPA identification number. Some examples of these are:

- When a RCRA Site splits or combines property (potentially along with a change of ownership).

- For closed military bases, the Department of Defense requires new owners of parcels to obtain new EPA identification numbers. In many cases the old EPA identification number is still used by Department of Defense for areas that are being cleaned up.

Recommendation

For the purposes of the RCRA program, a RCRA Site is identified as a specific location which is currently, or has in the past, conducted waste handling activities of interest to the RCRA Subtitle C program, as promulgated in either the Federal Register or individual State statutes. The location may be described by a physical address, and/or by description, and/or by geographic coordinates.

All current guidance related to the assignment of EPA identification numbers is to be compiled and distributed. The guidance will indicate that as a general rule, a single EPA identification number should be assigned to a location for all situations. This number would be retained even under the following situations:

- A new party acquires the property or operation of the site.

- A new name is adopted for the site.

- The owner adds new hazardous waste activities at the location (e.g., a generator begins to also treat hazardous waste).

- The owner begins new hazardous wastes activities that require updating the information (e.g., the owner begins to generate universal waste).

- The location address information - not the physical site location - is changed (e.g., a rural route becomes a named road or the site "front door" is moved from one bordering street to another street).

Specific examples of instances when this general rule cannot be applied will be considered during the design of this recommendation and will be documented in the guidance. Some examples of such instances are:

- Other federal agencies privatize and subdivide a site (e.g., Department of Energy)

- Vendor A is responsible for a spill at Customer B's site that has a valid EPA identification number. Vendor A is responsible for the clean-up at site B and requires a new EPA identification number for the clean-up site, distinct from Customer B's number.

- RCRA Site goes out of business. The site is then subdivided into several smaller units some with their own RCRA regulated activities, necessitating assignment of additional EPA identification numbers

- A business wants to split an existing RCRA Site into multiple subsidiaries. The parent corporation maintains ownership, but the subsidiaries are the operators.

- Airports have multiple airlines and service companies that lease property from the airport. The portion of the airport used by leasing the company may expand or contract or move.

- A TSDF has been designated clean closed but not gone through corrective action. The property is then subdivided and sold into smaller units. The original EPA identification number is maintained for the entire site for future potential corrective action, but each of the smaller units are assigned their own EPA identification number.

- Adjacent properties, each with their own identification number and businesses, merge operations.

Design Considerations

1) National systems must be able to associate multiple EPA identification numbers to a RCRA Site to cater to the exceptional circumstances.

2) Allowances must be made during design for those existing RCRA Sites and associated EPA identification numbers that are not compliant with the guidance.

3) Systems that provide public access to RCRA Site information must be evaluated and potentially redeveloped to ensure that they correctly present historical information about EPA identification number. For example, the systems would need to indicate that data on previous

compliance problems at a RCRA Site is not associated to the current owner/operator, even though they share the same EPA identification number.

Other Options Considered

1) *Only assign an EPA identification number once for a location in all situations. Require new owners to use this number.*

2) *Always assign a new EPA identification number to a location when there is a new owner of the property. Relate to the previous EPA identification number information to allow assessment of a site's history.*

Dependencies

22)   Record historical changes to RCRA Site name, operator name, owner name, and regulated activity status

This is a <u>partial</u> dependency.

This will support the need to track changes in the name and ownership of the RCRA Site over time, such that new EPA identification numbers will not be required each time a change occurs.

2)   Study feasibility of periodic verification of RCRA Site information

Summary

Study the feasibility of instituting some form of verification of basic site identification information from RCRA regulated sites having a valid assigned EPA identification number. The study would include an assessment of both mandatory or optional verification as well as considering the appropriate frequency for the verification process and the most practical universe(s) of RCRA regulated sites that should be included. The most appropriate mechanism for verification would also be evaluated, for example, the use of forms pre-populated with available information about the RCRA site.

Program Need

The notification process is the initial means for identifying hazardous waste sites under the RCRA program. Currently, there is no formal or Federally mandated process to verify or update the notification information collected by EPA or the States from RCRA Sites.

To have a meaningful picture of the regulated universe, implementers must be able to distinguish between *active* and *inactive* RCRA Sites. There is a need to know when a RCRA Site no longer conducts any RCRA-regulated activities and is not of active interest to an implementer, except historically.

Accurate information about the universe of all RCRA regulated sites, including SQGs and others having a valid EPA identification number, supports the following RCRA program activities:

- resource allocation and planning

- planning and targeting for inspections and technical assistance

- national program planning and reporting

- respond to public information requests

- regulatory impact analysis

- environmental justice analysis

- waste minimization

- assessing program effectiveness (EPA)

- grant distribution (EPA)

- support of fee collection mechanisms (States)

Problem Analysis

At the inception of the RCRA program, hazardous waste handlers were required to initially notify the EPA by completing and submitting a "Notification of Hazardous Waste Activity" form. Most RCRA Sites submitted the Notification form because they actually generated, transported, and/or managed hazardous waste and were subject to regulation.

Once a RCRA Site submits a Notification form, there is no Federal regulation requiring the RCRA Site to inform the implementer of any changed information. For example, if their generator status changes from large quantity to small quantity or the RCRA Site is no longer handling hazardous waste or changes the types of waste being generated. When RCRA Sites cease operation, or stop generating hazardous waste, they can be considered inactive. Some

current methods used to determine activity are periodic reporting, site visits, bankruptcy notices, or returned mail.

Given this lack of regular update, the site information available to the RCRA program can quickly become outdated and inaccurate for one or more of the following reasons:

-   For RCRA Sites that do not file Biennial Reporting forms or State equivalents (typically SQGs, transporters, some used oil handlers, and universal waste handlers), much of the notification data is very old, some of it based on the initial 1980 notifications.

-   Some information, such as the RCRA Site's contact person or generator status, may change frequently.

-   When a RCRA Site goes out of business it is likely that the State or EPA will not be informed unless a new owner notifies.

-   The information collected in the Federal Biennial Reporting forms is used by only some States to update the associated data recorded in RCRIS.

-   The lack of capabilities in RCRIS and BRS for easy access to data, have led to minimal maintenance of that information by users and collectors of the data.

-   Some businesses, unfamiliar with the new hazardous waste regulations, notified EPA during the early years of the program despite being uncertain whether they were actually required to do so. This is referred to as "protective filing" meaning they were protecting themselves from possibly being in violation of the notification requirement even if they were not actually legally subject to it.

-   CESQGs are not required to notify, but may if they wish to. Many commercial TSDFs require CESQGs to have a valid EPA identification number assigned before they will receive their hazardous waste. Most States do not require any periodic verification of CESQGs identification data.

Some States have taken this issue in hand by implementing a periodic verification process to improve data quality. Benchmarking of existing implementations of this recommendation by the States of Indiana and Oregon provided the following information:

INDIANA	OREGON
- perform verification biennially to LQGs and variably to SQGs	- perform verification annually to all registered LQGs, SQGs and CESQGs
- 1000 LQGs regularly sent verification forms	- 240 LQGs, 560 SQGs and 3000 CESQGs are sent verification forms
- response rate from regulated community is good	- viewed favorably by regulated community
- 70% to 80% of returns include some modification to handler details	- 40 hours for State to prepare and send forms
- 80 hours for State to prepare and send forms	- 320 hours for State to process modifications
- 100 hours for State to process modifications	- estimated completion time is 10 minutes per facility
- estimated completion time is 10 minutes per facility	
- no negative feedback from regulated community	

A limited survey was conducted of 11 States to evaluate the current business practice with respect to verification.

Survey Results

- 3 of 11 survey respondents perform some type of systematic annual verification process.

- Of these 3 States, 2 include SQGs in the verification and all use some form of pre-populated form.

- Where States employ such a process, 2 of 3 have a mandatory requirement while the third allows response to be optional but typically experiences a 90% response rate from the regulated universe.

- Where no such process is employed, States rely instead on other information sources such as inspections and waste reports.

Where States currently perform periodic verification this is often associated to regular reporting of waste information and as such most often focuses only on LQGs and TSDFs, although several States also collect SQG information. Many States conduct such verification to improve RCRA Site data quality specifically to support revenue generation activities. This provides a greater incentive for both RCRA Site and State to have good quality data, and results in varying data collection/quality across States with different fee structures and invoicing periods.

Implementation of such verification procedures, while clearly resulting in improved data quality, also imposes some additional reporting burden on the regulated community and on the responsible organization.

Recommendation

Some form of periodic verification of notification data should be implemented. A design study should be undertaken to consider how best to perform this verification with a focus on determining the optimum balance between improved data quality and the associated data collection burden. The study will include an assessment of the feasibility of various approaches, an initial cost-benefit analysis and more detailed benchmarking. It will result in a recommended approach for detailed design consideration.

This study will consider four main factors:

Nature of requirement

The study will consider whether RCRA Sites should be required to re-verify their information or whether this should be optional. Although it is generally assumed that a mandatory requirement would result in greater level of response from the regulated community, the potential burden increase for the regulated community is a cause for concern, especially for the EPA. Some States have indicated that a voluntary approach may require greater effort on the part of these agencies to obtain a good level of response through follow up with RCRA Sites, for example, a site visit or further correspondence. Other organizations might be unable to implement such a procedure unless it is required by some Federal rule due to State regulatory restrictions. An alternative option would be to mandate re-verification but only if a change has been made to the basic site information.

Universe of regulated RCRA sites to be targeted

PAA participants commented generally on the poor quality of information about RCRA Sites in national and organization specific systems, although this problem is generally felt to be more acute for smaller, less closely regulated sites. The study will consider which universe of RCRA Sites should be subject to verification procedures. At one extreme, verification might be required for all regulated RCRA Sites having a valid EPA identification number including TSDFs, LQGs, SQGs, transporters and any CESQGs, used oil handlers, or universal waste handlers that have

---

previously notified. Alternatively, the requirement could be simply for LQGs and TSDFs, the biennial reporting universe, to verify basic site information at the same time as they submit the waste report. Clearly, the wider the universe of RCRA Sites who are subject to verification, the wider and therefore greater will be the impact on the regulated community and on the net additional burden.

Frequency of verification process

The study will also consider the frequency at which the verification process should occur. Most States who currently implement some form of periodic verification do so in association with their existing waste reporting cycle, for example, annually or biennially. This approach offers several advantages by streamlining the information collection process. When determining the ideal frequency for verification of site information, the study will consider the reporting burden imposed on the regulated community and the administrative burden to be borne by the implementing agency.

Reporting mechanism

One possible mechanism for verification would be to use a pre-populated copy of a *RCRA Site Identification* form containing the most recent identification information available that would be sent to the relevant RCRA Sites for verification and return. This form will include information such as the last reported name, owner, hazardous waste activity and so on.

The RCRA Site would mark up any changes in the information, sign it to certify its accuracy, and return it to the implementing agency. This option provides a consistent, minimum level of exchange that States and EPA can readily utilize.

Other possible mechanisms will also be considered such as electronic verification using the Internet, or simple resubmission by the RCRA Site of a new *RCRA Site Identification* form within a certain period, for example, 90 days from the date of any change to the information.

The design study will also quantify the effort required for different methods, taking account of such factors as mass mailings, data entry costs, follow up costs and how returned or non-responsive mailings might be handled.

Design Considerations

1) Federal regulatory change required supporting the biennial verification process.

2) Functionality would need to be developed in the national information system to produce the pre-populated verification forms.

3) There will be some increase in reporting burden for the regulated community, primarily for those RCRA Sites not currently required to submit biennial waste reports. Preliminary benchmarking and survey results appear to indicate that this burden is not great, amounting to less than 15 minutes completion time per RCRA Site (see above). A more accurate assessment will be made during the design project.

4) Some additional burden on States to implement.

Other Options Considered

While this recommendation will result in some additional burden to be assumed by both the regulated community and implementers, the resulting improvements in data quality and completeness are likely to result in a net reduction in burden over time. The following options were also considered:

1) *Collect information from TSDFs only. Remove any requirement for generators to provide such information directly.*

2) *Eliminate the requirement for SQGs to notify or report at all.*

3) *Use inspections, compliance assistance visits, and other means to verify or update notification information.*

Dependencies

7)   Merge common elements of site identification forms

This is a <u>critical</u> dependency.

If a common site identification form were not developed, the effort required to gather verification information would be complicated by the multiple forms from which the information originates. Regardless of the frequency or targeted universe for verification, a single reporting form would greatly improve and simplify the reporting process.

23)   Merge existing duplicate site data

This is <u>partial</u> dependency.

Any verification process would be complicated if efforts are not made to implement a single integrated set of site information. This is because any form of verification is likely to depend on pre-population of site information on a standard form to be used for verification. If this information is to be accurate, it should ideally be derived from a single source. Additionally, the administrative effort would be greater if updates are required to two information sources when changes are received.

National Review Feedback

Although most States and Regions support the recommendation to perform periodic verification as a means of improving data quality, they are generally very concerned about the resources that might be required to implement it. Several States commented that they would be unable to perform any kind of voluntary verification due to legal, political or resource constraints while EPA OSW expressed strong concerns as to the political viability of mandating verification from the regulated community.

These specific resource concerns will be evaluated as part of the recommended study before a final pathforward is determined.

A number of States and Regions proposed that verification should be supported by a Federal rule that would require RCRA Sites to re-notify within a certain time period if any basic site information changes. This would replace any requirement for wholesale verification, although such an approach would need to be implemented in conjunction with an initial one-time universal verification process in order to be fully effective. These commenters felt that this approach would better place the responsibility for data quality on the regulated site.

This alternative will be evaluated as part of the study, with attention being paid to the most effective verification frequency.

3)   Track all notifying CESQGs nationally

Summary

All future site information that is collected by implementers through notification by CESQGs will be made available at the national level where those CESQGs are assigned valid EPA identification numbers.

Program Need

States need to be able to track the handlers that have been issued a valid EPA identification number in their State, including those that are conditionally exempt from RCRA reporting regulations.

A better understanding of the CESQG universe will support several needs, for example:

- greater integration of data between regulatory programs (e.g. TRI and RCRA)

- internal tracking of enforcement and compliance activities

- pollution prevention assistance

- compliance assistance targeting

- waste minimization trend analysis

- response to public information requests about RCRA Sites

- response to queries from the business community, for example, CESQG information is frequently requested both by companies doing property assessments associated with real estate transfers, as well as businesses looking for potential customers

Although the quantity of waste generated by CESQGs represents only a small percentage of the total national waste production, the impact to the environment can potentially be great since:

- many CESQGs are service industries (e.g., dry cleaners) which are typically located in residential areas

- reduced regulations for handling of hazardous wastes may lead to a greater potential for spills and releases

- CESQGs tend to be smaller operations with fewer trained and knowledgeable staff

Problem Analysis

Currently, CESQGs are exempt from Federal reporting and notification requirements. Some State-specific exceptions exist, for example, in Minnesota and California, which regulate the generation of quantities of waste as small as one kilogram per year. However, in States that capture this broader scope of facilities, the RCRA Sites are regulated as either LQGs or SQGs, not CESQGs.

Some CESQGs do submit a Notification Form to obtain an EPA identification number. This is often the case where they are required to have a valid number by their TSDF or transporter. Since there is no Federal requirement for CESQGs to inform the relevant agency of any changes to their information, the information available in the databases soon becomes out of date.

At the national level, because only a small percentage of CESQGs notify, the national information systems can never report on the complete CESQG universe.

CESQG data is often entered into the RCRIS implementer database by States and Regions, but is excluded from the national oversight database unless the facility has had some other RCRA regulated activity in the last five years. This decision was made because of the perceived poor data quality and coverage of the CESQG information, as well as for streamlining efforts on the part of EPA. CESQG information that is available therefore provides incomplete coverage of the universe.

There is also concern over making this information available to the public for two reasons. The first is the potential for misunderstanding the scope of the available information. The second is the fact that these are *conditionally exempt* facilities and are not regulated by the RCRA program. The public may incorrectly assume that if the hazardous waste program is collecting information on them, the program regulates them.

Recommendation

In the future, where a valid EPA identification number is assigned, any information collected about CESQGs will be made available at the national level, whether this information was volunteered by the RCRA Site or collected by virtue of a broader-in-scope State requirement. This recommendation will not apply retroactively although each implementer may choose to make historical CESQG information available nationally if they wish.

This will allow implementers to know which CESQGs have notified. However, since only a partial view of the CESQG universe will be presented, care must be taken to avoid potential misunderstanding over the scope of facilities that are actually regulated.

Design Considerations

1) Develop explanatory materials to educate public and interested agencies of the impact of the change.

2) Make necessary changes to national information systems.

3) Share all existing CESQG notification information within the national program information systems.

4) Potentially make this information publicly available.

Other Options Considered

The team selected the recommendation since it provides consistent access to the widest possible set of CESQG information.

The following options were also considered.

1) *Implementers do not share CESQG information.*

2) *Require all CESQGs to notify.*

Dependencies

2) *Study feasibility of periodic verification of site information*

This is a partial dependency.

If CESQG data is made available nationally, the number of RCRA Sites being tracked in national systems will increase. To avoid redundancy and "cluttering" of the database, some form of periodic verification would be required to ensure that the CESQG population is up to date.

National Review Feedback

A number of commenting States indicated that they currently collect and manage some CESQG information. Of these States, approximately half enter this CESQG information into RCRIS, while the other half track the CESQGs in their own internal systems but not in RCRIS. The numbers of CESQGs vary greatly by State, from the low hundreds to ten thousand or more. At least two States indicated that the available CESQG data is of questionable quality or that the available data is not detailed enough to allow determination of whether the sites are CESQGs or simply non-hazardous waste sites.

4)   Track all emergency and temporary sites nationally

Summary

All emergency and temporary sites will be assigned a unique EPA identification number and information about them will be made available nationally.

Program Need

The RCRA program needs to be able to differentiate between RCRA sites that generate hazardous waste from ongoing processes and those sites that generate waste from a single event (e.g. spill clean-up, site or equipment closure). A "single event site" is a location that handles RCRA regulated wastes at one discrete point in time. This point in time may be a protracted period, but waste generation activities are limited to that period. The period of operation as a RCRA Site handling hazardous wastes is limited and the expectation is that the RCRA Site will not pose a continuing waste generation concern to the regulatory agency. These single-event sites are commonly termed *emergency* and *temporary* Sites.

Emergency sites

Emergency sites are those where the waste generation situation is unforeseen, uncontrollable and short-term and not expected to exceed 30 days. Emergency sites need to be distinguished from typical RCRA regulated sites since the standards of quality and completeness applied to the associated information would probably be less stringent.

In the case of spills and accidental releases, implementers are frequently called upon to issue an expedited identification number so that the hazardous waste can be moved off-site quickly. The request may be oral and no Notification form may be received before the EPA identification number is issued.

Temporary sites

A *temporary* RCRA Site is one that does not generate hazardous waste from ongoing industrial processes, but rather through remediation or "one-time events," such as plant cleanout and closure or process equipment change. Other examples include highway bridges and cruise ships. Unlike emergency sites, the implementing agency usually receives a Notification form and issues an EPA identification number. However, the period of operation as a hazardous waste RCRA Site is limited and typically short.

Despite the transient nature of both of these types of single event sites there is a need to track their activities and to gather information about the waste that is generated. For example:

-    Tracking information about emergency sites will allow an implementer the opportunity to trace patterns in incident occurrence and waste generation by geography or perhaps transporter. Preventative measures might then be taken.

-    The location of emergency incidents could be used in the future to investigate other environmental problems. For example, if a well in the immediate area becomes contaminated with the same constituents that were spilled a regulator could investigate the spill as a possible source of contamination.

-    Hazardous waste and its proper management carry some "higher" level of need to know what is generated and where it goes to be properly managed. This need for public reassurance includes temporary and emergency events.

Problem Analysis

RCRA regulations do not differentiate between "standard" RCRA Sites and temporary or emergency sites. Review of the regulations indicate that residues, contaminated soils or debris from spills that are to be discarded are regulated the same way as any other RCRA waste, and associated site of generation. If waste is generated at or above SQG levels, an EPA identification number is required, and BRS reporting is required if the quantity is at the LQG level.

Implementers differ in the treatment of such sites. Some assign "temporary" or tracking identification numbers, while others issue normal EPA identification numbers. Of these, some implementers record the sites in RCRIS, usually as one-time generators, and/or implementer systems or paper files. Several implementers handle temporary and emergency sites differently from one another.

For emergency sites, the person requesting the EPA identification number is usually not the owner/operator, but rather a representative of law enforcement, emergency response and management, or other agency. Although this person assumes the generator's responsibilities in connection with the hazardous waste manifest, the person does not meet the regulatory definition of a generator. Often, the available information about an emergency site is limited and incomplete.

For both of these types of site, implementers need a mechanism to "close the loop," so that those RCRA Sites that are no longer of interest can be distinguished from those of ongoing concern. Some implementers effectively deactivate such a site as soon as it is recorded by issuing a provisional number that effectively has a 30 day life span and automatically becomes invalid for waste shipment purposes after that time. Some States currently require that such temporary sites re-notify when they complete waste generation activities to indicate that they are no longer active.

To prevent cluttering of the national information systems, discussions have considered some type of automated deactivation of temporary sites. While prompt deactivation of such temporary sites is desirable, their complete removal from the national system would be detrimental since reports of waste received by a TSDF would be incomplete in the absence of the temporary generator site record.

Recommendation

The RCRA regulations do not distinguish between RCRA Sites that generate waste on an ongoing basis or through a single event. Given this and since all generators of RCRA waste that report are to be collected nationally, it is proposed that every single event site would be assigned an EPA identification number.

Information about these RCRA Sites will be collected and made available nationally in common with information about ongoing generators, providing a full picture of all regulated RCRA Sites and waste movement from such sites.

Emergency sites

Notifications will not typically be received from emergency sites. A brief "telephone notification" form might be used to take provisional details on the incident site, to ensure that an EPA identification number has not already been assigned. Such locations will be indicated as "emergency sites" to facilitate systematic reference and to indicate that a less stringent standard for data quality is to be expected.

The period of activity of the emergency site may be difficult to determine in all cases. To close the loop for such sites, functionality could be developed in the national system to provide a timed

"tickler" notifying the regulator that the site is still active in the system and deactivation may be required.

<u>Temporary sites</u>

A full Notification form would be required from all temporary sites (to be referred to as single event sites). Again, a brief "telephone notification" form might be used to take provisional details on a site before confirming that the single event site does not already have an EPA identification number and assigning a new one.

The duration of the waste generation activity would be indicated using the site activity information and associated activation and deactivation dates, which is how all RCRA Site activity information is to be managed. Some form of periodic RCRA Site information verification procedure will be used to track whether a single event site continues to be active.

Design Considerations

1) New guidance must be developed by States and EPA to ensure all parties are managing this information consistently.

2) Implementers must enter all regulated sites into the national system, assigning a valid EPA identification number to each.

3) Deactivation or "tickler" functionality may need to be developed.

Other Options Considered

The recommendation is expected to provide the comprehensive improvement in information quality with no additional burden on the regulated community. The following option was also considered:

1) Develop Federal regulation requiring that all RCRA Sites notify the implementing agency when they cease hazardous waste handling activities.

Dependencies

The above recommendation is dependent upon:

2)   Study feasibility of periodic verification of site information

This is a <u>partial </u>dependency.

If temporary and emergency site data is made available nationally, the number of RCRA Sites being tracked will increase. To avoid redundancy and "cluttering" of the database, some form of periodic verification would be required to provide a mechanism to determine if and when the sites are no longer active. This would avoid the current problem of national and implementer systems tracking many inactive sites as if they were still active.

National Review Feedback

Of those States who commented on this recommendation, the majority currently assign valid EPA identification numbers to emergency and temporary sites. Several of the remainder assign State-specific numbers. The number of such sites identified each year varies from state to state, ranging from tens to thousands of sites.

Some concerns were expressed that such sites may be recorded only to remain apparently active indefinitely if some verification mechanism is not put in place.

5)   Track all non-notifiers nationally

Summary

Adopt a consistent process for the classification and recording of sites that initially fail to submit a formal notification to the responsible implementing agency.

Program Need

Non-notifiers are RCRA Sites that have not submitted a signed Notification form to the implementing agency.

All implementers recognize a site as an "official" RCRA Site only if a Notification form is submitted, a telephone notification is provided in the case of emergency sites, or as the result of a formal site visit by State or EPA program staff. Sites that have not previously notified can be initially identified through a variety of means including:

- hazardous waste inspections

- complaints

- targeted initiatives using trade associations

- phone books

- industrial directories

- TRI reports

- other governmental agency referrals (e.g., DOT)

- regulated community

There is a programmatic need to capture information about such sites in an organized and consistent way.

Problem Analysis

Implementers assign an identification number to all RCRA Sites in order to track them in paper files and in information systems. Non-notifiers must be identified for the same reasons. A non-notifier is considered to have notified when they submit the Notification form or equivalent to EPA or the authorized State. The implementing agency then issues an EPA identification number if one has not already been assigned.

Some implementers track non-notifiers outside of the national information systems using various systems of alternative identifiers. Data about these RCRA Sites is then not made widely available to program staff.

Currently, the RCRIS Handler Module provides four values that can be entered into the non-notifier indicator field:

 X - Current non-notifier (known to State or EPA to be a hazardous waste RCRA Site, that has not submitted a notification)

 O - Former non-notifier that has since notified

 E - Initially considered a non-notifier, subsequently determined to be exempt from notification

 Blank - Not currently a non-notifier and not known to have been a non-notifier in the past

The primary issue concerns the need to identify non-notifying sites historically.

- There is currently no common convention for assigning tracking numbers to non-notifiers.

- The information about non-notifiers is usually only accessible to the implementing agency which can sometimes result in inconsistent accounting in program activity reports.

- Temporary tracking numbers assigned by implementers may last for many years before the owner applies for an EPA identification number or the agency determines no EPA identification number is needed.

Additionally, there is confusion about the use of the term non-notifier. The term applies to those who are engaged in activities that require an EPA identification number. Many State and EPA staff, however, also use the term to indicate those RCRA Sites with EPA identification numbers who fail to submit required subsequent notification of additional - sometimes newly regulated - hazardous waste activities (some regulated activities such as universal waste handling do not require further notification if the RCRA Site already has an EPA identification number).

Finally, although PAA participants agreed to the need for information about non-notifiers to be available to implementers, this information should not be made available to the public due to potential enforcement sensitivity.

Recommendation

RCRA Sites may only be identified and tracked nationally through either submission of a formal Notification form, by telephone or fax notification in the case of an emergency site, or a site visit by a responsible agency.

The following process will be used to track non-notifiers:

1) Issue a valid EPA identification number to non-notifiers when they are discovered, recording the date they were discovered.

2) If and when a non-notifier submits a notification, record the submission date. This would validate the identification number already assigned to the RCRA Site

3) If and when the implementing agency determines that the non-notifier is in fact not a hazardous waste RCRA Site, indicate that notification requirements are not applicable to this site.

4) All non-notifiers would be made available in the national implementer data set although would not necessarily be made available publicly due to enforcement sensitivity.

Design Considerations

1) Additional data elements would be required in the information system to track the discovery date for a site and the fact that a site is "not required to have notified" even though it may have an assigned EPA identification number.

2) Would require implementers to periodically review all non-notifiers to determine whether they are truly RCRA Sites. Such sites would then become available nationally.

Other Options Considered

1) Create new terms to replace the differing situations now represented by "non-notifier." "Non-applicant" might be used for those who fail to apply for an EPA identification number, "non-filer" (or "non-reporter") for those who fail to notify about changes in their hazardous waste activities.

2) *Train all implementers about the proper use of the current procedures for entering non-notifiers in the database. Use the term only for those RCRA Sites that may require an EPA identification number.*

6)   Collect both State and Federal generator status from States

Summary

In addition to reporting the Federal generator status for a RCRA Site, each State with regulations that are "more stringent than" or "broader in scope" will also provide the State generator status if different from the Federal status. This information will be made available nationally for all generators.

Program Need

The basic Federal regulatory framework provides for three distinct classes of hazardous waste generators: LQGs, who are subject to the most comprehensive regulations; SQGs, who comply with a less stringent set of requirements; and CESQGs, who are not subject to reporting requirements provided they comply with a set of simple requirements. Generators fall into these regulated classes based on the volume and toxicity of hazardous waste they generate, accumulate and/or store in any one month of the calendar year. Both LQGs and SQGs are required to notify the agency of their activities, declare their generator category, and obtain EPA identification numbers, to be used in manifesting and other waste reporting.

The definitions of these classes as described by the Instructions for the 1997 Biennial Reporting forms are:

Large Quantity Generator
Site is an LQG if it meets any of the following criteria:
a)   The site generated in one calendar month 1,000kg or more of RCRA hazardous waste; or
b)   The site generated in one calendar month, or accumulated at any time, 1kg of RCRA acute hazardous waste; or
c)   The site generated or accumulated at any time more than 100kg of spill cleanup material contaminated with RCRA acute hazardous waste.
Small Quantity Generator
Site is an SQG if it did all of the following:
a)   In one or more months generated more than 100kg of hazardous waste, but in no month did the site generate (1) 1000kg or more of hazardous waste; or (2) 1kg or more of acute hazardous waste; or (3) 100kg or more of material from cleanup of a spillage of acute hazardous waste; and
b)   Accumulated no more than 1kg of acute hazardous waste and no more that 100kg of material from the cleanup of a spillage of acute hazardous waste; and
c)   Stored its wastes in tanks or containers in a manner consistent with regulatory provisions.
The site can also be an SQG if it:
a)   Met all other criteria for a CESQG, but
b)   Accumulated 1000kg or more of hazardous waste
Conditionally Exempt Small Quantity Generator
Site is a CESQG if in every month of the year, the site did all of the following:
a)   Generated no more than 100kg of hazardous waste, and no more than 1kg of acute hazardous waste, and no more than 100kg of material from cleanup of a spillage of acute hazardous waste; and
b)   Accumulated no more than 1000kg of hazardous waste, and no more than 1kg of acute hazardous waste, and no more than 100kg of material from the cleanup of a spillage of acute hazardous waste; and
c)   Treated or disposed of the hazardous waste in a manner consistent with regulatory provisions.

While RCRA requires as a condition of authorization that State hazardous waste laws be at least as stringent as Federal rules, it allows States to operate regulatory programs that are broader in scope (BIS) or more stringent than (MST) the Federal program. For example, a State:

-   May impose the regulatory obligations of an LQG on facilities generating less than 1,000 kilograms of hazardous waste in a calendar month (which is more stringent than the Federal scheme).

-   May regulate wastes not included in the Federal list of hazardous wastes (broader in scope).

- May require CESQGs to notify and obtain an EPA identification number (also broader in scope).

This flexibility reflects both the essence of the State-Federal system of government and the varying situations, concerns and needs of different States.

States need to know the status of a generator as defined by their own regulations which may or may not be the same as the Federal regulations. Where State definitions are different from Federal definitions, States have less need for the Federal status.

EPA uses the Federally defined generator status to support many of the agency's program evaluation functions including various regulatory oversight activities, regulatory impact assessment, fund allocation, and congressional reporting. The Federal LQG and SQG universe sizes are also used to identify compliance rates, high-risk generator sectors, and facilities that need to be inspected. Since States have varying definitions of large and small quantity generators, the Federal definition must be used to ensure consistency and report meaningful universe numbers when performing interstate comparisons analysis.

If an authorized State has rules more stringent than the Federal equivalent, EPA inspects by those rules in that State: but if the State has rules that are broader in scope than the Federal program, EPA can enforce only by the Federal regulations. EPA therefore needs to be able to distinguish between generators categorized by the Federally defined or MST and BIS statuses.

Problem Analysis

Due to MST or BIS State regulations, a generator may identify itself as an LQG according to State regulations, but be considered an SQG under the Federal definition (e.g., because of the State of New York's inclusion of PCBs, and more extremely, the State of California's all-inclusive LQG regulation). The same situation is also true for State SQGs and Federal CESQGs (e.g., Kansas regulates generators of 25kg - 100kg as SQGs, where the Federal definition considers any generation under 100 kg to be CESQG). A state-only LQG must follow state regulations that are equivalent to federal LQG regulation requirements, even though it does not meet the Federal definition of an LQG.

This situation has a number of implications. Firstly, States that apply regulations that affect generator status definitions may have the burden of translating between State and Federal statuses. Secondly, users of both State and EPA data (including the regulated community and public) are provided with confusing and apparently contradictory representations of some generators. Thirdly, EPA's impact analyses of a given Federal regulation on LQGs may not be representative of the total population of those RCRA Sites that would need to comply with that regulation.

The main source of generator status information is the Notification form. This normally represents the generator's status as prescribed by State rule, if different to Federal rule, or in some States, collects information about both State and Federal regulatory classifications. Additionally, RCRA Sites that are LQGs and who are required to report waste generation information using Biennial Reporting forms are required to report their generator status on those forms using the Federal definition.

A brief survey was conducted of 17 States to evaluate the business practice with respect to variations between State and Federal regulatory definitions and how they are handled. This survey appears to indicate that this situation affects the minority of implementer States. The survey also indicates that where the state generator status is different from the Federal status, there is inconsistent reporting of the status values between states.

Survey Results

8 of the 17 States who responded have implemented regulations that are broader in scope or more stringent than the Federal regulations. In 6 of the 8 States, these regulations affect the number of generators, with the affect on the number of regulated large and small quantity generators varying between one and several thousand.

Survey respondents were asked to detail how any differences between their State regulations and the Federal regulations affect the provision of generator information to the national RCRIS and BRS information systems.

With respect to the RCRIS system:

- All of the surveyed States provide information to the national RCRIS information system and include both LQG and SQG information and in several cases any CESQG information collected.

- Of the 6 respondents whose State-defined generator universe is different from the Federally defined universe, 4 do not attempt to convert the State status to the equivalent Federal status prior to inputting the information into RCRIS. The remaining 2 respondents collect the necessary information to perform the conversion on their Notification forms.

- The main reason cited for not making the conversion was "resource shortage".

With respect to the BRS system:

- All of the surveyed States employ a mixture of manual and electronic reporting to the BRS system.

- 5 of 6 respondents whose State defined generator universe is different from the Federally defined universe input only Federally defined LQGs into BRS. Only one respondent inputs all State-defined LQGs additionally.

