



Report to the Ranking Member,
Subcommittee on Environment and the
Economy, Committee on
Energy and Commerce, House of
Representatives

January 2015

HAZARDOUS WASTE

Agencies Should
Take Steps to
Improve Information
on USDA's and
Interior's Potentially
Contaminated Sites

GAO Highlights

Highlights of [GAO-15-35](#), a report to the Ranking Member, Subcommittee on Environment and the Economy, Committee on Energy and Commerce, House of Representatives

Why GAO Did This Study

USDA and Interior manage over 600 million acres of land, including sites contaminated from prior uses or events, such as mining or toxic spills. These lands are managed by five Interior agencies, including BLM and the National Park Service, and five USDA agencies, including the U.S. Forest Service. These agencies must identify and report to EPA certain facilities that may threaten human health or the environment and, under some circumstances, clean them up. They must also report cost estimates for addressing contamination at certain sites, called environmental liabilities.

GAO was asked to review the status of USDA's and Interior's potentially contaminated sites. This report examines USDA's and Interior's (1) efforts to identify these sites, (2) funding to address the sites, (3) reported environmental liabilities, and (4) EPA's role in addressing the sites. GAO reviewed relevant laws and government accounting standards; examined agencies' policies, site inventory data from September 2013 to July 2014, and financial statements; and interviewed EPA, Interior, and USDA officials.

What GAO Recommends

GAO recommends that USDA develop plans and procedures for completing its site inventories and that EPA clarify which USDA and Interior sites need an environmental assessment. Interior and EPA generally agreed with GAO's findings. USDA disagreed that its incomplete inventory affects the effectiveness of its cleanup programs, but GAO continues to believe that effective program management requires reliable data.

View [GAO-15-35](#). For more information, contact J. Alfredo Gómez at 202-512-3841 or gomezj@gao.gov

January 2015

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Agencies Should Take Steps to Improve Information on USDA's and Interior's Potentially Contaminated Sites

What GAO Found

The U.S. Department of Agriculture (USDA) and the Department of the Interior (Interior) have identified many contaminated and potentially contaminated sites, but neither agency has a complete inventory. As of April 2014, USDA had identified 1,491 contaminated sites and many potentially contaminated sites, including landfills and shooting ranges. However, USDA does not have a reliable, centralized site inventory or plans and procedures for completing one, in particular, for abandoned mines. Without a reliable inventory or plans and procedures for developing one, USDA cannot effectively manage its cleanup programs. As of April 2014, Interior had an inventory of 4,722 sites with confirmed or likely contamination. In addition, Interior's Bureau of Land Management (BLM) had identified over 30,000 abandoned mines that were not yet assessed for contamination, and this inventory is not complete. BLM is working to improve the completeness and accuracy of its inventory.

In fiscal year 2013, USDA allocated over \$22 million for environmental cleanup efforts, and Interior allocated over \$13 million. Specifically, in fiscal year 2013, USDA allocated about (1) \$3.7 million for cleanup projects department-wide, primarily for one large site; (2) \$4.3 million to mitigate contamination at grain silos and foreclosure properties; and (3) approximately \$14 million for the U.S. Forest Service to assess and clean up sites. In fiscal year 2013, Interior allocated almost \$10 million for cleanup projects department-wide, the National Park Service allocated an additional \$2.7 million and the Fish and Wildlife Service allocated over \$800,000 for environmental assessment and cleanup projects. In addition, BLM allocated more than \$34 million to its hazardous waste management and abandoned mine programs.

Both USDA and Interior report probable and reasonably estimable environmental liabilities on their financial statements. In fiscal year 2013, USDA reported environmental liabilities of \$176 million, most of which was for asbestos cleanup. Interior reported environmental liabilities of \$192 million to address 434 sites. Interior also disclosed that it will incur \$62 million to \$139 million in cleanup costs at government-acknowledged sites—sites with damage caused by nonfederal entities. The majority of the costs Interior disclosed were for cleanup activities at 85 abandoned mines. As USDA and Interior complete their inventories and assess them for contamination, it might be expected that related environmental costs for both agencies will increase as additional sites are considered.

The Environmental Protection Agency's (EPA) role with regard to USDA and Interior sites is to maintain a list of potentially contaminated sites based on data from these agencies, take steps to assure that the agencies assess these sites for contamination, determine whether the sites should be proposed for the National Priorities List, and oversee certain cleanup activities. EPA has compiled a docket list of 260 USDA sites and 528 Interior sites that may pose health or environmental risks, most of which have been assessed. Disagreement with USDA and Interior over their need to assess the remaining sites and differing information on whether this requirement has been met at some sites means EPA cannot assure that the assessments are conducted in a timely manner and, ultimately, that sites most in need of remediation are addressed.

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Abbreviations

AML	Abandoned Mine Lands
APHIS	Animal and Plant Health Inspection Service
ARS	Agricultural Research Service
BLM	Bureau of Land Management
CCC	Commodity Credit Corporation
CEE	Center for Environmental Excellence
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CHF	Central Hazardous Materials Fund
Corps	U.S. Army Corps of Engineers
DOD	Department of Defense
ECAP	Environmental Compliance and Protection
EDL	Environmental and Disposal Liability
EMD	Environmental Management Division
EPA	Environmental Protection Agency
FASAB	Federal Accounting Standards Advisory Board
FSA	Farm Service Agency
FUDS	Formerly Used Defense Sites
HMMA	Hazardous Materials Management Appropriation
HRS	Hazard Ranking System
Interior	Department of the Interior
NDAI	no DOD action indicated
NFS	National Forest System
NPL	National Priorities List
NPS	National Park Service
OIG	Office of Inspector General
OMB	Office of Management and Budget
PRP	potentially responsible party
RCRA	Resource Conservation and Recovery Act
SFFAS	Statement of Federal Financial Accounting Standards
USDA	U.S. Department of Agriculture

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January 16, 2015

The Honorable Paul D. Tonko
Ranking Member
Subcommittee on Environment and the Economy
Committee on Energy and Commerce
House of Representatives

Dear Mr. Tonko:

Agencies within the U.S. Department of Agriculture (USDA) and the Department of the Interior (Interior) manage over 700 million acres of land that include national parks, national forests, research centers, and laboratories. This vast acreage includes land that may be contaminated with hazardous waste¹ from prior uses or events, such as landfills or toxic spills. In addition, abandoned mines from private mining activities on Interior and USDA lands can present major environmental cleanup challenges and expenses for the federal government. These lands are managed by five agencies within Interior, including the Bureau of Land Management (BLM) and the National Park Service (NPS), and five agencies within USDA, including the Forest Service and the Agricultural Research Service.

The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) of 1980 requires the Environmental Protection Agency (EPA) to compile a list of contaminated and potentially contaminated federal facilities. This list, known as the Federal Agency Hazardous Waste Compliance Docket (docket) is based on information that agencies are required by CERCLA and the Resource Conservation and Recovery Act (RCRA) of 1976 to report to EPA. In addition, the Chief

¹In this report, we use the term “hazardous waste” to refer generally to material that is or may be harmful to human health or the environment, although the term has specific meaning under the Resource Conservation and Recovery Act (RCRA) and the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). Under RCRA, “hazardous waste” generally refers to materials specifically listed by the Environmental Protection Agency or which demonstrate certain hazardous characteristics. A “hazardous waste” under RCRA is also among the substances defined as a “hazardous substance” under CERCLA.

Financial Officers Act of 1990² requires and Office of Management and Budget (OMB) Circular A-136 and the Federal Accounting Standards Advisory Board's (FASAB) Statement of Federal Financial Accounting Standards (SFFAS) No. 5³ direct federal agencies to include environmental liabilities in their annual financial statements.

In 1987 and 1994, GAO found that Interior and USDA were slow to complete an inventory of potentially contaminated sites for which they were responsible because of the size of their landholdings and limited resources.⁴ GAO's past work has also shown that BLM and Forest Service, the two principal agencies that manage federal lands available for hardrock mining, had no definitive estimates of the number of abandoned mines on their lands.⁵

You asked us to review the status of USDA's and Interior's potentially contaminated sites. This report examines (1) USDA's and Interior's efforts to develop an inventory of their contaminated and potentially contaminated sites, (2) funding levels for addressing their contaminated sites, (3) the amount of environmental liabilities the agencies report on their financial statements, and (4) EPA's role with regard to these sites.

To conduct this work, we reviewed relevant inventory data covering the period of September 2013 to June 2014 from 10 agency sources and budget data related to environmental cleanup projects for fiscal years 2003 through 2013. We also reviewed department and agency

²Pub. L. No. 101-576, 104 Stat. 2838 (codified as amended in scattered sections of 5, 31, 28, and 42 U.S.C.).

³Federal Accounting Standards Advisory Board's Statement of Federal Financial Accounting Standards (SFFAS) No. 5, *Accounting for Liabilities of the Federal Government* (Dec. 20, 1995).

⁴GAO, *Superfund: Civilian Federal Agencies Slow to Clean Up Hazardous Waste*, RCED-87-153 (Washington, D.C.: July 24, 1987) and *Status of Civilian Federal Agency Efforts To Address Hazardous Waste Problems on Their Lands*, RCED-84-188 (Washington, D.C.: Sept. 28, 1984).

⁵GAO, *Hardrock Mining: Information on Abandoned Mines and Value and Coverage of Financial Assurances on BLM Land*, [GAO-08-574T](#) (Washington, D.C.: Mar. 12, 2008); *Abandoned Mines: Information on the Number of Hardrock Mines, Cost of Cleanup, and Value of Financial Assurances*, [GAO-11-834T](#) (Washington, D.C.: July 14, 2011); and *Hardrock Mining: BLM Needs to Revise Its Systems for Assessing the Adequacy of Financial Assurances*, [GAO-12-189R](#) (Washington, D.C.: Dec. 12, 2011).

documents; government accounting standards and laws; and interviewed EPA, USDA, and Interior officials. To determine the status of USDA's and Interior's efforts to identify the universe of potentially contaminated sites on lands they manage, we reviewed each agency's policies and guidance on identifying new sites, and we interviewed agency officials on the completeness of their inventories. We collected data on both the number of contaminated sites in each agency's inventory, as well as the number of sites each agency has identified that could potentially be contaminated but have not yet been assessed to confirm contamination. Agencies with small inventories provided site numbers or a list. For the other agencies with more extensive inventories, we obtained information from a number of databases. To assess the reliability of the inventory lists from the agency databases, we reviewed available documents to determine the source of the information, data entry steps, and the completeness of the inventory, and interviewed agency officials. We found that some of the databases had inaccuracies and were not complete, but we determined that the data systems represented the available inventory identified and used by the agency and, therefore, were sufficiently reliable for our purposes of reporting USDA's and Interior's known contaminated sites. However, we do not feel that USDA's data on potentially contaminated sites was sufficiently reliable for the purpose of reporting the number of known potentially contaminated sites. To determine the funding levels for addressing the agencies sites in recent years, we selected the last decade as a reasonable period for analysis and, therefore, we collected and reviewed budget data for fiscal years 2003 through 2013. We also interviewed agency officials regarding estimated costs to address the abandoned mines on these agencies' properties. To determine the amount of environmental liabilities Interior and USDA report, we reviewed these departments' financial statements and interviewed officials in USDA's and Interior's Offices of Chief Financial Officer, USDA's Office of General Counsel, and Interior's Office of Solicitor. In addition, we collected and reviewed department and agency guidance on environmental liabilities and cost estimating. At Interior, we reviewed information from the Environmental and Disposal Liability (EDL) database. We reviewed the Chief Financial Officers Act of 1990, OMB Circular A-136, and the Federal Accounting Standards Advisory Board's (FASAB) Statement of Federal Financial Accounting Standards (SFFAS) No. 5 to better understand the applicable criteria.⁶ To determine the role

⁶Reporting is also referred to as recognizing a liability.

of EPA with regard to these sites, we interviewed EPA officials with the Federal Facilities Restoration and Reuse Office and reviewed data from EPA's Comprehensive Environmental Response, Compensation, and Liability Information System on the status of USDA and Interior sites, as of December 2013. To assess the reliability of EPA's data on the status of the sites, we also obtained information from USDA and Interior on the status of their sites and documented any differences; we found the data to be sufficiently reliable for the purposes of this report. Finally, for all four objectives, we reviewed relevant laws—in particular, CERCLA and RCRA—and associated regulations and directives. Appendix I provides a detailed description of our objectives, scope, and methodology.

We conducted this performance audit from April 2013 to January 2015 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.

Background

Federal law requires agencies to identify and report certain facilities where there is or has been hazardous waste activity or a release of hazardous substances. In addition, federal accounting standards direct federal agencies to develop cost estimates for certain environmental liabilities and report those estimates on their financial statements.

Federal Agency Inventory Requirements

Federal agencies began developing inventories of contaminated and potentially contaminated sites in response to laws passed in the 1980s. In 1980, Congress enacted CERCLA to respond to problems caused by improper disposal of hazardous substances in the past. Under CERCLA, responsible parties are liable for conducting or paying for site cleanup of hazardous substances, or for reimbursing others who conduct cleanups on their behalf, including federal agencies.⁷ Furthermore, by June 1981, all such facility owners and operators were required to notify EPA of the

⁷Under CERCLA, potentially responsible parties include current or former owners or operators of a site or the generators and transporters of the hazardous substances. For purposes of this report, we use the term responsible parties to refer to those potentially responsible parties who are accepting liability or for whom liability is proven.

existence of their facilities, as well as known, suspected, or likely releases of hazardous substances. These liability and notification provisions applied to the federal government and its contractors and lessees as well.

Beginning in 1986, RCRA required agencies to undertake a continuing program to identify and report to EPA those facilities that the agencies own or operate—or previously owned or operated—that involved the treatment, storage, or disposal of hazardous wastes. These inventories must be updated biennially. RCRA does not set a deadline for completing the inventories.

Reporting Environmental Liabilities on Agency Financial Statements

Federal accounting standards direct agencies responsible for cleaning up contamination to estimate cleanup costs and report those estimates on their financial statements as environmental liabilities. The Federal Accounting Standards Advisory Board's (FASAB) Statement of Federal Financial Accounting Standards (SFFAS) No. 5⁸ outlines standards based on whether events are government-related or government-acknowledged. Government-related events, or sites, involve interaction between federal entities and their environment, and include hazardous waste spills on federal property caused by federal operations. Government-acknowledged events are sites that are of financial consequence to the federal government because it chooses to respond to the event, and include toxic waste damage caused by nonfederal entities. SFFAS No. 5 directs an agency to report as a liability on its financial statements an amount for probable and reasonably estimable future costs associated with cleaning up contamination associated with these events, and to disclose the nature of the contingency, an estimate of the possible liability or the range of the possible liability, or a statement that such an estimate cannot be made for reasonably possible future costs in the notes to the financial statements.

Guidance for implementing the standards⁹ indicates that there are two ways a federal agency's environmental liabilities may meet the "probable"

⁸Federal Accounting Standards Advisory Board, Statement of Federal Financial Accounting Standards (SFFAS), No. 5, *Accounting for Liabilities of the Federal Government* (Dec. 20, 1995).

⁹Federal Accounting Standards Advisory Board, Federal Financial Accounting and Auditing Technical Release 2, *Determining Probable and Reasonably Estimable for Environmental Liabilities in the Federal Government*.

cost criteria. The first way is when contamination is known, government-related, and represents a legal liability. The second way is when the contamination is known, government-acknowledged, and funds have been appropriated for a cleanup or an event has occurred causing another party to expect payment (e.g., a contractor has performed cleanup of a site).

The “reasonably estimable” criteria relates to an agency’s ability to reliably estimate possible future costs associated with the cleanup of a contaminated site. In making such estimates, the agency is to consider several key factors, such as whether remedial investigations or feasibility studies have been conducted, prior experience with similar sites or conditions, and the availability of technology required to conduct cleanup operations.

