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U.S. ENVIRONMENTAL PROTECTION AGENCY

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Cleaning up and revitalizing land

The Coronavirus Pandemic Caused Schedule Delays, Human Health Impacts, and Limited Oversight at Superfund National Priorities List Sites

Report No. 22-E-0049

June 23, 2022



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Abbreviations:

C.F.R.	Code of Federal Regulations
EPA	U.S. Environmental Protection Agency
NPL	National Priorities List
OIG	Office of Inspector General
RPM	Remedial Project Manager
U.S.C.	United States Code

Cover Image: The SARS-CoV-2 virus, which causes the COVID-19 disease. The coronavirus pandemic prolonged human health and environmental exposure to contaminated sites. (Centers for Disease Control and Prevention image)

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Office of Inspector General U.S. Environmental Protection Agency **At a Glance**

22-E-0049
June 23, 2022

Why We Did This Evaluation

The U.S. Environmental Protection Agency's Office of Inspector General conducted this evaluation in an effort to determine the impact of the coronavirus pandemic—that is, the SARS-CoV-2 virus and resultant COVID-19 disease—on long-term cleanups at Superfund National Priorities List sites. We sent surveys to 457 remedial project managers in February 2021 and received 279 responses, a 61-percent response rate. We also interviewed EPA regional Superfund and Emergency Management Division directors, as well as directors from EPA headquarters.

The Comprehensive Environmental Response, Compensation, and Liability [Act](#), informally called Superfund, authorizes the EPA to oversee the cleanup of contaminated sites. The National Priorities List identifies the worst hazardous waste sites that warrant further investigation and cleanup.

This evaluation supports an EPA mission-related effort:

- *Cleaning up and revitalizing land.*

This evaluation addresses a top EPA [management challenge](#):

- *Integrating and leading environmental justice, including communicating risks.*

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[List of OIG reports.](#)

The Coronavirus Pandemic Caused Schedule Delays, Human Health Impacts, and Limited Oversight at Superfund National Priorities List Sites

What We Found

The coronavirus pandemic caused schedule delays and changed or extended the exposure of human health and ecological receptors to hazardous substances, pollutants, or contaminants at 31 Superfund National Priorities List, or NPL, sites. The pandemic also prolonged such human health and environmental exposures, as well as contributed to disproportionate impacts on some communities. Furthermore, some communities that do not use or cannot access electronic communications were unable to participate in community-involvement activities. Conversely, the pandemic did steer some positive changes, such as improved health and safety protocols, increased community participation in virtual meetings, and reduced EPA travel costs. Also, as of our February 2021 survey, there were no known impacts to cleanup costs at a large majority of Superfund NPL sites.

Coronavirus pandemic restrictions delayed work and limited on-site oversight, with disproportionate impacts to some communities.

The remedial project managers, or RPMs, responding to our survey said that their oversight of Superfund NPL site work was limited, in part, by the EPA's pandemic-related restrictions, even while some contractors and other parties responsible for cleanup were able to continue work. Further, some regional managers were unable to deploy RPMs to perform nonemergency yet mission-critical work without undergoing a burdensome, undocumented process to obtain headquarters approval for the provision of coronavirus testing and supplies. RPMs were deployed to assist with emergency responses, however.

Most pandemic impacts we identified were caused by social-distancing requirements and site-access limitations, such as EPA travel restrictions and local stay-at-home orders. Other impacts were caused by the EPA's change to virtual modes of communication. Also, at the time of our regional management interviews, the EPA lacked updated guidance that was consistent with an executive order related to providing coronavirus testing and vaccines.

Recommendations and Planned Agency Corrective Actions

We made three recommendations to improve community involvement, Superfund site oversight, and safe deployment of RPMs during a pandemic or other emergency. Based on additional information provided by the Agency in its response to the draft report, we revised Recommendation 1. We agreed with the Agency's proposed corrective action for Recommendation 3, which is resolved. Recommendations 1 and 2 are unresolved with resolution efforts underway. We updated our report as appropriate based on the EPA's technical comments.



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

THE INSPECTOR GENERAL

June 23, 2022

MEMORANDUM

SUBJECT: The Coronavirus Pandemic Caused Schedule Delays, Human Health Impacts, and Limited Oversight at Superfund National Priorities List Sites
Report No. 22-E-0049

FROM: Sean W. O'Donnell

A handwritten signature in blue ink that reads "Sean W O'Donnell".

TO: Janet McCabe, Deputy Administrator

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 of the U.S. Environmental Protection Agency. The project number for this evaluation was [OE-FY21-0050](#). This report contains findings that describe the problems the OIG has identified and corrective actions the OIG recommends. Final determinations on matters in this report will be made by EPA managers in accordance with established audit resolution procedures.

Multiple offices share responsibility for the issues raised in our report, including the Office of Land and Emergency Management; the Office of Enforcement and Compliance Assurance; the Office of Mission Support; the Office of the Administrator; and the Office of Environmental Justice, which is within the Office of the Administrator.

The findings in this report are not binding in any enforcement proceeding brought by the EPA or the U.S. Department of Justice pursuant to the Comprehensive Environmental Response, Compensation, and Liability Act.

In accordance with EPA Manual 2750, your office provided an acceptable planned corrective action and estimated milestone date in response to Recommendation 3. This recommendation is resolved with corrective action pending.

Action Required

Recommendations 1 and 2 are unresolved. EPA Manual 2750 requires that recommendations be resolved promptly. Therefore, we request that the EPA provide us within 60 days its responses concerning specific actions in process or alternative corrective actions proposed on the recommendations. Your response will be posted on the OIG's 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. The Inspector General Act of 1978, as amended, requires that we report in our semiannual reports to Congress on each audit or evaluation report for which we receive no Agency response within 60 calendar days.

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 Office of Inspector General [initiated](#) this evaluation to determine the impact of the coronavirus pandemic—that is, the SARS-CoV-2 virus and resultant COVID-19 disease—on long-term cleanup activities at Superfund National Priorities List, or NPL, sites. This evaluation involved a survey of remedial project managers, or RPMs, as well as interviews with regional management and headquarters management from the EPA’s Office of Land and Emergency Management and Office of Enforcement and Compliance Assurance.

Top Management Challenge Addressed

This evaluation addresses the following top management challenge for the Agency, as identified in OIG Report No. [22-N-0004](#), *EPA’s Fiscal Year 2022 Top Management Challenges*, issued November 12, 2022:

- Integrating and leading environmental justice, including communicating risks.

Background

The Coronavirus Pandemic

Since it emerged in December 2019, the coronavirus has caused millions of deaths worldwide, as well as lasting health problems in some who have survived the disease. The coronavirus can be spread from person to person and is diagnosed with a laboratory or at-home test. Coronavirus vaccines have been authorized by the U.S. Food and Drug Administration, and vaccination programs have been established across the United States. According to the Johns Hopkins Medicine “What Is Coronavirus” [webpage](#), prevention involves physical distancing, wearing masks, washing hands, and staying away from others if one feels ill.

The EPA’s Superfund Program

Congress enacted the Comprehensive Environmental Response, Compensation, and Liability [Act](#) in 1980. Informally called **Superfund**, this Act authorizes the EPA to oversee the cleanup of contaminated sites. It also authorizes the EPA to compel the parties responsible for the contamination to either perform the cleanups or reimburse the government for EPA-led cleanup work. When there is no viable responsible party, Superfund gives the EPA the funds and authority to clean up contaminated sites.

The EPA’s Superfund [program](#) is responsible for cleaning up some of the nation’s most contaminated land and responding to environmental emergencies, oil spills, and natural disasters. Superfund authorizes cleanup activities, including:

- Short-term **removal actions** to address releases or threatened releases of hazardous substances requiring prompt response.

- Long-term **remedial actions** to permanently and significantly reduce the dangers associated with releases or threats of releases of hazardous substances that are serious but not immediately life-threatening. EPA-led remedial actions can be conducted only at sites listed on the [NPL](#), which identifies the sites of national priority among the known releases or threatened releases of hazardous substances, pollutants, or contaminants. The NPL is primarily an information resource that lists the worst hazardous waste sites that warrant further investigation and cleanup.

