



Office of Inspector General

Report of Audit

SUPERFUND

Brownfields: Potential for Urban Revitalization

E1SHF8-11-0005-8100091

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Conducting the Audit**

**Headquarters Audit Division
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Program Office(s) Involved

Office of Solid Waste and Emergency Response

MEMORANDUM

SUBJECT: Brownfields: Potential for Urban Revitalization
Audit Report No. E1SHF8-11-0005-8100091

FROM: Elissa R. Karpf
Deputy Assistant Inspector General
for External Audits

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

Attached is our final report entitled, "Brownfields: Potential for Urban Revitalization." A draft of this report was issued to you on February 20, 1998, and comments were received from your office on March 17, 1998. The comments provided describe the specific actions along with the milestone dates for completion in accordance with EPA Order 2750. Therefore, we are closing this report in our Prime Audit Tracking System upon issuance.

This report describes findings and corrective actions the Office of Inspector General recommends to help improve and strengthen the Brownfields program. As such, it represents the opinion of the OIG. Final determinations on matters in the report will be made by EPA managers in accordance with established EPA audit resolution procedures. Accordingly, the findings described in this report do not necessarily represent the final EPA position and are not binding upon EPA in any enforcement proceedings brought by EPA or the Department of Justice.

Again, we would like to express our appreciation for the cooperation and helpful insight provided by your Outreach and Special Projects Staff as well as regional staff during our review. Should your staff have any questions, please have them contact Norman E. Roth, Divisional Inspector General for Audit, Headquarters Audit Division on (202) 260-5113.

Attachment

EXECUTIVE SUMMARY

PURPOSE

To help the nation address environmental concerns associated with idled, underutilized or abandoned urban industrial and commercial properties, EPA announced the Brownfields Economic Redevelopment Initiative (Initiative). The overall purpose of the Initiative is to help put urban Brownfield facilities back to sustainable and beneficial reuse.

Using information gathered in the survey phase of this audit, along with input from the Outreach and Special Projects Staff (OSPS), and a written request from the Acting Assistant Administrator for Solid Waste and Emergency Response, we developed the following audit objectives: 1) determine whether pilot funds were used for activities authorized under CERCLA §104; 2) determine whether pilot funds have impacted Brownfields redevelopment; 3) determine whether EPA quality assurance requirements were adhered to; and 4) determine whether the terms and conditions governing the revolving loan fund will permit its effective use.

RESULTS IN BRIEF

Overall, the Initiative has generated considerable attention from cities, states, tribes, other federal agencies, and congressional leaders. EPA has awarded 121 site assessment and 24 revolving loan fund grants to cities and states. EPA has been instrumental in bringing together numerous federal agencies to work cooperatively toward removing barriers to the redevelopment of Brownfields. Our review also showed that cities have been able to leverage millions in private Brownfields investment. The number of Brownfield assessment demonstration pilots as well as the Initiative's budget has grown steadily. Within the next three years, EPA plans to fund a total of 300 assessment demonstration projects. The Agency has accomplished a great deal in a relatively short time. Our report identifies actions the Agency can take to strengthen the Initiative and continue to move the program forward.

A Better Focus Could Lead to More Successful Pilot Projects

The five cities that we visited were using EPA funds to conduct site assessments, develop inventories, conduct community involvement activities, and develop Brownfield work groups and forums. While these activities are authorized under CERCLA §104, we found that some have had relatively little impact on actual redevelopment. We believe there is a need for the Agency to improve the focus of future pilots as well as a need to assist cities in developing technical expertise to continue the Brownfields program after pilot funds have been expended. Maintaining the Brownfields momentum and leveraging private Brownfield investments require successful redevelopments. Because success breeds success, EPA should encourage cities to focus their efforts on those activities which have the greatest potential for promoting rapid site redevelopment. This could be achieved by revising EPA's evaluation criteria used for the selection of pilot projects to focus on those activities designed to bring about timely redevelopment.

Quality Assurance at Brownfield Sites

Because the underlying goal of the Brownfields Initiative is to see facilities put back to sustainable and beneficial reuse, cleanup must be sufficient to protect the health and safety of those that will be occupying the former industrial property. To ensure that environmental data collected as part of a site assessment is of a known quality and that decisions made as a result of the data collected are defensible, EPA developed a planning tool known as the Quality Assurance Project Plan (QAPP). Two cities in our sample did not develop site-specific QAPPs as required by the National Contingency Plan and Agency policy. Uncertainties as to the amount of quality assurance needed for Brownfield sites led the Agency to form a work group to address this issue. The work group has drafted a Quality Assurance (QA) guidance document for Brownfield site assessments and plans on finalizing it during fiscal year 1998.

Brownfields Cleanup Revolving Loan Fund

City officials indicated that many of the sites that have the greatest potential for redevelopment may not be redeveloped due to the restrictions placed on the use of the funds by CERCLA and the requirements of the National Contingency Plan. Most notably, recipients pointed to the restrictions CERCLA places on using funds to cleanup asbestos, lead based paint, and petroleum. These restrictions, rather than the administrative terms and conditions of EPA's grants, may limit the usefulness of the revolving loan funds.

RECOMMENDATIONS

We recommend that the Acting Assistant Administrator for Solid Waste and Emergency Response:

- ▶ Revise EPA's proposal evaluation and ranking criteria to give credit and higher ranking to those cities whose work plan: identifies sites; proposes to conduct site assessments; contains the largest number of components of a successful redevelopment effort; contains specific objectives and milestones; and contains in-house technical expertise or a commitment from the city to obtain or develop technical expertise.
- ▶ Remind project officers and assistance recipients of the need for EPA-approved QAPPs prior to beginning field work.
- ▶ Issue the Brownfields QA guidance to the regional offices and provide copies of the guidance to current and future pilot recipients.
- ▶ Explore legislative and regulatory alternatives to help cities address the restrictions and requirements placed on the Revolving Loan Fund by CERCLA and the National Contingency Plan.

