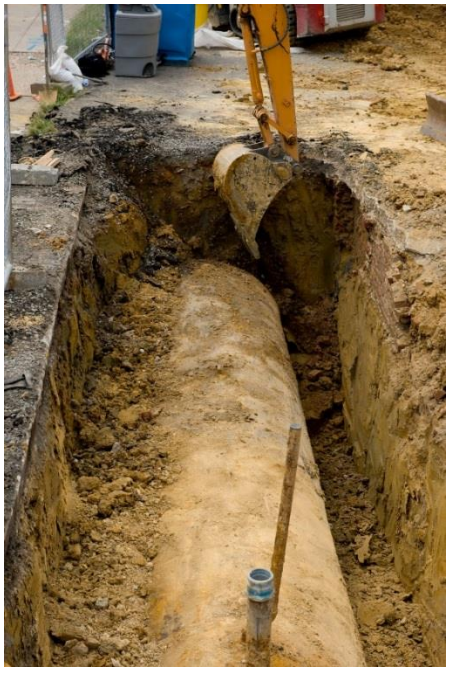
U.S. ENVIRONMENTAL PROTECTION AGENCY

OFFICE OF INSPECTOR GENERAL

Cleaning Up Communities

Backlog of Leaking Underground Storage Tank Cleanups in Indian Country Has Been Reduced, but EPA Needs to Demonstrate Compliance With Requirements

Report No. 17-P-0118 **March 6, 2017**



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Abbreviations

CFR	Code of Federal Regulations
EPA	U.S. Environmental Protection Agency
EPAct	Energy Policy Act of 2005
LUST	Leaking Underground Storage Tank
OIG	Office of Inspector General
OLEM	Office of Land and Emergency Management
OUST	Office of Underground Storage Tanks
RSO	Regional Strategic Overview
U.S.C.	United States Code
UST	Underground Storage Tank

Cover photo: Examples of underground storage tanks being removed. (EPA photos)

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U.S. Environmental Protection Agency
Office of Inspector General

17-P-0118
March 6, 2017

At a Glance

Why We Did This Review

We conducted this review to evaluate the U.S. Environmental Protection Agency's (EPA's) prioritization of releases from underground storage tanks (USTs), and to determine whether the backlog has been reduced for UST cleanups, in Indian country.

An UST is one or more tanks, and any underground piping connected to the tanks, that has at least 10 percent of their combined volume underground. The EPA's federal UST regulation requires that leaking UST (or LUST) sites must be cleaned up. For example, petroleum released from a LUST, such as at a service station, can contaminate groundwater.

The Energy Policy Act of 2005, Section 1529, requires the EPA to prioritize releases from LUSTs that present the greatest threat to human health or the environment. The EPA is responsible for directly implementing the UST program in Indian country across the United States.

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

- *Cleaning up communities and advancing sustainable development.*

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Backlog of Leaking Underground Storage Tank Cleanups in Indian Country Has Been Reduced, but EPA Needs to Demonstrate Compliance With Requirements

What We Found

Without documentation and controls for the prioritization of UST cleanups in Indian country, the sites with the greatest health and environmental risks may not be addressed.

The EPA is unable to demonstrate how it is complying with the requirements of the Energy Policy Act of 2005 to give priority to releases from LUST sites in Indian country that present the greatest threats to human health or the environment. The EPA can describe the prioritization process it uses to make annual funding decisions. However, this process is minimally documented, relies on inconsistent regional criteria, and lacks transparency. As a result, we do not have evidence that the EPA's process for selecting and funding sites for cleanup actions gives priority to those sites that present the greatest threat to human health or the environment. The absence of clear priorities could lead to lower-risk sites being addressed while cleanups for higher-risk sites are delayed. Delays in cleanups could create the potential for prolonged exposure to hazardous contaminants, such as gasoline leaks contaminating groundwater.

The EPA agreed to improve its documentation process and transparency, and clarify how funding decisions are made. The EPA is also making progress in reducing the backlog of cleanup sites in Indian country. Over the past 5 years, the number of cleanups remaining has decreased from 299 to 271. However, several challenges impede greater progress. These challenges include reliance on other parties for cleanup funds, a lengthy process to approve cleanups that cost more than $250,000 (action memo approval), and the complexity of some remaining sites.

Recommendations and Planned Agency Corrective Actions

We recommend that the Assistant Administrator for Land and Emergency Management document how the process and criteria the EPA uses to prioritize sites comply with the Energy Policy Act of 2005, and communicate the process and criteria to the regions. We also recommend that the Assistant Administrator develop a nationwide tracking tool for LUST sites in Indian country based on the prioritization criteria, and establish a panel to review funding decisions for UST/LUST sites in Indian country. In addition, we recommend the establishment of a time period for action memo review comments from the Assistant Administrator, and identification of opportunities to strengthen staff awareness and adherence to the expectations for action memos.

The agency provided acceptable corrective actions and milestone dates for the recommendations, and all recommendations are resolved.

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

THE INSPECTOR GENERAL

March 6, 2017

MEMORANDUM

SUBJECT: Backlog of Leaking Underground Storage Tank Cleanups in Indian Country Has Been Reduced, but EPA Needs to Demonstrate Compliance With Requirements
Report No. 17-P-0118

FROM: Arthur A. Elkins Jr.

TO: Barry Breen, Acting Assistant Administrator
Office of Land and Emergency Management

This is our report on the subject evaluation conducted by the Office of Inspector General (OIG) of the U.S. Environmental Protection Agency (EPA). The project number for this evaluation was OPE-FY16-0013. This report contains findings that describe the problems the OIG has identified and corrective actions the OIG recommends. This report represents the opinion of the OIG and does not necessarily represent the final EPA position. Final determinations on matters in this report will be made by EPA managers in accordance with established audit resolution procedures.

Because all recommendations are agreed to and resolved, you are not required to respond to this report. However, if you submit a response, it will be posted on the OIG's public website, along with our memorandum commenting on your response. Your response should be provided as an Adobe PDF file that complies with the accessibility requirements of Section 508 of the Rehabilitation Act of 1973, as amended. The final response should not contain data that you do not want to be released to the public; if your response contains such data, you should identify the data for redaction or removal along with corresponding justification.

We will post this report to our website at www.epa.gov/oig.

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Chapter 1
Introduction

Purpose

The U.S. Environmental Protection Agency's (EPA's) Office of Inspector General (OIG) evaluated the EPA's work related to the Underground Storage Tank (UST) program in Indian country. We addressed the following questions:

- Do the EPA's 2006 Tribal Strategy and 2015 revised UST regulations prioritize and address releases from USTs that present the greatest threat to human health or the environment?
- Has the EPA reduced the overall backlog of UST cleanups in Indian country?