If a liability is probable, but a reasonable estimate of costs can only be expressed as a range, SFFAS No. 5 directs the agency to report the low end of the range on the face of the financial statement and disclose the complete range in the notes of its financial statement.¹⁰ Similarly, if a liability is “reasonably possible”—that is, the probability of future expenditures for a given site is less than probable but greater than remote—then SFFAS No. 5 directs disclosure of the range of possible liability or a statement that such an estimate cannot be made.

¹⁰Disclosure refers to information in the notes regarded as integral to the financial statements.

USDA and Interior Have Identified Thousands of Contaminated and Potentially Contaminated Sites, but Neither Agency Has a Complete Inventory of Abandoned Mines

USDA and Interior have identified many contaminated and potentially contaminated sites¹¹, but neither agency has a complete inventory of sites, in particular, abandoned mines. There are approximately 1,491 USDA sites with confirmed contamination. However, USDA has not compiled a reliable, centralized inventory of known sites that are potentially contaminated and does not have plans or procedures for developing one. In particular, considerable work remains to identify abandoned mines on National Forest System (NFS) lands.¹² Interior has identified 4,722 sites with confirmed or likely contamination on land it manages. Interior officials believe that this inventory is largely complete, except for abandoned mines. In this regard, Interior's BLM has over 30,000 abandoned mines in its inventory that it has not yet assessed for contamination, but the inventory is not complete. For example, BLM has estimated that there may be about 100,000 additional sites in California, Nevada, and Utah that have not yet been located, included in the inventory, and assessed for contamination. BLM has a centralized inventory database of its sites and has been taking steps to improve its data quality and completeness.

USDA

According to our analysis of several USDA data sources,¹³ as of April 2014, there were at least 1,491 contaminated sites on land currently or previously managed by USDA. These sites include 1,422 Forest Service sites—primarily abandoned mines—2 Animal and Plant Health Inspection Service (APHIS) sites, 3 Agricultural Research Service (ARS) sites, 61 former grain storage sites once managed by Commodity Credit

¹¹In addition, certain Formerly Used Defense Sites (FUDS) are now under USDA or Interior's jurisdiction. These sites were once under the jurisdiction of the Department of Defense and may be contaminated. They include firing ranges, and industrial facilities. Appendix II provides information on FUDS.

¹²The National Forest System (NFS) is a national system of federally owned units of forest, range, and related land that are administered by the Forest Service or designated for administration through the Forest Service.

¹³These sources include the Environmental Management Division's (EMD) Center for Environmental Excellence (CEE) database for Forest Service sites in Regions 1 through 9, a spreadsheet of Forest Service sites for Region 10, USDA's Docket Status Spreadsheet, and statements from officials of the Animal and Plant Health Inspection Service (APHIS), Agricultural Research Service (ARS), and Commodity Credit Corporation (CCC).

Corporation (CCC), and 3 foreclosure properties belonging to the Farm Service Agency (FSA).¹⁴

In addition to sites with confirmed contamination, USDA agencies have also identified some potentially contaminated sites. ARS has identified 3 sites that are potentially contaminated. The Forest Service maintains multiple inventories of potentially contaminated sites that include landfills, shooting ranges, and cattle dip vats. However, there is no centralized database of these sites and no plans or procedures for developing one; the inventories are maintained at the regional level. A number of Forest Service officials we spoke with believe that most potentially contaminated sites in these categories have been identified but, for the reasons discussed below, they were unable to provide us with inventory numbers for all these sites.

These various inventories do not provide a complete picture of the extent of USDA's potentially contaminated sites. For example, there are an unknown number of potentially contaminated former grain storage sites in the 29 states where the CCC previously used carbon tetrachloride. This number is unknown because the CCC relies on the states to notify it of potential contamination, and 25 of the 29 states have not yet reported whether there is suspected contamination at their former CCC grain storage sites. The Forest Service also deals with various other types of hazardous waste sites, such as methamphetamine laboratories, roadside spills, and waste dumps. Forest Service officials said that, since these types of sites may involve illegal activities and are, therefore, not routinely reported, it is not possible to develop a comprehensive inventory of these types of sites.¹⁵

¹⁴However, Forest Service officials said that some landfills and underground storage tanks may not be captured by this number. The Forest Service tracks most of its sites with confirmed contamination in the CEE database. In general, sites brought into "active" status within CEE have known contamination, but the degree and extent of that contamination has yet to be determined. Active sites are those at which USDA plans to perform (or has performed) a CERCLA preliminary assessment to eliminate from further consideration those sites that pose no threat to public health or the environment, to determine the need for further response actions, and to set priorities for further response actions.

¹⁵Forest Service officials said that these types of sites are sometimes addressed through time-critical removal actions and are cleaned up shortly after their discovery, depending on the specific circumstances.

In addition, the Forest Service has not developed a complete, consistent, or usable inventory of abandoned mines and has no plans and procedures for developing such an inventory. The Forest Service estimates that there are between 27,000 and 39,000 abandoned mines on its lands¹⁶—approximately 20 percent of which may pose some level of risk to human health or the environment, based on the professional knowledge and experience of its staff. Such risks may include chemicals and explosives, acid mine drainage, and heavy metal contamination in mine waste rock. However, because the Forest Service does not have a complete inventory of abandoned mine sites, the actual number of abandoned mines on NFS lands is unknown. Forest Service officials told us that they do not have the resources to complete a comprehensive inventory of all potentially contaminated abandoned mines on the agency's lands. However, without a comprehensive inventory of such sites or plans and procedures for developing one, USDA and the Forest Service will not have reasonable assurance that they are prioritizing and addressing the sites that pose the greatest risk to human health or the environment.

The universe of abandoned mines on NFS lands is unknown for several reasons. According to a USDA official, USDA attempted to create a national inventory of NFS mines in 2003, with the creation of the Center for Environmental Excellence (CEE) database. This inventory pulled data from regional Forest Service inventories and currently shows 20,401 potentially contaminated abandoned mine or mill sites.¹⁷ However, these data are not complete or current and are therefore not useable for purposes of identifying a complete and accurate number of potentially contaminated abandoned mines currently on NFS lands. The Forest Service established the Abandoned Mine Lands (AML) database in 2008 to aggregate all available data on abandoned mines on NFS lands. The AML database drew data on pending abandoned mine sites from the CEE database and Forest Service regional inventories, as well as from the U.S. Geological Survey and various other federal, state, and local

¹⁶According to USDA officials, this estimate is derived from a 1995 USDA report that acknowledged uncertainties associated with the date used to generate the estimate. For some states, the data are fairly accurate but, in other cases, the data are incomplete or missing.

¹⁷In CEE, sites that are marked as "pending" have not yet been assessed and are therefore potentially contaminated. CEE shows that there are 20,401 "pending" mine or mill sites.

databases. USDA officials said that, once the AML database was established, the purpose of CEE shifted away from maintaining an AML inventory to tracking sites that entered into the CERCLA process.¹⁸

However, the AML database also has a number of shortcomings. For example, the data migration from multiple inventories led to data redundancy issues, such as some mine sites being listed multiple times under the same or different names. In addition, USDA officials told us that there is a lot of variation in the accuracy and completeness of the data on these mine sites, but a quality assurance review has not yet been performed. One Forest Service official said that, because of these problems, the data in the AML database are currently unusable for purposes of compiling a complete and accurate inventory of abandoned mines. In 2012, the Forest Service tried to obtain agency resources necessary to clean up the database. Even though the Forest Service rated this project as “critical,” the project did not receive any resources because other projects were deemed more important, according to a Forest Service official.

Similarly, there are several problems with the Forest Service’s regional abandoned mine inventories.¹⁹ First, some regional inventories are incomplete. For example, officials in Forest Service Region 10, which is composed solely of the state of Alaska, believe that their inventory of active mine sites is largely complete, but they said that there may be some abandoned mines scattered throughout Tongass and Chugach National Forests that have not yet been inventoried. They said that Forest Service Region 10 does not have enough staff to assess all abandoned mines across such a large area.²⁰

¹⁸USDA officials said that CEE still contains the original abandoned mine lands inventory and will do so until the AML database is completed. However, additional inventory work has been performed during the transition to the AML database, and the completeness of the data varies across the regions. Therefore, the abandoned mine data within CEE represent a subset of the data in the AML database.

¹⁹According to Forest Service officials, the Forest Service regional offices conducted inventory efforts in the 1980s and 1990s. Officials noted, however, that each regional office inventoried its sites differently, and some inventory efforts were more comprehensive than others.

²⁰Officials in Forest Service Region 10 said that their region’s focus has been on cleanup of known priority sites rather than completing their inventory of potentially contaminated sites.

Second, several Forest Service regional inventories contain inaccurate data. For instance, Forest Service Region 1's inventory data include all mine records from the state of Montana—including those not on Forest Service lands. Forest Service Region 8 maintains several different abandoned mine databases, and one official told us that there are multiple redundancies across these databases.

Third, the Forest Service's regional offices maintain their inventories differently. Some regional offices maintain their own inventories of potentially contaminated sites, whereas other regional offices utilize state or local agencies' inventories. In at least one instance, these inventories were not easily accessible. Specifically, Forest Service Region 2 relies heavily on various state and local inventories, but officials in that region did not provide us with data from those inventories when we requested them, instead they suggested we contact the state agencies.²¹

Finally, the type of data on abandoned mines varies from region to region and is therefore difficult to consolidate into a coherent national database. Some regional offices track mines at the site level, some by their features—such as mine shafts, pits, ore piles, or machinery—and some use both approaches.²² For example, officials in Forest Service Region 3 told us that they have identified over 3,000 abandoned mine sites, whereas officials in Forest Service Region 4 told us that they have identified approximately 2,000 mine features but have not yet consolidated these features into mine sites.

Despite the lack of a complete inventory of potentially contaminated sites, the Forest Service said that the highest risk sites are well-known due to their historic nature and past production of metal resources. According to the Forest Service, the abandoned mines that have not yet been

²¹Forest Service Region 2 has helped states in its region, most notably Colorado, develop their own inventories of abandoned mines, but Forest Service Region 2 does not maintain inventory data at the regional level and was only able to provide inventory data from CEE—which contains a more limited data set. To provide a full inventory of sites in the region, one Forest Service official told us that it would have to get the data, much of it in hard copy, from each ranger district—a very time-consuming task. Officials in Forest Service Region 2 added that their management approach is to spend their limited resources working with other state and federal agencies to address agreed-upon areas of concern rather than completing their inventory efforts.

²²A mine feature is a single human-made object or disturbance associated with mining. A mine site can be composed of one or more features.

identified include many small, poorly documented mines. The Forest Service said that many of these mines did not ever produce any ore and thus were only exploratory mines. Because of the high risk potential, the abandoned mine sites with the greatest human visitation and/or sensitive ecological receptors have been given priority for assessment, according to Forest Service officials. These officials said that only sites with significant risk are funded.

Interior

Interior has identified 4,722 sites with confirmed or likely contamination. These include 4,098 BLM sites that the agency reports have confirmed contamination or require further investigation to determine whether remediation is warranted. The majority of these sites are abandoned mines. NPS has identified 417 sites with likely or confirmed contamination, the Bureau of Indian Affairs, 160; the Fish and Wildlife Service, 32; and the Bureau of Reclamation, 15. These agencies have identified additional locations of concern that require verification or initial assessment to determine if there are environmental hazards at the sites. Except for BLM, agency officials told us that they believe they have identified all sites with likely environmental contamination. The total number of sites BLM may potentially have to address is unknown, due primarily to incomplete and inaccurate data on abandoned mines on land managed by the agency.

BLM accounts for the largest number of contaminated sites and sites that need further investigation in Interior's inventory. Table 1 shows the number of contaminated or potentially contaminated sites in BLM's inventory as of April 2014.

Table 1: BLM's Contaminated or Potentially Contaminated Sites Identified as of April 2014

	Hazardous materials sites	Abandoned mines with potential environmental contamination	Total sites
Requires further investigation and/or remediation	346	2,853	3,199
Has remediation measures planned or under way	546	353	899
Has been remediated	1373	886	2,259
Requires no further action	88	568	656
Total	2,353	4,660	7,013

Source: Bureau of Land Management's (BLM) Abandoned Mine Lands/Site Cleanup Inventory database. | GAO-15-35

Note: According to BLM, the Abandoned Mine Lands/Site Cleanup Inventory database is the agency's source of information regarding the inventory and status of abandoned mine and hazardous materials sites. BLM has not yet assessed all the sites on the ground, and the agency is constantly reviewing and updating the data.

As table 1 shows, BLM identified 2,353 hazardous materials sites as of April 2014, including underground storage tanks or landfills. Of these 2,353 sites, 892 sites may still need to be addressed; 546 sites have confirmed contamination with remediation measures planned or under way, and 346 sites may potentially be contaminated and require an initial or further assessment to determine whether remediation is warranted.²³

In addition, BLM identified 45,312 abandoned mine sites in its inventory database. As of April 2014, BLM identified that 4,660 abandoned mine sites have or likely have environmental contamination. Of these 4,660 environmentally contaminated mine sites, 353 have remediation measures planned or under way, and 2,853 require further investigation to determine whether remediation is warranted. BLM reports that 40,652 of the 45,312 abandoned mine sites pose only physical safety hazards. However, 30,553 of these 40,652 physical safety sites need verification or initial assessment to determine whether environmental hazards are present.

The number of potentially contaminated mines may be larger than BLM's inventory indicates because BLM has not identified all of the abandoned mines on the land it manages. BLM estimates that there may be approximately 100,000 abandoned mines that have not yet been inventoried in three selected states, and that it would take 2 to 3 years to complete the estimates for the other nine BLM states. BLM estimates that it will take decades to complete the inventory. To inventory a site, BLM field staff must visit the site to collect data, research the land ownership and extent of mining activity that occurred, and record the information in BLM databases.

The reliability of BLM's inventory of abandoned mines has been a long-standing concern. In 2005, Interior's Office of Inspector General (OIG) reported that BLM's national inventory of abandoned mines was

²³The remainder of the hazardous materials sites has been remediated or requires no further action.

incomplete, inaccurate, and inconsistent.²⁴ In addition, the OIG found that the BLM field office staff responsible for abandoned mines was not identifying or entering known, high-priority abandoned mine sites into the inventory database. Many of the sites listed in the database were obtained from old Bureau of Mines data that was never verified by site visits. Given the limited funds available, the OIG noted that it was important that the inventory include current and credible information needed for program management of significant sites. On this basis, the OIG recommended that BLM validate existing inventory data and develop procedures for ongoing data collection to ensure that data in the inventory is complete, accurate, and consistent.

BLM agreed with the recommendation and has made an effort to improve data quality and the inventory's completeness. BLM has an ongoing effort to estimate the number of abandoned mines and mine features that have not yet been inventoried on BLM lands and the approximate cost to complete the inventory. BLM established inventory teams in several states to go out and identify sites.²⁵ In addition, BLM began an initiative in California to determine the number of sites that need to be inventoried after the state provided the agency with digitized maps of potential mine sites and verified a sample of the sites. For California, BLM estimated that 22,728 sites and 79,757 features need to be inventoried. Of these, BLM estimated that approximately 2,600 sites will have environmental hazards. BLM estimates that it will cost approximately \$120 million to confirm the inventory of 22,728 sites. BLM has estimated approximately 69,000 and 4,000 sites remain to inventory in Nevada and Utah, respectively, on BLM land. BLM officials told us that they expect to provide a report to Congress on the inventory work remaining in these three states in 2015. The nine remaining states with BLM land do not have the digital geographic data available that BLM has been using for California, Nevada, and Utah, according to BLM officials, making it difficult for BLM to develop similar estimates for these states.²⁶ BLM officials told us that the U.S. Geological Survey is working on an effort to develop datasets

²⁴U.S. Department of Interior Office of Inspector General, Audit Report: Abandoned Mine Lands in the Department of the Interior, July 2008, C-IN-MOA-0004-2007.