Agency Response & OIG Evaluation:

The Office of Solid Waste and Emergency Response agreed with each of the recommendations in the draft report and provided planned corrective actions as well as milestone dates for completion. The specific corrective actions planned are included after each chapter's recommendations and the response is included in its entirety as Appendix A.

We believe the corrective actions underway and planned by the Agency address the report's recommendations, therefore, we are closing this report upon issuance. No further response by the Agency is necessary.

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CHAPTER 1

Introduction

Purpose

To help the nation address environmental concerns associated with the redevelopment and reuse of industrial and commercial properties, EPA announced the Brownfields Economic Redevelopment Initiative. EPA defines Brownfields as abandoned, idled or underutilized industrial and commercial facilities where expansion or redevelopment is complicated by real or perceived environmental contamination. EPA's Brownfields Initiative is designed to empower states, local governments, tribes, communities and other stakeholders to work together in a timely manner to prevent, assess, safely cleanup, and sustainably reuse Brownfields.

Using information gathered in the survey phase of this audit, along with input from the Outreach and Special Projects Staff (OSPS), and a written request from the Acting Assistant Administrator for the Office of Solid Waste and Emergency Response (OSWER), we developed the following audit objectives:

- 1) determine whether pilot funds were used for activities authorized under CERCLA §104;
- 2) determine whether pilot funds have impacted Brownfields redevelopment;
- 3) determine whether EPA quality assurance requirements were adhered to; and
- 4) determine whether the terms and conditions governing the revolving loan fund will permit its effective use.

Background

CERCLA §104(a) gives EPA broad authority to take response action to address releases and threatened releases of hazardous substances, pollutants, and contaminants. CERCLA §104(b) authorizes EPA to undertake a variety of studies and investigations, including monitoring, surveys, testing, planning and information gathering in connection with response actions taken under CERCLA §104(a). As specified in CERCLA §104(a), these response activities must be undertaken by EPA consistent with the National Contingency Plan (NCP) and may be taken at sites at which a release or threatened release occurred, regardless of whether those sites are listed on the National Priority List (NPL). EPA's Office of General Counsel (OGC) has determined that EPA may address Brownfields using CERCLA §104 authorities and fund Brownfield activities by the authority granted under §111 (a)(1) of CERCLA.

EPA's efforts under the Brownfields Initiative can be grouped into four broad and overlapping categories: 1) providing grants¹ for Brownfield pilot projects; 2) clarifying liability and cleanup issues; 3) building partnership and outreach among federal agencies, states, municipalities and communities; and 4) fostering local job development and training initiatives.

Brownfield pilot projects are divided into two categories, 1) Brownfield assessment demonstration pilots, and 2) Brownfields cleanup Revolving Loan Fund (RLF) pilots. Both types of pilot activities are funded via a grant between EPA and a state, city, or county. (Most Brownfield pilot projects have been awarded to cities.) Assessment pilots are funded up to \$200,000 each and were designed to assist with environmental activities preliminary to cleanup, such as site identification, site assessment, site characterization and cleanup planning and design. The RLF pilots, each funded up to \$350,000, provide funds from which low interest rate loans can be made for the cleanup of Brownfield sites. The fund is replenished through repayment of principal and interest, so that future loans can be made for cleanup activities.

¹ We use the term synonymously with cooperative agreement throughout this report.

To receive an assessment grant, an applicant must go through a competitive award process administered by EPA. EPA has set up panels consisting of personnel from a number of federal agencies to review each application in accordance with a predetermined set of criteria established by EPA. Final determination for award is made by the OSWER Assistant Administrator. To receive a RLF grant the applicant must have previously been awarded an assessment grant and must submit an application addressing evaluation criteria established by EPA. As of September 1997, a total of 121 assessment pilots and 24 RLF pilots were awarded.

There has not been a precise count of the Brownfield sites in the United States. We have seen estimates from 21,000² to 400,000 sites. The U.S. Conference of Mayors, in their publication, "Impact of Brownfields on U.S. Cities - A 39 City Survey," gives an indication of why there is such a disparity in the number of sites when they state, "...respondents identified either individual properties and/or sites, many of which contain multiple properties." With such a variance, determining the costs associated with environmental assessment and cleanup is difficult. The General Accounting Office estimated that the cost of individual site assessment averages between \$61,000 and \$85,000.³ Using the lowest numbers for both sites and cost, Brownfield site assessment costs could reach into the billions. EPA's budget for Brownfield activities has increased nine fold over the past three years, rising from \$10 million in fiscal year 1996, to \$85 million for fiscal year 1998.

Scope and Methodology

On January 23, 1997, the Office of Inspector General (OIG) began a survey of the Brownfields Initiative to obtain background information and identify areas that would benefit from additional audit work. On April 29, 1997, the Acting Assistant Administrator, OSWER requested that the OIG review five site assessment demonstration pilot projects awarded to cities in EPA Regions 1, 3, 4, 6, and 9, to determine if funds were spent for CERCLA §104

² The 21,000 figure represents only 39 cities, therefore the actual number of Brownfield sites may be much higher.

³ GAO RCED-96-125. June 17, 1996 - "Superfund: Barriers to Brownfield Redevelopment"

activities. We agreed to incorporate this objective into the audit and use as its sample the five cities named by the Acting Assistant Administrator.

To accomplish our objectives we discussed the Initiative with regional Brownfields coordinators, Brownfields project managers, and grants specialists. We reviewed the pilot cities project officer files for each of the five pilot cities, obtained and reviewed financial information from selected pilot cities and discussed the pilot projects with city representatives. We visited the five pilot cities and the Brownfield sites within those cities. We reviewed quality assurance information for those pilot sites where EPA funds were used to conduct site assessments. We reviewed OGC legal opinions with respect to EPA's authority to conduct Brownfields activities. We compared EPA's pilots with a similar state program.

