



Office of Inspector General

Audit Report

Superfund Sites Deferred to RCRA

EISFF8-11-0006-9100116

March 31, 1999

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- **Office of Emergency and Remedial Response**
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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

MAR 31 1999

OFFICE OF
THE INSPECTOR GENERAL

MEMORANDUM

SUBJECT: Superfund Sites Deferred To RCRA
Audit Report E1SFF8-11-0006-9100116

FROM: Michael Simmons *Michael Simmons*
Deputy Assistant Inspector General
for Internal Audits

TO: Timothy Fields, Jr.
Acting Assistant Administrator
for Solid Waste and Emergency Response

Attached is the subject audit report. Generally, we found that: (1) the deferral program goal has not yet been achieved, (2) many sites were inappropriate for deferral, and (3) EPA did not know the cleanup status of some sites.

In accordance with EPA Order 2750, please provide this office a written response to the report within 90 days of the report date. For corrective actions planned but not yet completed by your response date, reference to specific milestone dates will assist us in deciding whether to close this report.

This audit report contains findings and corrective actions the OIG recommends to help improve the RCRA Deferral program. As such, it represents the opinion of the OIG. Final determinations on matters in this report will be made by EPA managers in accordance with established audit resolution procedures. Accordingly, the issues contained in this report do not represent the final EPA position, and are not binding upon EPA in any enforcement proceeding brought by EPA or the Department of Justice.

Again, we would like to thank your staff for their cooperation. Should your staff have questions about this report, please have them contact Norman E. Roth, Divisional Inspector General, Headquarters Audit Division at 202-260-5113, or Bill Samuel of my staff at 202-260-3189.

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EXECUTIVE SUMMARY

INTRODUCTION

The Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) or "Superfund" was enacted in 1980 to clean up the worst abandoned or inactive waste sites in the nation. In 1984, amendments to the Resource Conservation and Recovery Act (RCRA) authorized EPA to compel owners of RCRA hazardous waste treatment, storage, and disposal (TSDF) facilities to clean up releases of hazardous wastes and constituents at their facilities. This cleanup process is referred to as RCRA corrective action. Sites that have been prioritized and in the cleanup universe are called the corrective action workload. Using authorities granted under both statutes has enabled EPA to effect cleanup of hazardous wastes at all sites--active, inactive, or abandoned.

EPA developed a policy to "...maximize the number of site responses achieved through the RCRA corrective action authorities, thus preserving the CERCLA Fund for sites for which no other authority is available."

Sites had to be subject to the corrective action authorities of RCRA Subtitle C in order to be deferred. The Agency's Superfund program has transferred cleanup responsibility for approximately 3,000 sites to the RCRA program. For the purposes of this report, we will refer to sites transferred out of Superfund as deferred sites, and the process by which this activity occurs as a deferral.

OBJECTIVES

We had three objectives.

1. Has the National Priorities List (NPL)/RCRA deferral policy achieved its goal?

2. Were the deferrals made in accordance with the policy?

3. Were procedures for deferring sites from one program to another effective?

RESULTS IN BRIEF

In our view, EPA's deferral program has not achieved its goal of effecting more cleanups using RCRA corrective action authorities. The Resource Conservation and Recovery Act Information System (RCRIS) indicates that less than 2 percent of deferred sites have been cleaned up¹. (See Appendix 6 for endnotes.) Only about 30 percent of the deferred sites are in the RCRA corrective action workload. However, many of those have cleanup activities in progress. GAO, in an October 1997, report entitled, "Progress Under the Corrective Action Program Is Limited, But New Initiatives May Accelerate Cleanups," credits the Agency for having begun cleanups at about half of the sites in the corrective action workload.

In contrast to cleanup activity in the corrective action workload, the remaining deferred sites (70 percent), are not in the corrective action workload, and are unlikely candidates for cleanup in the near future. RCRIS reported that cleanup had begun at only about 3 percent of our statistically sampled sites not in the corrective action workload.

We cannot say that deferred sites not included in the corrective action workload would have been any further in the cleanup process in the Superfund program if they had not been deferred. We can say that deferred sites which are not in the corrective action workload have a much reduced chance of being addressed. Furthermore, while not all deferred sites may pose a current threat to human health and the environment and some states may have taken cleanup actions not reflected in information we obtained, many sites may still pose serious risks. For

example, about one-third of the deferred sampled sites having Hazard Ranking System (HRS) scores not in the RCRA corrective action workload had scores high enough to be potentially eligible for placement on the NPL.

EPA needs to review and improve its policies and procedures for deferring sites. Chapter 3 discusses sites which, according to Agency policy, should not have been deferred from Superfund to RCRA. Sixty-seven percent (210 out of 313) of the sampled sites not in the corrective action workload fell into this category. Sampled sites inappropriate for deferral had been in EPA's inventory an average of about 17 years. In addition, as discussed in Chapter 4, we could not readily locate another 253 sites. For some of these sites, the states informed us that actions had been taken or were underway.

This report contains recommendations to address those sites which were inappropriate for deferral or could not readily be found, and to improve communication and decisions for future deferrals. Chief among these is our recommendation that EPA and the states conduct a cooperative effort to evaluate sites' current cleanup needs. EPA and states will need to determine which program has available resources and legal authority to address sites starting with those that pose the greatest threats to human health and the environment.

AGENCY COMMENTS

The Acting Assistant Administrator for Solid Waste and Emergency Response indicated that (1) the findings and recommendations will improve the efficiency of the deferral process, and (2) OSWER is prepared to reassess many of the site management decisions to ensure that EPA and state response efforts protect human health and the environment.

The Acting Assistant Administrator also suggested that we revise various parts of the report to clarify the issues discussed.

We made necessary revisions, and have included the full text of the Acting Assistant Administrator's comments and the OIG evaluation of the comments as Appendix 4.

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ABBREVIATIONS

CERCLA	Comprehensive Environmental Response, Compensation and Liability Act (1980)
CERCLIS	Comprehensive Environmental Response, Compensation and Liability Act Information System
GAO	U.S. General Accounting Office
HRS	Hazard Ranking System
HSWA	Hazardous and Solid Waste Amendments
NCAPS	National Corrective Action Prioritization System
NCP	National Oil and Hazardous Substances Pollution Contingency Plan
NPL	National Priorities List
OSWER	Office of Solid Waste and Emergency Response
RCRA	Resource Conservation and Recovery Act
RCRIS	Resource Conservation and Recovery Act Information System
TSCA	Toxic Substances and Control Act
TSDF	Treatment, Storage or Disposal Facility

CHAPTER 1

INTRODUCTION

OBJECTIVES

In response to a request from the Office of Solid Waste and Emergency Response (OSWER), we have performed an audit of sites deferred from the Superfund program to RCRA. We had three objectives.

1. Has the National Priorities List (NPL)/RCRA deferral policy achieved its goal?
2. Were the deferrals made in accordance with the policy?
3. Were procedures for deferring sites from one program to another effective?

BACKGROUND

CERCLA was enacted in 1980 in response to the dangers of uncontrolled or abandoned hazardous waste sites. To implement CERCLA, EPA revised the National Oil and Hazardous Substances Pollution Contingency Plan (NCP).

The National Priorities List

CERCLA requires that the NCP include a list of national priorities among the known releases or threatened releases of hazardous substances, pollutants, or contaminants throughout the United States. EPA is to revise the NPL at least annually. The principal mechanism for determining these priorities is the Hazard Ranking System (HRS). EPA calculates the HRS score by estimating risks presented in four potential pathways of human or environmental exposure: groundwater, surface water, soil and air. Numerical values are computed for each factor within the four categories to arrive at a final site score on a scale of 0 to 100. Those sites that score

28.50 or greater on the HRS are potentially eligible for the NPL.

The NPL/RCRA Policy

Since the NPL was first published as a final rule (September 8, 1983), the Agency's policy has been to defer listing sites that could be addressed by RCRA Subtitle C corrective action authorities, even though EPA has the statutory authority to list all RCRA sites that have an HRS score of 28.50 or greater. The enactment of the Hazardous and Solid Waste Amendments (HSWA) in 1984 greatly expanded RCRA Subtitle C corrective action authorities. As a result, the Agency publicized its policy to defer to the RCRA program sites subject to RCRA corrective action authorities unless and until the Agency determined that RCRA corrective action was not likely to succeed or occur promptly. The RCRA Deferral policy states that the intent of the policy was to maximize the number of site responses achieved through the RCRA corrective action authorities, thus preserving the CERCLA Fund for sites for which no other authority is available.

In 1986, EPA decided that certain RCRA waste sites would continue to be placed on the NPL and not deferred to RCRA. The sites included, among others, generators or transporters of hazardous waste, which are not required to have a final RCRA permit. In 1988, four new categories of handlers were to be considered for listing and not deferred: (1) non- or late-filers for RCRA permits [Treatment, Storage, or Disposal (TSDFs) who do not file for RCRA permits or file late]; (2) converters (TSDFs that closed or became generators only); (3) protective filers (handlers that filed as a TSDF for a RCRA permit to protect themselves from the penalties of failing to file, but were later determined not to be TSDFs); and (4) sites holding permits before the enactment of HSWA.