- Conversion of the collected information is often unnecessary since the reporting forms or software used to capture the report information from the regulated community typically make the distinction between the State and Federal regulations.

Recommendation

States will report their generator universe as identified by their own regulatory definitions and will also report the generator universe as identified by the Federal regulatory definition to the best of their ability to translate the generator status. This reporting will occur for all generators that are provided nationally.

The Federally defined generator status should be determined by the State either using information collected directly from the regulated community or by extrapolation from waste generation information provided on the Biennial Reporting forms or equivalents when it becomes available.

For those States having MST or BIS regulations that affect the generator status, the following steps are proposed:

1) When a generator notifies, the State will assume that the reported generator status reflects solely the State regulations unless the State collects sufficient information to determine both Federal and State status values using a State-specific Notification form.

2) Periodic waste reports (manifests, Biennial Reporting forms, or similar) will be used to confirm the relevant State and Federal status values. LQG status values may be determined directly from waste generation information while SQG and CESQG status values can be determined either directly, if they submit waste reports, or by examination of waste receipt information submitted by TSDFs.

It should be noted that precise determination of the Federal status may not always be possible. The PAA Team has agreed that the best approximation is acceptable in these cases. Supporting

definitions will be provided to viewers of the information to ensure that the data is interpreted correctly.

This recommendation will provide the following benefits:

- Having the State defined status values in the national database will provide a more complete picture of the total number of handlers that are regulated under the RCRA regulations across the country.

- Data will be more directly comparable across the nation, resolving many of the problems of having different universe numbers between EPA and States.

- A single approach will be used to determine the national universe of Federally regulated generators instead of varying State by State practices.

- EPA inspectors would be able to more accurately determine which regulations apply at a given generator.

- EPA could determine impact of Federal Rules both as written and as applied.

Design Considerations

1) Where States need to determine the Federal status using waste information, a translation procedure will be required.

2) Where States need to determine the Federal status using waste information, a level of accuracy must be defined for the calculation that will provide results suitable for EPA use.

3) States may need to collect additional data element(s) to allow calculation of the Federal status if not determined in some other way.

4) Some States will assume a greater burden when calculating the Federal generator status at the required frequency if they do not already do so.

Other Options Considered

This recommendation is proposed as providing the greatest improvement in quality. The following options were also considered:

1) *Use State definitions to determine and report generator status. For those States that have MST/BIS rules, generators would report their status based on these rules.*

2) *Collect both State and Federal statuses from the regulated community.*

3) *Eliminate reporting of generator categories altogether.*

National Review Feedback

Although this recommendation received widespread support, a number of States and Regions disagreed with it, expressing concern as to the additional burden placed on States and suggesting that States should only be required to provide the State definition to national systems.

The need for clear and consistent explanations of each of the two published status values was clearly expressed by a number of reviewers.

7)   Merge common elements of current site identification forms

Summary

Develop and implement a single information collection form to record basic site information whenever required by the RCRA program.

Program Need

Implementation of the RCRA program requires the collection of basic information about a site of interest and the hazardous waste handling activities taking place at the site. This information is used for waste activity monitoring, compliance monitoring, technical assistance, program planning, waste minimization and other program activities.

There is an increasing need to streamline and enhance the existing information collection process to reduce burden and improve the quality of data collected.

Problem Analysis

Site identification data is currently collected on several different forms using differing instructions and differing definitions for key information needs. A single RCRA Site may be required to submit the same information several times using forms that are structured somewhat differently and which have different instructions. This can lead to variations in the information submitted for that site.

Basic site information is collected from all regulated RCRA facilities on the Notification form (8700-12). LQGs report site information on the Biennial Reporting Identification and Certification (IC) form (8700-13A/B). Facilities that treat, store or dispose of hazardous waste need to submit site information on the Part A Permit Application form (8700-23) to obtain a permit from the relevant implementer organization.

Although the Part A Permit Application form does collect some process specific information, most of the data elements collected on the three different forms that provide basic site information are essentially duplicative of one another.

Recommendation

A new *RCRA Site Identification* form should be developed that would harmonize the site profile information that is currently collected on the Notification form, the Part A Permit Application, and BRS IC form along with other non-standardized forms (e.g. Notice of Emergency Site, Transporter Application).

The Notification and BRS IC forms would be replaced. The Part A Permit Application form would be modified to request only the process-specific information beyond the scope of the new standard *RCRA Site Identification* form. Similarly, the other non-standardized forms would be simplified to include only those data elements that are not captured on the new form.

The new *RCRA Site Identification* form would be submitted instead of each of the above forms whenever the RCRA program requires basic site information. Any information other than this basic site information will continue to be collected by those specific forms. The RCRA Site would therefore continue to submit the information with the same frequency as they currently do, but would only need to be familiar with one set of instructions and data fields. This recommendation will improve data quality by removing redundant and inconsistent collection mechanisms and by clarifying the information required.

The instructions and data fields included on the new *RCRA Site Identification* form will reflect the following program information needs captured during the PAA project.

National Information Needs	
EPA identification number	Hazardous waste transporter
Site name	Hazardous waste fuel marketer
Location address	Underground injection
Land owner type	Used oil transfer station
Owner name	Used oil burner
Owner type	Used oil processor
Operator name	Used oil refiner
Operator type	Used oil marketer
Site contact name	Used oil transporter
Site contact phone	Universal waste handler
Mailing address	Hazardous waste import agent
NAICS code	Mixed radioactive waste handler
State generator status	TSD unit type
Federal Generator Status	

Design Considerations

1) New *RCRA Site Identification* form would need to be developed with associated instructions.

2) Other supporting forms must be developed, such as the specific permit application form needed to capture those data elements currently captured by the Part A form that would not be included on the *RCRA Site Identification* form.

3) Regulatory changes to RCRA Notification requirements will be necessary to reflect the new reporting requirements for the regulated community.

4) Collection of treatment, storage or disposal activity information must be carefully designed to meet the identified need to distinguish between such sites while accommodating the fact that this information is determined at the unit level and unit level information is not collected by the Notification form.

5) Implementers and regulated community will need to be re-educated.

National Review Feedback

Several States noted that the new *RCRA Site Identification* form in some way should also satisfy the previously identified information need for "TSD unit type". This concerns the RCRA program's need to know what type of treatment, storage or disposal activities are being performed at a site. Although the specific activities are performed at the management unit level, it is important for the program to have visibility to these activities at a high level especially in the period prior to detailed management unit information becoming available. This need is now

included in the recommendation and the design process for this recommendation will determine the most effective way of gathering this information.

8)   Add Additional Data Elements to Notification Form

Summary

Include additional fields on the Notification form to capture new nationally required information needs.

Program Need

A number of nationally required information needs, are not currently collected on existing data collection forms or managed in existing data systems.

Industrial activity

An indicator of the principal industrial activity at the RCRA Site would enable many targeting and analysis operations. For example:

- to assess the impact of rule changes

- to provide technical and compliance assistance

- waste generation and waste management trend analysis

- waste minimization and pollution prevention outreach

- informational mailings

Collection of industrial activity information supports the movement of the RCRA program towards sector based approaches to hazardous waste management. As this trend continues, the program needs to collect and integrate this type of information with the rest of the information needed by the RCRA program.

Owner and operator name

PAA participants indicated that collection of both the owner name and the operator name using the Notification form would be very useful to some implementers:

Implementers could evaluate the compliance history of both the owner and operator of a site. This could allow for permit denial or inspection targeting based on past environmental actions.

For compliance and enforcement purposes, in cases where the owner and operator are either public or private entities (e.g., the owner is public and the operator is private), it is very important to make a distinction. An enforcement action can then be directed to the entity actually responsible for non-compliance.

There would be an increased chance of the correct party receiving informational mailings.

Handlers of imported wastes

PAA participants identified the need to differentiate between imported hazardous wastes and waste generated domestically.

Handlers of radioactive wastes

It is also necessary for program staff to be able to identify those RCRA Sites involved in radioactive waste activities for program oversight and in response to external requests for information.

Problem Analysis

Industrial activity

Some industry type information is currently collected on the Biennial Reporting forms and the RCRA Part A Permit Application form. It is voluntary information on the Biennial Reporting forms and is required from TSDFs on the Part A form.

Industry type information has typically been collected using the Standard Industrial Classification coding system (SIC). However, this coding system as a data standard is to be replaced by the use of the North American Industrial Classification System (NAICS) over the next three years.

<u>Owner and operator name</u>

The current Notification form does not distinguish between the RCRA Site owner and operator names.

<u>Handlers of imported wastes</u>

The current waste reporting forms and Notification form do not differentiate between generators located in a State that produce waste themselves or that import waste and only appear to generate the waste.

<u>Handlers of radioactive wastes</u>

Current waste activity reporting forms redundantly collect information about the mixed radioactive waste handling activities at a RCRA Site. Additionally information on mixed radioactive waste activity is not consistently available for SQGs, as they are not required to submit a Biennial Report.

Recommendation

Include additional fields on the new *RCRA Site Identification* form to collect the necessary data elements to meet the previously described needs.

At least one NAICS code will be requested corresponding to the primary industrial activity being performed at the site. Both facility owner and operator names will be collected.

The activity of importing hazardous waste will also be captured. Collecting this information on the *RCRA Site Identification* form would not exclude the reporting of additional site activities (e.g., hazardous waste transporter).

Another new data element will capture the fact that the RCRA Site is engaged in the generation and/or management of mixed radioactive waste. This will also provide currently unavailable information about radioactive waste handling activities being conducted by SQGs.

Design Considerations

1) Forms and instructions will require revision.

2) Some burden will be associated with collection of additional information from the regulated community.

3) Given that most businesses perform multiple operations, the design team will need to consider the use of single versus multiple NAICS codes in future systems

4) Allowances will have to be made in future systems for historical SIC numbers for those RCRA Sites that have previously provided SIC codes, and have not re-notified with their NAICS code.

5) Historical information about RCRA Sites who handle mixed radioactive wastes may be derived from existing biennial reporting data since this recommendation will only succeed in capturing this information for RCRA Sites who notify or re-notify.

9)   Provide for standard notification by large quantity handlers of universal wastes

Summary

Revise the Notification form to collect information about the activities of large quantity handlers of universal waste in a consistent way.

Program Need

Unless and until an authorized State adopts the RCRA universal waste regulations, handlers of universal wastes are not subject to Federal regulation for their activities, including notification requirements. However, once the regulations are adopted, there is a Federal requirement for handlers of large quantities of universal waste to notify the relevant implementing agency of these activities and of the specific wastes being handled.

PAA participants expressed a clear need for a better picture of universal waste handling activities to meet several needs, for example:

-    Understanding how many hazardous waste generators have become solely universal waste large quantity handlers will provide a starting point to review the impacts of the universal waste program.

-    Implementing agencies can, with this information, help support or take the lead on establishing collection and management (primarily recycling) systems.

-    Inspection scheduling and knowing in advance the type of universal waste facilitates efficient inspections.

Problem Analysis

A universal waste handler is a generator of universal waste or a facility that receives universal waste from other handlers, accumulates universal waste or sends universal waste to another universal waste handler or facility. This excludes persons who treat, dispose, of or recycle universal wastes or persons engaged in the off-site transportation of universal wastes.

Large quantity handlers are those who accumulate 5,000 kilograms or more total of universal waste (batteries, pesticides, or thermostats, calculated collectively) at any time. This designation as a large quantity handler of universal waste is retained through the end of the calendar year in which 5,000 kilograms or more total of universal waste is accumulated

Current Federal regulations require that large quantity handlers of universal wastes submit a one-time written notification to receive an EPA identification number. This requirement is waived if the site already has an EPA identification number or has previously notified EPA under the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA). Small quantity universal waste handlers, transporters and destination facilities are not required to notify under existing Federal regulations as adopted by States.

Despite this regulatory requirement that large quantity universal waste handlers notify of their activity and the wastes that they handle, the handler is not required to use the Federal Notification form and there is currently no place on the form to indicate such activity. Some authorized implementers may require use of a State-specific form for universal waste handlers to use when notifying to collect additional information important to individual State needs.

An incomplete national picture of universal waste sites and their activities exists due to current notification requirements and because this information is not entered into the current national information management system.

Recommendation

The Notification form should be amended to include an additional field indicating that the site is conducting large quantity universal waste handling activities.

This will only provide information from those States that have adopted the appropriate Federal regulations. Because some universal waste handlers already have an EPA identification number or have notified under FIFRA and therefore do not need to re-notify, a complete national picture of universal waste handling activities may always be difficult to achieve.

Additionally, this recommendation will not explicitly address the requirement for the site to also indicate the wastes being handled. This recommendation should, however, provide some consistency in the mechanism for notification.

Design Considerations

1) An Information Collection Request (ICR) for the Notification form has been developed and is currently under review, that implements this recommendation. The design of this recommendation will need to track the progress of this ICR, since its implementation may supercede the need for design and implementation of this recommendation.

2) The design project should address the outstanding need for some means of allowing the site to indicate on the Notification form, which wastes are being handled. This could possibly be achieved through use of the comments fields on the existing form.

3) Educational outreach by implementing agencies would be required to ensure that generators understand the changed information collection requirement.

Other Options Considered

The Team believes that the selected recommendation provides the greatest improvement in information quality for the least increase in burden for both implementers and regulated community. The following alternative solutions were considered.

1) *Use Notification Form comment field to record a description of universal waste activities.*

2) *Obtain universal waste handler information through agency surveys or RCRA 3007 information requests.*

10) Remove waste codes from Notification Form

Summary

With the associated recommendation to gather waste activity information by means of Quarterly Electronic Reporting by TSDFs, waste codes will no longer be collected on the notification forms.

Program Need

To effectively plan for and perform activities such as inspections and technical assistance visits, it is important for program staff to have an understanding of the types of hazardous waste being handled at a RCRA Site.

There is an overall program need to simplify and streamline regulated community reporting requirements. Additionally, to ensure proper implementation of the program, implementers require data of reliable quality.

Problem Analysis

The Part A Permit Application provides some information about the waste being handled by TSDFs, while Biennial Reporting data is a better source of waste information for both TSDFs and LQGs. However, the Notification form is the only direct source of any information on wastes handled by SQGs, as well as the only source of waste information for new RCRA sites, prior to their first reporting event.

Some PAA participants expressed a low level of confidence in the quality of the waste code information reported on the Notification form, especially by SQGs. It is believed that this is a result of generators not understanding the waste codes that apply to their wastes. PAA participants also indicated that this waste code information is not currently made available nationally to the RCRA program. Others PAA participants indicated that the waste codes on the notification form were the best source of waste data for SQGs given that there is currently no other source for this information. However many of these participants expressed low confidence in the accuracy of the data.

Recommendation

After implementation of the PAA Team's recommendation concerning quarterly electronic reporting of waste handling information by TSDFs, waste codes will no longer be collected on the Notification form. A RCRA Site's waste handling activities will be able to be determined through quarterly TSDF reports. This mechanism will also provide current information about generation activities for SQGs thereby replacing the need for reporting of waste codes on the Notification form. Currently, waste code data for this universe becomes dated, as they are required to notify only once, and are not required to submit biennial-reporting forms nationally.

For new RCRA Sites the implementer may also derive the RCRA site's waste activities by using NAICS codes, which will be added to the Notification form as part of the PAA Team's recommendation concerning the addition of data elements to the Notification form. Implementing organizations may also access waste generation data through the national information system on other like RCRA Sites, to derive initial generation activities for a new RCRA Site, until the first TSDF report on the RCRA Site is submitted.

Design Considerations

1) Forms and instructions need to be changed to reflect the change.

2) Modify EPA and State information systems to reflect the change.

3) Some PAA participants have indicated that they may continue to collect the waste codes, and would like to have the mechanisms necessary to store this data in a national system.

Dependencies

11)   Study feasibility of quarterly electronic reporting of TSDF waste receipts

This is a <u>critical </u>dependency.

For implementers to derive accurate waste activity information, Quarterly Electronic Reporting by TSDFs must be implemented. If this recommendation is not implemented, waste codes cannot be removed from the notification form.

National Review Feedback

When presented in the Draft Report for National Review, State reviewers were evenly divided in their support for this recommendation.

Although many reviewers observed that the waste code information that is currently collected on the Notification form is unreliable since there is no requirement to notify of changes to this information, a large number of reviewers cited the following concerns with removing this information from the form:

- NAICS is not specific enough when trying to determine potentially responsible parties in the event of a spill at a site. Waste codes are a better historical reference.

- Generators are required by RCRA to perform waste determination prior to operating and would therefore know their waste codes.

- Drawing conclusions about wastes generated from NAICS codes is difficult and imprecise.

- Waste codes provide a better source of information to inspectors.

- Waste codes are often the only current source of such information for small businesses.

11) Study feasibility of quarterly electronic reporting of TSDF waste receipts

Summary

The PAA Team proposes that further analysis should be conducted to assess the feasibility of the following two recommendations:

1. Require all TSDFs that submit Waste Received (WR) forms (or State equivalent) to submit quarterly electronic reports to their RCRA implementing agency describing all of the waste shipments that they received and managed for that period.

2. Based on waste receipt data submitted by the TSDFs across the country, a pre-populated Generation and Management (GM) form (or State equivalent) would be produced and sent to generators by the implementing agency in the State in which the generator resides. The generator would then confirm, add to, or correct the information detailed on the form.

The States and EPA would need to jointly implement these two improvements such that all hazardous waste shipment and management information would be promptly consolidated into a national information system from implementer systems. Any regulator would have access to this system and be able to examine all shipments that originated from, or were delivered to a specific State or Region.

Program Need

Currently, any RCRA Site that meets the definition of an LQG or who treats, stores or disposes of hazardous waste must file Biennial Reporting forms. These forms are collected every two years and capture one year of waste activity information. This provides an incomplete (only one year in two) and delayed (collected a year in arrears) picture of waste management activities.

With the limited national reporting capabilities of BRS, the current visibility available to implementers of shipments going out of State is poor. This is worse for those programs with more frequent data submissions than biennially who have to wait until the end of the biennium before they can compare their information to that of other implementers. They have the need to perform cradle to grave and quality assurance comparisons at or near the same frequency in which they collect waste data from their in-state generators and TSDFs.

State and Regional PAA participants strongly expressed the need for the waste information to be collected more frequently without any "blackout" years.

EPA OSW Headquarters indicated that their information needs are adequately supported by biennial updates. However, EPA Regional participants indicated that waste activity monitoring data was needed on at least an annual basis. State participants concurred, with several expressing a need for even more timely shipment level information.

Problem Analysis

The following issues were identified by PAA participants with respect to the current waste activity reporting mechanisms:

- The current biennial submission of hazardous waste data is viewed as too infrequent for implementers to respond to potential violations or trends in waste generation. Some PAA participants noted that many violations identified through the reported waste information are two years old before they are visible to the regulating agency.

- Participants characterized the current use of data for analysis and oversight as a public trust concern since there are credibility issues when responding to public requests for information with data that is three years old.

- Hazardous waste information is of concern to the public, and implementing agencies are tasked with ensuring that this waste is properly managed, protecting public health and safety and the environment. It is difficult to respond to these tasks when the only information available is dated.

- Through more frequent submission of hazardous waste data, implementers responsible for the day to day compliance of RCRA Sites can better perform activities such as inspection planning, waste minimization, enforcement, and environmental justice analysis.

- More frequent data submission could also help determine whether facilities are meeting their permit requirements and provide quicker response and intervention for those that are not. Implementers are currently reacting to old data when issues are noted.

- High quality, frequent data will allow States to better manage their fee programs. The fee programs are an important source of operating revenue and also provide pollution prevention incentives but require accurate defensible data for effective implementation.

Several States have modified the Biennial Reporting forms in one or more of the following ways:

- Increasing the reporting frequency to annually or, in some cases, as frequently as monthly.

- Collection of manifests resulting in more timely information, and a comprehensive assessment of waste activities .

- Including SQGs and other RCRA Sites in their reporting requirements.

The current minimum frequency of submission can in itself be a burden, as TSDFs have to manage data for many generators over a two-year period, prior to submission. It can then be difficult for the TSDFs to audit records and ensure data quality on dated information.

Recommendation

Figure 7: Recommended Approach for Waste Activity Reporting on the following page illustrates how the information would be collected from the regulated community and can be described in five sequential steps.

1) Instead of the traditional Biennial Report WR form, TSDFs would transmit data electronically to their State or Region on a quarterly basis describing *each shipment* received during the period. This reporting requirement would be supported by federal rule. Information needs to be transmitted would include:

> Originating EPA identification number
> Manifest number of the shipment
> Waste codes that describe the waste received
> Quantity of waste received
> Unit of measure
> Date the waste was shipped by the generator
> Date it was received
> Management method used to manage the waste
> Form code of the waste

NOTE:

The form of the waste is not currently defined as a "national" program need. Further analysis will be performed to confirm its inclusion.
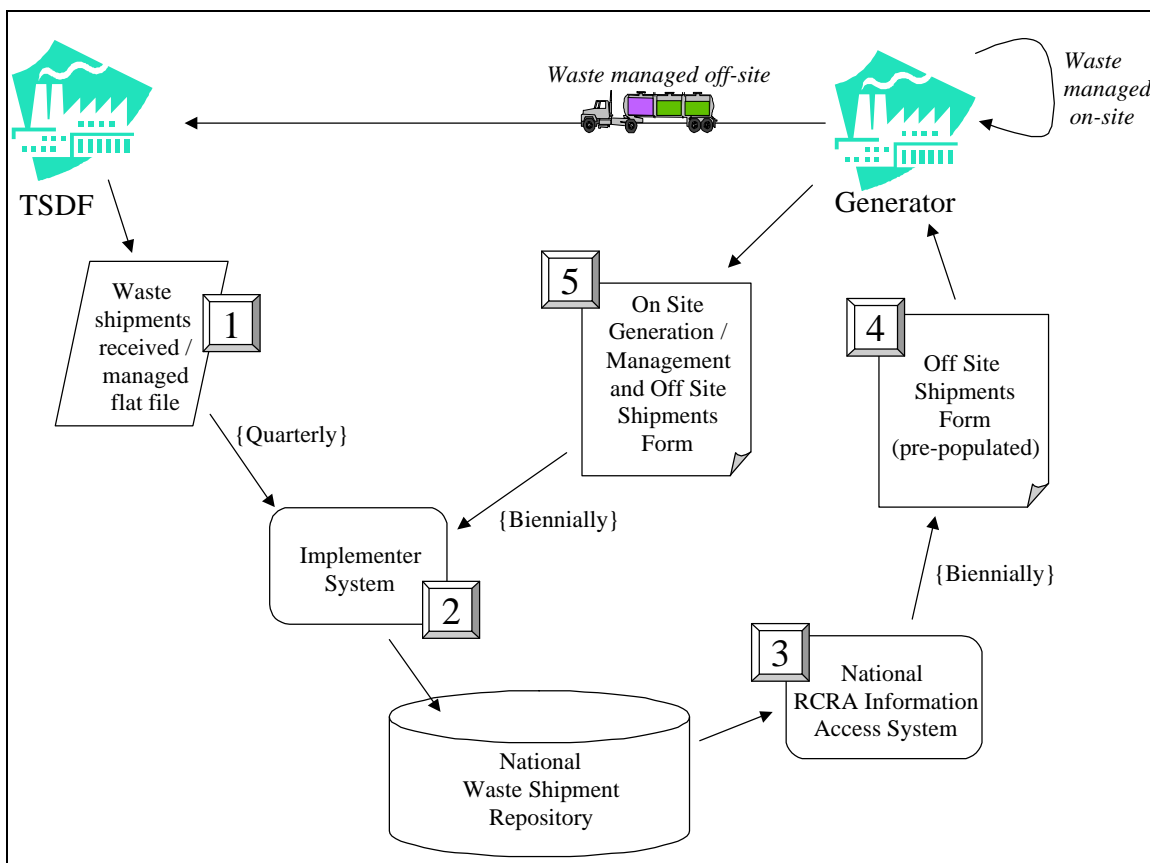
Figure 7: Recommended Approach for Waste Activity Reporting

2) The State/Region would quality assure the waste receipt data and then electronically transmit it into a national information system containing all shipment/management information from across the country. Alternatively the TSDF would report directly to the national information system if their implementing agency does not have an independent information system. The implementer may also decide to provide additional shared information needs, at their discretion.

3) Regulators will be able to access the national information system to review information about all shipments of waste across the country. A user would be able to assess for any generator (i.e., LQGs and SQGs) the types and quantities of waste they had recently shipped to TSDFs across the nation. States would be able to assess the waste volumes being shipped in and out of their State and from or to a given RCRA Site.

4) Biennially, or more frequently if required by State rule, LQGs (as the Federal minimum) would be sent a summary verification report based on the information submitted by the TSDFs describing the types and quantities of waste they had shipped. Implementers with MST requirements will also be able to generate summary verification forms for their non-LQG universe, as derived from reported TSDF waste receipt data.

5)   The LQGs would verify the shipment information and would also report the waste that they had generated and managed on-site. This would be submitted to the implementing agency, and subsequently to the national information system.

Benchmarking of existing implementations of this recommendation by the States of Ohio and Texas provided the following information:

Survey Results

Two States that have used innovative approaches to collecting waste activity information were identified and surveyed regarding their approach and experiences.

State of Texas

The Natural Resource Conservation Commission (TNRCC) currently requires all 200 TSDFs to electronically report monthly their waste receipts at the shipment level. The data is input into an application called *STEERS* for quality assurance and electronic reporting. Additionally the majority of their 800 LQGs use the STEERS application for data submission annually. The data file is posted to a dial-up bulletin board by the STEERS application.

TNRCC has seen a significant increase in data quality as a result of the quality checks in the application and feels that the majority of the reporters like the application and find it convenient. It minimizes reporting due to the data entry QA checks, and the reporters do not have to spend nearly as much time working with TNRCC to correct data entry errors. Additionally, TNRCC estimates that they save approximately $50,000 yearly in data entry costs by using the electronic reporting system. They have also found that the turn around time for data availability to organization staff has been cut significantly. Additionally, they have noted that program staff have additional time to perform tasks that they previously did not have time to complete, due to data entry and QA/QC follow-up issues.

TNRCC has many different uses for the data such as waste trending that is used for targeted outreach, inspection planning and budgeting. In addition they use TSDF derived data to look at sites they otherwise would not have knowledge of. For example, CESQG data from TSDFs is examined to ensure that the generator is properly determining their generator status, They also use the data to work with all generators for pollution prevention efforts. TNRCC has used the data for determining the quantity and types of wastes that are coming into the state from across the country for trending and ensuring TSDF capacity and permit compliance.

State of Ohio

The agency performs annual reporting from LQGs and TSDFs. Ohio has established a relationship in which Michigan provides a listing of all wastes received that were generated in Ohio. Ohio then uses this data to identify generators that are out of compliance. Examples include failure to report, or failure to identify waste shipped to a TSDF (out of state). Ohio estimates that in the past they have found approximately 100 of such violations yearly, of which 15-20% are a result of the Michigan derived data. Ohio has expressed interest in visibility to other State's TSDF receipt data, as their generators send wastes to more than 200 TSDFs nationwide. This data sharing is an example of the benefits a nationally available data system with frequent reporting could provide. Implementing agencies can have the visibility to the waste that their generators have shipped out of state to ensure compliance, identification for outreach as well as for support of revenue structures. Currently the Michigan derived data is obtained in paper form, however a national repository could provide advanced analysis features with reports tailored to capture such information.

Implementation of this improvement would realize the following benefits:

-      Provides more timely information about all hazardous waste shipments to States and Regions for wastes shipped across the country.

-      Has potential to improve data quality on the part of TSDFs, as their data reporting will be broken into smaller, more frequent submission increments. Smaller increments are easier to QA/QC. The submission cycle is also frequent enough to allow data review while it is still fresh and relevant.

-      Provides a potential improvement to the current TSDF reporting mechanism, which requires that they manage and audit records for receipt of wastes for up to two years. Reporting the

wastes soon after receipt will permit the TSDFs to verify and ensure the accuracy of their data, as opposed to working with two year old receipt data.

- Provides a more accurate indication of how effectively the waste is managed.

- May significantly reduce the burden on manifesting States if they deem this approach an acceptable alternative to their current manifest collection systems. Some States may opt to cease collection of manifests from TSDFs, as they will be submitting their waste receipt data to the implementer quarterly.

- Reduces burden on LQGs by pre-populating their GM (or equivalent) forms with TSDF reported data. The generator then confirms, corrects or appends to the data to reflect their perspective of the hazardous waste information shipped.

- Capture shipment level information for implementers to review. It has been suggested that this level of detail is easier for the TSDFs to provide than aggregated receipt data on generators. Views of aggregate data could be provided in the national repository.

Design Considerations

The following is a list of implications to be considered.

1) Significant effort required by EPA and States in modifying the reporting mechanisms and developing new information systems.

2) The recommended improvement would have to consider and potentially incorporate the recommendations from other related initiatives, such as electronic signature and electronic data interchange standards.

3) Federal rule would be required to ensure that all TSDFs, including those without a RCRA permit, send in waste receipt data electronically every quarter. This would be necessary to ensure that a "national" picture of waste generation and management is provided.

4) Implementers that have developed customized information systems for RCRA data management would have to modify their systems to interface with the national data repository.

5) Some States would be concerned about possible loss of control if such an approach required TSDF data to submit data directly to a national system without being quality assured by the State first.

6) Common data quality standards would have to be agreed upon by all participants and mechanisms would have to be built to ensure these standards.

7) Parties would have to agree upon a common time frame in which data would be made available to the national information system. Excessive time lags would be unacceptable, as other implementers would be depending on the data.

8) Some States have CBI restrictions on releasing information about a TSDF's clients. This might result in a 'black hole' for some shipments going to those TSDFs.

9) The recommendation does not dismiss the generator from their responsibility to accurately report the generation and management of their wastes. A common concern with the recommendation expressed by commenting organizations was that generators should be responsible for their own waste information. Implementation of the recommendation might promote a reliance on the TSDF for their responsibilities.

Feasibility Assessment

1) Further design this approach, survey TSDFs for their willingness to support it, and pilot the concept to test its effectiveness.

2) Replace the current Biennial Reporting WR form with a regulatory requirement for TSDFs to provide a slightly different set of information electronically on a more frequent basis.

3) Confirm that authorization requirements can be met through the workgroups that are currently conducting electronic signature rulemaking.

4) Construct a new EPA/State information system for receiving TSDF quarterly files and a National Repository for this shipment information, along with a regulator-only information access component.

5) Restructure the Biennial Reporting GM forms to allow them to be pre-populated with the waste shipment information.

6) The study should address the more "holistic" approach to capturing waste handling information presented by the recommendation. It should consider the manifesting states reporting structure, and this recommendation's potential for replacing this practice. The potential for TSDFs to report all data elements included on a manifest should be considered.

Other Options Considered

The Team believes that the selected recommendation provides the greatest improvement in information quality for the least increase in burden to both implementers and regulated community. The following alternative solutions were considered.

1) *Collect hazardous waste reports annually to remove 'blackout' years, and increase timeliness*

2) *Replace the Biennial Reporting forms with the collection of Manifests and separate on-site management reporting*

3) *Collect two years of information biennially.*

Dependencies

12)   Confidential Business Information (CBI)

This is a <u>critical</u> dependency.

This recommendation attempts to resolve the issue of some TSDFs claiming their customer generators as Confidential Business Information that would impact the completeness of the data that would be available from TSDF reporting.

National Review Feedback

Although this recommendation was well supported by EPA and States, some States expressed concern about the level of burden that the recommendation would impose on the reporting community. Some of the concerned States were open to the concept of studying the feasibility to obtain data on actual burden.

In contrast, some States felt that the recommendation would decrease the burden currently imposed on handlers. This is especially true for those States that manifest. Handlers in this situation submit manifests, as well as (at a minimum) Biennial Reports.

Several of the States indicated that they were uneasy using a verification form populated by TSDF data for confirmation by generators. They felt that it is the generator's responsibility to know and report their waste accurately, and that pre-population would remove this responsibility.

EPA also had concerns about the internal costs of supporting the recommendation. These will need to be addressed during the feasibility study.

12)   Confidential Business Information (CBI)

Summary

Develop and compile a clear national policy statement detailing for each of the data elements designated as national, which are and are not likely to be substantiated as confidential business information (CBI). This policy statement will facilitate the sharing of RCRA Site information in a national system.

Program Need

During the information gathering sessions, PAA participants requested a more up to date and expanded view of hazardous waste information. TSDFs claiming the identities of their customers (generators) to be CBI would hinder access to this information. This would prevent visibility to data for wastes shipped outside of their state boundary.

Problem Analysis

Although the practice is not widespread, some RCRA TSDFs have successfully claimed as CBI the identity (name and EPA identification number) of the customers from whom they receive waste shipments, on the basis that such information constitutes a customer list. States mask these generator's EPA identification numbers with a dummy number in the national system. This practice disassociates waste received data from its generator and prevents other States and EPA from comprehensively tracking waste from cradle to grave across state boundaries.

The number of CBI claims varies from cycle to cycle, but it is not large: for example, in 1995, less than 1% of the 800 TSDFs reporting claimed CBI on their "customer lists." These claims prevent the public release of such information, but do not withhold it from the implementer. However, there is no national standard or procedure for sharing and safeguarding confidential information, except for the process used by EPA, which is primarily oriented to paper reports.

CBI protection of waste management information presents special concerns with respect to the implementation of the PAA Team's recommendation to introduce quarterly electronic reporting by TSDFs. If the actual identity of "confidential" generators is not visible to all using the system it will be impossible to track wastes from cradle to grave. In these cases, regulators cannot use TSDF reports to infer generation data about sites of concern.

Generally, State law governs the releasing (or confidentiality) of information, and since State laws vary, there is a concern that, if an implementer shares with another State, data that is held as confidential, it may be subject to release under the laws and procedures of the second State. States handle CBI claims in a wide variety of ways.

Such CBI claims are not always challenged. There is no national guidance from EPA's Office of General Counsel (OGC) on whether such information can in fact be deemed confidential. Lack of uniformity can lead to inequity among TSDFs: some are able to keep "customer lists" confidential, while others find that this information is made available to their competitors.

One State has a very "liberal" CBI state law in which all records in possession by a state agency are pubic record, with the exception of specific correspondences of constitutional officers and legislators personal records and open law enforcement issues. The business may claim certain information as trade secrets. However, it is their policy that any materials submitted through the required standard hazardous waste reporting may not be claimed as CBI.