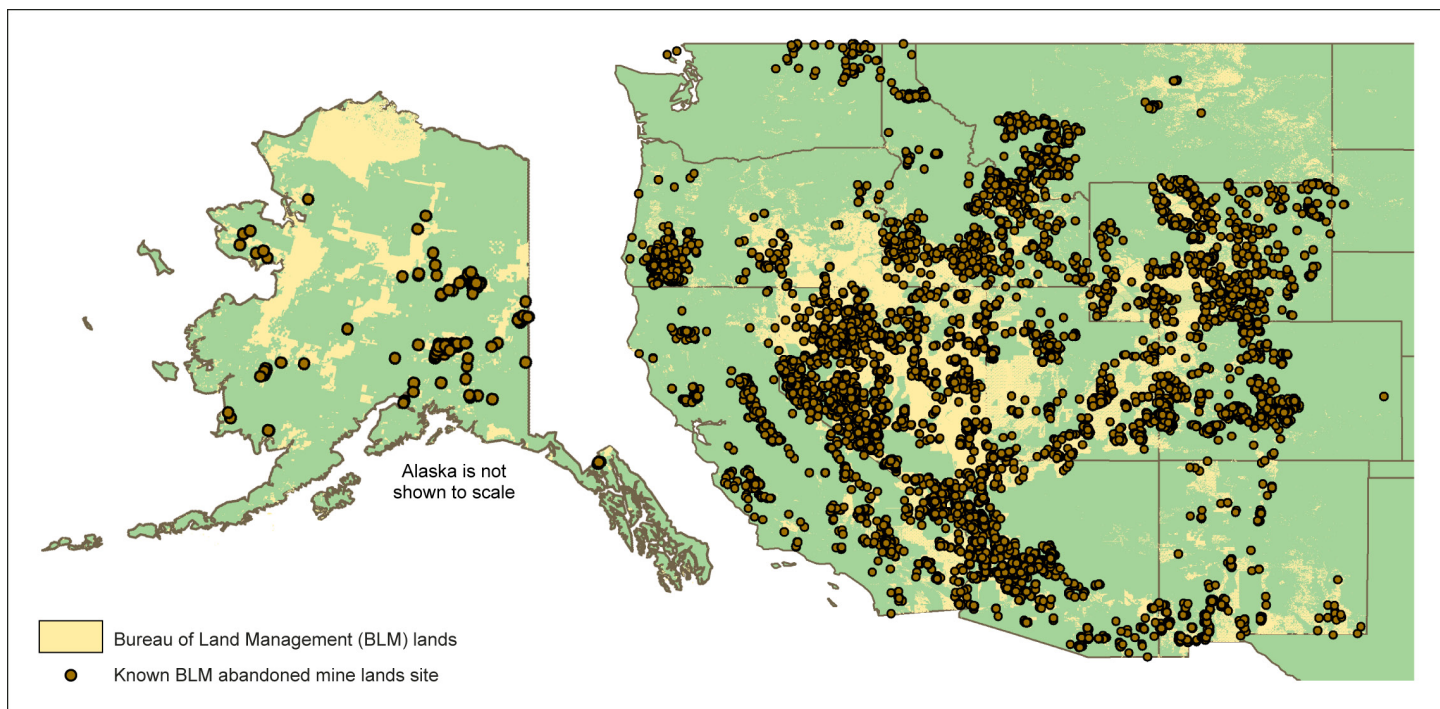
²⁵In May 2013, BLM published a report that summarizes recent inventory efforts titled *Abandoned Mine Lands: A New Legacy*.

²⁶BLM has 12 state offices located in Alaska, Arizona, California, Colorado, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Wyoming, and an eastern states office.

similar to those used to estimate the number of abandoned mines on the BLM land in California, Nevada, and Utah.

In addition, BLM has provided a contractor approximately \$1 million to assist with entering additional sites in its database from records stored in local BLM offices. The contractor has also been working to clean the database of duplicate records, ensuring location data is correct, adding names to unnamed records, and conducting field verification of sites. According to BLM, the inventory of abandoned mines in the database was 19,000 in 2008, and it has increased to over 45,000. Figure 1 shows the known BLM abandoned mine sites in the western United States.

Figure 1: Known BLM Abandoned Mine Sites in the Western United States



Source: BLM. | GAO-15-35

After BLM, the NPS is the Interior agency with the largest number of potentially contaminated and contaminated sites. Like BLM, NPS has hazardous materials sites, such as landfills and underground storage tanks, and abandoned mine sites. NPS has identified 377 hazardous materials sites where the presence or likely presence of contamination is at concentrations significant enough to require further assessment or

cleanup. NPS also has identified 96 locations of concern. These are sites where contamination is suspected based on known past activities or observed and reported physical indicators but which require further assessment. Nearly half of these are old dump sites.

In 2013, NPS completed a system-wide inventory and assessment project to identify abandoned mines on lands they manage and entered this information in their "Abandoned Mineral Lands Database." NPS used specialists trained in natural sciences with knowledge of mining and exploration methods, equipment, and impacts to develop the inventory.²⁷ NPS's inventory identified 37,050 mine features at 3,421 sites on NPS land. Of the total inventory, NPS believes that 3,841 features at 1,270 sites still require some level of effort to address human health and safety and/or environmental concerns. According to the NPS, there are 1,270 sites that require action, there are 227 sites in 76 parks that have or may have environmental contamination: 40 sites are confirmed, and 187 sites are locations of concern. According to NPS officials, these locations of concern require verification or initial assessment to determine if there are environmental hazards. According to the NPS, the remaining 1,043 abandoned mine sites pose physical safety hazards rather than environmental hazards. As a result of this effort, officials with NPS's Abandoned Mineral Lands Program told us that they now believe that their inventory of all potentially contaminated sites is largely complete.

Bureau of Indian Affairs, Bureau of Reclamation, and Fish and Wildlife Service also have sites with environmental contamination. Officials from each of these agencies told us that they believe their inventories of sites with environmental contamination are complete. In addition to contaminated sites, the Fish and Wildlife Service has a number of potentially contaminated locations of concern at wildlife refuges and hatcheries that need to be investigated to determine if contamination exists. Table 2 below notes the number of contaminated and potentially contaminated sites for each of these agencies.

²⁷NPS published interim results in Interim Inventory and Assessment of Abandoned Mineral Lands in the National Park System, Natural Resource Technical Report NPS/NRSS/GRD/NRTR-2013/659, January 2013. Complete results, as shown above, will be published in a comprehensive report to be released later in 2014.

Table 2: Potentially Contaminated and Contaminated Sites for Selected Agencies

Agency	Locations of concern	Sites with known or suspected contamination
Bureau of Indian Affairs	4	160
Bureau of Reclamation	^a	15
Fish and Wildlife Service	394 ^b	32

Sources: Locations of concern data was provided by each individual agency. The source of contamination known or suspected is from Interior's Environmental and Disposal Liability database as of the close of fiscal year 2013. | GAO-15-35

^aThe Bureau of Reclamation's inventory of locations of concern is maintained in its regional offices, and we did not collect this information because we determined that it was impractical to do so given the relatively small amount of land managed by this agency.

^bThe U.S. Fish and Wildlife Service's field stations (refuges and hatcheries) have identified locations of concern at 394 locations. This does not equate to 394 locations of concern; rather, it is the number of field stations identifying a location of concern.

USDA and Interior Use Funds from a Variety of Sources to Assess and Clean Up Sites

USDA and Interior use funding from annual appropriations to assess and to clean up sites. In addition, one of the USDA agencies uses funds it is authorized to borrow to carry out assessment and cleanup activities. USDA and Interior have also used one-time Recovery Act funds²⁸ for these purposes. In addition, both USDA and Interior seek cost recovery funds from potentially responsible parties to help offset cleanup costs at sites where those parties caused or contributed to contamination.

USDA

In fiscal year 2013, USDA allocated over \$22 million to environmental cleanup efforts. Specifically, USDA allocated (1) \$3.7 million for department-wide cleanup projects, the majority of which were for cleanup at USDA's Beltsville site and to cover legal expenses; (2) \$4.3 million in funds to mitigate contamination at former grain storage sites; and (3) approximately \$14 million for the Forest Service to conduct environmental assessments and cleanup activities.²⁹

USDA's funds for environmental cleanup programs declined annually for fiscal years 2003 through 2013—with the exception of 2009, when USDA used Recovery Act funds for this purpose. USDA's funds over this period

²⁸American Recovery and Reinvestment Act of 2009, Pub. L. No. 111-5, 123 Stat. 115.

²⁹ This total includes overhead costs; \$11.85 million was for site projects in fiscal year 2013.

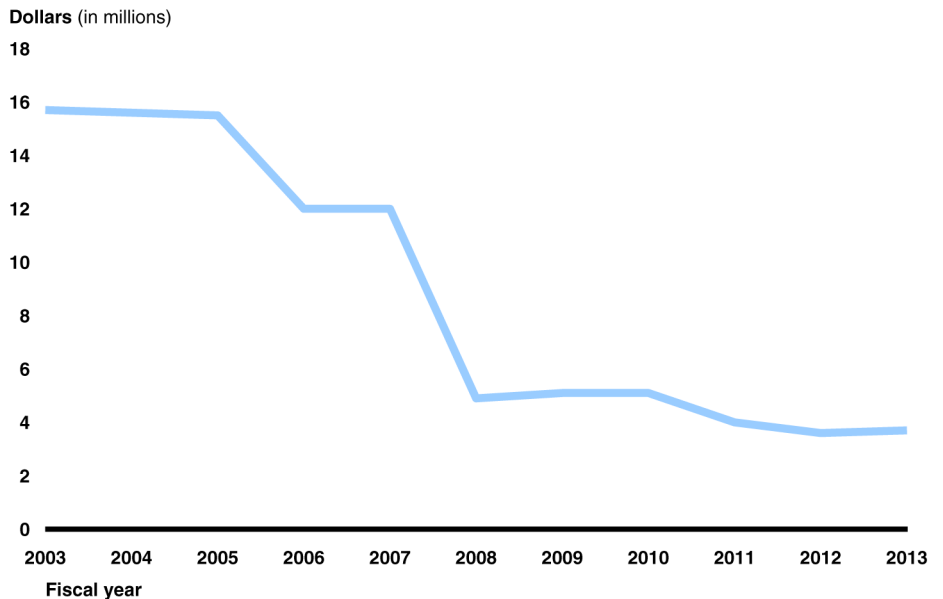
were composed of USDA's department-wide Hazardous Materials Management Appropriation (HMMA), the Forest Service's Environmental Compliance and Protection (ECAP) funds, funds the CCC is authorized to borrow, and one-time Recovery Act funds for the Forest Service.³⁰

- HMMA is USDA's department-wide account that is available to pay for cleanup activities, among other things.³¹ Of USDA's three annual sources of environmental cleanup funding, the HMMA account has experienced the most precipitous decline. According to USDA, HMMA funds declined from \$15.7 million in fiscal year 2003 to \$3.7 million in fiscal year 2013—a decrease of over 76 percent (see fig. 2). As a result, USDA has been able to fund fewer cleanup activities. In fiscal year 2003, USDA funded 110 cleanup and support activities at 81 sites and USDA offices with HMMA funds. In contrast, in fiscal year 2013, USDA was only able to fund 4 cleanup and support activities with HMMA funds. USDA officials said that these funds have decreased as a result of decreases in appropriations.

³⁰Several USDA agencies may also use agency specific funds for environmental cleanup activities, but those expenditures are usually a small percentage of the total budget and are therefore excluded from our analysis. For example, APHIS's Environmental Protection Program may fund some environmental cleanup projects. However, one APHIS official told us that APHIS does not receive any specific appropriation for environmental cleanup efforts, and that most of the funds in this program actually go toward disposal of hazardous waste from operating facilities. FSA also funds its cleanup of foreclosure properties through the Farm Loan Program. According to one FSA official, in fiscal year 2013 FSA spent approximately \$1.47 million on cleanup of its three foreclosure properties out of the Farm Loan Program's \$4.8 billion budget.

³¹EMD provides funds to the Office of the General Counsel (OGC) to support USDA cleanup efforts. EMD officials said that OGC has been successful in bringing additional money into the HMMA program by, among other things, identifying potentially responsible parties (PRP), such as owners and operators of a site, that may help pay for cleanup activities and by pursuing cost recovery actions against these PRPs. These officials added that—unlike Interior, which pays for staff salaries out of general appropriations—USDA pays for its staff salaries out of program specific accounts.

Figure 2: USDA's Hazardous Materials Management Appropriations (HMMA), Fiscal Years 2003-2013



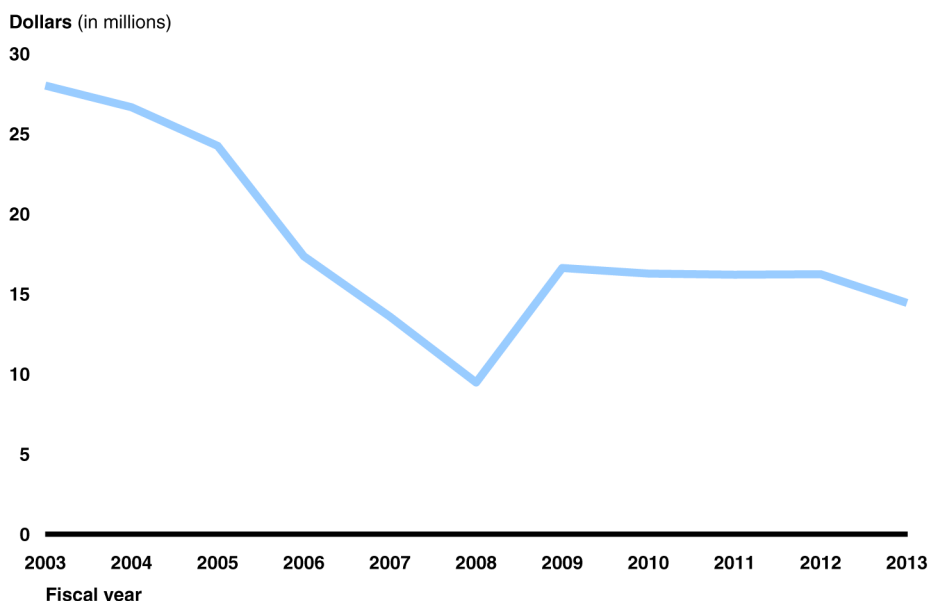
Source: USDA. | GAO-15-35

- The ECAP program is the primary source of funding for the Forest Service's environmental cleanup programs. The Forest Service allocates approximately \$500,000 a year to each of its nine regional offices for a variety of activities including preliminary assessments, site inspections, and small cleanups. The Forest Service awards the remaining funds to its regional offices for larger, high-priority assessments and cleanups on a priority basis. The ECAP program has also experienced a decline in recent years. USDA officials said that these funds have also decreased as a result of decreases in appropriations. ECAP funds have declined from \$28 million in fiscal year 2003 to \$14.4 million in fiscal year 2013—a decrease of 48 percent.³² The ECAP program does not have historical records on ECAP projects going back to fiscal year 2003, so we were not able to compare the number and type of cleanup projects from that time with similar projects in recent years. However, in fiscal year 2013, the ECAP program funded 61 projects, including assessments, cleanup

³² These funds include overhead costs; for example, in fiscal year 2013, \$11.85 million was for cleanup projects.

activities, PRP oversight, and maintenance activities. Figure 3 shows the decline in funds.

Figure 3: Forest Service Environmental Compliance and Protection (ECAP) Funding Amounts, Fiscal Years 2003-2013



Source: USDA. | GAO-15-35

- The CCC uses up to \$5 million annually from funds it is authorized to borrow,³³ and it also requests HMMA or other funds when needed. CCC uses these funds to mitigate contamination at its former grain storage sites. CCC officials told us that contamination at the former grain storage sites tends to be widespread, making cleanup difficult, expensive, and time-consuming. For fiscal years 2003 through 2013, CCC assessed 31 sites, and it initiated or completed cleanup at 9 sites. Twelve sites also received No Further Action status.
- The Forest Service also allocated approximately \$20 million in one-time Recovery Act funds in fiscal year 2009 to cleanup activities at 14 sites located on, or directly impacting, land managed by the Forest Service.