We reviewed the Outreach and Special Projects Staff (OSPS) 1996 Federal Managers' Financial Integrity Act assurance letter regarding management controls for the Brownfields Initiative. We also reviewed the OSPS proposal to be included as a demonstration project under the Government Performance and Results Act.

Our audit fieldwork was conducted from October 1997, through December 1997. Except as noted below, this review was conducted in accordance with Generally Accepted Government Auditing Standards (Government Auditing Standards, 1994 Revision). The five pilot cities selected by OSWER had projects that had been in process for at least two years. We used the same pilots to complete all of our audit objectives. As agreed with Agency management, we did not complete a detailed financial audit of these pilots. Rather, we reviewed the pilot activities to determine if those activities were allowable under CERCLA §104.

To determine if the terms and conditions governing the revolving loan fund would permit its effective use, we discussed the fund with EPA and pilot city representatives. Because the RLF pilots had just recently been awarded and no funds had been used, we relied upon the testimonial evidence of the participants to draw our conclusions.

Prior Audit Coverage

No previous OIG reports have been completed on the Brownfields Initiative.

CHAPTER 2

Impact of EPA Grant Funds and Future Concerns

The number of Brownfield assessment demonstration pilots as well as the Initiative's budget has grown steadily since the Initiative began, and the Agency has been able to accomplish a great deal in a relatively short time. Within the next three years, EPA plans to reach a total of 300 assessment demonstration pilot projects and continue efforts to identify mechanisms to fund cleanups. While the activities that we reviewed were authorized under CERCLA, we believe there are areas where additional focus and technical direction could help strengthen the Brownfields Initiative and continue to move the program forward.

Pilot Funds Were Generally Spent for CERCLA Activities

The review of five pilot grants to determine if funds were spent for authorized CERCLA §104 activities showed that, with the exception of activities at one pilot city, funds were used for CERCLA activities. The activities performed at each pilot city varied. For instance, the Region 1 city focused mainly on creating an inventory of Brownfield sites, while the Region 3 city focused on site selection and site assessment. The following chart presents the major activities performed by the five pilot cities in our sample.

Region	Major Activities Funded by EPA	Activities authorized under CERCLA
1	- Identification of sites - Development of a Geographic Information System of sites	Yes
3	- Identification of Brownfield sites and site assessments	Yes, however two sites did not meet the Brownfield Definition
4	- Identification and inventory of potential Brownfield sites	Yes
6	- Identification of sites, site assessments - Funding an EPA employee under an IPA	Yes
9	- Conducted community involvement activities and developed an Environmental Oversight Authority	Yes

Because CERCLA §104 is so broad, all of the activities performed under the various pilots were authorized. However, while site assessments are allowable under CERCLA, we found that EPA funds were used on two sites in Region 3 that did not qualify as Brownfields. (i.e., “abandoned, idled or underutilized industrial and commercial facilities.”) At these two sites (totaling nearly 90 acres) there were no facilities and no evidence of prior development, nor did it appear that there had ever been any. In fact, the sites consisted mainly of trees.

The phase 1 site assessment report for one of the two sites in question stated, “the site has been mostly wooded and no structures have been present on the site since at least 1922.” According to city officials, this property was the largest contiguous property (60+ acres) within the city limits with development potential. From the documentation we obtained from the city files it seems clear that the city fully intended to develop this site for industrial use. In 1994, before EPA’s grant was awarded, the city paid an engineering contractor to review the site for development potential. According to city records, the engineering firm reported that the site “is primarily thick woods” and that “these woods are primarily mixed deciduous trees with heavy undergrowth. Clearing operations should include consideration to sell wood to interested parties.” Such comments clearly indicate that the property was not previously used for commercial and industrial practices.

The approved work plan for this city, as well as others, did not identify specific sites to be assessed at the time the city was awarded the grant. The OSPS Director told us that not all approved work plans have identified the specific sites for assessments. Therefore, it is not possible to ensure that sites meet the definition of a Brownfield at the time of award. When we discussed the above situation with her, she agreed that it would be beneficial for the project officers to receive and review additional site-specific information once the city had chosen sites for assessment. The project officer would then be able to determine whether the site meets the definition of a Brownfield before the city spends EPA funds on it.

A Better Focus Could Lead to More Successful Pilot Projects

CERCLA provides EPA with broad authority to conduct a wide variety of actions under the Brownfields Initiative. The “Application Guidelines for Brownfield Assessment Pilots” state that pilot projects are to focus on EPA’s primary mission of protecting human health and the environment. Assessment pilots were instituted to fund those activities preliminary to site cleanup, primarily site assessments and other assessment-related activities. Pilot cities we visited have engaged in numerous activities including conducting site assessments, funding community involvement activities, developing inventories, conducting Brownfield forums and work groups, and developing creative financing solutions for Brownfield problems, to name but a few. While EPA has determined that these individual activities are authorized under CERCLA, we found that in some cases they have had little impact on actual redevelopment of Brownfield pilot sites.

In Region 9, EPA funds were used to conduct community involvement activities at two state superfund sites. These sites encompass nearly 350 acres, have viable responsible parties and are under state superfund enforcement orders for conducting the cleanup. EPA pilot funds were used, in part, to pay for a technical consultant to develop a land use plan with the responsible party and to participate in community meetings regarding the sites. While EPA approved these activities, city officials estimate that the cleanup and redevelopment efforts at one of these sites will not be completed for about 50 years. Given these time frames, the actual impact of EPA’s grant funds may not be known for quite some time. City officials we spoke with stated that they have identified other sites that have redevelopment potential, however, they need additional funding to conduct site assessments at these sites. They also told us that while the funding has helped at the two large sites, they believe it could have had more impact had they focused on smaller, less complex sites.