Other States indicated that they "mask" or eliminate essential elements such as customer name, EPA identification number and address, but they do not permit the claim for waste type

information. They also release CBI material internally with warning of penalties if the information is released outside the agency.

Most States are between these two extremes. Many discourage the claims or look negatively upon them through strict evaluation or procedures such as questionnaires, and substantiation making the filing of the claim less attractive. Others specifically denote in their state rules what can be claimed CBI (e.g., manifest data cannot be claimed CBI). One sends the CBI request to EPA for final approval.

Recommendation

Develop a clear national policy statement detailing whether the generator's EPA identification number reported on the WR form can be substantiated as confidential business information. PAA participants have indicated that there is much confusion over this issue, and a clear statement is required nationally. Once provided with this policy statement implementers must routinely and aggressively challenge CBI claims for such information.

The policy statement should be developed in such a way as to facilitate the sharing of generator identities in a national system. Shipments of waste to States with stringent CBI policies, and subsequent masking of generator identification runs contrary to the notion of tracking waste from cradle to grave.

Much of the information declared as confidential is available through other indirect mechanisms (e.g., from Manifest forms, or from generators' hazardous waste reports that identify the TSDFs to which they ship their waste).

Given implementation of these recommendations, regulators will have national access to the hazardous waste information needed to implement their programs. Additionally, a "level playing field" will be developed in which all TSDFs are treated the same from State to State.

Design Considerations

1) The time that may be required to develop a nationally endorsed policy may be significant.

2) There is potential that a national policy may not be acceptable to all States, given that each State may have its own CBI laws, and that States are not required to follow EPA Guidance

3) Ultimately, federal rule may be required to finally remedy the issue.

Other Options Considered

The Team believes that the selected recommendation provides the greatest improvement in information quality for the least increase in burden to both implementers and regulated community. The following alternative solutions were considered:

1) *Seek a national policy allowing inter-agency sharing of CBI, but expressly disallowing its release to the public.*

2) *Allow anyone to review information about the waste that was shipped from a generator to a TSDF declaring CBI, but do not provide information about the TSDF that received it.*

13)   Tracking Hazardous Waste Exports

Summary

Provide interface functionality to allow waste export data collected and tracked by OECA to be made available to RCRA program users in national RCRA program information systems.

Program Needs

Authorized States are responsible for monitoring waste from "cradle to grave" and PAA participants identified the need to know about waste generated in their State that is exported from the country. For constitutional reasons, this information is collected by OECA at the national level, bypassing State regulators. With access to this data States could undertake the same analyses that are performed upon domestic wastes, such as compliance and enforcement and targeted outreach for pollution prevention efforts. This data would also be used to confirm the appropriate generator status and potentially assess fees. Border States have unique needs for communication with their foreign counterparts. For example, the ability to identify generators facilitates coordination of hazardous waste classification and inspection targeting at border crossings. The overall program need is for a national picture and assessment on all wastes handled in the United States, that is accessible to all implementers.

Problem Analysis

US generators of hazardous wastes are required to submit an Annual Export report detailing:

- the exporter name, address and mailing label, calendar year covered

- name and site address of each foreign consignee

- by consignee for each waste, a description, waste codes, EPA ID of each transporter, total quantity shipped, and number of shipments

Annual Export report data is submitted to OECA and is stored in a system called EXPORTS, separate from Biennial Report and other hazardous waste data.   Generators are not required to submit generation data for exported wastes on the Biennial Reporting forms. However some generators do complete the GM form detailing generation data for exported wastes. As a result, exported waste generation data is not accurately and consistently captured in BRS. States, therefore, do not have comprehensive access to all wastes generated within their jurisdiction but exported from the country. Similarly, an integrated national picture of waste generation is not readily available.

Recommendations

Integrate EXPORTS data into national RCRA program information systems.

This option presents an improvement with potentially no burden increase to the regulated communities or implementing agencies. Additionally it will provide a mechanism for implementers to communicate with their foreign counterpart, to facilitate tracking of wastes from cradle to grave.

Design Considerations

1) The instructions for the Biennial Reporting forms will require amendment to explicitly exclude reporting of exported wastes. Directions for this form request that "for wastes shipped to … foreign countries, if the facility does not have an EPA identification number, enter 'FC' followed by the name of the country". This is in contradiction to current rules,

which exclude export reporting on the Biennial Reporting forms. To date, voluntary reporting of export data has been accepted to provide information that would otherwise be unavailable.

2) Reconciliation of data elements would be required to integrate the two systems. For example the Annual Export Report captures the number of shipments of a particular waste stream that was exported from the country, while BRS does not capture this level of detail. Additionally, if the WIN/INFORMED project defines a specific information need as being nationally required, that information need would be supported with mandatory collection procedures. For example, the source of waste is not currently captured on the Annual Export Report. This would necessitate a rule change since the current data elements collected in the Annual Export Report are detailed in Federal rule

3) In addition to information about the waste exported, PAA participants requested information about the destination of the waste. Since foreign destinations of the waste do not receive a unique EPA identification number, foreign receiving site address information would be difficult to reconcile with other records for that site.

4) Individual shipment information may not be available for exported waste, as it is submitted as totals for the year.

Other Options Considered

The Team believes that the selected recommendation provides the greatest improvement in information quality for the least increase in burden to both implementers and regulated community. The following alternative solutions were considered:

1) *Continue to have Annual Export Reports submitted to OECA without data integration with BRS.*

2) *Require reporting of exported waste generated in the Biennial Report.*

14)   Tracking Imports of Hazardous Wastes

Summary

An indicator will be added to the Notification form to capture the activity of importing hazardous waste. TSDFs will continue to report the EPA identification number of the importing agent as the "generator" of the waste, but will also report the country of origin of the waste if other than the United States.

Program Needs

PAA participants identified the need to differentiate between imported hazardous wastes and waste generated domestically. This information will facilitate accurate generation and import trending and associated oversight and inspection activities both nationally and for the importing state.

Problem Analysis

All hazardous wastes transported into the United States must be imported through an import agent, who assumes legal responsibility for the waste. Import agents who handle hazardous wastes, currently apply for and receive an EPA identification number containing the prefix of the state in which they do business. Current notification mechanisms do not include a means to capture the specific activity of importing waste and importers are typically recorded as generators.

This practice is problematic for the regulating State as it gives the appearance that the waste was physically generated within their boundaries. As a result, waste generation totals are artificially high for the State in question, as imported waste is counted as generated waste. The need to differentiate between domestic generation and foreign generation is important and currently hard to achieve.

Importing agents are currently not required to directly report the quantity of waste they have received. There is a requirement to submit a notification of intent to import to EPA detailing the proposed quantity. The TSDFs report the actual quantity of waste that they receive from a "generator" (i.e., importing agent). However, the current TSDF reporting mechanism does not provide the means to accurately determine that the waste was generated outside the country.

Recommendations

A reporting mechanism will be added to the Notification form to capture the activity of importing hazardous waste. Adding this information on the Notification form would not exclude the reporting of additional site activities (e.g., hazardous waste transporter).

The Team further proposes that the TSDF continue to report the EPA identification number of the importer as the "generator" of the waste, but also report the country of origin if other than the United States as indicated on the manifest.

Collecting the country of origin will permit implementers to derive that the waste reported by the TSDF was imported into the country. For example: X quantity of waste was received at TSDF Y from agent Z. The fact that agent Z imported the waste can be derived by the country of origin for the waste and the activity of "Hazardous Waste Importer" on the agent's Notification form. Implementing this suggestion will permit authorized programs to examine waste generation in greater detail, with an understanding of the true origin of the imported wastes.

Design Considerations

1) The requirement that agents report their hazardous waste importing activity is a minimal burden increase. They are currently required to submit a notification form but the current mechanisms do not accurately represent and capture their activities.

2) Current importers will have to be flagged as importers in current information systems. Potential mechanisms to obtain this information include, requiring renotification by importers, or deriving the activity through the request to import hazardous waste submitted to OECA.

3) Information systems will have to be modified to clearly denote that the waste was not generated in the United States. To resolve the issue of incorrectly counting imported waste in a state's generation totals, current queries and reports will have to be modified.

4) Instructions on the current BRS forms, which direct that the TSDF report FC + Foreign Country Name for wastes imported from a foreign country would need to be revised

5) The Team's recommendation will standardize the practice of reporting the import agent as the generator, with the country of origin delineating foreign waste from domestic waste. The explicit collection of the country of origin of the waste is a small burden increase to the TSDF.

15) Clarify Types of Hazardous Wastes to be reported

Summary

The Biennial Reporting requirements will be changed such that generators only report those hazardous wastes used in determination of their generator status.

Program Needs

Implementers need to know the volumes and characteristics of hazardous waste generated and managed in their States. However, since RCRA exempts certain waste management units and processes from permitting and other substantive regulations, reporting of such wastes is inconsistently implemented. As a consequence, there is confusion in the reporting community between wastes that must be reported and ones that need not be. There is a national need for clarity and consistency in the reporting of waste activity information and a connection between RCRA regulatory authorities and program reporting mechanisms.

Problem Analysis

The reporting of hazardous wastes that are managed in units exempt from RCRA permitting has been a longstanding issue in the Biennial Reporting process. There is confusion amongst generators in determining the wastes that are to be reported on the Biennial Reporting forms. This confusion is a result of the differences between RCRA regulations that limit the types of wastes that should be used when making a generator status determination and the more expansive list of wastes required by the Biennial Reporting forms.

RCRA regulations exclude the use of waste treated in exempt wastewater treatment units from the determination of generator status. However, the GM form of the Biennial Reporting forms asks the question "Did this site do any of the following to this waste… discharge to a sewer/POTW". If they did discharge to a POTW the form requests that the generator detail the quantity and the management method. Thus the contradiction, do not use waste treated in a wastewater treatment unit in determining generator status, but do report the excluded waste if your generator status is LQG.

This contradiction results in confusion for generators and represents a burden for both the reporting generator and the program implementer. It is a burden for the generators as they are required to report and monitor waste regulated under the Clean Water Act, and also are required to report this waste on the Biennial Reporting forms for RCRA. It is a burden for the implementer, as they have to provide assistance and clarification to the generator, as well as collect, maintain and transmit the data to BRS for wastes that are monitored by another regulatory program. The Clean Water Act maintains regulatory oversight by requiring that the generator perform quantitative analysis of the constituents in the waste stream as well as volume of discharge.

Recommendation

The Biennial Reporting form requirements should be changed such that generators only report those hazardous wastes used in the determination of their generator status. Further, the Biennial Reporting form instructions should be changed to clearly identify the wastes that are to be used in making the status determination and associated recommended hazardous waste reporting. The following is an example of text that might be used to detail the wastes that are to be counted and those that will be excluded from the determination. This is not a proposal for language to be included in the Biennial Reporting form instructions, it is for illustrative purposes only.

- COUNT AND REPORT: All quantities of listed and characteristic hazardous wastes that are: accumulated on the property for any period of time before disposal or recycling, packaged and transported off-site, placed directly in a regulated treatment or disposal unit on-site, generated as still bottoms or sludges and removed from product storage tanks.

- COUNT AND DO NOT REPORT: Wastes that are exported are to be used in the determination of the generator's status, however, they are not to be reported using the Biennial Reporting forms. This information is collected in the Annual Export Report submitted by the generator.

- DO NOT COUNT OR REPORT: Wastes that: are specifically exempted from counting (e.g., lead acid batteries that will be reclaimed, scrap metals that will be recycled, used oil, universal wastes),

  - are reclaimed continuously on site without storing prior to reclamation,

  - are managed in an elementary neutralization unit, a totally enclosed treatment unit or a wastewater treatment unit without being stored/accumulated first,

  - discharged directly to POTWs without being first stored or accumulated,

Such criteria should reduce the reporting inconsistency and result in significant burden reduction for both generators and implementers.

Design Considerations

1) Changes to the quantities of wastes reported may effect analysis and comparisons to previous Biennial Reporting cycles. This information could be gathered through other means such as targeted surveys. Using this mechanism would allow the surveyor to target the specific information required. Additional mechanisms may also be investigated to derive the information from the Clean Water Act program. Information about constituents as well as volume may be available.

2) Changes to the reporting forms, instructions and associated information systems will need to occur. Additionally, outreach and training of both regulators and generators will be required to ensure that both parties understand which wastes are now to be reported.

3) The management codes "M135-Direct Discharge to a POTW" and "M136-Direct Discharge to surface water under NPDES Permit" would require amendment to remove the term "Direct". It should be noted that this recommendation is compatible with the PAA Team's recommendation concerning the streamlining of management method codes. These codes would continue to be used, for example, when hazardous wastes, counted in the status determination, are trucked off site for discharge to a POTW.

4) This recommendation addresses a portion of the "exempt unit issue". It will address those wastes that are used in the determination of ones generator status. Wastes discharged to a POTW without prior accumulation or storage are not to be used in the determination of generator status. A POTW is an exempt unit, however the recommendation does not make mention to other exempt units such as injection wells. As these other exempt units are not explicitly excluded in the determination of generator status, it is assumed that wastes discharged to these units are used in the determination of generator status and would be reported. This is an important point given that several PAA participants indicated the need for information on other exempt units such as underground injection wells, as they are not regulated under other regulatory programs like wastewater is.

Other Options Considered

The selected recommendation provides the greatest improvement in information quality for the least increase in burden to both implementers and regulated community. The following alternative solutions were considered.

1) *Require reporting of the generation of all hazardous wastes by LQGs whether managed in exempt units or not.*

2) *Require reporting of the activity of discharging aqueous hazardous waste to POTW/NPDES outfalls on the Notification form.*

16)   Streamline Source, Origin, Form, and Management Codes

Summary

The following three recommendations will be implemented to streamline and improve the usefulness of reported waste information:

1) Current source codes will be consolidated, regrouped and merged with the current origin codes to provide a simpler coding structure.

2) Form codes will be revised resulting in a reduction from 89 to 32 codes.

3) Management Method codes will be revised to eliminate overlap with form codes.

Program Needs

One of the objectives of the WIN/INFORMED initiative is to introduce information management changes that realize efficiencies through burden reduction. Burden reduction must be achieved, while at the same time ensuring that program implementers and analysts are provided data at the level of detail required to achieve their program objectives. A review of the information needs identified by PAA participants suggests that the existing Source, Origin, Form and Management codes could be modified to contribute to burden reduction goals, and present higher quality data, while at the same time providing the required programmatic data.

In performing the analysis for the code revision the PAA Team attempted to reduce the number of codes that handlers are required to understand and report, through code aggregation and elimination of duplicate coverage.

Table 5: Waste Reporting Code Categories describes the information need categories identified by PAA participants.

Source	Form	Management Method
- Wastes from ongoing production and service processes - Intermittent and one-time processes - Spills and accidental releases - Remediation of past contamination - Pollution control and waste management	- Inorganic liquids - Organic liquids - Inorganic solids - Organic solids - Sludges - Other	- Disposal - Reclamation and recovery - Storage - Treatment

Table 5: Waste Reporting Code Categories

Combining Source and Origin Code

Problem Analysis

There is significant complexity in the way the existing Biennial Reporting source of generation and origin codes are defined. This complexity is a result of the overlap in the coverage areas of the two coding structures, which has led to a number of data quality and consistency problems. Analysis of the 1995 Biennial Report data has shown that 96% of GM forms submitted included an origin code and 94% a source code. Given the high response rate, it is essential that respondents understand their usage and the complexities and overlap be resolved.

The 1995 Biennial Report used the following five origin codes:

1. As-generated process-derived waste.

2. Cleanup, spills, remediation, and equipment decommissioning.

3. Residual from on-site management of a non-hazardous waste.

4. Received from off-site and NOT recycled or treated on-site.

5. Residual from on-site management of a hazardous waste.

The same report used some sixty source codes in the following seven high-level source groups:

Group 1 (A01-A19)   Cleaning and degreasing

Group 2 (A21-A29)   Surface preparation and finishing

Group 3 (A31-A49)   Processes other than surface preparation

Group 4 (A51-A60)   One-time and intermittent production-related processes

Group 5 (A61-A69)   Remediation-derived waste

Group 6 (A71-A89)   Pollution control and waste treatment processes

Group 7 (A91-A99)   Other processes

Overlap

Conceptually, there is significant overlap between the origin and source coding structures.

-   Origin 1 (as-generated) subsumes Source Groups 1, 2, and 3 (production and service processes).

-   Origin 2 (cleanup, spills, etc.) generally includes Source Groups 4 and 5 (intermittent, one-time and remediation).

-   Origin 4 (received from off-site, no TDR) has no corresponding Source Group.

-   Source Group 7 (other non-production processes) has no analogue Origin.

-   Wastes from Source Group 6 (pollution control and waste treatment) may have either Origin 5 (residual from managing hazardous waste) or Origin 3 (residual from managing non-hazardous waste) and may also be viewed by some reporters as an integral part of their production processes.

-   An example of the latter is K061 baghouse dust: it is definitively described by Source A78 (air pollution control devices), but is obviously tied to the *production* of steel. Is this more appropriately an example of a residual from on-site management of a hazardous waste (Origin 5) or of as-generated process-derived waste (Origin 1)?

<u>Correlation</u>

The overall correlation at a high level between reported origin and reported source is good. Some inconsistencies do appear, due in part to confusion on the part of reporters and the more specific and complex nature of the source coding structure. Additionally, respondents often provide ambiguous answers to some questions, typically by choosing "other" categories. In the 1995 Biennial Report, each source code group contained an "Other – specify in comments" choice and overall, 20% of GM forms indicated one of these, including 4% using Source Code A99 (Other Processes – Other).

<u>Fulfilling Information Needs</u>

Source codes in groups A1 through A3 (cleaning and degreasing; surface preparation and finishing; and other production processes) meet the PAA need to identify wastes from *ongoing generation from production and service processes* and source codes in group A6 (remediation-derived waste) meet the PAA need to identify waste generated by *remediation of historic contamination*. Group A7 (pollution control and waste treatment) addresses the PAA need to identify wastes that are *residuals from active on-site management of hazardous waste*. However, Group A5 (one-time and intermittent production-related processes) includes specific codes for both wastes *generated once or sporadically* and wastes *generated by current spills or accidental releases*, two categories that should be distinct. Group A9 (other processes) does not correspond to the information needs articulated by the PAA participants.

Recommendation

The current source codes will be consolidated, regrouped and merged with the origin codes to provide a simpler coding structure. It is intended that this approach will provide more meaningful and consistent responses, reduce at least some of the reporting burden, and support the high-level information categorization needs of the PAA participants. This scheme would reduce the number of choices from 60 to 30 and the groups from 7 to 5. The PAA participants feel that this proposal will result in increased data accuracy and quality through reduced variation in response.

Table 6 provides a proposed coding structure, which is intended to provide a basis for evaluation and discussion. Analysis and confirmation of these codes will take place during the next phase of the project.

Code	Source of Generation	Old Code(s)
Wastes from ongoing production and service processes		
G01	Dip, flush or spray rinsing	A04, A05, A06, A31
G02	Stripping and acid or caustic cleaning	A01, A02, A03
G03	Plating and phosphating	A22, A23, A24
G04	Etching	A27
G05	Metal forming and treatment (pickling, heat treating, etc.)	A25, A26, A40
G06	Painting and coating	A21, A29
G07	Product and by-product processing	A32, A35, A41, A49
G08	Cleaning out process equipment	A09
G09	Removal of spent process liquids or catalysts	A36, A37
G10	Removal of tank sludge, sediments or slag	A38, A39, A60

G11	Solvent or product distillation or recovery	A33, A34, A73
G12	Other production or service-related processes	A49, A29, A07, A08, A19
Intermittent and one-time processes		
G21	Discarding off-specification or out-of-date chemicals or products	A57, A58
G22	Lagoon or sediment dragout and leachate collection	A79, NEW
G23	Process equipment change-out or discontinue use of equipment	A56
G24	Oil changes and filter or battery replacement	A54, A55
G25	Other one-time or intermittent processes	A59, A60, A91
Spills and accidental releases		
G31	Accidental contamination of products, materials or containers	NEW
G32	Cleanup of spill residues	A53
G33	Leak collection and floor sweeping	A51, A92
G34	Other cleanup of current contamination	NEW
Remediation of past contamination		
G41	Closure of hazardous waste management unit under RCRA	A64
G42	Corrective Action at a solid waste management unit under RCRA	A63
G43	Remedial Action or Emergency Response under Superfund	A61, A62
G44	State-program or voluntary cleanup	A93, NEW
G45	Underground storage tank cleanup	A65
Pollution control and waste management		
G51	Air pollution control devices	A78
G52	Laboratory analytical wastes	A94
G53	Wastewater treatment	A75
G54	Hazardous waste management – indicate management method	A71-A74, A76, A77, A79, A89

Table 6: Proposed Source Codes

Design Considerations

1) Revision of the source/origin coding structure could cause difficulty in providing historical trending and analysis, since the number of code options has been decreased by 50%.

2) Program implementers and analysts would require training and thorough documentation of old versus new coding structure.

3) There is the potential for the loss of detail through the aggregation of codes. This impact should be minimized given that changes were elicited from code overlap and duplication.

4) Targeted surveying could be used to gather additional data for those implementers that require additional data. PAA participants and commenters indicated that surveying is a reliable method to capture information while minimizing burden for the entire reporting universe.

5) Comment from the regulated community is necessary to ensure, that the proposal will represent a burden reduction for them, and to ensure that they support the proposal.

6) Additional analysis and input will be required during the Design phase, for the recommendation to confirm the technical aspects of the proposal. The codes presented in the recommendation represent a first draft, for further refinement.

7) Changes to coding structures will have impacts on implementer systems, as well as private information systems used by industry. Changes will have to be made to these systems to reflect the new coding structure, as well as providing mechanisms for cross-walking old and new codes.

Simplify Management Method Codes

NOTE:

The term management method has been used throughout this report to refer to the system type used to treat, store or dispose of the waste.

Problem Analysis

Although there is no conceptual overlap, the current management method coding structure duplicates and conflicts with the use of form codes. For example, there are five distinct management method codes for waste incineration, depending on the physical form of the waste being incinerated. This leads to such reporting "anomalies" as a waste of the physical form B201 (concentrated solvent-water solution) being managed by system M043 (incineration – solids). It is impossible to know which of these conflicting data points is accurate.

Recommendation

The existing management method coding structure will be revised to eliminate overlap with form codes as represented in Table 7. This coding structure is based in part on analysis of the frequency and perceived accuracy with which different management method codes were reported in the 1995 BRS data. The impact of the LDR treatment codes was also considered in establishing this list. This reduces the detailed list from 65 entries to 28 and the high-level groups from 14 to 4. This proposal will result in increased data accuracy and quality through reduced variation in response with a notable decrease in burden for both the handlers as well as program implementers.

Code	Waste handling method	Old Code(s)
	Disposal	
H101	Deepwell or underground injection	M134
H102	Discharge to sewer or POTW or surface water under NPDES	M135, M136
H103	Land treatment or application	M131
H104	Landfill	M132, M137
	Reclamation and recovery	
H301	Energy recovery – use as fuel	M051-M059
H302	Fuel blending	M061
H303	Metals recovery	M011-M019
H304	Solvents recovery	M021-M029

H305	Other recovery or reclamation for reuse (specify in comments)	M031-M039
	Storage	
H501	Storage or transfer (no treatment or disposal)	M141
	Treatment	
H701	Absorption	M103
H702	Adsorption	M082, M092, M103
H703	Air or steam stripping	M083
H704	Biological treatment	M081, M091
H705	Chemical oxidation	M075
H706	Chemical precipitation	M071, M072, M074, M077
H707	Chemical reduction	NEW
H708	Cyanide destruction	M073
H709	Dewatering	M101, M102, M104, M109
H710	Neutralization	M121
H711	Evaporation	M122
H712	Incineration – thermal destruction	M041-49
H713	Macroencapsulation	M112, NEW
H714	Phase separation	M124
H715	Settling or clarification	M123
H716	Stabilization or chemical fixation	M111
H717	Wet air oxidation	M076, M084, M093
H718	Other treatment (specify in comments)	M078, M079, M085, M089, M094, M089, M099, M119, M125, M129

Table 7: Proposed Management Method codes

Design Considerations

1) Revision of the management method coding structure could cause difficulty in providing historical trending and analysis. The number of code options has been decreased by 56%.

2) Program implementers and analysts would require training and thorough documentation of old versus new coding structure.

3) There is the potential for the loss of detail through the aggregation of codes. This should be minimized since the changes were elicited from code overlap and duplication.

4) Targeted surveying could be used to gather additional data for those implementers that require additional data. PAA participants and commenters indicated that surveying is a reliable method to capture information while minimizing burden for the entire reporting universe.

5) Comment from the regulated community is necessary to ensure, that the proposal will represent a burden reduction for them, and to ensure that they support the proposal.

6) Additional analysis and input will be required during the program system design phase for the recommendation, to confirm the technical aspects of the proposal. The codes presented in the recommendation represent a first draft, for further refinement.

7) Changes to coding structures will have impacts on implementer systems, as well as private information systems used by industry. Changes will have to be made to these systems to reflect the new coding structure, as well as providing mechanisms for cross-walking old and new codes.

Other Options Considered

Replace current management method codes with Handling Codes For Treatment, Storage, and Disposal Methods (40CFR 264 Appendix II Table 2).

Simplifying Form Codes in the Biennial Report

Problem Analysis

The physical form of a generated waste is collected on the Biennial Reporting forms using 89 specific codes in 9 high-level groups.

This is the most elaborate of the Biennial Reporting form coding structures and the most difficult to analyze. It appears to be prone to error and ambiguity.

Recommendation

Table 8 presents the revisions to be made to the current list of form codes. The improvement reduces the number of form codes from 89 to 32 with 6 high level groups. This improvement will result in increased data accuracy and quality through reduced variation in response with a notable decrease in burden for both the handlers as well as program implementers.

Inorganic liquids

C01 Acid solution
C02 Aqueous waste
C03 Caustic solution
C04 Spent acid
C05 Other inorganic liquid (specify in comments)

Organic liquids

C11 Concentrated solvent
C12 Halogenated (e.g., chlorinated) solvent
C13 Halogenated/non-halogenated solvent mixture
C14 Non-halogenated solvent
C15 Oil-water emulsion or mixture
C16 Waste oil
C17 Other organic liquid (specify in comments)

Inorganic solids

Organic solids

C31 Halogenated organic solids
C32 Non-halogenated organic solids

Sludges

C41 Drillings and other muds
C42 Oily sludge
C43 Resins, tars or tarry sludge
C44 Wastewater treatment sludge
C45 Other sludges (specify in comments)

Other

C51 Compressed gases
C52 Lab packs
C53 Liquid mercury
C54 Waste containing asbestos

C21   Adsorbents, filters or spent carbon

C22   Ash

C23   Batteries and parts

C24   Contaminated soil

C25   Metal salts/chemicals

C26   Metal scale, filings

C27   Other "dry" ash, slag or thermal residue

C28   Reactive salts/chemicals

C29   Scrap metal

Table 8: Proposed Form Codes

Design Considerations

1) Revision of the coding structure could cause difficulty in providing historical trending and analysis. The number of code options has been decreased by 64%.

2) Program implementers and analysts would require training and thorough documentation of old versus new coding structure.

3) There is the potential for the loss of detail through the aggregation of code. The Team has attempted to minimize this impact and ensure that changes were elicited from code overlap and duplication.

4) Comment from the regulated community is necessary to ensure, that the proposal will represent a burden reduction for them, and to ensure that they support the proposal.

5) Additional analysis and input will be required during the Design phase for the recommendation, to confirm the technical aspects of the proposal. The codes presented in the recommendation represent a first draft, for further refinement.

6) Changes to coding structures will have impacts on implementer systems, as well as private information systems used by industry. Changes will have to be made to these systems to reflect the new coding structure, as well as providing mechanisms for cross-walking old and new codes.

17)   Removal of Data Elements from Biennial Reporting forms

Summary

A number of fields currently collected on the Biennial Reporting forms appear to no longer be required and should be removed.

Program Need

During the PAA, participants identified the information needs required to support RCRA and implement their authorized programs. The intent of the exercise was to capture the program's data needs, without reference to current forms and collection mechanisms. A key objective of the WIN/INFORMED initiative is to support burden reduction efforts through removal of form fields that are not necessary to support current program activities.

Mixed Radioactive Waste Indicator

Problem Analysis

The Biennial Reporting forms currently request that LQGs reporting waste generation and TSDFs reporting waste receipt, indicate whether the waste was previously mixed with nuclear source, spent nuclear or by-product material, as defined by the Atomic Energy Act of 1954, as amended. Response to this form element is currently optional providing an incomplete view of the affected reporting universe.

However, it is necessary to identify those involved in radioactive waste activities for analysis purposes. The PAA Team felt that the need should be met by identifying the RCRA sites performing the activities, rather than by requiring detailed reporting at the waste stream level.

Recommendation

The mixed radioactive flags will be removed from the GM and WR forms. As a result, this element will not be collected at the individual waste stream level of detail. Removal of this element from the GM and WR form will support burden reduction goals.

A new data element will be added to the Notification form to capture the activity of handling mixed radioactive waste. This will meet the need to know who is performing these activities. This will also allow implementers to know which SQGs are generators of mixed radioactive wastes. The current mechanism for collecting this information is through Biennial Reporting, which SQGs are not required to perform. Providing this activity flag on the Notification form will provide a more complete picture of the universe of generators of this waste. This will be helpful in targeting for inspections and outreach

If more specific information is required, handlers should be surveyed based on the required notification element (e.g., using a 3007H survey). This will result in better quality data than collection of optional data reported on the GM and WR forms. Additionally, comprehensive identification handlers of mixed radioactive wastes through the Notification form may facilitate information exchange with other regulatory agencies, such as the Nuclear Regulatory Comission.

Design Considerations

1) Any users of this data may have to adapt their collection and analysis mechanisms to fit the proposed improvement.

2) Shifted reporting burden from the GM and WR forms (although optional) to the Notification form. This burden will be minimized as the data collection is at the facility level, rather than on the individual waste stream level.

3) OSW currently uses mechanisms and authority provided by RCRA and the Biennial Report, to require this information of DOE sites. Other regulatory mechanisms and agreements will require development, to continue the collection of this mechanism. To provide ample time for development, it has been agreed by the PAA team that this improvement will not be implemented until after the 2001 reporting cycle.

4) Some implementers have large nuclear facilities in their jurisdiction and want to continue the collection of this information at the waste stream level. As a result, it has been determined that national information systems will have to provide for collection of this information, as a shared need.

Dependencies

8)   Add Additional Data Elements to Notification Form

This is a <u>critical</u> dependency.

This recommendation includes the addition of a data element to the Notification form to capture the fact that the RCRA Site is engaged in generation or management of mixed radioactive wastes. If the activity flag is not added to the notification form, mixed radioactive flag cannot be removed from the GM/WR forms. PAA participants expressed a clear need for information on mixed wastes regardless of the level of reporting.

Point of Measurement

Problem Analysis

The Biennial Reporting forms currently inquires of any LQG reporting waste generation (using a GM form) to indicate using one of the following four codes, whether the waste being reported was mixed with other wastes prior to being measured or estimated. Response to this form element is optional.

1   The hazardous waste was not mixed with any other waste prior to being measured.

2   The hazardous waste was measured after mixing with other hazardous wastes only

3   The hazardous waste was measured after mixing with non-hazardous wastes only

4   The hazardous waste was measured after mixing with other hazardous wastes and with non-hazardous wastes

This data element is intended to support the designation of a specific waste produced by a generator. However, PAA participants identified no significant need for this information.

Additionally, due to confusion on the part of the generator with respect to this element, the data is often of questionable quality especially given the element's optionality.

It has been suggested that this data is useful when attempting to identify fake waste minimization activities. However, given the questionable quality of the reported data, the use of this data in waste minimization analysis is of limited use.

Recommendation

Since the "point of measurement" data element appears to meet no current information need, it will be removed from the current GM data collection forms and from the associated national information systems. Removal of this element will reduce burden for both the generators and the implementers who have to explain its use.

Implications

This data element will not be available to those program staff who might use it for waste minimization analysis. This element may continue to be collected as an organization specific element if required.

SIC Code

Problem Analysis

The collection of SIC code at the waste stream level was not identified as an information need, especially given the proposal to add NAICS codes to the Notification form.

The Biennial Reporting GM form requests that respondents provide the overall SIC code for the site, rather than the SIC code for the process(es) generating the waste reported on the individual GM forms. Previously, each GM form captured the SIC code for the associated generating process, but this requirement has been dropped. However, given no current mechanism for collection of the SIC codes, the form element was kept on the GM form, with a change to the instructions requiring, collection of the facility-wide SIC code. Thus a respondent may submit several GM forms all with the same SIC code, as the same information is captured several times.

Recommendation

Remove the SIC code form element from the Biennial Reporting GM form.

Supplying SIC data on the GM form is currently optional. However, the collection of the NAICS data through the Notification form will be mandatory and will improve the quality and confidence in the data.

Dependencies

8)   Add Additional Data Elements to Notification Form

This is a <u>critical </u>dependency.

Removal of the SIC codes from the waste reporting forms must be replaced by the collection of some equivalent information on the Notification form.

Off-Site Availability

Problem Analysis

The Biennial Reporting forms use the off-site availability data element to indicate whether the off-site facility is a commercial TSDF, or is only permitted to accept wastes from firms owned by the same company. Completion of this form element is currently optional.

PAA participants did not indicate any program uses for this information.

Recommendations

Remove the off-site availability form element from the Biennial Reporting forms and from associated data systems, since this information is derivable from TSDF submitted data.

18)   Streamline Unit of Measurement Reporting

Summary

Waste quantities should be reported in weight units only, to reduce conversion errors and confusion on the part of the regulated community.

Program Needs

PAA participants indicated that they have two needs specific to units of measurement:

- The need for data that accurately represents the actual quantity of waste being generated, transported or managed.

- The need for consistency in the units of measurement meta-data used to describe waste quantities.

A common unit of measurement provides consistency and facilitates trend analysis, reporting to the public, legislature, and special interest groups.

Problem Analysis

PAA participants generally indicated a low level of confidence in the density data submitted by the regulated community. Participants stated that they have experienced very inaccurate reported density values or even a single density value for all reported waste.