³³15 U.S.C. § 713a-4 (2012).

In addition to these four funding sources, USDA seeks recovery of cleanup costs and natural resource damages under CERCLA from potentially responsible parties, such as owners and operators of a site, to help offset cleanup costs at sites where they caused or contributed to contamination.³⁴ Cost recovery amounts vary from year to year. Between fiscal years 2003 and 2013, USDA typically recovered \$30 million or less. However, according to agency documents, USDA successfully recovered over \$170 million from a single mining company as part of a bankruptcy case in 2009. These funds were used to conduct cleanup activities at 13 mine sites located on NFS lands. In fiscal year 2011, USDA recovered \$65 million from another mining company for restoration of injured natural resources in the Coeur d'Alene River Basin NPL site in Idaho.

Currently, the majority of USDA's environmental cleanup funds are spent cleaning up ARS's Beltsville NPL facility and abandoned mines and landfills on NFS lands, as well as mitigating potential groundwater contamination from activities at former CCC former grain storage sites. In 2003, USDA established the CEE database to track progress on all hazardous waste cleanup projects funded with HMMA funds. However, a series of budget cuts led USDA to scale back and repurpose the database. Currently, CEE serves to gather accomplishment data—such as site identification efforts, assessments, and cleanup activities—for the Forest Service, regardless of funding source. Because most of USDA's contaminated sites are located on land managed by the Forest Service, CEE data provide an important snapshot of USDA's historical accomplishments. A review of CEE data and Forest Service Region 10 data show that the Forest Service has conducted at least 714 assessments³⁵ and cleaned up 371 sites³⁶ between fiscal years 2003 and 2013. EMD issued an accomplishment report in 2011 and 2012 based on CEE data and supplemental agency data, such as data from its annual

³⁴USDA's cost recovery amounts include (1) costs already incurred by USDA and reimbursed by a PRP, (2) funds that a PRP has agreed to provide for future cleanup work, and (3) the value of cleanup work directly performed by the PRP.

³⁵USDA officials noted that this figure only includes assessment activities conducted after 2003. USDA officials told us that the agency assessed and cleaned up many sites prior to the establishment of CEE that have not been recorded in that database.

³⁶According to USDA officials, this number represents the number of CERCLA cleanup actions in CEE, as well as certain RCRA or UST sites. Several sites had more than one cleanup activity.

call letter. According to a USDA official, EMD plans to continue issuing such reports on an annual basis.³⁷

Interior

In fiscal year 2013, Interior allocated about \$13 million for environmental cleanup efforts. Specifically, Interior allocated \$10 million for cleanup projects department-wide, NPS allocated an additional \$2.7 million and the Fish and Wildlife Service allocated over \$800,000 for environmental assessment and cleanup projects. In addition to these project funds, BLM allocated more than \$34 million to its hazardous management and abandoned mine programs. BLM provided over \$18 million of these funds to its state offices; however, the amount of these funds specifically used for environmental cleanup projects was not readily available.

From fiscal years 2003 through 2013, Interior allocated over \$148 million in Central Hazardous Materials Fund (CHF) resources to its agencies to support response actions undertaken at contaminated sites under CERCLA. This amount includes over \$49 million in CHF “cost recoveries”—that is, funds recovered from or paid in advance to Interior by potentially responsible parties for past or future cleanup costs. To be eligible for CHF funding under agency policy, a site must have a completed preliminary assessment/site inspection, pose a significant risk to human health or the environment, and have a potentially responsible party search initiated or completed, among other things. Interior’s agencies nominate projects for CHF funding. A technical review committee evaluates the project nominations and recommendations are forwarded to the Deputy Assistant Secretary for Policy and International Affairs for approval. Interior’s agencies undertook 101 projects with CHF funding during fiscal years 2003 through 2013. These projects support a range of activities, from project oversight to advanced studies (e.g., remedial investigations, feasibility studies, engineering evaluations, and cost analyses) to removal and remedial actions. The majority of sites receiving CHF funding were abandoned mines, landfills, and former industrial facilities. In fiscal year 2013, Interior allocated \$10 million to the CHF.

³⁷EMD also issued accomplishment reports prior to 2011. However, according to agency officials, in 2011, EMD changed the format of the report to include background information to reach a broader audience and serve as a program education tool for individuals not familiar with the cleanup program.

As previously noted, within Interior, BLM has the largest inventory of sites with potential environmental contamination and contaminated sites. BLM has two programs that address environmental contamination, among other things. The Abandoned Mine Lands Program works to address both environmental contamination and physical safety issues at mines. The Hazardous Materials Management and Resource Restoration Program addresses environmental issues across all BLM-managed lands, and it may help address environmental issues at high-priority abandoned mine sites. In fiscal year 2013, BLM allocated over \$34 million to these two programs. Specifically, in fiscal year 2013, BLM allocated \$16 million to the Hazardous Management and Resource Restoration Program. Funding for the program has fluctuated between approximately \$16 million and \$17 million each fiscal year since 2003. Funding for the Abandoned Mine Lands Program increased by almost \$6.5 million in fiscal year 2009, and the program has retained these increased funds. In fiscal year 2013, BLM allocated \$18.7 million to the Abandoned Mine Lands Program.

Of the \$18.7 million funds allocated in fiscal year 2013, BLM provided over \$4.5 million to BLM state offices for hazardous waste projects at mines.³⁸ Using funds received from both the Hazardous Materials Management and Resource Restoration Program and Abandoned Mine Lands Program, BLM provided over \$14 million to the BLM state offices to cover program operations, expenses, and projects. According to BLM officials, after the BLM state offices fund program operations and expenses, they spend the remainder of the funds on (1) physical safety projects at abandoned mines and (2) environmental projects at abandoned mines or other sites needing cleanup. However, BLM headquarters does not compile information on the amount of funds each BLM state office had for such projects, the number of projects state offices conducted, or the amount spent on projects. As such, headquarters officials could not provide us with information on the amount of funds spent on environmental projects versus physical safety projects.

BLM also spent over \$27 million in one-time Recovery Act funds on physical safety and/or environmental remediation projects at 76 locations. According to BLM, there were 31 projects for environmental activities.

³⁸BLM has 12 state offices located in Alaska, Arizona, California, Colorado, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Wyoming, and an eastern states office.

BLM officials told us that the current funding levels are not sufficient to complete the inventory and address the physical and environmental hazards at abandoned mines. In its 2014 and 2015 budget justifications, Interior described proposals to charge the hardrock mining industry fees and use the funds to address abandoned mines. Interior proposes to levy a fee on all uranium and metallic mines on both public and private lands. The proposed fee would be charged per volume of material displaced. The fees collected would be distributed to two sets of funds, one for federal lands and another for nonfederal lands. The Secretary would disperse the share of non-federal funds to each state and tribe based on need. Each state and tribe would select its own priority projects using established criteria.

NPS allocates an average of \$2 to \$3 million each year to its own cleanup fund, and it allocated \$2.7 million in fiscal year 2013. NPS uses a combination of risk factors to rank sites for receiving these funds, including human risk, ecological risk, and the potential for leveraging funds from other responsible parties. An NPS official told us that the agency has inadequate funding to address its over 400 potentially contaminated and contaminated sites. The agency has been able to address its highest risk sites with funding from the CHF. If there is a very significant risk, NPS can usually obtain funds to address the portion of the site that has the highest risk, if not the site as a whole. According to NPS officials, NPS has not selected response actions for almost 300 sites because current funding levels are not sufficient to address them.

The Fish and Wildlife Service uses project funds from its Refuge Cleanup Fund. The National Wildlife Refuge System set aside \$1.7 million in annual appropriations in fiscal year 2003, but these funds have decreased over the last decade to \$834,000 in fiscal year 2013. The Fish and Wildlife Service uses a portion of these funds for environmental compliance work. For example, in fiscal year 2013, the Fish and Wildlife Service approved funding of about \$700,000 for 11 projects such as an underground storage tank remediation and a site investigation at a firing range. Fish and Wildlife Service officials review proposals for cleanup projects on national wildlife refuges and select sites for the funds using a ranking system based on risk to human health and the environment, legal requirements, and regional priorities. For emergency response to chemical and hazardous material accidents or immediate removal, Fish and Wildlife officials said the agency can use funds from an emergency construction account.

Interior tracks the progress of cleanup at sites listed as environmental and disposal liabilities in the Environmental Management Information System on a quarterly basis. The stage of cleanup for 756 sites is provided in appendix III.

USDA and Interior Report Over \$350 Million in Environmental Liabilities in Their Annual Financial Statements

USDA and Interior reported environmental liabilities of \$176 million and \$192 million, respectively, in their fiscal year 2013 financial statements. These liabilities represent what the agencies have determined to be the probable and reasonably estimable future costs to address 100 USDA sites and 434 Interior sites, as required by federal accounting standards.

In its fiscal year 2013 financial statements, USDA reported a total of \$176 million in environmental liabilities. The \$176 million amount included: \$165 million to address asbestos contamination,³⁹ \$8 million for up to 76 CCC former grain storage sites in the Midwest that are contaminated with carbon tetrachloride,⁴⁰ and \$3 million for 24 Forest Service sites, including guard stations, work centers, and warehouses, among others.⁴¹ USDA

³⁹USDA did not report asbestos cleanup liabilities prior to fiscal year 2013. As a result, USDA only reported \$10 million in environmental and disposal liabilities in fiscal year 2012.

⁴⁰CCC reported a cost range of \$8 million to \$55 million on its agency financial statements.

⁴¹These 24 Forest Service sites do not include any abandoned mines.

also reported \$40 million in contingent liabilities⁴² for environmental cleanup at four phosphate mine sites in Southeast Idaho.⁴³

Interior reported \$192 million in environmental liabilities in its fiscal year 2013 financial statements. This number reflects the low end of a range of probable future costs for completing cleanup activities at 434 sites. These activities include studies or removal and remedial actions at sites where Interior has already conducted an environmental assessment and where Interior caused or contributed to the contamination or has recognized its legal obligation for addressing the site. Interior also disclosed in notes to its financial statements the estimated cost range for completing cleanup activities at these sites. The cost range disclosed was approximately \$192 million to \$1.3 billion. The difference between the upper and lower ends of the range (\$1.1 billion) reflects the additional potential cost for addressing these sites.

Interior also disclosed the estimated costs for government acknowledged sites where it was reasonably probable that cleanup costs would be incurred. In fiscal year 2013, Interior disclosed in the notes to its fiscal year 2013 financial statements a cost range for these activities to be approximately \$62 million to \$139 million.⁴⁴ The majority of this cost range was related to addressing 85 abandoned mine sites.

⁴²A contingent liability is an existing condition, situation, or set of circumstances involving uncertainty as to possible loss to an entity that will ultimately be resolved when one or more future events occur or fail to occur.

⁴³USDA reported \$120 million in contingent liabilities in its fiscal year 2013 financial statements; the \$40 million in environmental liabilities is a portion of the total reported. The \$40 million represents the lower end of a range of cleanup costs for these four mine sites. The mining company that leases these sites sued the U.S. government to recover its response costs incurred in connection with the remediation of the four mines, which are located on federal land. The court ultimately approved a settlement under which the mining company would pay 67 percent, and the government would pay 33 percent of all past and future costs. In court documents, the United States noted that the total cleanup costs for the sites are unknown, but preliminary estimates are in the hundreds of millions of dollars. *Nu-West Mining, Inc. v. United States*, 2013 U.S. Dist. LEXIS 32747, D. Idaho (2013). Forest Service officials noted that, absent the completion of feasibility studies and the development of remediation cost estimates on these sites, any cost estimates are highly speculative.

⁴⁴USDA did not disclose any similar costs in its fiscal year 2013 financial statements.

As USDA and Interior complete their inventories and assess them for contamination, it might be expected that related environmental costs for both agencies will increase as additional sites are considered.

EPA's Primary Actions with Regard to Interior and USDA Sites Are Maintaining a List of Potentially Hazardous Sites and Overseeing the Cleanup at One NPL Site

EPA's primary roles with regard to contaminated and potentially contaminated sites under USDA's or Interior's jurisdiction include (1) placing the sites on the docket, (2) taking steps to assure that assessments of the sites are conducted, (3) determining whether the sites should be proposed for listing on the NPL, and (4) overseeing the cleanup of sites placed on the NPL. From information provided by the federal agencies, EPA has compiled a docket of federal sites that may pose a risk to human health and the environment, including 260 USDA sites and 528 Interior sites. Furthermore, EPA continues to review new information provided by USDA and Interior to determine if any additional sites should be added to the docket. EPA also is responsible for ensuring that USDA and Interior assess these sites for contamination; USDA and Interior have assessed the majority of these sites. EPA has also placed a number of USDA and Interior sites on the NPL and is currently overseeing the ongoing cleanup of one USDA NPL site.

EPA Is Responsible for Placing Certain Sites on the Federal Agency Hazardous Waste Compliance Docket

EPA is responsible for compiling a list of potentially contaminated federal facilities reported by agencies under certain provisions of RCRA or CERCLA. This list is the Federal Agency Hazardous Waste Compliance Docket (docket). EPA compiled the first docket in 1988 and CERCLA requires EPA to publish a list of any new sites added to the docket in the *Federal Register* every 6 months. EPA updates the docket after receiving and reviewing notices from federal agencies concerning the generation, transportation, treatment, storage, or disposal of hazardous wastes or release of hazardous substances. Specifically, section 120(c) of CERCLA requires the agency to update the docket with information submitted by federal agencies under the following statutory provisions:

- Section 3005 of RCRA, which requires owners and operators of facilities where hazardous waste is treated, stored, or disposed ("TSD facilities") to provide certain information to EPA when applying for permits.
- Section 3010 of RCRA, which requires owners and operators of TSD facilities, as well as generators and transporters of hazardous waste, to notify EPA of their hazardous waste activities.

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- Section 3016 of RCRA, which requires federal agencies to prepare a biennial inventory of hazardous waste sites currently or previously owned or operated.
 - Section 103(a) of CERCLA, which requires facility owners/operators to notify the National Response Center of any reportable releases of hazardous substances.

EPA officials told us if agencies fail to comply with hazardous waste self-reporting requirements and do not report a site, it is difficult for EPA to know about the site to list it. However, if EPA learns about a site that has had a release or threat of a release of hazardous substances through other means, EPA will list the site on the docket.

It is EPA's policy to exclude certain categories of sites from docket listing. For instance, small quantity generators of hazardous waste (less than 1,000 kilograms in any month) are excluded from docket listing unless they have reported releases.⁴⁵ While EPA lists some abandoned mines on the docket, in 2003, EPA issued a policy statement that mines with "mixed ownership"—mines located partially on private land and partially on public land— should typically not be included on the docket. Instead, individual mines should be evaluated on a case by case basis. Under this approach, EPA has listed a number of mixed ownership mines on the docket.

EPA has published 26 updates of the docket as of September 2014, but the agency has not consistently met the 6-month reporting requirement. Agency officials said that they have not met this requirement in recent years due to staff efforts to include as many facilities as possible in each docket publication by enabling longer quality assurance reviews of facilities that were identified as potential docket sites. Prior to 2014, the effort to compile and monitor the docket listings was a manual process. However, in 2014, EPA implemented revised docket procedures with a computer based process that is to compile potential docket listings from agency notices by searching electronic records. According to EPA officials, the first docket update with the new system will be published by the end of fiscal year 2014. EPA officials said that they expect the new

⁴⁵According to EPA, the agency also does not include previously owned federal facilities or sole transporters of hazardous waste.

system to allow them to update the docket in a more timely way in the future.