During the cleanup [process](#), a Superfund site can be divided into several distinct subareas, called **operable units**, to make the response more efficient. Operable units may be organized based on geography, specific site problems, or areas requiring specific action. As directed by 40 C.F.R. § 300.120, the EPA’s RPMs are responsible for managing cleanup activities at Superfund NPL sites. The RPM coordinates, directs, and reviews the work of all parties involved in the cleanup—including the EPA, state and local governments, the U.S. Army Corps of Engineers, and any other agencies and contractors—to make sure they comply with the *National Oil and Hazardous Substances Pollution Contingency Plan* regulations.

Per 42 U.S.C. § 9617, Superfund requires the EPA to solicit public participation in the long-term cleanup process by publishing a notice and brief analysis of a proposed remedial action plan, as well as allowing for the submission of written and oral comments and the opportunity for a public meeting on the proposed plan. Cleanup activities cannot proceed until certain community-involvement activities are completed. The EPA has established policy objectives for “community relations” to inform and encourage public participation in the Superfund process and to respond to community concerns.¹ In addition, the EPA’s *Superfund Community Involvement Handbook*, dated March 2020, states that the EPA should conduct early, frequent, and meaningful community involvement as a way to keep the public well-informed of ongoing and planned activities; encourage and enable the public to get involved; consider changing planned actions after deliberation of public comments or concerns; and explain EPA decisions to community members.

During a crisis event like the coronavirus pandemic, oversight of long-term cleanup actions at Superfund NPL sites may be impacted, and work may be delayed, especially if EPA or contractor personnel cannot travel to sites. This lack of site access may not only result in a delayed response to emergencies, such as a failed pump-and-treat system or disrupted engineering controls for a drinking water supply, but may also impact other oversight activities. For example, it could hinder community notification of emergencies, potentially leading to or prolonging human exposure to contaminants.

Community Relations

The *National Oil and Hazardous Substances Pollution Contingency Plan* requires that certain community-relations activities be accomplished prior to commencing fieldwork or remedial investigations, including:

- Conducting interviews with local officials, community residents, public interest groups, or other interested or affected parties, as appropriate, to solicit their concerns and information needs, as well as to learn how and when citizens would like to be involved in the Superfund process.
- Preparing a formal community relations plan, based on the community interviews and other relevant information, which specifies the community-relations activities expected to be undertaken during the remedial response.
- Establishing at least one local information repository at or near the location of the response action.
- Informing the community of the availability of technical assistance grants.

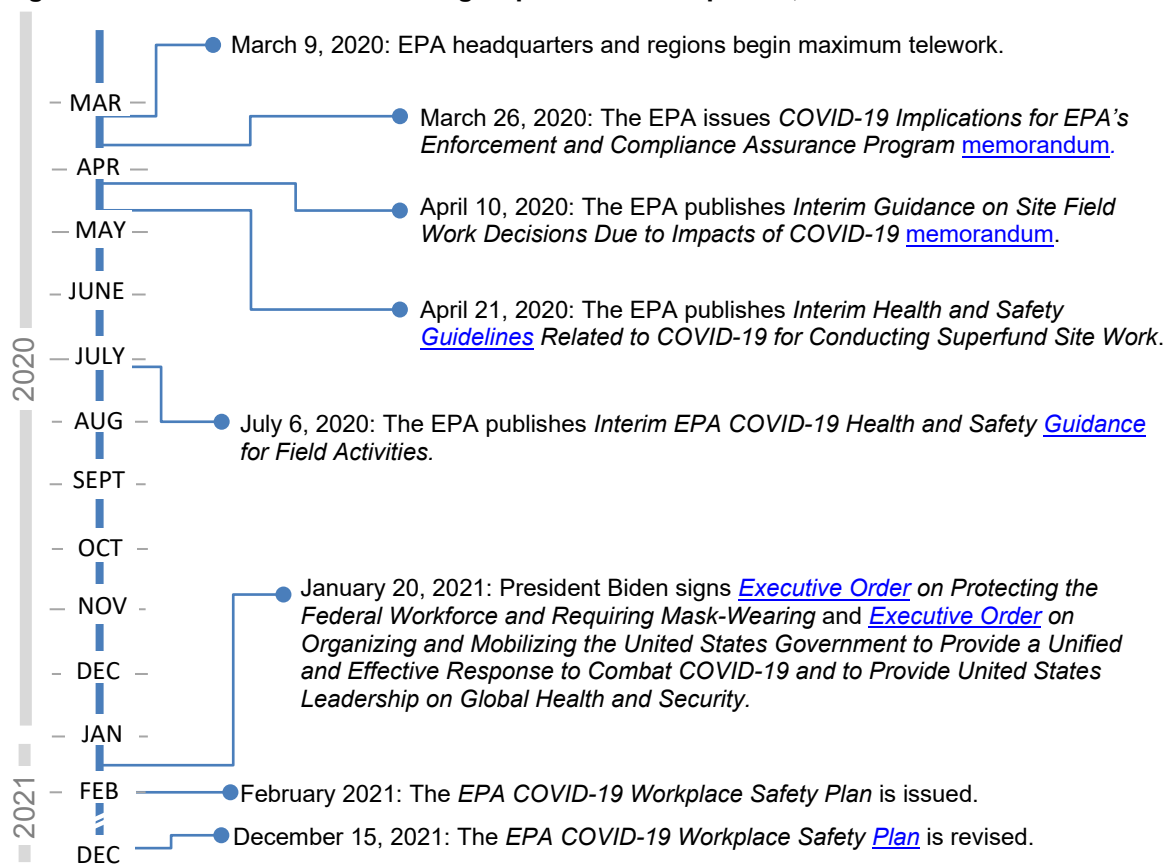
— *National Oil and Hazardous Substances Pollution Contingency Plan*, [40 C.F.R. § 300.430\(c\)\(2\)](#)

¹ [40 C.F.R. § 300.5](#), *National Oil and Hazardous Substances Pollution Contingency Plan*. See green sidebar for a description of community relations requirements.

Executive Orders and Federal Guidance

As depicted in Figure 1, executive orders and EPA guidance documents have guided Superfund cleanup work during the coronavirus pandemic.²

Figure 1: Federal directives assisting Superfund cleanup work, March 2020–December 2021



Source: OIG summary of executive orders and EPA policies. (EPA OIG image)

Executive Orders and Centers for Disease Control and Prevention Guidance

On January 20, 2021, President Joseph R. Biden Jr. issued two executive orders relating to the federal workforce's response to the coronavirus pandemic:

- [Executive Order on Organizing and Mobilizing the United States Government to Provide a Unified and Effective Response to Combat COVID-19 and to Provide United States Leadership on Global Health and Security](#), which provided for “coordinating the Federal Government’s efforts to produce, supply, and distribute personal protective equipment, vaccines, tests, and other supplies for the

² Additional executive orders and federal guidance responding to the coronavirus pandemic continued to be released and updated. Several executive orders were incorporated in the *EPA COVID-19 Workplace Safety Plan*, revised December 2021.

Nation's COVID-19 response, including through the use of the Defense Production Act, as amended."

- [Executive Order](#) on *Protecting the Federal Workforce and Requiring Mask-Wearing*, which states:

The heads of executive departments and agencies ... shall immediately take action, as appropriate and consistent with applicable law, to require compliance with CDC [Centers for Disease Control and Prevention] guidelines with respect to wearing masks, maintaining physical distance, and other public health measures by: on-duty or on-site Federal employees; on-site Federal contractors; and all persons in Federal buildings or on Federal lands.

In addition, the Centers for Disease Control and Prevention provided [guidance](#) for domestic travel during the coronavirus pandemic. It revised this guidance on April 27, 2021, to address unvaccinated people. This guidance recommends pre- and posttravel coronavirus testing.

