



U.S. ENVIRONMENTAL PROTECTION AGENCY

OFFICE OF INSPECTOR GENERAL

# EPA Has Made Progress in Assessing Historical Lead Smelter Sites But Needs to Strengthen Procedures

Report No. 14-P-0302

June 17, 2014



Scan this mobile code to learn more about the EPA OIG.

## Report Contributors:

Tina Lovingood  
Jill Trynosky  
Jenny Drzewiecki  
Jim Kohler  
Kate Robinson

## Abbreviations

CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CERCLIS	Comprehensive Environmental Response, Compensation, and Liability Information System
EPA	U.S. Environmental Protection Agency
FOIA	Freedom of Information Act
NPL	National Priorities List
OIG	Office of Inspector General
OSRTI	Office of Superfund Remediation and Technology Innovation
OSWER	Office of Solid Waste and Emergency Response
PA	Preliminary assessment
ppm	parts per million
SEMS	Superfund Enterprise Management System
SI	Site inspection

**Cover photo:** EPA removal action at the former Loewenthal Metals Corp. lead smelter in Chicago, Illinois. (EPA photo)

### Hotline

To report fraud, waste or abuse, contact us through one of the following methods:

**email:** [OIG\\_Hotline@epa.gov](mailto:OIG_Hotline@epa.gov)  
**phone:** 1-888-546-8740  
**fax:** 1-202-566-2599  
**online:** <http://www.epa.gov/oig/hotline.htm>

**write:** EPA Inspector General Hotline  
1200 Pennsylvania Avenue, NW  
Mailcode 2431T  
Washington, DC 20460

### Suggestions for Audits or Evaluations

To make suggestions for audits or evaluations, contact us through one of the following methods:

**email:** [OIG\\_WEBCOMMENTS@epa.gov](mailto:OIG_WEBCOMMENTS@epa.gov)  
**phone:** 1-202-566-2391  
**fax:** 1-202-566-2599  
**online:** [http://www.epa.gov/oig/contact.html#Full\\_Info](http://www.epa.gov/oig/contact.html#Full_Info)

**write:** EPA Inspector General  
1200 Pennsylvania Avenue, NW  
Mailcode 2410T  
Washington, DC 20460



# At a Glance

## Why We Did This Review

We conducted this review to determine how the U.S. Environmental Protection Agency (EPA) has addressed the sites in its August 2012 Lead Smelter Strategy. The 2012 Strategy focuses on 464 historical lead smelter sites identified in 2001, also known as "Eckel sites." We also examined the actions the EPA has taken to inform communities near the Eckel sites of potential lead contamination.

The Eckel sites are located across the country, primarily in urban areas. The EPA's Superfund site assessment process, used to assess sites like the Eckel sites, was designed to evaluate potential hazardous waste sites that may pose a threat to human health and the environment and to determine if a site may warrant cleanup attention. The EPA developed its 2012 Lead Smelter Strategy to ensure that all Eckel sites would be assessed.

**This report addresses the following EPA goal or cross-agency strategy:**

- *Cleaning up communities and advancing sustainable development.*

**For further information, contact our public affairs office at (202) 566-2391.**

**The full report is at:**  
[www.epa.gov/oig/reports/2014/20140617-14-P-0302.pdf](http://www.epa.gov/oig/reports/2014/20140617-14-P-0302.pdf)

## ***EPA Has Made Progress in Assessing Historical Lead Smelter Sites But Needs to Strengthen Procedures***

### What We Found

It took the EPA more than 12 years to complete the preliminary site assessment work at the 464 Eckel sites. According to the Office of Solid Waste and Emergency Response, when the EPA learned of the Eckel sites in 2001, it distributed the list to regional offices for informational purposes only. Because the Eckel sites were not submitted to the EPA through the public petition process, there were no acceptance criteria or time limits for screening and assessment of the sites. The EPA's ability to work on the Eckel sites was also impacted by an existing backlog of over 2,200 potentially contaminated sites. As a result, the EPA's regional efforts to assess the Eckel sites were inconsistent. The overall absence of a process for the Eckel sites and other non-petitioned sites, as well as a lack of initial direction from the EPA, led to the inefficient use of agency resources.

**Improvements in guidance and procedures for managing contaminated sites could result in more efficient and effective use of limited resources and result in public health and economic benefits.**

In addition, we found that the EPA lacked sufficient tracking, transparency and guidance on technical aspects of addressing the Eckel sites. Further, the EPA did not effectively convey to the public the details concerning its lengthy efforts and the challenges it faced in addressing the Eckel sites. Although the EPA has made progress in addressing the Eckel sites, the EPA's breakdown in applying standard, transparent criteria and guidance for assessing the sites resulted in inefficiencies in the site assessment process and impacted the EPA's credibility regarding its management of the Eckel sites. Specifically, improvements in guidance and procedures for managing contaminated sites could result in more efficient and effective use of limited resources, as well as have public health and economic benefits.

### Recommendations and Corrective Actions

We recommend that the EPA establish a clear process for handling potentially contaminated sites not referred to the EPA by a public petition, and that the EPA re-evaluate guidance to ensure that regions are able to efficiently spend resources addressing the highest priority sites. To increase transparency and public awareness of the EPA's efforts, we recommend the publication of the EPA's 2012 strategy document and any subsequent findings. The EPA agreed with our recommendations and provided acceptable corrective actions. The recommendations are resolved with corrective actions underway.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, D.C. 20460

THE INSPECTOR GENERAL

June 17, 2014

**MEMORANDUM**

**SUBJECT:** EPA Has Made Progress in Assessing Historical Lead Smelter Sites  
But Needs to Strengthen Procedures  
Report No. 14-P-0302

**FROM:** Arthur A. Elkins Jr.

A handwritten signature in black ink, appearing to read "Arthur A. Elkins Jr.", is written over the printed name.

**TO:** Mathy Stanislaus, Assistant Administrator  
Office of Solid Waste and Emergency Response

This is our report on the subject evaluation conducted by the Office of Inspector General (OIG) of the U.S. Environmental Protection Agency (EPA). This report contains findings that describe the problems the OIG has identified and corrective actions the OIG recommends. This report represents the opinion of the OIG and does not necessarily represent the final EPA position. Final determinations on matters in this report will be made by EPA managers in accordance with established audit resolution procedures.

The EPA office having primary responsibility for implementing the audit recommendations in this report is the Office of Superfund Remediation and Technology Innovation located in the Office of Solid Waste and Emergency Response.

**Action Required**

In accordance with EPA Manual 2750, your offices provided acceptable and complete corrective actions or planned corrective actions in response to OIG recommendations. All recommendations are resolved and no final response to this report is required. We will post this report to our website at <http://www.epa.gov/oig>.

Should you have any questions, please contact Carolyn Copper, Assistant Inspector General for Program Evaluation, at (202) 566-0829 or [copper.carolyn@epa.gov](mailto:copper.carolyn@epa.gov); or Tina Lovingood, Director, Land Cleanup and Waste Management Evaluations, at (202) 566-2906 or [lovingood.tina@epa.gov](mailto:lovingood.tina@epa.gov).

