HAZARDOUS WASTE PROGRAM PERFORMANCE MEASUREMENT: FINAL PROJECT REPORT

Prepared by Terri Goldberg, NEWMOA

June 2004

Ensuring that hazardous waste is safely generated and managed in the Northeast is an important goal of the state environmental agencies. However, measuring the progress of the states toward achieving this overall goal has proven to be quite challenging.

Starting in 2001 the Northeast Waste Management Officials' Association (NEWMOA)[1] member states initiated a project to facilitate an agreement on an approach to Resource Conservation and Recovery Act (RCRA) program performance and compliance measurement. This report provides a summary of the results of this project and some recommendations for follow-up for continued work on RCRA hazardous waste program performance measurement.

This project was funded by a grant from US EPA Headquarters to the New Hampshire Department of Environmental Services (NH DES). NH DES contracted with NEWMOA to conduct this project. NEWMOA appreciates the support and assistance that EPA Headquarters and NH DES provided for this effort.

The New Hampshire Department of Environmental Services (NH DES) has successfully piloted an approach to measuring RCRA hazardous waste compliance rates that has been shared with the other NEWMOA-member states through this NEWMOA project. This report focuses on the NEWMOA state member's efforts to examine approaches to measuring state RCRA Hazardous Waste Program performance. Overall the effort focused on those aspects of the states' RCRA Hazardous Waste Programs related to hazardous waste generators and waste management, including treatment, storage and disposal (TSDF) facilities, and not on the performance of the RCRA Corrective Action Program.[2]

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[1] NEWMOA is a non-profit, non-partisan interstate governmental association. The membership is composed of state environmental agency directors of the pollution prevention, hazardous and solid waste, and waste site cleanup programs in Connecticut, Maine, Massachusetts, New Hampshire, New Jersey, New York, Rhode Island and Vermont.

NEWMOA's mission is to develop and sustain an effective partnership of states to explore, develop, promote, and implement environmentally sound solutions for the reduction and management of materials and waste, and for the remediation of contaminated sites, in order to achieve a clean and healthy environment. The group fulfills this mission by providing a variety of support services that:

- facilitate communication and cooperation among member states and between the states and the US EPA; and
- support the efficient sharing of state and federal program resources

to help avoid duplication of effort and to facilitate development of regional approaches to solving critical environmental problems in the region.

[2] The RCRA Corrective Action program focuses on identification of and remediation of contamination at hazard waste generator facilities and TSDFs.

Evaluating the effectiveness of the states' RCRA Hazardous Waste Programs is inherently challenging. The Program is focused on minimizing the generation of hazardous waste and preventing adverse incidents and impacts from its generation and management. The states have found quantitatively examining this kind of preventative program to be difficult, particularly under the funding limitations that the RCRA Programs have experienced during the past decade. The NEWMOA-member states undertook several steps related to development of performance measures:

- Identified the overall common goals of the state RCRA hazardous waste programs in the Region
- Examined possible performance measures to evaluate progress toward these goal
- Identified specific metrics and sources of data to assess the performance measures
- Gathered available data for analysis and presentation
- Shared the data analysis and results with the participating states for review and concurrence and prepared a final report

This project was managed by the NEWMOA member states' Waste Program Directors and an active RCRA Performance Measures Workgroup consisting of the following state and federal environmental agency managers and staff:
Connecticut DEP: Kevin Sullivan and David Westcott
Maine DEP: Cherrie Plummer and Mike Hudson
Massachusetts DEP: Beth McDonough, Jeffrey Chormann, and Susie Peck
New Hampshire DES: John Duclos, Gretchen Rule, Nancy Leland, Ray Gordon, Chris Simmers, and Vincent Perelli
New Jersey DEP: Norine Binder
New York State DEC: Paul Counterman and Sal Carlomagno
Rhode Island DEM: Sean Carney
Vermont DEC: John Miller
EPA Region 1- New England: Ken Blumberg, Ken Rota, Kathleen Lynch, and Lynn Hanifan

These state and EPA representatives have extensive expertise in RCRA regulations, data, and program elements. Most of them are involved in one or more aspects of the day-to-day implementation of the RCRA Hazardous Waste Program in their state or at EPA Region 1-New England. Throughout this three year project, NEWMOA staff briefed the state RCRA Program Directors on the progress of the project at their regular quarterly NEWMOA Directors meetings to seek their approval and guidance.

