Office of Inspector General

Audit Report

SUPERFUND

Region 1's Implementation of Superfund Administrative Reforms

E1SFF7-01-0036-8100254
September 29, 1998

Inspector General Division Conducting the Audit:	**Eastern Audit Division Boston, Massachusetts**
Region Covered:	**Region 1**
Program Offices Involved:	**Office of Site Remediation & Restoration** **Office of Environmental Stewardship**

September 29, 1998

MEMORANDUM

SUBJECT: Audit of Region 1's Implementation of Superfund Administrative Reforms
Audit Report No. E1SFF7-01-0036-8100254

FROM: Paul D. McKechnie /s/
Divisional Inspector General
Eastern Audit Division

TO: John P. DeVillars
Regional Administrator
EPA - Region 1 - New England

Attached is our audit report, *Region 1's Implementation of Superfund Administrative Reforms*. While this report was based upon a review of Region 1 activities, its conclusions and recommendations are important to both Region 1 and Headquarters.

This audit report represents the opinion of the OIG. Final determinations on matters in this audit report will be made by EPA managers in accordance with established EPA audit resolution procedures. Accordingly, the findings contained in this audit report do not necessarily represent the final EPA position.

In this particular audit, the OIG did not measure the audited offices' performance against the standards established by the National Contingency Plan (NCP). The findings contained in this audit report are not binding in any enforcement proceeding brought by EPA or the Department of Justice under section 107 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) to recover costs incurred not inconsistent with the NCP.

ACTION REQUIRED

In accordance with EPA Order 2750, you as the action official are required to provide this office a written response to the audit report within 90 days. Your response should address all recommendations, and include milestone dates for corrective actions planned, but not completed.

We have no objection to the release of this report to the public.

Should you or your staff have any questions about this report, please contact Linda Fuller, Team Leader at (617) 565-3160.

Attachment

Distribution: Appendix 3

EXECUTIVE SUMMARY

PURPOSE

Superfund critics often asked “Why does it take so long and cost so much?” As a result, the Agency has been continually seeking ways to make the Superfund process faster, fairer and more effective. We analyzed some of the actions taken by the Agency in order to answer the following questions:

- Has Region 1 been consistently implementing reforms at sites when appropriate?
- Is the use of presumptive remedies expediting the cleanup process?
- Can the impact of Superfund reforms be measured?

RESULTS IN BRIEF

Region 1's use of various Superfund reforms helped achieve the Agency’s goals to improve the equity and effectiveness of the Superfund process. However, we were unable to document an overall improvement in expediting the Superfund process from listing on the National Priorities List (NPL) to construction completion (pipeline). Prior to the initiation of Superfund reforms, Region 1 sites took an average of seven years and two months to reach construction completion. Afterwards, the average time increased to nine years and 11 months. We found there were tradeoffs in implementing the reforms. Improved equity or community buy-in may come with the price of additional time spent in the pipeline. Such additional time may or may not equate to increased costs. Evaluating and measuring the impact reforms had on the cleanup process was not required of the Region. We found that Regional staff had ideas and suggestions about the impact reforms had in the process. In our opinion, capturing these ideas and suggestions to measure which reforms had a positive or negative effect on the entire cleanup process would allow the Agency to make better informed decisions regarding the

value of the reforms. We believe the Region and Headquarters should coordinate an effort to measure reform performance. Such measurements should carefully examine how reforms promoting equity and effectiveness have impacted attaining the goal of expediting the cleanup process. Based on our review, we believe the goal to expedite the cleanup process has not been achieved. The regions can provide the practical knowledge that comes from implementing the reforms and provide suggestions to further improve the goals of providing a faster, fairer and more effective Superfund program.

Region 1 Actively Implemented Reforms

Region 1 successfully piloted and implemented various Superfund reforms. Benefits such as increased equity, cost savings, and community buy-in were achieved. Region 1 was one of the few regions to aggressively implement the Updating Remedy reform, saving $75 million at 11 sites. Use of enforcement reforms such as de minimis, mixed funding, orphan share, and alternative dispute resolution (ADR) provided greater equity to the Superfund process. In one case, the use of a Community Advisory Group, another reform, resulted in not only community consensus but also a significant cost savings of approximately $45 million by the adoption of a new remedy. However, these successes also came with a price. It took five years for the Community Advisory Group to reach consensus. Enforcement reforms in particular required greater detailed information and documentation, thus increasing the amount of time a site spent in the pipeline. Based on their experience, Regional enforcement staff provided suggestions to prevent delays in implementing enforcement reforms.

Region 1 Needs to Assess the Impact of Presumptive Remedies on the Cleanup Process

Presumptive remedies were developed to streamline the Remedial Investigation/Feasibility Study (RI/FS) process, thus saving time and costs. We found, however, that this reform did not always expedite the Superfund process as

envisioned. Remedial Project Managers (RPMs) believed the use of presumptive remedies provided a more focused RI/FS and promoted consistency. However, the RI/FS phase for most sites using this reform took longer than the 18 month completion goal set by Headquarters. The Agency had not developed a plan to evaluate the use of this reform. As a result, there was no assurance that the use of presumptive remedies actually saved time or money. Additionally, the RPMs said they were unable to quantify time or cost savings which they believed resulted from the use of the reform. Without formal measurements and evaluations, it is difficult to identify why the time savings were not realized so that appropriate corrections can be made.

RECOMMENDATIONS

We recommend that you instruct the Regional enforcement staff to work with Headquarters Office of Enforcement & Compliance Assurance (OECA) staff to determine the feasibility of implementing Regional recommendations which could help to expedite the Superfund enforcement process.

We also recommend that you instruct your Office of Site Remediation & Restoration staff develop an evaluation plan to determine if the use of presumptive remedies is achieving its desired results. This evaluation should be coordinated with Headquarters as part of its analysis of Superfund Reforms to measure the qualitative and quantitative impacts on the cleanup process.

REGION 1 COMMENTS

Region 1 was pleased to note that the audit findings confirmed that the Region used reforms and contributed to the Agency's goals of improving equity and effectiveness in program implementation. However, the Region did not believe the OIG used the appropriate analysis to determine if the reforms were expediting the process. Region 1 along with Headquarters program staff provided written comments to our August 20, 1998 draft report. Their responses have been summarized at the end of Chapters 2, 3, and 4. The

complete Regional and Headquarters responses have been included as Appendices 1 and 2. An exit conference was held with Region 1 officials on September 23, 1998.

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ABBREVIATIONS

ADR	Alternative Dispute Resolution
CCL	Construction Completion List
CERCLA	Comprehensive Environmental Response Compensation and Liability Act
CERCLIS	Comprehensive Environmental Response Compensation Liability Information System
EAD	Eastern Audit Division
EE/CA	Engineering Evaluation/Cost Analysis
EPA	U.S. Environmental Protection Agency
FMFIA	Federal Managers' Financial Integrity Act
HAD	Headquarters Audit Division
IMC	Information Management Coordinator
NPL	National Priorities List
OECA	Office of Enforcement and Compliance Assurance
OIG	Office of Inspector General
OSRE	Office of Site Remediation Enforcement
OU	Operable Unit
PCB	Polychlorinated Biphenyls
PRP	Potential Responsible Party
RD/RA	Remedial Design/Remedial Action

RI/FS	Remedial Investigation/Feasibility Study
ROD	Record of Decision
RPM	Remedial Project Manager
SACM	Superfund Accelerated Cleanup Model
SARA	Superfund Amendments and Reauthorization Act of 1986
TAG	Technical Assistance Grant

CHAPTER 1
INTRODUCTION

PURPOSE

The Superfund program has often been criticized as being unfair, too expensive and taking too long. The Environmental Protection Agency (EPA) developed Superfund reforms to address that criticism. The Office of Inspector General conducted an audit of Region 1's Superfund administrative reforms.

The objectives of our audit were to answer the following questions:

- Has Region 1 been consistently implementing reforms at sites when appropriate? (See Chapter 2)
- Is the use of presumptive remedies expediting the cleanup process? (See Chapter 3)
- How well did Region 1 measure the impact of Superfund reforms? (See Chapter 4)

BACKGROUND

In 1980 Congress passed the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), commonly known as Superfund, to clean up highly contaminated hazardous waste sites.

In the past, the Superfund program had been criticized because of the pace and the cost of cleaning up hazardous waste sites, the extent to which these sites were cleaned, the fairness of EPA's approach for holding waste contributors liable for cleaning up sites, and the role of States and communities in the cleanup process.

In response to criticism, the Administration committed to make clean up of toxic waste sites faster, fairer, and more efficient. Thus, began three rounds of Superfund

administrative reforms. The reforms consisted of various initiatives and pilots that were implemented by the regions. In June 1993, the Agency announced the first round of administrative improvements. These administrative reforms were designed to improve the pace, cost and fairness of the Superfund program and expand the public involvement. Round one consisted of 17 reforms, nine new initiatives and eight continuing initiatives.

The second round of reforms was announced in February 1995. Round two consisted of 12 administrative reforms which focused on the following areas: enforcement, economic development, community involvement and outreach, environmental justice, consistent program implementation and State empowerment.