According to data from the Comprehensive Environmental Response, Compensation and Liability Act Information System (CERCLIS), 2,941 sites were deferred from the Superfund program. According to

deferral dates we located, these sites were deferred between fiscal years 1983 and 1997. Approximately two-thirds of the deferrals occurred as a result of the Agency's Environmental Priorities Initiative (the Initiative).

Environmental Priorities Initiative

The Initiative, which began in 1988 and ended in fiscal 1992, was designed to utilize Superfund resources to assist RCRA activities in regional offices in setting corrective action priorities. This would allow the Agency to address in a timely manner those sites that presented the greatest threat to human health and the environment. To accomplish this objective, Headquarters officials provided regional officials with a list of active storage and treatment facilities, as well as closing treatment, storage, and disposal facilities. These deferrals would be recorded in the CERCLIS inventory. Superfund resources would then be used to complete a preliminary assessment, and in some cases, a site inspection/ RCRA Facility Assessment for each site. RCRA officials would use these assessments to determine the site's priority in the RCRA corrective action workload, to estimate environmental significance, and to provide a basis for permitting or enforcement action.

Since Agency guidance does not supersede federal rule, the deferrals of the Initiative sites back to RCRA should have been consistent with criteria enumerated in 40 CFR Part 300 (the NPL/RCRA deferral policy). For this reason, we did not differentiate Initiative deferrals from non-Initiative deferrals in sample selection or for reporting purposes. We do, however, recognize that the Initiative was the cause of approximately two-thirds of the deferrals in the universe.

Archived Sites

Seven hundred and forty (740) of the 2,941 deferred facilities were classified as sites awaiting a Superfund decision (active in CERCLIS), while 2,201 were archived (inactive) from CERCLIS. EPA introduced the CERCLIS archiving effort in 1995, as part of the Agency's Brownfields Initiative on economic

redevelopment. When sites are archived, no further interest under the federal Superfund program exists. The Agency created the archive list to address the concern that sites listed in CERCLIS carried a perceived potential threat for Superfund liability (also known as the "CERCLIS stigma.") Once sites are deferred to RCRA, they should also be archived from CERCLIS, if no further federal Superfund interest exists.

SCOPE AND METHODOLOGY We conducted this audit from March 1998 to January 1999. To accomplish the objectives, we conducted fieldwork in Headquarters OSWER and in Regions 2, 3, 5, and 9. OSWER provided us with the universe of sites deferred from Superfund. From this CERCLIS data, we selected the above four regions primarily based on the total number of deferrals, the status of state corrective action authority, and the number of sites not appearing in RCRIS. The four regions selected contained over 50 percent of all sites deferred, and over 70 percent of the deferred sites which did not appear in the corrective action workload. Appendix 1 presents additional information on the scope, methodology, and prior audit coverage.

We performed our audit in accordance with the U.S. General Accounting Office's (GAO's) Government Auditing Standards, issued by the Comptroller General of the United States (1994 Revision). We also reviewed OSWER's Federal Managers' Financial Integrity Act reports for fiscal years 1997 and 1998. The reports did not identify any material weaknesses or vulnerabilities related to RCRA deferrals. We did not detect any control weaknesses except for those discussed in this report.

CHAPTER 2

DEFERRAL PROGRAM GOAL NOT ACHIEVED

Since the NPL/RCRA deferral policy was published in 1983, Superfund officials have transferred cleanup responsibility to RCRA for approximately 3,000 sites. The universe for cleanups under RCRA Subtitle C authority is called the corrective action workload. However, RCRIS indicates that less than one-third of the sites deferred from Superfund are in the corrective action workload. When we looked more closely at sites not in the workload, we found that in our four-region sample, 67 percent of the sites were inappropriate for deferral.

Although almost 3,000 sites were deferred, according to RCRIS only 49 have been cleaned up, and 32 of those cleanups were from the corrective action workload. The fact that sites were not in the corrective action workload does not mean that the sites are low or no risk. About one-third of all sites scored but not in the corrective action workload had HRS scores which were high enough to be considered for listing on the NPL.

Deferring sites to RCRA which do not meet the criteria for placement in the corrective action workload will not maximize cleanups. RCRA focuses its resources on cleaning up sites in the corrective workload. Sites not in the workload will not normally be a priority for cleanup. Because so many of these sites were inappropriate for deferral, Superfund and RCRA officials will now have to revisit and perhaps reassess and score many of them, especially those that have the greatest risk to human health and the environment.

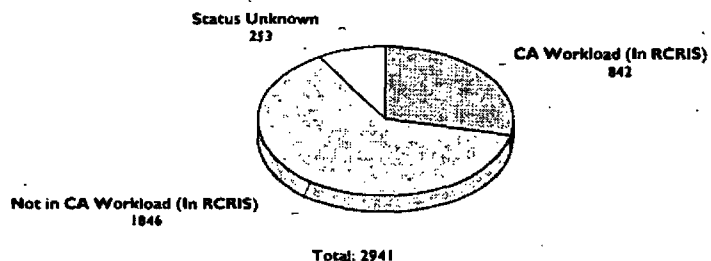
MOST RCRA DEFERRALS NOT IN THE CORRECTIVE ACTION WORKLOAD

The intent of the NPL/RCRA deferral policy was to maximize the number of site responses by using RCRA cleanup authorities. At the time the policy was developed (1983 - 1989), there were thousands of sites needing Superfund attention, but a finite amount of resources in the Fund. The policy would preserve the Fund for use on sites where there was no other cleanup authority and at the same time effect cleanup of some of these sites using RCRA corrective action authorities.

EPA has determined which facilities it considers to be its universe for cleanups under the Corrective Action Program and has identified them as the corrective action workload universe within RCRIS. Sites are in the corrective action workload because the facility owners are seeking or have a permit to treat, store, and dispose of hazardous materials. A site may also be in the workload when a facility owner volunteers to begin corrective action or when a state makes the site a priority. EPA and state resources and cleanup efforts are focused on those sites in the corrective action workload.

However, RCRA analysis of CERCLIS data from April 1998, showed that of the 2,941 sites deferred, only 842 (29 percent) were in the corrective action workload. The following pie chart shows the status of sites deferred to RCRA.

**Superfund Sites
Deferred To RCRA**



**SIXTY-SEVEN PERCENT
OF SITES
INAPPROPRIATE FOR
DEFERRAL**

We found that in the four regions sampled (which included 1,388 of the 1,846 sites not in the corrective action workload) 67 percent of the sites were inappropriate for deferral. Most were inappropriate because the facility owners were no longer seeking a permit to function as a TSDF. Therefore, these sites would not be in the corrective action workload. We learned from our sample that the sites inappropriate for deferral have been in EPA's inventory an average of about 17 years, and 29 of 108 (26%) of the sampled sites having HRS scores had scores high enough to be considered for the NPL. Chapter 3 provides a detailed discussion of the sites that were not in the corrective action workload and were inappropriate for deferral.

Further, approximately 10 percent (253) of the deferred sites did not appear in the RCRIS database. We discuss these sites in Chapter 4. Therefore, we will limit discussion for the rest of this chapter to the 2,688 sites in RCRIS—those in the corrective action workload (842) and those not in the corrective action workload (1,846).

**RCRIS INDICATES
SITES NOT BEING
CLEANED UP**

RCRIS indicates that of the 2,688 sites deferred from Superfund, 49 (less than 2%) have been cleaned up. Of these 49 sites, 32 were in the corrective action workload and 17 were not. GAO, in an October 1997, report entitled, "Progress Under the Corrective Action Program Is Limited, But New Initiatives May Accelerate Cleanups," credits the Agency for having begun cleanups at about half of the sites in the corrective action workload.

In contrast to cleanup activity in the corrective action workload, RCRIS reported that cleanup had begun at about only 3% of our statistically sampled sites not in the corrective action workload. Stated another way, 97% of the sites not in the corrective action workload have not been addressed beyond prioritization. This would be consistent with the Agency's decision to

focus resources on sites in the corrective action workload.

The fact that sites did not get in the corrective action workload does not mean that the sites contain low or no risk to human health and the environment. We reviewed HRS scores for all of the sampled sites that did not appear in the corrective action workload and found that about one-third, or 86 of the 242 sites that had been scored, had HRS scores which were high enough to be considered for listing on the NPL. We learned from our statistical sample that sites not in the corrective action workload have been in EPA's inventory for about 17 years on average.

DEFERRAL PROGRAM GOAL NOT ACHIEVED

In conclusion, the low number of completed cleanups, the low percentage of deferred sites in the corrective action workload, and the long amount of time the sites not in the corrective action workload have been in EPA's inventory with little or no activity beyond prioritization, suggest that the NPL/RCRA deferral policy has not achieved its objective. Because sites not in the corrective action workload are not expected to be addressed using corrective action "promptly" or any time in the near future, the intent of the policy would not be met and cleanup of these deferrals would not be maximized. Because so many of these sites were inappropriate for deferral, Superfund and RCRA officials will now have to revisit, and perhaps reassess and score, many of these deferred sites, especially those having the greatest risk to human health and the environment.