In Region 1 we found that the city spent approximately \$180,000 of its \$200,000 EPA grant to hire a contractor to develop an inventory and Geographic Information System of potential Brownfield sites. Once the inventory was completed however, there was no one on the city staff to maintain and update the system. (The city’s contractor estimated that keeping the system current would cost approximately \$25,000 per year.) Moreover, according to city officials, the six sites that the automated system

identified as having the greatest potential for development were already known by the city staff. EPA staff and the city project manager both came away with the same “lessons learned.” They stated that in retrospect they would rather have spent less on developing the inventory and more on completing site assessments.

Another reason why the impact of EPA’s grant money is not more readily apparent is that some pilot projects are not clearly focused from the outset. The city’s submitted proposal, which is the basis for the EPA-approved work plan, is sometimes very general--speaking more to the goals of the Brownfield program, rather than addressing the city’s specific needs. Therefore, work plans do not always contain well defined project objectives and milestones for completion. We found this to be the case especially when the pilot grant was awarded before specific sites had been identified. While not a mandatory factor in awarding a pilot grant, having cities present, in their proposal, potential Brownfield sites they intend to pursue, may provide a clearer link to the activities that need to be performed under the pilot.

Pilot participants told us that getting a clear focus on what to do and how to do it has taken longer than they originally envisioned. As a result, every pilot was extended beyond the two year time frame and approximately three years later, many of the pilots have not used the funds awarded.

A need for better focus was also reflected in the quarterly reports. Information contained in the reports was often interwoven with other Brownfield-related activities the city was performing, making it difficult to determine what activities were being funded by EPA and whether those activities were within the scope of the grant. Quarterly progress reports could be streamlined if they were to address only those activities funded through the grant. If more specificity were required in a city’s work plan, reports could be further simplified by having the city address the objectives and milestones accomplished during the reporting period.

There are three basic components to a successful and rapid redevelopment effort--a prospective developer, an owner willing or anxious to sell, and a city committed to making it happen. Theoretically, the award of the Brownfield grant is indicative that the third component is in place. In fact, all of the cities we visited were aggressively pursuing urban redevelopment. However, some

pilot projects were undertaken when one or both of the other two components were absent. One pilot city used the bulk of its EPA funds on a site which had neither a prospective developer nor an eager seller. We later found that this site had previously been turned down by a state program, similar to EPA's Brownfield Initiative, because they did not have an interested developer.

We do not intend to imply that each site must have a formal agreement for transfer of the property, rather we believe that EPA funds should be directed to those sites where there is the greatest potential for successful redevelopment. This type of focus would favor a commitment or at least an expressed interest from a potential developer. A similar approach is currently being applied by EPA regional offices in determining whether to fund Brownfields targeted site assessments. In addition to EPA's Brownfields pilot assessments, EPA regional offices also have funding for conducting their own targeted site assessments at Brownfield sites. We found that regional Brownfields coordinators developed a list of criteria for prioritizing and performing these assessments. One of the criteria for using these funds is whether there is a commitment in place for the cleanup and redevelopment of the site. We believe similar criteria in the pilot application guidance would result in EPA selecting future pilots which have the greatest potential for rapid success.

Maintaining the Brownfields momentum and leveraging private Brownfield investments require successful redevelopments. While the enthusiasm for EPA's Brownfields Initiative was readily apparent in all of the cities we visited, the impact of EPA's grant funds on redevelopment was less evident. Of the \$1 million awarded for the five site assessment pilot projects we visited, less than \$150,000 was spent on actual site assessments. If we exclude from this figure the funds used on sites not meeting the definition of a Brownfield, only \$65,000 has been spent on actual site assessments. Without site assessments, properties will not be ready for cleanup (if necessary) and reach the ultimate goal of productive reuse. Because success breeds success, EPA should encourage cities (through the grant award process) to focus their efforts on those activities which have the greatest potential for promoting rapid site redevelopment.

Helping Cities Develop Technical Expertise

From discussions with pilot participants and EPA officials, as well as reviewing the pilot projects, it became clear that for cities to continue conducting Brownfields activities beyond EPA funded pilot projects, they need to develop the necessary technical expertise and find additional funding sources. City representatives and several EPA officials stated that experience with the pilot projects has shown a need to have in-house technical expertise available or have a city committed to developing it.

The pilot projects which we reviewed were managed by the city's economic development department or similar office. While this is an appropriate office, Brownfield redevelopment projects require experience in a number of different fields including environmental, legal, financial, city planning and design among others. While the cities we visited had the legal, financial, and city planning expertise, some did not have staff with background in environmental issues, a key component in Brownfields redevelopment. As a result they relied upon EPA or state environmental offices for assistance. In two of the cities we visited, EPA provided employees using Intergovernmental Personnel Act (IPA) assignments. According to city officials we spoke with, these employees were instrumental in the success of the pilot projects. The main reason given was their familiarity with environmental cleanup issues and knowledge of EPA processes. In other cities where EPA employees were not available, cities tended to rely heavily on contract support, or support from EPA labs or state environmental agencies.

In Region 6, EPA provided an experienced manager to the city to help get the pilot started. According to city officials, once the city realized the potential benefits of the program, they invested in it by providing funding and technical staff to keep the program moving forward. When we spoke with city officials in December 1997, they told us that additional funding for conducting cleanup activities had been provided by the city for the program and they believe the program will continue to grow. City officials estimated that approximately \$53 million in Brownfields investment had been leveraged and an estimated 984 jobs were either retained or were being created as a result of the city's Brownfield program.