The density data is used to perform unit conversions (e.g., volume to weight). Thus inaccurate density data results in incorrect unit conversions and can skew data for analysis.   One PAA participant estimated that 20 % of all data quality problems requiring follow up contact with a RCRA Site result from confusion over units or measure and density. Some handlers do not have the facilities to measure density and use a standardized density value. Standardized densities assume pure material while wastes are typically a mixture or have been changed in some manner. Thus the use of a standard density is inappropriate.

There is also inconsistency across States in the implementation of reporting units. Some States have mandated reporting in a standard unit (e.g., weight), while other States permit reporting in many different units. When comparing waste volumes, the units must be converted to a standardized unit. The inconsistency between States in the use of collection and conversion methods has caused discrepancies to occur when comparing inter-state shipments.

Recommendation

Waste quantities must be reported in weight units only. Density data elements will be removed from the Biennial Reporting forms and all associated information systems.

This recommendation will result in better quality data for comparison and analysis. The recommendation will result in consistent reporting across States, and will facilitate State to State analysis since TRI data is reported in pounds this improvement will facilitate data analysis between the two reporting systems. The improvement will also simplify reporting generally.

Design Considerations

1) The availability of scales for weight determination poses a potential issue for the recommended option. Some handlers may still convert from volumetric units requiring the use of density data. Input from the regulated community should be solicited concerning this recommendation, to ensure that it is a workable option for them.

2) The recommended option will not provide visibility to the density used in the conversion, which may have some implications for reconciling generator and TSDF data. However, requiring reporting in weight units will discourage conversion across media, minimizing reporting error.

3) The design team should examine the possibility of requiring that quantity be reported in weight units on the manifest. This will encourage the use of weight units throughout the transportation process, and discourage weight/volume conversions.

Other Options Considered

The Team believes that the selected recommendation provides the greatest improvement in information quality for the least increase in burden to both implementers and regulated community. The following alternative solutions were considered.

1) *Reduce the UOM on the BRS Forms to pounds, gallons and cubic yards.*

2) *Drop density as a required element and use a standard density value with the assumption that all wastes have the same density.*

3) *Drop density as a required element and develop standards for waste densities by industry and waste code to facilitate conversion.*

4) *Report quantities by media, each media with its own standardized UOM.*

19)   Issue guidance on TSDF nomenclature

Summary

A clearly defined set of terms is recommended for adoption by the RCRA program when referring to TSDFs.

Program Need

Knowing about RCRA Sites that treat, store or dispose of hazardous waste is a central RCRA program need. The term TSDF is often used when asking questions about regulated RCRA Sites that manage waste. However, there appear to be different ways of categorizing such sites, which result in very different answers. These distinctions are important to include in a definition of what a "TSDF" should be assumed to be.

PAA participants also clearly stated the need for the RCRA program to be able to determine whether a site receives and manages waste from other RCRA Sites (offsite wastes), and also need to understand how waste is managed at the management unit level.

Problem Analysis

One of the most frequent Freedom of Information Act (FOIA) requests is for a list of TSDFs within a particular State or Region. While there is a very general, high level category of RCRA Sites that have TSDF activities, the typical information request is usually focused on a subset of that group. To respond to these requests, the information needed must first be clarified. For example, are we interested in TSDFs who are operating, closed, or under a post-closure permit, permitted or in interim status; or commercial, non-commercial or captive TSDFs?

Currently some general information about the type of management activity that a RCRA Site performs is collected on the Notification form: more specific information is only captured in the site's permit application.

Although this issue is primarily a reporting issue, there may also be confusion stemming from how the current system tracks TSDFs. There are at least three different structures for capturing TSDF categories in RCRIS. Two of them are derived from specific information on TSDF units. This unit level information drives reporting of TSDF categories on program specific groups (subject to corrective action) and on the separate treatment, storage and disposal reporting universes. The other structure is a facility-level flag that is entered based on notification or Part A information.

Recommendation

Future systems should distinguish operating, closed, post-closure, commercial, non-commercial, captive, treatment, storage, and disposal at the unit level. These reporting options should not be either/or choices for each category. Instead, they should allow any combination of these. In addition, this reporting mechanism should also allow ad-hoc development of the less frequently requested TSDF categories (e.g., clean-closed).

The following definitions for both the broad high level TSDF category and the most frequently used sub-categories of TSDFs should be used (operating, closed, post-closure, commercial, non-commercial, captive, treatment, storage, disposal, combustion and miscellaneous):

Operating   A unit that currently treats, stores and/or disposes of hazardous waste. (Note: Permitted/Interim Status should be an additional select category.)

Closed	A unit that no longer operates and has been closed in accordance with RCRA 40 CFR 264/265 Subpart G or equivalent State regulations, by removal of wastes.
Commercial	A unit that receives hazardous waste from off-site for processing and which charges or is charged a fee for the processing service. This category includes both "limited" and "non-limited" commercial facilities.
On–Site	A unit that treats, stores or disposes only of hazardous waste initially generated at that facility.
Captive	A unit that receives waste from off-site but only from another facility controlled by the same owner/operator (e.g., UNC-Chapel Hill receives waste from UNC-Wilmington.)
Post-closure	A unit that is closed with waste in place and has ongoing requirements under a post-closure permit, post-closure plan or enforceable order/agreement.
Treatment Unit	A hazardous waste management unit where hazardous waste is processed by any method, technique, or process, including neutralization, designed to change the physical, chemical, or biological character or composition of any hazardous waste so as to neutralize such waste, or so as to recover energy or material resources from the waste, or so as to render such waste non-hazardous, or less hazardous; safer to transport, store, or dispose of; or amenable for recovery; amenable for storage, or reduced in volume. These units have a **Txx** unit designation as listed under 40 CFR Part 264, Appendix I. An important subset of Treatment are combustion facilities: Boiler and Industrial furnaces (BIF) and Incinerators. The unit designation codes for these units are: Incineration Units T06 - T18, BIF Units T80-T93.
Storage Unit	A hazardous waste management unit where hazardous waste is contained for a temporary period, or for a period of years, in a matter which does not constitute permanent disposal. These units have a **Sxx** unit designation as listed under 40 CFR Part 264.
Disposal Unit	A hazardous waste management unit where hazardous waste has been permanently discharged, deposited, injected, dumped, spilled, leaked, or placed into or on any land or water so that the hazardous waste or any constituent thereof may have entered the environment or have been emitted into the air or discharged into any waters, including ground waters. These units have a **Dxx** unit designation as listed under 40 CFR Part 264. This group excludes units that have a post-closure permit.
Miscellaneous unit	A hazardous waste management unit where hazardous waste is treated, stored, or disposed of and that is not a container, tank, surface impoundment, pile, land treatment unit, landfill, incinerator, boiler, industrial furnace, underground injection well with appropriate technical standards under 40 CFR Part 146, containment building, corrective action management unit, or unit eligible for research, development, and demonstration permit under Section 270.65. Examples include, open detonation or open burning units. These units have an **Xxx** unit designation as listed under 40 CFR Part 264.

Information system functionality should be developed that allows a requestor to specifically define what types of TSDFs they are requesting information on starting with the list above as a standard and then allowing ad-hoc requests if necessary. This should be available for any system where people are requesting information on TSDFs.

Since all TSDF activity occurs at the unit level information should be tracked and reported for each unit. This will include whether the site is authorized to receive waste commercially at that unit. The following design project will consider the optimum mechanism for collection of this information given that unit level information is not collected by the Notification form. The current use of a facility level flag to indicate TSDF activity will be reviewed and a new activity definition mechanism will be designed.

Design Considerations

1) Collection of treatment, storage or disposal activity information on the Notification form and instructions must be carefully designed to meet the need to distinguish such sites while accommodating the fact that this information is determined at the unit level and unit level information is not collected by the Notification form.

2) Supporting information system changes.

3) Need to educate regulated community and implementers.

20) Implement standard definitions for programmatic TSDF universes

Summary

A standard set of definitions has been proposed to categorize and simplify the use of "universes" or groupings of regulated sites to meet program management needs.

Program Need

The RCRA program often needs to highlight certain groups of regulated sites for specific program management considerations. These groups, or universes, are used to manage the permitting/closure/post-closure, enforcement, and corrective action programs. The universes that support these areas are different from other RCRA universes such as large quantity generators, because they are derived from management unit and facility level status-type information defined by program staff as opposed to being directly identified by the regulated community.

A clear definition of certain universes of RCRA Sites is required to support the current tracking/reporting needs of the program. This includes the universes needed by implementers to manage the program (e.g., permit workload universe) and the universes needed for national reporting such as the Baseline Universes for reporting under the Government Performance and Results Act (GPRA).

In addition to supporting program management functions, the universe definitions are also helpful to provide standard reporting capabilities for information that is frequently requested by the public or other programs. Having standard reports saves time in responding to requests for information and also provides for national consistency for certain reports. This need tends to be more critical for EPA headquarters and regional offices.

Problem Analysis

The existing universe definitions are perceived to be complex and the derivation algorithms are poorly understood by many program staff. Several of the existing definitions also "overlap" such that a single RCRA Site may be found in more than one universe. This can lead to increased confusion.

Process

A small sub-group from the PAA Team was formed to focus on the needs for programmatic universe definitions. This TSDF Universe Group (TUG) reviewed the existing programmatic universes and developed a draft set of revised universes based on current program priorities and their experience with the problems using the current universes. The TUG team developed fact sheets for each universe to facilitate review of the universes and to serve as an aid once the universes were finalized. These fact sheets provide a formal definition for each universe and describe the programmatic uses of the universe and its derivation from the database. In addition to the universe specific fact sheets, a guideline for each broad area (e.g., permitting/closure/post-closure) was developed to explain how the universes fit together for that program area and how the proposed universes are different from the current ones. Once the fact sheets were drafted, the team participated in conference calls with State and Regional RCRA programs to get feedback on the revised universes.

Recommendations

A number of revised universe definitions are proposed to help direct future RCRA program management activities. These may be found in Appendix V together with the supporting fact sheets that have been developed.

The universes cover permitting/closure/post-closure, enforcement, and corrective action. A major part of this effort is to formalize the definitions for the permitting, post-closure and corrective action Government Performance and Review Act (GPRA) baseline universes. The facilities making up each of the Baseline universes were already defined by the program, so the job for the TUG team focused on formally documenting the definition of each baseline universe and clearly articulating the program usage of the GPRA universes.

The rest of the proposed universes are revisions to the existing programmatic universes. One of the first decisions made by the team was to continue using the legal and operating status codes in the database to identify and derive the universes. The Team believes this is the most effective way of identifying universes based on facility level information. Then, the Team focused on each set of universes for the three areas. For permitting/closure/post-closure, the State and Regional implementers commented that it would be useful to retain the workload-type universes since GPRA focuses only on a subset of all the facilities that were in the program as of October 1, 1997 and because the GPRA baselines will not change as facilities change. The workload universes will allow the program to capture the current view of the permit track, closure track and post-closure facilities. This feature will be especially critical for implementers who are trying to directly manage these programs. The team determined that the "progress" universe is not being used by the program and recommends dropping it.

The enforcement universes changed with the addition of two new universes. The first new universe is designed to capture the operating facilities. This group is the highest priority for annual inspections and is the principal universe being tracked by OECA. In addition to the enforcement need, most FOIAs ask about operating facilities. The program has been using the full CEI universe as a surrogate to meet these needs. The team believed the program needs supported the development of a separate universe to specifically track operating facilities. The current CEI universe is still available, although the name has been changed to address the confusion created by the original name. The second new universe "Annual BOY Enforcement Universe" is designed to identify facilities (TSDF, LQG and SQG) that are actively managing hazardous waste and are a priority of the enforcement program. This beginning of the year universe, which will consist of specific facilities, will show the RCRA's enforcement program's activity throughout the fiscal year.

The Corrective Action program has been debating the structure of the universes for several years. Under the WIN/INFORMED project, the team's task was to determine if the program needs had changed, identify current needs, and determine how to modify the universes to meet those needs. The most significant change results from GPRA making the GPRA Baseline universe the highest priority for the corrective action program. In fact, concerns were raised during the WIN/INFORMED process on whether the Team should even be looking at the other universes because all resources needed to be focused on the GPRA facilities. However, since the WIN/INFORMED project is tasked to look toward future needs as well, it was determined that the basic program universes should also be evaluated.

There were many different types of concerns raised about the corrective action universes. They can be broadly categorized into two distinct types: 1) disagreements with program priorities and how the current universes reflect those priorities, and 2) concern over the complexity of the universes and lack of clear definitions. Regarding the first issue, the TUG team attempted to determine if the program still supported the same priorities that drove the development of the

current universes. First and foremost, addressing the GPRA Baseline to meet the goals for 2005 must remain the program's focus and highest priority. However, the program has also publicly committed that after addressing the facilities in the GPRA Baseline, the program will address the remaining facilities in the current workload universe. Because of that commitment, OSW must be able to continue to track this group of facilities and report to Congress, GAO, the OIG and others on the progress toward this commitments.

Recognizing the need to continue to support tracking of workload facilities, it was determined that the Team could address some of the other types of concerns with the existing universe structure. Much of the complexity of the corrective action universes results from the duplication and overlap between the "Subject to" and "Workload" universes. To alleviate the duplication, the team is proposing to divide facilities into discreet universes instead of having facilities in multiple universes. This configuration is intended to allow the program to report on the "workload" facilities as needed but also make it easier for implementers to identify the correct universe for each facility. The team has proposed definitions for each universe and has identified the programmatic uses and how the universes will be derived from the database.

National Review Feedback

It was pointed out that the recommendation includes only three GPRA universe definitions and that a fourth, the Annual BOY Enforcement Universe was not included in the PAA Team's original recommendation. A working definition has been developed for this universe which may be found with the other definitions in Appendix V. Additionally, an information need has been added to the set of national information needs defined by the team to accommodate the requirement to indicate that a RCRA Site is a member of this universe.

21)   Determine location coordinates for a RCRA Site

Summary

Provide address-matching functionality in national information systems to determine accurate geographic location information from the location address.

Program Need

The increasing demand for place-based analysis is reflected in the need to specifically locate all RCRA regulated sites. The demand from implementers, the public and other interested groups for location based information is growing.

In the past, specific geographic coordinate information for a RCRA Site has only been collected for TSDFs. Improvements in address matching software and global positioning systems (GPS) technologies have provided increased opportunities for better locational tracking of all hazardous waste and RCRA Sites.

The physical coordinates of a RCRA Site are clearly important information needs as indicated by the EPA's adoption of the Locational Data Policy (LDP) in 1990.   As stated in the March 1992 LDP guidance document, "Under this policy, collection and documentation of locational information will be performed for all facilities, sites, monitoring points, and observation points regulated or tracked by EPA under Federal environmental laws." Additionally, in the opening paragraph of the April 11, 1994, Executive Order, locational information is recognized as benefiting "..our stewardship of natural resources and protect the environment…" especially given the capabilities offered by recent technological advances to acquire, distribute and utilize such data.

Problem Analysis

Currently, the EPA's LDP is not well supported by the RCRA program. TSDFs seeking a permit are required to report this information on the Part A Permit Application. Of the two national data systems, only RCRIS captures latitude and longitude values but no information about the determination method or accuracy of these values as required by the LDP.

Owners or operators often have difficulty securing precise geographic coordinates (in degrees, minutes, and seconds) and therefore, do not always provide accurate, uniform, and complete latitudes and longitudes for their facilities. Implementers have often found the coordinate information to be inaccurate.

Based on the experience of other programs, requiring that coordinates be reported has not been a very successful way to collect accurate data, and presents a significant burden. Some States have invested in visiting each RCRA Site, using GPS units to collect high quality coordinates.

There is also an ancillary question about how many locational points should be collected. For TSDFs, the coordinates of each waste management unit should be collected, as they may be fairly spread out. For other RCRA Sites, if only one point is to be collected, what should it be - the front door, the center of the site, or some other location?

Recommendation

The RCRA Site will be defined locationally by a specific location address if it is not available the site may be defined by a description, or by geographic coordinates. Additionally, the specific point used to locate the RCRA Site will be specified, for example, the map point of the address or the site centroid.

Locational data will be tracked for all RCRA Sites. RCRA information systems will include automatic address-matching functionality to facilitate data entry by EPA and States. Implementers would be free to use other methods, e.g., GPS to obtain locational data. Provide implementers the option to record locational data at the unit level. Add data fields in keeping with EPA's locational data standard for method, accuracy, description (MAD) meta-data. Eliminate latitude and longitude data collection from the Part A Permit Application.

This option takes advantage of the current geospatial tools to obtain the coordinates for each RCRA Site based on its physical address. Locational data for the front door of each RCRA Site would provide data consistency and at the same time allow implementers flexibility for data collection. Adding address-matching software that is easy to use would be inexpensive.

EPA HQ also would revise the Part A Permit Application to remove the geographic coordinates from Section III of the Part A form and references to this information in the instructions. In addition, EPA HQ would need to revise the RCRA permit regulations. Specifically, EPA HQ would need to delete the requirement at 40 CFR 270.13(b) for owners or operators to provide the latitude and longitude of facilities for which they are submitting a Part A Permit Application. This action will complement the previous recommendation to merge common elements of current site identification forms.

Design Considerations

1) The accuracy, uniformity, and completeness of geographic coordinates in RCRIS or the subsequent national data system would improve significantly with respect to the baseline.

2) RCRA Sites tracked in national systems will need to be updated using address-matching software to reflect geographic coordinates that are currently missing.

3) The address-matching software would eliminate the potential for human error in key punching the coordinates provided by facilities with first or revised Part As.

4) The PAA Team feels that the address matching software should be an integrated part of national information systems. This will ensure the population of the data for each RCRA Site.

5) It should be noted that the degree of accuracy of address matching software can be limited, especially for certain areas of the country (rural) and may not be compliant with the Locational Data Policy. However, this improvement will provide much better locational data over the current situation. Future systems must allow users to overwrite data from address matching software with more accurate information, for example hand verified through GPS.

22) Record historical changes to RCRA Site name, operator name, owner name, and regulated activity status

Summary

Provide functionality in the national RCRA information systems to accommodate historical records of the changes in RCRA Site name, operator name, owner name, and regulated activity status.

Program Need

The name under which a RCRA Site operates may change numerous times. PAA participants identified as an important requirement the need to be able to identify the name under which a RCRA Site operated at a given point in time.

Similarly, the regulated activities that a RCRA Site conducts change regularly. A generator may cease activity for a period of time before recommencing that activity. An important requirement has been to be able to identify the period of time during which a RCRA Site performed a given activity or operated within a specific regulatory category.

This information would support:

- understanding the history of waste generation and management activities at a given site

- the development of enforcement cases

- waste minimization trend analysis

- assessment of contamination cleanup and remediation needs

Problem Analysis

Current systems do not support this need.

Recommendation

Provide functionality in the national RCRA information systems to accommodate historical records of the changes in RCRA Site name, operator name, owner name, and regulated status.

This functionality will allow recording of future changes in these points of information while retaining existing values. The same functionality will also allow recording of past values although this historical information will only be captured at the discretion of the implementer.

This recommendation will help to ensure the successful implementation of the PAA Team's recommendation to generally assign only a single EPA identification number to a given RCRA Site, since important changes to the basic site information will still be possible while retaining an historical link to previous information.

Design Considerations

New system functionality required.

23)   Provide an integrated source of RCRA program information

Summary

Provide a single source of information for the RCRA program.

Program Need

A widespread need was identified during the information gathering sessions for a single integrated information source for the RCRA program. Currently, the RCRIS and BRS systems combine to provide this information.

Users specifically referenced the following needs:

-    single point of reference and access to information about RCRA regulated sites,

-    ready desktop access to information,

-    improved information reporting capabilities, and

-    removing redundant data sharing.

Problem Analysis

Much of the basic identification data about a RCRA Site is currently maintained redundantly in both RCRIS and BRS. Additionally, the two systems are currently "fed" separately, causing disparities in data quality. This is compounded by the information in RCRIS being updated on an ongoing basis, whereas BRS represents multiple biennial snapshots.

Recommendation

The two systems should be merged so that they share one 'repository' of RCRA Site data and an integrated set of data entry capabilities.

Consideration of the most appropriate and cost-effective way to achieve this recommendation will be made during the subsequent design project.

Design Considerations

1) The benefits of this data integration were previously documented in the Final Report from the Program Evaluation PAA.

24)   Additional Information Collection using the Manifest

Summary

Change the Uniform Manifest to capture the physical address of the collection location of a hazardous waste shipment.

Program Need

A number of States meet their need for more frequent submission of generation and management data by collecting manifest information from generators and TSDFs. The manifested EPA identification number is used to identify both the "cradle" and "grave" of the waste.

Where the generator EPA identification number is unknown or unclear, the physical collection location provides valuable supporting information. Currently, this location information is not collected on the Uniform Manifest Document.

Additionally the point of generation is important to ensure that the manifest is sent by the TSDF to the correct State.

Problem Analysis

The Uniform Manifest Document requires the reporting of the shipping generator's EPA identification number but this information is sometimes incorrectly reported making it difficult to precisely identify the origin of a waste shipment. An incorrect EPA identification number can result from poor typing or handwriting.

The Uniform Manifest Document does not require the physical address from which the waste shipment was collected. The generator's mailing address is currently required, but this can often be very different to the generating site's physical address.   For example waste may be generated in state X but their headquarters and mailing address is in state Y.   Alternatively one mailing address may serve many RCRA Sites and associated EPA identification numbers.   This can make it difficult to tie the manifest to the point of generation. This issue may result in the manifest being sent to the incorrect state causing a delay in processing or resulting in the manifest being "lost" to the generating state.

Although CESQGs are not required to notify of waste activity, many CESQGs ship hazardous wastes to TSDFs using the manifest, despite not being assigned an EPA identification number. It is then difficult to determine the origin of the waste as there is no EPA identification number to relate the mailing address detailed on the manifest to the physical generation address (which may be different from the mailing address). This inhibits implementing agencies from monitoring hazardous wastes from cradle to grave.

Recommendation

Revise the Uniform Manifest Document and associated instructions to record the physical site address including country of the originating generator of the waste shipment. The physical address will replace the mailing address on the manifest. This will provide the information required by implementing agencies needed for timely cradle to grave tracking of wastes. It will also provide information on CESQGs, who may not have an EPA identification number and may not be tracked nationally, for inspection targeting to confirm status, or pollution prevention outreach.

Design Considerations

1) The Department of Transportation controls the content of the Uniform Manifest, and their approval would be required before any modification to it could be made.

2) The manifest instruction and associated forms would require amendment for all 50 States. Many States have customized the appearance of the manifest. Thus any efforts could not be achieved through wholesale change but would require many individual efforts.

3) The Manifest Rulemaking Workgroup is charged with evaluating changes to the Uniform Manifest. As a result the implementation and design of this recommendation will need to be forwarded to this workgroup.

25)   Make Source of Waste a National Data Element

Summary

Require the collection of source code for reported wastes.

Program Need

PAA participants expressed the program's need to be able to distinguish among the following classes of hazardous wastes:

- Ongoing generation from production and service processes

- Residuals from active on-site management (i.e., recycling, reclamation, treatment or disposal) of hazardous waste

- Generated once or sporadically (e.g., discarding off-specification or out-of-date chemicals, process equipment change-out, lagoon drag-out)

- Generated by current spills or accidental releases

- Generated by remediation of historic contamination (e.g., Superfund or State cleanups, RCRA closure or corrective action)

One State asserted a need to identify those hazardous wastes that are residuals from active on-site management of non-hazardous waste.

Within each of the general categories above, participants reported the need to know in more detail the specific types of industrial or waste management processes from which hazardous wastes originate. For example, solvents are used by many industries in a number of quite different processes – cleaning, degreasing, painting, etc. – and simply knowing that a given site generates spent solvent does not provide enough information to determine whether they might benefit from a new technique to eliminate the use of solvents in only one of those processes.

Key processes driving this need include:

- Compliance monitoring and inspection – cleanups are regulated under different authorities for generators or TSDFs, and spills and releases are a indicator of potential non-compliance.

- Technical assistance and outreach – these are most often targeted toward routinely generated wastes, requiring the ability to distinguish those wastes from all others. Many technical assistance and waste reduction programs center around the specific waste producing processes (e.g., parts cleaning), rather than the wastes such processes create (e.g., spent solvent).

- State fees and program planning – annual volumes of remediation waste fluctuate much more than those of as-generated wastes, and some States do not charge fees on cleanup waste. In addition, program planning needs to know broadly whether their efforts are successful – are as-generated wastes being appropriately managed and minimized?

- Legislative support and interstate information-sharing – a meaningful description of wastes generated and/or managed requires all of these distinctions.

Problem Analysis

Currently, the reporting of source codes by generators of hazardous waste is not required. Generators have the option of providing the information if they choose. As a result, there is not a complete "national picture" of the sources of hazardous waste for all RCRA Sites.

Recommendation

The source of hazardous waste will be made a national data element. This data element will be collected from the generator and may be reported at the individual process level, at the manifest shipment level or at the cumulative waste code level (within the reporting cycle). The implementing agency will provide the source code to the national information system at the greatest level of detail feasible within the parameters of their individual authorized programs.

Dependencies

16)   Streamline Source, Origin, Form and Management Codes

This is a <u>partial</u> dependency.

The burden to the regulated community of requiring source code to be reported will be minimized by the streamlining of the existing source and origin codes.

Design Considerations

In order to provide an accurate context behind the data, meta-data must reflect the level of source code specificity, for use in analysis and comparison activities.

26)   Record Source of RCRA Site Activity Information

Summary

Track the source (i.e., either Program or Site) of each new piece of information regarding the RCRA regulated activities of a Site.

Program Need

Site identification information can be supplied by either a declaration on the part of the RCRA Site (e.g., via a Notification Form, or a BR IC Form), or through a program inspection/site visit. Implementers have greater confidence in data provided by experienced agency personnel than in data submitted by regulated entities. As a result, it is important to know whether the source of the information was the RCRA Site or the regulating agency. For example:

- To enable an implementer to evaluate and/or target inspections towards RCRA Sites that have notified that they are performing RCRA regulated activities that conflict with the activities that a program inspector had determined they are performing.

- To respond to phone calls requesting the last time a site notified the program of its regulated activities

- To know what the Site *certified* as its regulated activity.

Problem Analysis

Currently, RCRIS provides a mechanism to track the source of the information, but tracks in greater detail than the program needs. The current system is overly complex, because in addition to indicating the source of the information, it also records the recipient of the information (that is, region or state). The current system also allows for recording multiple occurrences of data beyond site activity, again resulting in unnecessary complexity.

Recommendation

Track the source (i.e., either implementer or Site) of each new piece of information regarding the RCRA regulated activities of a Site.

Consolidated Overview of the Recommendations

Introduction

In the previous section, the recommendations from the UID and WAM PAA were described individually to give the reviewer the opportunity to evaluate and comment on each individually. However, many of the recommendations interrelate, and often depend upon one another. This section provides an outline of how future information collection and management would be accomplished if all of the recommendations were implemented. This consolidated overview highlights the interdependencies between the recommendations and the benefits that might be achieved.

Recommended Future Information Collection

Figure 8: Recommended Future Information Collection Mechanisms illustrates the ways in which UID and WAM information would be collected based on the PAA recommendations. The figure does not include references to the database systems that would support the management of the information collected, since it is anticipated that all the collection mechanisms listed would be supported by automated systems.
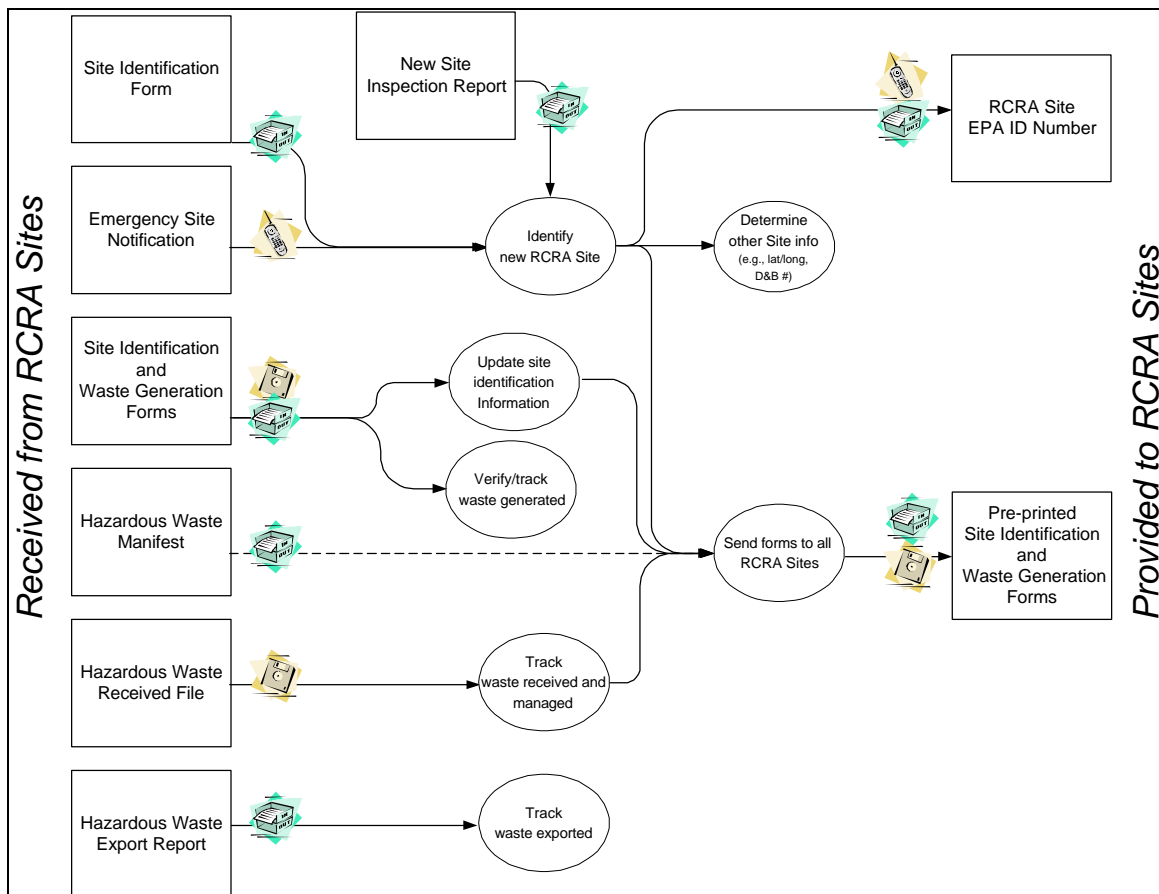
Figure 8: Recommended Future Information Collection Mechanisms

However, one should keep in mind that the PAA Team has recommended that future RCRA information systems be integrated, providing a single source for RCRA program information. This integration will allow implementers to query based on site information, and also seamlessly gain access to waste activity information. This integration will have a significant effect on how information is accessed and will greatly enhance the impact of the recommendations reviewed in the following discussion.

The ovals represent the internal processes that collect the information needed by the program. The boxes represent the forms or files used to collect or distribute information from or to RCRA Sites. The small icons represent the media that would typically be used for such collection or distribution (i.e., paper, electronic files, or telephone). The arrows represent the flow of information and the interdependencies between the internal processes.

In the remainder of this section, each of the internal processes is described in terms of the activities that would be performed and the data collection mechanisms that would be employed.

Identifying a new RCRA Site

A new RCRA Site is identified and recorded because either a new RCRA Site Identification form is received, an emergency site verbally notifies, or an inspection report is provided that identifies a RCRA Site that had not previously notified the program of its activities. This form will also capture import-handling activities. The table below identifies the types of information collected by these mechanisms.

RCRA Site Identification Information		
EPA identification number	Owner name	Land owner type
Site name	Owner type	Site contact name
Location address	Operator name	Site contact phone
Mailing address	Operator type	NAICS code(s)
RCRA Site Activity Information		
Federal generator status	Hazardous waste transporter	Hazardous waste fuel marketer
Underground injection	Used oil transfer station	Used oil burners
Used oil processor	Used oil refiner	Used oil marketer
Used oil transporter	Universal waste handler	State generator status
Hazardous waste import agent	Mixed radioactive waste handler	Waste codes

All RCRA Sites (including temporary sites, CESQGs, emergency sites, and sites that have been discovered during an official site visit) will be assigned a Federal EPA identification number and information about them will be shared nationally. EPA identification numbers will be assigned to RCRA Sites based on the new guidance developed to avoid multiple identification numbers being assigned to one RCRA Site, except in exceptional circumstances.

Determine other RCRA Site information

For any newly identified RCRA Site the latitude and longitude will be calculated based on the physical address of the Site, and the Facility Registry Identifier will be determined. Additionally, any of the shared information needs that are collected by a State or the EPA could be recorded.

Track quantities of waste received and managed

TSDFs will electronically submit data about all shipments of hazardous waste they have received during the preceding quarter. For wastes imported into the country, the TSDF will report the EPA identification number of the importing agent as well as the country of origin of the waste, providing the ability to distinguish between domestic and foreign generated wastes. Once this data has been quality assured by the implementer it will be transmitted to a national repository from which all regulators could access the information about waste being managed as well as inferring the waste being shipped from each generator. The information reported is shown in the following table.

Manifest number	Originating EPA ID
Destination EPA ID	Federal waste codes
State only waste codes	Quantity
Unit of measure	Originating country
Management method	Received date

Verify/track waste generated

Pre-populated generation forms are returned to the implementing agency reflecting changes or amendments to waste generation data, as identified by the generator. The submission additionally captures source code, unreported waste generation data, as well as any onsite management activities.

Track waste exported

Generators that export hazardous wastes continue to submit their Annual Export Report to EPA OECA for entry into the EXPORTS database. Data from the EXPORTS database will then be integrated into the national information systems Regulators across the nation have access to data on wastes generated and exported from their state. The regulators ability to track waste from cradle to grave is significantly improved, and they now have a more complete picture of the wastes generated in the state, for use in compliance assurance, inspection planning, program development and analysis and revenue generation.

Send waste verification forms to all RCRA Sites

Every two years pre-populated *RCRA Site Identification* forms will be printed that include all the identification information currently known about the RCRA Site. These will be sent to *every* active RCRA Site for their review and update.