# Table of Contents

## Chapters

<b>1</b>	<b>Introduction .....</b>	<b>1</b>
	Purpose .....	1
	Background.....	1
	Scope and Methodology .....	5
<b>2</b>	<b>Site Assessment Process, Guidance Does Not Fully Address Some Issues Encountered at Eckel Sites .....</b>	<b>7</b>
	EPA Does Not Have Criteria or a Time Limit for Reviewing and Assessing All Potentially Contaminated Sites.....	7
	Internal EPA Strategy Created to Address Eckel Sites.....	9
	Existing Backlog, Resources Impacted Earlier Attempts to Address Eckel Sites .....	11
	Delay in Addressing Contamination Can Reduce Projected Economic Benefits to Society .....	12
	OIG Review of Selected Eckel Site Documents Identified a Site Needing Further Assessment.....	13
	Additional Challenges Faced by EPA in Implementing 2012 Strategy .....	13
	EPA Did Not Fully Communicate or Publicize Overall Strategy Efforts.....	15
	Conclusions .....	16
	Recommendations .....	17
	Agency Response to Draft Report and OIG Evaluation .....	18
	<b>Status of Recommendations and Potential Monetary Benefits .....</b>	<b>20</b>

## Appendices

<b>A</b>	<b>Agency Response to Draft Report.....</b>	<b>21</b>
<b>B</b>	<b>Distribution .....</b>	<b>27</b>

# Chapter 1

## Introduction

### Purpose

The U.S. Environmental Protection Agency (EPA) Office of Inspector General (OIG) evaluated the EPA's response to contamination by historical lead smelters. Specifically, we focused our review on sites included in the EPA's 2012 "Strategy for Addressing 464 Lead Smelter Sites." We addressed the following questions:

- What has the EPA done to address the sites in its August 2012 Lead Smelter Strategy?
- What actions has the EPA taken to inform communities of the potential lead contamination in order to reduce the potential of exposure to lead?

### Background

In April 2001, the *American Journal of Public Health* published "Discovering Unrecognized Lead Smelting Sites by Historical Methods."<sup>1</sup> This study, also known as the Eckel study, claimed that 464 former lead smelter sites<sup>2</sup> were unknown to federal and state authorities. The study also stated that sampling results taken from 10 sites indicated that nine of the sites may pose a threat to public health.

In April 2012, *USA Today* reported that the EPA had known about the issue of residential contamination caused by these smelters since 2001, yet claimed the EPA had not acted to address the contamination and left many neighborhoods exposed to health risks. In May 2012, a group of U.S. Senators called on the EPA to take immediate action to review unassessed sites to determine priority locations for remediation, such as those near schools or playgrounds. In August 2012, the EPA created a document outlining its strategy for addressing these former smelter sites.

The EPA developed the 2012 Strategy to ensure successful completion of any remaining Superfund site assessment work at the 464 historical smelter sites. In the strategy, the EPA stated it would consider prioritization of assessments and, as necessary, cleanups for sites under certain circumstances, including sites near where children may gather, sites with potential environmental justice issues, and

---

<sup>1</sup> Eckel, W., Rabinowitz, M., and Foster, G., 2001, Discovering Unrecognized Lead-Smelting Sites by Historical Methods, *American Journal of Public Health*, v.91 (4): 625-627.

<sup>2</sup> The list of smelter sites is informally referred to as the "Eckel list" or "Eckel sites" after William Eckel, who was the primary author of the 2001 journal article identifying these sites. The smelter list in the Eckel study identified approximately 430 sites and the number of sites was later updated to include 464.

sites with sample results indicating contamination above risk-based screening levels and background.

### ***Secondary Lead Smelting***

The Eckel study used historical sources to identify sites in the United States where secondary lead smelting was done from 1931 to 1964. Historical sources included the *Standard Metal Directory* and *Year Book of the American Bureau of Metal Statistics*. Secondary lead smelters produce elemental lead and lead alloys from lead-bearing scrap material. The smelters were often small operations located in urban areas close to the source of scrap, such as automobiles.

Secondary lead smelting includes three major operations: scrap pretreatment, smelting and refining. Scrap pretreatment is the partial removal of metal and nonmetal contaminants from lead-bearing scrap and residue. Smelting produces lead by melting and separating the lead from metal and nonmetallic contaminants and by reducing oxides to elemental lead. The crude lead is then refined in furnaces.

### ***Health Risks from Lead***

The smelter pollution at the sites targeted for review in the EPA's August 2012 "Strategy for Addressing 464 Lead Smelter Sites" is lead and possibly other heavy metals that contributed to environmental contamination in soil or dust. According to the EPA, lead is a naturally occurring element that can be harmful to humans when ingested or inhaled, particularly children under the age of six. Lead poisoning can cause a number of adverse human health effects, but is particularly detrimental to the neurological development of children. The EPA classifies lead as a probable human carcinogen and a cumulative toxicant. A 2007 Agency for Toxic Substances and Disease Registry lead fact sheet states that exposure to high lead levels can severely damage the brain and kidneys in adults or children and ultimately cause death. According to the Agency for Toxic Substances and Disease Registry, the effects of lead are the same whether it enters the body through breathing or swallowing. Lead can affect almost every organ and system in the body.

### ***EPA Program to Address Contamination***

Under the 1980 Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) and related laws, the EPA's Superfund program identifies, investigates and cleans up America's most contaminated hazardous waste sites. Superfund cleanup data are stored in the Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) database. CERCLIS is the official repository for site- and non-site-

specific Superfund data.<sup>3</sup> According to the Office of Solid Waste and Emergency Response (OSWER), CERCLIS contains information on hazardous waste site assessment and remediation from 1980 to the present.

The Superfund cleanup process has steps to assess sites, place them on a National Priorities List (NPL), and establish and implement appropriate cleanup plans. This is a long-term cleanup process. Sites that score at or above an established level qualify for cleanup under Superfund and are proposed for listing on the NPL, a list of the most serious sites identified for long-term cleanup and eligible for fund-financed remedial action.

In addition, under CERCLA, the agency has the authority to:

- Conduct removal action where immediate action needs to be taken.
- Enforce against potential responsible parties.
- Ensure community involvement.
- Involve states.
- Ensure long-term protectiveness.

### ***Petition Process for the Public to Notify EPA of Potential Contamination***

The Superfund site assessment process begins with site discovery or notification to the EPA of possible releases<sup>4</sup> of hazardous substances. The EPA may be notified of a potentially contaminated site through various mechanisms, including receipt of a public petition; referrals from other EPA programs; and referrals or notifications from states, tribes and other federal agencies. The process for the public to notify the EPA of suspected releases—including lead-contaminated sites—is the petition process, created via CERCLA Section 105(d). EPA requires these petitions to meet certain criteria and contain specific information about the possible release or releases. Within 12 months of receipt, the EPA is expected to review the public referral or petition, approve or return the petition, and conduct a preliminary assessment if the petition is approved. EPA headquarters estimates that about 10 to 20 sites of the approximately 200 new sites brought to the EPA’s attention each year are based on petitions. For potentially contaminated sites brought to the agency’s attention through means other than the petition process, there is currently no acceptance criteria or timeframe for conducting a pre-CERCLIS screening assessment.

---

<sup>3</sup> According to an EPA website, the Superfund program is in the process of deploying a new information system—the Superfund Enterprise Management System (SEMS)—which is replacing CERCLIS. SEMS will include the same data and content as CERCLIS.

<sup>4</sup> EPA preliminary assessment guidance defines the term “release” to include any means by which a substance could be exposed to the environment, such as spilling, leaking, discharging, dumping, injecting and escaping.