In October 1995, EPA announced the third and final round of reforms. This round consisted of 20 reforms designed to make cost-effective clean up choices that protect public health and the environment, reduced litigation and transaction cost, and insured that States and communities were more informed and involved in clean up decisions.

To complement and expand upon the national reforms announced by EPA, Region 1 outlined six Superfund initiatives on February 21, 1995. The goals of these initiatives were to promote faster cleanups and quicker, fairer settlements.

SCOPE AND METHODOLOGY

We performed our audit in accordance with Government Auditing Standards (1994 Revision) issued by the Comptroller General of the United States for program audits with the exception of the field work standard on management controls. We did not assess the validity and reliability of Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) data or system controls.

We conducted our survey fieldwork from June 1997 to March 1998. The audit phase was performed from March

1998 to June 1998. As part of our evaluation, we reviewed Region 1's Fiscal Year (FY) 1995 and 1996 Federal Managers' Financial Integrity Act (FMFIA) Assurance Letters. These reports did not identify any material weaknesses or vulnerabilities pertaining to Superfund reforms.

Survey Phase

We evaluated five reforms utilized by Region 1 that were announced on February 1, 1995. These included:

- Updating Remedy
- Small Parties
- Innovative Technologies
- Community Empowerment
- Alternatives to Superfund Listing

We interviewed regional personnel including the Region 1 Ombudsman Site Assessment Manager, Updating Remedies Project Officer, Superfund Community Involvement Team Leader, Chief of the Superfund Legal Office, and Remedial Project Managers.

In addition, we obtained and reviewed EPA guidance, directives, and orders, information from the EPA Internet site, CERCLA, Superfund Amendments and Reauthorization Act (SARA), rounds one, two, and three of the Superfund reforms, regional policies on regional reform initiatives, round one closeout report, Superfund Annual Reforms Reports for FY 1996 and 1997, and General Accounting Office (GAO) reports.

We also obtained and analyzed CERCLIS data, which contained dates for designation to the NPL and construction completions.

Finally, we judgmentally reviewed five Superfund sites which used round one reforms, to determine if reforms streamlined and expedited the Superfund cleanup process. We used selection criteria such as: a high number of reforms used at

a site, sites from different States, and sites that used reforms we had not already selected. These sites included:

- Parker Landfill
- South Municipal Water Supply Well
- Saco Municipal Landfill
- Bennington Landfill
- Norwood PCB

For each of these sites, we reviewed files at the EPA Superfund Records Center to obtain site information. This information included Records of Decision (RODs), fact sheets, consent decrees, engineering evaluation/cost analysis (EE/CA), RI/FSs, non time critical actions (NTCRA) and explanations of significant differences (ESD). We also interviewed the RPM for each site to determine their methodology for selecting reforms, evaluating success of reforms, and documenting cost and time savings as a result of reforms.

Audit Phase

To determine if Region 1 had been consistently implementing reforms where appropriate, we judgmentally selected nine sites from the listing on the NPL. In our selection criteria we excluded those sites that used round 1 reforms, and sites where construction was completed before June 1993. We reviewed ROD information, and fact sheets from the EPA Superfund Records Center. In addition, we interviewed the RPMs to determine which reforms were used (if any).

To determine if presumptive remedies expedited the cleanup process, we analyzed and reviewed ROD information, and fact sheets from the EPA Superfund Records Center, and CERCLIS data pertaining to the site. We interviewed RPMs to determine why the RI/FS took longer than 18 months.

To determine how enforcement reforms impacted the time a site spends in the Superfund process, we interviewed Regional as well as Headquarters staff and reviewed the OIG Headquarters Audit Division (HAD) memorandum on

the Remedial Design/ Remedial Action (RD/RA) (Report No. 8400015).

In order to determine how long a site was in the Superfund process, we subtracted the date a site was listed on the NPL from the date it was listed on the construction completion report in CERCLIS.

Finally, we compared the three rounds of reforms to CERCLA to determine if the reforms significantly deviated from current law. From this review, we determined that 13 of 49 reforms closely mirrored the language of the existing law. Further, we reviewed and compared the definition and goals of the reforms to the applicable sections of CERCLA.

PRIOR AUDIT COVERAGE

The Eastern Audit Division (EAD) issued a *Special Review of Region 1's Superfund Revitalization Enforcement Pilot Projects* (Report No. 4700001, dated December 21, 1993). We reported that Region 1 Superfund staff had effectively carried out the goals and objectives of their pilot projects. We recommended improved communications with Headquarters regarding pilot status. EAD also issued a *Special Review of Superfund Revitalization Office (SRO) Administration of Enforcement Pilot Projects* (Report No. 4400037, dated March 9, 1994). We reported that the regions and Headquarters needed to develop an active partnership by sharing more information.

As previously noted, HAD issued its March 27, 1998 memorandum, “RD/RA Negotiation Time Frames” (Report No. 8400015). HAD analyzed overall trends in the length of nationwide RD/RA negotiation time frames and whether Superfund enforcement reforms affected the length of negotiations. HAD found that RD/RA negotiating time frames were longer, cumulatively, during the three years following the introduction of reforms than in the prior period.

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CHAPTER 2
REGION 1 ACTIVELY IMPLEMENTED REFORMS

Region 1 actively piloted and implemented various Superfund administrative reforms in such categories as cleanups, enforcement, and community relations. Headquarters staff singled out Region 1 as a leader in implementing alternative dispute resolutions (ADR) and updating remedies reforms. For updating remedies, Region 1 documented a cost savings of $75 million for 11 sites. Region 1's success was due to viewing the reforms as a way of doing business and setting priorities for carrying out certain reforms. However, while reforms may have improved equity or Agency processes, reforms did not appear to expedite the Superfund process in general. In fact, some reforms added time to the process.

Results of Sample

Our sampling of sites showed that Region 1 was consistently implementing the reforms. For instances when reforms were not used, the Regional staff provided reasonable explanations. Some examples of Region 1's successful implementation of reforms follow.

Updated Remedy (Cleanups) Reduced Cleanup Cost

Region 1 was one of the few regions to aggressively implement the reform to update Records of Decisions (RODs). According to the Region 1 Chief of Remedial & Restoration 1 Branch, the goal of this initiative was to encourage Regions to systematically identify and revisit remedy decisions at sites where significant new scientific information would achieve the current level of environmental protection in a more cost effective manner. In order to achieve this objective, a 100 percent review of Region 1's RODs was undertaken regardless of their dollar amounts. As a result, Region 1 claimed to have reduced cleanup costs by $75 million at 11 sites while ensuring the protection of public health and the environment.

One of the 11 sites was Norwood PCB. According to the Agency, the updated remedy saved approximately $45 million. Dramatic increases in the price of the original solvent extraction remedy, space constraints, and safety issues were some of the reasons given for updating the remedy.

Although Regional personnel documented estimated cost savings for updated remedies, there was a lack of specific national guidance on how cost savings should be calculated. This resulted in a lack of Regional consistency in the computation of cost savings because the method used to calculate these costs were at each RPM's discretion. Nationwide, computations for cost savings were left to the discretion of Regional staff. Inconsistent measures for calculating cost differences may not portray accurate cost savings for this remedy. Providing an established method for cost savings would also assist RPMs. RPMs would not have to spend time determining which method to use.

De Minimis Enforcement Reform Fully Implemented

Region 1 implemented various enforcement reforms such as de minimis settlements, mixed funding, orphan share, and alternative dispute resolution (ADR). The Director of the Policy and Program Evaluation Division, Office of Site Remediation Enforcement (OSRE), OECA stated that Region 1 was a leader in the use of ADR. Our review concentrated on the Region's use of de minimis settlements.

Region 1 offered de minimis settlements to 77 parties at five sites. According to Region 1 staff, offering de minimis settlements had evolved into a way of doing business and was no longer considered a separate reform. Part of the objective of the reform was to enter into de minimis settlements early in the enforcement process. This allowed Potential Responsible Parties (PRPs) who contributed minimal amounts of waste to a site to avoid the transaction and other legal costs they would otherwise incur by continuing in the litigation or waiting until a later time to settle.

The Region established goals for the number of de minimis settlements they wanted to make each year and reported their status to Headquarters. According to Region 1's Chief of the Superfund Legal Office, he was unaware of any other Region that had undertaken a broader initiative aimed specifically at small parties. For example, Region 1 used "plain English" correspondence, created a small parties hotline, and accumulated relevant guidance on de minimis settlement for Regional personnel.

Use of enforcement reforms provided greater fairness to PRPs. However, at times, RPMs cited these reforms as the reason for delays in the cleanup process. The Director of the Policy and Program Evaluation Division, OSRE, OECA advised us that enforcement reforms were aimed at improving equity, not timeliness. Both the Director and Regional staff acknowledged that enforcement reforms may increase the amount of time a site spends in the pipeline.

Regional enforcement staff described some of the problems which can contribute to inhibiting a timely de minimis settlement. These problems included: assembling complete waste information, devising a fair cutoff for de minimis at small quantity sites, and setting a fair settlement amount. The Regional staff added that PRPs with a larger involvement at the site may fear they will be the only ones left after a de minimis settlement and the final remedy will turn out to be more expensive than originally estimated. To guard against that possibility, the price to settle may be set so high that the very small parties will be priced out of the settlement.