NEXT STEPS

The results of our audit suggest that the Agency needs to revisit many of these deferred sites. Based on our audit work, we are suggesting an approach which may enable Agency officials to prioritize their efforts to focus first on those sites which pose the greatest risk.

We suggest that Agency officials start with deferred sites not in the corrective action workload, since they are not normally a priority for RCRA. These would

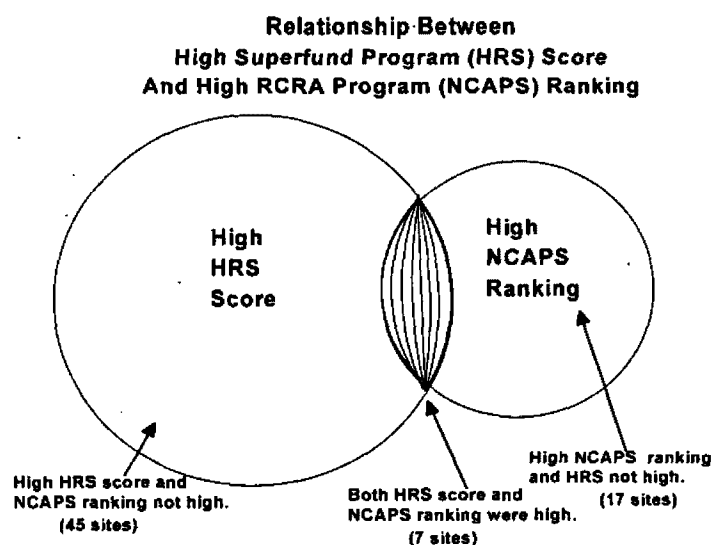
include all sites not in the corrective action workload, whether or not we considered them to be appropriate for deferral.

During our four-region review, we found that only about half of the sites deferred to RCRA had HRS scores. We would suggest reviewing unscored sites to determine the severity of the threats posed by these sites and their eligibility for listing on the NPL. Recognizing that some of the scores on scored sites may be based on old HRS criteria, updating the scores of some sites may be appropriate as well.

To complete the universe of deferred sites with HRS scores not in the corrective action workload, Superfund and RCRA officials must also locate all of the 253 status unknown sites (discussed in Chapter 4). They should determine whether they are RCRA deferrals (some in our sample were state Superfund sites) not in the corrective action workload, and score them if necessary.

Once the universe is identified, we suggest that Agency officials look first at sites that had HRS scores of 28.5 or higher, or sites that were assigned a high NCAPS ranking in RCRIS. We initially expected to find a great deal of overlap of sites ranked high in Superfund and high in RCRA because the NCAPS is based on the HRS. We did not find this to be the case. In fact, the HRS scores and the NCAPS priority rankings did not usually correlate. For example, a site with an HRS score of 28.5 or above may have been assigned a medium, low or no priority in RCRA. Conversely, there were sites with HRS scores below 28.5 with high priority assignments in RCRA. Though we did not audit for the cause of this lack in correlation, Agency officials and we speculated at an exit conference that this could be caused by the age of some HRS scores or that NCAPS rankings were amended after interim actions. Nevertheless, because we cannot be confident of this speculation, we believe that the lack of correlation in the HRS

scores and NCAPS rankings warrants consideration during this assessment process.



As the Venn diagram above illustrates, 69, or 22%, of the 313 statistically sampled sites had an HRS score of 28.5 or more or were ranked "high" in the National Corrective Action Prioritization System (NCAPS)—the RCRA method of prioritizing sites. Forty-five of these sites had an HRS score \geq 28.5, while 17 sites ranked high in NCAPS. However, only 7 of the 69 sites were a high priority in both programs (HRS \geq 28.5 and high NCAPS).

The differing assignments of site priorities, along with the low program priority of the sites not in the corrective action workload, suggests a re-examination of the prioritization of sites is needed.

Finally, we suggest that Agency officials work together with states to determine the current status of the high priority sites. Using this information, EPA and states could maximize cleanups and address the "worst sites first." As current cleanup status is identified, RCRIS should be updated.

As Agency and state officials work together to address the RCRA deferrals, we suggest a multi-

program approach, as provided for in EPA policy. Using its deferral policy, EPA intended to maximize cleanups by using a multi-program approach. The policy provided for the use of combined resources when it said "RCRA authorities may be used by themselves or in conjunction with CERCLA removal and enforcement authorities to initiate corrective action or to continue actions already begun." This allows the use of CERCLA authority at non-NPL sites. The policy also recognized that "deferred sites may later be added to the NPL if corrective action is not being taken." To maximize cleanups, EPA and states should share expertise, consider resources available, and avoid duplication of efforts.

Because there were almost 2,000 sites deferred to RCRA that are not in the corrective action workload, it may be appropriate for OSWER to reinstitute something similar to the Environmental Priorities Initiative. OSWER officials have indicated a willingness to revisit unaddressed sites. Whatever method is developed, we are in agreement that sites posing the greatest risk should be evaluated first.

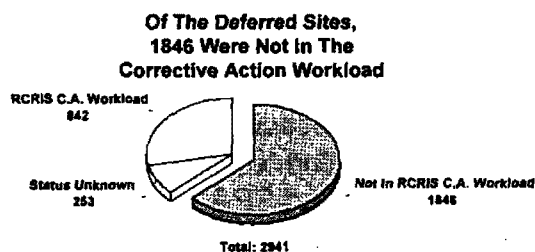
RECOMMENDATION

The Acting Assistant Administrator for Solid Waste and Emergency Response should:

2-1. Develop a method and procedures for EPA regions and the states to use to evaluate deferrals not in the RCRA corrective action workload, but which may pose risk to human health and the environment. (Note: Recommendations 3-1, 4-4, 4-6, and 4-7 should be considered when developing the method and procedures.)

CHAPTER 3

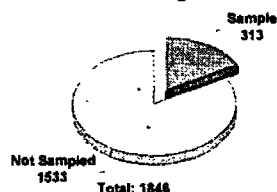
MANY SITES WERE INAPPROPRIATE FOR DEFERRAL



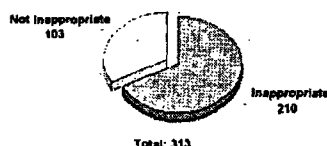
Of the 2,941 sites deferred from the Superfund program, only 842 are in the corrective action workload. As we will discuss in Chapter 4, 253 did not appear in the RCRIS database. The remaining 1,846 sites (63 percent) were deferred to RCRA, but were not part of the corrective action workload.

We took a closer look at sites not in the corrective action workload and found that in the four regions sampled, 67 percent of the deferrals were inappropriate because:

**Audit Reviewed 313 Sites
From Four Regions**



**Majority Of Sampled Sites
Were Inappropriate For Deferral**



(1) Decisions were made without sufficient communication between RCRA and Superfund program officials as to which authority would best address the site;

(2) Deferral guidance² was lacking; and,

(3) There was either misinterpretation or inconsistent application of the NPL/RCRA policy and the Environmental Priorities Initiative guidance³.

The sampled sites have been in EPA's inventory for about 17 years on average, and, according to RCRIS, less than one percent (2 of 313) of them have been cleaned up, despite the fact that a significant number of them may be NPL-caliber sites. One-hundred seven of 210 sites inappropriate for deferral had HRS scores and 29 of the 108 (26%) scored equal to or above 28.5. Because a site is not in the corrective

**67% OF SITES
INAPPROPRIATE FOR
DEFERRAL TO RCRA**

action workload does not mean that it does not pose a threat. The examples discussed later in this chapter demonstrate the need to determine the current threat to human health and the environment for sites that were inappropriate for deferral.

To review deferral decisions, we took a statistical sample of sites not falling in the RCRA corrective action workload in four regions. The regions in our sample contained 1,388 of the 1,846 sites not in the corrective action workload. By reviewing information in Superfund files on which deferral decisions were based and comparing that information to the NPL/RCRA deferral policy and related EPA guidance⁴, we concluded that approximately 67 percent of our sampled sites (210 of 313) were inappropriate for deferral.

In general terms, most of the sites determined to be inappropriate candidates for deferral had a change in permitting status. For instance, a site may have been a TSDf at the time RCRA was enacted, but then changed status to a generator only, rather than obtain a RCRA permit. This facility would be known as a converter, and according to the NPL/RCRA deferral policy, not an appropriate candidate for deferral. Appendix 2 details the reasons why the 210 facilities were inappropriate for deferral.

The following page contains a table showing the number of sites we sampled, the number we found to be inappropriate for deferral, and the projection of sites inappropriate for deferral to the universe.

Projection of Inappropriate Sites

Sample Size	Number of Inapprop. Sites	Weighted Projection of Inapprop. Sites	Universe
313	210	1003	1388

As described above, 210 of the 313 sites not in the corrective action workload were inappropriate for deferral. While some of the remaining 103 sites may have been appropriate for deferral at the time of deferral, they may now be appropriate for consideration under CERCLA, because they are not in the corrective action workload and are not planned to be addressed promptly. Appendix 3 details the information on the 103 sites.