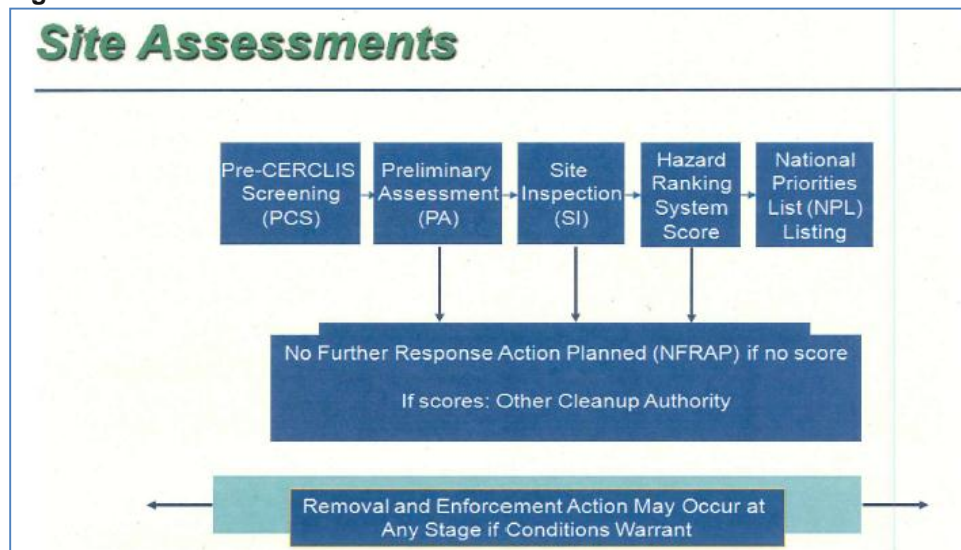
## ***EPA Process to Assess Sites With Potential Contamination***

The Superfund site assessment process includes multiple phases. Community involvement can occur at any point in the process. The first phase—the process of reviewing data on a potential site to determine whether it should be entered into the CERCLIS active site inventory for further evaluation—is referred to as pre-CERCLIS screening. Some examples of why a site would not receive further evaluation for an EPA cleanup action include:

- It is currently in CERCLIS or has been removed from CERCLIS and no new data warrants re-entry into CERCLIS.
- The site and some contaminants found on the site are subject to certain limitations based on CERCLA definitions.
- A state or tribal remediation program is involved in response at the site and it is in the process of a final cleanup.
- The hazardous substance release at the site is regulated under a statutory exclusion (e.g., petroleum, natural gas).
- The hazardous substance release at the site is deferred to another authority.
- Site data are insufficient (i.e., based on potentially unreliable sources or with no information to support the presence of hazardous substances or CERCLA-eligible pollutants or contaminants).
- Documentation clearly demonstrates that there is no potential for a release that could cause adverse environmental or human health impacts.

As demonstrated in the site assessment flow chart in figure 1, if a site moves past the pre-CERCLIS screening, the next phase is the preliminary assessment (PA). The PA involves gathering ownership history and other available information about site conditions to evaluate whether the site poses a threat to human health and the environment and/or further investigation is needed. The site inspection (SI) tests air, water and soil at the site to determine what hazardous substances are present. The SI looks at the substances present and determines whether they are migrating to the environment and are a threat to human health. Information collected in the PA/SI phase helps the EPA evaluate the risks posed by the site using its Hazard Ranking System.

Figure 1



Source: EPA.

### **Responsible Office**

OSWER's Office of Superfund Remediation and Technology Innovation (OSRTI) is the EPA headquarter office primarily responsible for the Eckel sites.

### **Scope and Methodology**

We conducted this performance audit in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives. We conducted our work from July 2013 to March 2014.

We interviewed OSWER staff—including staff in OSRTI—as well as staff in EPA Regions 2, 3 and 5. These three EPA regions were selected because they had the highest number of Eckel sites. We also interviewed staff from outside the EPA, including the Agency for Toxic Substances and Disease Registry, the Illinois Environmental Protection Agency, and the Pennsylvania Department of Health. Field visits were also conducted at multiple smelter sites in Regions 3 and 5.

In addition to the EPA's August 2012 "Strategy for Addressing 464 Lead Smelter Sites," we reviewed EPA programs, regulations and guidance documents related to the discovery and assessment of Superfund sites. Those documents included relevant sections of CERCLA, the National Contingency Plan, the December 2012 Superfund Implementation Manual, OSRTI website guidance, the October 2002 Preliminary Assessment Petition Guidance, the Superfund Community

## Involvement Handbook and the Superfund Lead-Contaminated Residential Sites Handbook.

We reviewed the available documentation for a sample of 42 historical smelter sites from the Eckel list. We identified 22 of these sites from counties with the highest number of Eckel smelter sites and counties in states with the highest number of children with elevated blood lead levels.<sup>5</sup> Random selection was used to select the other 20 sites (two sites from each of the 10 EPA regions). Documentation was compared with the data available in CERCLIS and was also reviewed for completeness and whether it supported the assessment decision.

The scope of our review included actions the EPA took to assess contamination at the Eckel sites before, during and after the development of the 2012 Strategy. We also estimated the total cost to conduct assessment work at the Eckel sites based on the average national historical cost data provided by OSRTI. Additionally, we monetized the human health benefits of reducing lead exposure from the smelter sites and other sources.

---

<sup>5</sup> Information is based on U.S. Center for Disease Control data from 2009.

## Chapter 2

### Site Assessment Process, Guidance Does Not Fully Address Some Issues Encountered at Eckel Sites

It took the EPA more than 12 years to complete preliminary site assessment work at the Eckel sites. This occurred because there was a lack of EPA criteria for determining whether to accept or reject a non-petitioned site, an absence of target completion dates for assessing potentially contaminated sites, an existing backlog of other sites needing assessment work, and limitations in guidance on how to address urban lead contamination. Further, while the EPA stated it communicated with the public on a site-by-site basis where it determined a need, it did not publicize its August 2012 Lead Smelter Strategy. Communicating the 2012 Strategy publicly and sharing results of its implementation could better serve communities and other stakeholders who may have questions about sites near them. The development of the 2012 Strategy appeared to be driven by Freedom of Information Act (FOIA) requests, congressional interest and media coverage. Improvements in guidance and procedures for managing potentially contaminated sites could result in more efficient and effective use of limited resources as well as public health and economic benefits.

#### **EPA Does Not Have Criteria or a Time Limit for Reviewing and Assessing All Potentially Contaminated Sites**

A scientific journal listed the Eckel sites. The site list was not brought to the EPA as a petition, nor did the EPA consider it a petition. For the list to be considered a petition, it would need to meet the criteria identified in table 1. Since the Eckel list was not a CERCLA 105(d) petition, the EPA was not bound by the statutory<sup>6</sup> 12-month review period. According to EPA guidance, if it receives and acts on petitions that are general, unclear or do not have enough information, or are without clear impact to the petitioner, valuable time and resources are taken away from more serious problems. The EPA further states in its guidance that petitions without the required information will be returned to the petitioner.

The EPA processed the sites on the Eckel list as it would any site that enters the site assessment process under CERCLA. No criteria exists for determining whether the EPA should accept or decline to pursue pre-CERCLIS screening work at non-petition sites. Further, if additional work is conducted, no EPA requirements or guidance exist for identifying a reasonable timeframe for conducting pre-CERCLIS screenings or setting target dates for future site assessments at non-petitioned sites.

---

<sup>6</sup> When the EPA is alerted to potentially contaminated sites by a public petition submitted under CERCLA 105(d), the EPA has a 12-month timeframe to review and assess the site or explain why the assessment is not appropriate.