Background

An UST is one or more tanks, and any underground piping connected to the tanks, that has at least 10 percent of their combined volume underground. The EPA's federal regulations[1] require that released contamination from leaking UST (or LUST) sites must be cleaned up to restore and protect groundwater resources and create a safe environment for those who live or work around these sites. The federal UST regulation applies only to USTs storing petroleum, petroleum blended with biofuels, and certain other hazardous substances. Nearly all USTs regulated by the UST requirement contain petroleum. There were 560,872 active USTs as of September 2016 (at approximately 202,000 sites) regulated by the EPA's UST program. Of the active USTs, approximately 2,600 are on tribal[2] land.

Potential Human Health and Environmental Impacts

Until the mid-1980s, the majority of USTs were constructed from bare steel, which can corrode and cause the contents to be released. Faulty installation or inadequate operating and maintenance procedures can also cause USTs to release their contents into the environment. UST systems contain petroleum or other hazardous substances. Leaks from USTs threaten America's groundwater and land resources as well as human health. Specific pollutants of concern from LUSTs include methyl tert-butyl ether, benzene, toluene, ethylbenzene and xylenes. Exposure to these contaminants poses a significant public health risk, as

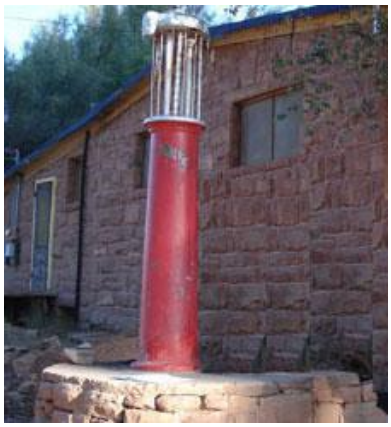
[1] Not all USTs are federally regulated, such as a tank used for storing heating oil for consumptive use on the premises where stored, a septic tank, or a stormwater or waste water collection system. For a list of criteria, see federal regulations at 40 CFR Part 280.

[2] "Tribe" or "Indian tribe" means an Indian or Alaska Native tribe, band, nation, pueblo, village or community that the Secretary of the Interior acknowledges to exist as an Indian tribe pursuant to the Federally Recognized Indian Tribe List Act of 1944, 25 U.S.C. 479a.

some are known to cause cancer. For example, according to the U.S. Department of Health and Human Services, excessive exposure to benzene can cause leukemia.

Severity and Magnitude of Gasoline Leaks

Gasoline or diesel fuel leaking from service stations is one of the most common sources for polluting groundwater—the drinking water source for nearly half of all Americans. Gasoline is a complex manufactured mixture typically containing more than 150 chemicals. Once a tank develops a leak, its contents can migrate through the soil and reach the groundwater, and any nearby river or stream can also become polluted by the groundwater. Even a small release can contaminate groundwater; for example, 12 ounces of gasoline (the volume of a can of soda) can contaminate about 40,000 gallons of water. Additionally, one pin-prick-sized hole in an UST can leak 400 gallons of fuel a year.



A 1930s–1940s-era gas pump on Navajo Nation land. (EPA photo)

Nearly 700,000 people rely on safe drinking water provided by 750 community water systems owned by tribes. Many of these tribal systems have seen treatment costs increase over the past 20 years, and contaminant threats continue to increase as old USTs deteriorate. For example, one of the Region 8 LUST sites we visited—the Pine Ridge Oil site—had over 4,000 gallons of mixed gasoline and water recovered, and the cleanup is still underway.

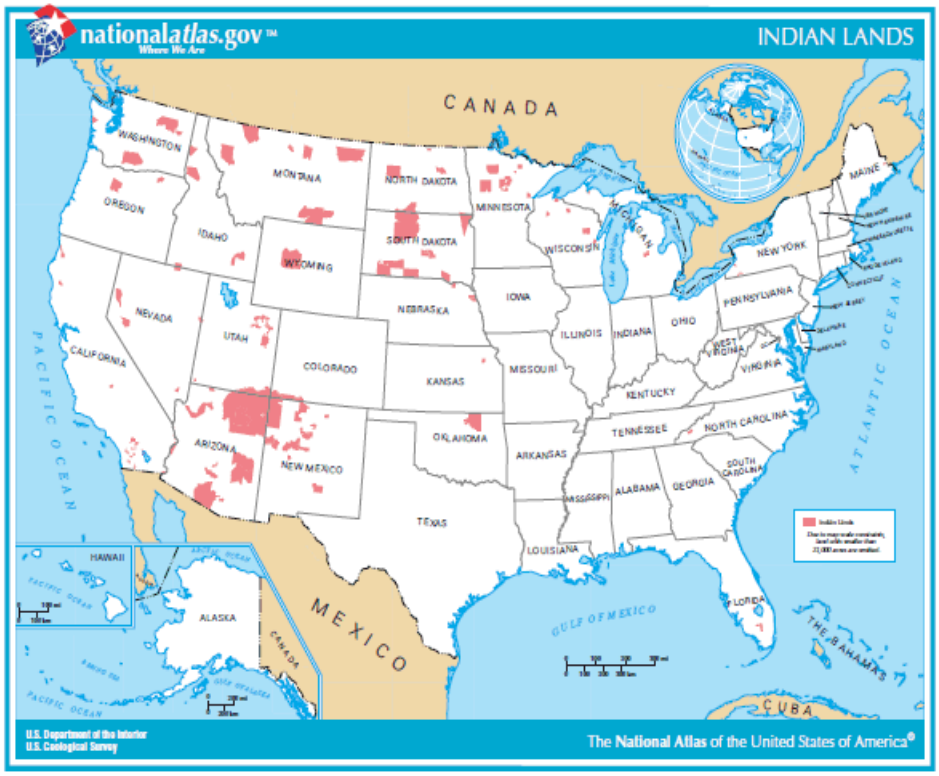
Tribal citizens experience unique risks because of their traditional lifestyle and use of natural resources. Tribal communities often follow traditional diets that include an abundance of freshwater fish and seafood. Water—considered sacred—plays an important role in tribal cultural and spiritual practices, including sacred springs or drinking water sources. For example, the Nez Perce Tribe, located in Idaho, gets nearly 100 percent of the drinking water on the reservation from groundwater wells. Also, the tribe is historically a fishing culture, with the majority of its diet provided by the threatened and endangered anadromous steelhead and salmon, which spawn on the Nez Perce Reservation. Because of tribes' reliance on natural resources to maintain traditional diets, life ways, customs and languages, there is a unique need for tribal-focused research to identify risks, as well as to inform decisions to reduce health risks in these areas.

Traditional diet items such as fish can be contaminated by LUSTs. (EPA photo)

EPA Oversight of USTs and LUSTs in Indian Country

The EPA is responsible for directly implementing the UST program in Indian country across the United States. As shown in Figure 1, Indian country lands are widely dispersed, although a large concentration is in the west and southwest parts of the country.

Figure 1. Map of Indian country lands[3]



Source: U.S. Department of the Interior, U.S. Geological Survey, 2014.