Proposed RCRA Program Goals & Performance Measures

The NEWMOA RCRA Performance Measures Workgroup started the project by examining state goals and objectives for their RCRA programs. After lengthy discussions that took place over many months, the group identified a set of common goals and ideal quantitative performance measures related to these goals, which are summarized in Table 1.

Table 1: Hazardous Waste Program Goals & Proposed Performance Measures

Goal: Hazardous waste will be stored, treated, & disposed in ways that are protective of human health & the environment	**Type of Measure**
Amount of Hazardous Waste Generated	Outcome Measure
Amount of Hazardous Waste Transported	Outcome Measure
Types of Hazardous Waste Generated	Outcome Measure
Goal: Improve RCRA Compliance & Enforcement	
Percent or Number of Hazardous Waste Handlers[3] Inspected	Activity Measure
Percent or Number of Hazardous Waste Handlers in Compliance	Outcome Measure
Percent or Number of Hazardous Waste Handlers with Minor Compliance Problems	Outcome Measure
Percent or Number of Hazardous Waste Generators in Compliance	Outcome Measure
Percent or Number of Newly Created Waste Sites as a Results of Hazardous Waste Mismanagement	Outcome Measure
Percent or Number Complaints Investigated	Activity Measure
Percent or Number of Civil or Criminal Enforcement Cases Brought Against Illegal Disposers of Hazardous Waste	Activity Measure
Percent or Number of Referrals to the Attorney General	Activity Measure
Percent or Number of Significant Non-Compliers (SNCs) Detected[4]	Outcome Measure
Percent or Number of Cases Settled, which Contain a pollution prevention (P2) or supplemental environmental project (SEP) Component	Outcome Measure
Amount of Waste Reduced From Enforcement Documents that Include Environmental Management Systems (EMS) & P2	Outcome Measure
Percent or Number of SNCs that Have been Returned to Compliance or are Otherwise Addressed	Outcome Measure
Percent or Number of Permitted, Inspected Hazardous Waste Management Facilities Operating in Substantial Compliance with State & Federal Environmental Regulations & Standards	Outcome Measure
Environmental & Public Health Benefits Achieved Through Concluded Enforcement Activities	Outcome Measure
Goal: Protect Human Health & Environment From Adverse Effects of Accidental, Sudden, or Catastrophic Releases of Hazardous Waste	
Number of Toxic (adverse) Events, including Accidents & Spills, Related to Hazardous Waste	Outcome Measure
Goal: Reduce to Insignificant Levels the Risk to Public Health, Safety, Welfare, & the Environment from the Abatement of Environmental Hazards from the Transportation of Hazardous Substances	
Percent or Number Transporters Applications Processed	Activity Measure
Percent or Number of Inspections with Violations Documented	Outcome Measure
Goal: Reduce Volume & Toxicity of Hazardous Waste	
Amount of Hazardous Waste Reduced & Recycled	Outcome Measure
Amount of Hazardous Waste Releases & Transfers Reduced	Outcome Measure
Percent or Number Large Quantity Generators that Have Changed Their	Outcome Measure

[3] "Handlers" includes hazardous waste generators; transporters; and treatment, storage, and disposal facilities (TSDFs).

[4] Significant non-compliers (SNCs) are those violators that have caused actual exposure or a substantial likelihood of exposure to hazardous waste or hazardous waste constituents; are chronic or recalcitrant violators; or deviate substantially from the terms of a permit, order, agreement, or from RCRA statutory or regulatory requirements. An actual exposure or a substantial likelihood of exposure is sufficient to satisfy this criterion.

This list of the possible program performance goals and measures that the Workgroup developed was based on a review of the measures that EPA had identified at that time and those of the states in their strategic plans, Performance Partnership Agreements (PPAs) with the US EPA, and other work plan documents.

The Workgroup categorized each of these potential measures into either an activity measure or an outcome measure. The group viewed activity measures as quantitative measures of the activities that are undertaken by the program. They are often referred to as "beans" as in "bean counting" since they represent the level of program effort without reflecting any outcomes or results of those efforts. Outcome measures are designed to evaluate the direct results or outcomes of the activities. In the case of outcomes related to hazardous waste management these could be environmental, health and safety, behaviors related to hazardous waste management and compliance assurance, or economic.