**Table 1. EPA’s criteria for accepting petition under CERCLA compared to Eckel list**

Criteria for petition	Attributes of 464 Eckel list sites
Contains the full name, address, telephone number and signature of the person submitting the petition.	List not submitted by the journal author as a petition to the EPA; therefore, no submitter contact information or signature included.
Includes a description of how the petitioner is, or may be, affected by the actual/potential release. Concerns a release that affects the petitioner.	List did not include description of how the journal author was, or could be, affected by the actual/potential release at each site.
Contains the location of the actual/potential release.	Location of the actual/potential release was insufficient for 78 sites.

Source: OIG analysis of EPA 9200.5-330FS guidance document and the EPA’s 2007 Headquarters Lead Smelter Site Project Report.

Using the EPA’s criteria above, had the Eckel list been submitted as a petition, it should have been returned. The Eckel list did not contain enough information about all of the 464 sites to allow the EPA to take action without expending additional resources. As an alternative to returning the entire list, the EPA could have made the determination to reject or not pursue additional work at the sites on the list with missing information. Instead, according to OSWER, the Eckel list was distributed to regional offices in 2001 for informational purposes only. No direction was provided on whether and when the sites should be reviewed. According to OSRTI staff, no assessment requirements were established because of the limited site information in the Eckel list. As a result, some regional offices pursued work on the Eckel list sites while some did not.

From 2001 to 2012, EPA regions assessed between two and 38 Eckel list sites per year. According to a January 2007 internal EPA document, OSRTI implemented a site identification project from January 2005 to November 2006 focused on identification of any unreported sites posing high human health risks. The OSRTI project concentrated on a sample of 31 Eckel sites. The project concluded that OSRTI’s role should be limited to managing the refinement and regional distribution of any large volume site listings submitted to the EPA for potential federal Superfund attention; EPA regions can then incorporate and prioritize these sites as appropriate within existing site assessment workloads.

Once the untracked Eckel sites became part of the EPA’s workload, the EPA used pre-CERCLIS screening forms at most of the remaining sites to determine whether further site assessment work was needed. The completion of pre-CERCLIS screening forms for even the ineligible Eckel sites took time because the EPA had incomplete information for some sites.<sup>7</sup> EPA staff we spoke with told us that in some cases they spent more time reviewing historical documents to find site locations and boundaries than is usual for a pre-CERCLIS screening. Some sites

<sup>7</sup> Pre-CERCLIS checklist information not readily available or incomplete for some Eckel sites included site location and information on the release at the site. Sites that do not meet the pre-CERCLIS screening form criteria may be ineligible under CERCLA, which means they do not qualify for further assessment.

had been paved over for many years or contained large office buildings where no public exposure route was present. For example, according to the EPA, the Wrigley Building in Chicago, Illinois, is at an Eckel site. The EPA stated in a January 2007 internal report that, given the age of the Wrigley Building, it is probable that the offices, not the smelter for the Michigan Smelting and Refining Company, were located at the site and the site does not appear to pose a risk to humans.

## Internal EPA Strategy Created to Address Eckel Sites

In July 2012, the EPA developed a CERCLIS tracking report to monitor progress at the Eckel sites. The EPA created the Lead Smelter Strategy in August 2012 to ensure successful completion of the remaining Superfund site assessment work at the 464 smelters. The 2012 Strategy purpose also stated it was necessary to determine the extent to which new information recently made available to the EPA could affect planned, ongoing and completed assessments and identify smelters that may pose a health threat requiring further assessment and, as necessary, cleanup.

In addition, OSRTI staff told us the 2012 Strategy was created to establish a framework for completing and documenting the EPA's work on the Eckel sites in the midst of continuing FOIA and media requests, congressional interest and awareness of new sampling data. According to OSRTI staff, in late 2010, the EPA began receiving multiple FOIA requests, many from the news media, for information about the current status of the Eckel sites. One region we interviewed estimated that it received 13 FOIA requests. In addition to information requests, *USA Today* conducted sampling at some Eckel sites. Although the EPA was unable to review the sampling details, *USA Today's* test results identified high levels of lead in the soil, sparking concern and prompting the EPA to reassess some sites.

The EPA did not have a cost estimate for the 2012 strategy, nor did it track the personnel costs associated with implementing it. In the last few years of its work on the Eckel list sites, we estimate the EPA spent a substantially larger portion of money on site assessment work. As of 2013 the Eckel site assessment cost was estimated to be \$14.7 million,<sup>8</sup> while since 2012 we estimate the EPA spent \$9.2 million<sup>9</sup> or more on the Eckel site assessments. The EPA staff we spoke with in three regions said that the 2012 Strategy involved a more extensive process, and site assessments were more resource intensive compared to other sites brought to the EPA for review.

---

<sup>8</sup> Estimates are based only on the average cost to complete assessment activities (considering contractor and EPA costs). The site status covers all Eckel site assessment work conducted by the EPA through November 2013.

<sup>9</sup> The estimate is based on data from February 2012 to November 2013. OSWER's CERCLIS tracking report for the Eckel smelter sites provides February 2012 as a baseline starting point for the 2012 Strategy.

## ***2012 Strategy Resulted in Completion of All Site Screenings***

The 2012 Strategy stated that the EPA would consider prioritizing Eckel sites for assessment and, as necessary, cleanup. Circumstances the EPA would consider in its prioritization efforts included:

- Sites where sampling results indicate the presence of lead or other heavy metals attributable to past smelter operations and above risk-based screening levels and background.
- Sites located near where children may gather or be active (e.g., residential areas, day care centers and schools).
- Sites where population density is high (e.g., population within a quarter-mile of the listed address).
- Sites with potential environmental justice issues.

We found that these factors and the prioritization effort had a limited impact on the completion of site assessments. For over 216 of the 464 sites, EPA regions had already conducted site assessments before the 2012 Strategy was implemented. Because the regions were planning to assess all remaining sites within a 14-month timeframe, one region we spoke with told us the order in which the sites were assessed was influenced by other factors, including proximity to EPA and state offices. The EPA's estimated timeline for smelter-related activities in the 2012 Strategy included the completion, to the maximum extent practicable, of preliminary assessments for all 464 sites by October 31, 2013. Pre-CERCLIS screenings and/or preliminary assessments were completed by the end of November 2013 for all Eckel sites.

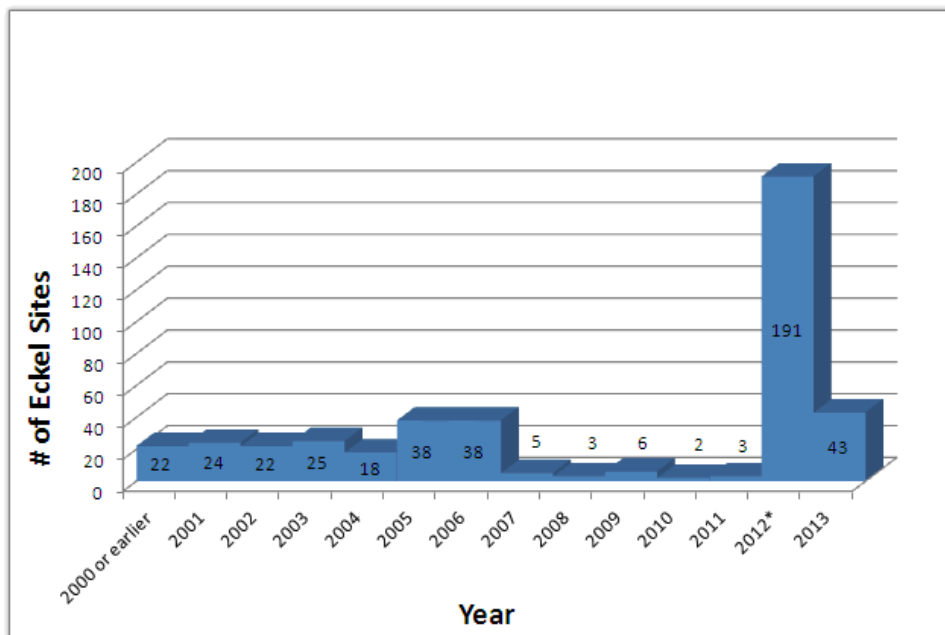


Example of EPA removal action at former Loewenthal Metals Corp. lead smelter—an Eckel site in Chicago, Illinois. (EPA OIG photo)