EPA implementation and oversight is accomplished in part by providing technical and financial support to tribal governments to prevent and clean up releases from USTs. The EPA's Office of Underground Storage Tanks (OUST) partners with the EPA's regional offices to facilitate implementation of the UST program in Indian country. OUST provides technical and financial support to tribal governments to prevent and clean up petroleum releases from USTs. In cases when the state, with the permission of the tribe, is overseeing existing cleanups or agrees to oversee future cleanups, EPA regions will monitor state oversight of these corrective actions.

According to the EPA's *Tribal Program Report, Accomplishments and Activities 2014*, the EPA's UST program works with about 190 tribes to prevent releases at 2,516 USTs (about 900 facilities) in Indian country. Owners and operators of

[3] The map does not show trust lands where the EPA also implements the Tribal UST program.

USTs in Indian country must comply with the federal UST regulations. In addition, owners and operators must report the existence of new UST systems, suspected releases and UST system closures; and keep records of operation and maintenance. The responsibility for conducting and paying for cleanups lies with owners and operators in Indian country. However, those owners can find it difficult to initiate and complete cleanups due to the high cost. Although the EPA estimates the average cleanup costs to be about $125,000, a release with significant groundwater contamination can cost more than $1 million to clean up.

Tribal UST Prioritization Requirements and Policy

The EPA must prioritize UST releases that present the greatest threat to human health or the environment. The Energy Policy Act of 2005 (EPAct), Section 1529,[4] directs the EPA to develop and implement, in coordination with Indian tribes, a strategy that includes:

> (1) [G]iving priority to releases that present the greatest threat to human health or the environment, to take necessary corrective action in response to releases from leaking underground storage tanks located wholly within the boundaries of—
>
> (A) an Indian reservation; or
> (B) any other area under the jurisdiction of an Indian tribe; and
>
> (2) [T]o implement and enforce requirements concerning underground storage tanks located wholly within the boundaries of—
>
> (A) an Indian reservation; or
> (B) any other area under the jurisdiction of an Indian tribe.

In 2006, the EPA issued a strategy[5] to address the 2005 EPAct requirements. The strategy referenced and restated the EPAct requirements, but did not include how the agency gives priority to releases presenting the greatest threat to human health and the environment. In 2015, the EPA issued revised UST requirements[6] that included requirements for operator training, maintenance, containment, prevention and detection techniques. The revised UST requirements were created to ensure owners and operators properly operated and maintained their UST systems.

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[4] Section 1529 of the EPAct of 2005 amends the Solid Waste Disposal Act by establishing a new Section 9013 regarding USTs in Indian country.
[5] *Strategy for An EPA/Tribal Partnership To Implement Section 1529 Of The Energy Policy Act Of 2005,* EPA-510-R-06-005, August 2006.
[6] *40 CFR Parts 280 and 281, Revising Underground Storage Tank Regulations, Revisions to Existing Requirements and New Requirements for Secondary Containment and Operator Training; Final Rule* (2015 Revised UST Regulations).

EPA Responsibility for Internal Controls in Indian Country

Office of Management and Budget Circular A-123 defines management's responsibility for internal controls in federal agencies, including control activities. Control activities include policies, procedures and mechanisms in place to help ensure that agency objectives are met. As the EPA is responsible for implementing the UST program in Indian country, and adhering to the requirements within the EPAct, internal controls are expected to be in place to ensure compliance.

Funding for UST Program in Indian Country

The EPA's overall UST Indian country budget for fiscal years 2012 through 2016 was estimated at an average of $4.6 million per year. Of that, only a portion—an estimated average of $2.4 million per year—was for cleanup. The program receives three types of federal funding to manage different parts of the tribal UST program:

- Environmental Programs and Management funds, which support the EPA's Indian country UST prevention program.
- LUST Trust Fund prevention funding for Indian country tribal assistance agreements (grants) to prevent releases.
- LUST Trust Fund cleanup funding to support the EPA's Indian country cleanup program and tribal cleanup cooperative agreements.

Additionally, the EPA's Brownfields program can provide cleanup grants to address sites contaminated by relatively low-risk petroleum and hazardous substances, pollutants or contaminants (including hazardous substances commingled with petroleum).

What is the LUST Trust Fund?

Congress created the LUST Trust Fund to address petroleum releases from federally regulated USTs. This fund is financed by a 0.1-cent tax on each gallon of motor fuel sold nationwide, and is used to oversee corrective actions by responsible parties and cleanup sites that require prompt action to protect human health and the environment and/or where the responsible party is unknown, unwilling or unable to perform the cleanup.

Separate from federal funding, some states have state trust funds supported by a gas tax or environmental impact fee. According to OUST, some states with funds allow owners or operators of UST systems in Indian country to buy in to the state fund. Therefore, if there is a cleanup, state funds can be used. Most LUST cleanups are paid for either by the LUST Trust Fund, state funds or insurance.

Backlog and Current Cleanups in Indian Country

Over the course of the program, OUST has confirmed 1,409 releases from LUSTs in Indian country. As of September 2016, there were 271 cleanups remaining in Indian country. These sites are part of the national backlog.

What is the National Backlog?

The backlog is the number of releases from underground storage tanks remaining to be cleaned up nationwide. The EPA maintains a backlog for sites in Indian country and nationwide.

Monitoring well installation, Pine Ridge Oil Company (Pine Ridge Indian Reservation, South Dakota, Oglala Sioux Tribe). During fiscal year 2016, EPA funding was used to remove contamination at two sites. (EPA photo)

In fiscal year 2016, a total of 30 cleanups were completed in Indian country, using funding from owners and operators, state funds, and the EPA. The EPA completed four of the 30 cleanups using LUST Trust Fund money. The four sites are on land located within the boundaries or exterior boundaries of the Uintah and Ouray Indian Reservation in Utah, the Navajo Nation in New Mexico, the Quinault Indian Nation in Washington, and the Yakama Nation in Washington. In addition, EPA provided funding to advance progress at 27 additional cleanup sites in Indian country in fiscal year 2016.

Responsible Office

The EPA's OUST, in the Office of Land and Emergency Management (OLEM), is responsible for implementation of the UST program in Indian country.[7]

Scope and Methodology

We conducted our work from March to November 2016. We conducted this performance audit in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

We interviewed the OLEM Assistant Administrator, EPA staff in OLEM/OUST, and EPA staff in the Office of International and Tribal Affairs. We interviewed regional staff in Regions 5, 6, 8 and 9. We visited and interviewed environmental staff involved in the active remediation of two tribal underground storage tank sites at the Pine Ridge Reservation in South Dakota. We spoke with representatives from a tribal consortium in Region 6. Our review of Indian country UST releases, cleanup and funding amounts focused primarily on the past 5 years, from 2012 to 2016. We also reviewed relevant laws, regulations, guidance and policy, including Resource Conservation and Recovery Act Subtitle I, the EPAct, Fiscal Year 2017 Justifications of Appropriation, UST regulations,[8] the U.S. Government Accountability Office's *Standards for Internal Control in the Federal Government*, and Office of Management and Budget Circular A-123. Further, we reviewed the EPA's 2007 report to Congress on tribal USTs.

[7] For more information on the UST program, visit: https://www.epa.gov/ust.