In contrast, at two of the pilot cities we visited, the cities relied heavily on EPA funding and contract support to conduct

Brownfield activities. While these cities were able to conduct a limited number of site assessments and develop an inventory of potential Brownfield sites, they will need to seek additional funding assistance to maintain the program once the EPA funding is expended. Moreover, because these cities did not have technical staff, most of the technical decisions were either directed by the contract support, or the city turned to EPA for assistance. For instance, in one city a contractor was hired to complete the site assessments at the selected sites. Once the site assessment reports were completed, the city did not have technical staff on hand to review them. As a result, they had to request assistance from one of EPA's laboratories to review the results of site assessment and suggest alternatives. While such assistance may be possible with a limited number of pilots, the number of pilots has been increasing each year. Providing such assistance to a large number of pilots may not be feasible. Early successes will promote growth of a city's Brownfield program. To sustain this growth, the city will need to have ready access to high-caliber environmental expertise.

Conclusions

The five cities that we visited were using EPA funds to conduct site assessments, develop inventories, conduct community involvement activities, and develop Brownfield work groups and forums. While these activities are authorized under CERCLA §104, some have had relatively little impact on actual redevelopment. We believe there is a need for the Agency to provide increased focus to future pilots as well as a need to assist cities in developing technical expertise to continue the Brownfields program after pilot funds have been expended. Maintaining the Brownfields momentum and leveraging private Brownfield investments require successful redevelopments. Because success breeds success, EPA should encourage cities to focus their efforts on those activities which have the greatest potential for promoting rapid site redevelopment. This could be achieved by revising EPA's evaluation criteria used for the selection of pilot projects to focus on those activities designed to bring about timely redevelopment.

Recommendations

We recommend that the Acting Assistant Administrator for Solid Waste and Emergency Response:

- 2-1 Revise EPA's proposal evaluation and ranking criteria to give credit and higher ranking to those cities whose work plan:
 - a. identifies sites;
 - b. proposes to conduct site assessments;
 - c. contains the largest number of components of a redevelopment effort;
 - d. contains specific objectives and milestones; and
 - e. contains in-house technical expertise or a commitment for obtaining or developing technical expertise.

- 2-2 Develop special grant conditions which require recipients to:
 - a. Submit site-specific information to the EPA project officer when sites have not been identified in the approved work plan. Require the EPA project officer to review this information to determine that the site meets the definition of a Brownfield. Require the EPA project officer's approval of the site before the city is authorized to spend EPA assessment funds on it.
 - b. Clearly delineate in quarterly reports those activities which were undertaken with EPA funds during the reporting period.

Agency Response

Recommendation 2-1

The Agency agreed to revise the pilot application criteria to include all of the elements mentioned. This action is scheduled to be completed for the Fiscal Year 1999, pilot application review process.

Recommendation 2.2

OSWER agreed to work with EPA's Grants Administration Division and OGC to develop terms and conditions for selection of future pilot sites. These terms and conditions will be incorporated into pilot workplans and will be developed in time for the Fiscal Year 1999 application review process. OSWER also agreed to direct project officers to clarify with grant recipients the need to clearly delineate in quarterly reports those activities undertaken with EPA funds. This activity will be completed by May 31, 1998.

OIG Evaluation of Agency Response

The proposed corrective actions will address the recommendations and no further action is required.

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CHAPTER 3

Quality Assurance at Brownfield Sites

Quality Assurance Project Plans

We found that two cities in our sample did not develop site-specific Quality Assurance Project Plans (QAPPs), as required by the National Contingency Plan and Agency policy. As a result, the reuse decisions made regarding these sites may not be based on data of known quality.

Unlike NPL sites which are cleaned up but not always reused, the underlying goal of the Brownfields Initiative is to have facilities put back into sustainable or beneficial reuse in a timely manner. Cleanup, therefore, must be sufficient to protect the health and safety of those that will be occupying the former industrial property. To ensure that environmental data collected as part of the Brownfield site assessments is of a known quality and that decisions made as a result of the data collected are defensible, EPA developed a planning tool known as the Quality Assurance Project Plan. The purpose of the QAPP is to document planning results for environmental data collection and to provide a project specific “blueprint” for obtaining the type, quality, and quantity of environmental data needed for decision making regarding cleanup.

In Region 3, we found that EPA funds were used to pay for a Phase II assessment which included environmental sampling. However, a QAPP was not developed for these sampling activities. In discussions with the Brownfields project manager, he stated that he was not aware that a QAPP was required. Similarly, city officials were not aware that a QAPP was required for the site. However, the terms and conditions of the grant clearly stated that a QAPP was required before any field work was initiated.

In Region 4, we found that a QAPP was developed but contained no site-specific information. Rather it was developed as a generic quality assurance plan. When the document was forwarded to the Region 4 Office of Quality Assurance for review, there were numerous comments regarding the adequacy of the plan. The QA office comments stated that “the QAPP provided for review followed the format established by EPA for QAPPs.

However since it is not [site specific], the QAPP contains no details on data quality objectives.” The comments also stated that the QAPP did not contain a sampling and analysis plan. The sampling and analysis plan takes the data quality objectives and formulates them into a specific design that shows where, what type, how, and how many samples are to be taken as well as how they should be stored, transported, and what analytical methods should be used for analysis. The QA office requested that the QAPP be reconciled to address the inadequacies. However, Region 4 officials did not require the city to revise the plan. Nevertheless, sampling and analysis took place on the site, removal activities occurred, and the site is currently occupied by the prospective owner.

Quality Assurance Guidance for Brownfield Sites

During our review we discussed the quality assurance concerns with the Outreach and Special Projects Director, the Office of Research and Development’s Quality Assurance Division, as well as EPA Brownfields project managers. We found that, in general, there were uncertainties about the amount of quality assurance needed for Brownfields field work activities. These uncertainties centered around the need versus the cost of quality assurance. As a result, a Brownfields Quality Assurance work group was established to research what QA requirements were necessary for Brownfields projects.