Figure 2 on the following page shows the rate at which site assessments for the Eckel list sites were completed and entered into CERCLIS as of November 2013. The number of assessments rose sharply in 2012. We attribute this to implementation of the 2012 Strategy. Figure 2 shows that 50 percent of all Eckel

sites were assessed in just the last 2 years. The figure only includes those sites for which a site assessment has been completed. Of the 464 Eckel list sites, figure 2 includes 440 of the sites. For the remaining 24 sites not shown, 19 were duplicates and further assessment is still needed at five sites.

**Figure 2: History of Eckel sites marked “assessment complete” in CERCLIS, November 2013**



Source: OIG analysis of 2013 EPA CERCLIS data using non-NPL date or proposed NPL date assigned. The (\*) next to 2012 highlights the year in which the EPA’s Strategy was developed.

As of November 2013, the EPA had determined that of the 464 Eckel list sites, approximately 290 sites (over 60 percent of the total sites) were determined to be invalid and therefore did not qualify for further assessment under CERCLA. In contrast, 50 of the 464 sites qualified for potential cleanup actions due to human health and environmental risks, according to OSWER’s tracking reports. Of those 50 sites, 32 were referred to the removal program, seven were proposed to be placed on or were placed on the final NPL, one is listed as part of an NPL site, three were deferred to the Resource Conservation and Recovery Act program, six were being cleaned up by states or private parties, and one has not yet had the cleanup program determined. Five of the seven sites that were proposed to be placed on or were placed on the NPL were proposed to the NPL prior to 2001.

### **Existing Backlog, Resources Impacted Earlier Attempts to Address Eckel Sites**

The EPA had a site assessment backlog of about 5,100 sites in the active site inventory in 2001. According to OSWER, this backlog currently stands at about 2,200 sites. The backlog consists of sites that have completed pre-CERCLIS screening and are subsequently added to the active site inventory. It does not



include sites that the EPA has determined require an initial pre-CERCLIS screening because EPA headquarters does not formally track this category. While some Eckel sites were on the assessment backlog because they had already been screened and found to be CERCLA eligible, others remained on the untracked, screening backlog. We found that the volume of these sites and the existing assessment backlog, as well as a lack of information on many, caused some regions to put a lower priority on the Eckel sites relative to their existing workload.

During the implementation of the 2012 Strategy, the EPA identified certain factors that could be used to prioritize assessment of the Eckel sites, as noted earlier. However, some regional site assessment managers had difficulty applying these factors and comparing these sites to those already in the backlog before initial screening. Once screening is completed and more site-specific information is gathered, the EPA could then use site-specific factors to assign each site a qualifier (e.g., “high priority” and “low priority”). These qualifiers are already defined and available within the CERCLIS program. The EPA could better use these qualifiers to determine whether time is being spent addressing sites that are of the highest priority, and to communicate to outside stakeholders the basis for determining the agency’s priorities and timeline for site assessment. The delay in addressing Eckel sites may be justified if the risk from other sites in the backlog was greater than the risk posed by the Eckel sites, but the EPA did not formally conduct such an analysis.

## **Delay in Addressing Contamination Can Reduce Projected Economic Benefits to Society**

The delay in addressing lead contamination is not insignificant. For the Eckel list sites, 50 were referred to cleanup programs because they had the potential to impact public health. While protecting human health is the EPA’s primary mission, resources spent to remove and remediate lead contamination can also result in projected economic benefits to society. According to a 2011 study,<sup>10</sup> lead poisoning for children in the United States cost \$50.9 billion (in 2008 U.S. dollars) in lost economic productivity resulting from reduced cognitive potential from preventable childhood lead exposure and an additional \$5.9 million in medical care costs. A 2009 study<sup>11</sup> suggests that each IQ point loss represents a loss of \$17,815 in discounted value of lifetime earnings (in 2006 U.S. dollars). Another study from 2002<sup>12</sup> estimated an economic gain of \$2,350 to \$5,500 in increased lifetime earnings per child for each microgram per deciliter blood lead

---

<sup>10</sup> Trasande L., and Liu Y. (2011) “Reducing the Staggering Costs of Environmental Disease in Children, Estimated at \$76.6 Billion in 2008.” *Health Affairs*, Volume 30, No. 5:863-870.

<sup>11</sup> Gould, E. (2009) “Childhood Lead Poisoning: Conservative Estimates of the Social and Economic Benefits of Lead Hazard Control.” *Environmental Health Perspectives*, Volume 117:1162–1167.

<sup>12</sup> Grosse S., Matte T., Schwartz J., Jackson R. (2002) “Economic Gains Resulting from the Reduction in Children’s Exposure to Lead in the United States.” *Environmental Health Perspectives*. Volume 110, No. 6:563-569.

reduction (in 2000 U.S. dollars). Furthermore, a 2013 study<sup>13</sup> estimated the benefits from cleanup under the Superfund program and found that, by analyzing census tract-level data within a 3-mile radius, the median home values increase by 20.8 percent after cleanup. Backlogs in site assessment activities can delay cleanup actions that lead to these economic benefits.

## **OIG Review of Selected Eckel Site Documents Identified a Site Needing Further Assessment**

In addition to our review of EPA activities related to the Eckel sites, we conducted a review of the site-specific documentation for a sample of 42 Eckel sites across all 10 EPA regions. Our goal was to confirm that EPA actions at these Eckel sites were currently supported by documentation. We found the EPA was initially missing documentation for one of the 42 sites. Subsequent pre-CERCLIS screening activities showed that additional assessment to ensure protection of the nearby residents and community was needed. Assessment activities, including sampling, were necessary because of the site's location in a residential area in close proximity to a school. The assessment activities will also include community outreach and reporting.

## **Additional Challenges Faced by EPA in Implementing 2012 Strategy**

The EPA had additional challenges in using the CERCLA statutory framework to efficiently implement the 2012 Strategy. These include:

- Delineating and cleaning up sites, including those in and around urban areas where the background levels of lead are high.
- Linking the source of lead contamination to the historical former lead smelters.
- Determining potential impact on communities when data on health impacts, including blood lead level data, are unavailable.

According to EPA guidance, CERCLA response actions are undertaken to address a release or threat of release of a hazardous substance such as lead into the environment. In certain cases, such as the secondary former lead smelters on the Eckel list, it may be appropriate to use CERCLA authorities to conduct sampling and site characterization activities to determine the source of the lead contamination and to differentiate between various site-related sources. However, one region that we visited stated that it found overarching difficulties in tracking and managing lead issues. The regional contacts we spoke with questioned whether CERCLA was the appropriate statute to address areas with lead contamination since it does not specifically address cleanup in circumstances when the background levels of contamination are equal to or higher than the site

---

<sup>13</sup> Gamper-Rabindran S., and Timmins C. (2013) "Does cleanup of hazardous waste sites raise housing values? Evidence of spatially localized benefits." *Journal of Environmental Economics and Management*. Volume 65, Issue 3, Pages 345-360.

under review. Both regions we visited and OSRTI managers stated that it is difficult to identify the various sources of lead in urban environments.