According to the Regional enforcement staff, deadlines required by law are impossible to meet unless there is (1) good waste information, (2) a small number of PRPs are involved, and (3) most of the PRPs are knowledgeable about CERCLA and have the financial ability to settle with EPA. However, those ideal circumstances usually do not exist. Deadlines required by law do not allow enough time for the PRPs to resolve differences among themselves so as to form a cohesive group which can then negotiate a final

deal with EPA. Often there are defunct or insolvent parties at sites who cannot contribute to the cost of cleanup. To address this problem, the Regional enforcement staff suggested that the Agency identify orphan share as early as possible, preferably at the RI/FS phase. (Orphan share is the share belonging to the defunct or insolvent parties. EPA may agree to compensate performing parties a limited portion of the orphan share.) The Regional staff believed this would help the PRPs to get a better understanding of the potential universe of costs and to form that cohesive group which could then deal with EPA.

Developing allocations was cited as another delaying factor. In a written response to our questions, the Regional enforcement staff stated:

> *Implementation of reforms relating to allocations can have the affect [sic] of slowing the process. Gathering waste volume information, preparing it for effective presentation to PRP groups and negotiating with PRPs to reach consensus on the details of the allocation for each party in a large group is a cumbersome and very time consuming process. Pursuing allocations at landfill sites is perhaps the most difficult due to incomplete data or lack of information on the disposal practices of the PRPS [sic] over long periods of time. Poor quality or insufficient data hampers efforts to determine and defend deminimis [sic] settlements with the smaller PRPs.*

In instances where data is not complete for de minimis or allocations, the Regional enforcement staff suggested that the Agency develop standard presumptions to apply so that these reforms can be used without unnecessarily delaying the process. They believed orphan share and mixed funding provided time savings and created a favorable settlement climate.

Some other suggestions offered by the Regional enforcement staff to Headquarters included: (1) making

orphan share available to cash out situations and owners/operators, at least in some situations (e.g., municipalities who own part of a site but are not culpable), and revise the limitations that presently exist and (2) becoming more proactive in acting as a national center to which regions can refer and learn how other regions are dealing with the reforms.

RD/RA Negotiations Were Taking Longer

Delays resulting from implementation of enforcement reforms were not unique to Region 1. During assistance and advisory work done for the Agency at Headquarters, the OIG analyzed overall trends in the length of nationwide remedial design/remedial action (RD/RA) negotiation time frames for fiscal years 1990 - 1996 (RD/RA Negotiation Time Frames, March 27, 1998). The OIG analyzed whether Superfund enforcement reforms affected the length of negotiations. The OIG wanted to pinpoint the effect of major policy changes. One of the major policy changes the report noted that coincided with changes in the time frames for RD/RA negotiations was the advent of the Superfund reforms. In order to judge the effect of the Superfund reforms on the length of RD/RA negotiations, the analysts compared the length of negotiation time frames during a three year time period just before (fiscal years 1990 - 1992) and a three year time period immediately after (fiscal years 1994 - 1996) the start of the Superfund reforms, skipping the year (fiscal year 1993) in which the reforms were actually implemented. The results showed that RD/RA negotiating time frames were longer, cumulatively, during the three years following the introduction of reforms than in the prior period.

Increased Equity Can Delay Cleanup

Another example of reforms which promoted equity but increased time spent on cleanups was community involvement. The primary goal of the various community involvement reforms was to include all affected parties in the decision making process. The Agency believed early community involvement increased the equity of the Superfund program as it related to the people immediately

impacted by the site. In this way, revisions and amendments to the ROD would not be needed.

According to the Guidance for Community Advisory Groups at Superfund Sites:

> *"While recognizing that providing additional opportunities for community involvement may require additional time and slow the cleanup process down initially, EPA believes this is time well spent, and that early and effective community involvement will actually save time in the long run."*

According to the Superfund Community Involvement Team Leader, the reform initiative was measured by whether: (1) cleanup decisions reflected community input and involvement, (2) the chosen solution was a consensus decision of the community, and (3) future reuse was included in the proposed cleanup options.

Although additional time was needed at two Regional sites, benefits of reduced costs and community buy in were derived. At the Pine Street Barge Canal Site, Region 1 presented a plan in 1992 calling for a $50 million remedy at the site. Since the plan met strong opposition, Region 1 and the community council agreed to look at a new, less costly and less intrusive alternative. As a result, five years passed before a new plan was proposed. In May 1998 the remedy was estimated to cost $4.3 million. If EPA adopts this remedy, the PRPs voluntarily agree to contribute another $3 million for environmental projects selected by the community.

Although negotiations with the community council took five years, existing conditions at the site did not pose an unacceptable human health risk. In 1992, EPA determined that it was very unlikely for the contaminants to pose a threat to human health by being released into the air. The State of Vermont prohibits the use of contaminated groundwater beneath the site for drinking water. In 1993, 40 drums containing hazardous waste were removed from the

site. Studies continued at the site, but there was no evidence of any further cleanup. An October 1994 progress report stated that "previous studies performed by contractors for the EPA has concluded that there appears to be no human health risk posed by the site."

The Pine Street Barge Canal site received much attention from the Region because it met at least two of the three criteria used to measure community involvement. According to the Cleanup Plan Proposal, the Pine Street site was one of the first sites in the country where a public consensus group had been used to develop and recommend a Superfund remedy.

Reforms Did Not Speed Up Construction Completions

While use of Superfund reforms improved program equity and effectiveness, use did not expedite the time a site progressed from listing on the NPL to construction completion. Prior to the announcement of reforms, nine of 26 sites (35 percent) reached construction completion. The average time taken for these nine sites was seven years and two months. After the announcement of reforms, the average amount of time taken for the remaining 17 sites (65 percent) to reach construction completion was nine years and 11 months.

Federal Fiscal Year	Time between NPL & CCL
1992	6 Yrs. 3 Mos.
1993	8 Yrs. 11 Mos.
1994	9 Yrs. 8 Mos.
1995	10 Yrs. 11 Mos.
1996	9 Yrs. 6 Mos.
1997	9 Yrs. 9 Mos.
1998	14 Yrs. 4 Mos. *

*** Only one site construction completed at end of fieldwork for**

Even though sites have taken longer since Superfund reforms were introduced, more sites have been added or will be added to the construction completion list (CCL). There were seven construction completions in fiscal year 1997, compared to

two construction completions in each of the three previous years. According to the Information Management Coordinator (IMC) in Region 1, there were seven to nine sites projected for construction completion in 1998. The IMC believed the main reason why most of these sites reached construction completion was that they were already in the Superfund process for a period of time. Most of these sites were reaching construction completion because of the way they fell in the pipeline. After further inquiry of Superfund Branch Chiefs, the IMC reported that reforms played a minor role in sites reaching construction completion.

CONCLUSION

The Region had been actively implementing reforms. These reforms provided cost savings and greater equity to the Superfund process. However, the Superfund process was not expedited by the set of reforms we examined in Region 1. The average time a site reached the construction completion list increased from seven years and two months to nine years and 11 months since the initiation of the Superfund reforms. Enforcement reforms especially could delay the process. However, Regional enforcement staff provided suggestions to address this problem (See pages 10 and 11). We believe the Regional enforcement staff's suggestions show promise. A further evaluation of suggestions with Headquarters should be performed to determine their feasibility.

RECOMMENDATIONS

We recommend that you instruct your enforcement staff work with Headquarters staff to determine the feasibility of implementing Regional suggestions which could help to expedite the Superfund enforcement process.

REGION 1 COMMENTS

Region 1 was pleased to receive independent verification that Regional staff was using reforms and contributing to the Agency's goals of improving equity and effectiveness in Superfund.

However, Region 1 did not agree with the OIG's conclusion related to expediting the cleanup process. Region 1 did not believe it was appropriate to evaluate time lines at sites where work was initiated many years prior to the announcement of the reforms. In their opinion, calculation should begin at the point in time that a particular reform was applied to a specific cleanup phase of the sites.

On the issue of inconsistent cost estimate calculations, Region 1 wrote:

> The OIG comments relative to updating remedies indicate that there is a lack of regional consistency in how savings were calculated. Each remedy may vary slightly in the method used to calculate savings due to differences in the nature of the site and remedy. However, each cost saving calculation was consistent to the extent it included an estimate of construction costs (capital costs) saved and Operation and Maintenance (O&M) cost savings in accordance with national guidance. Also, EPA national guidance indicates that the accuracy of remedial action cost estimates in the FS are anticipated to be no better than +50/-30.

Regarding our recommendation, Region 1 responded:

> The Regional enforcement staff have been working over the years, both internally and with Headquarters staff, on efforts to expedite the enforcement process. We have been very active in our efforts to improve the enforcement program along the lines suggested and will continue those efforts.

HEADQUARTERS COMMENTS

Headquarters (and Region 1 agreed) believed it was too early to see the impact of the reforms on construction completions. Headquarters further stated:

> ... the lengthening of the time frames probably has more to do with program maturity than anything else. The Superfund program was only twelve years old in June 1993, so the average time to reach construction completion by 1993 would have to be significantly less than twelve years. In 1998 the program was 17 years old, so the average age could be longer.
>
> ... none of the reforms apply to the entire response pipeline, so its doubtful that their impact can be adequately evaluated by looking at the time it takes to go from NPL listing to construction completion. Each of the reforms was designed to addresses (sic) a different aspect of the process.
>
> ... the report faults the reforms for not accelerating the pace of cleanup at sites where work had been underway for an average of almost 8 years prior to the reforms.