The other category of performance measures that many environmental agencies use are frequently called environmental indicators. These measures are associated with the overall quality of the environment and public health. For example, specific aspects of human health, stream water, air, soil, and groundwater are the most frequent categories related to environmental indicators, but these environmental media are often affected by multiple activities and multiples sources of pollution and are difficult to associate with one particular program or activity. This project did not focus on developing environmental indicator measures for state Hazardous Waste Programs, since an effort to develop these kinds of measures was undertaken in another project by EPA Region 1-NE in the 1990s. The Workgroup was particularly interested in the possible identification of and use of outcome measures as critical aspects of program performance measures, however, they also felt that it would be necessary to identify some important activity measures that are related to those outcomes and that would reflect the resources available to the programs.

The NEWMOA RCRA Performance Measures Workgroup used the list in Table 1 of potential performance measures to identify specific data or metrics that could be collected to implement the measures. Simultaneously, the group examined the potential sources of data from the EPA and states that are currently available to track and evaluate those metrics. The State Hazardous Waste Programs wanted to find existing sources of data to tack the proposed measures because they do not currently have resources to develop new sources of data. Table 2 presents the final list of hazardous waste program metrics that the Workgroup developed. The metrics are divided into the following groups:

- **Universe of Hazardous Waste (HW) & Its Handlers**
- **Level of Hazardous Waste (HW) Management Program Effort**
- **Hazardous Waste (HW) Program Results**

Table 2 identifies the sources of data that are potentially available on a multi-state basis to address the proposed metrics. Some states have unique data sets that they collect and

manage, but these are not universally available in the Region and, therefore, cannot be aggregated on a Regional basis.

The Workgroup found three primary sources of quantitative data for tracking the proposed hazardous waste programs metrics in the Region: the Biennial Reporting System (BRS), RCRA Information System (RCRAInfo), and state manifest tracking systems. RCRAInfo has been launched by EPA in the past year, and it combines data from the BRS with program implementation data from the states and EPA Regions (which used to be part of a data system called RCRIS). The BRS presents hazardous waste generation, management, and disposal data collected by EPA in partnership with the States and Territories on a biennial basis. In addition to BRS data, RCRAInfo now includes data on the compliance and enforcement activities of the state RCRA programs.

As soon as a drum or other quantity of hazardous waste is shipped from a generator for treatment, management, and/or disposal a manifest is created that tracks the waste from the original generator to the site where it is finally disposed. A copy of the manifest is sent to the state in which the waste was originally generated. Some states have established databases to track these manifests, and these are often called manifest tracking systems. However, a significant number of states in the Northeast are no longer entering this data into a database and tracking these manifests, in part, because of cuts in their program staff. As a result this data is not currently available for Regional compilation and analysis.

Table 2: Proposed Metrics for RCRA Hazardous Waste Programs & Potential Sources of Data

UNIVERSE OF HAZARDOUS WASTE (HW) & ITS HANDLERS	**POTENTIAL SOURCES OF DATA**
Number of hazardous waste handlers **--Large Quantity Generators (LQG)** --Small Quantity Generators (SQG) --Conditionally Exempt Generators (CEGs) **--Treatment Storage & Disposal Facilities (TSDFs) (commercial/captive)** --Number Corrective Action facilities (some TSDFs may also be corrective action facilities) **--Transporters**	**RCRAinfo, state lists, manifest tracking system**
Number of new HW handlers --LQG --SQG --CEG --TSDF (commercial/captive) --Transporters	RCRAinfo, state lists, manifest tracking system
Number of hazardous waste handlers in the existing system --LQG --SQG --CEG --TSDF (commercial/captive) --Transporters	RCRAinfo, state lists, manifest tracking system

Amount HW transported --Amount of HW recycled	**Manifest tracking system**
Amount of LQG HW generated --Average quantify/manifest --Number of manifests completed --Number of Shipments Amount of SQG & CEG HW generated --Average quantify/manifest --Number of manifests completed --Number of shipments	**RCRAInfo, manifest tracking system**
Types of HW waste generated	**RCRAInfo, manifest tracking system, waste reduction programs, inspection & enforcement staff**
Number of HW releases --over 2200 pounds --220 - 2200 pounds --under 220 pounds	State inspection & enforcement staff, special investigations
Number of HW releases discovered by the state or by third parties --over 2200 pounds --220 - 2200 pounds --under 220 pounds	State inspection & enforcement staff, special investigations
LEVEL OF HAZARDOUS WASTE (HW) MANAGEMENT PROGRAM EFFORT	
Number of HW program personnel	State program plans
Number of HW program field personnel --Enforcement --Spill Response --RCRA Sites	State program plans
Program Budget --Federal funds --State funds	State program budgets & work plans
Number of HW handlers inspected (full/partial) **--LQGs** **--SQGs** **--CEGs** **--TSDFs (commercial/captive)** **--Transporters** --Subsets in Source Water Protection Areas **--Multi-media inspections** **--**Number of corrective actions in progress --Number of facilities closed during the year	**RCRAinfo**
Number of complaints received --Referred --Investigated	State enforcement staff
Number staff days in the field --Enforcement --Spill response	State inspection, enforcement, and compliance assistance staff
Number in-office record reviews --Financial assurance reviews --Compliance assurance activities	RCRAinfo, inspection & enforcement staff