Under the Toxic Substances Control Act, Section 403, the EPA defines a soil lead hazard as bare soil on residential property, or on property of a child-occupied facility, that contains concentrations of lead equal to or exceeding 400 parts per million (ppm) in the play area or an average of 1,200 ppm in the rest of the yard. The Superfund program uses a 400 ppm screening level for residential properties.<sup>14</sup> In addition to the soil lead concentration, the potential for a health concern is related to several other factors, including the age of the person exposed as well as the level and duration of exposure.

The EPA conducted sampling at some of the sites we reviewed and identified lead levels in excess of 1,500 ppm both at the site and in surrounding areas. Background<sup>15</sup> levels of lead in urban areas can be high. Generally, the CERCLA program does not clean up sites to concentrations below natural or anthropogenic background levels. It is therefore difficult for regions to delineate sites and clean up contaminated property in many urban environments. Nonetheless, the contamination still exists and presents a potential risk to public health. For these cases, engineering controls (such as creating reliable barriers to mitigate the risk of lead exposure) as well as non-engineering controls (such as education and health intervention programs) can be appropriate response actions under CERCLA. However, because such non-engineering controls are not permanent, these actions may not be preferred remedies.

In addition to the complications of determining where and how to focus cleanup efforts in highly contaminated environments, EPA assessment managers we spoke with experienced challenges in linking lead contamination directly to the former smelter sites. Lead releases in soil can come from multiple sources, including paint and car exhaust. Lead from historical smelter sites may have degraded over time. One of the regions we visited conducted a pilot study to identify the source of lead through speciation.<sup>16</sup> However, this method can be time consuming and costly and, therefore, may not be widely used. Given the potentially broad statutory authority CERCLA provides to the EPA to conduct a removal and/or remedial action, the agency should determine whether and where it is necessary to use limited assessment resources to link contamination to a source.

According to regional interviews, the EPA does not have definitive guidance on source confirmation or cleanup decisions in areas with high background lead levels. Generally, there is a lack of blood lead level data available to inform

---

<sup>14</sup> Screening levels are defined as a level of contamination above which there may be enough concern to warrant site-specific study of risks.

<sup>15</sup> For the CERCLA cleanup program, EPA policy defines “background” as constituents or locations that are not influenced by the releases from a site and are usually described as naturally occurring or anthropogenic.

<sup>16</sup> Speciation is a technique used to identify the specific type of lead that can be used to distinguish smelter lead from other lead sources.

assessment decisions. Often, data most widely available is at the county level, which is not detailed enough to link blood lead levels to a source. EPA Region 3 is planning voluntary testing of community members for blood lead levels near a smelter site to determine whether there are potential health impacts from the site. Linking soil contamination at historical secondary lead smelter sites to current public health issues and environmental conditions is further complicated by high levels of lead in urban environments and the historical nature of the pollution. Additionally, according to OSWER, health impacts like community-wide blood level data cannot be incorporated into the current pre-remedial Hazard Ranking System scoring process.

Based on our regional interviews, review of the CERCLA statute, and existing guidance, the extent that resources should be expended to link contamination to a site to then utilize CERCLA funds for cleanup is unclear. In February 2013, OSRTI developed an internal discussion draft which outlined considerations and challenges associated with evaluating Eckel list sites for placement on the NPL. The internal document identified challenges evaluating Eckel sites, including where there were background levels of contamination and distinguishing between lead smelter and other sources of pollution in urban areas, but it did not address all circumstances or constitute formal program guidance. The lack of information and clear guidance on assessing lead at former smelter sites created uncertainty for the site assessment managers we spoke with. For sites where the level of cleanup, source of contamination and potential health impact were uncertain and guidance was not clear, EPA actions could be inconsistently and inefficiently applied. This could result in differences in the level of protection and cleanup from one community to another as well as potential delays in addressing sites that could impact public health.

## **EPA Did Not Fully Communicate or Publicize Overall Strategy Efforts**

The August 2012 Lead Smelter Strategy outreach and coordination section noted that EPA headquarters would explore the development of a “boilerplate” communications strategy to help regions proactively respond to concerns raised by the public. The EPA considered, but did not develop, any boilerplate communications for the regions. According to regional staff, there were relatively few public inquiries received on the sites and, where inquiries were received, regional staff developed site-specific responses. Regions were in regular communication with EPA headquarters on progress made assessing the Eckel list sites. Progress was tracked and reported on a quarterly basis for the number of sites assessed and monthly conference calls were held. No metrics, milestones or consistent information on the type of communication used at sites was included in the quarterly reports or otherwise tracked. As a result, we were unable to determine the full extent of the EPA’s communication and outreach efforts and any overall impacts on public health and community awareness.

With the exception of access agreements for sampling, no requirements exist for communicating with the public during either the PA or SI phase. According to EPA guidance, the agency does involve the community at sites that garner public interest and at sites during the PA/SI phases. The regions we visited—Regions 3 and 5—were both involved with community outreach during the PA stage. Region 3 had prepared a draft outreach document on lead smelters, lead contamination, exposure and prevention for residents in case of inquiry.

The EPA has not made its August 2012 Lead Smelter Strategy available to the public on its website. An OSRTI manager explained that it was OSRTI's decision to use the 2012 Strategy as an internal planning and management tool rather than to publicize it. Nonetheless, a news organization obtained the document through a FOIA request in September 2012 and posted it to a public website. EPA took no subsequent actions to release the strategy document.

The EPA's decision not to publish its strategy for assessing the Eckel list sites may result in reduced public awareness of its efforts and time spent to address these sites. The EPA generally did not emphasize in communications with the public and media that it received minimal details for many of the sites, nor did it disclose that the Eckel list was not submitted as a petition and was being addressed through the EPA's cleanup process. In addition, EPA senior officials were quoted in news articles about the Eckel list, but the agency's actions and process for addressing the Eckel sites were not included in the article and the EPA did not follow up with this information on its own website or an EPA press release.

## Conclusions

The EPA's pre-CERCLIS screenings and site assessments for Eckel list sites, tracked under the 2012 lead strategy, were completed more than 12 years after the EPA received and distributed the list. The EPA does not have decision criteria or required timeframes for screening and assessing potentially contaminated sites that come to its attention outside the petition process. By distributing the Eckel list to regional offices in 2001 for informational purposes only, the EPA created an awareness of the sites without a clear expectation for action. Without criteria and initial direction for assessing these 464 sites, agency resources in some cases were inconsistently and inefficiently used. The EPA spent time reviewing sites where the locations and existence of historical smelters were unclear. Moreover, it initially overlooked some sites that were later found to need clean-up actions. Establishing a clear process that includes decision criteria for accepting a non-petitioned site as well as target dates for screening and assessment may improve the timeliness in which sites are addressed. In addition, the application of criteria can increase consistency in decisions made across EPA regions.

The EPA has a site assessment backlog of over 2,200 sites. These sites compete for a limited amount of EPA resources. The EPA currently has no requirement to

prioritize new sites with existing sites in its backlog. Additional limitations include some EPA regional uncertainty about the extent that resources should be spent to link contamination to a source that would then enable the EPA to address a site under CERCLA. Also, EPA regions lack definitive guidance to prioritize site assessments in areas with high background levels of lead contamination. Regions also need instruction on determining actual or potential site-related health impacts, particularly in areas where data of this type are unavailable or incomplete. Existing guidance should be re-evaluated to ensure that regions are able to efficiently spend future resources addressing the highest priority sites.