EPA Guidance

The EPA issued multiple guidance documents to facilitate Superfund cleanup work, including guidance on the oversight of cleanups and guidance on health, safety, and fieldwork during the coronavirus pandemic:

- *COVID-19 Implications for EPA's Enforcement and Compliance Assurance Program* [memorandum](#), dated March 26, 2020, which stated that under certain conditions the EPA will exercise enforcement discretion for noncompliance resulting from the coronavirus pandemic. For example, the EPA was not expecting:

[T]o seek penalties for violations of routine compliance monitoring, integrity testing, sampling, laboratory analysis, training, and reporting or certification obligations in situations where the EPA agrees that COVID-19 was the cause of the noncompliance and the entity provides supporting documentation to the EPA upon request.

This memorandum was retroactively applied and effective from March 13 through August 31, 2020.

- *Interim* [Guidance](#) on *Site Field Work Decisions Due to Impacts of COVID-19*, dated April 10, 2020, to help management determine whether to pause or continue work at Superfund sites.
- *Interim Health and Safety* [Guidelines](#) *Related to COVID-19 for Conducting Superfund Site Work*, dated April 21, 2020, to address the protection of RPMs, including medical clearance; deployment considerations; site safety; recording workplace exposure to the coronavirus; travel-related issues; and other considerations, such as reducing exposure by avoiding groups and practicing social distancing by maintaining a 6-foot distance from other individuals.
- *Interim EPA COVID-19 Health and Safety* [Guidance](#) *for Field Activities*, dated July 6, 2020, to further address the protection of RPMs, including respiratory protection, safety training, medical clearance for field activities, and pretravel considerations.
- *EPA COVID-19 Workplace Safety* [Plan](#), originally dated February 2021 and revised in December 2021, to outline the EPA's plan for managing the coronavirus pandemic. This plan provides a framework to ensure that the EPA's policies and practices are in line with guidance

issued by the Office of Management and Budget, the Centers for Disease Control and Prevention, and other federal agencies. The plan addresses telework, the use of face masks, coronavirus testing, travel for mission-critical work, contact tracing, potential exposure while on temporary duty, symptom monitoring, quarantine and isolation, confidentiality, and workplace operations.

According to the EPA's *Interim Guidance on Site Field Work Decisions Due to Impacts of COVID-19*, the EPA makes decisions about on-site activities on a case-by-case basis, with the following priorities:

- Protecting the health and safety of the public, as well as maintaining the health and safety of EPA staff and cleanup partners. Integral to the protection of health and safety is the adherence to any federal, state, tribal, or local health declarations and restrictions, to the extent possible.
- Maintaining the EPA's ability to prevent and respond to environmental emergencies or any situation necessary to protect public health and welfare and the environment.

Responsible Offices

Multiple offices share responsibility for the issues raised in our report:

- The Office of Land and Emergency Management manages the EPA's Superfund program. Regional Superfund and Emergency Management Divisions identify, investigate, and clean up contaminated sites and protect public health and the environment from releases of hazardous substances.
- The Office of Enforcement and Compliance Assurance addresses pollution problems that impact American communities through civil and criminal enforcement that targets the most serious water, air, and chemical hazards. The office advances environmental justice by protecting those communities most vulnerable to pollution. The office works with EPA regional offices, as well as in partnership with state and tribal governments and other federal agencies, to enforce the nation's environmental laws.
- The Office of Mission Support provides critical resources, tools, solutions, and support services that enable the EPA to protect human health and the environment. This office also provides health and safety management for the EPA workforce.
- The Office of the Administrator provides executive and logistical support for the EPA administrator and supports the leadership of the EPA's programs and activities to protect human health and the environment. The administrator is responsible for implementing the executive orders discussed in this report.
- The Office of Environmental Justice, within the Office of the Administrator, coordinates the EPA's efforts to address the needs of vulnerable populations by decreasing environmental burdens; increasing environmental benefits; and working collaboratively to build healthy, sustainable communities. This office provides financial and technical assistance to communities working constructively and collaboratively to address environmental justice issues. The Office of Environmental Justice works with local, state, and federal governments; tribal governments; community organizations; business and industry; and academia to establish partnerships seeking to achieve protection from environmental and health hazards for all people regardless

of race, color, national origin, or income. Some of these responsibilities intersect with the findings in this report.

Scope and Methodology

We conducted this evaluation from January 2021 through March 2022, in accordance with the *Quality Standards for Inspection and Evaluation* published in January 2012 by the Council of the Inspectors General on Integrity and Efficiency. Those standards require that we plan and perform the evaluation to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings, conclusions, and recommendations based on our review objective. We believe that the evidence obtained provides a reasonable basis for our findings, conclusions, and recommendations.

To answer our objective, we reviewed EPA remedial actions, documents, regulations, executive orders, and guidance from March 2020 through July 2021. We sent a survey to 457 RPMs, whose names we obtained from staff in the Office of Land and Emergency Management. The survey was open from February 5 through February 24, 2021. Appendix A presents the text of the survey. We received 279 responses, a 61-percent response rate.³ The RPM responses addressed up to 479 different operable units at 343 Superfund sites. Not all RPMs who responded to our survey answered all the questions for all the operable units they oversee, and not every question received the same number of responses. Rather, RPMs focused on the operable units they oversee that were impacted by the coronavirus pandemic.

As shown in Table 1, we received survey responses involving 343 Superfund sites, including 298 sites that were listed on the NPL, one of which was identified to us as being on the NPL after we administered our survey; six sites that were proposed for the NPL; 28 sites that were previously listed on but have since been deleted from the NPL; and 11 other sites. The 11 “other” sites were identified as being NPL-caliber—in other words, they were not on the NPL but have similar risks and complexities as sites on the NPL. Some of these 11 sites were being addressed under EPA enforcement actions. Interview responses also encompassed some contaminated sites that were NPL-caliber but not on the Superfund NPL. For the purposes of this report, however, we refer to all of these sites collectively as **Superfund NPL sites**.

Table 1: NPL status of sites addressed in survey responses

Site was:	Number of sites
Listed on NPL	298
Proposed for NPL	6
Previously listed but since deleted from NPL	28
Either NPL-caliber but not listed on NPL or under EPA enforcement action	11
Total	343

Source: OIG analysis of NPL data. (EPA OIG table)

We interviewed Superfund and Emergency Management Division directors and other management from all EPA regions except Regions 1 and 3. For the purposes of this report, we refer to these directors and managers collectively as **regional management** or **regional managers**. We also interviewed managers and staff from EPA headquarters in the Office of Land and Emergency Management’s Office of

³ We received survey responses from 277 RPMs and two other EPA staff. For simplicity, however, we hereafter refer to the survey responses as being from RPMs.

Superfund Remediation and Technology Innovation, the Office of Enforcement and Compliance Assurance, and the Office of Mission Support about their perspectives on the impacts of the coronavirus pandemic on long-term cleanup efforts at Superfund sites.

While our survey was conducted in February 2021, the Agency's management of safety protocols has continued to evolve throughout the pandemic. We have done our best to reflect this rapidly changing environment in our report, specifically as it relates to our findings, conclusions, and recommendations. Also, this report may not reflect the full impact of the pandemic on the Superfund program, as not all RPMs responded to the survey.

Prior Report

OIG Report No. [20-E-0332](#), *EPA Has Sufficiently Managed Emergency Responses During the Pandemic but Needs to Procure More Supplies and Clarify Guidance*, issued September 28, 2020, found that EPA regions sufficiently protected human health and the environment by responding to emergencies or assisting in emergency responses during the coronavirus pandemic. In addition, the Agency took some initial measures to protect its on-scene coordinators. However, the on-scene coordinators who responded to an OIG survey conducted for that evaluation expressed concerns that the EPA did not provide sufficient protective measures or effectively manage its emergency responses. We recommended that the EPA implement a strategy to provide necessary personal protective equipment and cleaning supplies to on-scene coordinators, including N95 masks; develop communications mechanisms to address the safety concerns of on-scene coordinators; clarify its coronavirus pandemic guidance; and provide COVID-19 tests to on-scene coordinators being deployed. As of May 9, 2022, three of the report's four recommendations were closed with corrective actions completed, while one recommendation was resolved with corrective actions pending.