BETTER COMMUNICATION AND ADHERENCE TO POLICY WOULD IMPROVE DECISIONS

We believe insufficient communication between Superfund and RCRA has contributed to the high percentage of inappropriate deferrals. EPA's "Guidance for Performing Preliminary Assessments Under CERCLA," (EPA /540/G-91/013) recommends that the Superfund site assessment contacts discuss with RCRA officials whether or not to proceed with Superfund investigative activities or to defer the site to RCRA. However, our file reviews and interviews with Superfund and RCRA regional officials have shown that these decisions usually have been made by Superfund staff, with only occasional input from RCRA staff. RCRA, the amendments to it, the regulations supporting it, and the guidance explaining it, make up a voluminous and complex body of knowledge which is not normally the area of expertise of those Superfund officials who have been making decisions as to whether cleanup can best be effected under RCRA or CERCLA. The complexity of

the RCRA program would seem to necessitate frequent communication on a site-by-site basis in order to make good decisions about the appropriateness and priority of the deferral.

Although the NPL/RCRA deferral policy was published as a final rule in 1983 and amended in 1989, EPA did not issue guidance covering deferrals of sites (cited above) until 1991. Sites have been deferred from Superfund to RCRA, however, since 1983. While those inappropriate deferral decisions that occurred prior to the guidance might have been reduced had it been published sooner, we found no evidence in the files referencing the guidance or its decision-making technique. For instance, the guidance included a "RCRA Eligibility Checklist" to aid Superfund officials in making a determination regarding site deferral eligibility. Yet, we found no checklists or evidence of similar decision matrices in the Superfund site assessment files.

Lastly, there was misinterpretation or inconsistent application of the NPL/RCRA deferral policy and the Environmental Priorities Initiative guidance. Under the Initiative, Superfund resources were to be used to perform enhanced preliminary assessments for some unassessed RCRA sites. Once the assessments were completed, at least one region did not adhere to the NPL/RCRA policy. Our meetings with RCRA and Superfund officials indicated confusion over which sites should be deferred. Superfund staff deferred facilities (back) to RCRA that did not always meet the deferral criteria, such as generators. One region's Initiative agreement stipulated that all facilities were to be deferred to RCRA upon completion of the site assessments. Because no consideration for the appropriateness of the deferrals was given, this stipulation was inconsistent with the NPL/RCRA deferral policy.

DEFERRED SITES MAY NEED ATTENTION

Of the 313 sites in our sample, we identified 210 as inappropriate for deferral to RCRA. For some of these sites we gathered additional information. Using data from RCRIS we checked on current status and progress toward cleanup. We found that the majority of these sites had not been addressed beyond site prioritization. In fact, only two of the 210 facilities had been reported in RCRIS as having been cleaned up.

Almost half of the sites which were inappropriate for deferral had no HRS score. For those sites that were scored, 26% of them scored high enough to be considered for listing on the NPL.

We made a further attempt to obtain current cleanup information for more than one-third of the 210 sites. We asked selected states in Regions 3 and 5 for the current status of 79 sites in their regions that were inappropriate for deferral. The 79 sites either had an HRS score of 28.5 or higher, or had no HRS score. States provided responses for 66 of the 79 sites. States indicated that only 15 of the 66 sites had RCRA corrective action underway, or state Superfund or voluntary cleanup planned, underway, or completed. It is unknown whether these cleanups meet RCRA standards. The remaining 51 of 66 sites may need cleanup.

In addition, while 41 of the 66 facilities had closed, contamination could still exist from previous operations. (We do not know whether closures were before or after cleanup, or, if after, whether RCRA cleanup standards were met for all cases.) Once the Agency verifies that RCRA standards for these facilities have not been met, RCRIS should be updated to reflect the current status.

The sites that have not been addressed by EPA or states may need attention. The two examples presented below illustrate the effect of inappropriate deferrals. Based on HRS scores, these sites could have been considered for listing on the NPL at the time of deferral. Instead, they were deferred

(inappropriately) and archived from CERCLIS (in accordance with the archiving guidance⁵). Potential threats may exist to human health and the environment for the surrounding communities.

First Example

The first site was inappropriate for deferral because it was a facility that converted from TSDF status to generator status before deferral. According to the deferral policy, this site would not be eligible for deferral because a converter would not be a priority for the RCRA program.

Nevertheless, this site was deferred to the RCRA program in 1995 after a Superfund contractor assessing the facility concluded that the facility was regulated under RCRA. Nowhere in regional files did we find evidence that Superfund officials coordinated with RCRA officials regarding the appropriateness of the deferral.

Once deferred, the site was not included in the corrective action workload because the facility was not actively seeking a permit to operate as a TSDF. Even though the site was not in the workload, it was given a "high" priority ranking in NCAPS.

According to a June 1992, Corrective Action Stabilization Questionnaire, lead contamination had migrated off site and was found in the closest of four residential wells located within one mile of the facility. The lead levels found in samples taken from the wells were four times higher than allowable tolerances under the Safe Drinking Water Act. Employees working at the facility (in 1995 there were 2,350), should be restricted from going in to the areas of contamination.

The official completing the 1992 RCRA Stabilization Questionnaire recommended that as a stabilization initiative, EPA could reduce risks to human health and the environment by providing alternate water supplies to the four residences. It also recommended further

First Example:

- Not in the corrective action workload***
- High NCAPS priority***
- HRS score above 28.5***
- Alternate water supply may be needed***
- Investigation may be needed***
- Employees may be exposed to contaminants***

investigation to define and characterize the impact of the facility on the groundwater.

We cannot tell from Superfund or RCRA files whether the investigation was completed, the alternate water was supplied, the employees were restricted from access to contaminated areas, or whether the employees have been affected by the contamination. However, the state authorized for ensuring corrective action at the facility indicated to us in December 1998 that it is devoting its limited resources, in concert with the EPA regional office, to those facilities that are high environmental priorities and are in the corrective action workload. This facility, however, is not in the corrective action workload.

The state also indicated that "...based on the RCRA corrective action priority status of most of the deferred facilities, [the state] cannot understand why most, if not all, of these facilities [deferrals in the state authorized for corrective action] were ever considered for deferral by U.S. EPA in the first place."

Second Example

The second site was inappropriate for deferral because it would not be subject to corrective action. This site is not in the corrective action workload and as of September 1998, when we conducted our regional fieldwork, RCRA had not assigned an NCAPS priority to the site.

In March 1995, Superfund officials deferred the site because it was a RCRA facility. As with the previous example, we found no evidence in the files that Superfund officials had coordinated with RCRA officials regarding the appropriateness of the deferral.

The facility has a history of non-compliance. In order to perform a site inspection, state personnel had to obtain a search warrant. In addition, based on an anonymous call, state personnel witnessed the dumping of substances believed to contain cyanide, barium, and trichloroethylene into the ground near the facility's plant. According to state personnel, no

Second Example:

- Not in the corrective action workload***
- No NCAPS priority***
- HRS score above 28.5***
- History of non-compliance***
- Suspicion of groundwater contamination***
- Groundwater is town's only source of drinking water (pop. >10,000)***

cleanup action was ever taken because samples showed that the cyanide in the groundwater samples was below the levels needed to take an enforcement action. However, concerns that barium and trichloroethylene may have contaminated the groundwater remain. The groundwater is the only source of drinking water for the town (population 10,000).

It appears that, just prior to the 1995 deferral decision, Superfund officials were considering performing a listing site inspection, the results of which would be used to determine whether to list the site on the NPL. In January 1999, the same month in which we received information about the status of the site, the state sent a letter to the facility requesting an investigation of the site.

As the two sites demonstrate, inappropriately deferred sites can have serious environmental problems, yet not fall within the corrective action workload. Human health and the environment may still be threatened because neither EPA nor the states have identified beyond site prioritization the extent to which cleanup is needed.

CONCLUSIONS

Almost 3,000 sites have been deferred from the Superfund program to RCRA, yet less than one-third are in the corrective action workload. A four-region statistical sample of sites in the RCRA program but not in the corrective action workload has shown that 67 percent of these sites were inappropriate for deferral. Decisions to defer can be improved by better coordination and communication between the two programs and better adherence to the NPL/RCRA deferral policy and guidance.

The effect of these inappropriate deferrals can be serious. Twenty-six percent of the sites inappropriate for deferral and having HRS scores were potentially eligible for listing on the NPL. Yet RCRIS shows that less than one percent of these sites (2 of 210) have been cleaned up. The sampled sites have been in

EPA's inventory for an average of about 17 years. The extent to which human health and the environment may be threatened currently is unknown.

RECOMMENDATIONS

The Acting Assistant Administrator for Solid Waste and Emergency Response should:

3-1. In cooperation with the states, assess the sites that were inappropriate for deferral. Develop criteria to determine which of them will be evaluated, update site characterizations, prioritize the sites, and identify the best legal authority and available resources to effect cleanup.