Better communicating EPA efforts to address the Eckel sites may increase public awareness of how the EPA is taking steps to mitigate risk to public health. Improved communication may also help to reduce the resources used to respond to FOIAs and media inquiries and help to sustain EPA credibility in this area.

## Recommendations

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

1. Establish criteria for determining upfront whether to expend resources to conduct a pre-CERCLIS screening and/or add a non-petitioned site referred to the EPA Superfund site assessment program to the EPA's existing workload. Document and communicate decisions made in EPA records.
2. Refine the process for tracking non-petitioned sites referred to the EPA Superfund site assessment program, including:
  - a. Definition of a reasonable timeframe that pre-CERCLIS screenings and site assessments should be conducted. If needed, a discovery date should be entered as well as target dates for future assessments.
  - b. Establishment of a tracking mechanism for any backlog of pre-CERCLIS screenings.
  - c. Periodic reviews to ensure that sites in the assessment backlog have appropriate qualifiers that indicate priority level for further assessment.
3. Assess existing EPA guidance for addressing lead contamination in soil within the Superfund site assessment process and obtain input from the regions to determine whether any updates are needed and revise as appropriate. Include the following issues in the assessment:
  - a. Amount of resources, level of effort and methods used to link lead contamination to a source.

- b. Cleanup or other actions needed at sites when background contamination levels are above screening levels, including those in urban areas.
  - c. Determination of actual and/or potential health impact on communities, including whether a referral to another agency or program for further review or health-based testing is necessary.
4. Clearly post the August 2012 lead smelter strategy document on the EPA's website.
5. Following completion of the 2012 Strategy, create and post a summary of the results of the EPA's efforts to address sites included in the strategy and, as applicable, any findings and recommendations on the EPA's website.

## **Agency Response to Draft Report and OIG Evaluation**

We received comments on the draft report from the Assistant Administrator for OSWER (appendix A). In its response, OSWER stated that it uses its limited Superfund site assessment resources to address a wide variety of sites brought to its attention by various public and private entities using a "worst sites first" philosophy to guide the prioritization of site assessment work. OSWER expressed concern over the description of the EPA's initial response to the Eckel sites and noted that it distributed the list to its regional offices for informational purposes only. According to OSWER, it required the regions to assess a small number of the Eckel sites following a 2007 EPA site identification project. However, OSWER stated it did not require the addition of any remaining Eckel list sites to the workload until the 2012 strategy was developed.

We reviewed additional supporting information provided by OSWER in its response to the draft report. The information did not show that OSWER explicitly stated that the Eckel list sites were to be viewed for informational purposes only, nor did the information show that OSWER provided any specific direction to regional offices regarding the Eckel list. We clarified our portrayal of the EPA's initial response based on this information. The agency's response also included some technical comments, which were incorporated into the final report as appropriate.

The agency agreed with all recommendations and provided a corrective action plan as well as estimated completion dates. The plan provided steps the agency would take to address the recommendations, including many actions already in the planning stages. In a subsequent communication, OSWER confirmed that its corrective actions for recommendation 2a would include entry of discovery dates, if needed, and explained that it will use a new project management software component of SEMS to track this element. In addition, OSWER clarified that it will include all aspects of recommendation 3 (3a, 3b and 3c) in its assessment of

existing guidance. Based on the proposed corrective actions and subsequent communication with OSWER, the OIG believes the agency's actions, when implemented, should address all recommendations.



## **Status of Recommendations and Potential Monetary Benefits**

RECOMMENDATIONS						POTENTIAL MONETARY BENEFITS (in \$000s)	
Rec. No.	Page No.	Subject	Status <sup>1</sup>	Action Official	Planned Completion Date	Claimed Amount	Agreed-To Amount
1	17	Establish criteria for determining upfront whether to expend resources to conduct a pre-CERCLIS screening and/or add a non-petitioned site referred to the EPA Superfund site assessment program to the EPA's existing workload. Document and communicate decisions made in EPA records	O	Assistant Administrator for Solid Waste and Emergency Response	9/30/14		
2	17	Refine the process for tracking non-petitioned sites referred to the EPA Superfund site assessment program, including: <ul style="list-style-type: none"> <li>a. Definition of a reasonable timeframe that pre-CERCLIS screenings and site assessments should be conducted. If needed, a discovery date should be entered as well as target dates for future assessments.</li> <li>b. Establishment of a tracking mechanism for any backlog of pre-CERCLIS screenings.</li> <li>c. Periodic reviews to ensure that sites in the assessment backlog have appropriate qualifiers that indicate priority level for further assessment.</li> </ul>	O	Assistant Administrator for Solid Waste and Emergency Response	9/30/14 (for all parts, a-c)		
3	17	Assess existing EPA guidance for addressing lead contamination in soil within the Superfund site-assessment process and obtain input from the regions to determine whether any updates are needed and revise as appropriate. Include the following issues in the assessment: <ul style="list-style-type: none"> <li>a. Amount of resources, level of effort and methods used to link lead contamination to a source.</li> <li>b. Cleanup or other actions needed at sites when background contamination levels are above screening levels, including those in urban areas.</li> <li>c. Determination of actual and/or potential health impact on communities, including whether a referral to another agency or program for further review or health-based testing is necessary.</li> </ul>	O	Assistant Administrator for Solid Waste and Emergency Response	9/30/16 (for all parts, a-c)		
4	18	Clearly post the August 2012 lead smelter strategy document on the EPA's website.	O	Assistant Administrator for Solid Waste and Emergency Response	6/30/14		
5	18	Following completion of the 2012 Strategy, create and post a summary of the results of the EPA's efforts to address sites included in the strategy and, as applicable, any findings and recommendations on the EPA's website.	O	Assistant Administrator for Solid Waste and Emergency Response	12/31/15		

<sup>1</sup> O = Recommendation is open with agreed-to corrective actions pending.  
 C = Recommendation is closed with all agreed-to actions completed.  
 U = Recommendation is unresolved with resolution efforts in progress.

## **Agency Response to Draft Report**



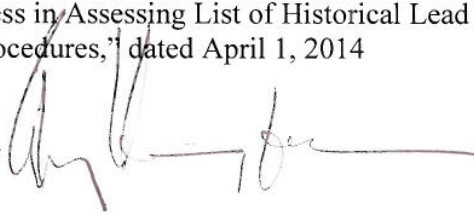
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, D.C. 20460

MAY 01 2014

OFFICE OF  
SOLID WASTE AND  
EMERGENCY RESPONSE

MEMORANDUM

**SUBJECT:** Response to Office of Inspector General Draft Report No. OPE-FY13-0023  
"EPA Has Made Progress in Assessing List of Historical Lead Smelter Sites but  
Needs to Strengthen Procedures," dated April 1, 2014

**FROM:** Mathy Stanislaus  
Assistant Administrator 

**TO:** Arthur A. Elkins, Jr.  
Inspector General

Thank you for the opportunity to respond to the issues and recommendations in the subject audit report. Following is a summary of the agency's overall position, along with its position on each of the report recommendations. For those report recommendations with which the agency agrees, we have provided high-level intended corrective actions and estimated completion dates to the extent we can. There are no report recommendations with which the agency does not agree. For your consideration, we have included a Technical Comments Attachment to supplement this response.