Chapter 2

The Coronavirus Pandemic Impacted Long-Term Cleanups at Superfund Sites

The coronavirus pandemic caused schedule delays and changed or extended exposures of human health and ecological receptors to hazardous substances, pollutants, or contaminants at 31 Superfund NPL sites.⁴ In addition, the pandemic prolonged such human health and environmental exposures, as well as contributed to disproportionate impacts on some communities. Furthermore, some communities that do not use or cannot access electronic communications were unable to participate in community-involvement activities. Conversely, the pandemic did steer some positive changes, such as improvements to health and safety protocols; increases in participation in virtual community meetings; and savings in EPA travel costs. Also, as of our February 2021 survey, there were no known impacts to cleanup costs at a large majority of Superfund NPL sites.

The RPMs who responded to our survey said that their oversight of work at Superfund NPL sites was limited, in part, by the EPA's pandemic-related restrictions, even while some contractors and other parties responsible for cleanup were able to continue work. For example, some regional managers were unable to deploy RPMs to perform nonemergency yet mission-critical work without undergoing a burdensome, undocumented process each time to obtain headquarters approval for the provision of coronavirus testing and supplies.

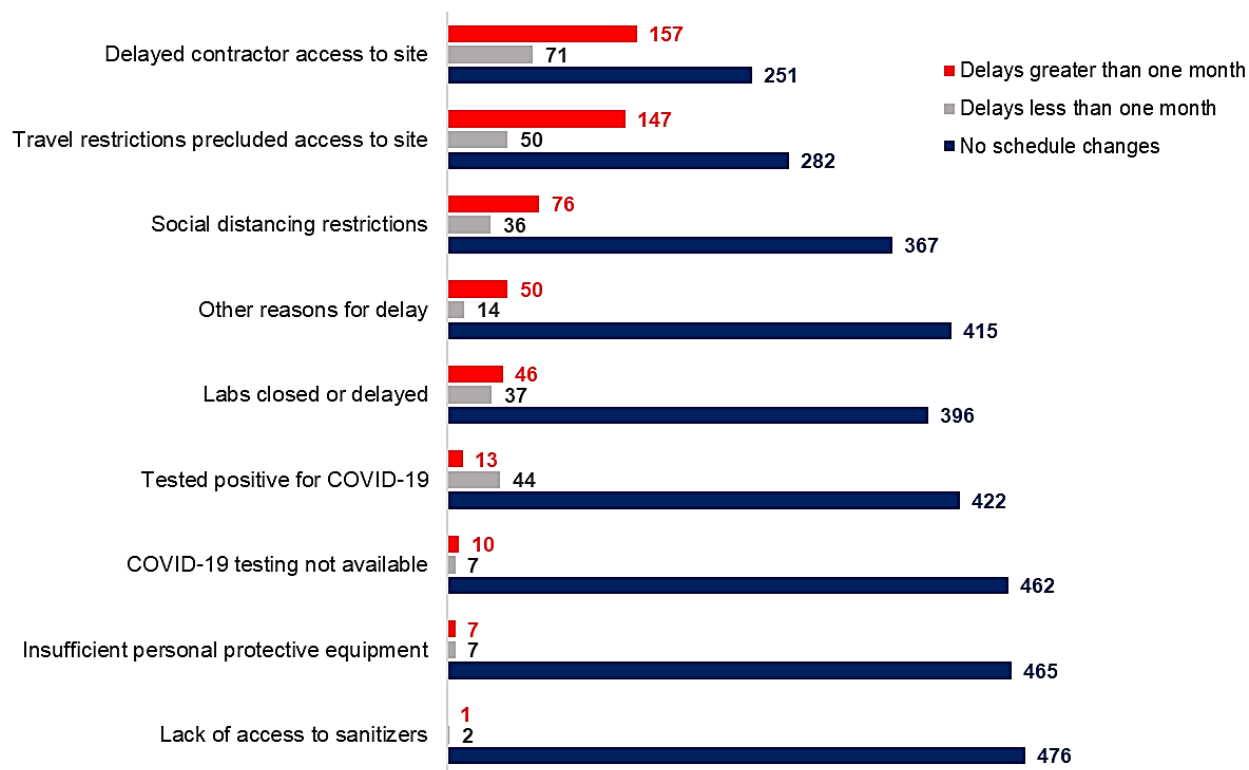
Most pandemic impacts we identified were caused by social-distancing requirements and site-access limitations, such as EPA travel restrictions, local stay-at-home orders and quarantine restrictions, or a lack of permission from local or tribal governments for the EPA to access areas to conduct needed work. Other impacts were caused by the EPA's change to virtual modes of communication and, at the time of our regional management interviews, the EPA's lack of updated guidance consistent with an executive order to provide coronavirus testing and vaccines for RPMs to conduct mission-critical work.

The Coronavirus Pandemic Caused Schedule Delays at Superfund Sites

RPMs reported that the coronavirus pandemic caused schedule delays at Superfund NPL sites. As Figure 2 shows, RPMs reported that 31 percent (147 of 479) of operable units experienced schedule delays of greater than one month because of travel restrictions alone. Figure 2 also lists other pandemic-related factors that impacted the work schedules for Superfund cleanups. In early April 2020, the Office of Superfund Remediation and Technology Innovation began tracking delays in remedial activities and reductions in construction activity at Superfund sites. The office reported that the maximum number of delays or reductions occurred in April 2020, with 110 across 81 sites. The number of delays and reduced construction activity then subsided, with the office reporting just 14 across ten sites in January 2021 (Figure 3).

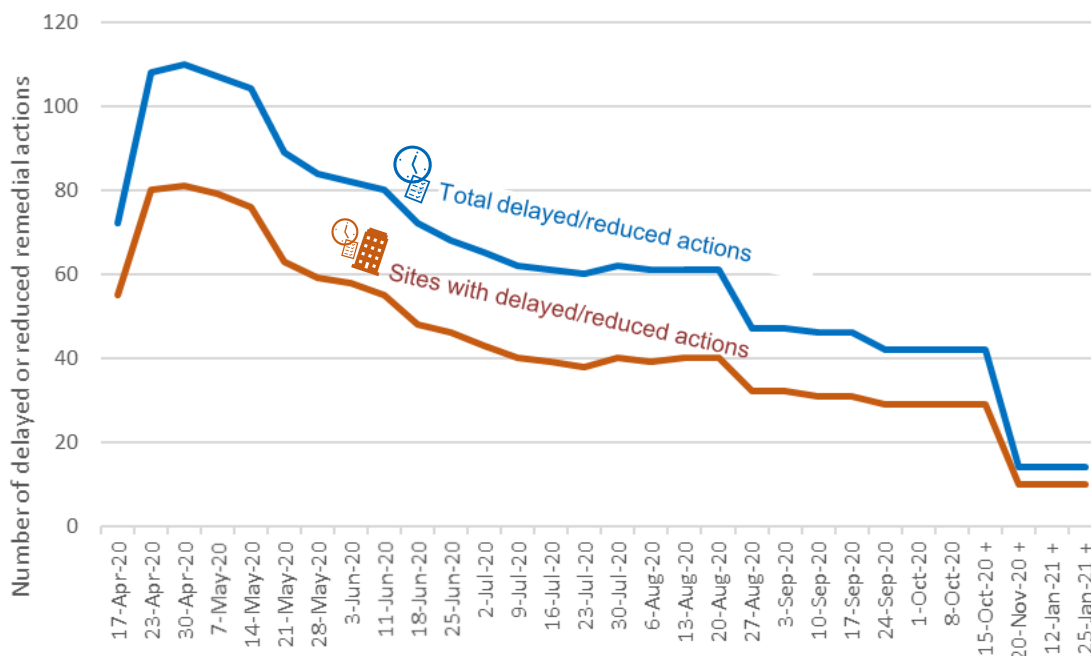
⁴ A **human health receptor** is either an individual with the potential to be exposed to a chemical in environmental media or a specific organ or group of cells interacting with a delivered dose of an agent within the body. Per EPA [540-R-97-006](#), *Ecological Risk Assessment Guidance for Superfund: Process for Designing and Conducting Ecological Risk Assessments*, dated June 1997 (interim final), **ecological receptors** are "plant and animal populations and communities, habitats, and sensitive environments."