In January 1998, we met with the work group leader to discuss what had transpired since the group was formed and what had resulted. The work group was comprised of both regional and Headquarters staff from OSWER, the Office of Research and Development and regional quality assurance specialists. According to the work group leader, there were and continues to be differences of opinion as to what level of QA is required by the different parties. However, he also stated that work group members realize that QA is an important part of the decision-making process. The work group has drafted a guidance document on quality assurance requirements for conducting Brownfield assessments, which tries to balance the need for quality data with the limitations on funding for Brownfields assessments. The document is slated to be finalized during fiscal year 1998.

Recommendations

3-1 We recommend that the Acting Assistant Administrator for Solid Waste and Emergency Response:

- Remind project officers and assistance recipients of the need for EPA-approved QAPPs prior to conducting field work.
 - Issue the Brownfields QA guidance to the regional offices and provide copies of the guidance to current and future pilot recipients.
-

Agency Response

The Acting Assistant Administrator agreed to issue a memorandum to all Brownfield pilot project officers which will emphasize that when pilot funds will be used to conduct environmental sampling activities, recipients should have an EPA-approved site specific sampling and analysis plan in place prior to beginning fieldwork. The Acting Assistant Administrator also agreed to issue the Brownfields Quality Assurance Guidance to the regions and project officers as well as pilot recipients. These activities will be completed by the end of the first quarter of Fiscal Year 1999.

OIG Evaluation of Agency Response:

The proposed corrective actions will address the recommendations and no further action is required.

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CHAPTER 4

The Brownfields Cleanup Revolving Loan Fund

As a follow-on to the Site Assessment pilots, EPA established the Brownfield Cleanup Revolving Loan Fund (RLF) pilots. These were initiated to provide cities, states, and Indian tribes loan funds to conduct environmental cleanup of Brownfield pilot sites. It was originally envisioned that EPA funds would be used to capitalize RLFs. The funding in the RLF would then be loaned out by pilot cities to interested developers at low interest rates for the purpose of site cleanup. The fund would be replenished for future loans by the repayment of principal and interest on the existing loans. On April 25, 1997, EPA's Office of General Counsel provided the Director, OSPA a legal opinion advising OSPA that EPA could legally provide financial assistance to capitalize Brownfields revolving loan funds. As of September 1997, 24 RLF pilot projects have been awarded.

We reviewed the terms and conditions governing the revolving loan fund to determine if they would permit its effective use. Because many of the pilots had either just recently been awarded or were still awaiting approval, and because none of the pilot funds had been used for cleanup, our review consisted mainly of testimonial evidence gathered from EPA officials and pilot recipients.

Discussions with EPA officials and RLF recipients revealed that the terms and conditions, as stated in the assistance agreement, governing the revolving loan fund were complex and somewhat burdensome, but were feasible. However, both EPA and pilot recipients expressed concern regarding the restrictions and requirements placed on the use of the fund by CERCLA and the National Contingency Plan (NCP). Nearly all RLF recipients and several EPA officials we spoke with stressed that the Brownfields program should not be tied to CERCLA. They told us that the provisions of CERCLA and the NCP are overly restrictive and present barriers to effective cleanup of Brownfield sites. For instance, many Brownfield sites contain old facilities which often contain materials such as asbestos, lead based paint, and many

have underground storage tanks. However, because CERCLA restricts the use of funds to address asbestos, lead based paint and petroleum products, recipients believe that many potential Brownfield facilities will not be addressed. Beyond these specific restrictions, we were also told that the requirements of the NCP, such as addressing community concerns, holding community meetings, and setting up and maintaining administrative records require a great deal of resources to carry out. Because the grants are set at a total of \$350,000 and intended to address multiple sites, many participants believe that the funding is not sufficient and the administrative requirements to the lender are burdensome. As a result, city representatives told us that they did not want to get involved with the RLF pilots. In fact, in a few instances EPA had to encourage cities to apply for the pilots.

Further, as mentioned earlier, because some cities do not have the technical expertise on environmental programs and legislation (CERCLA, The Resource Conservation and Recovery Act, Leaking Underground Storage Tanks) they were not always familiar with specific provisions and restrictions of the programs, and some had never managed an environmental cleanup. As a result, some of the cities did not want the responsibility of providing oversight for Brownfield cleanup actions.

We also found, however, that some cities are working on innovative ways of handling the administrative and legal barriers which the RLF presents. In Region 4, a RLF recipient is working with a community development bank, which was established using funding from the Department of Housing and Urban Development, to issue and manage low interest rate loans for city development project funding. The city believes that teaming up with the community development bank presents a low cost option to administer and manage the RLF. In Region 6, the success achieved under the site assessment pilots has allowed the city to leverage additional funding which can be used to help address those substances which are restricted under CERCLA. Nevertheless, even with these innovative approaches, EPA and city officials we spoke with believe that changes are needed in order to make the program operate effectively. While they believe that addressing administrative requirements is feasible, there is continuing concern regarding the legal restrictions.

During our review, Congress was examining the Agency's Fiscal Year 1998, budget request. While the Congress provided the Agency with \$85 million for Brownfields activities, concerns were expressed regarding the "Agency's legal authority to utilize Superfund dollars to establish revolving funds which in turn would be used to clean up sites which are neither emergency in nature nor eligible for NPL listing." As a result, language was added to the appropriation bill prohibiting the use of Superfund dollars for the establishment of Brownfield revolving loan funds unless specifically authorized by future legislation. As a result, EPA has not awarded any further RLF pilots.

While there remains uncertainty as to whether there will be future RLF pilots, 24 have been awarded. This presents the Agency with an opportunity to monitor a small number of pilots to test the revolving loan fund methodology and explore alternatives to the restrictions on the use of the funds.