Headquarters also commented that citizen groups, law suits, political interest, site size and complexity, etc. also impact the timeliness of construction completion.

Headquarters commented that implementing the suggestion made by Regional enforcement staff on making orphan share available to owners/operators "would conflict with the direction we have received from Congress on this issue."

OIG COMMENTS

In our opinion, using the NPL listing date as our starting point is valid because 98 percent of Region 1's NPL sites were listed prior to October 1, 1995 (the last round of reforms). One of the criticisms the Agency was trying to address with the reforms was the slow pace of cleanups. Few sites had been removed from the NPL.

Also, the NPL is a public document. Individuals outside the Agency can readily review this document to determine how long a site remains on the list. We believe the Agency has made great progress in addressing equity and effectiveness issues. However, Superfund is a long process and in the opinion of its critics the process must move quicker. We also believe that expediting the Superfund process still remains a significant area on which the Agency must focus more attention. We did attempt to evaluate just one segment of the Superfund process as it related to one reform (See Chapter 3). Again in this one instance, we could not document significant time savings.

Five years have passed since Superfund reforms were first announced. As we have reported in Chapter 4, many of these reforms were already a part of the law and not drastic program departures. In our opinion, sufficient time has passed for the Agency to start evaluating what it has accomplished and determining where it wants to head.

Regarding the Region's comments on the consistency of cost estimates, conversations with Headquarters staff indicated that this was a national issue, not a Regional issue. We included this information for use by Headquarters and have not made any Regional recommendations. Our review of a cost estimate prepared by Region 1 staff showed that it was reasonably prepared and documented.

Regarding comments on the audit recommendation, our recommendation is directed at continued communication between Headquarters and Regional staff on the subject issues as opposed to support for a particular suggestion.

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CHAPTER 3
EPA NEEDS TO ASSESS THE IMPACT OF PRESUMPTIVE REMEDIES ON THE CLEANUP PROCESS

We found the use of presumptive remedies had not provided all its expected benefits. RPMs believed the use of presumptive remedies provided a more focused risk assessment and feasibility study which promoted consistency. However, the RI/FS phases for most sites using presumptive remedies have taken longer than the 18 month completion goal set by Headquarters. Further, the Agency had not developed a plan to evaluate the impact of this reform. As a result, there was no assurance that the use of presumptive remedies actually expedited the process and saved time or money. Additionally, the RPMs said they were unable to quantify time or cost savings which they believed resulted from the use of the reform.

Background

The Agency's Superfund program had been criticized by Congress and the public for taking too long to decide upon remedies at sites and for the slow pace of achieving cleanups.

In 1991, the Agency began efforts to standardize parts of the remedy selection process and increased efforts to take advantage of experience at sites across the country. The Agency believed that the process of site characterization, evaluating the feasibility of cleanup options, and design may have been unnecessarily complex, site-specific and lengthy. EPA believed new efforts could save time and money and would increase national consistency of the Superfund program.

The objective of the presumptive remedies initiative was to use the program's past experience to streamline site investigation and speed up the selection of cleanup actions. Over time presumptive remedies were expected to ensure

consistency in remedy selection and reduce the cost and time required to clean up similar types of sites.

Presumptive remedies were expected to have several benefits. They limited the number of technologies considered, which should promote a more focused data collection, resulting in streamlined site assessments and accelerated remedy selection decisions which achieve time and cost savings.

Presumptive remedies were tools to help site managers to focus data collection efforts during the site investigation (e.g., remedial investigations, removal site evaluation) and significantly reduce the technology evaluation phase (e.g., Engineering Evaluation/Cost Analysis (EE/CA) and/or Feasibility Study (FS)) for certain site categories.

EPA developed various presumptive remedies for such site types as volatile organic compounds (VOCs) in soils, wood treaters, municipal landfills, and contaminated ground water. We focused on the municipal landfill presumptive remedy because it was easy to identify this site type by simply reading the name of the site (e.g. Town/City Name Municipal Landfill) on the NPL.

The Superfund Program Implementation Manual for Fiscal Year 1994 defined an RI/FS as “an investigation designed to characterize the site, assess the nature and extent of the contamination, evaluate potential risk to human health and the environment, and develop and evaluate potential remediation alternatives.” It also defined an Operable Unit (OU) as “the division of a project into meaningful work elements (events) that can be implemented on different schedules, resulting in acceleration of cleanups .” A site can have more than one OU, each with its own RI/FS.

Criteria

EPA Directive No. 9355.0-49 FS issued September 1993 for Presumptive Remedy for CERCLA Municipal Landfill states that:

the biggest savings in time and money can be realized if streamlining is incorporated at the beginning of the RI/FS process . . . this directive addresses those issues identified during the pilots and highlights streamlining opportunities to be considered during the scoping component of the RI/FS.

Headquarters Remedial Action and Contract Section staff stated that the goal to complete an RI/FS was within 18 months, but the actual average was two years.

RI/FS Completion Took Longer Than Agency Goal

For the majority of sites reviewed that used presumptive remedies, the RI/FS took significantly longer than the Agency goal of 18 months. The Region identified 13 sites which used a presumptive remedy. From CERCLIS, we determined the length of time it took to complete an RI/FS for these sites.

Completion of RI/FS Using Presumptive Remedy
1 RI/FS ≥7 years
1 RI/FS ≥4 years, < 7 years
1 RI/FS ≥3 years, < 4 years
1 RI/FS ≥2 years, < 3 years
2 RI/FS ≥1 year, < 2 years
1 RI/FS < 1 year
2 RI/FS not completed after 2 years

For seven sites representing nine RI/FSs where the Region clearly identified an OU as using a presumptive remedy, we found that six of nine (66.7 percent) took more than two years to complete the RI/FS. The remaining six of 13 sites represented 18 RI/FSs and were not identified in CERCLIS as using a presumptive remedy. Of the 18 RI/FSs, 16 (88.8 percent) took longer than two years to complete.

Municipal Landfill RI/FS Not Expedited

Region 1's use of the municipal landfill presumptive remedy did not expedite the RI/FS process. A comparison of sites which used and did not use this presumptive remedy

showed no significant difference in the time it took to complete the RI/FS. RPMs usually attributed other factors such as weather or legal action as the reason for delays rather than a problem with implementing the presumptive remedy.

Of the 13 sites the region identified as using presumptive remedies, we judgmentally selected five for review. Of the five sites none of the RI/FSs was accomplished by the Headquarters goal of 18 months. The RI/FS for two sites were completed in little more than two years and the other three were accomplished between four and seven years.

NPL SITES REVIEWED THAT USED PRESUMPTIVE REMEDY FOR MUNICIPAL LANDFILLS

Site Name	Time to Complete RI/FS	RPMs Reasons for Length of Time
Old Southington Landfill, CT	7 yrs, 20 days	Lawsuits, request for additional off-site work
Saco Landfill, ME	2 yrs, 6 mos, 25 days	Took no longer than normal
BFI Sanitary Landfill, VT	2 yrs, 1 mo, 28 days	Took no longer than normal
Bennington Landfill, VT	6 yrs, 9 mos 23 days	Additional data needed to be collected
Parker Landfill, VT	4 yrs, 7 mos 25 days	Site location in northern VT, & seasonal time to collect data

Of the five sites reviewed the RI/FSs took from two years, one month and 28 days to seven years 20 days. Even for sites which took longer than two years to complete the RI/FS, the RPMs believed the RI/FS completion time was reasonable. RPMs believed that there were extenuating circumstances, such as requests for additional offsite work, lawsuits by citizens, additional data collection, and site location which extended the RI/FS.

We reviewed five sites that did not use presumptive remedy. One RI/FS was completed in just over two years, while the others took significantly longer, between four and seven years. This completion time was similar to those sites which used presumptive remedies for municipal landfills. Two of the reasons why the RI/FSs were completed in more than two years included: State was lead in developing RI/FS and significant community involvement resulted in additional work done to alleviate community concerns.

SITES THAT DID NOT USE PRESUMPTIVE REMEDY

Norwood PCB, MA	**2 yrs, 4 mos, 8 days**
Coakley Landfill, NH (OU 1) *	**4 yrs, 9 mos, 30 days**
Central Landfill, RI *	**7 yrs, 2 mos, 14 days**
Winthrop Landfill, ME	**4 yrs, 1 mos, 23 days**
Dover Municipal Landfill, NH	**7 yrs, 5 mos, 11 days**

*** Listed by Regional Staff as Using Presumptive Remedy but according to RPMs did not.**

Benefits from Use of Presumptive Remedies

Presumptive remedies provided technical benefits to RPMs but it was unclear if time or money was saved. RPMs believed using presumptive remedies allowed them to be more focused during the risk assessment and the feasibility study. However, one RPM believed that time saved during the risk assessment phase was lost during other aspects of the cleanup (i.e. ground water studies, air monitoring, geological studies or enforcement reforms). Another RPM added that a significant amount of time was not saved during the remedial investigation phase. At one site which had already reached construction completion, the decision to write-off further action for ground water restoration was facilitated by using the presumptive remedy for Technical Impracticability of Ground Water Restoration. No RPMs documented or quantified time savings. Only one RPM estimated a cost savings, $2 million in reduced transaction costs in a PRP lead site. However, this estimate was not documented. Due to a lack of documentation, we could not

verify time or cost savings. At PRP lead sites only the PRP, not EPA, could quantify the cost savings.