[8] The 2015 Revised UST Regulations are included in the objective questions. However, after reviewing the regulations, it was determined that the requirements were created to ensure owners and operators properly operated and maintained their UST systems, and were not directly related to the agency's prioritization process. Therefore, the regulations are not included in the scope of this evaluation.

Chapter 2
EPA Faces Multiple Challenges in Cleaning Up Tribal Leaking Underground Storage Tanks

The EPA is unable to demonstrate how it is complying with requirements of the EPAct of 2005 to give priority to releases from LUST sites in Indian country that present the greatest threats to human health or the environment. The EPA can describe the prioritization process it uses to make annual funding decisions. However, this process is:

- Minimally documented.
- Relies on inconsistent regional criteria.
- Lacks transparency.

As a result, we do not have evidence that the EPA's process for selecting and funding sites for cleanup actions gives priority to those sites that present the greatest threat to human health or the environment. The absence of clear priorities could lead to lower-risk sites being addressed while higher-risk sites are delayed, thus creating the potential for prolonged exposure to hazardous contaminants, such as gasoline leaks contaminating groundwater. The EPA agrees to improve its documentation process and transparency, and clarify how funding decisions are made. The EPA is making progress in reducing the backlog of cleanup sites in Indian country; over the past 5 years, the number of cleanups remaining has decreased from 299 to 271. However, several challenges impede greater progress, including reliance on other parties for cleanup funds, a lengthy action memo approval process, and the complexity of some remaining sites.

EPA Cannot Demonstrate How Sites Are Prioritized to Meet EPAct Requirements

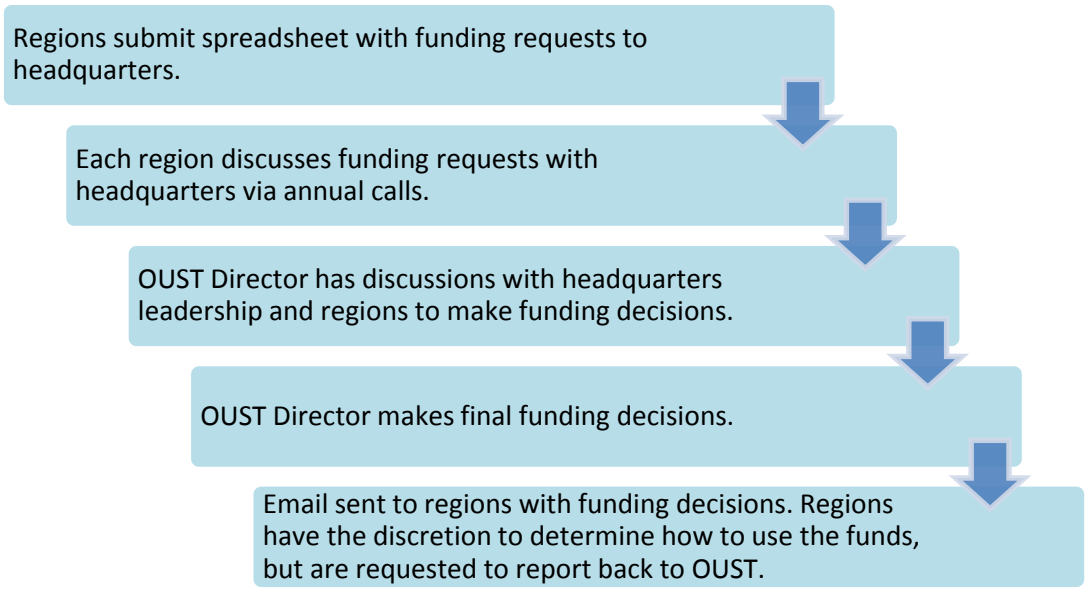
While the EPA's cleanup funds are intended to address UST releases that present threats to human health and the environment, the EPA cannot demonstrate that releases are being prioritized and addressed based on the greatest threat to human health or the environment. The EPA's 2006 Tribal Strategy, created in response to the EPAct, includes reference to the EPAct's requirement but does not include a written process for how to prioritize releases. Also, EPA headquarters program management described—but were unable to provide us with—documentation, including consistent national criteria to evaluate and prioritize funding decisions.

EPA's Process for Prioritizing Cleanup Activities Needs Improved Documentation

The EPA, through OUST, described its risk-based prioritization process for addressing LUSTs through its regional strategic overview (RSO) calls. OUST

typically receives requests from the regions for more underground storage tank cleanup activities in Indian Country than it can fund. The EPA's RSO process, described in Figure 2, is used to make annual funding decisions nationwide. The process consists of regions submitting a spreadsheet to OUST stating their funding requests by source (e.g., LUST prevention, LUST cleanup) per site and the expected benefits per site. Next, each region discusses with OUST management and its tribal team, via the RSO calls, the requests for funding. OUST does not set site priorities during annual RSO calls. Then, OUST leadership (including headquarters management and the tribal team) discuss the information gathered from the regions. After these discussions, the OUST Director makes the final funding decisions and sends emails to each region informing them of the funds they will receive, and suggestions for the use of the funds.

Figure 2: Regional strategic overview process



Source: OIG-created image based on information gathered from OUST, regional interviews and document requests.

At the end of the funding selection process, it is unclear how the sites selected will meet the requirements of the EPAct. Emails stating funding amounts allocated to each region may be shared with regional program managers. However, these emails do not include details on how priority was given to sites that present the greatest threats nationwide or how funds were allocated amongst the regions consistent with the EPAct requirements. After the OUST Director makes a decision, regions have the discretion on how the funds received will be used, but are requested to report back to headquarters.

OUST stated that the requests for funding are different each year, so the regional funding level from year to year is not consistent. Additionally, the Indian country UST program budget has generally been reduced in recent years and funding requests outpace funding available. We found that there was a significant gap

between the amount of funds requested by the three regions we met and the funds allocated. For example, one region requested $830,000 for fiscal year 2016 for LUST cleanup activities and received $320,000; the region noted the significant difference between the funding received versus requested can cause the region to need to reevaluate its plans for cleanup activities. The gap between the regional funding requests and allocations makes the OUST prioritization process critical.

Regional Prioritization Processes Vary

The RSO process involves each region separately, and the regions do not apply the same criteria to regional site prioritization. Regions can and do have their own process and tools for documenting prioritization or risk ranking of sites. However, these processes and tools are not consistent.

Table 1: How OUST and select regions prioritize sites

Office/ region	Prioritization process
OUST	• Annual regional strategic overview calls. • RSO calls lead to decisions for which cleanups to fund.
Region 5	• Focus on sites that have been inherited from predecessors determined as high risk and any new sites considered high risk. • Qualitative process.
Region 6	• No ranking. Currently, there are only two sites in this region and both are being cleaned up by the responsible party, according to OUST. • Sites are looked at when they become known because there are so few sites. • Qualitative process.
Region 8	• Uses ranking criteria from 1–100 modeled after the state of Colorado. • Prioritization based on ranking criteria for each site. • Combination of knowledge and judgement based on factors, including, but not limited to, exposure pathways, proximity to wells, and more remote locations. • Quantitative and qualitative process.
Region 9	• Developed a semi-quantitative ranking consisting of 5 tiers (0–5, 5 being lowest threat). • Highest threats are emergency responses or sites where risks are uncertain/unknown—the higher the ranking, the higher the prioritization. • Sites can be re-ranked as needed. • Ranking includes professional judgement and data based on factors, including, but not limited to, exposure pathways, contamination, future use, and uncertainty of impacts. • Quantitative and qualitative process.