Jointly with this form, a pre-populated waste generation verification form would be sent to all known LQGs and any non-LQGs that appear to have generated large quantities of waste based on the shipment information reported by TSDFs. As determined by individual implementers, the form would be pre-populated with the shipment level information or with aggregated periodic totals based on TSDF reporting of wastes received from the generator during the prior biennium.

This would allow generators to review, modify or append information about their shipments during the period. The generator would also be able to report the source of generated wastes and the on-site management of waste they have performed. This Waste Generation Verification form could, at the discretion of the implementer, also be sent to all known generators (i.e., including SQGs).

The types of information reported are shown in the following table.

Source of waste	Originating EPA ID
Destination EPA ID	Federal waste codes
State only waste codes	Quantity
Unit of measure	Destination country
Reporting period	

Update RCRA Site identification information

Based on the pre-printed RCRA Site Identification forms returned biennially by all RCRA Sites, changes to that RCRA Site's information would be recorded. Historical information about changes to the site name, owner name, operator name or changes in the RCRA regulated activities (e.g., generator status) would be retained for reference.

Information Access Capabilities

One of the major objectives of WIN/INFORMED is to provide RCRA program staff with improved capabilities to access and use the information that they collect and manage.

One of the main issues with the existing RCRA information systems that was identified during the Information Strategy Planning projects that preceded this PAA project (and confirmed during this project), was the lack of support to allow program staff to make use of the information tracked within those systems.

This section of the Final Report provides a high level assessment of the ways in which RCRA program staff need to be able to query and analyze information. This is intended to provide reviewers with an overview of the required capabilities for comment. It is anticipated that these needs would ideally be supported through some easy to use information access functionality[7].

Based on an assessment of the types of questions that EPA and the States regularly need to answer to implement the RCRA program, four *generic* types of data access needs can be identified:

RCRA Site Profile	answers questions about the identity and activities of one specific RCRA Site,
Targeted Group of RCRA Sites	answers questions regarding which set of RCRA Sites match a set of specific criteria,
Regulated Universe Quantification	answers questions about the size of the RCRA regulated community within specific States, Regions or the country
Hazardous Waste Quantification	answers questions regarding the total amounts of waste being generated, managed or shipped within specific States, Regions or the country,

Although the organization of these types of access need is subjective, the various questions that make up each group require overlapping data sets. This classification is used for organization purposes.

Many of the questions that make up these types include the need to consider changes that occur over time. This provides a perspective of the trends in management practices and the impact of regulatory and other initiatives.

Each of these four types of data access needs is described in the following way:

Example key questions	provides examples of the types of questions that are regularly asked of the program by either internal or external audiences
Applicable criteria	lists the specific criteria that individually, or in combination, define the set of results that answer a question
Resulting data content	describes how information would be presented (e.g., within a report) that would answer a question

---

[7] The term "report" has been used in this section to refer to general access functionality. This term is not intended to suggest that access to the information would be limited to hardcopy alone.

RCRA Site Profile

This provides the program with all the available details about an individual RCRA Site and supports such program activities as:

- preparing for an inspection,

- responding to a public request for information,

- processing a permit application,

- enforcement case development,

- reviewing the 'mass balance' of a Site's waste shipments, and

- considering the applicability of technical assistance.

Example key questions

- Where is Site X located, what RCRA regulated activities do they perform, and who should I contact at the Site regarding my upcoming site visit?

- What is the hazardous waste generation and management history at Site X?

- What is the EPA identification number for facility named X?

- Does this Site still perform any RCRA regulated activities?

- Is this TSDF in an Environmental Justice Area?

- Has this location/address ever been the site of RCRA activities?

- Is Site X registered as a used oil or hazardous waste transporter

Applicable criteria

Has been assigned EPA ID X	Is currently named or owned/operated by X
Was previously named or owned/operated by X	Is located at, or nearby, X (e.g., street name, ZIP code, latitude/longitude)

Resulting data content

These types of questions require a complete profile of a specific RCRA Site's identifying information, RCRA regulated activities, and waste generation, shipment and management activities. For example:

- a report of the Site's name, location, owner, operator, site contact and mailing address;

- a map showing the location of the Site, with overlays of various natural resources (e.g. wetlands, population centers) and geopolitical boundaries (e.g. tribal lands, counties).

- a description of the regulated activities occurring at the Site (as of the last time the Site reported its activities or the agency visited the site);

- a breakdown of all the hazardous waste that the Site had reported that it had generated, shipped and/or managed;

- a breakdown on all of the hazardous waste that other Sites had reported being received from, or sent to that Site, along with any discrepancies between the individually reported wastes (where applicable, for example, for an LQG).

Targeted Group of RCRA Sites

This provides the program with the ability to identify a discrete set of RCRA Sites that fit a variety of targeting criteria. This supports such program activities as:

- planning inspection schedules

- responding to a public request for information

- targeting assistance and outreach activities

- performing regulatory impact analyses

Example key questions

- Which TSDFs manage PBTs?

- Which Sites manage waste onsite vs. offsite?

- Which generators generated 10% more than the SQG limits?

- Which commercial TSDFs manage waste of type X?

- Which large quantity generators are within industry types X, Y or Z.

- Which RCRA Sites are located within a 10 mile vicinity of X?

- Who are the active small quantity generators?

Applicable criteria

Is in industry type X	In geographic area X (e.g. a state, city, county, legislative district)
Currently performs RCRA activity X (e.g., hazardous waste transporter)	Previously performed RCRA activity X (e.g., LQGs sometime during the prior year)
Falls into the formal TSDF Universe X	Owned by X corporation
Is currently a non-notifier	Ships waste to TSDF X
Receives waste from generator X	Treats or disposes of waste code X
Is either a commercial, on-site, or captive TSDF	Generates waste code X
Generated a quantity of waste in excess of X pounds	Generates hazardous waste from industrial process X
Imports waste from another country	Exports waste to another country

Resulting data content

The response to this type of question would be a simple list containing EPA identification numbers, names and locations of each RCRA Site that meets the criteria. Based on this list, and the context of the question the following types of elaboration should be available:

- If the information was to be used to mail information to each RCRA Site, a mailing list should also be provided.

- If the information was to be used to determine the effects that these RCRA Sites might be having on nearby natural resources, a detailed map would locate each Site relative to those natural resources.

- If more specific information was required about each RCRA Site that met the criteria, a user could employ the capabilities associated with RCRA Site Profile described above. For example, if a user wished to know what was the method used by each commercial TSDF to manage the waste of waste code X, they could examine the waste management history for each RCRA Site in the list.

Regulated Universe Quantification

This provides the program with the information about the number of RCRA Sites that are regulated in varying ways, and how they are distributed geographically. This supports such program activities as:

- program planning and resource management

- responding to a public request for information

- policy development

- risk assessment

- legislative support

- EPA oversight of States

- regulatory impact analyses

Example key questions

- How many generators in state ship X waste to out of state facilities?

- How many RCRA Subtitle C facilities with waste management unit type A are located in State B?

- How many handlers generate wastes from the production of, for example, fertilizers?

- How many facilities subject to permitting requirements are also undergoing corrective action?

- How many high priority facilities are meeting environmental indicators (e.g., GPRA criteria) X?

- How many handlers with a specific generator status are there in each county, district, or other geographic area (e.g., radius from a town)?

Applicable criteria

Falls into GPRA universe X	Is in industry type X / performs industrial process Y
In geographic area X (e.g. a state, city, county, legislative district, vicinity around a point)	Currently performs RCRA activity X (e.g., hazardous waste transporter)
Previously performed RCRA activity X (e.g., LQGs sometime during the prior year)	Falls into the formal TSDF Universe(s) X

Resulting data content

Although the main result is the <u>number</u> of RCRA Sites based on the activities for which they are regulated (e.g., Federally defined LQGs, TSDFs, transporters, universal waste handlers), this number often needs to be presented so that the percentage change over time can also be considered.

Hazardous Waste Quantification

This provides the program with the information about the amounts of hazardous waste that are being generated, managed and shipped intra-state, inter-state and internationally. This supports such program activities as:

- responding to a public request for information

- rule making and policy development

- risk assessment

- legislative support

- EPA oversight of States

- capacity planning

- regulatory impact analyses

Example key questions

- How much waste of waste type X was landfilled in the state during a particular quarter of the year, and how much of it came from out of state?

- How much has the generation of waste type X changed during the last few years?

- How much waste is being generated in industry sector X, and geographic area Y?

- How is waste of type X being managed before and after the implementation of a specific rule/standard?

- How much waste is being exported to country X?

- What are the trends in waste management for certain types of waste?

- What waste codes and volumes are being managed through combustion?

Applicable criteria

Generated/managed waste code X	Managed using method X
Generated/managed in geographic area X	Generated/managed in industry sector X
Exported to country X?	Imported from country X?

Resulting data content

The total quantity of hazardous waste should be described as an amount generated, an amount managed, and/or an amount shipped in or out of the state/nation. Additionally, these quantities will sometimes need to be additionally categorized by the type of the waste (e.g., by waste code), and/or by the ways in which the waste is managed. Once again, the trending of these quantities over periods of time is vital when considering the overall impacts of changing regulations, new industrial processes, and waste minimization initiatives.

IMPLEMENTATION PLAN

This section of the report provides an outline of a possible approach to the detailed design and implementation of the report's findings.

Implementation Planning Considerations

As described in the WIN/INFORMED Approach section of this report, the methodology employed by this Program Area Analysis (PAA) calls for the project's recommendations to be further developed by one or more Program System Design (PSD) projects. The PAA recommendations have been organized into smaller, more manageable groupings. The scope of each design project has been constructed to accommodate dependencies between recommendations.

There are two primary drivers for the planning and scoping of PSD projects.

1. Inter-dependencies between recommendations may be significant enough to require that recommendations be developed in parallel with each other.

2. Some recommendations require modification of national reporting mechanisms including regulatory change. Given the formal and time dependent processes required for regulatory change, recommendations with similar regulatory impacts should clearly be implemented together.

The manner in which these two drivers affect the specific PAA recommendations is described in the next two sections.

Inter-dependencies between PAA Recommendations

The inter-dependencies described for each recommendation in the report are represented in Figure 9: Inter-dependencies between recommendations.

Each arrow on the diagram represents a dependency for the design and implementation of two PAA Recommendations. The recommendation at the endpoint of the arrow is dependent upon the recommendation at the start of the arrow.

The solid arrows represent *critical* dependencies where the source recommendation must be implemented before the target can be implemented. Failure to observe these dependencies may require a recommendation to be modified or abandoned. For example, waste codes cannot be removed from the notification form until the reliant program needs are supported elsewhere (e.g., quarterly reporting of TSDF receipt data, or other means of receiving information about wastes).

The dotted arrows represent *partial* dependencies. Failure to observe these dependencies may require reanalysis and design of the dependent recommendation's implementation. For example, if the universe of RCRA Sites reported nationally, were expanded to include all temporary and emergency RCRA Sites without regular verification of the universe, then the current situation with historical data that has not been re-verified since initial submittal, would simply proliferate to a larger universe of RCRA Sites.
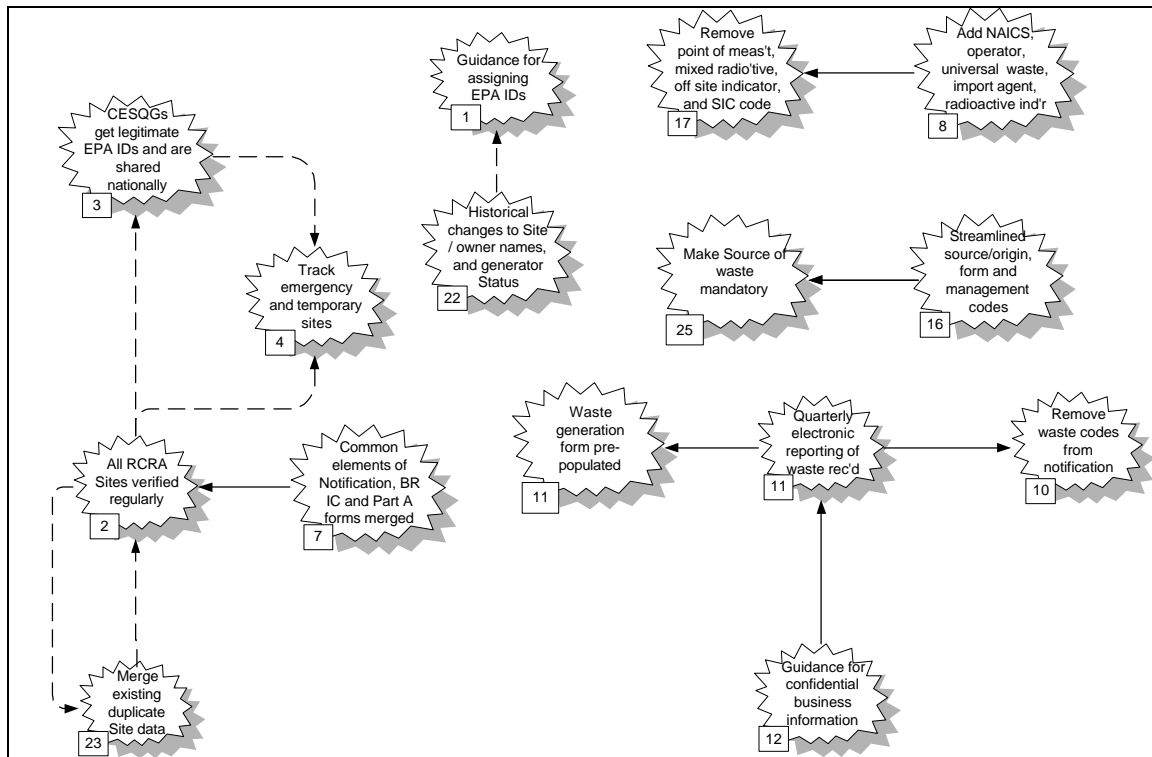
Figure 9: Inter-dependencies between recommendations

The inter-dependencies influence the ways in which the recommendations can be grouped into discrete PSD projects. This diagram should be used as a reference to ensure that there are no adverse affects to other recommendations that rely upon it.

Regulatory Implications of PAA Recommendations

The PAA recommendations may require one or both of two types of regulatory action, including development of Information Collection Requests (ICR), and/or revisions to RCRA rules. Table 9 identifies, for each recommendation, the types of anticipated regulatory change required. The majority of the recommendations will require some modifications to one or more ICRs, as indicated in the rightmost columns, while the three italicized recommendations will require revisions to RCRA rules.

The PAA recommendations have been organized into five logical groupings based on the dependencies described in Figure 9 and the regulatory impacts shown in Table 10. The leftmost column identifies the four PSD projects into which the recommendations have been grouped.

NOTE:

24) Additional Information collection Using the Manifest has been excluded from consideration here since the program's needs in this area are being considered by the Manifest Rulemaking Workgroup.

Project		PAA Recommendation	ICR revision required				
			Notification	Biennial Report	Part A Permit Application	Uniform Manifest Document	Export Report
1	16	Streamline Source, Origin, Form, and Management Codes		X		X	X
	13	Tracking Hazardous Waste Exports		X			
	15	Clarify Types of Hazardous Wastes to be Reported		X			
	17	Removal of Data Elements from Biennial Reporting forms		X			
	25	Make Source of waste a mandatory data point		X			X
	18	Streamline Unit of Measurement Reporting		X			X
	6	Collect both State and Federal generator status from States	X	X			
	7	Merge common elements of current site identification forms	X	X	X		
	14	Tracking Imports of Hazardous Wastes	X	X			
	8	Add Additional Data Elements to Notification Form	X				
	9	Provide for standard notification by large quantity handlers of universal waste	X				
	19	Issue guidance on TSDF nomenclature			X		
	21	Determine location coordinates for a RCRA Site			X		
2	2	*Study feasibility of periodic verification of RCRA Site information*	X	X	X		
	11	*Study feasibility of quarterly electronic reporting of TSDF waste receipts*		X		X	
	10	Remove waste codes from Notification Form	X				
	12	Confidential Business Information (CBI)					
3	23	Provide an integrated source of RCRA program information					
	22	Record historical changes to RCRA Site name, operator name, owner name, and regulated activity status					
	26	Track the source of Site Activity data					
	20	Implement standard definitions for programmatic TSDF universes					
4	1	Issue guidance on EPA identification number assignment					
	3	Track all notifying CESQGs nationally					
	4	Track all emergency and temporary sites nationally					
	5	Track all non-notifiers nationally					
	24	*Additional Information Collection using the Manifest*				X	

Table 9: Regulatory Impacts of Recommendations

Project 1 groups those recommendations that will require changes to ICRs only. By grouping these recommendations together, the changes to the reporting forms, data entry screens and regulations can be accomplished in unison, allowing for coordinated ICR changes and ensuring consistent design and implementation.

Project 2 groups those recommendations that have the greatest impact to existing regulatory and/or information management practices and recommendations that are critically dependent on

these. These have been segregated from the other recommendations due to their need for further feasibility study[8] and also due to length of time required perform the studies.

Project 3 groups recommendations that primarily impact information management systems, and may also require adjustments to business practices, documentation and training.

Project 4 groups the remaining recommendations that either require new guidance to be developed or which recommend practices that when implemented will improve the quality of reported information.

Implementation Projects

This section further describes each of the implementation projects identified above including:

- The recommendations included in the project

- The internal and external dependencies between the recommendations included in the projects

- The schedule and milestones for the project

- A summary of the specific tasks required during design.

Much of the information included here has been summarized from other sections of the report, to provide a consolidated project discussion for evaluation. For more detailed information about these projects the reader should refer to the individual PAA recommendations detailed in the *Recommended Information Management Improvements* section of this report.

Each project has been designated as either EPA or State lead. This responsibility is intended to mirror that of the PAA's lead responsibility, in that the lead organization provides a greater level of support to the project. However, as with the PAA, both EPA and States will be active participants in the decisions made during each project.

Project 1: ICR Reliant System Changes   *EPA Lead*

This project will design the policies/procedures, reporting mechanisms, and information system changes required by those PAA recommendations that require ICR changes, with the exception of those that have been included in Project 2.

This design project should commence as soon as possible, to ensure that those recommendations that are effected by the Biennial Report ICR will be implemented within the 2000 ICR process. If this is not accomplished, then these recommendations will not be implemented until the 2002 Biennial Report ICR cycle.

This project will also require changes to the ICRs for the Notification form, Part A Permit Application, Uniform Manifest Document, and Export Report. As a result, associated information systems functionality will require analysis and development, to ensure consistency with paper forms.

Some of the design tasks included within this project are:

- Address matching software for determination latitude/longitude will be evaluated and piloted.

---

[8] A "feasibility study" is an exercise to better understand the alternative ways in which the recommendation could be implemented, along with soliciting more comprehensive input from all stakeholders, so that the costs and benefits of those approaches can be better understood, and an informed decision can be made with respect to implementing the recommendation.

- The OECA Exports system data and technical infrastructure will be evaluated to determine best way to integrate the system's data.

- The Source, Form and Management codes will be streamlined. This effort will require additional input from key stakeholders such as state agencies, and regulated community to refine the level of detail presented in the codes.

- A data transition strategy will be developed for changes to source/origin form and management codes, unit of measure, NAICS codes, export data, generator status, latitude and longitude, mixed radioactive waste indicator, and other identified RCRA Site identification data elements.

			ICR revision required			
	PAA Recommendation	Notification	Biennial Report	Part A Permit Application	Uniform Manifest Document	Export Report
16	Streamline Source, Origin, Form, and Management Codes		X		X	X
13	Tracking Hazardous Waste Exports		X			
15	Clarify Types of Hazardous Wastes to be Reported		X			
17	Removal of Data Elements from Biennial Reporting forms		X			
25	Make Source of waste a mandatory data point		X			X
18	Streamline Unit of Measurement Reporting		X			X
6	Collect both State and Federal generator status from States	X	X			
7	Merge common elements of current site identification forms	X	X	X		
14	Tracking Imports of Hazardous Wastes	X	X			
8	Add Additional Data Elements to Notification Form	X				
9	Provide for standard notification by large quantity handlers of universal waste	X				
19	Issue guidance on TSDF nomenclature			X		
21	Determine location coordinates for a RCRA Site			X		

Internal Dependencies

17) Removal of Data Elements from Biennial Reporting Forms is critically dependent upon *8) Add Additional Data Elements to Notification Form.*

25) Make Source code a National Data Element is critically dependent upon *16) Streamline Source, Origin, Form and Management Codes*.

High Level Scheduling and Milestones

The PSD would take approximately 5 months to complete.

The anticipated ICR changes would take approximately 6 months to complete.

The 2001 (biennial) Hazardous Waste Report ICR is due to be drafted on May 1st, 2000, and finalized in November 2000.

Project 2: Site Verification and TSD Quarterly Reporting   *State Lead*

Site Verification

This project will study the feasibility of alternative mechanisms by which identification data can be verified by RCRA Sites. The project will estimate the cost / burden imposed upon the regulated community and RCRA implementers. Major tasks will include:

- Benchmarking of 2-3 States and data analyses to evaluate the burden on both implementer and RCRA Sites of verifying based on :

    - universe,

    - optional vs. mandatory,

    - verification frequency ,

    - initial vs. ongoing verification,

    - cost of not verifying data.

- Industry outreach.

- Regulatory and ICR change.

- Quantification of State support.

- Design of the reporting form and information system additions / changes required.

TSDF Quarterly Electronic Reporting

This project will study the feasibility of the quarterly electronic reporting of waste receipt data from the nation's TSDFs. This would include the evaluation and design of the reporting mechanism, a national repository and State/EPA data interchange mechanisms, and the pre-population of generators biennial hazardous waste reports.

 Major tasks will include:

- Outreach to TSDFs for input and to gauge their support

- Detailed benchmarking with states implementing reporting mechanism that are similar to recommendation (e.g., Texas)

- Perform a pilot study of the design

- Survey manifest states to evaluate the benefits and liabilities to their programs

- Design reporting forms and

- Analyze and design information systems (new or existing).

		ICR revision required				
PAA Recommendation		*Notification*	*Biennial Report*	*Part A Permit Application*	*Uniform Manifest Document*	*Export Report*
2	*Study feasibility of periodic verification of RCRA Site information*	X	X	X		
11	*Study feasibility of quarterly electronic reporting of TSDF waste receipts*		X		X	
10	Remove waste codes from Notification Form	X				
12	Confidential Business Information (CBI)					

External Dependencies

2) Study feasibility of periodic verification of RCRA Site information is critically dependent upon *7) Merge common elements of current site identification forms* included in Project 1.

2) Study feasibility of periodic verification of RCRA Site information is partially dependent on *23) Provide an integrated source of RCRA program information* included in Project 3.

Internal Dependencies

10) Remove waste codes from Notification Form is critically dependent upon *11) Study feasibility of quarterly electronic reporting of TSDF waste receipts*.

11) Study feasibility of quarterly electronic reporting of TSDF waste receipts is critically dependent upon *12) Confidential Business Information (CBI)*.

High Level Scheduling and Milestones

The feasibility study for this project would take 6 months to complete and would include a national review.

The Site Verification PSD would take approximately 4 months to complete and would include a national review

The TSD Quarterly Reporting PSD would take approximately 9 months to complete and would include a national review

The anticipated regulatory change would take approximately 2 years.

Project 3: Data Integration into RCRAInfo   **State Lead**

This project will determine how the RCRAInfo data and functionality for Site Identification information will be integrated and modified. Major tasks would include:

- Development of a detailed data integration strategy (the 1999 biennial report IC forms would be the basis for reconciling with the RCRIS data).

- Interviewing implementers to evaluate data quality issues

- Specify how the common systems functionality should be merged

		ICR revision required				
PAA Recommendation		*Notification*	*Biennial Report*	*Part A Permit Application*	*Uniform Manifest Document*	*Export Report*
23	Provide an integrated source of RCRA program information					
22	Record historical changes to RCRA Site name, operator name, owner name, and regulated activity status					
26	Track the source of Site Activity data					
20	Implement standard definitions for programmatic TSDF universes					

External Dependencies

23) Provide an integrated source of RCRA program information is partially dependent on *2) Study feasibility of periodic verification of RCRA Site information* included in Project 2.

High Level Scheduling and Milestones

The PSD would take approximately 6 months to complete and would include a national review

Project 4: New Guidance   *EPA Lead*

This project will design the policy/procedural changes for the recommendations that do not effect the reporting mechanisms per se. The project will include the following tasks:

- New guidance documents and training materials will be developed and disseminated to all RCRA regulators

- Define consistent national approach for identifying, classifying and recording information about non-notifiers

- The method(s) to identify as inactive sites are no longer active including for temporary sites

		ICR revision required				
PAA Recommendation		*Notification*	*Biennial Report*	*Part A Permit Application*	*Uniform Manifest Document*	*Export Report*
1	Issue guidance on EPA identification number assignment					
3	Track all notifying CESQGs nationally					
4	Track all emergency and temporary sites nationally					
5	Track all non-notifiers nationally					

External Dependencies

3) Track all notifying CESQGs nationally and *4) Track all emergency and temporary sites nationally* are partially dependent on *2) Study feasibility of periodic verification of RCRA Site information* included in Project 2.

1) Issue guidance on EPA identification number assignment is partially dependent on *22) Record historical changes to RCRA Site name, operator name, owner name, and regulated activity status* included in Project 3.

Internal Dependencies

4) Track all emergency and temporary sites nationally is partially dependent on *3) Track all notifying CESQGs nationally.*

High Level Scheduling and Milestones

The PSD would take approximately 6 months to complete.

Implementation Schedule

An implementation plan has been developed that takes into consideration the inter-dependencies between the four projects discussed above and the EPA and State resources available to support the performance of these projects.

Figure 10: Schedule of Implementation Projects presents a proposed schedule for the four projects and associated tasks. Four types of implementation tasks are shown:

1. PSD projects -will examine and detail the manner in which existing regulations, reporting forms, and information management systems will change.

2. Feasibility studies – will further consider the implications of the most significant changes to existing reporting mechanisms and will determine the most practical mechanisms for implementing the recommendations.

3. Regulatory change tasks – will perform the rulemaking or ICR processes required by some PAA recommendations.

4. Implementation projects – will make the changes as specified by the PSD projects.

The following important considerations are not explicitly included in the implementation projects or schedule but will impact the way that some of the PAA's recommendations are implemented.

Data Integration

Project 3 includes the recommendation to integrate the two sets of site identification data currently managed in RCRAInfo's RCRIS and BRS datasets. This effort will require evaluating and reconciling the differences between the two datasets. Given the scope and complexity of this exercise, this effort has been scheduled to begin after the design and feasibility study included in Projects 1 and 2. Projects 1 and 2 may significantly impact the definition of the data, and the mechanisms used to collect and verify that data. As a result, these two projects will impact the manner in which the existing datasets would be integrated.

Periodic Verification

A number of the information needs identified through the PAA require that existing data elements be redefined or that entirely new data elements be added to forms and/or information systems. The proposed changes to regulations, reporting forms and systems will support the information collection for future data collection activities, but the data will not be available for current active RCRA Sites. For example, adding NAICS codes to the notification form will only provide data for RCRA Sites that submit a new *RCRA Site Identification* form or submit the Biennial Reporting forms. However NAICS information will not be available for existing SQGs as they are not required to re-notify or submit Biennial Reporting forms. This issue would be resolved if *2) Periodic Verification of RCRA Site Information* were implemented. A verification exercise would fill data gaps for existing RCRA Sites.

Information Access

One of the primary goals of the WIN/INFORMED initiative is to provide RCRA program staff with improved access to information. The PAA has examined information needs and collection mechanisms within its scopes and determined that on-line data access will best support the primary goal. Information access mechanisms are partly dependent upon the implementation of many of the PAA's recommendations. As a result the development of the new data access capabilities will be best performed through a process that runs concurrently to the PAA's implementation plan.

ID	Task Name	2000	2001	2002	2
		D J F M A M J J A S O N D	J F M A M J J A S O N D	J F M A M J J A S O N D	J F M A M J
1	**1) ICR Reliant System Changes**				
2	PSD	EPA Lead			
3	2001 Biennial Report Draft ICR Due	6/2			
4	ICR Processes				
5	Implementation				
6	**2) Site Verification & TSD Quarterly Report**				
7	Feasibility Study - State Lead				
8	Decision/National Review				
9	Site Verification PSD	State Lead			
10	Site Verification Decision/National Review				
11	Site Verification Rule Making				
12	TSD Quarterly Reporting PSD w/Pilot	State Lead			
13	TSD Quarterly Reporting Decision/National Review				
14	TSD Quarterly Reporting Rule Making				
15	**3) Data Integration Into RCRAInfo**				
16	Site Identification Data PSD				
17	1999 Biennial Report Data Received	10/2			
18	Site Identification Data Implementation				
19	Waste Activity Data Integration PSD				
20	Waste Activity Data Integration Implementation				
21	**4) New Guidance**				
22	PSD	EPA Lead			
23	Implementation				

Figure 10: Schedule of Implementation Projects

THIS PAGE LEFT INTENTIONALLY BLANK

APPENDICES

THIS PAGE LEFT INTENTIONALLY BLANK

APPENDIX I: PROGRAM AREA ANALYSIS PROCESS

The analysis of the UID and WAM program areas was conducted based on the following set of tasks.

Information Gathering

The primary information gathering activities of the project were accomplished through information gathering conferences termed Information Needs Assessments (INA) Sessions. INA participants were selected based on their program expertise and included representatives from States, EPA Regional Offices and EPA Headquarters Offices.

The goal of the sessions was to understand RCRA program information needs and their supporting data collection mechanisms, including manual procedures, data collection forms, and computer systems.

The sessions were tailored to fit the respective audience. The following general process was employed:

Current Data Collection Workflow

Participants described the current procedures that their organization uses to collect program information. This included both an assessment of the data collection mechanisms and a definition of the universe of RCRA Sites from which information is gathered. These collection procedures differed between organizations.

Data Uses

Participants were asked to describe how program area information is used by their organization. This was approached in two ways.

Participants first explored the "key questions" concerning RCRA program area activities that an implementing organization must answer in response to internal or external demands for information. A key question is one that is asked on a regular basis and which requires RCRA program area information to answer. For example, "How much waste containing arsenic is incinerated in State X?"

Participants then identified the major program activities that would cause the question to be asked. An example activity might include "Inspection Planning"

Information Needs

Participants then described the information needs required to answer the key questions including the data source, the managing data systems, and the coverage and data quality for each of the needs (collectively termed system support). The participants were then asked to express their opinion concerning future collection and use of data.

Improvements

Using information gathered through the data collection workflow and the current and future system support activities, participants were asked to explore avenues in which ineffective or inefficient work processes and collection mechanism might be improved

Policy and Procedure Issues

The final element of the INA session was a structured discussion of various policy and procedural issues that had been identified during the session or during the project planning phases. Participants were asked to elaborate upon each issue, including its significance to RCRA program implementation and to explore potential resolutions.

Critical Review

The information that was collected during the INA Sessions was compiled and analyzed to provide an overall outline of the UID and WAM program area needs. This outline is made up of three main components, the **Program Needs Assessment**, the **Future System Recommendations**, and the **Policy and Procedural Issues**.

Program Needs Assessment

This component describes the "conceptual" information processing needs, focusing on *what* these needs are, rather than on *how* well they are currently being met.

Secondly, this section then illustrates how these conceptual program needs are supported by the existing systems, including data collection forms, data systems, organizational structures and other procedures. This analysis highlights how well the needs are currently supported, identifies needs that are not being met, and existing collection procedures that might no longer be required.

Future System Recommendations

This component presents ways in which the existing systems should be changed to meet the identified program needs more effectively. It also explores opportunities for process improvements as well as efficiencies that might contribute to an overall reduction in the program implementation.

Policy and Procedural Issues

During the project, a number of policy and procedural issues were highlighted that affect the way in which information is collected and used by the program. These issues interrelate the other analysis components, affecting both the use of current systems and the implementation of future capabilities. This component presents an analysis of these underlying issues and provides recommended resolutions.

Once these components were developed, a draft report was prepared outlining the findings and recommendations. A key goal of the WIN/INFORMED initiative is to obtain nationwide review and consensus to project findings. Before a national review can take place, an expert group of reviewers was asked to evaluate the draft findings and recommendations through a process termed critical review.

National Review

Once the critical review was completed, the project progressed to further detail the recommendations for improvements to the current and future systems, taking into account the comments provided by the critical reviewers. The enhancement of these recommendations also included an evaluation of existing "benchmarking" examples of the proposed future system capabilities.

The findings and detailed recommendations from both the UID and WAM PAA projects were consolidated into a Draft Report that was circulated for nationwide review by States, Territories and EPA Regional and Headquarters offices.

Implementation Planning

Following the completion of the National Review, the PAA Team considered the comments received from reviewers and made changes to the recommendations where appropriate. The PAA Team then worked to prioritize the confirmed recommendations. The recommendations were organized into logical groups based on their relative priority and degree of interdependency.

The groups of recommendations were reviewed by the WIN/INFORMED Executive Steering Committee (ESC) for decisions concerning the future steps required to implement the recommendations.

A plan was then developed that identified the priorities and dependencies involved in implementing the changes to the current systems. The plan set out a list of the critical actions to be taken and strategies different organizations might take. The planning takes account of the fact that the strategy is intended to be acted upon by both the participating States and EPA. Each group of recommendations will be implemented in separate Program System Design (PSD) phases.

APPENDIX II: PROGRAM SYSTEM DESIGN TASKS

This section provides a summary of the tasks that occur during a Program System Design (PSD) project. They are included as reference, to provide reviewers with an understanding of the activities to be undertaken for the UID and WAM program areas following the completion of the PAA project.

Develop overall design structure

For the selected group of recommendations, an overall design will be produced to define the implementation tasks. This will outline how the changes will be integrated and will identify all manual and automated procedural changes required.

Design for data collection forms

Any forms that must be changed to support a recommendation will be redesigned. Forms will be combined and restructured appropriately. Additional fields required by a recommendation will be added to the appropriate sections of the forms and redundant fields will be removed. The supporting instructions for each form will be updated to reflect changes to reporting schedules or the regulated universe required to report and to reflect any revised definitions for data elements collected on the forms.