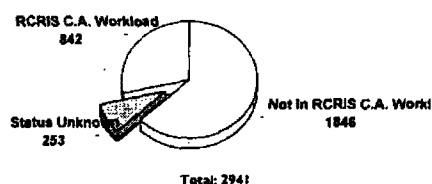
3-2. Reemphasize the need for communication and collaboration between Superfund and RCRA regional officials prior to deferring sites from one program to another. Restate the criteria for deferring sites, and require regions to maintain written documentation (for example, the deferral checklist) which shows that the decision to defer has been agreed to by both programs. Sites should not be considered deferred, or coded as such in respective information systems, until written acceptance of the proposed deferral(s) by the receiving program is obtained.

CHAPTER 4

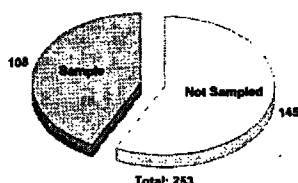
EPA DID NOT KNOW CLEANUP STATUS OF SOME SITES

DEFERRED SITES NOT IN RCRIS

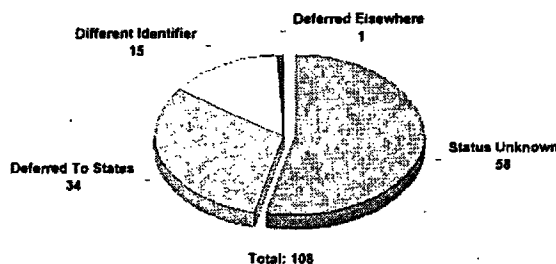
Of The Deferred Sites,
Status Was Unknown For 253



Audit Reviewed 108 Sites
From Four Regions



Status Was Discovered For
Many, But Not Most, Sites Sampled



Chapter 3 discussed sites in the RCRIS data base which were inappropriate for deferral to RCRA. However, almost 10 percent (253) of the total number of Superfund deferred sites were not found in the RCRIS database. We attribute this to system incompatibilities (between RCRIS and CERCLIS), insufficient communication between the two programs, and weak deferral procedures. As discussed later in this chapter, not all of these sites would be expected to be found in RCRIS because they were not intended to be deferred to the RCRA program. In addition, Agency officials indicated that some of these sites may never have handled hazardous wastes and would not appear in RCRIS. We agree this is possible. However, information found in the Superfund files for sites not found in RCRIS indicated that some of these sites were part of the Initiative program or had notified EPA that they handled RCRA hazardous waste. We also found misidentified sites that were handlers of RCRA hazardous waste. While these sites were originally not identified in RCRIS under one site identification number, they were in RCRIS under another.

If our four region sample of the sites not appearing in RCRIS holds true nationwide, about 31 percent (34 of 108 sampled sites) of these sites have HRS scores high enough to be potentially eligible for listing on the NPL. Since these sites may still pose risks to human health and the environment, they should be of continued federal interest. Yet EPA is generally unaware of the status of cleanup, and is not monitoring cleanup progress. By following up at the state level, we were able to get limited status information on many of these sites.

The four regions we reviewed contained 154 of the 253 sites not appearing in RCRIS. We included 108 of them in our sample. By reviewing regional files and automated systems, we were able to locate 50 of the 108 sites as shown below.

Disposition of Sampled Sites

Disposition	Number of Sites
ID Number Changed	15
Deferred to Another EPA Program	1
Deferred to States	34
Unknown	58
Total	108

ID Number Changed

Fifteen (15) of the 108 sites did not retain the same site identification (ID) numbers in RCRIS that they had in CERCLIS. For example, adjacent properties owned by the same company were given two site identification numbers in CERCLIS. When the sites were deferred and entered into RCRIS, RCRA officials consolidated the sites into one and issued a new site identification number. The 15 sites in this category are being tracked in RCRIS, albeit under new site identification numbers. Because there is no crosswalk between the two automated systems, Agency officials will have to manually search program files to ensure that all deferred sites are accounted for.

Deferred to Another EPA Program

One of the 108 sampled sites was deferred to the Toxic Substances and Control Act (TSCA) program for monitoring. In this case, the RCRA deferral code was recorded in CERCLIS because there was no code for deferring a site to another EPA program.

Deferred to States

Thirty-four (34) of the 108 sites were intended to be deferred to state, not RCRA, authorities. However, there was no code in CERCLIS to indicate deferral to states.

We identified the deferral to states coding problem in the OIG audit report entitled, "State Deferrals: Some Progress, But Concerns for Long-Term Protectiveness Remain" (Report No. 8100234, September 10, 1998). In response to this report, EPA officials indicated that a code for state deferrals was being developed. The fiscal 99/00 Superfund Program Implementation Manual issued in July 1998, indicated the development of the state deferral code.

Thirteen of the 34 state deferrals scored low enough that no further remedial action would have been planned. In these cases, a No Further Remedial Action Planned (NFRAP) code should have been entered in CERCLIS.

Seven of the 34 state deferrals were not scored. Because of this, we cannot determine whether any federal interest exists at these sites.

Regions 3 and 5 contained five of the seven unscored sites. We followed up with nine states in these regions. State officials indicated that two cleanups were underway, the state had no information on two of the sites, and the state did not provide a response for the remaining site.

Fourteen of the 34 state deferrals scored high enough (HRS score equal to or above 28.5) to merit federal interest. The May 3, 1995, OSWER Directive 9375.6-11, entitled "Guidance on Deferral of NPL Listing Determinations While States Oversee Response Actions," requires a written agreement between EPA and the states for cleanup of sites where a federal interest exists. The agreement would specify the activities a state will perform and the reduced level of oversight EPA would provide. Before the May 1995, guidance, and the pilot state deferral program that

preceded it (from 1993-1995), there were no provisions to defer sites to states where a federal interest existed. Of the 14 state deferred sites which scored high, 10 were deferred prior to the pilot deferral program, 3 were deferred after the guidance was published, and 1 had no deferral date. We could not find any written agreements for these 14 state deferrals.

The following example shows why a written agreement is important. One of the Superfund deferrals scored well above the minimum requirement to be listed on the NPL and was located in a state not authorized for corrective action. Superfund site assessment personnel indicated that the state was going to take the lead on cleaning up the site. However, the state changed its priorities and shifted resources to another state program. When the site was deferred, the state appeared to have good intentions to enforce cleanup, but according to the EPA Superfund site assessment manager, the cleanup has stalled. A written agreement would have committed state resources for cleanup, established cleanup milestones, and committed EPA to monitor progress against the milestones. These assurances might have prevented the cleanup being stalled.

We followed up on the status of these 14 sites with high HRS scores. Information from state officials and a state database showed that two sites had been cleaned up, three cleanups were underway, and three were in the inventory for cleanup. For the remaining six sites, we either received no response or found no information in the state database.

OSWER officials told us the sites were not formally deferred to states and were incorrectly coded as deferred to RCRA. Formal deferrals did not occur because there were no written agreements. The officials who put the deferral codes in the system (coded as deferrals in CERCLIS due to the lack of a state deferrals code) are not authorized to code sites as a state deferral until a written state deferral

agreement is in place. Therefore, even if a state deferral code existed at the time, the sites should not have been assigned the code until a written agreement was in place.

Regional officials refer to sites that state and tribes are working on but EPA has not yet listed or given up its right to list as "informal deferrals." In addition to the 14 sites we found which merit federal interest, GAO reported in its report entitled "Unaddressed Risks at Many Potential Superfund Sites" (GAO/RCED-99-8, issued November 1998) on approximately 800 similar sites in CERCLIS. Although states, tribes, or PRPs may be addressing the sites, they still merit federal interest. NCP requirements do not apply to the sites identified in GAO's report and ours. Thus, the preference for permanence and treatment, the five-year review, and community involvement may not be afforded for these NPL-caliber sites. Our 1998, report on State Deferrals (Report No. 8100234, September 10, 1998) raised this concern for sites that were formally deferred to states. In that report, we found that a majority of the remedies were containment, rather than permanent or treatment solutions, and only a few had a requirement similar to the five-year review. Thus, remedies may not remain protective over the long term.

Agency officials told us that they cannot require states to follow NCP requirements for non-NPL sites. They also said that some states have indicated they will not report site progress to EPA. Agency officials could indicate in CERCLIS that states and tribes were remediating sites, and that they have already begun to track this information.

EPA officials also told us that they do not have the resources to monitor the ongoing progress of hundreds or potentially thousands of non-NPL sites. They are currently focused on addressing sites they plan to list or have listed on the NPL.

We understand the Agency's position concerning the states. We also recognize that states and tribes are cleaning up some of these sites. However, we are concerned about whether all cleanups at NPL-caliber sites or sites that merit federal interest will be similar to NPL cleanups in terms of community involvement, remedy selection and long-term protectiveness of remedies.

Status Unknown to EPA

Documentation in EPA regional files did not indicate the disposition of the remaining 58 of 108 sites in our sample. These sites were coded generally in CERCLIS, indicating deferral to RCRA. However, neither RCRA officials nor we were able to identify the sites by identification number or name as being in the RCRA program. From documentation obtained from Superfund files, we know that 53 percent of the sites that were scored in our sample of status unknown sites, scored high enough to be considered for listing on the NPL.