Figure 2: Impact of coronavirus pandemic on cleanup schedules for Superfund operable units



Source: OIG analysis of RPM survey responses by operable unit. (EPA OIG image)

Figure 3: Delayed or reduced remedial actions at Superfund sites, April 2020–January 2021



Source: OIG analysis of Office of Superfund Remediation and Technology Innovation data. (EPA OIG image)

+ After October 15, 2020, regions were asked to submit data only when a status changed.

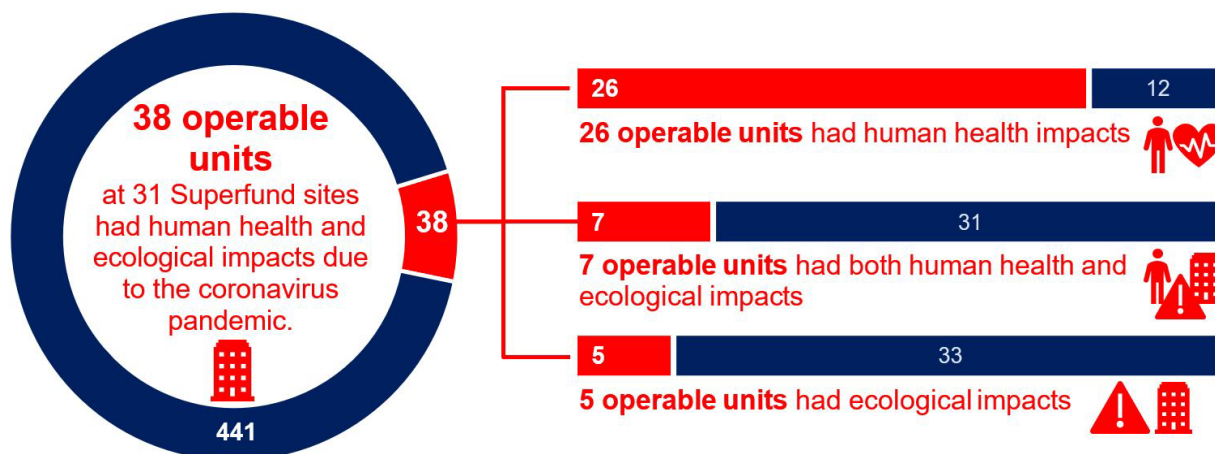
The schedule delays were a result of decisions made by headquarters and regional managers, who had to balance the risks of sending RPMs to Superfund sites during a pandemic with the risks to surrounding communities if the pace of Superfund cleanup work slowed. Managers often decided to scale back travel to address only critical needs. In addition, managers focused on on-site construction and chose to accomplish other activities remotely, such as design work and meetings. Regional and headquarters management also emphasized a risk-balancing approach to address the safety of community members and staff, and indoor work was often delayed to avoid potentially exposing RPMs and community members to the coronavirus. For example, one region delayed indoor plumbing hookups that would provide potable water to replace contaminated water sources. Another region stated that entering houses to sample vapor intrusion was difficult to justify given the pandemic-related risks, reporting that vapor-intrusion evaluations at a federal facility were delayed because the facility’s occupants did not feel safe.

Regional management weighed other factors when considering whether to deploy RPMs, including local travel restrictions, local hospital room availability, local hotel and restaurant availability, and the risk of RPMs spreading the coronavirus from their departure locations to the Superfund sites and vice versa. Regional management noted that local travel restrictions and local government orders often required everyone to stay home and closed all but essential businesses. Limitations on travel, however, did result in cost savings for the EPA since travel funds were often not spent.

The Coronavirus Pandemic Impacted 31 Superfund Sites by Changing or Extending Human Health and Ecological Exposures

RPMs reported that the coronavirus pandemic changed or extended exposures of human health and ecological receptors to hazardous substances, pollutants, or contaminants at 38 operable units across 31 Superfund sites. Specifically, RPMs reported that 26 operable units experienced changes or extensions of only human health impacts, seven operable units experienced changes or extensions to both human health and ecological impacts, and five operable units experienced changes or extensions to only ecological impacts (Figure 4). For example, delaying indoor activities such as vapor-intrusion monitoring, water sampling, or lead-dust cleanup could lead to prolonged exposure of residents to hazardous chemicals at some sites.

Figure 4: Sites experienced human and ecological impacts



Source: OIG analysis of RPM survey data. (EPA OIG image)

The Coronavirus Pandemic Disproportionately Impacted Some Communities

Regional management and RPMs also provided evidence that some communities faced disproportionate impacts related to the COVID-19 disease, communication methods, and cultural or religious practices. The choice of communication methods affected required community-involvement activities. An analysis of data reported by the Centers for Disease Control and Prevention suggested that American Indian and Alaska Native people have suffered a disproportionate burden of COVID-19 illnesses during the pandemic—3.5 times the cumulative incidence among non-Hispanic White persons.⁵ One regional manager reported observing the severe health impact on these communities and said that some tribes closed their borders to address the crisis. Without access to sites on tribal lands, the EPA and tribes had little choice but to stop cleanup work at sites. Also, because of local stay-at-home orders and a cessation of in-person community-involvement activities, tribes often could not participate in the Superfund cleanup process. Without community participation, the cleanup work could not proceed. For example, the EPA and the community were ready to discuss the remedy to clean up the abandoned uranium mines on Navajo Nation tribal lands when the coronavirus pandemic began. As a result, that work halted.

Other remote, nontribal communities did not want EPA contractors to visit during the pandemic, which postponed Superfund work. In addition, communities that do not use or cannot access electronic communication methods for religious, cultural, or geographic reasons—such as tribal, Amish, Mennonite, and rural communities—were disproportionately impacted by the pandemic. Communities without sufficient internet access or with language barriers were impacted as well. These communities could not participate in the cleanup process because they were unable to participate in the community-involvement process activities, which moved to virtual platforms as a result of the pandemic. This lack of community involvement delayed cleanup work.

In their survey responses, the majority (149 of 208) of RPMs confirmed that they were able to conduct the community-involvement activities required by Superfund and the *National Oil and Hazardous Substances Pollution Contingency Plan*; however, 59 RPMs reported that community involvement for sites they oversee was impacted. These RPMs reported that meetings were delayed and that the transition to virtual meetings diminished communication with communities that had limited access to virtual tools.

The exact health and ecological impacts on communities because of the coronavirus pandemic are unknown. Regional management provided information that some communities experienced changed or extended exposures to human health and ecological impacts because of the coronavirus pandemic, as described in the previous section. According to the Environmental Justice Screening and Mapping tool,

Environmental Justice

According to the EPA, *environmental justice* is the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income, with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies. Within this context, some minority, low-income, tribal, or indigenous populations or geographic locations potentially experience disproportionate environmental harms and risks. This disproportionality can result from greater vulnerability to environmental hazards, lack of opportunity for public participation, or other factors. Increased vulnerability may be attributable to an accumulation of negative or a lack of positive environmental, health, economic, or social conditions within these populations or places. In these cases, multiple factors may cumulatively affect health and the environment, contributing to disparities.