--Generator status determinations	
Number of HW manifests tracked	**Manifest tracking system**
Number of significant non-compliers (SNCs) detected **--Number of facilities** **--Number of violators**	**RCRAinfo, state inspection & enforcement staff**
Number of informal enforcement actions (i.e., NON, NOV, NOAV)[5]	RCRAinfo, state inspection & enforcement staff
Number of formal administrative enforcement cases (Any action that could result in a penalty)	RCRAinfo, state inspection & enforcement staff
Number of civil enforcement cases sent to the Attorney General Number of criminal enforcement cases sent to Attorney General	RCRAinfo, state inspection & enforcement staff
HAZARDOUS WASTE (HW) PROGRAM RESULTS	
Percent Inspections with violations (addressed by enforcement NOVs, NOAVs, NONs) **--waste identification** **--container management** **--inventory/inspection** **--employee training** **--contingency planning/preparedness** **--manifests/reporting** **--tank management**	**RCRAinfo**
Number of significant non-compliers (SNCs) returned to compliance	RCRAinfo, state inspection & enforcement staff
Number of enforcement cases settled, which contain a P2, SEP or EMS component	RCRAinfo, state inspection & enforcement staff, P2
Number of LQGs that became SQGs	Manifest tracking system

The Workgroup identified those metrics shown in bold in Table 2 as core measures that they believed were the most likely to have data available on a regional basis. The other measures are those that the programs could pursue in the future as efforts to implement program measures in the region on a consistent basis develop further.

Hazardous Waste Data Collection & Analysis

At the direction and request of the NEWMOA Directors and the Workgroup, NEWMOA staff initiated an effort to collect and analyze the data available from EPA and the states to implement the metrics listed in Table 2 and to evaluate what conclusions could be drawn. The NEWMOA Directors asked for a report that would highlight hazardous waste generation and management in the Region for 1999 and 2001 and a separate analysis of the available data on hazardous waste program activities. Starting in early 2003, NEWMOA submitted to EPA and the participating states requests for the data that

[5] Notices of Non-compliance (NON), Notices of Violations (NOV), and Notices of Alleged Violations (NOAV) are standard notices that the environmental agencies issue after an inspection in which the first instance of non-compliance is observed. These are a warning to the regulated entity that they are in violation of one or more of the state's requirements and informs them of what they need to do to be in compliance. The notices identify the violation/s that were observed, references their legal basis, outlines the activities that must the undertaken, and provides deadlines for compliance.

was available on the metrics in Table 2. Appendix A and B show the data requests that NEWMOA submitted to the EPA Region 1-New England and its Member States.

NEWMOA staff was able to compile some of the requested data from the member states, but was unable to get a full data set on most of those metrics by the end of the summer of 2003. As a result, NEWMOA focused on pulling together the available data on hazardous waste generation and management in the Region from the Biennial Reporting System (BRS). The 2001 BRS data became available in November 2003. At that point, NEWMOA prepared a draft report showing the 1999 and 2001 BRS data for the Region. However, because the reporting requirements changes between 1999 and 2001 NEWMOA was not able to examine trends in hazardous waste generation and management using BRS data. EPA Region 1-New England also provided NEWMOA with some basic data on State Hazardous Waste Program compliance and enforcement activities, particularly inspections and enforcement actions. EPA drew this data from RCRAInfo. RCRAInfo is a relatively new database that is maintained by EPA, and relies on hazardous waste program activity data submitted by the states hazardous waste compliance and enforcement programs.