Since 1988, EPA has listed 260 USDA sites and 528 Interior sites on the docket. However, EPA, Interior, and USDA officials disagree over whether some of these sites should have been listed. EPA and Interior officials disagree about the overall approach of listing sites on the docket that are not reported to EPA by an agency. Interior officials believe that CERCLA does not give EPA the discretion to list sites unless Interior reports the sites to EPA and that EPA should limit its listing of sites on the docket to those reported by an agency under one of the provisions specifically noted in CERCLA. Interior and USDA officials also believe that abandoned mines should not be listed on EPA's docket because the agencies did not cause the contamination, and, therefore, the sites should not be considered federal sites. However, EPA officials believe that, regardless of whether USDA and Interior are legally liable for addressing these sites, they have an independent responsibility under Executive Order 12580⁴⁶ and CERCLA as land management agencies owning the sites to address them.

EPA's docket and USDA's and Interior's inventory lists differ in a number of ways. First, the docket includes a historical record of potentially contaminated sites that typically have been reported to EPA by the agencies. Because it includes a historical record, sites that subsequently were found to not be contaminated and sites that the agencies may have addressed are still included on the docket. Furthermore, agency inventories may include potentially contaminated sites that the agency is not required to report to EPA for inclusion on the docket. For example, an abandoned mine that is not known to have had a reportable release of a hazardous substance may not have to be reported to EPA.

⁴⁶Exec. Order No. 12580, Superfund Implementation, 52 Fed. Reg. 2,923 (Jan. 29, 1987).

EPA Is Responsible for Taking Steps to Assure That Preliminary Assessments Are Conducted for Docket Sites

After a site is listed on the docket, CERCLA requires EPA to take steps to assure that a preliminary assessment is conducted. EPA has established 18 months as a reasonable time frame for agencies to complete the preliminary assessment. However, EPA cannot enforce the requirement or penalize agencies for not completing a preliminary assessment within the 18-month time frame. As of February 2014, both Interior and USDA had conducted a preliminary assessment of the majority of their sites on EPA's docket. However, EPA, Interior, and USDA have differing information on the status of preliminary assessments for their docket sites.

Our analysis of data in EPA's Comprehensive Environmental Response, Compensation, and Liability Information System showed that USDA had completed preliminary assessments for 186 of the 260 USDA sites on the docket and submitted a preliminary assessment for 24 sites where EPA has yet to make a decision about whether the preliminary assessment is complete. According to EPA's data, USDA still needs to conduct a preliminary assessment at 50 docket sites. We reviewed the 50 sites with USDA officials. These officials told us that they believe no further action is required at 48 of these sites. They noted that preliminary assessments had been conducted at 34 of the sites, including locations where USDA's records indicate that a preliminary assessment was provided to EPA, cleanup actions were completed, or USDA had notifications from EPA or state environmental agencies that no further action is required. Of the remaining 16 sites, USDA officials said that a time critical removal of hazardous waste was conducted at 4 sites in lieu of a preliminary assessment. USDA officials said that they had no plans to conduct a preliminary assessment at 8 of the sites because a hazardous release had not occurred. These sites are listed on the docket because of their past or present operation as a disposal facility—not because of any identified release of hazardous waste—that triggered a notice to EPA.⁴⁷ According to USDA, these sites are listed on the docket because of their past or present operation as a one time or periodic large quantity RCRA generator, not because of any identified release of hazardous waste. USDA said that it does not believe that facilities in good standing that handle hazardous waste and generate a manifest under RCRA should then have to conduct a preliminary assessment as a result of a docket

⁴⁷We note that the only trigger for the preliminary assessment requirement is inclusion on the docket, not whether a release occurred or whether that release is thought to be low-risk.

listing. A preliminary assessment is to be conducted for sites listed on the docket, however.⁴⁸ USDA believes that two sites are listed in error—one does not belong to USDA, and the other USDA believes is a duplicate listing. Table 3 shows the preliminary assessment status USDA provided on these 50 sites.

Table 3: USDA’s Reported Preliminary Assessment Status of Disputed Docket Sites

Status	Number of sites
Preliminary assessment complete	34
No release occurred ^a	8
Time critical removal in lieu of preliminary assessment	4
Undetermined	2
Other ^b	2
Total	50

Sources: USDA and GAO analysis of EPA data. | GAO-15-35

^aThese sites are listed on the docket because of their past or present operation as a disposal facility, not necessarily because of any identified release of hazardous waste.

^bUSDA believes one of these sites is the responsibility of another agency and that one is a duplicate docket listing.

Based on our analysis of EPA data, Interior has conducted preliminary assessments at 442 of 528 docket sites. In addition, EPA has received 7 preliminary assessments from Interior that they are still reviewing. According to EPA’s data, Interior still needs to conduct a preliminary assessment at 79 docket sites. We reviewed the status of the remaining 79 docket sites with Interior officials. These officials told us they believe they have met the preliminary assessment requirement at 47 of the 79 sites. According to Interior officials, these include sites where remedial investigations have been conducted, sites where cleanup activities are ongoing, and sites where cleanup activities are completed. In addition, the officials said that 1 site had a preliminary assessment in progress, and 3 of the docket sites still need a preliminary assessment. Interior officials do not have plans to conduct a preliminary assessment at 26 sites for a number of reasons. Interior reported that cleanup at 13 of the sites was the responsibility of another agency. According to Interior, three sites are small quantity generators, and the agency believes the sites should have been excluded from the docket. Interior does not have plans

⁴⁸ 42 U.S.C. § 9620(d)(1) (2012).

to conduct a preliminary assessment at 4 sites because they disagree with the listing. For some of these 4 sites, NPS officials said that they had no knowledge of a release at the site and that the agency had not provided any type of notice to EPA regarding the site. Table 4 shows the preliminary assessment status of the 79 docket sites as reported by Interior.

Table 4: Interior Reported Preliminary Assessment Status of Disputed Docket Sites

Status	Number of sites
Preliminary assessment conducted	47
Responsibility of DOD or U.S. Army Corps of Engineers	13
Unknown site ^a	6
Disagreement with docket listing	4
Preliminary assessment needed	3
Small quantity generator	3
Other ^a	2
Preliminary assessment in progress	1
Total	79

Sources: Interior and GAO analysis of EPA data. | GAO-15-35

^aUnknown sites are sites listed on the docket that did not list a responsible agency name. We sent a list of these sites to the Interior agencies and no agency recognized or claimed these sites. Other includes two docket sites for the U.S. Geological Survey that we did not include in the scope of this review.

According to EPA officials, USDA and Interior have different opinions on the status of a preliminary assessment for a number of reasons. First, USDA and Interior may have conducted preliminary assessment work and submitted information to EPA, but EPA officials may not have concurred that the work was sufficient to meet the preliminary assessment requirement. Second, the agencies may not have submitted information to EPA about the preliminary assessment at the site. Third, while EPA carefully considers USDA and Interior comments regarding proposed docket sites before listing, USDA and Interior do not always agree with final docket listings. USDA and Interior generally do not perform a preliminary assessment if they do not agree with EPA's determination that a facility should have been added to the docket. For example, EPA officials said that, even if an agency removes hazardous waste from a site, the site may still meet the legal requirements for being added to the docket, and a preliminary assessment at the site may still be needed to determine if there is additional contamination.

EPA officials said that they have an ongoing initiative to verify the status of federal sites in EPA's database. In EPA's 2014 and 2015 budget request, EPA stated that it will begin working cooperatively with states and federal facilities on a multiyear effort to complete outstanding facility assessments and close the compliance gap. However, EPA officials with the Federal Facilities and Restoration and Reuse Office told us that they received 20 percent less funds in fiscal year 2014 and that this may negatively affect their completion of this effort.

Without accurate and consistent information from USDA and Interior on the status of their sites, EPA cannot determine whether additional work is needed to complete the preliminary assessments required by CERCLA and update its records. Furthermore, unless EPA informs USDA and Interior of its determination that preliminary assessments are not complete, USDA and Interior will not be aware of EPA's expectations that additional work is necessary for the preliminary assessments to be complete. As a result, EPA cannot effectively assure that preliminary assessments are being conducted in a timely manner and, ultimately, that sites most in need of remediation are addressed.

EPA Is Responsible for Evaluating Whether Federal Sites Should Be Placed on the National Priorities List

After the agency conducts the preliminary assessment, EPA reviews it to determine whether the information is sufficient to assess the likelihood of a hazardous substance release, a contamination pathway, and potential receptors. EPA may determine that the site does not pose a significant threat and requires no further action.⁴⁹

If further investigation is needed, EPA may request that the agency conduct a site inspection to gather more detailed information. If on the basis of the site inspection, EPA determines that hazardous substances, pollutants, or contaminants have been released at the site, EPA will use the information from the preliminary assessment and site inspection to calculate and document a site's preliminary Hazard Ranking System (HRS) score, which indicates a site's relative threat to human health and the environment based on potential pathways of contamination. The HRS scores sites on four possible pathways: groundwater migration, surface water migration, soil exposure, and air migration. Sites with an HRS score

⁴⁹These sites may still need cleanup. In those cases, the federal agencies proceed with cleanup using delegated CERCLA authority.

of 28.50 or greater become eligible for listing on the NPL. According to EPA, in order to maintain close coordination with the states and tribes in the NPL listing decision process, EPA's policy since 1996 has been to determine the position of the states and tribes on sites that EPA is considering for listing.

To list a site on the NPL, EPA must publish a proposed regulation and give the public notice and an opportunity for comment before finalizing it. According to EPA officials, EPA and OMB have determined that the NPL rulemakings do not fall under Executive Order 12866 requiring review by OMB.⁵⁰ However, EPA informally submits both NPL proposed and final rulemaking packages to OMB for review. During its review process, OMB will discuss the package with the federal agency that manages the site and other federal agencies. Some proposed sites do not proceed past this step and do not become NPL sites.

After OMB concurs with the listing package, EPA publishes a notice of proposed rulemaking in the *Federal Register*, obtains public comments during the specified period, reviews the comments received, responds to comments, and makes a final listing decision. The final listing decision process includes input from states and tribes and concurrence from OMB. EPA publishes the final rule in the *Federal Register*, formally adding the site to the NPL.

According to EPA, the majority of USDA and Interior sites on the docket have not required further action from EPA after review of the preliminary assessment. However, a number of sites have been eligible for listing on the NPL. As of September 2014, two USDA sites and two Interior sites were on the NPL. In 2009, EPA considered proposing one Interior site, Red Devil Mine in Alaska, but it was ultimately never proposed for NPL listing. BLM objected to the listing, arguing that the mercury mine was abandoned before federal land managers had any practical regulatory authority over this type of site,⁵¹ and that listing these sites as "federal

⁵⁰Executive Order 12866 applies to "significant regulatory actions—which include, among other things, actions expected to (1) have an annual effect of \$100 million or more on the economy or (2) raise novel legal or policy issues.

⁵¹Specifically, BLM noted that prior to BLM's implementation of the Federal Land Policy and Management Act of 1976, private operators of mine sites like Red Devil had broad rights to enter and locate mining claims on public lands and to control surface use and activities without federal oversight.

facilities” on the NPL would impede BLM’s efforts to hold private parties responsible for cleanup at similar mine sites. As an alternative to listing, EPA and BLM entered into negotiations for an agreement that would clarify the roles and responsibilities of BLM, EPA, and the state of Alaska. According to EPA officials, EPA’s goal is to establish a framework for cleanup that satisfies CERCLA regulatory requirements. Specifically, EPA wants the agreement to provide for (1) public participation and community involvement; (2) meaningful participation by local tribes, including appropriate opportunities for tribal consultation; (3) EPA concurrence on cleanup choices, in consultation with the state, as well as concurrence on work plans, reports, and other decision documents; (4) enforceable milestones; and (5) a formal dispute resolution process in which all parties accept EPA’s final decision. BLM objects to the enforceability and dispute resolution provisions. For this and other reasons, since 2009, BLM and EPA have not been able to reach an agreement. The state of Alaska asked EPA to list the site on the NPL in 2012 and 2013. BLM continues to work at the site and informally coordinate with EPA and the Alaska Department of Environmental Conservation.

EPA Oversees Cleanup of NPL Sites, and Work at Most USDA and Interior NPL Sites Is Complete

Once a site is on the NPL, EPA oversees the cleanup. As part of its oversight responsibility, EPA works with the agency to evaluate the nature and extent of contamination at a site. The federal agency must then enter into an interagency agreement with EPA that includes: (1) a review of remedial alternatives and the selection of the remedy; (2) schedules for completion of each remedy; and (3) arrangements for the long-term operation and maintenance of the site. According to EPA, the agreements also provide a process for EPA and the federal agency to resolve any disagreements related to implementing the cleanup remedy, with EPA being the final arbiter of such disputes. Once the agency and EPA agree on a cleanup remedy, the agency implements the remedy at the site. Afterwards, the agency must conduct long-term monitoring to ensure the remedy remains protective of human health and the environment. For sites where hazardous substances, pollutants, or contaminants were left in place above levels that do not allow for unlimited use and unrestricted exposure, every 5 years following the initiation of the remedy, the agency must conduct a formal review of the site and provide it to EPA. EPA determines whether the selected remedy is still protective of human health and the environment.

For three of the four USDA and Interior sites on the NPL, cleanup remedies have been selected, and construction completed or implemented. EPA has conducted at least one 5-year review at each of

these three sites and determined that the site's selected cleanup remedy is still protective of human health and the environment. Of the four NPL sites, only USDA's Beltsville Agricultural Research Center site is undergoing active cleanup. Appendix IV provides additional information on these four NPL sites.

Conclusions

Interior and, to a lesser extent, USDA have made progress in identifying contaminated and potentially contaminated sites on lands they manage. However, neither agency has completed the task, primarily because of the significant effort required to locate abandoned mines on their vast acreages. Interior agencies have developed separate national inventories of contaminated and potentially contaminated sites, and BLM continues to take steps to expand the number of sites in its abandoned mine database and improve the accuracy of its data. Continuing progress in this effort should help Interior develop a more comprehensive inventory that it needs to most effectively manage its cleanup programs. USDA, on the other hand, has no reliable national inventory of potentially contaminated sites or plans and procedures for developing one. In particular, USDA's data on the potentially contaminated abandoned mines on its lands is unreliable. Without a comprehensive, reliable, and easily accessible inventory of potentially contaminated sites on lands managed by USDA, including abandoned mines, and plans and procedures for developing such an inventory, USDA cannot either effectively manage the department's cleanup programs or ensure that limited funds are targeted to clean up those sites that may pose the greatest threats to human health or the environment. However, given USDA's decreasing funding for environmental restoration programs, current funding may be inadequate to both complete this inventory effort and continue cleanup efforts on sites with known contamination.

Under CERCLA, EPA is responsible for assuring that preliminary assessments are conducted at agency sites listed on the docket. However, EPA, USDA, and Interior disagree over how many docket sites need a preliminary assessment, and the agencies have differing information on whether this requirement has been met at a number of sites. Without accurate and consistent information from USDA and Interior, EPA cannot resolve whether additional work is needed and update its Superfund Enterprise Management System database. More importantly, without this information, EPA cannot effectively assure that preliminary assessments are being conducted in a timely manner and that sites most in need of remediation will be addressed.

Recommendations for Executive Action

To ensure that USDA has the information needed to better identify potentially contaminated sites—particularly abandoned mines—on properties it manages and, thereby, help minimize possible risks to human health and the environment, GAO recommends that the Secretary of Agriculture direct the heads of the department’s land management agencies to develop plans and procedures for completing their inventories of potentially contaminated sites.

To help resolve disagreements between EPA and USDA and Interior regarding which remaining docket sites require preliminary assessments, GAO recommends that the Administrator of EPA direct the Office of Federal Facilities Restoration and Reuse to take the following three actions:

- review available information on USDA and Interior sites where EPA’s Superfund Enterprise Management System indicates that a preliminary assessment has not occurred to determine the accuracy of this information, and update the information, as needed;
- after completing this review, inform USDA and Interior whether the requirement to conduct a preliminary assessment at the identified sites has been met or if additional work is needed to meet this requirement; and
- work with the relevant USDA and Interior offices to obtain any additional information needed to assist EPA in determining the accuracy of the agency’s data on the status of preliminary assessments for these sites.