HRS Scores For Status Unknown

Status	HRS > or = to 28.5	HRS < 28.5	No HRS Score	Total
Unknown	15	13	30	58

While EPA could not provide information about the disposition or cleanup status of these 58 sites, we found that relevant states were able to supply us with additional information. We chose to pursue current status in two of the four regions in our sample. We selected Regions 3 and 5 because no states in Region 3 had corrective action authority, while, in contrast, all states in Region 5 had corrective action authority.

Regions 3 and 5 contained 36 of the 58 status unknown sites. Selected states in Regions 3 and 5 provided cleanup status on 17 of the 36 sites.

Cleanup was complete or underway for five of these sites. Cleanup had not begun, but the site was in the state inventory for 11 sites. States had no information on one site. The following table depicts these 17 sites based on whether they are NPL-caliber or not.

Status and Potential NPL Eligibility of 17 Sites

Status	HRS > or = 28.5	HRS < 28.5	HRS Unknown	Total
Cleanup Complete/ Underway	3	0	2	5
Site in Inventory	3	2	6	11
No Info.			1	1

The 58 sites in the status unknown category are not being tracked in RCRIS (at least not under their CERCLIS site identification number). Many of them are no longer being tracked in CERCLIS either because they have been archived. Of the 58 status unknown sites, 45 have federal interest (HRS score equal to or above 28.5) or no HRS score.

Status Of Sites With Potential Federal Interest

CERCLIS Status	NPL Eligible - HRS > or = 28.5	No HRS Scores	Totals
Active	7	3	10
Archived	8	27	35
Totals	15	30	45

The October 1996 CERCLIS archiving guidance says that "Sites which will be addressed under RCRA...should also be archived (by definition, no further Superfund interest should exist at these sites)." Three of the four regions in our sample archived most of their sites after deferral.

One Regional office took a conservative approach to archiving sites. During our review, Region 2 officials told us they did not archive sites until they were "absolutely" sure that no further CERCLA action was needed at sites. In fact, Region 2 officials were going through a process to check with states and other programs, including RCRA, to determine whether cleanup was needed or occurring under those authorities before archiving the sites. Thus, even though some of the Region 2 deferrals did not appear in RCRIS, at least one program (Superfund) retained lead authority for ensuring that environmental problems were addressed.

COMMUNICATION AND PROCEDURES NEED STRENGTHENING

The Superfund Program Implementation Manual indicates that a "D" should be entered in CERCLIS when a site is deferred to RCRA, but does not discuss how the deferral is to occur. The September 1991, "Guidance for Performing Preliminary Assessments Under CERCLA" advises Superfund officials to notify the site assessment contact "who will discuss the situation with representatives of the RCRA program and decide whether to proceed with CERCLA investigative activities." While this guidance addresses the need for communication with RCRA officials on a site-by-site basis, it does not detail the actual transfer and acceptance process.

Superfund officials told us that they reviewed site documentation and coded sites in CERCLIS with a "D" if they decided to defer the sites. They also told us that they communicated informally with RCRA officials. We did not see any documentation of these informal discussions during our Superfund file reviews, nor did we find any receipt or acknowledgment of acceptance of lead authority in

RCRA files. Superfund officials in one region told us that they sent a list of sites that they intended to defer to RCRA and gave those officials 30 days to review and comment on the proposed deferral actions. Since they got no response in the 30-day time period, they deferred all the sites to RCRA.

Because CERCLIS and RCRIS do not interface, RCRA officials would be unaware of lead authority for a site being transferred to them without discussion and agreement between offices. As discussed in Chapter 2, enhanced communication on a site-by-site basis is necessary to ensure that sites are placed with the program having the legal authority and resources to effect cleanup at the earliest opportunity.

CONCLUSIONS

Almost 10 percent of the total number of sites deferred from Superfund to RCRA were not found in the RCRIS data base. We attribute this discrepancy to data system incompatibilities (between RCRIS and CERCLIS), insufficient communication between officials in the two programs, and weak deferral procedures. In addition, some of these sites were never intended to be deferred to the RCRA program. The number of sites not appearing in RCRIS are shown below by region.

Sites With Status Unknown	
Region	Number Of Sites
01	14
02	33
03	82
04	36
05	27
06	22
07	24
08	2
09	12
10	1
Total	253

If our sampling of four regions is consistent among all regions, we would expect Superfund and RCRA program officials to be able to locate about half of these sites through regional file review. The other half may require coordination with state officials. Many of the sites we followed up on were in state inventories, although EPA does not know their cleanup status.

It is important that EPA account for all of these sites. In the group of sites not appearing in RCRIS, more than 53 percent of the scored sites had an HRS score equal to or above 28.5. Not only would they be potentially eligible for listing on the NPL, but they may still pose significant risk to human health and the environment. For these reasons, EPA needs to ascertain the status of these sites and monitor cleanup progress.

RECOMMENDATIONS

We recommend that the Acting Assistant Administrator for Solid Waste and Emergency Response instruct Superfund, and RCRA regional officials as appropriate, to:

- 4-1. Add a code in CERCLIS for deferring sites to other EPA programs.
- 4-2. Change the status of the 13 sites with low HRS scores in CERCLIS to reflect the NFRAP designation rather than deferral to RCRA.
- 4-3. Revise CERCLIS to reflect the appropriate status of the 14 sites scoring equal to or above 28.5 in the HRS that were incorrectly coded as deferred to RCRA.
- 4-4. Delay archiving sites until OSWER develops a policy to determine whether state or tribal cleanups are adequate. Include as a prerequisite to archiving, a requirement for five-year reviews or some comparable process for sites where hazardous substances have been left on site so protectiveness of remedies can be assured over the long term.

4-5. Enter into written agreements when sites of federal interest are deferred to states.

4-6. Determine whether the sites that were not scored but were deferred to states merit federal interest, and proceed with recommendation 4-2 or 4-3 and 4-4 and 4-5 as appropriate.

4-7. Determine the appropriateness of the deferral (see Chapter 2 for guidance and discussion) for the 58 status unknown sites. After coordination with RCRA and state officials, either defer and update RCRIS accordingly, assess for potential listing on the NPL, or retain and monitor state cleanup progress in CERCLIS.

4-8. Adjust the active/archived status in CERCLIS as necessary.

APPENDIX 1

SCOPE, METHODOLOGY, AND PRIOR AUDIT COVERAGE

SCOPE AND METHODOLOGY We conducted this audit from March 1998, to January 1999. To accomplish the objectives, we conducted fieldwork in Headquarters OSWER and in Regions 2, 3, 5, 9. OSWER officials provided us with the universe of sites Superfund officials deferred to the RCRA program. We analyzed this CERCLIS data and selected the four regions based on the total number of deferrals, the status of state corrective action authority, and the number of sites not appearing in RCRIS. Headquarters OSWER officials provided input for the regions we selected.

An OSWER official provided us with a CERCLIS 3 listing of 2,941 deferrals to RCRA as of March 6, 1998. We provided the list of deferrals to RCRA officials to analyze and tell us which sites were in RCRIS and their status in RCRIS. In April 1998, RCRA officials analyzed the data and divided the sites into four groups: (1) sites that had been deferred and fell into the corrective action workload, (2) sites that were subject to corrective action but were not in the corrective action workload (subject to sites), (3) sites that were not subject to corrective action and were called RCRA handlers, and (4) sites that had been deferred but did not appear in the RCRIS database. We chose not to review the corrective action workload sites because GAO had recently performed a review of this population in a report entitled, "Progress Under the Corrective Action Program Is Limited, But New Initiatives May Accelerate Cleanups," (GAO/RCED-98-3) in October 1997 and we believe it appropriate to give the Agency time to address the recommendations.

For the three remaining groups, the sites subject to corrective action, the RCRA handlers, and the sites not in RCRIS, we selected a random sample in each group in each region for file reviews. While we selected separate samples in the subject to and RCRA handlers groupings, we reported on them as one group in this report because we found sites that were subject to corrective action in the RCRA handlers group.

For our randomly selected sites, we reviewed Superfund site assessment files for discovery dates (dates that EPA became aware of the sites), preliminary assessments of environmental conditions and site inspections, deferral documentation, HRS scoring, and other site assessment information. We also reviewed selected RCRA corrective action files for evidence of progression of cleanup of the sampled facilities where the HRS scores for the facilities were not completed or were equal to or greater than 28.5 (potentially eligible for NPL consideration) or where the sites did not appear in the RCRIS database. We also looked for evidence of the decision to defer and acceptance of deferral. We interviewed HQ RCRA and CERCLA staff and managers. We also spoke with regional officials responsible for the deferral process in the RCRA and CERCLA programs in Regions 2, 3, 5, and 9 regarding the controls over the deferrals to RCRA. We also reviewed removal files for selected sites to find out whether immediate risks at certain sites had been addressed. We also attended a regional decision team meeting in Region 2 which included Superfund officials. We identified which states or territories were authorized for corrective action and which sites were subject to corrective action according to the Agency's definition of what it means to be subject to corrective action. An Office of General Counsel opinion indicates that the Agency has the ability to have facilities conduct corrective action if they have, had, or should have had interim status. Interim status, simply stated, refers to the status a facility holds between

application and receipt of a RCRA permit. Interim status is granted by a state or EPA.