Project Follow-up & Recommendations

The NEWMOA RCRA Performance Measures Workgroup put a substantial amount of work and thought into developing the proposed performance measures and the associated metrics outlined in this report and would like to suggest some next steps to the NEWMOA Directors for their consideration:

- Continue to support a regional workgroup to develop and implement the proposed RCRA program performance measures and to share ongoing efforts by the states to develop better ways of evaluating the rates of compliance in the regulated community with RCRA requirements.
- Utilize existing data available from EPA for implementing regional RCRA program performance measures in the near future; the states cannot invest in development of new RCRA program data development and implementation unless and until new resources become available.
- Identify an initial small set of high priority core readily available RCRA program performance measures from those outlined in this report and begin to implement those; the preferred measures should be those that most closely reflect the intent of the RCRA program for hazardous waste generators and management facilities—prevention of releases, spills, and accidents involving hazardous waste.
- Produce a biennial report using the performance metrics outlined in this report, where available, to evaluate regional trends in hazardous waste generation and management and to examine trends in state hazardous waste programs activities and their outcomes for use by the management and staff of the State Hazardous Waste Programs. This regional report could coincide with the publication of EPA BRS data and could be conducted in collaboration with the EPA Regional Offices utilizing the RCRA program data available from RCRAInfo.
- Continue to develop hazardous waste program outcome measures and to work with EPA to move beyond the simple counting of inspections and enforcement actions

toward an improved understanding of the overall environmental benefit and impact of these activities as well as compliance assistance.

- If and when resources allow in the future, examine opportunities to develop and implement jointly additional or alternative common program performance metrics that could be integrated into the proposed regional NEWMOA biennial report on hazardous waste in the future.

Appendix A

Data Request for the NEWMOA Member States for the "Northeast States Hazardous Waste Generation and Compliance Report"
February 24, 2003

At the request of its members NEWMOA is preparing a "Hazardous Waste Generation and Compliance" Report for the Northeast states and is interested in obtaining the following data elements from the state hazardous waste programs, if available. The purpose of this report is to help states identify potential issues associated with hazardous waste generation and management in the region and to help them improve their RCRA compliance and enforcement activities. The list below describes the data that is requested and identifies possible state sources of the information. This data request compliments a request that NEWMOA has made to EPA Region 1 for data from RCRAInfo and the Biennial Reporting System (BRS). NEWMOA is planning to try to combine the data that is provided by EPA and the states into a single report that profiles hazardous waste generation in the Northeast, hazardous waste management practices related to the waste, and compliance and enforcement efforts of the states in the region.

This data request covers the federal fiscal years 2000 (October 1, 1999 – September 30, 2000) and 2001 (October 1, 2000 – September 30, 2001). This request is being sent to the following states: Connecticut, Maine, Massachusetts, New Hampshire, New Jersey, New York, Rhode Island and Vermont. NEWMOA staff recognizes that not all of the states have all of the data that is listed in a readily available form. **The Association is particularly interested in trying to obtain those data elements that are highlighted in bold below.** This list was developed over the course of more than a year by the NEWMOA RCRA Performance Measures Workgroup with the understanding that the states would make an effort to try to obtain the requested information. If the data is not available from a participating state, they should indicate this to NEWMOA.

In addition to this quantitative data, NEWMOA requests that each state provide a one-to two-page write-up of an innovative program that they have begun to or fully implemented that tests out policy innovations for the RCRA C program. These examples of state innovation will be used in the final report to demonstrate possible future directions for the state hazardous waste programs.

1. Data Element: Amount of hazardous waste transported; how much hazardous waste was transported from generators in the state to HW management facilities in or outside of the state?
Data Source: Manifest tracking systems of the states

2. Data Element: Average quantity of large quantity generator (LQG) hazardous was shipped per manifest; what was the average quantity of waste reported on the manifests.
Data Source: Manifest tracking systems of the states

3. Data Element: Number of LQG HW manifests completed; how many HW manifests were completed by LQGs.
Data Source: Manifest tracking systems of the states

4. Data Element: Number of shipments of LQG HW; how many shipments of LQG HW were made;
Data Source: Manifest tracking systems of the states

5. Data Element: Average quantity of small quantity generator (SQG) and conditionally exempt generator (CEG) hazardous waste shipped per manifest; what was the average quantity of LQG HW reported on the manifests.
Data Source: Manifest tracking systems of the states

6. Data Element: Number of SQG & CEG manifests completed; how many HW manifests were completed by SQGs & CEGs—may be the same as 7
Data Source: Manifest tracking systems of the states

7. Data Element: Number of shipments of SQG & CEG HW; how many HW shipments by SQGs & CEGs HW were made;
Data Source: Manifest tracking systems of the states

8. Data Element: Average quantity of SQG and CEG hazardous waste per manifest; what was the average quantity of SQG and CEG hazardous waste reported on the manifests.
Data Source: Manifest tracking systems of the states

9. Data element: Amount of hazardous waste generated in the state that was recycled; how much of the HW that was generated in the state was recycled?
Data source: Manifest tracking systems of the states