Source: OIG-created table generated based on information gathered from OUST, regional interviews and document requests. Selected regions represent the regions we met during our evaluation.

As shown in Table 1, while one region approaches OUST with a list of cleanup sites ranked according to qualitative and quantitative factors, other regions only provide anecdotal information on sites of concern, while still others provide a ranking based on separate factors. As a result, regions apply criteria inconsistently. Another impediment to the prioritization process is that not all regions have prioritized all sites; this further complicates the EPA's ability to benchmark threats/risks from sites nationwide. In addition, some funds are requested for a specific site while other requests are for broader support, including lab support or

senior environmental employment program grantees, which are not site-specific. As a result, the lack of a consistent process nationwide to prioritize sites makes it difficult for regions, tribes and the public to understand how one region receives more funding for cleanups than another.

Lack of Transparency in EPA's Funding Decisions

There is no standard or consistent identification of risk or threat to human health or the environment during the national review of tribal LUST sites for funding. The cleanup funding decision process is based on professional judgment and is minimally documented. As a result, the cleanup funding decision process is not transparent, and cleanup funding decisions can appear to be subjective. A few factors contribute to the lack of transparency in the decision process, including:

- ***Funding decisions are minimally documented:*** Regions document their funding requests to headquarters, and headquarters documents its funding decisions with suggestions for use of funds. According to OUST, a number of factors are considered in the funding decision process. OUST noted these factors have included the potential threat to human health and the environment and how much funding is available. However, there is minimal documentation to evidence how the agency is meeting its requirements per the EPAct, such as how sites are compared or benchmarked on a national scale to determine which sites present the greatest health threats and, therefore, should be given priority.

- ***Regions lack access to information on nationwide site and cleanup activity information:*** According to some regional managers and staff we met, the regions are not collectively aware of, nor have access to, the specific documentation that other regions submit to OUST for the annual calls, and the discussions that occur during the calls. OUST management said that because each site is unique, they cannot have a checklist or other guidance document to outline how and what should be reviewed when making prioritization and funding decisions.

- ***Funding decisions are made by an individual rather than a panel:*** While conversations with headquarters leadership and regions occur during the decision-making and prioritization process, the final decision on funding had previously been left to one person—the OUST Director. In contrast, other EPA programs—such as Superfund—use technical panels, which include regional staff, to review components of Superfund remedial investigations or cleanup plans. This allows increased transparency and objectivity.

- ***Regions have funding execution discretion:*** After OUST funding amounts are provided, regions have the discretion to choose how to use the funds. The regions are to inform OUST on how the funds will

be spent, but the regions have flexibility to make changes. Regions with sites funded by the LUST Trust Fund set priorities for those sites within their region. One region noted having this flexibility is beneficial, but this creates risks that (1) funds are not used consistent with the requirements of the EPAct, and (2) site risks that resulted in OUST funding decisions are not addressed.

- ***Link between supporting activities and EPAct requirements minimally documented:*** LUST funds are not only used for site-specific cleanup activities. Funds can be used as support for cleanup and remediation of LUST-eligible sites in Indian country and grants for tribes to oversee cleanups in Indian country or perform site assessments and remediation on LUST-eligible sites. LUST funds can also support the EPA's Senior Environmental Employee Program[9] grants for implementation of the LUST program in Indian country (e.g., corrective action oversight). For example, at the Pine Ridge Reservation in South Dakota, some funds allocated to the region are used to cover the tribal grantee's salary and work supporting cleanup activities. Further, in a funding decision email provided to one region for fiscal year 2016, OUST recommended that allocated funds be used toward the region's Senior Environmental Employees, site assessment and cleanup activities. According to OUST, much of the work of the grantees and Senior Environmental Employees is focused on addressing high-priority sites, consistent with the EPAct requirements. However, while LUST funds can be used in this way, the link between the grantee and employee activities and this outcome is not documented in OUST funding decisions, and could appear inappropriate or inconsistent when viewed with EPAct requirements.

- ***Internal controls, including standard criteria, operating procedures or guidance, are missing:*** Current EPA resources covering USTs/LUSTs in Indian country do not include criteria or methods for how to prioritize sites based on greatest threats. Without standard operating procedures, guidance, or other types of documentation available for prioritized risks, it is unclear how the institutional knowledge needed to make funding decisions based on sites that present the greatest threats would be transferred if staff leave or vacate their posts. Other programs, such as the Superfund program, use a hazard ranking system to evaluate potential or confirmed releases of hazardous substances that can pose a threat to human health or the environment. The hazard ranking system consists of documented criteria used to guide the process of Superfund site assessments. Having such criteria documented and available to all parties involved in that program's process allows the institutional knowledge associated with Superfund site assessments to maintain

[9] The EPA's Senior Environmental Employee Program provides an opportunity for retired and unemployed Americans age 55 and over to share their expertise with the EPA, remaining active using their matured skills in meaningful tasks that support a wide variety of environmental programs.

consistency. In this case, internal controls are missing. Per Office of Management and Budget Circular A-123, internal controls should be in place to ensure compliance and help ensure that agency objectives are met. In addition, according to the U.S. Government Accountability Office's *Standards for Internal Control in the Federal Government*, documentation of the internal control system also provides a means to retain organizational knowledge and mitigate the risk of having that knowledge limited to a few personnel, as well as a means to communicate that knowledge as needed to external parties, such as external auditors. Absent documentation, the EPA cannot demonstrate its compliance with the EPAct requirements.

Efforts to Make Improvements Are Underway

Under the guidance of OUST, Region 9 is leading an effort to create a national database for prioritizing UST/LUST sites. Region 9 is currently in the initial scoping phase, and is exploring the feasibility of nationwide use. According to Region 9, the goal of the national database is to increase transparency of site data, improve data quality, and provide a comparable repository for tracking sites nationwide.

Also, the EPA plans to make changes to the OUST funding process for UST cleanups in Indian country as early as 2017. OUST plans to use a panel for future funding decisions, which can help improve transparency and efficiency. In addition, OUST is considering increasing the involvement of all regions in the review of sites and cleanup activities. These changes are in the early stages, and implementation plans have not been finalized.

Number of LUSTs in Indian Country Needing Cleanup Has Been Reduced

The EPA has been tracking progress toward addressing the backlog of LUST sites needing cleanup for years. Although more sites have been added, the total number of sites, including the overall number in Indian country, has been reduced.