According to the RPM at the South Municipal Landfill site in New Hampshire, the presumptive remedy for Technical Impracticability of Ground Water Restoration at Superfund Sites was not used because the guidance was not available earlier in the process. However, the RPM was able to use the guidance to support the decision to write-off further action for ground water restoration at this site.

CONCLUSION

The use of presumptive remedies had mixed results in Region 1. The RPMs were finding the process beneficial, but the expected benefits in time and cost savings were not always achieved or documented. EPA Headquarters gave the Regions no criteria to measure the success of the reforms and the Region had not evaluated whether the reforms were achieving their expected benefits. Evaluating the use of the presumptive remedies should help to identify why all the benefits have not been achieved and help to identify corrective action needed.

RECOMMENDATIONS

We recommend that the Office of Site Remediation & Restoration staff develop an evaluation plan to determine if the use of presumptive remedies is achieving its desired results. This evaluation should be coordinated with Headquarters as part of its analysis of Superfund Reforms to measure the qualitative and quantitative impacts on the cleanup process.

REGION 1 COMMENTS

Region 1 responded:

> Regarding municipal landfills presumptive remedies - The 18 month time period for RI/FS used by the OIG as a basis of comparison is an Agency goal. The study of three landfills conducted by Headquarters in 1996 used a national average of 51 months for the RI/FS. Current national data indicate a national

average of approximately 36 months. The current national average of approximately 36 months would be a better basis for comparison of the time to complete a presumptive remedy landfill RI/FS versus a conventional RI/FS. While we are striving for a goal, a comparison of the processes as they actually occur in the field is more representative than comparison to a goal.

The Region then stated that if the average of 36 months was used as criteria, four of the seven RI/FSs took less than three years which would be good news.

HEADQUARTERS COMMENTS

Headquarters stated:

> ... it would be more useful to simply state the average time required to complete the RI/FSs. From the data it appears that the durations have gotten shorter, but not as short as hoped.

Headquarters also commented that it was unlikely that there is a cost effective way to estimate the cost and time savings from using presumptive remedies.

OIG COMMENTS

Region 1 makes a good point in showing that 60 percent of the seven RI/FSs took less than the nation average. However, that still leaves 40 percent which were over the average. Also, it is unknown at this time the reasonableness of the national average or even of the Agency's goal of 18 months. As a result, we still present this finding and the recommendation because we believe the Agency should determine a reasonable goal to strive towards and measure actual performance against. Without such measurements, the Agency cannot determine the effectiveness of its procedures.

Regarding Headquarters comments on the feasibility of documenting time and cost savings, we made this comment to inform the reader that while such claims were made, we could not verify these claims because the necessary documentation was not developed.

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CHAPTER 4

REFORMS' IMPACT NOT FULLY MEASURED

Introduction

Our review was limited to evaluating Region 1's implementation of Superfund reforms. Overall assessment of the reforms is a Headquarters responsibility, and Headquarters should provide guidance to the regions on measuring the impact of the reforms. We provide the following solely for information. No action is required by the Region.

Measuring Reforms

The Agency has not fully measured the impact of reform use. Standardized methods for documenting cost and time savings were not developed for all reforms. Some reforms are difficult to measure because intangible benefits are expected or assumptions must be made on what actions did not happen. Another problem with measuring the impact of the reforms is that some reforms are not significantly different from what was enacted in the law. In such cases, it may be difficult to attribute a reform's use to being a "reform" or being a mandate. Without an accurate assessment, the success of the reforms cannot be effectively promoted.

Regional staff stated that Headquarters had not asked the regions to assess the success of the initiatives and they had not made an evaluation. The Regional staff also believed that since two years had passed, it was an excellent time for Headquarters to reassess the value of the reforms and determine if the reforms were going in the right direction.

The RPMs believed certain reforms saved time or money but could not always provide support for their claims because some results cannot be easily measured. As an example, the RPM at the Norwood PCB site believed use of ADR saved time and money because a mediator was able to settle disputes between the PRPs and EPA. However, the RPM said it was difficult to determine and document savings because it was unknown how long litigation would have lasted without ADR.

The updating remedies reform saved costs at various sites. However, Headquarters did not provide a standard method to calculate cost savings, leaving each RPM to determine their own method. Such an inconsistency may depict an inaccurate measure of success for this reform.

Reforms Were Interpretations of Existing Law

Many reforms could be directly traced to the Comprehensive Environmental Response Compensation and Liability Act (CERCLA). From a review of 49 reforms, 13 were found to mirror the language of the existing law. Nine of the 13 reforms (69.2 percent) were further clarifications or interpretations of the existing Superfund law. These reforms implemented approaches already included in the law. For example, de minimis was not fully utilized prior to reforms, even though it was a part of the law [CERCLA § 122(g)]. This reform is now used. Another example was community relations. These reforms merely emphasized community involvement during remedy selection, even though the law always required community involvement and was later amended to provide Technical Assistance Grants.

HEADQUARTERS COMMENTS

Headquarters provided:

> ... this comment seems to imply that 36 of the 49 reforms have no basis in law. If that is the intent of the report it should be stated explicitly, ... The simple fact is that EPA believes that all of the reforms have a basis in law, which is why they are called 'Administrative Reforms.' EPA does not have the authority to operate outside of its enabling legislation.

OIG COMMENTS

It was not the intention of the OIG to imply that any of the reforms had no basis in law. The dictionary defines "reform" as to amend or improve. Our point was that in some cases, we did not see how the Agency amended or improved what was already provided for by law. As a result, it would be difficult to measure a "reform's" impact if no discernable change had been made.

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APPENDIX 1
REGIONAL COMMENTS

**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION I
J.F.K. FEDERAL BUILDING, BOSTON, MA. 02203-2211**

MEMORANDUM

DATE: **September 17 , 1998**

SUBJ: Response to the OIG Draft Audit of Region I's Implementation of Superfund Administrative Reforms - Audit Report No. E1SFF7-01-0036

FROM: **John P. DeVillars** ***/s/***
Regional Administrator
EPA - Region I - New England

TO: **Paul D. McKechnie**
Divisional Inspector General
Eastern Audit Division

Thank you for the opportunity to review and comment on the draft audit of Region I's Implementation of Superfund Administrative Reforms. The response is presented in four parts:

Part 1 - Summary comments on the overall audit approach and recommendations;
Part II - Specific comments relating to policy implications of the recommendations;
Part III - Specific comments regarding factual accuracy; and
Part IV - Comments on the request for a Plan for Taking Corrective Action.

Part I - Summary comments of the overall audit approach and recommendations

The comments which follow are in response to the Executive Summary section of the report.

EPA response to the Purpose of the report

The audit report purpose should identify the Administrative reforms which are the focus of the audit. There have been three rounds of Administrative Reforms announced over the past five years; Round One - June 1993, Round Two - Feb. 1995 and Round Three - Oct. 1995. Rounds One and Two have been closed out. The Agency has focused most recently on Round Three Administrative "common sense" Reforms which have as general goals making the Superfund program Fairer, Faster and More Cost Effective.

EPA response to the Results in Brief

The Region is pleased to note that the audit findings confirm our use of reforms and our contribution to the Agency's goals of improving equity and effectiveness in program implementation. We have worked hard to change the way Superfund is implemented in this Region. Independent verification of success is very important to our managers and staff.

With regard to the topic of expediting the cleanup process, the Region is concerned with the audit finding that it took, on average, longer to cleanup sites after reforms than before the reforms. According to Headquarters national data , the cleanup time line (listing - construction completion) for post-reform sites is less than for sites started in the pre-reform (before 10/95) period. Regional data for all sites shows a decrease in the time line from RI start through construction complete.

Of more significance, however, we believe it is not appropriate to evaluate time lines at sites where work was initiated many years prior to the reforms being announced. In our opinion, that calculation should begin at the point in time that a particular reform was applied to a specific cleanup phase of the sites. For example, the presumptive remedy reforms evaluation time line should begin when this particular reform was used at a site during the RI/FS. The evaluation should not begin at listing. Having done this, however, you will still be left with the issue of separating out the impact of this reform in situations where additional reforms were applied to the site during the same phase of the process. This point is further expanded upon in Attachment I .

The audit findings confirm that the Region has succeeded in implementing reforms. The degree of success is a reflection of the nature of each reform, site specific applicability of reforms and the competing goals of the reforms. We do not believe that the intended benefits of all of the reforms together can be achieved simultaneously at a particular site. Indeed, it is recognized that the goals of one reform may conflict or compete with the goals of other reforms. As noted in the report, community involvement and enforcement reforms may conflict with the goal of expediting the response process at the sites you examined for that phase of the time line. In the future it will be important to evaluate the length of time it takes from the point in time the reform is initiated at the site to construction completion, for example, to determine overall impacts on the site cleanup schedule. Although there are delays at some sites during application of the reform at the particular phase of the process, future phases of cleanup may be expedited.