10. Data Element: Number of firms changing status from LQG to SQG (or lower) & number of firms changing status from SGQ (or lower) to LQG
Data Source: Manifest tracking systems of the states

11. Data Element: Number of HW manifests that were tracked by the program
Data Source: Manifest tracking systems of the states

12. Data Element: Number of hazardous waste releases broken down by the following categories: over 2200 pounds; 220-2200 pounds; and under 220 pounds.
Data Source: state inspection, emergency response or special investigations staff

13. Data Element: Number of hazardous waste releases discovered by the state or third parties broken down by the following categories: over 2200 pounds; 220-2200 pounds; and under 220 pounds.
Data Source: state inspection, emergency response or special investigations staff

14. Data Element: Number of active Corrective Action Sites that the state was working on (these sites could be at any stage of evaluation and cleanup)
Data source: Corrective Action Program

15. Data Element: Number of hazardous waste program personnel; (including all compliance and enforcement staff and management)
Data Source: states HW programs

16. Data Element: Number of HW program field personnel, broken down by the following responsibilities: enforcement, spill response, and RCRA sites.
Data Source: state HW programs

17. Data Element: HW Program budget broken down by program elements: compliance and enforcement, corrective action, regulatory development, permitting, and any other key elements
Data Source: state HW programs

18. Data Element: Number of HW-related complaints received by the RCRA C Program
Data Source: state inspection and enforcement staff

19. Data Element: Number of HW Program staff days in the field, broken down by inspection and spill response activities
Data Source: state inspection and enforcement staff

20. Data Element: Number of enforcement cases settled that contain P2, SEP or EMS components
Data Source: state inspection and enforcement staff

21. Qualitative information on innovative RCRA C programs that have been initiated by the states to improve compliance and enforcement. This information should be provided in the form of a one-page write up that describes the initiative and any results, if they are available.

Data Request to EPA Region 1-New England for Hazardous Waste Program Data

Here is a summary of the data elements that we are interested in obtaining from RCRAInfo/BRS the following states: CT, ME, MA, NH, NJ, NY, RI and VT for the Fiscal Years 1999 and 2001:
1. Amount of LQG HW generated per year
2. Amount of SQG HW generated per year
3. Top twenty types of HW generated (as defined by waste codes) by quantity of waste
4. Amount of HW generated managed by the various available categories of waste management (i.e., treatment/disposal, recycling, etc.)

5. Numbers of Hazardous Waste (HW) handlers broken down by the following categories by the end of the fiscal year: LQGs, SQGs, CEGs (where this is available), TSDFs, Corrective Action facilities (may overlap with TSDFs), transporters
6. Number of new HW handlers in that fiscal year broken down by the following categories: LQGs, SQGs, CEGs (where this is available), TSDFs, Corrective Action facilities (may overlap with TSDFs), transporters
7. Number of HW handlers in the system at the beginning of the fiscal year: LQGs, SQGs, CEGs (where this is available) Corrective Action facilities (may overlap with TSDFs), transporters
8. Number of HW handlers inspected (full & partial): LQGs, SQGs, CEGs (where this is available), TSDFs, Corrective Action facilities (may overlap with TSDFs), transporters. Can the database distinguish multi-media inspections?
9. Number of HW handlers closed during the year
10. Number of corrective actions in progress during the year
11. Number of in-office record reviews that occurred during the year
12. Number of SNCs identified during the year: break down into number of facilities and number of violators (would these be different?) (This may have to have the caveats about the issues related to the definition of SNC)
13. Number of informal enforcement actions (i.e., NONs, NOVs, NOAVs) filed during the year
14. Number of formal administrative enforcement cases (any action that could result in a penalty) that was filed during the year
15. Number of civil enforcement cases sent to the AG during the year
16. Number of criminal cases sent to the AG during the year
17. Total number of inspections that occurred during the year
18. Number of inspections that identified violations (addressed by an enforcement step, including letters of violation) that occurred during the year broken down by violation (if possible) in the following categories:
-- waste identification
-- container management
-- inventory/inspection
-- employee training
-- contingency planning preparedness
-- manifests/reports
-- tank management
19. Number of SNCs returned to compliance during the year
20. Number of SEP settlements negotiated during the year

Is the following data available from RCRAInfo?

- Percent of HW managed at inspected TSDFs operating in significant compliance per year
- Percent of HW generators implementing improvements in waste management practices during the year
- Number of reported environmental releases and quantities of HW released by HW handler type per year