Tribal LUST Cleanups and Backlog

As of 2016, there had been about 1,400 UST releases confirmed in Indian country. Table 2 shows the backlog for the previous fiscal years 2012–2016. LUSTs are added to the backlog as they are discovered and, therefore, the backlog or number of cleanups remaining can increase from a previous year despite cleanups completed; this occurred in fiscal year 2013, when the number of cleanups remaining was greater than the number of cleanups remaining for fiscal year 2012. The table also shows that while the number of cleanups remaining can fluctuate year to year, the agency was able to reduce the backlog in 4 of the 5 years we

reviewed. There was a net reduction of 28 sites in the backlog between fiscal years 2012 and 2016.

Table 2: Indian country backlog of LUSTs

Fiscal year	LUSTs added to backlog	Cleanups completed	Cleanups remaining
2012	23	47	299
2013	23	18	304
2014	20	26	298
2015	25	32	291
2016	10	30	271

Source: OIG-created table generated with EPA data.

Factors Impacting Reduction of LUST Backlog in Indian Country

A number of factors impact the EPA's ability to address the LUST backlog in Indian country, including:

- The EPA's reliance on other parties to conduct the majority of cleanups.
- LUST sites with low risk can remain on the backlog.
- The action memorandum approval process is lengthy.
- Some LUSTs need more complex and costly cleanups.

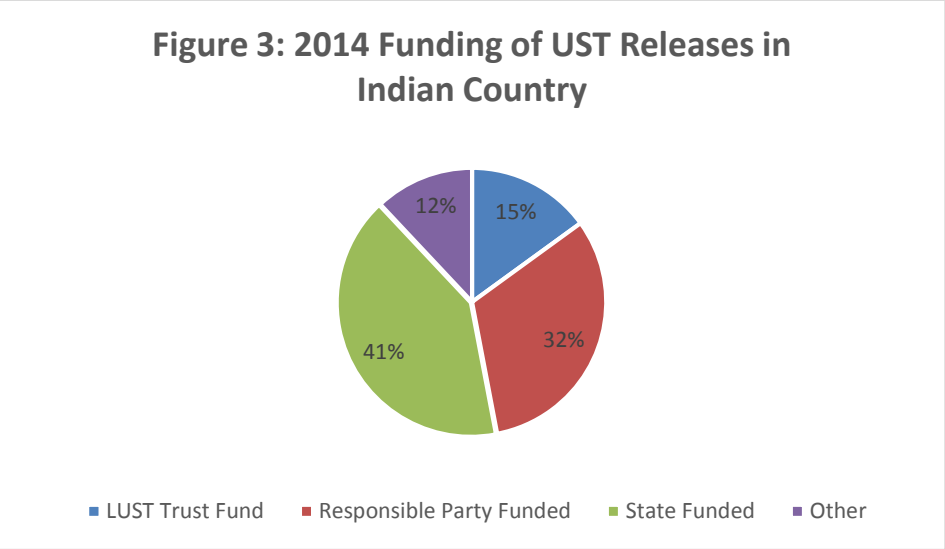
Reducing the backlog is important to reducing potential exposure to harmful contaminants that are detrimental to the health of the public and the environment. Details on the four factors noted above follow.

EPA's Reliance on Other Parties to Conduct Majority of Cleanups

Tank removal at Batesland store (former Mobil Oil and gas station), Pine Ridge Reservation, South Dakota. Batesland is on the national backlog, and the EPA is performing cleanup actions at the site. (EPA photo)

The EPA is responsible for implementing the UST program in Indian country. However, funding and cleanup actions can be performed by states and responsible parties as well as the EPA. Due to cleanups of LUSTs by other parties, the EPA is not solely addressing the backlog.

According to OUST data, most of the 271 sites in the backlog will not be cleaned up using the LUST Trust Fund. An EPA report from 2014 notes that state funds were responsible for funding 41 percent of the UST releases in Indian country, and responsible parties were to clean up 32 percent of the sites. The LUST Trust Fund was to be used for 15 percent of the cleanups, and the remaining cleanups fell into other categories, such as unknown funding sources and transfers to other cleanup programs (see Figure 3).



Source: OIG-created chart with EPA data.

In situations when the state, with the permission of the tribe, is overseeing cleanups, the regions will monitor state oversight of these corrective actions. As the EPA is responsible for implementing the UST program in Indian country, according to OUST, the agency will check as to whether the completed cleanup was appropriate. The reduction of the backlog is largely contingent on state funds and responsible parties conducting and completing work at many LUST sites.

LUST Sites With Low Risk Can Remain on Backlog

Some LUSTs have remained on the backlog for a decade or more. In 2014 the EPA reported that 66 percent of the backlog was 15 years old or older. This includes LUSTs the EPA considers "impractical" to clean (those with low risk and high cost to clean). This also includes a small number of LUSTs cleaned to EPA but not tribal standards. In Region 9, staff estimated that three sites do not meet tribal standards and, therefore, are still on the backlog.

Action Memorandum Approval Process Is Lengthy

EPA regional offices must request funding approval through an action memorandum (action memo) to use LUST Trust Fund money to finance a cleanup. Regions justify a site's priority for corrective action (and the other LUST statutory requirements) in action memos. Action memo funding requests over $250,000 are reviewed and approved by the OUST Director but also require the OLEM Assistant Administrator's approval. For these memos, the OLEM Assistant Administrator is personally involved in the review and provides comments to the regions. If additional funds are needed to complete work at a site, multiple action memos will be needed, and the Assistant Administrator's approval will be required for each action memo requesting funds over $250,000. The three regions we interviewed suggested the approval process is a lengthy one and the review period can vary,

taking a few months to a year for non-emergency approval needs. The lengthy approval process, in conjunction with the need to reissue task orders for different contract periods and weather constraints, can delay the cleanup and other work, such as outreach or field work activities. This, in turn, can prolong exposure to harmful contaminants.

According to the OLEM Assistant Administrator, a rigorous review process is a necessary step to ensure cleanup activities are optimized. He added that the tribal work is very complex, from a government-to-government standpoint, and the tribal views of the cleanup remedies can alter the strategy the EPA takes. The Assistant Administrator wants the project managers to consider the tribal views before funding is requested. He further explained that he applies the same amount of rigor to the review of the tribal UST action memos as for the Superfund removal action memos.

In May 2016, the OLEM Assistant Administrator released a memorandum, *Improving Action Memos for Leaking Underground Storage Tank (LUST) Cleanup Activities in Indian Country.* This document was created to clarify requirements for action memos authorizing the use of LUST Trust Funds, in addition to streamlining the process and strengthening justification for using the LUST Trust Funds. As stated in the document:

> Action memos provide information to meet our statutory obligation for why a site qualifies for LUST Trust Funds, explains what has been done at the site, what still needs to be done, and how much it will cost. The most complete action memos also provide, when applicable, information about:
>
> - The remedial strategy, goals and exit plan
> - Maximizing performance and reducing cost (e.g., optimizing corrective action)
> - Tribal government and affected community perspectives
> - Efforts to mitigate risk and reduce uncertainty
> - Your [UST/LUST Regional Division Directors] confidence in the likelihood the proposed approach will succeed
> - What would trigger the need for additional authorization in the future

According to one region we interviewed after the release of the May 2016 memo, the staff stated they still do not know what is expected, and there are times when the level of detail wanted is unknown and some questions (asked to address in the action memo) are too far in advance to have the answers. For example, the site in question may be in an investigative phase, yet there are already questions on a remedial exit strategy. Additional feedback from a different regional manager of the UST program noted that the technical hurdles placed before those requesting

funds are inconsistent with the site assessment and cleanup process, and the intent of the action memos.