Recommendations

We recommend that the Acting Assistant Administrator for Solid Waste and Emergency Response:

- 4-1. Explore legislative and regulatory alternatives to help cities address the restrictions and requirements placed on the Revolving Loan Fund by CERCLA and the National Contingency Plan.
- 4-2. Provide RLF cities with training on the provisions of CERCLA, as they apply to removal actions.

Agency Response

Recommendation 4-1

The Acting Assistant Administrator responded that more detailed legislative language clarifying the appropriateness of using the Superfund for supporting RLFs for cleanup could be helpful. He also stated that the Brownfields program did not exist at the time the 1989 NCP was promulgated and recognized the current version places restrictions on the use of the RLF. He agreed to explore clarification in the form of revisions to the NCP to better

support the Brownfields program goals in the context of CERCLA. These activities are scheduled for completion during Fiscal Year 1999.

Recommendation 4-2

The Acting Assistant Administrator responded that on March 10-12, 1998, a Brownfield Coordinators Meeting was held where a draft administrative manual was provided. The manual discusses the provisions of CERCLA relevant to the RLF. The manual will be used to facilitate training of EPA regional staff and assistance recipients. Additionally, he responded that OSWER is working toward contractual support to provide technical assistance.

**OIG Evaluation of
Agency Response**

We believe the proposed corrective actions will help the Agency address the recommendations. No further corrective actions are required.

APPENDIX A

Agency Response

March 17, 1998

MEMORANDUM

SUBJECT: OIG Draft Audit Report No. E1SHF8-11-0005
 Brownfields: Potential for Urban Revitalization

FROM: Timothy Fields, Jr. /s/
 Acting Assistant Administrator

TO: Elissa R. Karpf
 Deputy Assistant Inspector General for External Audits

The Office of Solid Waste and Emergency Response (OSWER) has reviewed the subject draft audit report, and we concur with each of the recommendations stated therein. We are proud of the accomplishments made by our Outreach and Special Projects Staff (OSPS) and Regional Brownfields Coordinators working with other EPA offices and our federal, state, and local partners. We agree that the recommended actions will help to continue moving the Brownfields program forward. Our responses to specific recommendations, contained in the attachment to this memorandum, indicate our planned corrective actions and milestone dates for their completion.

As we take steps to improve the Brownfields program per the findings stated in the report, we wish to stress the experimental nature of our assessment demonstration pilots. The awards that have been made in the past five years are intended to foster a climate of change for renewed interest in urban revitalization and the remediation of environmental contamination. We view these pilots as 'living, learning laboratories' from which we draw lessons that can be applied in the continuing effort to put idled and abandoned commercial and industrial land into sustainable and beneficial reuse.

For the most part, the lessons learned from the five cities reviewed in this report, all early pilot award recipients, have already been incorporated into our current work processes. For example, we changed from a non-competitive to a competitive selection process as a means of ensuring fairness; we have revised the pilot selection criteria/guidelines numerous times, as we learned more about just what it is we hope the pilots will accomplish; and, we learned to emphasize the importance of strong, well-

negotiated cooperative agreements that clearly identify the type of sites and proposed activities for each pilot. We will continue to apply the lessons we have learned in our ongoing efforts to make the Brownfields program as effective as possible.

Thank you for the opportunity to review and comment on this draft report, and for the cooperation of your staff throughout the course of this review. If you have any questions, please contact Linda Garczynski, Director of the Outreach and Special Projects Staff, at 202-260-4039.

Attachment

cc:	Mike Shapiro	Dev Barnes
	Linda Garczynski	Marjorie Buckholtz
	Ann McDonough	Andrew Kreider
	Earl Salo	Karen Kraus
	Johnsie Webster	Liz Harris
	Mike Hurd	

Recommendation 2.1

- Revise EPA's proposal evaluation and ranking criteria to give credit and higher ranking to those cities whose work plan:
 - a. identifies sites;
 - b. proposes to conduct site assessments;
 - c. contains the largest number of components of a redevelopment effort;
 - d. contains specific objectives and milestones; and
 - e. contains in-house technical expertise or a commitment for obtaining or developing technical expertise.

Response

In the five years since the first Brownfields pilots were awarded, we have continually updated and revised our award criteria based on lessons learned from ongoing pilots. The increased sophistication of these criteria has given priority to applications which indicate understanding and consideration of the many components necessary for the successful assessment and sustainable reuse of Brownfields sites. Throughout, we have continued to stress the need for replicability and innovation in the proposals as a means of laying the foundation for a Brownfields program that can outlive the Federal role.

Our January, 1998 review of pilot applications emphasized the importance of committing pilot funds directly to site assessments, and gave credit to those applicants who had already targeted specific geographic corridors for use of the funds. While we will not require applicants to identify specific sites and will not set a minimum financial level for funds committed to site assessments, we fully expect these elements to be appropriately emphasized in future panel reviews.

Beginning in the summer of fiscal year (FY) 1998, we will revise the pilot application criteria for the FY1999 application review, giving higher ranking to cities whose proposals include all of the elements recommended above. These revised criteria will be finalized prior to the first FY1999 review, by 10/31/98.

Recommendation 2.2

- Develop special grant conditions which require recipients to:
 - a. Submit site-specific information to the EPA project officer when sites have not been identified in the approved workplan. Require the EPA project officer to review this information to determine that the site meets the definition of a Brownfield. Require the EPA project officer's approval of the site before the city is authorized to spend EPA assessment funds on it.

- b. Clearly delineate in quarterly reports those activities which were undertaken with EPA funds during the reporting period.