Specify automated system changes

Depending upon the recommendations being implemented, existing systems may need to be changed to capture more or fewer data elements, or to provide additional functionality. These changes will be specified in the form of system prototypes, screen layouts, database designs, functionality requirements, file transfer formats, system navigation, and report layouts. In some cases, entirely new information systems or components, such as enhanced data display screens, may be required. These again will require fully detailed specifications.

Design business procedure improvements and training plans

Some of the recommendations will call for changes to manual business procedures, for example, where the existing EPA identification number assignment procedure might change. In such cases, step-by-step models will be developed to implement these changes and training plans will be outlined to ensure that changes are uniformly and efficiently adopted nation-wide.

Draft rule and policy changes and supporting documents

Changes to the RCRA regulations may be required to support a recommendation. Changes to the relevant regulatory text will be drafted. In some cases, simple guidance documents will be sufficient. Other documents, such as Information Collection Requests, may be required to support implementation of certain recommendations.

Define data translation approach

Existing system(s) data will be analyzed and assessed to determine how it should be transitioned into the future systems, whether those future systems are new or modified existing systems. This assessment will identify both missing data as well as data quality or compatibility issues. This will result in a data translation plan that defines what data cleaning efforts and data conversion rules will be required to result in appropriately populated future information systems.

Define system infrastructure requirements

Within the stipulations of the existing Technical Architecture, requirements will be defined for the automated system infrastructure, i.e., system security, system help, meta-data, and data interchange protocols. For example, respectively, context-sensitive data entry restrictions, on-line data element definitions and policy documentation, data collection dates, and State-EPA data file quality control rules.

Produce system implementation plan

A system implementation plan will be developed that will identify the detailed tasks to be performed for the group of selected recommendations. This plan will include both resource estimates and scheduling information. For example, changes to National and State-specific systems will be estimated and assigned.

The costs of implementation will now be well understood. These costs will be contrasted with the benefits to be realized from the implementation.

Conduct National Review

Once developed, the design specifications and implementation plan will be circulated for review and consideration by all States, EPA Regions, and EPA HQ program offices before any changes are actually implemented. Since existing processes will be changing, it is anticipated that there will be a substantial need for outreach to the regulated community, and wide public comments, perhaps using the Burden Reduction NODA model.

APPENDIX III: INFORMATION NEED DEFINITIONS

RCRA Site Identification

EPA identification number

Unique RCRA identification number assigned by the implementing State or Region, to each RCRA Site (e.g., generators, transporters, and treatment storage or disposal facilities).

Facility registry identification number

The program independent unique identification number that would be assigned to the RCRA Site by EPA. The identifier will provide the mechanism to cross-reference a single RCRA Site that might in practice be regulated by a number of different environmental programs.

Site name

The name by which the RCRA Site does business and is commonly known. Typically, this might be the name displayed at the entrance to the RCRA Site.

Mailing address

The primary business mailing address to be used by the implementing environmental agency for any correspondence. Only one mailing address is required for each RCRA Site. This is often different from the physical RCRA Site address.

Location address

The physical address of the primary site entrance (front door) of the facility, including the street, locality, state and USPS zip code. Where possible this should be the specific street address as defined in the "911 system" used by State and Federal emergency services.

Location county

The name of the county (or county equivalent), in which the RCRA Site is physically located. Where a RCRA Site spans a county boundary, the county corresponding to the official location address will be used.

Location coordinates

The latitude and longitude coordinates of a specific point at the RCRA Site. As a general rule, the point recorded should be the primary site entrance (front door) of the facility, however, the collected coordinates may relate to a different location than the front door. This would be indicated by the use of a different method, accuracy, description (MAD) code for the point. Other coordinate system values may be derived from the latitude/longitude.

Location method, accuracy, description (MAD)

Describes the method by which the location coordinates were collected, a description of what the point represents, and the accuracy of the collected values. As defined by the EPA's Locational Data Policy (http://www.epa.gov/irmpoli8/irm_ldp/madmeta.txt.html).

NAICS Code

The primary industrial activity of a RCRA Site as defined by a standard industrial coding system. To date, SIC code has been the most commonly used coding structure. However, the newer five digit North American Industrial Classification System (NAICS) has been established as the new Federal standard for the collection, and presentation, of data relating to economic activity at RCRA Sites.

Discovery date

The date on which the RCRA program first identified a site that is believed to be conducting RCRA regulated activities (e.g., through site visit)

Notification date

The date on which a Notification form or emergency site notification was first received from a site conducting RCRA regulated activities.

Exempt from Notification

Indicates, for a site that was previously believed to be conducting RCRA regulated activities, that the site is in fact not regulated by the program and did not need to have notified.

Emergency site

Indicates that the RCRA Site is regulated as the result of a waste generation situation that was unforeseen, uncontrollable and short-term and not expected to exceed 30 days.

Land owner type

Indicates in a general way the type of entity that legally owns the land on which the RCRA Site is located. Possible values include – Federal, State, County, Local, Municipal, Tribal, Private.

State identification number

The unique identification number assigned to the RCRA Site by the applicable implementing State agency.

Number of employees

Describes the number of people actively on the payroll at the RCRA Site on a permanent or semi-permanent basis. This information is often used to classify the type of business operation, for example, to determine a small business designation.

Site legal name

The legal name of the RCRA Site as registered with the appropriate Secretary of State.

RCRA Site Responsibility and Contacts

Owner name

The name of the entity (individual, agency, corporation) having legal ownership of the physical operation. The owner name may or may not be the same as the actual RCRA Site name or the operator name.

Operator name

The name of the entity (individual, agency, corporation) who is responsible for the overall operation of the facility. The operator name may or may not be the same as the actual RCRA Site name or the owner name.

Owner type

Generally indicates the type of entity that legally owns the facility. Possible values include – Federal, State, County, Local, Municipal, Tribal, Private

Operator type

Generally indicates the type of entity that is responsible for the overall operation of the facility. Possible values include – Federal, State, County, Local, Municipal, Tribal, Private

Site contact name

The primary contact person for the RCRA Site location who should be reasonably expected to be available at all times and to be fully aware of the regulated activities being performed at the RCRA Site. In many cases this will be the RCRA Site emergency contact, but may also be the plant manager, an environmental manager or some other individual.

Site contact phone

Phone number at which the RCRA Site contact may be reached

Site contact address

Mailing address for the RCRA Site contact.

D & B number

Nine-digit unique identification number assigned by the Dunn & Bradstreet organization to a company that might own or operate a RCRA Site. The identifier serves as linkage for commercially available information pertaining to the RCRA Site.

RCRA Site Activities

Federal generator status

The regulatory status of the RCRA Site with respect to the Federal rules to which it is subject as determined by the quantity and or toxicity of hazardous wastes generated, stored or accumulated over a specified period of time. The Federal program provides for three distinct classes: large quantity generators (LQG), who are subject to the strictest regulations; small quantity generators (SQG), who follow a less stringent set of procedures; and conditionally exempt small quantity

generators (CESQG), who are not subject to reporting requirements provided they follow a set of regulations.

State generator status

The regulatory status of the RCRA Site in view of the implementing State's "broader in scope" or "more stringent than" rules. Although such an implementing State might use terms that differ for their generators (e.g., "Fully Regulated Generator"), these would be translated to match the Federal regulatory term (i.e., LQG, SQG or CESQG) which best represents the way that the State regulates the generator. For example, a "Fully Regulated Generator" should be referred to as an LQG, given that the State applies the Federal LQG requirements at a minimum to that Site.

Used oil transfer station

Indicates whether the RCRA Site acts as a transfer station for used oil. A transfer station is any transportation related facility including loading docks, parking areas, storage areas and other areas where shipments of used oil are held for more than 1 day and not longer than 35 days during the normal course of transportation.

Used oil burner

A facility where off-specification used oil is burned for energy recovery in devices or processes such as: 1) Industrial furnaces, boilers for facilities engaged in manufacturing processes, 2) Boilers for the production of electric power, steam heated or cooled air or other gases or fluids for sale, 3) Used oil space heaters provided that the used oil originates form the owner operator or from do-it-yourself used oil generation, or 4) Hazardous waste incineration.

Used oil processor

A site that processes used oil. Processing means chemical or physical operations that are designed to produce or make amenable for the production of fuel, oils, lubricants or other oil derived products through activities such as blending, filtration, separation and distillation.

NOTE: Current regulations make no clear distinction between the "processing" and "refining" activities for used oil.

Used oil refiner

A site that processes used oil. Processing means chemical or physical operations that are designed to produce or make amenable for the production of fuel oils, lubricants or other oil derived products through activities such as blending, filtration, separation and distillation.

NOTE: Current regulations make no clear distinction between the "processing" and "refining" activities for used oil.

Used oil marketer

Any person who directs a shipment of off-specification used oil from their facility to a used oil burner, or first claims used oil targeted for energy recovery, meets used fuel oil specifications.

Used oil transporter

Any person who transports or collects and transports used oil from more than one generator, or owns and operates a transfer station. The transporter may aggregate loads for the purposes of transportation but may not process the oil with the exception of incidental processing such as oil water separation, that may occur during transportation.

Hazardous waste transporter

A company engaged in the offsite transportation of hazardous wastes by air, rail, highway or water.

Hazardous waste fuel marketer

Any person who directs a shipment of hazardous waste to be burned or processed in a boiler or industrial furnaces (BIF) for the purposed of energy recovery, destruction, processing for materials recovery or to be used as a process ingredient.

Universal waste[9] handler

Is a generator of universal waste or a facility that receives universal waste from other handlers, accumulates universal waste or sends universal waste to another universal waste handler or facility. This excludes persons who treat, dispose, of or recycle universal wastes or persons engaged in the off-site transportation of universal wastes.

Hazardous waste recycler

Indicates whether the RCRA Site is engaged in the recycling of hazardous waste through activities such as use or reuse as ingredients in industrial processes to make product provided that the materials are not being reclaimed, used or reused as effective substitutes for commercial products, returned to the original process from which they are generated without first being reclaimed.

Underground injection

Indicates whether the RCRA Site is engaged in the management of hazardous wastes by subsurface emplacement of fluids through a bored, drilled or driven well, or a dug well where the depth of the dug well is greater than its largest surface dimension.

Hazardous waste transfer station

Any transportation related facility including loading docks, parking areas, storage areas, and other similar areas, where shipments of hazardous waste are held during the normal course of transportation.

Hazardous waste import agent

Any person who imports hazardous wastes into the United States from a foreign country. Import agents are required to obtain an EPA identification number prior to engaging in import activities.

Mixed radioactive waste handler

Any generator or TSDF who handles wastes mixed with nuclear source, special nuclear or by-product material.

---

[9] Universal waste is defined as including (a) Batteries as described in 40 CFR 273.2; (b) Pesticides as described in 40 CFR 273.3; and (c) Thermostats as described in 40 CFR 273.4; (d) Fluorescent light tubes as described in 7/6/99 Federal Register.

Waste Codes

State or Federal codes corresponding to the hazardous wastes generated by a site as reported on the site notification form. These codes are listed in 40 CFR Part 261, Subparts C and D or are assigned by States for wastes that are either: 1) Regulated and defined as hazardous by the State but are not regulated as RCRA hazardous waste, or 2) State equivalent waste codes for RCRA regulated hazardous wastes.

GPRA corrective action universe

Indicates that the TSDF is a high priority for the Corrective Action program. This facility was included in the Corrective Action Workload Universe and/or was also a high priority NCAPS facility as of September 7th, 1997.

GPRA operating permit universe

Indicates that the TSDF had at least one unit that was operating or needed to obtain an operating permit as of October 1, 1997

GPRA post closure universe

Indicates that this TSDF had at least one land disposal unit, or a storage/treatment unit that cannot clean close, that ceased operating before October 1, 1997 and had not yet clean closed.

Annual BOY enforcement universe

The Annual Beginning of Year (BOY) Enforcement Universe identifies RCRA Sites (TSD, LQG & SQG) that are actively managing hazardous waste and are a priority for the Enforcement program. Unlike the other universes for the Permitting and Corrective Action program, the universe for the enforcement program is not a static baseline; rather it is a standard definition which is applied to the facilities at the beginning of each fiscal year beginning with FY2000.

The following information needs were identified during the PAA project and relate to the operation of waste management units at TSDFs. This information is generally derived from specific permit development activities, although a simple indication that the RCRA Sites is engaged in treatment, storage or disposal activities is also made using the current Notification and Biennial Report IC Forms. While detailed analysis of these needs will be undertaken during subsequent PAA projects, the information is also used to help define "universes" of sites for RCRA implementation planning purposes and so has been included in this listing for completeness.

TSDF unit type

Indicates the type of waste management process that is performed for a specific management unit at a TSDF. This is typically referred to as the handling code for the management unit.

TSDF unit commercial type

Indicates whether the facility accepts and manages waste from other facilities. "Commercial" facilities receive off-site waste for a fee. "On-site" facilities treat only their own wastes. "Captive" facilities will accept wastes from a specific and narrow set of other facilities, typically those owned or operated by the same parent company.

TSDF unit operating status

Indicates the operating status of a TSDF management unit. Some typical values for these statuses are: operating, clean closed, closing, under construction, abandoned.

TSDF unit legal status

Indicates the programmatic or legal status that determine the type of RCRA program activities that take place at a TSDF management unit. Some typical values for these statuses: interim status, permitted. permit terminated, post-closure permitted.

TSDF unit location

The location expressed as geospatial coordinates of a management unit operated by a TSDF.

Waste Activity Information Needs

Originating EPA ID

The unique assigned identifier of the RCRA Site that generated, or imported from another country, hazardous waste.

Destination EPA ID

The unique assigned identifier of the RCRA Site that provides systematic separation, storage, processing, treatment, recovery, and or disposal of hazardous wastes. This definition excludes the collection and transportation of hazardous wastes.

Federal Waste Codes

Four character alphanumeric code that identifies each hazardous waste listed in 40 CFR Part 261, Subpart D and to each characteristic identified in 40 CFR Part 261 Subpart C. "D codes" are characteristic waste codes (reactive waste, arsenic, lindane); "F codes" are codes for wastes from non-specific sources (spent cyanide plating bath solutions from electroplating operations); "K codes" are wastes from specific sources (spent potliners from primary aluminum reduction); "P codes" are acutely hazardous compounds (potassium cyanide); "U codes" are toxic compounds (creosote, chloroform).

State Waste Codes

Four character alpha numeric hazardous waste code assigned by approved States for wastes that are either: 1) Regulated and defined as hazardous by the State but are not regulated as RCRA hazardous waste (e.g., X001 – Contaminated Pesticide Containers). 2) State equivalent waste codes for RCRA regulated hazardous wastes.

Quantity

The amount of a given waste handled by a Generating or Managing RCRA Site during a specific period of time.

Unit of Measure

The measuring unit of the quantity

Management Method

The method used to separate, store, treat, process, recover, or dispose of hazardous waste.

Originating Country

The country in which the RCRA or State regulated waste was generated, if other than the United States.

Destination Country

The country in which the RCRA or State regulated waste is to be managed, if other than the United States.

Source of Wastes

Describes the production, service, waste management process or event that results in the generation of the hazardous. For example, electroplating, plastics forming.

Waste Form

A code describing the physical form or chemical composition of a hazardous waste. For example, spent acid with metals, halogenated solvent, aqueous waste with low solvents.

Waste Description

A general narrative description of the waste, the source and form, of the waste the type of hazard posed and the primary hazardous constituents. For example, Ignitable spent solvent from degreasing operation in tool production, consisting of a mixture of mineral spirits and kerosene.

Transporter EPA ID

The unique assigned identifier of a handler engaged in the offsite transportation of hazardous waste by air, rail, highway or water.

Border Crossing

The physical location at which imported or exported hazardous waste crossed the US border to or from an adjoining country.

Shipped Date

The date in which a given unit of hazardous waste is collected by a transporter for movement from one RCRA Site to another.

Received Date

The date hazardous wastes are received by a Treatment, Storage or Disposal facility.

Manifest Number

A unique number used to identify a shipment and associated documentation of hazardous waste.

Mixed radioactive waste

Indicates that the wastes include or have been mixed with nuclear source, special nuclear or by-product material.

Foreign Recipient

Provides descriptive information about a foreign recipient of an exported waste. A foreign recipient will typically not be assigned a valid EPA identification number but the RCRA program still desires to have basic identification information about the foreign site for tracking purposes.

APPENDIX IV: CURRENT SYSTEMS ASSESSMENT

Although the focus of a PAA is to identify the program's fundamental needs for information, an understanding of the current systems is also necessary in order to highlight those areas where support for information needs must be improved.

A high level representation of how information is currently collected and managed is presented in Figure 11: Generalized Flow Diagram of Current Information Systems. The diagram is intended to document the *generalized situation* and does not present all of the implementer-specific variations. The boxes in the center of the diagram represent the procedures that are performed by the implementer to collect information. The arrows indicate the flow of information, and the circle on the right side of the diagram depicts the database systems used to manage the collected information. There are four major national database systems that track UID and WAM information. They are:

- Resource Conservation and Recovery Information System (RCRIS),

- Biennial Reporting System (BRS),

- Waste International Tracking System (WITS), and

- Hazardous Waste Exports System (HWES).

Although these systems serve different purposes, they each contain duplicate RCRA Site identification information. This has resulted in:

- information that is duplicated, of inconsistent quality and sometimes contradictory,

- the development of workaround procedures to deal with the problems resulting from having these non-integrated systems.

Some States have developed their own RCRA database systems either to provide a substitute system tailored for their own specific needs, or to augment the national systems. For example, Biennial Reporting software has been developed and distributed to States by some private vendors and the State of Florida. To provide the waste activity information required by EPA, States either:

- do not track this information in-house but enter the information directly into the national systems, or

- enter the information into their own systems as well as the national system, or

- enter information into their own system and use a translation mechanism to transmit the information electronically into the national systems (termed translator States).
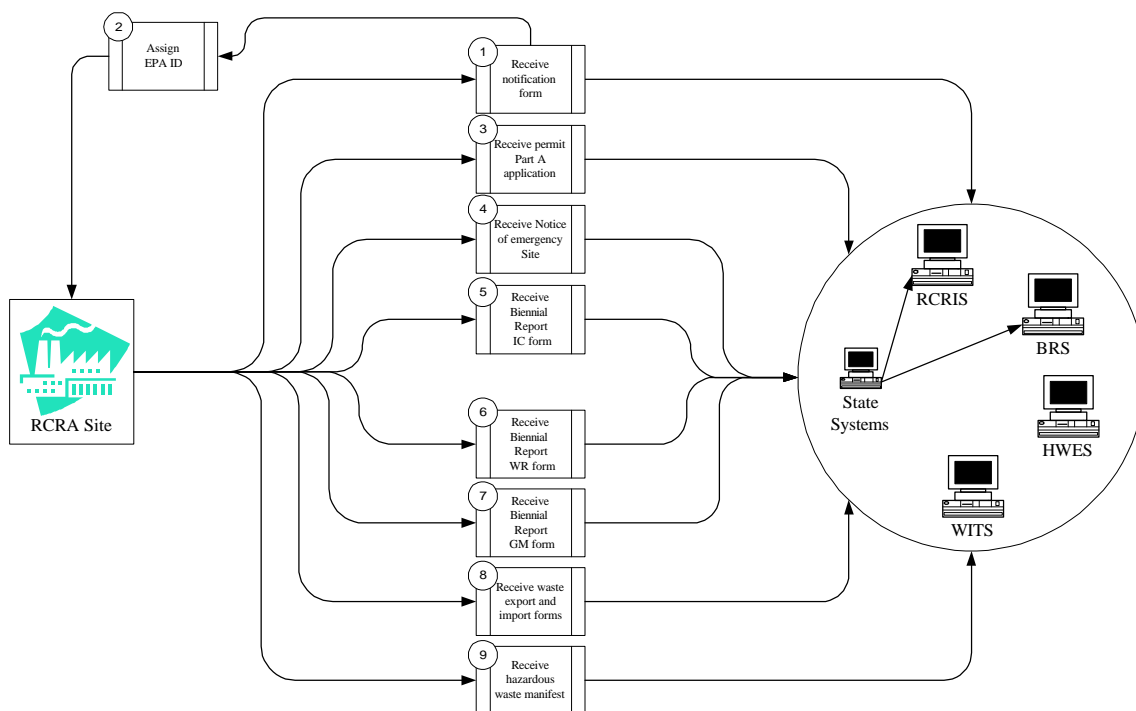
Figure 11: Generalized Flow Diagram of Current Information Systems

Descriptions of Current Collection Mechanisms

The remainder of this section provides an overview of each of the information collection procedures shown on the diagram. This includes descriptions of the Federal reporting mechanisms along with some of the major State variants.

1)   Receive Notification form

RCRA Sites are required to submit a signed Notification form (EPA Form 8700-12) containing basic site identification and RCRA activity information. Notification forms are submitted by sites to the EPA Region or the authorized State to declare their RCRA activities (e.g., hazardous waste generation, transportation, treatment, storage, disposal, or used oil activities). The Notification form supports the reporting of the waste codes handled by each notifying RCRA Site (with the exception of transporters who are not required to report this information). Some States have developed alternative forms that contain modifications to the 8700-12.

Although most implementers receive notice of transporter activities on a Notification or similar form, some States have broader regulations governing transporter activities, and require a separate permitting or registration process be completed before allowing transporters to haul hazardous waste in their state.

Current Federal regulations do not require RCRA sites to automatically submit subsequent notifications. However, under certain circumstances, a regulatory agency may request that a RCRA Site provide updated notification information. Such requests would occur when there is some suspicion that the information currently held by the agency is inaccurate. For example, based on a complaint, inspection, or information received from a TSDF that suggests discrepancies in a generators RCRA activity records.

In some cases, a Site may contact the agency to request that their information be updated. Implementers will often receive voluntarily updated notification information from a site after the initial notification. Some form of authorization is required by the implementing agency for most but not all changes in notification information (e.g., some implementers would be willing to record a change of a site contact name and phone number without a signed notification form being submitted).

The State or Region records the information from the Notification form in RCRIS.

2)   Assign EPA ID

The RCRA regulations require persons handling hazardous waste to obtain an EPA identification number (with some exceptions, for example Conditionally Exempt Small Quantity Generators, although they may still voluntarily notify). Once a Notification form has been received the implementing agency assigns an EPA identification number to the applicant (i.e., technically, the owner or operator; owner is used below to mean both). This number is then used for correspondence between the Site and either regulators or other RCRA Sites (e.g., when shipping waste).

The general understanding among State and EPA program staff is that an EPA identification number is issued only once for any given location, although the basis for the policy is not stated in Federal regulation. In practice, however, this principle has not been applied consistently, with some implementers assigning more than one EPA identification number to the same RCRA Site. For example some companies request that the implementer assign a new EPA identification number when taking over an existing RCRA Site, to avoid association with the previous owner's environmental record.

EPA Regions and some States assign EPA identification numbers using RCRIS or their own automated systems. Some implementers assign false EPA identification numbers to temporary sites as well as CESQGs, which are similar to the "federal" identification numbers but are not entered into RCRIS.

3)   Receive Part A Permit Application

Part A Permit Applications (EPA form 8700-23) are received by the implementing agency from TSDFs wishing to receive a permit for a treatment, storage, or disposal process. Part A Permit Applications are process based, and require detailed waste management and process-specific information. Although a Part A Permit Application includes much of the same information a Notification form must also have been submitted by the TSDF

The Part A Permit Application form collects information about the types of hazardous waste that will be managed by a TSDF. The reporter identifies each waste code along with the process codes that describe how they will be managing that waste, and an estimate of the annual volume that will be managed. This waste code information is optional in RCRIS and is not always entered by the implementer.

4)   Receive notice of emergency site

During emergencies or for situations such as hazardous waste spills or drug lab cleanups, sites may require an EPA identification number to be assigned quickly in order to prepare hazardous waste manifests. The regulatory agency may receive an urgent letter or fax with the appropriate information, or simply a telephone call. This will sometime be followed up at a later time with an official Notification form, but in the case where a responsible party is not apparent, a Notification form may never be received.

For States who don't assign EPA identification numbers directly, emergency situations may necessitate assigning a "temporary" or "emergency" identification number, sometimes from a predefined list. No check is then performed to validate the site as a location within RCRIS.

5)   Receive Biennial Report[10] IC form

The Biennial Reporting Identification and Certification (IC) form requests basic site identification and activity information. RCRA Sites may respond by filling out the paper form or by submitting digital information produced with the aid of available software.

Some States implement their own waste reporting forms on a more frequent basis which include (and sometime go beyond) the information required by the Biennial Reporting forms.

Sometimes the implementer includes a "postcard" so that if a RCRA Site receives a reporting package but does not believe that they are required to report, they can indicate this on the card and return it to the implementer.

6)   Receive Biennial Reporting GM form

The Biennial Reporting GM form is the main Federally supported reporting mechanism used for collecting information about waste generation, shipment, and on-site management. States that have their own reporting requirements either subsume the Federal reporting requirements in their own forms, or require Sites to complete the Federal forms along with the State's additional forms.

EPA requires reporting of one year's waste generation, shipment, and on-site management every two years. Some States collect similar information annually or quarterly, and collect information for all such periods, instead of every other period.

7)   Receive Biennial Reporting WR form

The Biennial Reporting WR form is the main Federally supported reporting mechanism used for collecting information about waste receipt and management[11]. States that have their own reporting requirements either subsume the Federal reporting requirements in their own forms, or require Sites to complete the Federal forms along with the State's additional forms.

---

[10] The term "Biennial Reporting form" refers to the Hazardous Waste Report instructions and forms (i.e., EPA form 8700-13A/B) federally required to be submitted by LQGs and TSDFs every other (odd) year. Although SQGs and Conditionally Exempt Small Quantity Generators (CESQGs) are exempt from Federal reporting requirements, they may be required to report by the State in which they reside, or may report voluntarily.

Implementers use a variety of methods to determine which RCRA Sites should receive blank reporting forms. Methods used include using the previous reporting cycle's mailing list, supplementing that list with new notifiers in RCRIS, or obtaining a complete list of notifiers from RCRIS and excluding only the RCRA Sites that are not part of a State's required reporting universe.

Some implementers allow reporters to submit their information electronically to the agency. In such cases, a signed certification form is submitted along with the data files. Electronic reporters either use State developed, third party, or internally developed software to capture the reported information and to format it to the specification required by the implementer.

Regardless of how each implementer collects this waste activity information, all implementers must submit information into the national Biennial Report System (BRS).

[11] Federal reporting regulations also require used oil processors, refiners and collection centers to report their used oil handling activities at least biennially although this is not achieved via the hazardous waste Biennial Reporting forms. Because these regulations were promulgated pursuant to RCRA rather than HSWA, they are not effective in authorized States until the State adopts them, and many States have not. Where this information is collected, paper forms are received, and the data is entered into custom information systems.

EPA requires reporting of one year's waste receipt and management every two years. Some States collect similar information annually or quarterly, and collect information for all such periods, instead of every other period.

8)   Receive waste export and import forms

All RCRA Sites (with the exception of CESQGs) exporting hazardous wastes to countries that are covered by the Organization for Economic and Commercial Development (OECD)[12] from the US must submit to OECA a report of hazardous wastes exported on an annual basis. OECA tracks this reported information in the Hazardous Waste Exports System (HWES). Current rule excludes generators who export wastes from having to report in the Biennial Reporting Cycle. Despite this some generators also submit waste generation information on the Biennial Reporting forms. There is a high degree of overlap between information required on the Annual Export Report and that required by Biennial Reporting forms.

Hazardous waste management facilities (or their import agents) receiving hazardous waste from a foreign country notify the appropriate EPA Regional office of its intent to receive a foreign shipment four weeks before the initial shipment being received. Subsequent shipments from the same source and the same type of hazardous waste do not require any additional notification. OECA receives these forms and enters them into the Waste Import Tracking System (WITS).

Hazardous waste import information is captured in BRS through reporting on the WR forms by the TSDF. Identification of the country of origin and generator is performed inconsistently across the nation. Some State use special numbering systems to indicate foreign generators, while instructions of the Biennial Reporting WR form instruct respondents to indicate FC + foreign country name.

9)   Receive hazardous waste manifest

Although the use of manifests by TSDFs, LQGs and SQGs is required (or the similar shipping agreement / log allowed for SQGs), there is no Federal requirement to send copies of hazardous waste manifests to States or EPA. However, approximately half of the States have a requirement that RCRA Sites who generate or dispose within their jurisdiction must submit a copy of their hazardous waste manifests to the agency. A copy of the manifest is sent to the State from both the generator and the receiving TSDF.

In these States, the information obtained from manifests is entered directly into a State information system, or filed. Some States are experimenting with electronic manifesting.

When hazardous waste loads are rejected by a TSDF, a rejected load report may be required by the State. The Region or State environmental agencies may receive letters reporting discrepancies in hazardous waste amounts. Discrepancy reports are required in certain cases, but this information is difficult to collate and organize.

EPA OECA receives manifests from customs officials for each trans-border shipment of hazardous waste via land.

---

[12] OECD countries consist of Australia, Austria, Belgium, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Japan, Luxembourg, Netherlands, New Zealand, Norway, Portugal, Spain, Sweden, Switzerland, Turkey, and the United Kingdom. Canada and Mexico are considered OECD member only for the purpose of transit.

APPENDIX V: TSDF UNIVERSE DEFINITIONS

The following definitions are proposed for a number of logical groups or universes of RCRA Sites. Each of the following definitions is accompanied by a legal and operating status code matrix. A key for these codes as applied to management units is provided at the end of this section.

Guidelines for the Permitting / Closure / Post-closure Programmatic Universes

Date of Last Revision: 7/20/99

Number of Universes: 5

Names: GPRA Operating Permit Baseline Universe

GPRA Post-Closure Baseline Universe

Permit Workload Universe

Closure Workload Universe

Post-Closure Workload Universe

Differences between the universes:

The primary difference between the universes is that the GPRA Baseline universes are static lists of facilities that will not change over time. The GPRA Baseline universes will report on achievements within that set list.

The Workload universes will change over time as events at a facility cause it to move from the permit track to the closure or post-closure track or as new facilities apply for permits.

Changes from old universe system:

The principle universes that OSW will focus on for reporting progress will be the GPRA Baseline Permit Universe and the GPRA Baseline Post-Closure Universe. GPRA is meant to focus on a priority subset of the program. The GPRA universes do not include the entire scope of work of the program. The Land disposal facilities on the post-closure track and the operating facilities were identified as the priority groups for the RCRA program to track under GPRA. The workload universes are available to support management of the ongoing permit, closure, and post-closure tracks. The public should have access to both the GPRA and Workload information. Clear explanations need to be provided to the public about what both the GPRA and Workload universes cover and why they both exist.

Note that all of these universes, the GPRA Baseline universes and the Workload universes, are derived from unit information. Therefore, it is possible for a single facility to be in more than one universe, including being in both GPRA Baseline universes and being in more than one Workload universe.

GPRA Operating Permit Baseline Universe

DEFINITION OF UNIVERSE:

Any Treatment, Storage and/or Disposal Facility (TSDF) that had at least one unit that was operating or needed to obtain an operating permit as of October 1, 1997. (For example, if in 1997, a facility had an operating unit in interim status waiting to be permitted, the facility would be included in the GPRA Baseline Operating Permit Universe).

PURPOSE of UNIVERSE (who uses it and what for)**:**

1. The purpose of this baseline universe is to track the permitting program's success in meeting the GPRA goal for safe waste management practices through the year 2005.

2. This will be the principle universe used by OSW to track operating permits since OSW is now focusing on progress toward the GPRA goals.

3. Regions and States will use this universe to track the progress made toward their GPRA goals and report to OSW.

4. Regions and States have the responsibility of making sure that the data for every unit in the baseline universe are up-to-date, especially the legal and operating status code data.

HOW IS UNIVERSE DETERMINED:

Every facility in this universe has a GPRA operating permit universe flag associated with it. The universe is pulled based on this flag. The universe is designed to be a static universe. New facilities/units will not enter the baseline universe and existing facilities/units in the baseline universe will not be removed over time. The 1997 baseline was developed using the Permit Workload Universe from October 1st, 1997. The list of facilities in the universe was pulled from RCRIS and sent to the Regions and States for verification. Once the list was verified and revised, the universe was set by the GPRA flags. While the program is no longer using the legal and operating status codes to identify the facilities in the baseline universe, OSW will be using them to measure success toward GPRA goals. The legal and operating status codes (of the units within the baseline facilities) will indicate if safe waste management practices are being initiated.

GPRA Post-Closure Baseline Universe

DEFINITION OF UNIVERSE:

Any Land Disposal Facility (LDF) that had at least one land disposal unit that ceased operating before October 1, 1997 and had not yet clean closed. (For example, in 1997, if a facility had an inactive land disposal unit, then the facility is included in the GPRA Baseline Post-Closure Universe). Every facility that met the definition for the RCRIS Post-Closure Workload Universe as of October 1, 1997, should be included in the GPRA Baseline Post-Closure Universe.

PURPOSE of UNIVERSE (who uses it and what for):

1. The purpose of this baseline post-closure universe is to track the success in meeting the GPRA goal for safe waste management practices through 2005.

2. This will be the only universe used by OSW to track post-closure since OSW is now focusing strictly on progress toward the GPRA goals..

3. Regions and States will use this universe to track the progress made toward their GPRA goals and will use this universe to report to OSW on post-closure.

4. Regions and States have the responsibility of making sure that the data for every unit in the baseline universe are up-to-date, especially the legal and operating status code data.

HOW IS UNIVERSE DETERMINED:

Every facility in this universe has a GPRA post-closure universe flag associated with it. The universe is pulled based on this flag. The universe is designed to be a static universe. The 1997 baseline was developed using the Post-Closure Workload Universe numbers from October 1st, 1997. The Post-Closure Workload Universe was derived from the legal and operating status code matrix in the permit module of RCRIS. The list of facilities in the universe was pulled and sent to the Regions and States for verification. Once the list was verified and revised, the universe was set by the GPRA flags. While the program is no longer using the legal and operating status codes to identify the facilities in the baseline universe, OSW will be using them to measure success toward GPRA goals. The legal and operating status codes (of the units within the baseline facilities) will indicate if safe waste management practices are being initiated.

Permit Workload Universe

DEFINITION OF UNIVERSE:

Any facility with units that are in the permit pipeline as well as units with active permits. The permit pipeline includes any operating facility that is currently permitted or operating under interim status, and any facility with new units that are proposed or in the process of being constructed.