We recommend that the title "Region I Needs to Assess the Impact of Presumptive Remedies in the Cleanup Process" be changed to read " Headquarters and Region I -----".

EPA response to Recommendations

The Regional enforcement staff have been working over the years, both internally and with Headquarters staff, on efforts to expedite the enforcement process. We have been very active in

our efforts to improve the enforcement program along the lines suggested and will continue those efforts.

It would be helpful if you would separate out all suggestions (in the appendix) so that we could initiate appropriate follow up.

Headquarters is planning to conduct a more in-depth analysis of the Superfund Reforms. The analysis will attempt to measure the qualitative and quantitative impacts on the cleanup process and Agency decision making. An examination of the recommendations regarding presumptive remedies would be part of such an effort. We recommend that you revise your recommendation to instruct the Office of Site Remediation & Restoration (OSRR) to develop an evaluation plan to indicate that the plan be developed in conjunction with Headquarters efforts.

Part II - Specific comments relating to policy implications of the recommendations

OIG Report, Chapter 2, Region I Actively Implements Reforms

Recommendations - We recommend that you instruct your enforcement staff work with Headquarter staff to determine the feasibility of implementing Regional suggestions which could help to expedite the Superfund enforcement process.

The regional suggestions identified in the report, pages 10 & 11, are:
1) identify orphan shares as soon as possible, preferably during the RI/FS phase;
2) develop standard presumptions regarding allocations for deminimis status determinations;
3) make orphan share available to cash out situations and owners/operators and revise the limitations; and
4) Headquarters be more proactive as a national center for reforms implementation information.;

EPA Response: The Region has been actively involved on our own efforts, and with Headquarters on national efforts, to improve PRP search procedures to focus attention of an allocation based enforcement program. Regional staff were on the national workgroup and attended the national conference held in June 1998. The Region is pursuing the PRP search process in an effort to identify orphan share parties as soon as possible in the search process. The intent is to do this before the RI/FS start.

The Region has worked closely with Headquarters and DOJ in efforts to streamline the allocations process and waste volume determinations necessary to defining deminimis parties. While site specific factors and PRP attitudes on the subject vary, we believe we have advanced our understanding of the pros and cons of various approaches. Existing statutory language may limit our ability to apply standard presumptions leading to deminimis status determinations.

Headquarters has responded to a range of comments from the regions, PRPs and the public to make orphan share compensation available to cost recovery cases. The Region will take advantage of this development in an effort to expedite cost recovery enforcement cases. The Region and Headquarters have already worked together on ways to create innovative settlement

packages that go beyond the limitation of orphan share policy. These collaborative efforts will continue.

OIG Report, Chapter 3, Region I needs to assess the impact of Presumptive Remedies on the cleanup process

Recommendation - We recommend that the Office of Site Remediation & Restoration staff develop an evaluation plan to determine if the use of presumptive remedies is achieving its desired results.

EPA Response: The type of study recommended by the OIG is best done at the national level. EPA Headquarters has the larger universe of sites needed to establish a valid data base. The Region does not have enough sites to make this type of study meaningful.

Headquarters is currently conducting an in-depth analysis of time and cost savings estimates for implementing the municipal landfill, VOCs in soils, wood treaters and groundwater presumptive remedies across the country. Candidate sites have been selected and a survey instrument has been developed and distributed. Approximately 80% of the surveys have been completed and returned to Headquarters. Analysis of the survey data will begin as soon as possible.

Regarding municipal landfills presumptive remedies - The 18 month time period for RI/FS used by the OIG as a basis of comparison is an Agency goal. A study of three landfills conducted by Headquarters in 1996 used a national average of 51 months for the RI/FS. Current national data indicate a national average of approximately 36 months. The current national average of approximately 36 months would be a better basis for comparison of the time to complete a presumptive remedy landfill RI/FS versus a conventional RI/FS. While we are striving for a goal, a comparison of the processes as they actually occur in the field is more representative than comparison to a goal.

For the nine RI/FSs in the Region using the presumptive remedy at seven sites:

* two are not yet complete so the time to complete is not known; and

* of the seven RI/FSs remaining, four took less than three years (approximately the national average) and of these four, three took two years or less. This is good news.

For the municipal landfill sites, the OIG selected five sites for review. None of these were RI/FSs that took two years or less, although three were available and could have been included in the review. BFI Landfill and the Saco Landfill took approximately two years from the date of the AOC to the start of construction of the landfill cap.

As the OIG report noted, each site has factors that may impede the streamlining of an RI/FS. These factors may include enforcement issues or resistance from the public to streamlining the

site characterization for municipal landfills. These factors may be independent of the presumptive remedy process or they may be a direct result of implementation of the process.

Part III - Specific comments regarding factual accuracy

EPA Response:

Page 3 - The first line in the section entitled "Survey Phase" would be more accurate if it were changed to read - We evaluated five reforms utilized by Region I that were announced on Feb. 1, 1995.

Page 4 - In the first sentence of the first paragraph and again in the second sentence of the third paragraph the word "judgmentally" is used when referring to site selection. The reader would be better informed if the report included a listing of criteria or factors which influenced your opinion and judgement.

Page 8 - In the second and third lines of the second paragraph it would be more accurate if the text were changed to read - specific national guidance.

Page 8 - The OIG comments relative to updating remedies indicate that there is a lack of regional consistency in how savings were calculated. Each remedy may vary slightly in the method used to calculate savings due to differences in the nature of the site and remedy. However, each cost saving calculation was consistent to the extent it included an estimate of construction costs (capital costs) saved and Operation and Maintenance (O&M) cost savings in accordance with national guidance. Also, EPA national guidance indicates that the accuracy of remedial action cost estimates in the FS are anticipated to be no better than +50/-30.

Page 11 - The OIG report heading at the bottom left of the page would be more accurate if changed to read - Community Involvement Reforms Can Delay Cleanup, But Can Reduce Costs, Increase Buy-In and Save Time of the Life of the Project. The text for this section would be more accurate if the phrase in line two "increased time spent" were changed to acknowledge that initial time spent in creating community buy-in could ultimately result in an overall time saving for the cleanup project.

Page 12 - The line after the indented quote - The report would better inform the reader if it indicated who established the measures noted as items 1,2 & 3 and who did the measuring. In particular, the source of measurement item 3 should be identified.

Page 12 - The last sentence in the second full paragraph would be more accurate if changed to read - If EPA adopts this remedy, the PRPs voluntarily agree to contribute another $3 million for environmental projects selected by the community.

Page 12 - The first sentence in the last paragraph would be more accurate if changed to read -

Although negotiations with the community council took five years, existing conditions at the site did not pose an unacceptable human health risk.

Page 12 - The last paragraph would be more accurate if an additional sentence were inserted after "into the air". The new sentence would read - And, the State of Vermont prohibits the use of contaminated groundwater beneath the site for drinking water.

Page 12 - The sense of the paragraph would be more accurate if the sentences beginning " In 1993" and "Finally an October 1994" were deleted and a new final sentence inserted. The new final sentence would read - The remedy proposed for the site will address the existing ecological risk and potential human health risks.

Page 13 - Text under the heading of "Reforms Did Not Speed Up Construction Completions" would inform the reader better if it noted that measuring the cleanup time from the time of listing includes for many, if not most, sites a significant amount of time prior to the announcement of Superfund reforms. Time lines noted in the text of "seven years and two months" and "nine years and eleven months" don't seem illustrative of the point of the audit when compared to the fact that reforms were announced in 1993 (five years ago) or 1995 (three years ago). Evaluating performance from the time of site listing has the effect of holding the program responsible for achieving goals of reforms prior to the announcement of the reforms.

Page 14 - "in the already" should be changed to read - already in the.

Page 17 - Regarding the word "judgmentally". Refer to our previous comments concerning use of "judgmentally".

Page 19 - Regarding benefits and the uncertainty of RI/FS time and money saved through use of presumptive remedies - The report should acknowledge that at PRP lead sites only the PRP, not EPA, could quantify the cost savings.

Page 22 - First full paragraph - As noted previously (see comments above re: Page 8) the Region consistently used capital costs and O&M costs in evaluating savings. The text should be revised to note the response.

Part IV - Comments on the request for a Plan for Taking Corrective Action

EPA response - We would like to discuss the appropriate follow-up at our September 23, 1998 meeting. As a result of that meeting we may want to revise our earlier comments on the Executive Summary recommendations.

Headquarters provided the Region with comments on various topics in the OIG draft report. Those comments have been included as Attachment I.

If you have any questions contact George Mollineaux, Region I - Audit Coordinator (617) 565 - 3329 or Dennis Huebner, Office of Site Remediation & Restoration, Associate Director for Management (617) 918-1203.

Attachment

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APPENDIX 2
HEADQUARTERS COMMENTS

Attachment I

9/15/98

COMMENTS ON DRAFT OIG AUDIT OF REGION 1's REFORMS

14. Page i - Results in Brief - the report states that Region 1 sites took 7 years 2 months to reach construction completion prior to the reforms, and 9 years 11 months after the reforms.