AGENCY'S OVERALL POSITION

- We concur with all of the OIG's proposed recommendations and, as specified in the attached chart, have initiated or planned corrective actions.
- Every year, EPA uses its limited Superfund site assessment resources to address a wide variety of sites brought to our attention by various public and private entities. EPA regions work with their state and tribal partners to determine which sites will be evaluated. Historically, EPA applies the philosophy of "worst sites first" to guide the prioritization of site assessment work.

- We are concerned about statements describing when the 464 Eckel sites were added to EPA’s existing workload since they may imply an expectation to complete this work dating back to 2001.
- While EPA became aware of the list of potential sites in 2001, the list generally lacked sufficient site detail to add them to the workload. EPA distributed the list to its regional offices for informational purposes only. Our Regional offices did add some of these sites to the existing workload and conducted assessments based on their research of this list.

EPA’s site identification project completed in 2007 focused on those sites from the 2001 list that had not already been added to the existing workload. At that time, OSWER required the regions to assess a small number of these sites based on certain key criteria. The results of these assessments concluded that the newly assessed sites from the 2001 list generally did not pose sufficient contamination needing response under the Federal Superfund program. Thus, no additional requirements were made to add any remaining sites to the workload. However, in early 2012, EPA learned of new sampling results from media reports suggesting some of the 464 sites with no planned EPA involvement had soil lead contamination above health-based benchmarks. That is when EPA decided to develop the 2012 lead strategy ensuring remaining sites were added to the workload and assessed as necessary.

AGENCY’S RESPONSE TO REPORT RECOMMENDATIONS

No.	Recommendation	High-Level Intended Corrective Action(s)	Estimated Completion by Quarter and FY
1	Establish criteria for determining upfront whether to expend resources to conduct a pre-CERCLIS screening and/or add a non-petitioned site referred to the EPA Superfund site assessment program to the EPA’s existing workload. Document and communicate decisions made in EPA records.	OSWER agrees with this recommendation. OSWER is currently revising the October 1999 Pre-CERCLIS Screening Assessments fact sheet as an action item under the Superfund Remedial Program Review Action Plan dated November 26, 2013. OSWER expects the revision will address the components of this recommendation, including establishing criteria for determining whether pre-screening is warranted, identifying the point at which potential sites should be added to the existing workload, and describing records management and communication requirements.	4 <sup>th</sup> Quarter FY 2014

2-a	<p>Refine the process for tracking non-petitioned sites referred to the EPA Superfund site assessment program, including:</p> <p>a. Definition of a reasonable timeframe that pre-CERCLIS screenings and site assessments should be conducted. If needed, a discovery date should be entered as well as target dates for future assessments.</p>	<p>OSWER agrees with this recommendation.</p> <p>OSWER's corrective action applies to sites that pass the criteria to be developed in response to Recommendation #1 (i.e., sites determined by EPA to need completion of a pre-screening report).</p> <p>OSWER plans to define an average expected timeframe for performing pre-screenings in the revised pre-screening fact sheet and/or EPA's Superfund Program Implementation Manual (SPIM).</p> <p>In addition, EPA's Superfund Enterprise Management System (SEMS) became operational in December, 2013 and subsumed EPA's CERCLIS database. SEMS includes a new project management software component that uses default durations to develop a draft site project schedule. Default durations for site assessment activities have been programmed into the project management software thereby establishing target dates for future assessments when new sites are added to the SEMS active site inventory.</p>	4 <sup>th</sup> Quarter FY 2014
2-b	<p>Establishment of a tracking mechanism for any backlog of pre-CERCLIS screenings.</p>	<p>OSWER agrees with this recommendation.</p> <p>OSWER's corrective action applies to sites that pass the criteria to be developed in response to Recommendation</p>	4 <sup>th</sup> Quarter FY 2014

		<p>#1 (i.e., sites determined by EPA to need completion of a pre-screening report).</p> <p>SEMS provides the ability to add a new site record when a determination has been made that pre-screening is warranted. SEMS users can add site name and location data along with planned and actual start and completion dates for pre-screening work. OSWER plans to develop a computer tracking report displaying new sites added to SEMS which need pre-screening work completed.</p>	
2-c	<p>Periodic reviews to ensure that sites in the assessment backlog have appropriate qualifiers that indicate priority level for further assessment.</p>	<p>OSWER agrees with this recommendation. The Superfund Program Implementation Manual (SPIM) describes appropriate qualifiers that indicate priority level for further assessment beginning with the Preliminary Assessment and a SEMS data quality report exists showing missing action qualifiers. OSWER will add an instruction to the SPIM requiring review of the data quality report on an annual basis. OSWER will explore the benefit of adding qualifiers to pre-screening and remedial site discovery activities in SEMS and update the SPIM as necessary.</p>	4 <sup>th</sup> Quarter FY 2014
3	<p>Assess existing EPA guidance for addressing lead contamination in soil within the Superfund site assessment process and obtain input from the</p>	<p>OSWER agrees with this recommendation. OSWER plans to work with regional offices in assessing existing guidance relating to the Superfund site assessment</p>	<p>Guidance Assessment: 2<sup>nd</sup> Quarter FY 2015</p> <p>Revised Guidance (if necessary): 4<sup>th</sup> Quarter FY 2016</p>

	<p>regions to determine whether any updates are needed and revise as appropriate. Include the following issues in the assessment:</p> <p>a. Amount of resources, level of effort and methods used to link lead contamination to a source.</p> <p>b. Cleanup or other actions needed at sites when background contamination levels are above screening levels, including those in urban areas.</p> <p>c. Determination of actual and/or potential health impact on communities, including whether a referral to another agency or program for further review or health-based testing is necessary.</p>	<p>process to determine if updates are warranted with respect to addressing lead contamination in soil.</p> <p>OSWER's assessment will include consideration of the elements described in parts 3a, 3b, and 3c of the OIG's recommendation.</p> <p>OSWER will revise guidance or issue new guidance as necessary based on the outcome of the guidance assessment.</p>	
4	Clearly post the August 2012 lead smelter strategy document on the EPA's website.	OSWER agrees with this recommendation. OSWER will post the 2012 lead smelter strategy on an Agency web page.	3 <sup>rd</sup> Quarter FY 2014
5	Following completion of the 2012 Strategy, create and post a summary of the results of the EPA's efforts to address sites included in the strategy and, as applicable, any findings and recommendations on the EPA's website.	OSWER agrees with this recommendation. OSWER plans to develop a summary of results based on EPA's implementation of the 2012 lead strategy, including applicable findings and recommendations. OSWER will post the summary on an Agency web page.	1 <sup>st</sup> Quarter FY 2015

#### CONTACT INFORMATION

If you have any questions regarding this response, please contact Doug Ammon, Site Assessment and Remedy Decisions Branch Chief in the Office of Superfund Remediation and Technology Innovation on (703) 347-8925.

Attachments

cc: Barry Breen, OSWER  
James Woolford, OSWER/OSRTI  
Dana Stalcup, OSWER/OSRTI  
Doug Ammon, OSWER/OSRTI  
Randy Hippen, OSWER/OSRTI  
Tina Lovingood, OIG  
Jill Trynosky, OIG

## ***Distribution***

Office of the Administrator  
Assistant Administrator for Solid Waste and Emergency Response  
Agency Follow-Up Official (the CFO)  
Agency Follow-Up Coordinator  
General Counsel  
Associate Administrator for Congressional and Intergovernmental Relations  
Associate Administrator for External Affairs and Environmental Education  
Deputy Assistant Administrator for Solid Waste and Emergency Response  
Director, Office of Superfund Remediation and Technology Innovation,  
Office of Solid Waste and Emergency Response  
Audit Follow-Up Coordinator, Office of Solid Waste and Emergency Response