⁵ Hatcher SM, Agnew-Brune C, Anderson M, et al. "COVID-19 Among American Indian and Alaska Native Persons — 23 States, January 31–July 3, 2020," [Morbidity and Mortality Weekly Report](#), August 28, 2020; 69:1166–1169.

some of these communities have high-minority or low-income populations. Other communities are located on tribal lands that restricted site access. For sites that were in the earlier stages of the cleanup process, it would be premature to determine whether the coronavirus pandemic impacted human health or the environment at a site. Where an emergency response was required, regional management said that a response was implemented. For example, RPMs were deployed to assist with emergencies, as necessary.

The Coronavirus Pandemic Had Limited Impact on Known Cleanup Costs

RPM survey responses showed that the cost impacts of the coronavirus pandemic were low. For most operable units, RPMs reported no cost changes. Specifically, RPMs reported that 447 operable units at 316 sites had no equipment cost changes, 434 operable units at 305 sites had no personnel cost changes, and 442 operable units at 314 sites had no laboratory cost changes.

RPMs did report that 127 operable units experienced changes related to contractor costs, laboratory costs, and other costs. These cost changes were less than \$10,000 at 86 operable units and greater than \$10,000 at 41 operable units.

While the survey-reported cost impacts were low, regional managers expressed concerns that the cost impacts of the pandemic were not yet fully known. For example, these managers said that they did not yet know the full cost impact of schedule delays or work shutdowns. Delayed schedules may drive future changes to contractor costs. Regional managers said that they could not yet determine whether the savings from reduced travel and use of virtual technologies for meetings would offset any increased costs, such as higher costs for building materials.

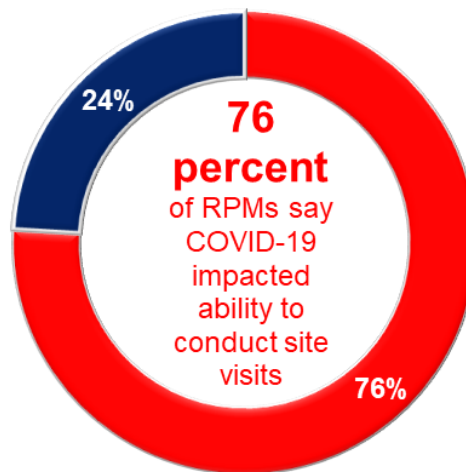
Although Some Work Continued, the EPA's Response to the Coronavirus Pandemic Curbed Oversight at Superfund Sites

The EPA's Travel Restrictions Limited Oversight, but Virtual Tools and Telework Enabled Some Work to Continue

The EPA imposed travel restrictions in response to the coronavirus pandemic. These travel restrictions limited RPMs' on-site oversight of cleanup work and community-involvement activities. In their survey responses, 186 (76 percent) of 245 RPMs reported that the coronavirus pandemic negatively impacted their ability to conduct site visits or other oversight (Figure 5).

Instead of being in the office or traveling to sites, RPMs began teleworking full-time and using virtual tools to work, including meeting with contractors and potentially responsible parties; engaging with the public; and performing contractor-related tasks, such as conducting the site tours needed to prepare bids and verify that work was completed.

Figure 5: The coronavirus pandemic impacted site visits and oversight



Source: OIG analysis of RPM survey data. (EPA OIG image)

RPMs shared with us various lessons learned about operating in a virtual environment:

- Photo logs and video logs were critical to continuing work.
- Virtual meetings and webinars increased the ability of communities to participate in community-involvement activities.

RPMs also reported a number of limitations to the virtual environment:

- RPMs made cleanup decisions without completely understanding site conditions because fieldwork was done via photographs or teleconference. Teleconferencing did not adequately allow RPMs to view the sites.
- Virtual meetings replaced most site visits. Because some sites limited the number of visitors to meet the 6-foot social distancing requirements, oversight could not be conducted in person.
- Travel limitations reduced oversight. Travel to sites was often limited to mission-critical tasks. For example, because a five-year review inspection was not considered mission-critical, RPMs were unable to perform direct oversight of the work at Superfund sites. One RPM reported that contractors or potentially responsible parties were asked to photo-document the site on the EPA's behalf or use a drone to view the site as a workaround. Some sites were anticipated to go more than a year-and-a-half without in-person RPM oversight.

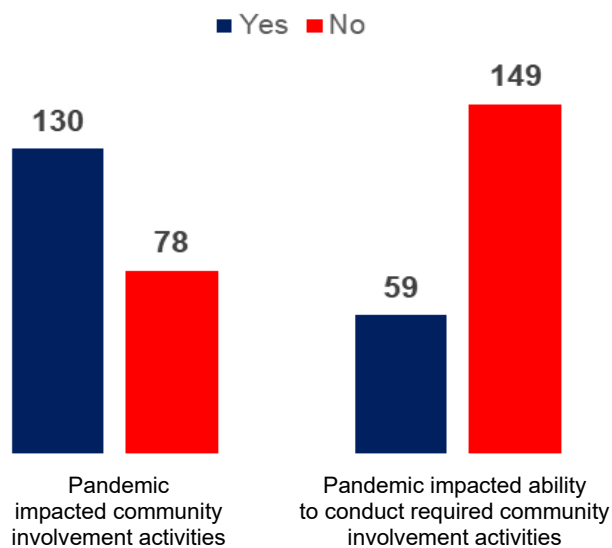
Changes to Community-Involvement Activities Impacted Participation and Relationships

Community involvement in the Superfund cleanup process was impacted as the modes of communication changed. While most RPMs (130 of 208, or 63 percent) reported changes to community-involvement activities, the majority (149 of 208, or 72 percent) responded that they were still able to conduct required activities (Figure 6).

RPMs reported in their survey responses that the activities related to community meetings changed. For example, meetings were rescheduled and shifted to virtual platforms, site visits to communities were curtailed, and interviews were conducted by phone or other virtual means. RPMs also reported the following changes to community-involvement activities:

- Blood sampling and indoor dust monitoring for lead were canceled.
- Soil sampling and written reports about sample results were delayed.

Figure 6: RPM perspectives on whether the coronavirus pandemic impacted community-involvement activities



Source: OIG analysis of survey data. (EPA OIG image)

- Risk communication, such as presentations about the results of private well drinking water sampling for contaminants, was delayed. Well owners received test results by mail instead.

Further, RPMs reported that printed documents, such as public notices about the deletion of sites from the NPL and announcements related to community-involvement activities, were no longer being placed in public repositories, such as local libraries, because they were closed. Instead, these documents were posted to websites or mailed to community members. RPMs commented that their inability to conduct required community-involvement activities and to interact with the community in face-to-face meetings caused some delays during the cleanup process, especially in communities that lack or have limited internet access.

Though some cleanup and meeting delays may have occurred, regional managers said that, overall, community participation increased as a result of virtual meetings. One regional manager described the use of virtual tools as a positive outgrowth and reported that these tools often allowed site work to proceed, such as by conducting virtual site tours and confirming that work was completed. Other regional managers recognized the challenge presented by cultural differences in the use of technology and said that, while larger cities seamlessly transitioned to using virtual tools, rural and tribal areas had more difficulties because of limited internet connections and cultural factors. These challenges affected the EPA's ability to conduct cleanup activities in those areas.

EPA Guidance and Protocols Evolved, but Improvements Are Still Needed

According to the majority of RPMs who responded to our survey, the EPA's guidance on conducting site fieldwork decisions during the coronavirus pandemic adequately addressed their needs when conducting site work. Specifically, 85 percent (213 of 252) of RPMs reported that they were aware of the EPA's *Interim Guidance on Site Field Work Decisions Due to Impacts of COVID-19*, while 89 percent (190 of 213) said that the guidance adequately addressed their needs when performing remedial activities at NPL sites during the pandemic. However, in their survey responses, RPMs did outline some needed improvements, recommending that the guidance:

- Be more specific about what protections should be established for on-site RPMs and contractors.
- Provide for adequate oversight of contractors, who are considered essential and are on-site, even though RPMs overseeing contractor work were not allowed to travel.
- Specify when it is acceptable to return to work after a pause in work was required.
- Provide clarification on what can and cannot be done to provide flexibility for RPMs to travel to sites, as well as on how to complete statutorily required activity that involves travel—such as site inspections—if all travel for RPMs is stopped.
- Address indemnification of EPA decision-makers from potential coronavirus liabilities when deciding to deploy staff for site work.
- Specify how to protect staff and site workers, as well as where to obtain the resources—including coronavirus testing and personal protective equipment—to protect these individuals.