Response

The 'lag time' between the announcement of a pilot award and the actual submission of the recipient's workplan has traditionally been a critical time for project officers to work closely with pilot award recipients to ensure that they have considered all necessary elements as they construct their workplans. It is during this period that specifics are developed and necessary adjustments to the proposed workplans are made. We will continue to emphasize this time as a crucial opportunity to narrow a pilot's focus to a specific site or geographic corridor.

The draft report states on pages 6 and 7 that two sites in Region 3 did not qualify as Brownfields. However, while visiting the pilot sites, the project officer viewed an abandoned, unregulated dump and a number of abandoned drums of questionable content. These observations raised concerns about possible groundwater and soil contamination. Based on this evidence, he concluded that the site was environmentally stressed by past activity that may have led to contamination, and therefore met the definition of a brownfield despite currently consisting mainly of trees.

We believe that the Region 3 situation is a unique case but we also agree that project officers should have input into a pilot's site choice. During FY1998, we will consult with EPA's Grants Administration Division (GAD) and the Office of General Counsel (OGC) to develop appropriate terms and conditions so that EPA project officers review and approve project phases, including selection of pilot sites, in accordance with the substantial involvement guidance contained in EPA Order 5700.1. These terms and conditions will be incorporated in the final workplan agreements, and will be crafted in time for the first FY1999 application review process, by 10/31/98.

We will also issue a memorandum directing project officers to clarify with recipients that their quarterly reports should more clearly delineate activities undertaken with EPA funds, and we will work with them to ensure that these reports reflect appropriate changes. This memorandum will be issued by 5/31/98.

Recommendation 3.1

- Remind project officers and assistance recipients of the need for EPA-approved QAPPs prior to conducting site assessments.
- Issue the QA guidance to the regional offices and provide copies of the guidance to current and future pilot recipients.

Response

It is important to note in Chapter 3 of the draft audit report that Subpart O of the Code of Federal Regulations (CFR) only specifies that an EPA-approved *non-site-specific* Quality Assurance Project Plan (QAPP) be in place prior to beginning field work (40 CFR §35.6055(b)(2)(ii)). We understand that a generic QAPP is generally appropriate when cooperative agreement recipients may be taking the lead on similar activities at multiple sites and/or conducting minimal sampling activities. If, however, the scope of an assessment pilot includes more than minimal environmental sampling on a site-specific basis (e.g., pilot funds used to conduct a Phase I/Phase II-type assessment which includes environmental sampling), we agree that a site-specific sampling and analysis plan should be in place, and approved by EPA, prior to such sampling taking place.

We will issue a memorandum to all Brownfields pilot project officers emphasizing that when pilot funds will be used to conduct environmental sampling activities, recipients should have an EPA-approved site-specific sampling and analysis plan in place prior to conducting field work. We will also issue the Brownfields Quality Assurance Guidance to the regions and project officers and will provide copies to all current and future pilot award recipients. This memorandum and the Brownfields QA Guidance will be issued together, by the end of the first quarter of FY1999.

Recommendation 4.1

- Explore legislative and regulatory alternatives to help cities address the restrictions and requirements placed on the Revolving Loan Fund by CERCLA and the National Contingency Plan.

Response

We agree that CERCLA does present challenges that we are continuously addressing. For example, while CERCLA does limit the use of funds to address asbestos, lead-based paint, and petroleum products, cities do have alternative sources of funding to address these concerns at Brownfield sites. EPA recently worked closely with the U.S. Department of Housing and Urban Development (HUD) to amend the lead abatement grant to include provisions for Brownfields and Superfund. This source of funding, in addition to the Leaking Underground Storage Tank (LUST) Trust Fund, is available to cities, who should be encouraged to discuss use of these funds with their state governments.

While we do agree that the procedural requirements in the National Contingency Plan (NCP) can be an obstacle to the use of the Revolving Loan Fund (RLF), we do not think that the legislative and regulatory authorities are inherently flawed. However, more detailed legislative language clarifying the appropriateness of using the Superfund for supporting RLFs for cleanup could be helpful. Because the

Brownfields program did not exist at the time the 1989 NCP was promulgated, we recognize that the NCP, as it is currently written, places restrictions on the use of the RLF. We will explore clarification in the form of revisions to the NCP to better support the Brownfields program goals in the context of CERCLA. We will undertake and complete this process during FY1999.

Recommendation 4.2

- Provide RLF cities with training on the provisions of CERCLA, as they apply to removal actions.

Response

At the Headquarters-Regional Brownfields Coordinators meeting held March 10-12, 1998 in Washington, DC, we distributed a draft administrative manual that discusses the provisions of CERCLA relevant to the RLF. The draft manual, which was given to all Regional Brownfields Coordinators, will be a tool for them to use in facilitating training of Regional staff and assistance recipients. In addition, we are continuing to work toward securing contractual support to provide technical assistance.

APPENDIX B

Distribution of Report

Inspector General
Deputy Inspector General for Audit
Divisional Inspectors General
Assistant Administrator, Office of Solid Waste and Emergency Response
Director, Outreach and Special Projects Staff
Director, Grants Administration Division
Agency Followup Coordinator, Attn: Director, Resource
Management Division
Audit Coordinators, Regions 1, 3, 4, 6, 9
Audit Coordinator, Office of Solid Waste and Emergency Response
Regional Administrators, Regions 1-10

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APPENDIX C

Abbreviations

CERCLA	The Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended by the Superfund Amendments and Reauthorization Act of 1986.
EPA	United States Environmental Protection Agency
NCP	National Oil and Hazardous Substances Pollution Contingency Plan
NPL	National Priority List
OIG	Office of Inspector General
OGC	Office of General Counsel
OSPS	Outreach and Special Projects Staff
OSWER	Office of Solid Waste and Emergency Response
RLF	Brownfields Cleanup Revolving Loan Fund
QA	Quality Assurance
QAPP	Quality Assurance Project Plan