PURPOSE of UNIVERSE (who uses it and what for):

1. Allows the Regions and States to manage all the facilities that are in line to be permitted or are currently permitted.

2. Provides information to the public on all permitted and "to be" permitted facilities in the RCRA program.

3. Provides a changing universe which will allow the program to track or report on the current, real-world status of the permit program (as opposed to the static GPRA Baseline operating permit universe).

HOW IS UNIVERSE DETERMINED:

Uses the legal and operating status code matrix in the Permits Module of the RCRAInfo database. The universe will include any facility that has at least one unit with any of the appropriate legal and operating status code combinations (see matrix below). To enable the user to break the entire universe out by type of operating TSDF or select only a particular type of TSDF (e.g., combustion facilities), the select logic will breakout these facilities according to the LIBST flag in the handler module.

The applicable legal and operating status codes have been modified based on comments from the program. Operating or constructing facilities that are also non-notifiers are no longer included in the permit workload. They have been transferred to the closure workload to more closely reflect the program practice of closing illegal facilities instead of giving them operating permits.

Permit Workload Universe

	OP	CN	UC	BC	IN	CC	CP	CO	DC	CV	CR	AB	SF	PF	CA
PI	X	X	X	X											
PC															
PT															
PR		X	X	X											
IS	X	X	X	X											
LI															
IT															
TA	X	X	X	X											
PM	X	X	X	X											
LP															
NN															
RQ	X	X	X	X											
NR															
DL															
RD															
RU															
EM															
SR															

Closure Workload Universe

DEFINITION OF UNIVERSE:

Any facility with units that are closing. Facilities are included in the universe up to the time that closure certification is verified by the Agency. This universe does not include facilities that have completed closure and been verified by the Agency (i.e., certified clean closed or certified closed with waste in place) and those facilities going through post-closure.

PURPOSE of UNIVERSE (who uses it and what for):

1. Allows the Regions and States to manage all the facilities that are on the closure track (e.g., inactive facilities that will close or are in the process of closing).

2. Provides information to the public on facilities with closing units.

3. This is the only universe that will track or report on closure.

HOW IS UNIVERSE DETERMINED:

Uses the legal and operating status code matrix in the Permits Module of the RCRAInfo database. The universe will include any facility that has at least one unit with any of the appropriate legal and operating status code combinations (see matrix below). To enable the user to break the entire universe out by type of TSDF or select only a particular type of TSDF (e.g., combustion facilities), the select logic will breakout these facilities according to the LIBST flag in the handler module.

The applicable legal and operating status codes have been modified based on comments from the program. Operating or constructing facilities that are also non-notifiers are now included in the closure workload, instead of the permit workload as they were previously captured. They were transferred to more closely reflect the program practice of closing illegal facilities instead of giving them operating permits.

Also, units that have been transferred to Superfund have been removed from the universe since they would no longer be in the RCRA program's "workload".

Closure Workload Universe

	OP	CN	UC	BC	IN	CC	CP	CO	DC	CV	CR	AB	SF	PF	CA
PI					X				X	X		X			
PC					X				X	X		X			
PT					X				X	X		X			
PR															
IS					X				X	X		X			
LI					X				X	X		X			
IT					X				X	X		X			
TA					X				X	X		X			
PM					X				X	X		X			
LP					X				X	X		X			
NN	X	X	X	X	X				X	X		X			
RQ															
NR															
DL															
RD															
RU															
EM															
SR															

Post-Closure Workload Universe

DEFINITION OF UNIVERSE:

Facilities with closing land disposal units and storage units closing as landfills. If a unit clean closes, it is removed from this universe once the clean closure is certified by the Agency.

PURPOSE of UNIVERSE (who uses it and what for):

1. Allows the Regions and States to manage all the land disposal facilities that are undergoing post-closure or are currently inactive and planning to go through post-closure.

2. Provides information to the public on all post-closure activites in the RCRA program.

3. Provides a changing universe which will allow the program to track or report on the current, real-world status of post-closure (as opposed to the static GPRA Baseline post-closure universe).

HOW IS UNIVERSE DETERMINED:

Uses the legal and operating status code matrix in the Permits Module of the RCRAInfo database. The universe will include any facility that has at least one unit with any of the appropriate legal and operating status code combinations (see matrix below).   Because the universe is limited to the Land Disposal facilities only, the select logic will link to the LIBST flag in the handler module and select only those facilites with an L flag.

Note: The applicable legal and operating status codes have been modified based on comments from the program. Units that have been transferred to Superfund have been removed from the universe since they would no longer be in the RCRA program's "workload".

Note on Storage facilities closing as landfills: To correctly document changes from a unit currently listed as a storage unit that will close as a landfill, document a new landfill process code (D80) for the existing unit. Do not erase or overwrite the previous process code. The system is designed to pick up the most recent process code for a unit to determine the LIBST flag.

Post-Closure Workload Universe

	OP	CN	UC	BC	IN	CC	CP	CO	DC	CV	CR	AB	SF	PF	CA
PI					X		X		X	X		X			
PC					X		X		X	X		X			
PT					X		X		X	X		X			
PR															
IS					X		X		X	X		X			
LI					X		X		X	X		X			
IT					X		X		X	X		X			
TA					X		X		X	X		X			
PM					X		X		X	X		X			
LP					X		X		X	X		X			
NN					X		X		X	X		X			
RQ															
NR															
DL															
RD															
RU															
EM															
SR															

Guidelines for the Enforcement Programmatic Universes

Date of Last Revision: 1/13/00

Number of Universes: 3

Names: Annual BOY Enforcement Universe

Full Enforcement Universe

Operating TSDF Universe

Differences between the universes:

Annual Beginning of Year Enforcement Universe

The Annual Beginning of Year (BOY) Enforcement Universe identifies RCRA Sites (TSDFs, LQGs and SQGs) that are the highest priority for the enforcement program. Unlike other GPRA universes for the Permitting and Corrective Action program, the Annual BOY Enforcement universe is not a static baseline; rather it is a standard definition which is applied to the facilities at the beginning of each fiscal year beginning with FY2000.

The Full Enforcement Universe

Previously referred to as the "Subject to CEI" universe, this universe is meant to capture any TSDF that could potentially be evaluated for compliance with the applicable TSDF requirements found in 40 CFR Parts 264/265, and/or authorized state equivalents (e.g., land disposal, incinerator, BIF, storage or treatment).

The Operating TSDF Universe

New universe that captures the facilities that are required to have an biennial CEI, namely the operating TSDFs. This universe is a sub-set of the Full Enforcement Universe (currently the HUSUBJCEI). In addition, most FOIA requests for TSDFs want the operating TSDFs. This universe will be able to be broken out by type of TSDF (e.g., land disposal, incineration, BIF, storage or treatment).

Changes from old universe system:

The Operating TSDF Universe becomes the main universe for TSDF enforcement information and FOIA requests on TSDFs.

Annual Beginning of Year Enforcement Universe

DEFINITION OF UNIVERSE:

The Annual Beginning of Year (BOY) Enforcement Universe identifies facilities (TSD, LQG & SQG) that are actively managing hazardous waste and are a priority for the Enforcement program. Unlike the other universes for the Permitting and Corrective Action program, the universe for the enforcement program is not a static baseline; rather it is a standard definition which is applied to the facilities at the beginning of each fiscal year beginning with FY2000. This beginning of year universe, which will consist of specific facilities by EPA identification number, will show the RCRA enforcement program's activity throughout that fiscal year. This universe will be identifiable by a repeating field with an associated year indicator to allow the identification of which facilities make up the universe for each fiscal year.

PURPOSE of UNIVERSE (who uses it and what for):

1. The main purpose of this universe is to identify facilities that are actively treating, storing, disposing or generating hazardous waste.

2. Regions and States will have the responsibility of making sure that the information on each facility in this universe are up-to-date, including facility operating and legal status codes for TSDs in the permits module and bankruptcy indicator flags in the handler module. Enforcement data (evaluations, violations and enforcement actions, and Significant Non-Complier (SNC) information) must also be up-to-date.

3. HQ, Regions and States will use this universe to track RCRA program activity.

4. Subsets of this universe will be used to analyze and measure the RCRA enforcement programs's activity in the enforcement priority areas. These subsets will be used for GPRA purposes.

HOW IS UNIVERSE DETERMINED:

This universe identifies facilities that have units that are actively treating, storing, disposing or generating hazardous waste based on the hierarchy of combustion (boilers and industrial furnaces and incinerators combined), land disposal, treatment/storage, large quantity generators and small quantity generators.

TSDFs

For the treatment, storage and disposal universes, facilities that are not actively managing hazardous waste are eliminated. TSD facilities in this universe are derived based on the operating and legal status codes associated with each individual hazardous waste management unit in the Permits Module of the data system. Facilities with HBANKRUPT not equal to 'F' (= responsible parties have fled the country) OR 'C' (= RCRA responsibilities have transferred to the CERCLA program) are selected.

LQGs

The Large Quantity Generator universe will be retrieved from the most current Biennial Reporting System (BRS) data available (e.g.: FY 99 & FY 00 will use FY97 BRS data, other years will use FY99 BRS data once it becomes available or until RCRAInfo and BRS data are combined). These BRS LQG IDs will be then matched with RCRIS/RCRAInfo LQG IDS which have had any enforcement activity in the last five years. (Any enforcement activity is defined as having any evaluation, violation or enforcement data in the CM&E module with a date in the last five years.) Facilities with HBANKRUPT not equal to 'F' (= responsible parties have fled the country) OR 'C' (= RCRA responsibilities have transferred to the CERCLA program) are

selected. These LQG IDs will be flagged and included in the Annual BOY Enforcement Universe.

SQGs

The Small Quantity Generator universe will be retrieved from RCRIS/RCRAInfo SQG IDs which have had any enforcement activity in the last five years. (Any enforcement activity is defined as having any evaluation, violation or enforcement data in the CM&E module with a date in the last five years.)   Facilities with HBANKRUPT not equal to 'F' (= responsible parties have fled the country) OR 'C' (= RCRA responsibilities have transferred to the CERCLA program) are selected. These SQG IDs will be flagged and included in the Annual BOY Enforcement Universe.

Select Logic (originally sent out to the user community on June 30, 1998):

The **latest** process code, legal status code, and operating status code associated with a particular unit is selected using PU_DATE. These process codes are translated into an associated TSD type (B for BIF, I for Incinerator, L for Land Disposal, and S for Storage/Treatment). Facilities with HBANKRUPT not equal to 'F' (= responsible parties have fled the country) OR 'C' (= RCRA responsibilities have transferred to the CERCLA program) are selected. The following Legal Status Codes will be included 'EM', 'IS', 'LP', 'NN', 'PI', 'PM', 'RD', 'RQ' or 'TA' ONLY if the Operating Status Code is 'OP'. (See legal/operating matrix below.)

The following hierarchy is used for each facility and a facility can only fall into one universe:

Universe

Combustion, (INC & BIFs)

Land Disposal

Treatment Storage

LQG

SQG

Annual BOY Enforcement Universe

	OP	CN	UC	BC	IN	CC	CP	CO	DC	CV	CR	AB	SF	PF	CA
PI	X														
PC															
PT															
PR															
IS	X														
LI															
IT															
TA	X														
PM	X														
LP	X														
NN	X														
RQ	X														
NR															
DL															
RD	X														
RU															
EM	X														
SR															

Full Enforcement Universe (existing universe = HUSUBJCEI)

DEFINITION OF UNIVERSE:

The entire universe of TSDFs that could potentially undergo a Compliance and Evaluation Inspection (CEI) to be evaluated for compliance with the applicable TSDF requirements found in 40 CFR Parts 264/265 and/or authorized State equivalents. Not every facility in this universe will undergo an annual inspection. This universe includes both currently operating TSDFs as well as closed but not yet certified closed TSDFs. This universe can be broken out by type of TSDF (i.e., incinerator, boiler and industrial furnaces (BIFS), combustion (combustion = incinerators + BIFS), land disposal, treatment/storage, etc.)

PURPOSE of UNIVERSE (who uses it and what for):

1. Identify the full universe of TSDFs that are legally subject to TSDF operations and management regulations under RCRA Subtitle C.

2. Used by State and Regional programs to identify all the facilities that could undergo a Compliance and Evaluation Inspection (CEI) against the TSDF regulations. (The Operating TSDF Universe identifies the TSDFs that are required to have a CEI biennially because they are still operating).

3. OECA will use this universe for trend analysis to compare the "Operating universe" over time to the "Full Enforcement universe". This analysis will provide valuable information for RCRA enforcement oversight of resources and also program performance.

HOW IS UNIVERSE DETERMINED:

The Full Enforcement Universe is derived from the Legal and Operating status code matrix. Since only the name has been changed, this universe still uses the same legal and operating status code combinations as the TSDFs Subject to CEI Universe (HUSUBJCEI) logic listed below. To enable the user to break the entire universe out by type of operating TSDF or select only a particular type of TSDF (e.g., combustion facilities), the select logic will breakout these facilities according to the LIBST flag in the handler module.

Full Enforcement Universe

	OP	CN	UC	BC	IN	CC	CP	CO	DC	CV	CR	AB	SF	PF	CA
PI	X				X		X		X						X
PC	X				X		X		X						X
PT					X		X		X						
PR															
IS	X				X		X		X						X
LI					X		X		X						X
IT					X		X		X						X
TA	X				X		X		X						
PM	X				X		X		X						
LP	X				X		X		X						
NN	X				X		X		X						X
RQ	X				X		X		X						
NR															
DL															
RD	X				X		X		X						
RU															
EM	X				X		X		X						
SR															

Operating TSDF Universe

DEFINITION OF UNIVERSE:

Captures every facility that currently has an operating Treatment, Storage, or Disposal unit. This universe can be broken out by type of TSDF (i.e., incinerator, boiler and industrial furnaces (BIFS), combustion (combustion = incinerators + BIFS), land disposal, treatment or storage, commercial, etc.)

PURPOSE of UNIVERSE (who uses it and what for):

Operating TSDF facilities are subject to the full RCRA subtitle C requirements and are one of the highest priorities to the RCRA enforcement program.

Uses for this universe are:

1. Primary enforcement reporting universe for TSDFs information. This universe includes every facility that is required to undergo a Compliance and Evaluation Inspection (CEI) biennially.

2. This universe will be used for developing State grant commitments on TSDF inspections and reporting on the progress of State and Regional programs against their MOA requirements.

3. This universe will also be the basis for statistical work on national progress of the program for inspection targets and accomplishments.

4. Provides the list of all currently operating TSDFs for FOIA requests. An additional reporting feature includes the ability to break this universe out by type of TSD.

5. This universe will be used by the RCRA Enforcement program for Agency GPRA measures.

HOW IS UNIVERSE DETERMINED:

Facilities that are not actively managing hazardous waste have reduced regulatory requirements and are excluded from this universe. This includes facilities where all units are closed with waste in place, in closure or in post-closure care. The Operating TSDF universe is derived from the Legal and Operating status code matrix: All facilities listed as operating with the legal status of: PI, IS, TA, PM, LP, NN, RQ, RD and EM are included in the universe. Facilities with HBANKRUPT not equal to 'F' (= responsible parties have fled the country) OR 'C' (= RCRA responsibilities have transferred to the CERCLA program) will be selected. To enable the user to break the entire universe out by type of operating TSDF or select only a particular type of TSDF (e.g., combustion facilities), the select logic will breakout these facilities according to the LIBST flag in the handler module.

Operating TSDF Universe

	OP	CN	UC	BC	IN	CC	CP	CO	DC	CV	CR	AB	SF	PF	CA
PI	X														
PC															
PT															
PR															
IS	X														
LI															
IT															
TA	X														
PM	X														
LP	X														
NN	X														
RQ	X														
NR															
DL															
RD	X														
RU															
EM	X														
SR															

Guidelines for the Corrective Action Programmatic Universes

Date of Last Revision: 6/15/99

Number of Universes: 4

Names: GPRA Corrective Action Baseline Universe

TSDFs Potentially Subject to Corrective Action Under 3004(u)/(v)

TSDFs Only Subject to Corrective Action Under Discretionary Authorities

Non-TSDFs where RCRA Corrective Action has been Imposed.

Differences between the universes:

The GPRA Baseline universe is a static list of facilities that will not change over time unless a facility becomes unreachable by the RCRA program (e.g., abandoned or bankrupt). The GPRA Baseline universe will report on achievements over time within that set list. The remaining corrective action universes can change. For example, facilities will be added to the TSDFs Potentially Subject to Corrective Action under 3004(u)/(v) Universe as new facilities apply for a permit or if newly listed wastes create additional facilities with interim status. Non-notifiers will be added to the TSDFs Only Subject to Corrective Action Under Discretionary Authorities as they are identified.

The GPRA Baseline universe is now the only universe that overlaps with the other universes. The remaining universes have been modified so that a facility will only fall into one universe (2-4 as listed above).

Changes from old universe system:

Based on comments, the universe structure has been changed. The Corrective Action universes were formerly arranged as sets and subsets of a broad "Subject to CA" universe. Under the new structure, the universes are segmented so that, with the exception of the GPRA Baseline universe, each universe pulls a unique group of facilities. The GPRA Baseline universe is now the only universe that overlaps with other universes. The revised configuration of the universes still allows the program to capture the group facilities that are currently captured under the CA Workload universe, and thus continues to support the program's priorities for addressing corrective action.

With regards to how the universes are pulled from the database, the following changes have been made: Units that have an operating code of SF (Superfund) are no longer captured in any corrective action universe. In addition, for the TSDFs Potentially Subject to §3004(u)/(v) Universe, units that are have an operating status code AB (abandoned) are not included. This change was made because AB facilities will never be permitted.

GPRA Corrective Action Baseline Universe

DEFINITION OF UNIVERSE

The 1997 baseline list of facilities that are the highest priority for the Corrective Action program.

PURPOSE of UNIVERSE (who uses it and what for):

1. The main purpose of this universe is to track the corrective action program's success in meeting the GPRA clean-up sub-objective for the RCRA program against a 1997 baseline.

2. This will be the primary universe used by OSW to track the corrective action program through 2005. (Note: The GPRA sub-objectives have specific milestones (Environmental Indicators, events CA725 and CA750) to measure progress. These will continue to be the sole reporting measures for GPRA progress. However, OSW will use the Corrective Action GPRA Baseline Universe to track additional events in reviewing the overall progress of the Corrective Action program.).

3. It is important that Regions and States keep the information on each facility in this universe up-to-date in the database, especially the corrective action events and other information in the Corrective Action Module.

4. Regions and States will use this universe to report to OSW on the progress made toward their GPRA commitments.

5. Information regarding progress at these sites will be posted by OSW on EPA's Corrective Action Web Page, including the status of the Environmental Indicators and other events (http://www.epa.gov/correctiveaction/).

HOW IS UNIVERSE DETERMINED:

This universe is a static <u>baseline</u> universe; the facilities in it do not change over time, with the rare exception of those facilities that become unreachable (e.g., abandoned or bankrupt). This allows the RCRA program to measure progress over time against a fixed baseline. The facilities on this list were selected jointly by HQ, Regions and States. The facilities are identified in a file of RCRA Identification Numbers on the mainframe, maintained by OSW. Reports can be run against this file of ID#s, so that only information regarding the facilities in this baseline universe are selected and reported. The 1997 baseline was initially developed based on the Corrective Action Workload Universe facilities that were also High NCAPS priority as of September 7th, 1997. The proposed list of facilities for the universe was pulled and sent to the Regions and States for verification. The Regions and States had the opportunity to add in an additional 15% of facilities that were identified as a priority in that Region or State. Once the list was verified and revised, the official file of ID#s was created by OSW.

TSDFs Potentially Subject to Corrective Action Under §3004(u)/(v)

DEFINITION OF UNIVERSE:

The universe consists of the Treatment, Storage and/or Disposal (TSD) Facilities that could potentially be required to address corrective action through the statutory requirements under §3004(u)/(v). An important feature to note is that this universe is not driven by what is used to *implement* corrective action. It is only focused on which facilities are <u>potentially subject to</u> the 3004(u)/(v) requirements. Therefore, the universe will not change based on which authority is actually used to implement the corrective action (i.e., 3004(u)/(v), 3008(h), 7003, 3013, State only authorities).

PURPOSE of UNIVERSE (who uses it and what for):

1. The universe captures the TSDFs that have permits and those facilities in interim status that have not yet clean closed. The statute requires <u>all</u> permitted facilities, both operating and post-closure, to address corrective action (i.e., determine whether or not corrective action is needed and implement it, if needed). Interim status facilities fall into this universe because they will be permitted unless they clean close. The interim status facilities stay in this universe until the Agency has confirmed that they have clean closed.

2. OSW will use this §3004(u)/(v) universe to identify the TSDFs that will have to address corrective action under the statutory requirements §3004(u)/(v), if they are permitted. This includes the §3004(u)/(v) Medium and Low NCAPS TSDFs that are not all captured by the Corrective Action GPRA Baseline Universe.

3. Regions and States will use this universe as a prioritization tool to identify the Medium and Low NCAPS TSDFs that have to address corrective action under the §3004(u)/(v) requirements and to identify any new High NCAPS sites that come into the program after September 7, 1997 (GPRA Baseline cut off date).

4. All of the facilities in this universe must be assessed for corrective action, per ongoing CA guidance in the RCRA Implementation Plan (RIP).

HOW IS UNIVERSE DETERMINED:

The facilities making up the TSDFs Potentially Subject to Corrective Action Under §3004(u)/(v) Universe are identified using the legal and operating status code matrix in the permits module of the database. The universe will include any facility that has at least one unit in any of the appropriate legal and operating status code combinations (see matrix below). Facilities with all units transferred to Superfund (SF), or listed as abandoned (AB) are not captured in this universe.

TSDFs Potentially Subject to Corrective Action Under §3004(u)/(v)

	OP	CN	UC	BC	IN	CC	CP	CO	DC	CV	CR	AB	SF	PF	CA
PI	X	X	X	X	X		X		X						X
PC	X	X	X	X	X		X		X						X
PT															X
PR															
IS	X	X	X	X	X		X		X						X
LI	X	X	X	X	X		X		X						X
IT															
TA	X	X	X	X	X		X		X						X
PM	X	X	X	X	X		X		X						X
LP	X	X	X	X	X		X		X						X
NN															
RQ															
NR															
DL															
RD															
RU															
EM															
SR															

TSDFs Only Subject to Corrective Action under Discretionary Authorities

DEFINITION OF UNIVERSE:

The universe consists of the Treatment, Storage and/or Disposal (TSD) Facilities that are only subject to corrective action under the discretionary corrective action authorities. (Primarily 3008(h) - although these facilities are also subject to §7003, not every RCRA handler subject to §7003 is also subject to §3008(h)). Every facility in this universe is outside of the scope of the §3004(u)/(v) permitting requirements. The facilities in this universe are only potentially subject to corrective action under discretionary authority - not every facility listed here will need corrective action or be required to do corrective action.

PURPOSE of UNIVERSE (who uses it and what for):

1. The purpose of this universe is to capture the TSDFs where the program only has discretionary enforcement authority to require corrective action. These facilities are only subject to enforcement authorities, not the 3004 (u)/(v) authority. This includes clean closed facilities, non-notifiers, abandoned facilities, converters, loss of interim status, and permit by rule facilities.

2. Using this universe in combination with the §3004(u)/(v) universe will allow the programs to identify all the TSDFs potentially subject to the specific corrective action requirements in the RCRA statute (i.e. 3004(u)/(v) and 3008(h)).

3. For reporting purposes, OSW will be more interested in capturing the facilities that have initiated corrective action as opposed to the entire universe.

4. Several Regions use this universe, in addition to the TSDFs subject to corrective action under §3004(u)/(v), to determine which TSDFs need to be assessed for corrective action.

HOW IS UNIVERSE DETERMINED:

The facilities making up the TSDFs Only Subject to Corrective Action Under Discretionary Authority Universe are identified using the legal and operating status code matrix in the permits module of the database. The universe will include any facility where at least one of the units has the appropriate legal and operating status code combinations listed below plus none of the units can have any of the 3004(u)/(v) status code combinations. This select logic prevents overlap between the two universes. Facilities with all units transferred to Superfund (SF) are not captured in this universe.

TSDFs Only Subject to Corrective Action Under Discretionary Authorities

	OP	CN	UC	BC	IN	CC	CP	CO	DC	CV	CR	AB	SF	PF	CA
PI						X		X		X		X			X
PC						X		X		X		X			X
PT															
PR															
IS						X		X		X		X			X
LI						X		X		X		X			X
IT															
TA						X		X		X		X			X
PM						X		X		X		X			X
LP						X		X		X		X			X
NN	X	X	X	X	X	X	X	X	X	X		X			X
RQ															
NR															
DL															
RD															
RU	X	X	X	X	X	X	X	X	X	X		X			X
EM															
SR															

Non-TSDFs Where Corrective Action has been Imposed

DEFINITION OF UNIVERSE:

The universe consists of the RCRA handlers that are <u>NOT</u> Treatment, Storage and/or Disposal (TSD) Facilities where corrective action has been imposed (e.g., generator conducting corrective action under a §7003 order).   Handlers are only included in this universe once they've initiated corrective action through an RFI.

PURPOSE of UNIVERSE (who uses it and what for):

1. The purpose of this universe is to account for the additional handlers where the program is conducting corrective action activities.

2. Regions and States can use this universe to track and account for non-TSDF corrective action work.

3. Headquarters will use this universe in conjunction with the TSDFs Subject to Corrective Action Under §3004(u)/(v) Universe and the TSDFs Only Subject to CA Under §3008(h) when identifying and reporting on the entire scope of corrective action work taking place within the program and, when needed, to capture the entire set of facilities formerly captured under the CA Workload Universe.

HOW IS UNIVERSE DETERMINED:

Any non-TSDF handler with an RFI Imposed (CA100). Non-TSDFs will be identified in the database (process TBD based on RCRAInfo design).

Operating Status Code Definitions

AB   Abandoned.

Use AB for units at which the owner or operator is unwilling/unable to accept legal responsibility to close the unit.

BC   Before Construction.

Use BC for proposed "new" units for which Parts A and B of the Permit Application have been received. In most cases BC represents the "grassy field" scenario where no ground has been broken.

CC   Clean Closed.

Use CC to designate a unit that has completed clean closure. Closure is completed when all closure activities have occurred, and closure has been verified. This usually includes closure certification (sections 264.115 and 265.115), inspection of the unit to verify that the closure was conducted in accordance with the approved closure plan, and release of the owner or operator from financial assurance (sections 264.143(i) and 265.143(h)).

CN   Constructed, Not Yet Managing Hazardous Waste.

Use CN for existing units entering the "RCRA process pipeline," but are not yet managing hazardous waste. For example: Newly-permitted units that have completed construction but have not yet begun managing hazardous waste; units that have managed only non-RCRA waste but are pursuing RCRA permits to manage hazardous waste; units that are clean closed and then upgraded to resume management of RCRA-regulated hazardous waste.

CO   Completed Post-Closure Care.

Use CO to indicate that the post-closure care period at the unit has been completed.

CP   Closed With Waste in Place.

Use CP to designate a unit that has completed closure with waste-in-place. Closure is completed when all closure activities have occurred, and closure has been verified. This usually includes closure certification (sections 264.115 and 265.115), inspection of the unit to verify that the closure was conducted in accordance with the approved closure plan, and release of the owner or operator from financial assurance (sections 264.143(i) and 265.143(h)).

CR   Conducting Activities not Requiring a Permit.

Use CR to designate former TSDF units that conduct only activities not subject to permitting. CR should be limited, however, to units that had no legal requirement to close.

CV   Converted but Not RCRA Closed.

Use CV to designate units that converted to hazardous waste activities that do not require a permit (e.g., less than 90-day storage, totally enclosed treatment) but were required to clean close and did not.

DC   Delay of Closure.

Use DC to designate landfill, land treatment, or surface impoundment units that have received the final volume of hazardous waste but, rather than begin closure, will continue to operate to receive non-hazardous waste under the authority of the "delay of closure" provisions of sections 264.113(d) and (e) or 265.113(d) and (e).

IN   Inactive/Closing, but not Yet RCRA closed.

Use IN to identify units that are subject to RCRA closure requirements, and have received the final volume of hazardous waste, but have not completed closure activities as required to be designated CC or CP. Units with a legal status of NN should be assigned an operating status of IN if the unit will close.

OP   Operating, Actively Managing RCRA-Regulated Waste.

Use OP to designate active units that are conducting hazardous waste management activities subject to permitting. OP should be used regardless of the current legal status of the unit. For example, OP should be used to designate units that are: Operating under interim status or pre-mod authorization; operating under permits; allowed to continue operation under enforcement orders, or interim status compliance letters; under temporary suspension of hazardous waste activities pending decision to allow operation (e.g., awaiting permit issuance) where the intent is to operate, rather than close, the unit.

A unit with a legal status of NN should be assigned an operating status of OP if: The unit is allowed to continue to operate, or; the unit temporarily ceases to operate while seeking an operating permit but there is no intent to close the unit.

PF   Protective Filer.

Use PF to designate units that were submitted on a Part A, but are not RCRA-regulated, or do not exist physically.

SF   Referred to CERCLA.

Use SF to designate units (AB or other) that have been referred to CERCLA for cleanup.

UC   Under Construction.

Use **UC** to designate a new unit that has received an operating permit and begun construction, but has not yet started managing hazardous waste, or a unit that is "under construction" as defined in the section 260.10 definition of "existing hazardous waste management facility."

Legal Status Code Definitions

DL   Delisted.

Use **DL** to designate units that have been delisted, or units at which all hazardous waste ever handled by the unit have been delisted.

EM   Emergency Permit. (Non-Core)

Use EM for units regulated by the provisions for emergency permits under section 270.61. An EM unit should remain in that legal status throughout the life of the unit, including closure.

IS   Interim Status.

Use IS to designate units that gain interim status under the provisions of section 270.70. A unit that complies with those provisions is presumed to gain interim status upon receipt of the Part A.

IT   Interim Status Terminated.

Use IT to designate units that have had interim status terminated under section 270.73(a) or (b). For example: An interim status unit for which a permit was denied for any reason including failure to submit a Part B in a timely manner or failure to submit a complete Permit Application.

LI   Loss of Interim Status.

Use LI to designate units that have lost interim status for failure to comply with the requirements of section 270.73 (c) through (g).

LP   Loss of Pre-Mod Authorization.

Use LP for loss of pre-mod authorization in cases where a unit with pre-mod authorization (PM) failed to comply with the appropriate requirements of section 270.42(g) for newly regulated units. For example: Failure to submit a permit modification application within regulatory timeframes, or failure to establish a groundwater monitoring system for a land disposal unit.

NN   Non-notifier/Illegal.

Use NN to designate units that have operated illegally. For example: Units discovered to be operating without interim status, pre-mod authorization, or a permit, or units that applied for interim status or pre-mod authorization and failed to qualify, but operated.

NN should be used in these cases whether the unit is shut down or allowed to continue to operate under an order or interim status compliance letter.

NR   Never Regulated as a TSD.

Use NR to designate the following: Protective filers, or processes which were filed in error, proposed new units that are withdrawn prior to permit issuance; where a Part A was submitted to obtain interim status or pre-mod authorization, the unit was found to be ineligible, but the unit never operated as a TSDF (e.g., less-then-90-day-storage units, exempt recycling units, units which never managed hazardous waste, and units that never existed).

PC   Post-Closure Permitted.

Use PC to designate a unit for which a post-closure permit has been issued. When a permit is issued during closure of the unit, the PC legal status should be used for units closing with waste in place, and PI used for units that will clean close.

PI   Permitted.

Use PI when an operating permit has been issued to a unit. The legal status of the unit should remain PI until the permit expires and is not renewed, or the permit is terminated, or the permit is modified to address only post-closure care, or a post-closure permit is issued to a unit that is closing or has closed with waste in place

PM   Pre-Mod Authorization.

Use PM to designate newly-regulated units at permitted facilities that are authorized to operate under section 270.42(g) while a permit modification application is pending. For example: A previously unregulated unit at a permitted facility that becomes regulated as a hazardous waste unit due to a new waste listing.

PR   Proposed.

Use PR to designate a "new" unit for which the owner/operator is pursuing an operating permit where the unit is not constructed or, the unit has never been eligible for interim status or pre-mod authorization, and has never operated illegally.

PT   Permit Terminated/Permit Expired, not Continued.

Use PT to designate units for which an operating (PI) or post-closure (PC) permit has been terminated under the authority of section 270.43, and units with permits that expire and are not continued in accordance with section 270.51, Permitted units for which the permit is renewed should retain the PI or PC legal status.

RD   Research, Development, and Demonstration Permit.

Use RD for units regulated by the provisions for RD&D permits under section 270.65. An RD unit should remain in that legal status throughout the life of the unit (i.e., from application through closure).

RQ   Requested but Not Approved.

Use RQ as a transitional status code for tracking increases in capacity of existing interim status units (section 270.72(a)(2)) or changes in the process (section 270.72(a)(3)), additional capacity at permitted units, or requests for temporary authorization.

RU   Permit-by-Rule.

Use RU for units at which the only activities subject to RCRA permit requirements are processes regulated under section 270.60. An RU unit should remain in that legal status throughout the life of the unit, including closure. Examples: Ocean dumping (process code D82), UIC wells (D79), publicly-owned treatment works that receive RCRA-regulated hazardous waste.

SR   State Regulated.

Use SR to designate units that are regulated only under broader or more stringent State standards, and are not subject to RCRA permit requirements.

TA   Temporary Authorization.

Use TA to designate a new unit that has received temporary authorization under the authority of section 270.42(3) for installation and operation at a permitted facility.

APPENDIX VI: RELATED INITIATIVE STATUS

Information Integration Initiative (I³)

Impact

Unknown at this time. The initiative is expected to impact various current efforts to develop new data systems in a variety of individual programs including WIN/INFORMED.

Summary

EPA has recently launched an effort to create a single, unified data system for all of the agency's programs. The objectives are to create a system that makes it easier for regulated entities to submit information and easier for the public to access data. The EPA Administrator announced the launch of the Information Integration Initiative (I3) on October 27, 1999, as the first major project of the new Office of Environmental Information. The goal of the project is to create a single, integrated multi-media core of environmental data and tools that will deliver the vision of integrated, multi-media information that is sought by the public and EPA's partners.