Agency Comments and Our Evaluation

We provided a draft of this report to Interior, USDA, and EPA for review and comment. Interior, USDA, and EPA also provided technical comments, which we incorporated, as appropriate.

In an e-mail we received December 1, 2014, Interior’s Audit Liaison stated that Interior generally concurred with our findings.

USDA submitted written comments, included in appendix V, stating that the department did not agree with the key findings in our draft report. With regard to our finding that USDA does not have a complete, consistent, or usable centralized inventory of abandoned mines and has no plans or procedures for developing one, USDA stated that it does have a centralized inventory and that this inventory is in a transition phase as a result of reduced funding levels. USDA also stated that it has taken a

number of actions to manage its inventory in a more cost-effective manner, reduce operating costs, and eliminate data collection redundancies across USDA agencies.

Although USDA asserts that it has a centralized site inventory, USDA could not provide us with up-to-date information on sites across the department. Instead we had to obtain information from USDA's individual agencies. Furthermore, USDA stated that it relies on data from outside sources, such as states and other federal agencies, to supplement this information. However, because these data are from a variety of sources and not part of a centralized USDA database, USDA may not be able to ensure the quality, completeness, consistency, or reliability of this information.

USDA acknowledged that abandoned mine lands make up the bulk of its inventory of contaminated and potentially contaminated sites. USDA also recognized that its inventory of potentially contaminated sites is not complete. USDA stated that, given limited funding resources, it is utilizing abandoned mine data from all existing sources and developing collaborative partnerships with federal and state agencies. USDA strongly disagreed that an incomplete inventory leads to ineffective management of the program.

We continue to believe that USDA's inventory of contaminated and potentially contaminated sites—in particular, abandoned mines—is insufficient for effectively managing USDA's overall cleanup program. In our report, we note that USDA has a list of contaminated sites, but its inventory of potentially contaminated sites is incomplete and unreliable. For example, the Commodity Credit Corporation's list of potentially contaminated sites is incomplete because many states have not yet reported whether there is suspected contamination at former grain storage sites. In addition, USDA officials told us that because the data in both USDA's department-wide CEE database, and its AML database maintained by the Forest Service, are incomplete and contain inaccurate information, USDA could not provide a reliable number of the potentially contaminated sites the agency has identified. On this basis, we concluded that USDA does not have a complete, consistent, or usable inventory of potentially contaminated sites, in particular, abandoned mines. We continue to believe that, without reliable data, USDA cannot effectively manage its cleanup program or ensure that its limited funds are targeted to clean up sites that may pose the greatest threats to human health or the environment.

In its letter, USDA also expanded on its position with regard to its continuing disagreements with EPA over the need to assess certain USDA sites on the federal facilities docket. To the extent that the information USDA provided helps to clarify the department's position on this issue, we incorporated it into the report, as appropriate. Specifically, we added USDA's explanation of why it does not perform preliminary assessments if it does not agree with EPA's determination that these assessments are needed. In its letter, USDA stated that this situation generally relates to sites listed on the docket pursuant to RCRA. USDA stated that these sites are listed on the docket because of their past or present operation as a one time or periodic large quantity RCRA generator, not because of any identified release of hazardous waste. USDA said that it does not believe that facilities in good standing that handle hazardous waste and generate a manifest under RCRA should then have to conduct a preliminary assessment as a result of a docket listing. A preliminary assessment is to be conducted for all sites listed on the docket, however.

In written comments, reproduced in appendix VI, EPA generally agreed with our findings, conclusions, and recommendations. With regard to our recommendation that EPA review the status of USDA and Interior sites on the docket in order to identify whether a preliminary assessment is still needed, EPA stated that it will compare the site data provided by USDA and Interior during the review of existing Superfund Enterprise Management System data in order to identify sites that still need a preliminary assessment. With regard to our recommendation that EPA inform USDA and Interior whether the requirement to conduct a preliminary assessment has been met, or if additional work is needed, EPA stated that it will use the data collected from USDA and Interior to inform these agencies of their statutory requirements to complete site assessment work. Finally, as we recommended, EPA agreed to work with USDA and Interior to obtain additional information to determine the accuracy of EPA's data on the preliminary assessments for sites on the federal facilities docket. EPA stated that it believes that our recommendations will help to address the 50 USDA sites and 79 Interior sites with a preliminary assessment status that is being disputed; moreover, additional actions may be needed for other contaminated or potentially contaminated sites on USDA and Interior lands because EPA says it cannot compel agencies to comply with requests for preliminary assessments to be completed.

As agreed with your office, unless you publicly announce the contents of this report earlier, we plan no further distribution until 30 days from the

report date. At that time, we will send copies to the appropriate congressional committees, the Secretary of the Interior, the Secretary of Agriculture, the Administrator of EPA, and other interested parties. In addition, the report will be available at no charge on the GAO website at <http://www.gao.gov>.

If you or your staff members have any questions about this report, please contact me at (202) 512-3841 or gomezj@gao.gov. Contact points for our Offices of Congressional Relations and Public Affairs may be found on the last page of this report. GAO staff who made major contributions to this report are listed in appendix VII.

Sincerely yours,

A handwritten signature in black ink that reads "Alfredo Gómez". The signature is written in a cursive style with a large initial "A" and a stylized "G".

J. Alfredo Gómez
Director, Natural Resources and Environment

Appendix I: Objectives, Scope, and Methodology

This appendix details the methods we used to examine the Department of Agriculture's (USDA) and the Department of Interior's (Interior) efforts to identify and to clean up hazardous waste sites. We were asked to review the status of USDA's and Interior's efforts in this area. Specifically, this report examines: (1) the status of efforts to develop an inventory of potentially contaminated and contaminated sites, (2) the funding levels for addressing these contaminated sites, (3) the amount of environmental liabilities reported on agency financial statements, and (4) EPA's role in cleaning up these sites.

This review addresses the activities of five agencies within USDA: the Agriculture Research Service (ARS), Animal and Plant Health Inspection Service (APHIS), Commodity Credit Corporation (CCC), the Farm Service Agency (FSA), and the Forest Service. Within Interior, this review addresses the activities of five agencies: the Bureau of Indian Affairs (BIA), Bureau of Land Management (BLM), Bureau of Reclamation, Fish and Wildlife Service, and the National Park Service (NPS). We selected these agencies because they manage USDA and Interior lands.

Developing Inventories

To describe the status of efforts to develop an inventory of potentially contaminated and contaminated sites and determine the number of sites in each agency's inventory, we identified and analyzed current legal requirements for federal identification and reporting of potential hazardous waste sites, including the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) and the Resource Conservation and Recovery Act (RCRA). We also obtained and reviewed USDA and Interior policies on identifying potentially hazardous waste sites. We interviewed agency officials from each agency identified above regarding efforts to identify potentially contaminated or contaminated sites, and the extent to which their inventories are complete. We reviewed relevant inventory data ranging from the period of September 2013 to June 2014 from 10 agency sources. Agencies with small inventories provided site numbers or a list. For the other agencies with more extensive inventories, we obtained information from a number of databases. Because the work to identify sites is conducted in the field offices of most of these 10 agencies, it was not practical for us to determine the extent to which agency field staff are following policies and procedures.

In addition, we obtained information from the agencies that ranged from September 2013 to June 2014 on the number of sites in each agency's inventory that the agency had identified as potentially contaminated but

may not have visited yet to determine whether contamination exists, as well as the number of contaminated sites. We included sites that the agencies have identified as being on land managed or leased by USDA and Interior, including grain storage sites formerly leased by the CCC. We included CCC grain storage sites in our scope because USDA is currently expending funds to clean up these sites and has reported them as environmental liabilities on their annual financial statements.

USDA

To determine the number of contaminated and potentially contaminated sites for USDA's ARS, we obtained a list of all ARS facilities as of November 2013 and discussed the list with ARS officials. Because the list did not indicate which of ARS's facilities were contaminated or potentially contaminated, we relied on ARS officials to identify those facilities with known or possible contamination. ARS officials identified three contaminated and three potentially contaminated sites. Similarly, for APHIS, we relied on testimonial evidence from APHIS officials. According to APHIS officials, the agency does not own or operate many sites that deal with hazardous waste, so APHIS does not track its sites in a database or spreadsheet. However, based on their knowledge of APHIS sites, they identified two sites with known contamination and none that are potentially contaminated. For FSA and CCC (which is located within FSA), we met with an official representing FSA and CCC and reviewed the agency's Environmental and Disposal Liability spreadsheet, which tracks their inventory of former grain storage sites. Because there are only three foreclosure properties remaining in FSA's inventory, however, they do not track their foreclosure sites in a database or spreadsheet. We requested that FSA/CCC officials identify the former grain storage sites and foreclosure properties in their inventory that had confirmed or possible contamination.

Finally, for the Forest Service, we met with officials within the agency's headquarters office and all nine regional offices, as well as officials from USDA's EMD. Because Forest Service does not maintain an inventory of contaminated sites at the headquarters level, we requested and obtained data from EMD's Center for Environmental Excellence (CEE) database—which contains the agency's most current data on Forest Service sites in Regions 1 through 9. The CEE database does not track all of the agency's docket sites, however, or have current inventory data on contaminated sites in Forest Service Region 10. We, therefore, supplemented the CEE inventory data with data from EMD's Docket Status Spreadsheet and an inventory spreadsheet from Region 10 to calculate the Forest Service's total inventory of contaminated sites. To

evaluate the reliability of these data and determine its limitations, we reviewed the data obtained from EMD and Forest Service Region 10, and we interviewed EMD and Forest Service officials. We analyzed related documentation, examined the data to identify obvious errors or inconsistencies and compared the data we received with other published data sources, such as USDA's annual environmental restoration accomplishment report. On the basis of our evaluation of these data, we concluded that the CEE data, Docket Status spreadsheet, and Forest Service Region 10 data we collected and analyzed were sufficiently reliable for the purpose of compiling a complete and accurate inventory of the Forest Service's contaminated sites. We also attempted to obtain Forest Service's inventory of potentially contaminated sites and requested information from the Forest Service regional offices, as well as data from CEE and USDA's Abandoned Mine Lands database. However, for the reasons described earlier in the report, we did not find the data to be reliable for purposes of calculating the Forest Service's inventory of potentially contaminated sites and, therefore, did not use the data for our report.

Interior

At Interior, we obtained the number of contaminated sites for BIA, the Bureau of Reclamation, the Fish and Wildlife Service, and NPS's hazardous materials sites from Interior's Environmental and Disposal Liability (EDL) database. These data were current as of September 30, 2013, and were the most recent data available at the time they were collected. We determined the data were sufficiently reliable for the purpose of reporting the agencies' 4,722 contaminated and potentially contaminated sites based on our review of Interior and agency handbooks and interviews with agency officials.

For the number of contaminated abandoned mines and potentially contaminated abandoned mines, we obtained data from NPS's Abandoned Mine and Site Cleanup Module database. We interviewed agency officials on the development of the database and reviewed the data entry instructions. We determined the data were sufficiently reliable for representing the 40 contaminated abandoned mines in NPS's abandoned mine inventory. To identify the number of sites in BLM's inventory, we obtained and analyzed data from BLM's Abandoned Mine Lands/Site Cleanup Inventory database as of April 28 and 29, 2014. In 2005, Interior's Office of Inspector General (OIG) found that this inventory data were not complete and reliable and recommended that BLM validate existing inventory data and develop procedures for ongoing data collection to ensure that data in the inventory are complete, accurate, and

consistent. The Interior OIG has not yet closed this recommendation. According to BLM, these data are an authoritative source of information regarding the inventory and status of sites. According to BLM's website, BLM is constantly reviewing and updating its data. In addition, the majority of sites were reported during the initial inventory efforts from various sources, but they have not been assessed on the ground by BLM.

We also collected information from the U.S. Army Corps of Engineer's Formerly Used Defense Sites (FUDS) Management Information Systems on former defense sites located on land managed by USDA and Interior. We are reporting the inventory number that is currently in that system. To determine whether the data were sufficiently reliable for reporting the number of USDA and Interior FUDS sites, we provided the inventory lists to USDA and Interior officials, who confirmed that the data accurately reflected their FUDS inventories. Because the data from the U.S. Army Corps of Engineers (Corps) were not used to support any findings, conclusions, or recommendations in our report, we did not review how the Corps developed its inventory list.

Funding

To describe the funding levels for identifying and addressing contaminated sites, we collected budget and expenditure data for fiscal years 2003 through 2013 from responsible agency officials. Specifically, we collected funding data and project lists for the following:

- USDA's department-wide Hazardous Materials Management Appropriations account;
- Forest Service's Environmental Compliance and Protection program, as well as USDA's one-time Recovery Act funds and cost recovery funds;
- funds the CCC is authorized to borrow;
- Interior's department-wide Central Hazardous Materials Fund;
- BLM's Abandoned Mine Lands subactivity account;
- BLM's Hazardous Materials Management subactivity account;
- NPS's cleanup fund; and
- the Fish and Wildlife Service's Refuge Cleanup Fund.

To better understand how USDA's environmental restoration funds were used, we interviewed officials from each of USDA's responsible agencies. At Interior, we met with officials from Interior's Office of Environmental

Policy and Compliance, Environmental Cleanup and Liability Management. We also interviewed officials with BLM, NPS, and Fish and Wildlife Service about their cleanup funds. We reviewed policies for awarding cleanup project funds and lists of project funding. We also collected data, as of September 30, 2013, from Interior's EDL database on the stage of cleanup of each site in the system. Finally, we interviewed agency officials regarding efforts to develop a comprehensive estimate of the cost to address environmental contamination at abandoned mines on Forest Service, BLM, and NPS lands.

Environmental Liabilities

To describe the amount of environmental liabilities USDA and Interior reported on its financial statements, we reviewed the Chief Financial Officer's Act of 1990 and the Federal Accounting Standards Advisory Board's *Statement of Federal Financial Accounting Standards 5: Accounting for Liabilities of the Federal Government* (SSFAS No. 5) and its supplemental guidance, *Technical Release 2: Environmental Liabilities Guidance*.¹ We reviewed the policies, procedures, and methodologies the departments provide their agencies to estimate their environmental liabilities. When available, we reviewed the policies and procedures for estimating and reporting environmental liabilities from each agency or bureau. In addition, we interviewed officials in both Interior's and USDA's Office of the Chief Financial Officer, Interior's Office of the Solicitor, and USDA's Office of General Counsel. Furthermore, we reviewed the fiscal year 2013 consolidated financial statements of both USDA and Interior. Because USDA's fiscal year 2013 financial statements were audited by the USDA OIG, and Interior's 2013 financial statements were audited by an independent public accounting firm and determined to be reliable, we reviewed the statements but did not perform additional audit procedures to verify the completeness or accuracy of the amounts reported. We met with officials from ARS, CCC, and the Forest Service to understand their process for selecting sites for inclusion as environmental liabilities on their annual financial statements. At Interior, we reviewed information from the EDL database and interviewed officials with Interior's Office of Environmental Policy and Compliance, Environmental Cleanup and Liability Management. This office develops the environmental liability

¹Federal Accounting Standards Advisory Board's Statement of Federal Financial Accounting Standards (SSFAS) No. 5, *Accounting for Liabilities of the Federal Government*; *Federal Financial Accounting Standards 5: Accounting for Liabilities of the Federal Government*, *Technical Release 2: Environmental Liabilities Guidance*.

policy for Interior and maintains the EDL database for documenting liabilities. We also reviewed Interior's *Environmental and Disposal Liabilities Identification, Documentation and Reporting Handbook* and agency handbooks for implementing the process.