Concurrent with this audit, GAO was conducting an audit on sites awaiting listing to the NPL. GAO's audit is related to ours because some of the sites that were deferred to RCRA remained active in CERCLIS and would have been included in their population and because the recommendations may be similar in nature. The audits differ because most of the sites that were deferred to RCRA were not in GAO's population and because GAO's primary goal was to try to determine how many sites may ultimately be placed on the NPL and to gather detailed information on the sites that remained potentially eligible for the NPL. For the purposes of our review, we only sought to determine whether the Agency's deferral program objective was achieved, whether deferrals were made in accordance with the policy, and whether procedures for deferring sites from one program to another were effective. Because our purpose was not to determine whether any sites should be added to the NPL, we did not gather the same information as GAO did for their review. During our review, we coordinated with GAO to avoid duplication of efforts. GAO issued its audit reports entitled, "Unaddressed Risks at Many Potential Superfund Sites" (GAO/RCED-99-8) and "Information on Potential Superfund Sites," (GAO/RCED-99-22) in November 1998.

At the commencement of our audit, we also considered reviewing sites that had been deferred from RCRA to Superfund. We performed limited work in Region 2, but excluded them from our audit scope because there was no commonality between these deferrals and the sites deferred to RCRA and because of limited resources. We may consider further work on these deferrals at some future date. We also reviewed 7 NPL sites and 27 sites deproposed from the NPL that were deferred to RCRA. We chose not to report on these sites as they generally appeared to be progressing.

We reviewed Federal Managers Financial Integrity Act documentation related to the audit objectives. We did not evaluate all of the controls over RCRIS data, but we sought to verify data in RCRIS for selected sites by asking state officials for status of cleanup of facilities. We also attempted to verify the accuracy of RCRIS corrective action data by reviewing selected RCRA files. Like GAO, we did not validate state responses by performing site visits or file reviews because our recommendations will include state participation in ensuring that human health and environmental risks have been or will be addressed.

PRIOR AUDIT COVERAGE

The OIG issued an audit report in January 1994, entitled, "Program Enhancements Would Accelerate Superfund; Site Assessments and Cleanup" (Report No. 4100180). This report evaluated many of the sites then awaiting listing to the NPL and potential actions for addressing the backlog. One of the recommendations was that the Agency consider deferring sites to other federal authorities. Agency officials generally agreed with these recommendations.

GAO issued an audit report in October 1997, entitled, "Progress Under the Corrective Action Program Is Limited, But New Initiatives May Accelerate Cleanups" (GAO/RCED-98-3). This report evaluated the cleanup completions of the corrective action workload in the RCRA program. This report concluded that, "the step by step process for cleanup is drawn out and cumbersome and the cost of implementing it discourages companies from initiating more cleanups. Protracted disagreements among EPA, the states, and affected companies over the cleanup standards to be met and the methods used to meet them have also delayed cleanups. Both of these factors can contribute to the economic disincentives that companies face in performing cleanups. Furthermore, these two problems are exacerbated by the limited resources EPA and the states have for implementing the [Corrective Action]

program." GAO generally recommended that EPA reform the program to make it more streamlined and consistent nationwide. EPA generally agreed to these recommendations.

APPENDIX 2

DETAILS OF SITES INAPPROPRIATE FOR DEFERRAL

Using a weighted projection, 67 percent, or 1003 of the 1,388 sites in the sample universe were inappropriate for deferral. (210 of the 313 sampled sites were facilities that were inappropriate for deferral to RCRA.) This appendix describes the seven categories of sites that were inappropriate for deferral. The table below summarizes the categories we identified, the number of sites in each category, and the corresponding projection

PROJECTION OF SITES INAPPROPRIATE FOR DEFERRAL

Type of Inappropriate Deferral	Number Found	Weighted Projection to Universe
Sites That Converted Before Deferral	69	254
Sites That Converted After Deferral	9	20
Other Converted Sites (Conversion or Deferral Date Unknown)	96	585
Non- or Late Filers	8	33

Type of Inappropriate Deferral	Number Found	Weighted Projection to Universe
Protective Filers	22	80
Generators	6	31
Pre-HSWA Permittees	0	0
Totals	210	1003

The first three categories of sites that were inappropriate for deferral were converters. Converters are facilities that at one time treated or stored RCRA Subtitle C hazardous waste but have since converted to generator-only status or closed. EPA or the states granted this change of status. The first category are those sites that converted before deferral, and the second category are those sites that converted after deferral. The third category are converted sites where the conversion or deferral date was unknown. While converters remain technically subject to RCRA corrective action, Agency officials believed that deferral of converters was not appropriate. Because they were no longer active TSDFs, they were not a priority for prompt corrective action under RCRA. The Agency believed converters, should be placed on the NPL to ensure prompt corrective action, when certain listing criteria are met.

We identified eight facilities in the fourth category of sites inappropriate for deferral, non- or late-filers. Non- or late-filers did not file or filed late for a RCRA permit and have little or no history of compliance with RCRA. Though these sites may be subject to RCRA corrective action, EPA decided that these facility owners generally may not have the ability to assure prompt compliance with RCRA standards. As a

result, EPA decided that it is not appropriate to defer non- or late-filers to RCRA.

Twenty-two sites were found in the fifth category of sites inappropriate for deferral: protective filers. Protective filers are facilities that filed as a TSDF as a precautionary measure, but were determined by a state or EPA not to be a TSDF. Protective filers are not subject to RCRA subtitle C; therefore, RCRA cannot order a site to take corrective action except where hazardous waste has caused an imminent and substantial endangerment to human health or the environment.

Six of our sampled sites were in fact generators and comprised the sixth category of sites inappropriate for deferral. Generators are not subject to RCRA corrective action and, according to the policy, would continue to be placed on the NPL.

Though we did not identify any, the seventh category of sites that were inappropriate for deferral were sites holding permits before the enactment of HSWA. Such facility owners had permits that predated corrective action requirements and would not agree to a voluntary reissuance of the permits to include such requirements.

APPENDIX 3

INFORMATION ON SITES NOT INAPPROPRIATE FOR DEFERRAL

During our exit conference, Agency officials requested that we characterize the sites that we found not to be inappropriate for deferral. The chart below describes the results of that characterization. For all of the 103 sampled sites below, we found insufficient information in the files to conclude that the sites were inappropriate for deferral based on the policy.

Description of 103 Sites Not Inappropriate for Deferral

Characterization	Number
TSD Status Unclear	46
Closed and Requested Change of Status But No Approval Found	19
Facilities Undergoing Closure	14
Interim Status Facilities	16
Facilities Filed Part A and B But Permit Not Yet Received	4
Permitted	2
EPA Discussing TSD Status with Facility	2
Total	103

For the first 46 sites, the status of these facilities was unclear from the documentation we reviewed during fieldwork. In these cases, it was unclear whether facilities notified or filed and were considered generators or TSDFs.

Thirty-three (33) of the 103 sites that were in the "Closed and Requested Change of Status But No Approval Found" or "Facilities Undergoing Closure" groups were moving toward closure or conversion to a status other than TSDF. These sites would eventually be appropriate for consideration under CERCLA since they will likely convert and are not in the corrective action workload.

The 16 sites that appeared to be in interim status, the four facilities that filed both parts of the RCRA permits to be TSDFs but, based on the documentation we obtained, had not yet received their permits, and the two permitted facilities would be appropriate for deferral. These facilities should be in the corrective action workload because, according to the documentation we obtained, they are seeking or had obtained permits to operate as TSDFs.

EPA was discussing the TSDF status of the final two sampled sites, according to documentation we obtained. Until EPA resolved the TSDF status of these two facilities, we cannot comment on the appropriateness of these two deferrals.

APPENDIX 4

AGENCY RESPONSE AND OIG EVALUATION

AGENCY RESPONSE

MEMORANDUM

SUBJECT: Response to Draft OIG Report Superfund Sites Deferred to RCRA,
Audit Report E1SFF8-11-0006-DRAFT

FROM: Timothy Fields, Jr. (Signed March 23, 1999)
Acting Assistant Administrator

TO: Michael Simmons
Deputy Assistant Inspector General for Internal Audits
Office of the Inspector General

This memorandum transmits the Office of Solid Waste and Emergency Response's (OSWER) comments on the subject draft audit report by the Office of the Inspector General (OIG). We appreciate the OIG's thorough review of the process of deferring Superfund sites to RCRA; we feel the audit findings and recommendations will be helpful in improving the efficiency of the deferral process.

In a March 4, 1999 meeting with the OIG, staff from both the Superfund and RCRA programs raised issues regarding various aspects of the draft report. In follow-up to that meeting, OSWER provided informal comments on the draft. We received a revised draft on March 17 which incorporated many of our preliminary comments. Please note that this written response does not address many of the minor comments discussed during the March 4 meeting or those submitted prior to the revision of the draft report. Rather, it addresses larger issues concerning the presentation of the OIG's findings, and the assumptions made during the audit.