An action plan is expected by December 31, 1999 for establishing the new system.

OECA General Enforcement Management System (GEMS)

Impact

None identified.

Summary

OECA's Enforcement Planning Targeting and Data Division (EPTDD) is moving ahead with GEMS, a system re-engineering initiative designed to produce a consolidated enforcement and compliance data management system that will support the core information needs of EPA's National Enforcement and Compliance Assurance program.

The GEMS initiative is being coordinated with the Office of Environmental Information's new Information Integration Initiative (I³). Gems will include basic components such as tracking of facility inspections, violations and enforcement actions, and addresses more complex needs for compliance assistance tracking, multi-media planning, targeting and evaluation. GEMS will provide a consistent framework, process and structure for collecting and tracking compliance and enforcement information. In 1999 OECA conducted a series of 5-day General Design Workshops in three major Program Business areas: 1) Enforcement; 2) Compliance Monitoring/Assistance; and 3) Program Management/ Evaluation.

Central Receiving

Impact

None identified.

Summary

The concept of Central Receiving (CR) is to establish a central point which supplements EPA reporting systems by performing new and existing functions for receiving legally acceptable data in various formats (e.g., electronic, paper, diskette), including consolidated/integrated data.

For external "customers", the regulated community, state and local government, CR will offer a single, common point-of-entry for data they send us.

For EPA reporting systems, CR will serve as a shared resource that provides consistent, centralized management for all reporting transactions.

Proposed CR functions include:

- receiving, authenticating, and logging submissions;

- translating data to and from different electronic formats;

- archiving submissions;

- managing the security of network transactions; and

- distributing data to EPA databases and possibly other entities.

There are five major steps planned for the development of CR:

- Determine Functional Requirements: 1999

- Design, Pilot-testing and Prototyping: 1999 - 2000

- Decision Point: Final Design/Option Section: early 2000

- Interim Operation (based on prototype): mid-2000

- Establish Full Production CR: 2000 - 2002

Electronic Data Interchange (Manifest)

Impact

This initiative could have an impact on both the UID and WAM program areas although at this time, no definitive recommendations have been issued.

This initiative relates closely to the following EPA "Cross-media electronic reporting and recordkeeping rule workgroup" initiative.

Summary

An updated version of the SEES report has been released. The first of three phases of a pilot electronic manifesting project is complete, although results have not yet been published. The NPDES program is known to be considering a rule to allow submission of EDI transmissions of Discharge Monitoring Reports in lieu of paper documentation.

Cross-Media Electronic Reporting and Record keeping Rule Workgroup

Impact

Although the scope of this workgroup overlaps with some of the recommendations included in this Final Report, the schedule for any proposed rulemaking is beyond the schedule for this PAA. As a result, no direct impact can be determined at this time.

This initiative relates closely to the previous State "Electronic Data Interchange Workgroup" initiative.

Summary

The workgroup starting meeting in May, 1999.   The goal of the workgroup is to draft a rule that will provide a uniform legal framework for paperless electronic reporting across all EPA environmental compliance programs. Workgroup members include representatives from EPA Headquarters offices and Region III. To date, the workgroup has been understanding the issues and progress made in the area of electronic reporting, including gathering background information on the new statute, the Government Paperwork Elimination Act, which requires the Federal government to allow for electronic reporting for all information transactions by the year 2003. In addition, the workgroup has been meeting with Department of Justice on legal concerns regarding electronic reporting and the Agency's information management office on the Computer Security Act. The workgroup hopes to draft a Notice of Proposed Rulemaking by September, 2000 and work towards a Final Rule by September, 2001.

Manifest Rulemaking Workgroup

Impact

At this time, the full details of the new rule are still to be determined .

The proposed rule includes changes to collect information regarding international shipments. A checkbox is proposed to be added to the manifest to indicate that the shipment is international in nature. There will also be a new field to indicate the point of entry/exit for the US. Instructions now include the requirement that a copy of the manifest be left with US Customs for both imports and exports (currently this is only required for exports). This will allow the identification of how much waste generated in a state is actually waste imported from another country.

These changes may have some impact on the recommendations for handling of waste imports and exports included in this report. Following this national review and consideration of additional comments received by the Manifest Rulemaking Workgroup, these recommendations may be modified to remove any overlap.

Summary

An internal draft of the proposed manifest rule and the new manifest form has been released. A proposed rule is due to be published in summer of 2000 with a probable phased implementation of the new regulations in December 2001.

Burden Reduction

Impact

A number of the options included in the Burden Reduction NODA conflicts with recommendations from the UID and WAM PAAs. The confirmed recommendations from the UID and WAM program area will be communicated to the workgroup charged with developing rules based on the NODA.

Summary

The PAA Team has reviewed the Burden Reduction team's draft NODA. The final version of the NODA was published to the Federal Register on June 18, 1999. A final rule specification is planned for May 2000. Once the comments are all received and reviewed EPA will convene a workgroup to begin the rulemaking. This workgroup will convene early in 2000.

National Rulemaking

Impact

Implementation of the recommendation to "Provide for standard notification of universal waste activities" may be accomplished by a soon to be published Information Collection Request (ICR).

Summary

An ICR is currently being reviewed which calls for the collection of an additional data element on the Notification form that would indicate that the RCRA Site is a large quantity handler of universal wastes.

RCRA Info Conversion

Impact

The PAA Team continues to work with the RCRAInfo Design Team to ensure that neither project takes steps that may preclude greater integration at a later stage.

Summary

The existing RCRIS and BRS national systems are currently being redeveloped based on a new technical architecture. The implementation platform will be changing although the basic system functionality will remain constant.

Implementation of the new system is on schedule for first quarter 2000, with a phased implementation planned by Regional Offices (Regions I, IV and VI will be the first to transfer to the new system).

ECOS Core Performance Measures

Impact

None identified.

Summary

ECOS core performance measures have been developed to support NEPPS and GPRA.

SIC/NAICS

Impact

The new NAICS codes have been incorporated into the program area model.

Summary

Rules have been drafted mandating the use of NAICS codes as a replacement for SIC codes.

Facility Data Standards

Impact

The UID program area model will be compliant with the Facility Identification Data Standard. The PAA Team will continue to coordinate with this initiative and will work with the Facility Data Standard to build additional needs as required.

Summary

The "Facility Identification Data Standard" (Standard) provides formats and definitions for basic information used to identify facilities and sites that are of environmental and program interest to EPA, State and local environmental agencies, communities and industry. This standard format will result in improved data integration capabilities, data analysis and quality at all levels.

The Standard was developed by the Facility Data Standard Action Team chartered by the EPA/State Information Workgroup. The Team used the "Interim Facility Identification Standard" posted for comment by the EPA in February of 1998 and the "Facility Identification Template For States" (FITS) developed by a multi-state initiative as its basis. The Team included representatives from several States, all EPA Program offices, EPA Office of Enforcement and Compliance Assurance, EPA Office of Information Resources Management staff and representatives of the Environmental Council of the States (ECOS).

The Standard has been endorsed by the EPA/State Information Workgroup. ECOS has provided the Standard to all 50 State commissioners for review. EPA will undertake review and adoption through the Reinventing Environmental Information (REI) Subcommittee of the Information Resources Management Executive Steering Committee. The FITS guidance document for States will be revised to reflect the elements of the Standard.

Latitude/Longitude Workgroup

Impact

The recommendation to collect location coordinates for all RCRA Sites using address-matching software is consistent with EPA's Locational Data Policy (LDP). The program area model that has been developed has incorporated defined standards for latitude, longitude and MAD codes.

Summary

The March 1992 Locational Data Policy (LDP) guidance document states that "Under this policy, collection and documentation of locational information will be performed for all facilities, sites, monitoring points, and observation points regulated or tracked by EPA under Federal environmental laws."

Following this guidance, standards have been developed for latitude, longitude and MAD codes.

Center for Environmental Information Statistics (CEIS)

Impact

Although the work of the CEIS will include waste activity information from the Biennial Report, no direct impact is expected for the WAM program area.

Status

The goal of the CEIS, an EPA Headquarters program, is to increase public access to integrated information on environmental quality, status and trends. CEIS displays of data are available through EPA's Envirofacts system. For hazardous waste information, CEIS relies on Biennial Report National Data and has links to the Biennial Report System (BRS) reports that are posted on the Internet. The CEIS pages provide a description of the data and what it does and doesn't mean.

NGA Manifest Survey

Impact

None identified.

Summary

A comprehensive survey of a number of States was conducted by the National Governors Association to understand States' needs for manifest information. The following results were published:

1) States oppose complete elimination of the optional fields on the manifest form;

2) Standards for automation and manifest streamlining need to be developed through direct consultation with States; and

3) EPA should provide as much funding as possible to support manifest automation.

Government Performance Review Act (GPRA)

Impact

The TUG team (Treatment, Storage, and/or Disposal Universe Group) worked closely with the EPA OSW staff involved in identifying those facilities in the GPRA Corrective Action, Permits and Post-Closure Baseline universes. These are those sites that were identified as requiring controls in place (via permit, closure or post-closure), or as being the highest priority for corrective action, in the baseline year of 1997, so that progress can be measured against work at these sites annually through 2005. This work is covered by GPRA Goal 5.

Summary

A number of the GPRA goals appear to potentially impact the UID and WAM program areas. The most significant and obvious area of impact is with respect to the regulated universes of TSDF RCRA Sites.

Program Evaluation PAA

Impact

Lessons learned from the conduct of the Program Evaluation PAA project were incorporated into planning for the UID and WAM PAA projects.

Summary

Each PAA project will conduct a "lessons learned" exercise to identify areas in which improvements may be made to streamline the process and improve the quality of resulting deliverables.

APPENDIX VII: SUPPLEMENTARY POLICY PROCEDURAL ISSUES

Introduction

During the course of the PAA project, a number of policy and procedural issues were identified. These issues result from the varied practices of the different agencies that implement the RCRA hazardous waste program and from evolutionary changes to the program . Typically, such issues have broad implications for the program and must be carefully considered before recommendations are made that affect program information management.

Although the majority of the issues identified during the PAA have been addressed by recommendations included in the main body of the report, others did not and have been compiled here for reference purposes. These issues fall into two categories

Policy Procedural Issues without Recommendations

Those issues that have been considered and discussed by the PAA Team but for which the current situation appears to be the most satisfactory. These issues are described in detail and the various alternative options for resolution are discussed

Policy / Procedural Issues Excluded from Project Scope

Those issues that have been excluded from consideration during the analysis of the WAM program area due to scope constraints, or their organization or design specific focus. For these issues, a proposed path forward is presented, that might be used to address the issue in some forum outside of this project.

Policy Procedural Issues without Recommendations

Exceptions to the general definition of a RCRA Site

Program Need

Most RCRA Sites fit conveniently into a general definition comprising an industrial installation at a fixed contiguous site controlled by a specific person. However, there are exceptions. Some examples are:

- Mobile sources, such as ships, that may generate wastes at ports or repair yards in different locations and jurisdictions

- Continuous sites, such as pipelines and roads

- Non-contiguous sites under common control, such as utility manholes or county bridges

- Non-industrial sites where the owner is not the generator, as in the case of hazardous waste abandoned at a Goodwill loading dock or in a national park

- Industrial parks, in which multiple generators operate on contiguous sites "controlled" by another person (the owner)

- Outside contractors who generate hazardous wastes at an industrial site controlled by another person.

In each of these cases, one or more of the elements making up the general definition of a RCRA Site is missing. However, the RCRA program must still identify the site and track waste generated and managed at that site.

Problem Analysis

The way in which a unique RCRA Site is defined can vary from State to State. For example, some States track utility manholes as separate RCRA Sites, while other States do not. Some States may require a non-contiguous RCRA Site to notify as two RCRA Sites while other States do not. These State-to-State variations do not normally pose problems for the implementers, but where sites are defined and counted differently, it may be difficult to develop a "national" picture of hazardous waste handling in terms of the numbers of RCRA sites regulated and to establish the environmental record of large companies.

For the purposes of the RCRA program, a RCRA Site is identified as a specific location which is currently, or has in the past, conducted waste handling activities of interest to the RCRA Subtitle C program, as promulgated in either the Federal Register or individual State statutes. The location may be described by physical address, by description or by geographic coordinates.

Since the number of exceptions to the general rule is small in comparison to the total universe and there is virtually no effect across or between implementers, it is recommended that exceptions should be handled on a case-by-case basis.

Options Considered

1) *Develop formal guidance for each class of exceptions to the general definition by which each would be handled and accommodated in both manual and automated procedures.*

Reporting of TSDF regulatory status

Program Need

States need to be able to track RCRA Sites performing waste management activities as regulated by their own regulations. Due to "broader in scope" (B-I-S) or "more stringent than" (M-S-T) State authorities, a RCRA Site may be identified as a TSDF but not be considered a TSDF by Federal regulations.

Problem Analysis

A State (only) defined TSDF may have to follow the Federal TSDF regulations (at a minimum), even though it does not fall into the Federal definition of a TSDF. This may lead to inconsistency between definitions of Federal and State identification of the universe of TSDF's.

This issue impacts very few States.

Options Considered

1) *Use State definitions to determine TSDF status.*

2) *Use Federal definitions to determine TSDF status*

Consistent notification of transporters and transfer stations

Program Need

States need to be able to access notification information for transporters that receive their EPA ID number in a different State from that in which they operate. States also need to understand where transporters are conducting transfer operations for the purposes of identifying potential compliance issues.

Problem Analysis

Transporters do not always need to notify to a State in which it does business or through which it transports waste, providing the transporter has already submitted a notification to another State and has received a valid EPA ID.

Additionally, a transporter has no regulatory obligation to report the location of transfer stations, although a number of States feel that such transfer locations, where a transporter is changing hazardous waste conveyance and packaging, or even simply temporarily "storing" the waste, should be subject to greater scrutiny.   Many transfer stations are not locations that would typically be considered RCRA Sites, for example, roadside stops, parking lots and other locations.

An additional issue identified is 'Transporters that mix hazardous waste of different DOT shipping descriptions by placing them in a single container' are subject to 40 CFR 262, Standards Applicable to Generators of Hazardous waste. This requires them to notify, however, when they notify there is no specific way of identifying themselves as such a transporter.

Options Considered

1) Prohibit repackaging of waste at un-permitted transfer stations.

Prohibit repackaging of waste at un-permitted transfer stations. If repackaging is to occur, it must be done at a permitted TSDF and then remanifested. True transfer stations where no repackaging occurs have no need for a permit or notification.

Bulk reconsolidation facilities exist who receive hazardous wastes from customers (original generators of the waste) and consolidate these customers' wastes, based on compatibility, and then remanifest these combined wastes to other TSDFs. These facilities must have a permit or interim status (they have notified and received or are applying for a permit), and therefore, they are already being handled in the system via State and Federal requirements.

2) Require comprehensive notification

Require transporters to notify in any States in which they do business, even if passing through the State only. Also require that transporters formally notify the relevant State of any waste transfer locations and activities.

Business status information for a RCRA Site

Program Need

When discussing the business status of a RCRA site, an important distinction must be made between the conduct of RCRA-regulated activities at the site, and the actual operation of a business at the site. During the INA sessions, the need for both of these dimensions was expressed.

Problem Analysis

The term *business status* reflects whether the site is currently engaged in business activity. A consistent mechanism for the collection of this information is not readily available at this time.

Waste Accounting and Movement

Program Need

PAA participants expressed the need for a full accounting of wastes generated and managed from cradle to grave.

Problem Analysis

- Waste storage facilities can accumulate wastes for extended periods of time and under certain conditions may mix wastes prior to shipment for final treatment and disposal. Similarly, transporters can combine wastes received from individual generators while such wastes are in transit.

- A new manifest is generated for the combined wastes, indicating the source of the waste as the storage facility or transporter.

- The new manifest severs the link to the original generators of the individual wastes.

- Current Federal guidance indicates that if a transporter commingles wastes with different DOT shipping descriptions by placing them in a single container (e.g., drum, tanker truck), the previous manifests should accompany the waste shipment.

- For commingled waste shipments, the current Federal manifest does not allow for linking, by manifest document numbers or other direct means, with any previous manifests associated with the shipment.

- Some transfer stations act in similar ways to Storage Facilities – i.e., merging wastes and declaring themselves the 'generator' of that waste.

- The original generator may report for the hazardous waste Biennial Reporting form (or other comparable State periodic report) that the final destination of the waste is the storage or transfer facility, severing the link to the disposal of the waste at a disposal unit.

- The storage facility may report the waste as a newly generated waste for purposes of the required periodic reporting process.

- Because of the way these activities are reported, a full accounting of waste generated and managed is made difficult with the potential double counting of waste generated and reported by storage facilities and generators.

Options Considered

1) Continue to use appropriate waste origin and handling codes related to storage (transfer) only.

Since complete "cradle to grave" tracking would always be challenging given the wide range of exceptional circumstances, waste accounting should be achieved using a more rigorous implementation of the current practice.

Continue to use appropriate waste origin and handling codes related to storage (transfer) only. (M141 for the current Biennial Reports) Waste volumes reported as being managed by such codes would not be counted for waste volume tracking (and, indirectly, waste management capacity tracking) purposes. That is, the system logic could be designed to subtract out all waste volumes identified, by a given management code (e.g., M141) as being received from off site and not recycled, treated, or disposed on site. Only waste volumes that were actually treated or disposed as the "final" management method would be counted for reporting purposes. Generators would simply report on the waste handling method of the first TSDF to receive their waste.

This recommendation obviously will require added emphasis to educate generators, transporters, and facilities that receive waste shipments to properly complete and use the manifest as well as properly report waste shipment information.

Pros

- Addresses the issue from the periodic waste movement tracking perspective.

Cons

- Confusion may persist about completing the manifest and Biennial Reports creating continued data quality gaps.

2) Link manifests created as a result of commingling, aggregating, or related handling to the preceding manifests.

EPA, with stakeholder (States, waste management industry, and others) input, is preparing recommended changes and improvements to the uniform manifest. A rulemaking proposal will be prepared addressing the results of this joint effort. As part of this proposal, manifest linking should be enforced in rule in one of the following two ways:

a) Provide for the manifest to have a field where linking or referencing to related manifests can properly be done.

b) Reaffirm Federal guidance that original manifests are to accompany the new manifest for the commingled waste shipments. This is obviously a weaker means of ensuring national uniformity for linking waste shipments involving commingling, transferring, and/or storing prior to final treatment and/or disposal.

Pros

- Addresses the issue for real-time waste movement (manifesting) purposes.

- Dovetails in with the manifest reinvention work and therefore encompasses some of the overall burden reduction benefits

- Provides opportunity as a part of the outreach to generators, transporters, and TSDF facilities to get direct feedback for further improvements.

Cons

- Learning curve to implement new form or procedure for linking manifests.

- Schedule for manifest rulemaking may not coincide with the future steps (design, etc.) of this project.

- Confusion may persist about completing the manifest and Biennial Reports creating continued data quality gaps.

3) Remove the option for a generator to report on the Biennial Reporting form (or comparable periodic report) that the management method was to store or transfer it.

Stated another way--for periodic (biennial) reporting purposes, require generators to only report final treatment/disposal method.

Pros

- Accounts for "true" cradle-to-grave reporting by the original generator.

- Reaffirms the generator's liability and therefore accountability for the waste generated (cradle) and the associated proper waste disposal method (grave).

- Minor burden reduction achieved by removing a current data element option available for reporting purposes.

Cons

- Only resolves a reporting issue rather than a "real-time" waste tracking (linking) one via the manifests. Any desired direct link between original generators to commingled waste shipments would not be available.

- Volume discrepancies would likely continue between generator information and receiving treatment/disposal facility information (i.e., mass balances would be difficult to provide).

- Generators are often unfamiliar with the actual treatment and/or disposal methods used to manage their wastes and would therefore report their "best guess."

Determine corporate relationships for a RCRA Site

Program Need

PAA Participants identified the information need to understand the corporate ownership of a RCRA Site where compliance patterns are being researched.

Problem Analysis

Currently, it can be difficult to relate the activities of one company to another since there is not necessarily an obvious connection between a RCRA Site and its corporate ownership. There is currently no clear way of assessing corporate relationships in order to build a comprehensive picture of a given company's national compliance record.

A number of different data systems record this type of information, but names can be recorded very differently between systems and no single number is currently recorded for each owner/operator. The Dunn & Bradstreet system is used by EPA to provide some information on company parentage and hierarchy, but this information is expensive and difficult to share.

For Permit Applications and enforcement actions, more detailed ownership information is often collected, for example, financial assurance information, owner/operator parentage, history of prior notifications, and company size.

Options Considered

1) Require a naming convention for corporate owner information.

The use of D&B numbers is too costly for States and still requires much of the same QA/QC a corporate name would. While it will be a burden to make sure you had good information, and that it either existed in the national RCRIS database already, or was entered as new data, it is not as difficult to maintain as the D&B number.

Pros:

- Provides a means to trace ownership by name versus number (D&B)

- QA can be done by staff and standard search mechanisms

- Easily shared across States

Cons:

- Costs are indeterminate at this time but could be extensive when considering data cleanup, and education.

- Naming convention needs to be developed and agreed upon

- QA/QC burden. Those entering information must do a thorough search to assure the corporate owner is not already in RCRIS. The search must be standard and must be conducted by all staff entering data in each State or Region.

- States must accept the way another State entered the name (can be mitigated by naming conventions used by all)

2) Obtain Dunn & Bradstreet Numbers for all RCRA handlers and use this information to trace corporate ownership of RCRA handlers.

Pros:

- Provides a simple numerical way to trace ownership across handlers

- May implement over time by asking handlers to provide as part of a re-notification process

Cons:

- Expensive

- Can≠t readily share

- Requires burden to populate all current handler files with this data

- Added reporting burden for new sites to include this information when notifying or re-notifying

- QA/QC burden to see if D&B number is legitimate. Would require easy access to D&B data to check

3) Use Secretary of State company registration information

Company registration information could be obtained from the relevant Secretary of State office, including corporate relationship information. Address matching could be used to compare and integrate this information with RCRA data.

Pros:

- Provides relatively low-cost access to corporate relationship data.

Cons:

- Multiple sources of data.

- Reliant on accuracy of address matching routines.

Status

Given the difficult and complex nature of corporate relationships the PAA participants feel that this need might best be managed by tracking of owner and operator names as specified in the Recommended Information Needs in the main body of the report. This improvement in information collection will permit the assignment of an Owner and or Operator, as well as type (e.g., Private, Tribal, or Governmental). This issue will be further supported. While not a perfect resolution to the issue, this recommendation provides better quality information than is currently available.

Reporting RCRA waste activity by "waste stream"

The Biennial Reporting forms currently require waste to be reported as a set of individual wastes rather than a single unit of hazardous waste. Wastes can be reported together 'if the wastes have the same Origin code and Form code'. The term "waste stream" is used variably by the RCRA program, yet a common understanding is required to facilitate communication

Options Considered

1. *Maintain current situation*

2. *Provide agreed definition in the regulations and form instructions*

Status

Given the term waste stream, commonly is used in the context of a unit of reportable waste, the PAA participants have agreed to defer this issue until after the design of the new reporting mechanisms as defined in Recommendation # 11 Study Feasibility of Quarterly Electronic Reporting. The final outcome this study and potential implementation will strongly influence the final definition of a waste stream

Policy / Procedural Issues Excluded from Project Scope

The following issues were excluded from consideration within the WAM program area for one or more of the following reasons:

Scope Constraint The issue had been excluded from PAA initial scope, and the findings of the information-gathering sessions did not suggest that they are critical issues which would threaten the success of the project if not resolved.

Organization Specific The issue is highly specific to a small number of organizations and is not considered significant for national resolution.

Design/Implementation The issue will affect design and/or implementation of the project's recommendations but does not have a bearing on information needs and management.

These issues have been documented below. For each issue a proposal has been included suggesting a process outside of the project that might best be employed to resolve the issue.

Inadequacies of Waste Codes

Reason for Exclusion: Scope Constraint

Issue Description

- Some States and Regions have developed their own waste codes to supplement the Federal waste codes. Some of these are due to additional State regulations, but others are to better describe the waste (e.g., codes for PCBs, solid waste, and universal waste).

- Waste codes do not provide adequate information about toxicity

- Characteristic Waste Codes are often used inappropriately, as a way to describe a waste without providing a more specific description

- Waste Codes include some information that overlaps with form and source codes information.

- There is not a standard universal Waste Determination process currently in place to assist generators with understanding what waste codes apply.

Pathforward

The redefinition or restructuring of the current system of waste codes employed in the RCRA program will be a complex task requiring considerable programmatic and technical knowledge. As such, any reevaluation can only realistically be pursued as a separate, dedicated exercise undertaken in parallel to the progress of the PAA projects.

It is recommended that the WIN/INFORMED Coordinating Committee consider appointing a separate workgroup to address the redefinition of the current waste code scheme, consisting of representatives from States, EPA Regions and EPA Headquarters offices.

Determining the Chemical Constituents and Composition of Waste

Reason for Exclusion: Scope Constraint

Issue Description

- Many of EPA's activities require them to understand the types and concentration of chemicals that constitute a hazardous waste.

- Waste codes provide a very limited indication of chemical composition.

- The LDR program collected constituent information during rule development (in the form of paper comments from RCRA Sites), which could be used to generalize the types of chemicals typically found in specific types of waste.

- TRI collects information about chemicals in releases (in the form of CAS codes) for approximately half of the current universe of TSDFs and LQGs.

Pathforward

During the information gathering sessions, participants identified a number of possible approaches to resolve this information shortfall.

In some cases, profiles have been developed describing the typical chemical composition of certain wastes from specific types of industry. A separate workgroup is recommended to evaluate making information more widely accessible to all regulators.

An alternative proposal that could present a significant increase in the associated burden would be to have TSDFs report detailed information about wastes that they manage to the regulators. TSDFs currently maintain records of the chemical composition of wastes they receive to meet permitting and land disposal restriction requirements.

Measuring a RCRA Site's Production

Reason for Exclusion: Organization Specific

Issue Description

- To evaluate how well a generator has minimized its waste generation, the trend in quantities generated alone can be a poor indicator. That quantity should be compared to volumetric changes in the generator's activities that resulted in the waste. For example, a generator may have halved its generated waste due only to the fact that it was manufacturing only half as many products.

- An indicator of volume of production would also provide EPA with a useful inspection targeting criteria.

- TRI reports include the production index of the process that led to a reporter's toxic releases. However, TRI reporters only represent a subset of hazardous waste generators.

- The Biennial Reporting forms used to include the production index of the process that led to each waste, but this was recently removed along with the other waste minimization questions.

- Analyses of the Biennial Report and TRI reported production indices suggest that the reporters are using their overall facility production index (which is readily available to them) instead of any process specific index.

Pathforward

This issue was excluded from the scope of the WAM PAA project because of its organization specific nature. However, production information is important to many areas of the RCRA program and a separate project should be conducted jointly by those groups requiring the information.

Two possible options that might be used to gather this information include:

1. To gather the production index information using the Biennial Report.

2. Use industry production index information as an approximation for each generator (collected from Trade Associations).

The EPA Waste Minimization Team is currently evaluating solutions to this issue.

Cross Media Reporting of Releases/TRI Harmonization

Reason for Exclusion: Scope Constraint

Issue Description

- The Toxic Release Inventory is based on the collection of EPA Form R from a universe of the regulated community that overlaps to some extent with the biennially reporting universe. It provides information about releases to land, air and water for a specific list of chemicals.

- Given the desirability to be able to understand the cross media profile of sites that release pollutants, along with the move to integrated reporting mechanisms, the possible merger of the Biennial Report with the TRI Form R should be considered.

- If the TRI model was used for RCRA, information about the generation of PBTs may also be tracked satisfactorily.

- A 1995 study of facilities showed that 43% of the Biennial Report respondents also reported to TRI; these facilities produced more than 90% of the hazardous waste volumes reported to BRS. With recent changes to TRI, the percentage of the Biennial Report respondents that also submit TRI reports is expected to be even higher.

Pathforward

Integration of RCRA information collection with TRI information collection was excluded from the scope of the WAM PAA in an effort to maintain a manageable scope for the project. However, as discussed above, there are clearly a number of overlaps between RCRA and TRI in terms of the reporting universe and the information collected.

While the WAM PAA was unable to tackle this issue, the Team recommends that an alternative working group be charged with evaluating the potential for integration of the TRI report with the Biennial Report. Based on the recommendations of this group, an implementation plan should be developed to guide the integration process if appropriate.

Some options discussed by the Team were:

Eliminate Biennial Reporting for wastes covered under TRI

Reporters would not report any wastes that are also currently required for TRI reporting. Studies have shown that facilities that report under the Biennial Report often also report to the Toxics Release Inventory. The team is aware of the differences between these two information systems, including the universe covered, the frequency of reporting, what is reported, and the definition of facilities.

Limit the Biennial Report to 1,400 top generators; rely on TRI for other RCRA facilities

A small number of facilities are responsible for the majority of the waste reported in BRS. This option would require the top 1,400 facilities (or some other number) as measured by waste volume reported to continue reporting under the Biennial Report. In 1995 only 1,372 reporters generated more than 1,113.2 tons of hazardous waste managed in RCRA permitted units. No other facilities would have to report biennially.

Collect all information under TRI

Under this option, the TRI form would be modified to take data elements currently only collected by the Biennial Report, such as waste code description, waste code number, and RCRA permit information and put them on the TRI form. EPA would eliminate the Biennial Report. The TRI reporting universe would remain the same under this option.

Collect all information under TRI for all RCRA Sites

As the previous option except all RCRA Sites would be required to report on TRI form. The full TRI reporters would remain the same as the previous option, however, the biennial reporters would only submit hazardous waste information and would not complete TRI data, e.g., chemical quantities.

Non-Hazardous Waste Managed in RCRA Subtitle C Units

Reason for Exclusion: Scope Constraint; Organization Specific

Issue Description

- Some generators ship their non-hazardous waste to be managed as hazardous, for example in a hazardous waste landfill.

- If non-hazardous waste is being managed in hazardous waste management units then a calculation of available capacity is made inaccurate.

- When considering the impact of listing and existing solid waste, the burden expected to be imposed may be much reduced if it is known that much of that solid waste is already being managed as if it were a hazardous waste.

- Some State RCRA programs already collect this information from TSDFs.

Pathforward

This issue affects primarily capacity assurance analysis. It was suggested that EPA Office of Solid Waste should attempt to assess the scale of the problem that this practice presents and then consider possible regulatory change to facilitate the collection of the additional information.

Third Party Manifesting

Reason for Exclusion: Organization Specific; Design/Implementation

Issue Description

- Some States that collect manifests from out of State generators or TSDFs require that those RCRA Sites also submit an additional copy of the manifest to the resident State agency.

- Some of these agencies have no use for those manifests. This would seem to be reporting burden (although a small one) which has little benefit.

Pathforward

This issue was excluded from the scope of the WAM PAA project due to its organization specific nature and relatively limited impact.

Waste Decharacterization

Reason for Exclusion: Organization Specific; Design/Implementation

Issue Description

- Decharacterization is the process of making characteristically hazardous waste, non-hazardous by removing or nullifying the characteristic component (e.g., mixing of wastes).

- Courts have ruled that waste must be treated for characteristic components regardless of the decharacterization.

- Once decharacterized the waste no longer is required to be reported

Pathforward

This issue was not felt by the Team to have wide-ranging impact and any impact on the RCRA program is usually organization specific. If required, the issue should be further examined by the EPA Office of Solid Waste.

Hazardous Waste Transfer Stations

Reason for Exclusion: Scope Constraint

Issue Description

- As transfer stations do not formally report their activities there is some suspicion that they are illegally mixing wastes.

- Transfer stations may mix and re-manifest wastes. However, the original manifests from the generators are included with the new manifest when transferred for disposal.

Pathforward

Since full and complete tracking of transfer station activities would require greatly increased reporting and regulation of these RCRA Sites, the Team agreed that there is little that could be done within the scope of the PAA to support this issue.

Recycled Waste

Reason for Exclusion: Scope Constraint

Issue Description

There are two elements to this issue.

1)   Firstly, there are inconsistent recycler reporting requirements amongst States, with some States requiring recyclers to report the receipt of hazardous wastes while others do not.

40 CFR 264.1(g)(2) exempts certain recycling facilities from the BRS (40 CFR 264.75) requirements. Those facilities that are exempt include those that treat the following wastes; those that are covered in Subparts C through H of 40 CFR 266, industrial ethyl alcohol, scrap metal, fuels produced from the refining of oil-bearing hazardous waste, petroleum coke products and

used oil. There are of course numerous restrictions and caveats to those exemptions. Those should be the only TSDF facilities that are not required to report the 9 items prescribed in 40 CFR 264.75.

2)   Secondly, there is a desire for additional information on the quantities of hazardous wastes that are recycled and into which product they are recycled. Currently:

- The final destination of recycled hazardous wastes does not have to be reported if the material is not stored long term.

- EPA loses visibility to the fate of wastes due to recycling and no reporting requirement.

- EPA is required to encourage recycling of hazardous wastes and must demonstrate (for GPRA) their success through monitoring the *quantity* of hazardous waste recycled; however this data is not comprehensively collected.

Pathforward

The scale and complexity of this issue led the team to consider it out of scope of the WAM project. If deemed appropriate by the coordinating committee a separate detailed assessment should be conducted to determine EPA and State information needs for hazardous wastes that are managed by exempt recycling facilities and processes.

This study would clearly describe the specific information needs together with recommendations on collection method.

Public information access

Reason for Exclusion: Scope Constraint; Design/Implementation

Issue Description

The PAA participants have differing opinions on what information should be made available through "self-service" mechanisms, and which should have to be requested through FOIA requests. Additionally this issue has agency wide implications beyond the remit of this PAA.

Pathforward

For the reasons cited above public information access will be referred to the Coordinating Committee for review.

Tracking of State specific RCRA Sites information in a national system

Reason for Exclusion: Scope Constraint

Issue Description

The information need for this issue is based on some States need to be able to track non-RCRA TSDFs and inspections of non-RCRA regulated sites.

Pathforward

This issue is beyond the scope of this PAA will be deferred to the Permitting and Corrective Action and the Handler and Monitoring and Assistance PAAs.