The action memo approval process is an important senior official oversight tool to ensure that use of public funds is adequately justified. However, the time it takes for the senior official's review can vary, and there is no established time period for the review. A process that is unclear, lengthy or not well understood by those responsible for completing and preparing documentation provides OLEM with a further opportunity for review and possible improvement.

LUSTs Needing More Complex and Costly Cleanups

According to an EPA report from 2016, sites have been more complex and, therefore, more expensive. This has resulted in longer-term cleanups than in the past. While there are difficult and costly LUST sites with substantial releases in Indian country, the EPA has become more vigilant about optimizing remediation plans. According to the EPA, increased scrutiny adds time and more steps to the process, such as a need for more action memos, but, according to the EPA, will lead to more cost-effective and efficient cleanups in the future.

Conclusion

Without a documented and transparent funding decision process nationwide with consistent regional criteria, it is difficult to determine the extent to which UST/LUST sites with the greatest threat to human health and the environment are prioritized and receive funding. The EPA has plans that, when implemented, can enhance the transparency and effectiveness of the funding decision process, through the use of a panel and additional regional involvement. Although the EPA has reduced the backlog in Indian country, factors—such as sites remaining on the backlog for more than a decade or a lengthy action memo approval process—can impede the agency's ability to effectively reduce or eliminate backlog sites. While all UST sites present some degree of risk, when sites are not prioritized for threats, there is a potential public health concern of prolonged exposure to more hazardous contaminants.

Recommendations

We recommend that the Assistant Administrator for Land and Emergency Management:

1. Document how the process and criteria the EPA uses to give priority to those Leaking Underground Storage Tank releases that present the greatest threat to human health and the environment comply with the Energy Policy Act of 2005, Section 1529, including how funding decisions for cleanup activities prioritize these releases, and communicate this with the regions.

2. Once a process and criteria for prioritizing are documented, develop a tool or mechanism to track each Leaking Underground Storage Tank site in Indian country according to the EPA's prioritization criteria.

3. As other EPA cleanup programs have done, establish a panel, including headquarters and regional staff, to review annual funding decisions for Underground Storage Tank/Leaking Underground Storage Tank sites in Indian country.

4. Establish a standard time period (in days) for the Assistant Administrator and Office of Land and Emergency Management headquarters' offices to provide comments to the regions on submitted action memos.

5. Assess staff understanding of the May 2016 guidance and identify opportunities to strengthen staff awareness and adherence to the expectations for action memos.

Agency Response and OIG Evaluation

The EPA stated it is in full compliance with an EPAct requirement to give priority to releases from LUST sites in Indian country presenting the greatest threats to human health or the environment. The EPA believes its program is robust given the staff and financial resources appropriated by Congress. The EPA agrees it could do more to document the funding decision-making process in a more transparent way, and provide opportunities for cross-regional participation when allocating Indian country funding. We agree that the EPA is working to address threats to human health and the environment at LUST sites in Indian country. However, due to the absence of a transparent prioritization effort and the lack of documentation for funding decisions, we cannot confirm that the requirement is fully met.

The EPA agreed with all recommendations. Based on discussions during a January 2017 meeting with EPA managers and our review of written comments, we made changes to the report where appropriate. In addition, we requested that the EPA make changes to its corrective actions plan, and it did so. All recommendations are resolved. The agency's response is in Appendix A, and its revised corrective actions plan is in Appendix B.

Status of Recommendations and Potential Monetary Benefits

RECOMMENDATIONS

Rec. No.	Page No.	Subject	Status[1]	Action Official	Planned Completion Date	Potential Monetary Benefits (in $000s)
1	16	Document how the process and criteria the EPA uses to give priority to those Leaking Underground Storage Tank releases that present the greatest threat to human health and the environment comply with the Energy Policy Act of 2005, Section 1529, including how funding decisions for cleanup activities prioritize these releases, and communicate this with the regions.	R	Assistant Administrator for Land and Emergency Management	9/30/17	
2	17	Once a process and criteria for prioritizing are documented, develop a tool or mechanism to track each Leaking Underground Storage Tank site in Indian country according to the EPA's prioritization criteria.	R	Assistant Administrator for Land and Emergency Management	9/30/18	
3	17	As other EPA cleanup programs have done, establish a panel, including headquarters and regional staff, to review annual funding decisions for Underground Storage Tank/Leaking Underground Storage Tank sites in Indian country.	R	Assistant Administrator for Land and Emergency Management	12/31/17	
4	17	Establish a standard time period (in days) for the Assistant Administrator and Office of Land and Emergency Management headquarters' offices to provide comments to the regions on submitted action memos.	R	Assistant Administrator for Land and Emergency Management	6/30/18	
5	17	Assess staff understanding of the May 2016 guidance and identify opportunities to strengthen staff awareness and adherence to the expectations for action memos.	R	Assistant Administrator for Land and Emergency Management	6/30/17	

[1] C = Corrective action completed.
R = Recommendation resolved with corrective action pending.
U = Recommendation unresolved with resolution efforts in progress.

Agency Response to Draft Report

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

DEC 20 2016

OFFICE OF
SOLID WASTE AND
EMERGENCY RESPONSE

NOW THE
OFFICE OF LAND AND
EMERGENCY MANAGEMENT

MEMORANDUM

SUBJECT: Response to Office of Inspector General Draft Report No. OPE-FY16-0013 "Backlog of Leaking Underground Storage Tank Cleanups in Indian Country Has Been Reduced, but EPA Needs to Strengthen Requirements," November 22, 2016

FROM: Mathy Stanislaus
Assistant Administrator
Office of Land and Emergency Response

TO: Arthur A. Elkins, Jr.
Inspector General

Thank you for the opportunity to respond to the issues and recommendations in the subject audit report. Following is a summary of the agency's overall position, along with its position on each of the report recommendations. For those report recommendations with which the agency agrees, we have provided high-level intended corrective actions and estimated completion dates to the extent we can. For your consideration, we have included a Technical Comments attachment to supplement this response.