The draft audit report identifies discrepancies between Superfund Hazard Ranking System (HRS) scores and RCRA National Corrective Action Prioritization System (NCAPS) rankings for the sites deferred to RCRA. The OIG concluded that a re-examination of the prioritization of sites is needed as a result of these discrepancies. However, both the Superfund and RCRA programs agree that there are fundamental

differences between the HRS and NCAPS ranking systems that do not support comparisons of a score or ranking. The HRS generates a numerical score which must be above a certain threshold to warrant Federal Superfund interest, while NCAPS prioritizes a site relative to other RCRA sites and takes into account specific solid waste management units that are not addressed by the HRS. Furthermore, NCAPS rankings are updated more frequently than HRS scores to reflect current site conditions. Therefore, priority ranking under RCRA may decrease as a result of response actions taken at a site while the HRS score will remain the same. It is important to note in the final audit report that these prioritization systems were developed for very different purposes and may not necessarily yield comparable results at sites scored under both systems.

The OIG states in the draft report that less than 2 percent of the deferred sites have been "cleaned up." This term is rather ambiguous and could refer to several different types of site conditions. We would like this to be clarified in the final report so that the entire statement reflects the actual status of those sites. Most importantly, what standards were applied in order to make the determination that the remaining 98 percent have not been "cleaned up"?

In the draft report, the OIG suggests that the Superfund site assessment process will be the primary tool for re-evaluating the sites that were inappropriately deferred to RCRA. Similarly, the draft report implies that the HRS will be the primary tool for prioritization and that Superfund decisions will be made at all of these sites. However, the OIG should recognize that if these sites are to be re-evaluated under Superfund, it is unlikely that all of them will be, or will need to be, cleaned up with Superfund resources. There are currently more than 10,000 sites in the active CERCLIS inventory needing assessment decisions, and on average, an additional 400 sites come to EPA's attention each year. Any inappropriate deferrals that return to Superfund for reassessment will be prioritized in the context of all other active sites needing assessment, and according to the threat the site poses to human health and the environment. We believe EPA has already conducted a Preliminary Assessment at virtually all of the sites OIG has included in the draft report; field sampling and Site Inspections have also been conducted at a large percentage of these sites. OSWER would like to note that Superfund decisions have been made at over 35,000 sites since the program was created, however, only 4 percent (less than 1,500 sites) have been placed on the National Priorities List for long-term cleanup under the Superfund program.

Chapter 4 of the draft discusses OIG's inability to locate the 253 "Status Unknown" facilities in the RCRIS system. While it is possible that this resulted in part, as suggested by OIG, from system incompatibilities, OIG's overall premise that each of the 253 should have appeared in RCRIS may be flawed. RCRIS contains data on over 250,000 facilities that, by the Agency's records, ever handled hazardous waste. The

absence of any of the 253 from RCRIS could be explained by the fact that they never handled hazardous waste. Chapter 4 needs to acknowledge this possibility.

After reviewing the draft report, OSWER has some suggestions on presenting the data in a format that readers may more easily comprehend. A possible method of clarification would be the use of graphics, such as pie charts or graphs, to represent the most complex data (i.e., to more clearly state when the report is referring to a random sample, as opposed to the four-Region sample or the total National universe of deferrals). Another possibility may be a "data glossary" as an additional appendix, so that any figure in the report could be easily defined.

After reviewing the audit findings, OSWER notes that the draft report clearly indicates a need for improved communication and coordination between the Superfund and RCRA programs in all EPA regional offices. We are prepared to reassess many of the site management decisions identified by the audit to ensure that EPA and State agency response efforts provide the highest level of protection of human health and the environment.

Thank you for providing the opportunity to comment on the draft report. If you have any questions regarding our written response, please contact Elizabeth Harris, OSWER Audit Liaison, at (202) 260-7323.

cc: Sharon Hallinan
Liz Harris
Jennifer Griesert
Anne Andrews
Barbara Braddock
Bill Samuel
Judy Vanderhoef
Barry Parker
Tina Lovingood

OIG EVALUATION

The Acting Assistant Administrator for Solid Waste and Emergency Response indicated that there are fundamental differences between the HRS and the NCAPS ranking systems that do not support comparisons of a score or ranking. The Acting Assistant Administrator requested that we note in the final report that these prioritization systems were developed for very different purposes and may not necessarily yield comparable results at sites scored under both systems.

As requested, we added language to the report to explain why these scores might be different. However, the NCAPS system was based on the HRS, and while their

purposes might be different, they are both indicators for potential threats to human health and the environment. Accordingly, until the current environmental threat posed by sites with different scores can be determined, the Agency cannot be certain of whether there is cause for concern. To assist the review process, we will provide OSWER staff with the specific data for sites with differing scores.

The Acting Assistant Administrator also commented that the draft report suggested that the Superfund site assessment process will be the primary tool for re-evaluating the sites that were inappropriately deferred to RCRA. He also believed the draft report implied that the HRS will be the primary tool for prioritization and that Superfund decisions will be made at all of these sites.

The OIG did not intend to imply that Superfund site assessment will be the primary tool for reassessment of sites. In fact, in the draft report, the OIG supported the NPL/RCRA policy when it suggested a multi-program approach to addressing sites. We also suggested a cooperative approach to include states in any evaluations of sites that would take place. The OIG recognizes the limited resources of Superfund, RCRA and state programs. We also recognize that legal authority is a factor in any decisions EPA may need to make for reassessing sites when necessary. We believe that both resources and legal authority must be considered when determining how best to proceed. For example, just because a particular state may have legal authority does not mean it has the resources to address the sites.

We also recognize, as OSWER staff pointed out at the exit conference, that the corrective action workload is the priority for RCRA and is the reason many of these sites may not have been addressed. For EPA RCRA officials to address these sites would take resources away from those needed to achieve RCRA's GPRA goal of addressing the corrective action workload.

The OIG also agrees with the Acting Assistant Administrator that not every site may need to be reevaluated, and that those that do need reevaluation should be prioritized for any potential listing to the NPL. Preliminary assessments, and in some cases, site inspections or other assessments have been conducted for these sites. However, we found that much of the data is several years old, and OSWER and state officials should give some consideration to increases in potentially affected populations (or targets) and uses of the potentially affected properties.

APPENDIX 5

DISTRIBUTION

OSWER Audit Liaison (5103)

Director, State and Tribal Site Identification Center (5204G)

Deputy Director, State and Tribal Site Identification Center (5204G)

Deputy Director, Office of Solid Waste (5301W)

Acting Director, Permits and State Programs Division (5303W)

Associate Director, Permits and State Programs Division (5303W)

Chief, Corrective Actions Program Branch (5303W)

Superfund Reforms Coordinator (5204G)

APPENDIX 6

ENDNOTES

1. Sites are coded in RCRIS with the Corrective Action Event Code "CA999," or "CA Process Terminated."

In addition, in its October 1997 report entitled, "Progress Under the Corrective Action Program Is Limited, But New Initiatives May Accelerate Cleanups" GAO defined, and in its response EPA did not disagree that, using the code CA999 meant that cleanup was completed.

If the CA999 code was not used, then cleanup was not completed, for the purpose of defining the remaining 98 percent of sites.

2. "Guidance for Performing Preliminary Assessments Under CERCLA," EPA/540/G-91/013, September 1991, pages 16-19.

"Superfund Program Implementation Manual, Fiscal Year 99/00," June 1998, pages A-6 to A-24.

3. OSWER Directive 9932.0, "Method for Prioritizing CERCLA Preliminary Assessments at RCRA Facilities," May 31, 1988.

OSWER Directive 9932.1, "Guidance for Environmental Priorities Initiative (EPI) Facilities in the Superfund Pre-Remedial Program," January 31, 1989.

Memorandum from Mary A. Gade, Deputy AA for OSWER, "Environmental Priorities Initiative - Headquarters Responsibilities and Upcoming Activities," February 11, 1991.

4. Memorandum from J. Winston Porter, AA for OSWER and Courtney M. Price, AA for OEMC, "Interpretation of Section 3008(h) of the Solid Waste Disposal Act," December 16, 1985.

5. Memorandum from Stephen D. Luftig, Director, Office of Emergency and Remedial Response, and Michael H. Shapiro, Director, Office of Solid Waste, "Removing RCRA Facilities from CERCLIS," June 21, 1995.

Memorandum from Larry G. Reed, Director, Hazardous Site Evaluation Division and Linda Boornazian, Director, Policy and Program Evaluation Division, OSWER, "Refining CERCLIS Archive Determinations," July 6, 1995.

Memorandum from Robert Myers, Acting Chief, Site Assessment Branch, OSWER "Transmittal of CERCLIS Archive Materials: Site Lists and Guidelines," July 14, 1995.

Guidance entitled "CERCLIS Archive Guidelines," October 1996.

Memorandum from Stephen D. Luftig, Director Office of Emergency and Remedial Response, "Archiving CERCLIS Sites," November 13, 1996.

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