EPA's Role

To determine EPA's role with regard to USDA and Interior sites, we obtained and reviewed relevant laws, regulations, and agency policies. We interviewed officials with EPA's Federal Facilities Restoration and Reuse Office and USDA and Interior headquarters officials on the procedures for listing federal sites on the docket and efforts to take steps to assure that agencies conduct preliminary assessments and any other cleanup-related activities. We selected three EPA regions with the most USDA and Interior sites on the docket to interview about the process for listing federal sites. However, we did not interview EPA docket officials in California because the docket coordinator had retired. We documented the cleanup status of the four USDA and Interior NPL sites.

EPA published the original docket in 1988 and has published additions, deletions, and corrections 26 times. EPA provided a copy of the spreadsheet it has compiled that lists the USDA and Interior docket sites. EPA recently compared the spreadsheet with each docket publication. In addition, it provided the compiled docket to each EPA regional office for our review. Because of this recent verification, we believe the docket is sufficiently reliable for reporting the number of docket sites EPA has published. We also obtained each updated docket EPA has published in the *Federal Register* to determine how often EPA has made such updates.

To determine whether the USDA and Interior agencies have conducted preliminary assessments of sites on EPA's docket, we collected and analyzed data from the Comprehensive Environmental Response, Compensation, and Liability Information System as of February 2014. Because of the age of the data and its potential unreliability, we asked Interior and USDA to review the data in EPA's database relating to sites that EPA had not noted had met the preliminary assessment requirement. Both USDA and Interior noted the sites that they believed had met the preliminary assessment requirement. Because we are reporting the information currently in the system—and also providing data on the discrepancies USDA and Interior report with regard to this data—we believe the information is sufficiently reliable for reporting.

Finally, for all four objectives, we reviewed relevant laws—in particular, CERCLA and RCRA—and associated regulations and directives.

We conducted this performance audit from April 2013 to January 2015 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.

Appendix II: Number of and Cleanup Costs for Formerly Used Defense Sites on Department of the Interior and U.S. Department of Agriculture Properties

The Department of the Interior (Interior) and the U.S. Department of Agriculture (USDA) both manage lands that contain formerly used defense sites (FUDS). Specifically, FUDS are defined as properties that were under the jurisdiction of the Department of Defense (DOD) and owned by, leased to, or otherwise possessed by the United States at the time of actions leading to contamination by hazardous substances or other hazards prior to October 17, 1986. Under the Defense Environmental Restoration Program, DOD is required to carry out a program of environmental restoration activities at FUDS.¹ Authority for cleaning up FUDS was delegated to the Department of the Army, which in turn delegated it to the U.S. Army Corps of Engineers (Corps). According to Army officials, the Corps may, as appropriate, address FUDS located on lands managed by Interior and USDA in consultation with these two departments.² As of the end of fiscal year 2012, the Corps had identified 735 and 236 eligible and approved FUDS projects on Interior and USDA properties, respectively. About 46 percent of these projects were designated as “no DOD action indicated” (NDAI). According to Corps officials, NDAI signifies a FUDS property or project that meets any of these conditions: (1) is not eligible for FUDS program consideration; (2) is categorically excluded from the FUDS program; (3) contains hazards that were not the result of DOD actions on or before 17 October 1986, pose no threat to human health or safety or the environment, and require no additional environmental restoration activities; and (4) for which the required response action has been completed.³

¹The Defense Environmental Restoration Program was established by section 211 of the Superfund Amendments and Reauthorization Act of 1986 which amended CERCLA. In implementing this program, DOD is required to carry out its activities addressing hazardous substances, pollutants, or contaminants in a manner consistent with section 120 of CERCLA.

²The Army, Interior, and USDA are signatories to the *Statement of Principles for Collaborative Decision Making for Cleanup of Formerly Used Defense Sites on Federal Lands*, in which the agencies agreed to coordinate on FUDS preliminary assessments, and Interior and USDA agreed to consult with DOD on cleanup activities.

³ Specifically, the Corps designated 320 of the 735 FUDS projects on Interior properties as NDAI, and 123 of the 236 FUDS projects on USDA properties as NDAI.

FUDS projects generally fall under one of three program categories: Installation Restoration Program, Military Munitions Response Program, and Building Demolition/Debris Removal Program.⁴

- **Installation Restoration Program.** This program category includes FUDS with (1) hazardous, toxic, and radioactive waste and (2) containerized hazardous, toxic, and radioactive waste, such as aboveground and underground storage tanks. Projects under this program category focus on addressing releases of hazardous substances or pollutants and contaminants; petroleum, oil, or lubricants; DOD-unique materials; hazardous wastes or hazardous waste constituents; low-level radioactive materials or low-level radioactive wastes; and explosive compounds released to soil, surface water, sediments, or groundwater as a result of ammunition or explosives production or manufacturing at ammunition plants. The Corps categorized 317 FUDS projects on Interior properties and 102 FUDS projects on USDA properties under this program, as of the end of fiscal year 2012.⁵ Of these projects, 190 and 67, respectively, were designated NDAI.
- **Military Munitions Response Program.** This program category includes FUDS with munitions and explosives of concern, munitions constituents, and recovered chemical warfare materiel.⁶ The Corps categorized 367 FUDS projects on Interior properties and 106 FUDS projects on USDA properties under this program, as of the end of

⁴ In addition, the Corps categorized 4 FUDS on Interior properties and 5 FUDS on USDA properties as “community relations” projects. Such projects are associated with public involvement activities and do not fall under one of the three FUDS program categories.

⁵ These numbers include “potentially responsible party/hazardous, toxic, and radioactive waste” projects. The Corps defines such projects as FUDS where HTRW cleanup requirements exist, and parties other than DOD are potentially responsible parties for the hazardous substances, pollutants, or contaminants.

⁶ Munitions and explosives of concern include unexploded ordnance; discarded military munitions, as defined in 10 U.S.C. § 2710(e)(2); or munitions constituents (e.g., TNT, RDX) present in high enough concentrations to pose an explosive hazard. Munitions constituents are defined by 10 U.S.C. § 2710(e)(4) as materials originating from unexploded ordnance, discarded military munitions, or other military munitions, including explosive and nonexplosive materials, and emission, degradation, or breakdown elements of such ordnance or munitions.

fiscal year 2012.⁷ Of these projects, 91 and 36, respectively, were designated NDAI.

- **Building Demolition and Debris Removal Program.** Projects under this program category focus on the demolition and removal of unsafe buildings and structures and the removal of unsafe debris from eligible FUDS properties. To be eligible, the property's conditions must have been hazardous as a result of prior DOD use and must have been inherently hazardous (i.e., present a clear danger, likely to cause, or have already caused, death or serious injury to a person exercising ordinary and reasonable care) when the property was transferred by DOD. The Corps categorized 47 FUDS projects on Interior properties and 23 FUDS projects on USDA properties under this program, as of fiscal year 2012. Of these projects, 39 and 20, respectively, were designated NDAI.

The Corps reports cleanup costs of over \$405 million at FUDS on Interior properties and \$223 million at FUDS on USDA properties over the past decade. These amounts include costs expended during fiscal years 2003 through 2012 and costs allocated for fiscal year 2013.⁸ The Corps estimates it will cost an additional \$3.3 billion to complete FUDS projects on Interior properties and \$1.4 billion on USDA properties. Both past and future costs are for cleanup activities at FUDS that have undergone a preliminary assessment and where further action is warranted.⁹ According to Corps officials, a FUDS site or project area may have several

⁷These numbers include "potentially responsible party/military munitions response" projects. The Corps defines such projects as FUDS where Military Munitions Response Program cleanup requirements exist, and parties other than DOD are potentially responsible parties for disposal of the Military Munitions Response Program materials.

⁸A U.S. Army official said the expenditures data the Corps provided to GAO was reported in the last published Defense Environmental Programs Annual Report to Congress, which reflected data as of the end fiscal year 2012. The report for fiscal year 2013 has not yet been submitted to Congress, and, therefore, the cost data for that year still reflects allocations or planned costs.

⁹During the preliminary assessment, the Corps uses available information, including a search of historical records, to determine whether the property was ever under the jurisdiction of DOD and owned or controlled by the United States, and if hazards caused by DOD's use may be present. If the Corps determines that the property was under the jurisdiction of DOD and owned or controlled by the United States, but it does not find evidence of any hazards caused by DOD, it designates the property as NDAI. If, however, the Corps determines that hazards caused by DOD prior to October 17, 1986, may be present, then the Corps begins further study.

Appendix II: Number of and Cleanup Costs for Formerly Used Defense Sites on Department of the Interior and U.S. Department of Agriculture Properties

landowners or property managers; therefore, FUDS develops and reports costs on a site specific or project specific basis, regardless of landowner. This means that the costs reported above may overestimate the actual cleanup costs on DOI or USDA properties as an individual project may only be partially located on federally managed land.

Appendix III: Cleanup Status of Department of the Interior's Environmental and Disposal Liability Sites

Department of the Interior's (Interior) bureaus are directed to record¹ their environmental and disposal liabilities (EDL) in the EDL database module of the department's Environmental Management Information System on a quarterly basis.² In order for Interior and its bureaus to track the progress of cleanup at EDL sites, the database prompts the bureaus to record the current stage of the cleanup process for each EDL site. One of five stages, as described by Interior below, can be recorded.

- **Due care only.** An EDL site is recorded as having “due care only” when no activity beyond an environmental assessment has been completed at the site.³
- **Study.** This stage of the cleanup process is associated with an EDL site that has had due care completed and where the level of contamination is significant enough to warrant further study or future cleanup. During this stage, bureaus may complete a preliminary assessment/site investigation, remedial investigation/feasibility study, or other investigation study at the EDL site. Such studies are used, for example, to determine the nature and extent of contamination, assess the treatability of site contamination, and evaluate the potential performance and cost of treatment technologies.
- **Cleanup/remediation/removal.** This stage of the cleanup process is associated with a cleanup response action (removal or remedial) at an EDL site.
- **Operation and maintenance.** This stage of cleanup process is associated with an EDL site requiring operation and maintenance of, for example, cleanup systems dedicated to a cleanup response

¹ Interior uses the term “record” to refer to the information documented in the department's EDL database module.

² In 2005, Interior's Office of Inspector General recommended that the Office of Environmental Policy and Compliance develop a management information system that captures consistent and accurate data for all hazardous materials sites. To implement this recommendation, the Office of Environmental Policy and Compliance created the Environmental Management Information System. The EDL module of the database was implemented in the third quarter of fiscal year 2006 and is used by the department in preparing its quarterly and annual financial statements.

³ Interior defines environmental assessment or due care as the process followed by a bureau or office to use reasonable effort to examine a location of concern—an area on department lands that is suspected to be contaminated based on known past activities or observed and reported physical indicators—to identify the presence or likely presence of contamination at concentrations significant enough to require further study or cleanup.

action. Operation and maintenance is applicable after the remedial action has achieved cleanup action goals and is determined to be operational and functional, or 1 year after construction (whichever is earlier) except for water treatment alternatives.⁴

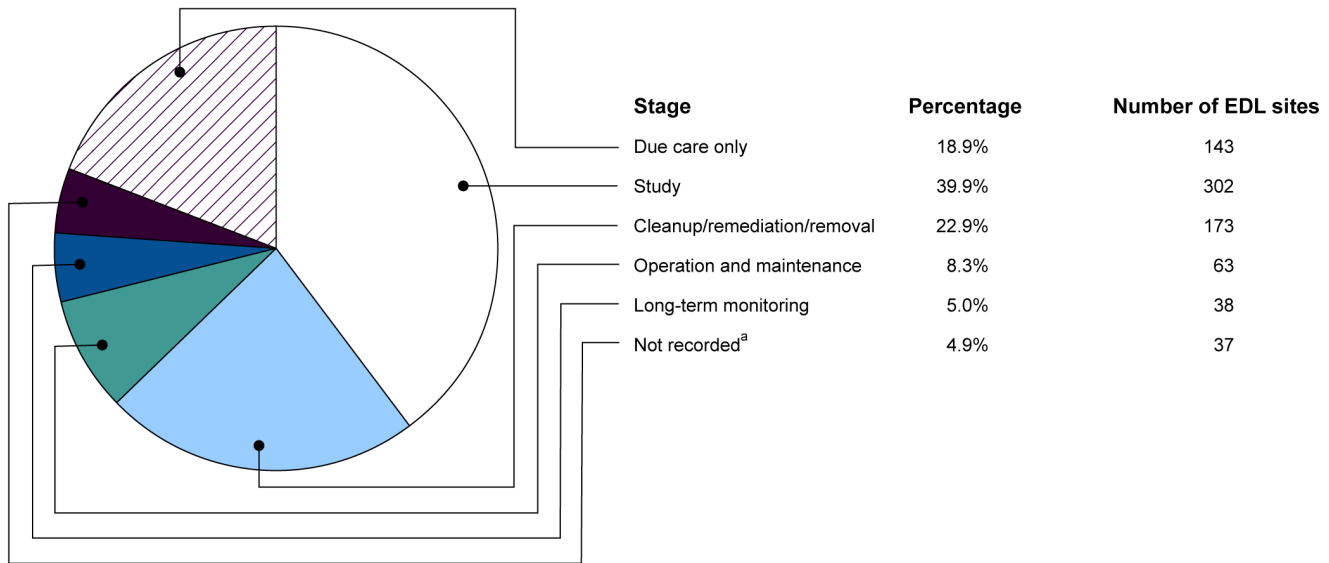
- **Long-term monitoring.** This stage of the cleanup process is associated with an EDL site that requires monitoring to minimize and control the contamination. For example, the monitoring of groundwater may be required to ensure capture or natural attenuation is occurring.

As of the end of fiscal year 2013, about 40 percent of the bureaus' 756 EDL sites were recorded as being in the study stage of the cleanup process. The second and third highest recorded stages, respectively, were cleanup/remediation/removal (22.9 percent), followed by due care only (18.9 percent). The number of EDL sites in each stage of the cleanup process is shown below in figure 4.

⁴According to Interior's *Environmental and Disposal Liabilities Identification, Documentation and Reporting Handbook v 3.0*, groundwater and surface water treatment actions to restore water quality to a protected level are considered part of the remedial action for the first 10 years of operation and operation and maintenance for any additional years.

Appendix III: Cleanup Status of Department of the Interior's Environmental and Disposal Liability Sites

Figure 4: Number of Environmental and Disposal Liabilities (EDL) Sites in Each Stage of the Cleanup Process, as of Fiscal Year 2013



EDL = Environmental and Disposal Liability

Source: GAO analysis of Department of the Interior data and its responses to follow-up data questions. | GAO-15-35

^aAccording to bureau officials, of the 37 EDL sites with no cleanup stage recorded, 1 site required no further action; 1 site is in multiple stages of the cleanup process; and 35 sites were input into the database before the standards for due care were established but the responsible bureau is currently in the process of hiring an engineering contractor to conduct due care to either establish or refute the contamination liability at the sites.

Appendix IV: USDA and Interior National Priorities List Sites

This appendix provides the cleanup status of the two U.S. Department of Agriculture (USDA) sites and two Department of the Interior (Interior) sites currently on the National Priorities List (NPL). (See table 5.)