AGENCY'S OVERALL POSITION

The EPA's Underground Storage Tank Program believes it is in full compliance with the Energy Policy Act of 2005 (EPAct) requirement for giving priority to releases from Leaking Underground Storage Tank (LUST) sites in Indian country that present the greatest threats to human health or the environment. The EPA also believes that we have a robust program given the staff and financial resources appropriated to us by Congress. We agree we could do more to document our funding decision-making process in a more transparent way and provide opportunities for cross-regional participation allocating Indian country funding. The statutory structure of the LUST program, which requires UST owners and operators to pay for cleanups

and uses federal funds for critical situations not covered by other funding, can be complex but is appropriate, effective, and results in significant backlog reduction. We also believe it is important to implement the LUST corrective action program in Indian country in a manner that is consistent with our guidelines for states, where applicable. This includes having an approach to LUST Trust funded site priority setting that gives priority to sites that pose the greatest risk to human health and the environment while ensuring all sites move forward. It necessitates adhering to the statutory structure of the program which relies on several, complementary funding mechanisms and on investing time and money in program management and support activities (such as, Senior Environmental Employees, training, database management, adequate and timely action memo justification authorizing the use of LUST Trust Funds, grants and contracts management) in addition to direct site cleanup to ensure effective protection of human health and the environment.

AGENCY'S RESPONSE TO REPORT RECOMMENDATIONS

Agreements

No.	Recommendation	High-Level Intended Corrective Action(s)	Estimated Completion by Quarter and FY
1	Document how the process and criteria the EPA uses to give priority to those Leaking Underground Storage Tank releases that present the greatest threat to human health and the environment comply with the Energy Policy Act of 2005, Section 1529, including how funding decisions for cleanup activities prioritize these releases, and communicate this with the regions.	The EPA will document the process and criteria it uses to give priority to those Leaking Underground Storage Tank (LUST) releases that present the greatest threat to human health and the environment in Indian country by issuing a memo to the regions. The memo will consider input from the FY17 pilot regional-headquarters funding panel and explain how releases are prioritized when making funding decisions for LUST Trust Funded site cleanup.	4nd Quarter FY FY17
2.	Once a process and criteria for prioritizing are documented, develop a tool or mechanism to track each Leaking Underground Storage Tank site in Indian country according to the EPA's prioritization criteria.	1.1 The EPA will track the LUST Trust Funded sites through the documents developed for the funding panel.	2nd Quarter FY17

		1.2 The EPA will consider whether there are use the new tribal database we are developing to assist in this tracking.	4th Quarter FY17
3.	As other EPA cleanup programs have done, establish a panel, including headquarters and regional staff, to review annual funding decisions for Underground Storage Tank/Leaking Underground Storage Tank sites in Indian country.	The EPA will establish a regional-headquarters pilot panel to consider FY17 funding requests and make funding recommendations. EPA headquarters and regions UST program will assess the pilot panel approach and make adjustments to improve the effectiveness of future Indian country cleanup funding decisions.	2nd Quarter FY17 1st Quarter FY18
4.	Establish a standard time period (in days) for the Assistant Administrator and OLEM headquarters' offices to provide comments to the regions on submitted action memos.	The EPA will establish a standard period of one month for the Assistant Administrator and OLEM headquarters' offices to provide comments to the regions on submitted action memos.	3rd Quarter FY18
5.	Assess staff understanding of the May 2016 guidance and identify opportunities to strengthen staff awareness and adherence to the expectations for action memos.	The EPA will assess staff understanding of the May 2016 guidance and identify opportunities to strengthen staff awareness and adherence to the expectations for action memos.	3nd Quarter FY17

Disagreements
None

CONTACT INFORMATION

If you have any questions regarding this response, please contact Lela Hagan, Program Analyst of the Office of Underground Storage Tanks on (202) 564-0659 or Kecia Thornton, Organizational Management and Integrity Staff, OLEM on (202) 566-1913.

Attachment: Technical Comments

cc: Barry Breen
Nitin Natarajan
Carolyn Hoskinson
Mark Barolo
Will Anderson
Judy Barrows
Lela Hagan
Kecia Thornton

Appendix B

Revised Corrective Actions Plan

The revised corrective actions plan below was submitted by OLEM in February 2017. It represents the position of the action official and has been agreed to by the OIG. Corrective actions with changes from the original submission are shown in blue. All recommendations are agreed to and resolved.

No.	Recommendation	High-Level Intended Corrective Action(s)	Estimated Completion by Quarter and FY
1	Document how the process and criteria the EPA uses to give priority to those Leaking Underground Storage Tank releases that present the greatest threat to human health and the environment comply with the Energy Policy Act of 2005, Section 1529, including how funding decisions for cleanup activities prioritize these releases, and communicate this with the regions.	The EPA will document the process and criteria it uses to give priority to those Leaking Underground Storage Tank (LUST) releases that present the greatest threat to human health and the environment in Indian country by issuing a memo to the regions. The memo will use, where applicable, input from the FY17 pilot regional-headquarters funding panel and explain how releases are prioritized when making funding decisions for LUST Trust Funded site cleanup.	4nd Quarter FY FY17
2.	Once a process and criteria for prioritizing are documented, develop a tool or mechanism to track each Leaking Underground Storage Tank site in Indian country according to the EPA's prioritization criteria.	2.1 The EPA will track the LUST Trust Funded sites through the documents developed for the funding panel.	2nd Quarter FY17
		2.2 As part of the development of the new database for the UST sites in Indian country, EPA will evaluate options to determine whether it is feasible and affordable to track the funding decisions for LUST Trust funded sites.	4th Quarter FY17

		2.3 If EPA determines that it is not feasible or affordable to use the database for this purpose, EPA will develop an alternative method to track the funding decisions for LUST Trust funded sites.	4th Quarter FY18
3.	As other EPA cleanup programs have done, establish a panel, including headquarters and regional staff, to review annual funding decisions for Underground Storage Tank/Leaking Underground Storage Tank sites in Indian country.	3.1 The EPA will establish a regional-headquarters pilot panel to evaluate FY17 funding requests and make funding recommendations.	2nd Quarter FY17
		3.2 EPA headquarters and regions UST program will assess the pilot panel approach and make adjustments to improve the effectiveness of future Indian country cleanup funding decisions, through continued panels or alternative approaches determined to be more effective.	1st Quarter FY18
4.	Establish a standard time period (in days) for the Assistant Administrator and OLEM headquarters' offices to provide comments to the regions on submitted action memos.	The EPA will establish a standard period of one month for the Assistant Administrator and OLEM headquarters' offices to provide comments to the regions on submitted action memos.	3rd Quarter FY18
5.	Assess staff understanding of the May 2016 guidance and identify opportunities to strengthen staff awareness and adherence to the expectations for action memos.	The EPA will assess staff understanding of the May 2016 guidance and identify opportunities to strengthen staff awareness and adherence to the expectations for action memos.	3nd Quarter FY17

Appendix C

Distribution

The Administrator
Assistant Administrator for Land and Emergency Management
Assistant Administrator for International and Tribal Affairs
Agency Follow-Up Official (the CFO)
Agency Follow-Up Coordinator
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Associate Administrator for Congressional and Intergovernmental Relations
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Director, Office of Underground Storage Tanks, Office of Land and Emergency Management
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Audit Follow-Up Coordinator, Office of Land and Emergency Management
Audit Follow-Up Coordinator, Office of International and Tribal Affairs