From March 2020 through February 2021, the EPA's health and safety guidance and protocols did evolve to enable site work to continue. A regional manager told us that potentially responsible parties wanted to continue site work. Some regional managers said they partnered with state employees or other

federal agency employees who could access sites that the EPA could not travel to. In some cases, work was delayed while health and safety programs were adjusted or while local coronavirus cases subsided.

An EPA headquarters manager observed that contractors and the EPA regions improved their health and safety plans and standard operating procedures to address biohazards in general. For example, according to the manager, cases of seasonal influenza declined during the pandemic, and Office of Land and Emergency Management staff said that there is now more awareness about sanitizing hands, which may help reduce the number of influenza cases.

Problems persisted, however. For example, headquarters managers:

- Identified health and safety issues related to sites in states that had restrictions on individuals, such as testing and quarantining requirements before work could start. For example, one state required contractors crossing its borders to test and quarantine for two weeks before they could report to work.
- Stated that the Office of Mission Support had not, at the time we conducted our interviews, developed plans for or supported provisioning of testing and vaccination.
- Reported that, because of the lack of Office of Mission Support plans, they spent a significant amount of time researching safety concerns, such as hospitals, because they are responsible for their staff, contractors, and support workers.

The EPA Did Not Sufficiently Develop Policy to Protect RPMs During Mission-Critical Work

While some of the EPA's health and safety protocols evolved during the pandemic, the EPA did not sufficiently address the need for the provisioning of pre- and posttravel coronavirus testing and vaccines to protect RPMs. As a result, some regional managers were not able to obtain approval from EPA headquarters to deploy RPMs, except to assist with emergency responses. In addition, regions had to follow an undocumented, case-by-case process to obtain headquarters approval for the coronavirus-related testing and supplies required to deploy RPMs safely.

During our interviews, regional managers told us that they interpreted the January 2021 executive orders related to the federal response to the pandemic to mean that the Agency should immediately provide testing and vaccinations to protect RPMs, who perform mission-critical work. As of June 2021, five months after the executive orders were issued, regional managers confirmed that RPMs still lacked access to these services. Furthermore, the EPA did not develop policy to implement the directive of the January 2021 executive orders. The absence of such policy led to gaps in contractor oversight; contractors could travel and work, while those charged with oversight could not. Such policy is also needed in advance of construction seasons. The importance of developing policy and provisioning the needed tests and supplies is underscored by the RPM survey responses, which indicated that only 7.7 percent (19 of 247) of RPMs had been tested for the coronavirus in their official capacity (Figure 7).

By not provisioning RPMs with testing and vaccinations, which would allow them more latitude to travel, the EPA had:

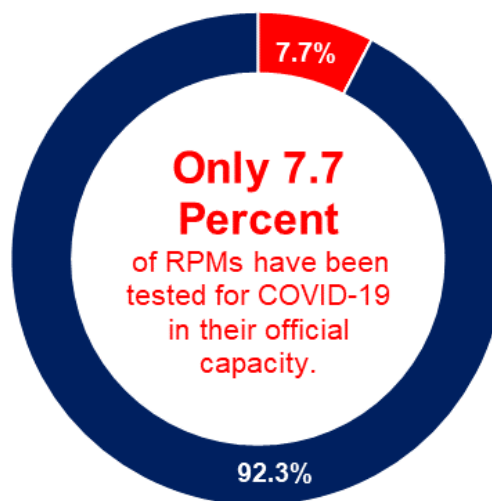
- Impeded its ability to address public health and environmental risks needing prompt action.
- Caused some sites to go without in-person RPM oversight for long periods of time.

As a result, some Superfund sites with remedies needing prompt in-person attention may have deteriorated into conditions requiring emergency responses. For example, regional managers stated that:

- The Iron Mountain site in Redding, Northern California, had a pit containing sludge from treated acid mine drainage that was nearing capacity. Action was needed to prevent the acid mine drainage from contaminating the drinking water supply for 20 percent of Californians. Unless the pit was expanded, off-site transport of toxic sludge would have been required, which would create additional risks of traffic accidents, fatalities, and spills, as well as significantly increase the greenhouse gas contribution associated with the site. It would also increase the potential for exposure to COVID-19 for site personnel, drivers, and landfill operators at the destination facilities. Because of these deteriorating conditions, regional management believed it had to seek approval from headquarters on a case-by-case basis for the provision of coronavirus testing and supplies before it could send any RPM to the site.
- At the Brown and Bryant site in Arvin, California, untreated extracted groundwater being stored at the site exceeded the normal on-site storage capacity. Once the normal storage capacity is reached, either the treatment system must be shut down or large volumes of contaminated water must be stored in temporary holding tanks or drums, increasing the chance of spills. Shutting down the treatment system could result in contaminated groundwater migrating into the deeper drinking water aquifers, including the aquifer that supplies water to Arvin, which is a 94-percent minority community. A time-critical removal action was completed to mitigate threats to human health and the environment. This action targeted contaminated groundwater, which was extracted, stored in six above-ground containers, and then shipped off-site for disposal in an incinerator. An RPM and other supporting staff were needed at this site to ensure groundwater treatment system operation during construction, provide community-involvement activities, and complete documents needed for remedy optimization and contract procurement. Regional management believed it had to seek approval from headquarters for the provision of coronavirus testing and supplies before deploying the RPM and other support staff to the site.

Though the EPA developed and published interim guidance related to operations during the coronavirus pandemic, headquarters managers noted that the EPA did not “immediately” update the interim guidance or develop policy to reflect the directives in the executive orders because it did not want to conflict with anticipated governmentwide guidance. According to some regional managers, they were unable to deploy RPMs to sites to perform nonemergency yet mission-critical work without undergoing a burdensome, undocumented process to obtain approval from headquarters.

Figure 7: RPM COVID-19 testing



Source: OIG analysis of RPM survey data. (EPA OIG image)

Conclusions

The lack of updated EPA guidance and policy magnified delays and gaps in oversight of site work. If the EPA does not keep pace with the need to protect its RPMs during this pandemic or future crises, foreseeable impacts include delayed and prolonged cleanups; increased costs; prolonged human health and ecological exposures; and delayed remedial actions, which may lead to an increase in situations requiring immediate, emergency responses. These impacts may also add to the cumulative and disproportionate impacts that some communities—including communities with environmental justice concerns—already suffer. Updated EPA guidance regarding the provision of coronavirus testing and supplies was critical to timely cleanups at Superfund NPL sites and would have been consistent with presidential executive orders. Without this guidance, delays would likely have continued, especially if EPA regions needed to obtain headquarters approval on a case-by-case basis for the provision of testing and supplies. Such guidance would have protected not only the RPMs but also the communities they serve.

The Office of Land and Emergency Management must weigh the cost of community relationship-building via in-person meetings against the benefits of increased participation via virtual meetings, as well as determine how to use virtual tools in a post-pandemic environment. Communities that do not have adequate internet access or whose religious or cultural practices are inconsistent with the use of electronic resources have been particularly affected by the RPMs' inability to travel. The EPA should issue guidance on the continued use of virtual technologies, including alternatives for overcoming the identified challenges related to holding public meetings, such as when to embed a community-involvement coordinator in a community or when to have outdoor meetings with appropriate social distancing. Without such guidance, communities that lack internet access may be prevented from participating in the cleanup process and may suffer prolonged and disproportionate environmental effects, since cleanup activities cannot proceed if the required community-involvement activities are not conducted.