Table 5: USDA and Interior NPL Sites, as of May 2014

USDA NPL sites

<p>Agricultural Research Service (ARS) Beltsville Agricultural Research Center</p>	<p>This site is a large agricultural research complex spanning 6,500 acres in Beltsville, Maryland. The site was listed on the NPL due to contamination as a result of past disposal practices. Contaminants include polychlorinated biphenyl, pesticides, metals, radioactive materials, and solvents in soil and groundwater. In 1998, USDA and Environmental Protection Agency (EPA) finalized a Federal Facility Agreement under which they agreed to, among other things, establish a process for investigating areas of concern, identify response actions for these contaminated areas, and clean them up. USDA originally identified 167 areas of concern. As of February 2014, 13 such areas remain where assessment or cleanup is anticipated.</p>
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<p>Forest Service White King/Lucky Lass, Oregon</p>	<p>This site is the location of two abandoned uranium mines located approximately 1 mile apart. The site encompasses approximately 140 acres affected by uranium mining activities that occurred during the 1950s and 1960s. The site is contaminated with arsenic and radionuclides in water-filled excavation pits (ponds) and stockpiled mineralized waste piles. EPA listed the site on the NPL in 1995. That same year EPA and Forest Service entered into an Administrative Order on Consent with several private sector potentially responsible parties (PRP). PRPs subsequently performed investigations and remedial actions at the site. EPA and the Forest Service also signed a Memorandum of Understanding in 1995. A group of private PRPs constructed the remedy under a 2005 Consent Decree. Construction of all remedies at the site is complete. In 2010, EPA conducted a Five Year Review at the site and noted that the remedial actions at the site are complete and protective of human health and the environment.</p>
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Interior NPL sites

<p>Bureau of Land Management (BLM) Lee Acres Landfill, New Mexico</p>	<p>In 1962, BLM leased a portion of land to San Juan County to operate a county landfill. The landfill disposed of liquid waste in lagoons. In 1985, a lagoon was breached. The county closed the landfill and covered a lagoon on site with soil. Volatile organic compounds were found in three domestic water supply wells in a nearby subdivision. BLM distributed bottled water to some local residents and ultimately connected them to the town water supply. EPA listed the site on the NPL in 1990. Contaminants of concern include nickel, vinyl chloride, trichloroethene, and manganese. In 1993, BLM, EPA and the New Mexico Environment Department entered into a technical Memorandum of Understanding for completion of a remedial investigation. After further study and approved plans, EPA and Interior signed an interagency agreement in 2004. The remedy construction was completed at the site in 2005 with the construction of a landfill cover and monitoring wells. The groundwater is to be restored through natural attenuation. In 2009, BLM prepared a Five Year Review of the site. The remedial actions performed at the site are considered to be protective of human health and the environment. BLM has plans to conduct a second 5 year review in 2014.</p>
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**Appendix IV: USDA and Interior National
Priorities List Sites**

Fish and Wildlife Service
Crab Orchard National Wildlife Refuge, Illinois

The site was a location of a bomb and explosive plant during World War II and was established by the federal government as a refuge in 1947. Industries continued to lease the site, and some used unlined landfills and dumps to dispose of waste from their operations. The site has polychlorinated biphenyl, cadmium, and lead contamination. EPA listed it on the NPL in 1987. In 1991, EPA, Illinois EPA, Interior, and the Department of the Army signed a Federal Facility Agreement. A number of cleanup remedies have been implemented at the site, including the excavation and treatment of contaminated soils, the installation of a pump and treat system for one groundwater plume, and monitoring of a second plume for natural attenuation. In June 2011, EPA signed the fourth Five Year Review report for the site and concluded that the site is expected to protect human health and the environment.

Sources: GAO analysis of documents from USDA and Interior. | GAO-15-35

Appendix V: Comments from the U.S. Department of Agriculture



**United States
Department of
Agriculture**

Office of the
Assistant Secretary
for Administration

Office of
Procurement and
Property
Management

300 7th Street
Southwest
Room 302
Reporters Building

Washington, DC
20024-9300

Mr. Vincent Price
Assistant Director,
Natural Resources and Environment
Government Accountability Office
Washington, DC 20548

Dear Mr. Price:

The U.S. Department of Agriculture (USDA) appreciates the opportunity to respond to the U.S. Government Accountability Office (GAO) draft report concerning hazardous waste sites on USDA and Interior Lands, dated January 2015.

USDA does not agree with the key findings in the GAO draft report. We are providing (1) a narrative that clarifies USDA's position on the key findings (Attachment 1) and (2) a comment matrix with suggested word changes for the final report (Attachment 2).

Thank you again for the opportunity to review and respond to the GAO draft report.

Sincerely,

A handwritten signature in black ink, appearing to read "Lisa M. Wilusz".

Lisa M. Wilusz
Director
Office of Procurement and Property Management

AN EQUAL OPPORTUNITY EMPLOYER

Attachment 1

**USDA Response to GAO Key Findings from
Draft Report Concerning Hazardous Waste Sites on USDA and Interior Lands**

This document describes the status of the USDA centralized hazardous waste site inventory and presents USDA views on GAO findings related EPA and USDA responsibilities associated with the identification of the cleanup of contaminated sites.

GAO's Inventory-Related Findings

- (1) The GAO report states that “USDA does not have a centralized site inventory or plans and procedures for completing one, in particular, for abandoned mines on some USDA lands” (“Introductory/Preface” page). Page 7 of the report similarly states that USDA “has not developed a complete, consistent, or usable inventory of abandoned mines and has no plans and procedures for developing an inventory”.

USDA Response:

As USDA staff explained during interviews with GAO staff related to this report, the USDA centralized inventory is in a transition phase as a result of reduced funding levels. USDA experienced significant yearly budget cuts from \$15.7 million to \$3.7 million, amounting to a 76 percent reduction over the past ten years. These budget cuts significantly affect the way we manage our program and forced us to answer some very difficult questions. For example:

- Can we afford a centralized inventory?
- What benefits will a centralized inventory provide?
- Based on historical funding, how can we afford to identify every potentially contaminated mine site on Forest Service Managed lands?

In answering these questions, USDA decided to maintain the database, which contains our centralized inventory, but modify it in an effort to reduce operating costs.¹ We also looked at the most cost effective way to house the data. As a result, we moved this database to a cloud environment, instead of dedicated servers. Finally, we looked at ways to reduce redundancy in data collection across USDA agencies. When looking at the data, we found that abandoned mine lands (AML) make up the bulk of the potentially contaminated sites inventory. We also recognized that AML pose a multitude of diverse challenges such as protection of bat habitats and physical safety hazards. Moreover, only a subset of this entire inventory will result in contamination levels which will require a cleanup action.

With these issues in mind, as well as Forest Service efforts to develop their own agency-wide database to address some of these other challenges associated with AML, USDA decided to move the AML portion of the centralized inventory to the Forest Service. This decision represents a significant cost savings for USDA and reduces redundant data collection. USDA will continue to track any sites within the USDA database where cleanup is deemed

¹ The USDA centralized inventory referenced in the GAO report contains 1,491 contaminated sites (page 6, line 3) and 20,401 potentially contaminated sites (page 8, 2nd paragraph, line 4).

necessary. Despite some difficulties with this transition plan, USDA is moving forward with it. USDA agrees that our centralized inventory requires some updating due to this transition; however a centralized inventory in need of some updating is nonetheless an existing centralized inventory.

- (2) The GAO conclusions further state (p. 33): “Without a comprehensive, reliable, and easily accessible inventory of potentially contaminated sites on lands managed by USDA, including abandoned mines, and plans and procedures for developing such an inventory, USDA cannot either effectively manage the department’s cleanup programs or ensure that limited funds are targeted to cleanup those site that may pose the greatest threats to human health or the environment”.

USDA’s Response:

USDA is effectively managing its cleanup program within the given constraints of limited resources. Although, we recognize that our potentially contaminated inventory is not complete, we strongly disagree that an incomplete inventory leads to ineffective management of the program, as stated in the GAO report.

USDA recognizes that resources are not, nor are they likely to become, available to complete an on-the-ground inventory of all USDA-managed lands in the foreseeable future. Therefore, the USDA AML inventory strategy includes utilizing data from all existing sources and development of collaborative partnerships with Federal and State agencies. Inventory and cleanup efforts are focused on State and/or local priority areas, such as high-visitation areas and threatened watersheds. Cleanup efforts are initiated at sites with the most acute public safety and/or environmental hazards.

A more focused USDA AML inventory and cleanup approach also supports the Department’s strategic plan with respect to protecting and enhancing America’s water resources. As water continues to become a more valuable resource, we believe that an effort made towards cleaning up priority watersheds is the best use of limited resources. A holistic watershed approach unifies all stakeholders (including private interests groups and Native American Tribes) in the identification, prioritization, and cleanup of important drinking water supplies, fisheries, and wildlife habitat within an entire watershed. Such partnerships have been instrumental in the progress achieved to date.

Focusing our future AML inventory efforts in areas determined to be high priorities through coordination and collaboration reduces costs through leveraging funds. Such efforts also achieve effectiveness in facilitating solutions to address mixed ownership issues, avoid duplication of efforts and conflicting actions, and assist in identifying those sites that pose the highest potential for harm to public health and safety.

GAO Findings with Respect to EPA and USDA Responsibilities

- (1) The GAO report states that “Disagreements with USDA and Interior over their need to assess the remaining sites and differing information on whether this requirement has been met at some sites mean EPA cannot assure that the assessments are conducted in a timely manner and, ultimately, that sites most in need of remediation are addressed” (preface & page 33).

USDA’s Response:

USDA has delegated CERCLA authority with respect to land under its jurisdiction, custody, or control except that EPA retains authority in cases of emergencies and for remedial actions at sites that are listed on the National Priorities List (NPL). Therefore USDA, not EPA, sets the priority for response actions at non-NPL sites on USDA-administered land. Specifically the disagreements referenced in the report occur in cases where (1) there is no evidence that a release has occurred, (2) the site location is not defined by EPA to the extent feasible to do an assessment (i.e., docketing an entire national Forest), and (3) EPA did not provide USDA with enough information to identify the location of the site. USDA acknowledges the need to improve coordination with EPA with respect to these situations, and has already begun face-to-face meetings with each EPA Region to address these issues. Disagreements between EPA and USDA, however, do not ever delay needed remediation work.

- (2) The report also states that “USDA and Interior generally do not perform preliminary assessment if they do not agree with EPA’s determination that a facility should have been added to the docket” (Page 29).

USDA’s Response:

With regard to the failure to perform preliminary assessments at disputed sites on the EPA docket, it is important to understand how sites get listed on EPA’s docket. The docket contains information submitted to EPA by federal agencies under the following authorities: CERCLA Section 103 and the Resource Conservation and Recovery Act (RCRA) Sections 3005, 3010, and 3016. GAO’s comments about USDA not performing preliminary assessments if they do not agree with EPA’s determination generally relate to sites listed on the docket pursuant to RCRA. While we acknowledge EPA’s authority to place these sites on the docket, USDA does not believe that facilities in compliance with RCRA, which must generate waste disposal manifests, should be required to conduct CERCLA investigations as a result of docket listing, particularly where there is no record of a release of hazardous substances into the environment. The result of this practice would be unnecessary expense with essentially no benefit. As a matter of policy, EPA should develop an alternative, less wasteful process. In almost all cases, these sites have not had a release of hazardous substances and, therefore, do not pose a threat to the environment, human health, or safety.

- (3) In addition, the report explains how sites are scored by EPA and categorized (pages 30-31) without adequately defining what a no further action determination by EPA means to other federal agencies.

USDA's Response:

For docket purposes, a no further remedial action planned (NFRAP) letter from EPA means that EPA has determined the site does not require NPL listing. The vast majority of USDA sites do not warrant NPL listing and a docket NFRAP letter does not preclude USDA from taking action. The threat may be significant and cleanup by USDA warranted. In those cases, USDA prioritizes its sites and proceeds with cleanup using its delegated CERCLA authorities with little or no EPA involvement.

Appendix VI: Comments from the Environmental Protection Agency



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

DEC 9 2014

OFFICE OF
SOLID WASTE AND
EMERGENCY RESPONSE

Mr. Alfredo Gomez
Acting Director
Natural Resources and Environment
U.S. Government Accountability Office
Washington, DC 20548

Dear Mr. Gomez:

Thank you for the opportunity to review and comment on GAO's draft report, "Hazardous Waste: Agencies Should Take Steps to Improve Information on USDA and Interior's Potentially Contaminated Sites" (GAO-15-35).

The purpose of this letter is to provide the Environmental Protection Agency's response to your recommendations. The EPA generally agrees with the GAO's findings, conclusions, and recommendations.

In its review, GAO found that the Departments of Agriculture and the Interior do not have complete inventories of contaminated or potentially contaminated sites on their properties. Both Departments' estimates of their financial liabilities for land cleanup were found to be reasonable. GAO found that the EPA's primary role is to maintain a list of potentially contaminated sites on USDA and Interior land, based on data provided by the agencies; to ensure the agencies assess the sites; and to oversee cleanup as needed. The report states that the EPA's ability to ensure that preliminary assessments are conducted in a timely manner and that sites in most need of remediation are addressed is inhibited by disagreement from the two agencies about what cleanup work is necessary and whether the preliminary assessment requirement has been met. The report also noted that the EPA has an ongoing initiative to work with states and federal agencies on completing outstanding assessments.

The EPA believes that the recommendations contained within this report will help to address the 50 USDA sites and 79 Interior sites whose status is being disputed; moreover, more may be needed for other contaminated or potentially contaminated sites on USDA and Interior lands, as the EPA cannot compel agencies to comply with requests for site assessments to be completed.

GAO Recommendations

- Review available information on USDA and Interior sites where the EPA's Superfund Enterprise Management System indicates that a preliminary assessment has not occurred to determine the accuracy of this information, and update the information, as needed;

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**Appendix VI: Comments from the
Environmental Protection Agency**

- After completing this review, inform USDA and Interior whether the requirement to conduct a preliminary assessment at the identified sites has been met or if additional work is needed to meet this requirement; and
- Work with the relevant USDA and Interior offices to obtain any additional information needed to assist the EPA in determining the accuracy of the agency's data on the status of preliminary assessments for these sites.

EPA Response

The EPA agrees with the recommendation to review the status of USDA and Interior sites to identify if a preliminary assessment is still needed. The EPA will compare the site data provided by USDA and Interior during the review to existing Superfund Enterprise Management System data in order to identify these sites.

The EPA agrees with the recommendation to inform USDA and Interior whether the requirement to conduct a preliminary assessment has been met or if additional work is needed. The EPA will use the data collected in response to the first executive recommendation to inform the other Federal agencies of their statutory requirements to complete site assessment work.

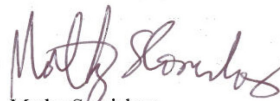
The EPA agrees with the recommendation to work with USDA and Interior offices to obtain additional information to determine the accuracy of the agency's data on the status of preliminary assessments for these sites.

Comments about terminology and phrasing in the report have been included separately in the document itself (enclosed).

During the EPA's Federal Facility Cleanup Dialogue held with the Department of the Interior and Department of Agriculture on, October 21, 2010, the EPA encouraged USDA and DOI to work with the EPA on the need to promote transparency, greater collaboration and joint problem solving; have a conversation about challenges of federal facility cleanups; clarify federal roles and responsibilities; and develop a longer-term strategy for addressing key issues. The EPA also recommended that DOI and USDA should consider the Department of Defense, Department of Energy, and other agencies to determine what lessons learned and best practices can be adapted to their issues. The EPA also recognized the need for DOI and USDA to establish baseline facts and develop an inventory of known sites in order to advance site cleanup.

On behalf of the EPA, I would like to thank you for the opportunity to review the draft report. If you require further information, please contact Ellen Treimel at (703) 603-0720.

Sincerely,



Mathy Stanislaus
Assistant Administrator

Enclosure

cc: EPA GAO Liaison Team
Barry Breen
Nitin Natarajan

**Appendix VI: Comments from the
Environmental Protection Agency**

Becky Brooks
Charlotte Bertrand
Paul Leonard
Charles Openchowski
Lora Culver
Bobbie Trent
Johnsie Webster
Gwendolyn Spriggs
Kecia Thornton
Nick Hilosky
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Appendix VII: GAO Contact and Staff Acknowledgments

GAO Contact

J. Alfredo Gómez, (202) 512-3841 or gomezj@gao.gov

Staff Acknowledgments

In addition to the individual named above, Vincent P. Price (Assistant Director), Antoinette Capaccio, John Delicath, Paul Kinney, Heather Salinas, Esther Toledo, and Leigh White made key contributions to this report.

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