Comment: The first round of reforms was announced in June 1993, so it is impossible for sites begun after the reforms were initiated to average 10 years in duration. The report's analysis has apparently categorized sites according to completion dates rather than start dates. This causes four significant problems.

First, the lengthening of the time frames probably has more to do with program maturity than anything else. The Superfund program was only twelve years old in June 1993, so the average time to reach construction completion by 1993 would have to be significantly less than twelve years. In 1998 the program was 17 years old, so the average age could be longer. In addition, many of the worst sites, sites where work began during the first years of the program, have been completed recently. These factors neither owe anything to, nor are likely to be affected by, the administrative reforms. If any programmatic adjustment affected these sites it is more likely to have been the Enforcement First initiative shifted the focus away from Fund financed cleanup and onto efforts the get the PRPs to do the work. The cleanup negotiations that were required as part of that initiative may explain the longer durations noted by this report. Prior to the Enforcement First initiative, only 35% of cleanups were conducted by PRPs. After the initiative took effect the PRP involvement climbed to over 70%, with half of those were achieved only after the very involved process of negotiating a Consent Decree.

Second, none of the reforms apply to the entire response pipeline, so it is doubtful that their impact can be adequately evaluated by looking at the time it takes to go from NPL listing to construction completion. Each of the reforms was designed to addresses a different aspect of the process. As a result, their impact of any particular reform is going to be most visible when you focus on that aspect.

Third, the first round of reforms was announced in June 1993, the second in February 1995, the third in October 1995. In each case, the reforms went into full effect in the ensuing fiscal year (FY94, FY96 and FY96 respectively). Yet the report faults the reforms for not accelerating the pace of cleanup at sites where work had been underway for an average of almost 8 years prior to the reforms.

Lastly, a difficulty that is not addressed in the report is how the analysis accounted for meaningful differences among sites. For example:

1. what was the impact of activist citizen groups or law suits;
2. was there a higher level of political interest at some sites, such as where there was a potential for lost jobs, that required more negotiation or a different remedy;
3. what is the effect of site size, remedy selection, and complexity on the length of time to reach construction completion;
4. did the number of operable units affect the amount of time required; and
5. were any of the sites affected by a failed remedy?

It would be very difficult to draw meaningful comparisons about cost or duration without taking these, and many other factors that are beyond EPA's control, into account.

15. Page ii - Based on our review , we believe the goal to expedite the cleanup process has not been achieved. The regions can provide. . . suggestions to further improve the goals of providing a faster, fairer and more effective Superfund program.

Comment: Two issues. The first sentence addresses the net effect of the "faster" goal and ignores the expected countervailing effects of the "fairer" and "more effective" goals. The reforms have overlapped, so any analysis would have to address the net effect of all three simultaneously, or focus on sites that employed reforms supporting only one. The second sentence addresses all three reform areas, but seems to say that the region can suggest improvements to the goals. Was the intent to say that the regions can suggest ways to improve performance against the goals?

Expanding on what was said in Comment 1, it is simply too early to see the impact of the reforms on construction completions. Most of the reforms address the early stages of the response and enforcement effort. Any impact the speed of cleanup that would be visible today would be seen in the time required for discreet segments of the process. The recent IG review of the time required for RD/RA negotiations is an example of a well targeted analysis.

16. Page ii - enforcement reforms in particular required greater (more?) detailed information and documentation, thus increasing the amount of time a site spent in the pipeline. Based on experience, regional enforcement staff provided suggestions to prevent delays in implementing enforcement reforms.

Comments:

a. This conclusion does not appear to be supported by the analysis presented in the report.
b. Replace "Based on experience, regional enforcement staff provided suggestions to prevent delays in implementing enforcement reforms." with "Based on their experience, regional enforcement staff provided suggestions that could prevent the enforcement reforms from slowing the pace of cleanup at individual sites."

c. An important point that is overlooked in the report is the effect of PRP lead responses on the **overall** pace of cleanup (as opposed to the time required to complete an individual site). If the Trustfund suddenly had to pay for the responses currently performed by PRPs, one of two things would have to happen. Either the pace of cleanup would fall by 2/3rds, or the Superfund budget would have to triple. For this reason, reforms that cause small to moderate delays at some individual sites are a good trade-off if they encourage PRPs to continue taking responsibility for cleanups.

4. Page iii - "...it is difficult to identify why the time savings were not realized..."

Comment: As noted above, the report focuses on the "faster" goal and finds that the goal was not attained, but neglects the possibility that simultaneous efforts to meet the other goals tended to extend the time required. In essence, the question should be whether or not the trade-off is real. Stated another way, would use of the "fairer" and "more effective" reforms have extended the time frames even further without the "faster" reforms?

5. Page iii - "...Regional recommendation which could help to expedite the Superfund enforcement process."

Comment: Please itemize these recommendations somewhere in the report.

6. Page 1 - Purpose

Comment: replace "...criticized as being too expensive and taking too long." with "...criticized as being **unfair,** too expensive and taking too long."

7. Pg. 2, last paragraph in "Background" section -

Comment: replace "Region 1 outlined five Superfund initiatives on Feb. 21, 1995. The goals of these initiatives were to promote faster cleanups and quicker, fairer settlements." with "Region 1 **decided to use** five **of the** Superfund initiatives on Feb. 21, 1995. The goals of these initiatives were to promote faster cleanups and quicker, fairer settlements."

8. Page 3 - On the list of reforms

Comment: replace "Small Parties" with "Expedited De Minimis Settlements"
Comment: Where iss "Alternatives to Superfund Listing" addressed in the analysis

9. Page 3 - Interviewed Regional Project Mangers

Comment: should this be **Remedial** Project Mangers?

10. Page 4 - "Finally, we judgmentally reviewed five Superfund sites which used round one reforms..."

    Comment: The word judgmentally is used several times throughout the report. What does it mean?

11. Page 4 - "To determine if region 1 had been consistently implementing reforms where appropriate, we judgmentally selected five sites in which we had no indication of reforms being used, and four municipal landfills."

    Comments:
    a. Again, what does judgmentally mean as used here
    b. Is this the same group of five sites listed in the previous section. If not please provide a list. If it is, please explain how they could "use round one reforms" in the first instance and have "no indication of reforms" in the second.
    c. Please mention briefly that the assessment consisted of interviews to see what rationale the RPMs offered for not using the reforms.

12. Page 4 - "To determine if presumptive remedies expedited the cleanup process, we analyzed and reviewed ROD information, and fact sheets form the EPA Superfund Records Center, and CERCLIS data pertaining to the site. We interviewed RPMs to determine why the RI/FS took longer than 18 months"

    Comments:
    a. What sites were evaluated? Was this the same 5 sites as above, or was it all sites at which the presumptive remedies reform was applied?
    a. What reasons were offered and is the additional time reasonable in light of the reason given?
    b. How many RI/FSs were in the sample, and how many of them were initiated after the reform? Was the evaluation of the reform limited to those RI/FSs that were started after the reform?

13. Page 4 - "To determine how enforcement reforms impacted the time a site spends in the Superfund process, we interviewed Regional as well as Headquarters staff and reviewed the OIG Headquarters Audit Division (HAD) memorandum on the Remedial Design/Remedial Action (RD/RA) (Report No. 8400015)."

    Comment: It appears that this portion of the analysis was principally a gathering of staff impressions and did not look at data for specific sites. Is that correct?

14. Page 5 - "Finally, we compared the three rounds of reforms to CERCLA to determine if the reforms significantly deviated from current law. From this review, we determined that 13 of 49 reforms closely mirrored the language of the existing law. Further, we reviewed and compared the definition and goal of the reforms to the applicable sections of CERCLA."

Comments:

a. Does this imply that the other 36 reforms that do not "closely mirror" the existing law?
b. Please state the purpose of comparing any of the reforms to the existing law.
c. EPA crafted all of the reforms within its interpretation of the applicable laws, that is why they are called Administrative Reforms. EPA is not allowed to operate outside of its enabling legislation.

15. Page 7 - "However, while reforms may have improved equity or Agency processes, reforms did not appear to expedite the Superfund process in general. In fact some reforms added time to the process."

Comment: Please replace with "However, while reforms may have improved equity or Agency processes, **increased fairness, and saved costs,** reforms did not appear to expedite the Superfund process in general. In fact some reforms added time to the process."

16. Page 7 - Updated Remedy - "...the goal of this initiative was to encourage Regions to systematically identify and revisit remedy decisions at sites where significant new scientific information would achieve the current level of environmental protection..."

Comment: replace with "...the goal of this initiative was to encourage Regions to systematically identify and revisit remedy decisions at sites where significant new scientific information **suggested new technologies or techniques that** would achieve the **same** level of environmental protection..."

17. Page 8 - De Minimis Enforcement

Comments

a. In the first sentence, replace "de minimis" with "expedited de minimis settlements"
b. In the second sentence, replace "Director of the Policy and Program Evaluation Division, Office of Site Remediation (OSRE)" with "Headquarters"
c. In the second paragraph replace "immaterial" with "minimal"
d. In the third paragraph, replace "The Director of the Policy and Program Evaluation Division, OSRE, OECA" with "Headquarters"
e. In the fifth paragraph, replace "larger PRP groups" with "PRPs with a larger involvement at the site"
f. In the fifth paragraph, replace "the price to settle" with "the price of de minimis settlement"
g. In the sixth paragraph, replace "a small number of PRP are involved" with "the PRPs are cooperative, or there are not too many involved"
h. In the sixth paragraph, please clarify what is meant by "deadlines required by law are impossible to meet..." There are no deadlines for *de minimis*. If the reference is to

the RD/RA 120 day negotiation deadline in the statue, this discussion should be moved to the "RD/RA Neg." section on pg. 11.

18. Pg. 10 - Regarding the discussion on allocations

Comment: The discussion of allocations is somewhat misleading. First, because it is located in the de minimis section, it creates the impression that allocations are limited to de minimis situations, which is untrue. Second, the presentation also creates the impression that allocations are stalling many projects and that Superfund has overlooked problems related to them. The report needs to balance the presentation by noting that:

a. There are only 9 allocation pilots nationwide, and only one of these pilots is in Region 1 (Old Southington Landfill, CT).
b. Allocation Pilots were designed as a test of specific proposed statutory language (in the Superfund Reauthorization Act) to see how well it could, or could not, be implemented. Superfund has already discussed the shortcomings of the SRA allocation process in several Reforms End of Year Reports.
c. Superfund is not endorsing the SRA allocation pilot process for all sites.

19. Pg. 10 - "...some other suggestions offered by the Regional enforcement staff to Headquarters included: 1) making orphan share available to cash out situations and owners/operators, at least in some situations..."

Comments: This suggestion would require careful evaluation.

a. Regarding cash out parties - the principal goal of this reform was to increase the fairness to the parties performing the cleanups. See the preceding discussion regarding the effects of losing PRP response actions. Cash out parties do not perform cleanups and are actually charged a premium. The premium compensates for the fact that cash out parties settle early and the final cost of the cleanup could be considerably higher than the estimates used to calculate their liability . De Minimis parties are already benefitting from the orphan share reform. The question is whether including the other cashout would have a negative effect on the fairness as perceived by the settling PRPs.
b. Regarding owner/operators - the SRA and other draft bills on the Hill all stated that owner/operators should not benefit from orphan share for various reasons (past owner/operators profited from what occurred at the site current owner/operators get benefits after site is cleaned up; future owner/operators should be aware of what they are getting into and not turn a blind eye, generators/transporters did not have control of waste after it got to the owner/operator site...etc.). Implementing this suggestion would conflict with the direction we have received from Congress on this issue.

20. Page 11 - RD/RA Negotiations

Comment: This segment discusses a previous OIG report, and notes that RD/RA negotiations took longer in the period after the reforms were implemented without actually stating how much longer the negotiations took or the conclusions of the cited report.

21. Page 11 - Community Involvement -

Comments:

a. First paragraph - Replace "The Agency believed early community involvement increased equity of the Superfund program as it related to the people immediately impacted by the site. In this way, revisions and amendments to the ROD would not be needed." with "The Agency believed early community involvement increased **the** equity of the Superfund program as it related to the people immediately impacted by the site, **and the additional early involvement of the community would reduce the number of ROD revisions and amendments needed."**

b. Fourth paragraph - Replace "Although additional time was needed at two Regional sites, benefits of reduced costs and community buy in were derived." with "At two Regional sites, some additional time was needed, but overall costs were reduced and the community seemed to be more satisfied that their interests were being protected."

c. Fourth paragraph - replace "At the Pine Street Barge Canal site, Region 1 presented a plan in1992 calling for a $50 million remedy at the site. Since the plan met strong opposition..." with "In 1992, Region 1 presented a plan calling for a $50 million remedy at the Pine Street Barge Canal site. When the plan met strong opposition..."

d. Fifth paragraph - replace "Although negotiations with the community council took five years, there did not appear to be any human health risk during that time." with "Although negotiations with the community council took five years, there did not appear to be **an increased** human health risk during that time."

22. Page 13 - Reforms Did Not Speed Up Construction Completions

Comments:

a. As noted earlier, not all of the reforms were intended to speed up the process. The title of this section should be revised to avoid creating the impression that hastening the construction process was the sole objective of the reforms.

b. First paragraph - replace "While use of Superfund reforms improved program equity and effectiveness, use did not expedite the time a site progressed from listing on the NPL to construction completion." with "The Superfund reforms improved program equity and effectiveness. It is unclear whether the reforms have reduced the time required for a site to progress from NPL listing to construction completion."

c. First paragraph - what group of 26 sites dose this refer to? What was the basis for their selection?

d. First paragraph - as noted earlier, the analysis in the paragraph is badly flawed. It attempts to gauge the reforms by the amount of time it took a group of sites that entered the pipeline 6-8 years before the reforms to reach construction completion. A meaningful analysis of the reforms must look at those pipeline stages that were the target of a reform AND were begun after the reform took effect. See note 22.

e. First paragraph - the previous note not withstanding, most readers would get more out of this discussion if it simply stated the average time required for sites in each of the two groups.

f. First paragraph - as noted earlier, to be meaningful this analysis must make an effort to recognize the myriad external factors (i.e., not under EPA's control) that can affect the duration of the response

g. Table - a footnote in the table indicates that there was only one FY 1998 construction completion at the end of the field work for the report. FY 1998 is now complete, so it would be reasonable to update this simple piece of data.

h. Second paragraph - replace "There were seven construction completions in federal fiscal year 1997, an increase from the previous three years when only two sites per Federal fiscal year were completed." with "There were seven construction completions in FY 1997, compared to two construction completions in each of the the three previous years."

i. Page 14 - end of the paragraph completing the prior discussion - This segment acknowledges that the reforms had little if anything to do with the time required to achieve the FY 1998 construction completions, and that those sites had been in the pipeline for an extended time prior to the reforms. This being the case, why is there an entire chapter devoted to the fact that the reforms have not had an impact on the time required to clean-up a site?

j. Conclusion - replace the entire conclusion with the following - "The Region actively implemented the reforms it chose to use. These reforms saved money and improved the equity of the Superfund process. However, as of the date of this audit, we were unable to determine whether or not the reforms had had an effect on the time required for cleanup. Although there were significantly more construction completions in FY 1997 and FY 1998 than in previous years, the response efforts at these sites were already in advanced stages when the reforms went into effect. As a result, it is unlikely that the reforms could have had a significant impact on the time required t complete these sites. Nonetheless, it does appear that enforcement reforms have the potential to delay the cleanup process, and Superfund should monitor this issue to ensure that they are satisfied with the trade-off."

k. Conclusion - the comment about regional suggestions is omitted from the suggested conclusion, above, because they have been addressed previously.

l. Recommendations - replace "We recommend that you instruct your enforcement staff work with Headquarters staff to determine the feasibility of implementing Regional suggestions which could help to expedite the Superfund enforcement process." with "We recommend that you instruct the regional enforcement staff to work with Headquarters to identify alternatives that would support the enforcement goals, increasing fairness and maintaining a high level of PRP lead response work, while at the same time minimizing the possibility that the pace of individual cleanups might be slowed. We recognize, however, that most of the cleanup work is being performed by PRPs, and that maintaining a high level of PRP involvement is critically important."

23. Page 17 - RI/FS Took Longer than Agency Goal

Comments:

a. Retitle the section "RI/FS Completion is Quicker than before, but not as quick as had been hoped."

b. As suggested above with respect to construction completions, it would be more useful to simply state the average time required to complete the RI/FSs. From the data it appears that the durations have gotten shorter, but not as short as hoped..

24. Page 17 - Municipal Landfill RI/FS Not Expedited

Comments:

a. Second paragraph - again, what does judgmentally mean?
b. Second and Third paragraphs - it would be more meaningful to most readers if you state the average RI/FS duration for the group, and how it compares to the durations of similar sites at which the presumptive remedies were not used.

25. Page 19 - Benefits from Use of Presumptive Remedies

Comment: Although we agree with the concept, given the degree of uniqueness of sites and remedies, it seems unlikely that there is a cost effective way to estimate the cost and time savings from using presumptive remedies. The simplest method would be to perform the RI/FS twice (with and without the presumptive remedy) and compare the costs and time required. But that would defeat the purpose. Another alternative is to use raw averages from groups of sites, but that ignores the impact of external factors which frequently drive both costs and time (see the partial list offered at the end of comment 1).

26. Page. 21 - Measuring Reforms - second paragraph - "The Regional staff also believed that since two years had passed, it was an excellent time for Headquarters to reassess the value of the reforms and determine if the reforms were going in the right direction."

Comment: In a November, 1997, memo entitled "FY98 Reforms Strategy" we did revisit the reforms and highlighted how they could be measured. We also prepare and annual public report showing the benefits/measures of 45 round 2 and 3 reforms. It is possible that the Regional staff interviewed are not aware of these assessments.

27. Page 22 - Reforms Were Interpretations of Existing Law -

Comments: As noted previously, this comment seems to imply that 36 of the 49 reforms have no basis in law. If that is the intent of the report it should be stated explicitly and supported with facts and interpretations that can be reviewed. The simple fact is that EPA believes that all of the reforms have a basis in law, which is why they are called "Administrative Reforms." EPA does not have the authority to operate outside of its enabling legislation.

APPENDIX 3
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