In addition, because of EPA restrictions, RPMs have been unable to travel, while EPA contractors and other stakeholders have continued work on-site. At the time of our survey, some sites had lacked on-site RPM oversight for one year or longer. In some cases, the EPA has had to rely on state or contractor staff to conduct oversight on its behalf. It is uncertain whether and for how long it is appropriate to have others perform oversight duties for the RPMs.

Recommendations

We recommend that the assistant administrator for Land and Emergency Management:

1. Develop and implement a plan to conduct outreach meetings in the communities where meetings did not occur during the pandemic because they either lacked or do not use virtual technologies.
2. Promptly develop and implement guidance regarding how oversight should be conducted for Superfund sites when travel or site access is limited.

We recommend that the deputy administrator, in coordination with the assistant administrator for Mission Support and the assistant administrator for Land and Emergency Management:

3. Promptly develop and implement a policy to provide the necessary tools—such as appropriate testing, vaccination, and supplies—to safely deploy remedial project managers during a pandemic or other emergency.

Agency Response and OIG Assessment

The Agency provided a response to the draft report and included technical comments, which we considered and incorporated into the report as appropriate. Overall, the Agency agreed with Recommendations 1 and 3 and offered alternative language for Recommendation 2.

In the draft report, Recommendation 1 said that the Agency should:

Promptly develop and implement guidance addressing the use of virtual technologies for public meetings and other community involvement activities. This guidance should address how to conduct such meetings and activities with communities that lack adequate internet service or whose cultural or religious practices prohibit using electronic communication methods.

To address Recommendation 1, the Agency provided guidance issued in 2017, 2020, and 2021, which it had not previously provided to us. The guidance addresses the need to plan for communications with those who may not have access or may have limited access to virtual technologies. However, as we identified in our report, the Agency still did not meet with some communities. We accordingly modified Recommendation 1 to focus on conducting the needed meetings for those communities. The Agency will need to propose a corrective action and estimated completion date for the revised recommendation, which is unresolved.

The Agency disagreed with Recommendation 2 and offered an alternative recommendation to develop a lessons-learned document on oversight conducted at Superfund sites when travel or site access is limited by a pandemic. While conducting a lessons-learned review is important in the aftermath of this pandemic, such a review and document may not sufficiently prepare the EPA for future events that may demand a more robust response capability for mission-critical or essential tasks. Per 40 C.F.R. § 300.120, RPMs are tasked with providing oversight of Superfund site work by coordinating, directing, and reviewing the cleanup work to assure compliance with the National Oil and Hazardous Substances Pollution Contingency Plan, which is an inherently governmental function. As such, we maintain that the EPA should develop guidance that offers a flexible set of principles to guide and empower its regions and managers in making oversight decisions that support Agency goals and objectives during events that limit travel or site access. This oversight guidance should clearly explain how RPMs are to comply with statutory and existing contract oversight requirements when site visits are not allowed. This recommendation is unresolved.

The Agency agreed with Recommendation 3 and provided an acceptable proposed corrective action and estimated completion date. The deputy administrator affirmed the Agency's response in subsequent communication. This recommendation is resolved, with corrective actions pending.

Appendix B includes the Agency's response to our draft report.

Status of Recommendations

RECOMMENDATIONS

Rec. No.	Page No.	Subject	Status ¹	Action Official	Planned Completion Date
1	17	Develop and implement a plan to conduct outreach meetings in the communities where meetings did not occur during the pandemic because they either lacked or do not use virtual technologies.	U	Assistant Administrator for Land and Emergency Management	
2	17	Promptly develop and implement guidance regarding how oversight should be conducted for Superfund sites when travel or site access is limited.	U	Assistant Administrator for Land and Emergency Management	
3	18	In coordination with the assistant administrator for Mission Support and the assistant administrator for Land and Emergency Management, promptly develop and implement a policy to provide the necessary tools—such as appropriate testing, vaccination, and supplies—to safely deploy remedial project managers during a pandemic or other emergency.	R	Deputy Administrator	4/30/23

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

Superfund RPM Survey

We distributed an electronic survey to 457 RPMs on February 5, 2021, whose names we obtained from staff in the Office of Land and Emergency Management, and asked them to respond within two weeks. We received 279 responses, a 61-percent response rate. Not all respondents answered every question or completed the survey. The results included two respondents who were on the RPM email lists but said in the survey that they were not RPMs. The survey requested RPMs to consider all parts of the Superfund cleanup process at Superfund sites that the RPMs oversaw from March 15, 2020, until the day they took the survey. The RPM responses addressed up to 479 different operable units at 343 Superfund sites, which comprised 298 sites that were on the NPL, 11 sites that were NPL-caliber sites but not listed on the NPL or being addressed under enforcement action, six sites that were proposed for the NPL, and 28 sites that were previously on the NPL but have since been deleted.

Source: The OIG survey information is the source for all the tables presented in this appendix. These tables were created by the EPA OIG.

Legend: AROD = Amended Record of Decision; ESD = Explanation of Significant Decisions; PPE = Personal Protective Equipment; PRP = Potentially Responsible Party; ROD = Record of Decision; SSID = Site Spill Identification Code.

RPM demographics questions						
Are you a Remedial Project Manager?	Yes	No	Total			
	277	2	279			
How long have you been an RPM?	Five years or less	Greater than five years, but less than ten years	Greater than ten years to less than 15 years	Greater than 15 years to less than 20 years	Greater than 20 years to less than 25 years	Greater than 25 years
	100	33	41	24	21	58
Please select the regional office you work for.	Region 1	Region 2	Region 3		Region 4	Region 5
	17	46	41		25	36
	Region 6	Region 7	Region 8	Region 9	Region 10	Total
	16	17	13	40	26	277

Continuity of operations questions			
	Yes	No	Total
1: Was the Continuity of Operations Plan used for risk responses for long term cleanups at any Superfund NPL sites?	125	140	265
2: Were any preplanned actions taken to address the risks from a pandemic:			
a. In place for long term cleanups at Superfund NPL sites?	76	41	117
b. Effective for long term cleanups at Superfund NPL sites?	83	34	117
3: If preplanned actions were not effective, please explain why.			

Guidance questions			
	Yes	No	Total
4: Are you familiar with the EPA's Interim Guidance on Site Field Work Decisions Due to Impacts of COVID-19 dated April 10, 2020?	213	39	252
5: (If Yes to Question 4) In your opinion, does the guidance adequately address the needs of the RPMs to perform remedial activities at NPL sites during the pandemic?	190	23	213
6: What changes would you suggest? (For "No" responses to Question 5)			
7: Are you familiar with the EPA's Interim EPA COVID-19 Health & Safety Guidelines for Field Activities – July 6, 2020?	217	35	252
8: (If "Yes" to Question 7) In your opinion, do the guidelines adequately protect RPMs?	206	11	217
9: What changes would you suggest? (For "No" responses to Question 8)			
10: In your opinion, are headquarters and regional	224	24	248

Guidance questions			
	Yes	No	Total
managers applying the COVID-19 policies and guidance properly?			
11: If No to Question 10, please explain.			
12 Have you or any of your contractors encountered any difficulties applying the guidance to remedial work activities?	28	220	248
13 Does your region or office provide additional COVID-19 guidance for RPMs in addition to those discussed above?	172	76	248
14: In your official capacity, have you been tested for COVID-19 since March 15, 2020?	19	228	247

General questions			
	Yes	No	Total
15: Has COVID-19 impacted your ability to conduct site visits or other oversight?	186	59	245
16: If yes to Question 15, then describe that impact.			
17: Did the Agency lose the ability to recover costs due to the statute of limitations expiring during the COVID-19 pandemic?	6	239	245
18: If yes to Question 17, please explain. Include the site name and SSID.			
19: Was a settlement agreement, consent decree, or another similar document modified due to COVID-19?	6	239	245
20: If yes, to Question 19 please explain. Include the site name and SSID.			
21 Is there any additional information you would like to provide?			
22: If yes to Question 21, please add that information in the box below.			

General questions			
	Yes	No	Total
23: Has COVID-19 impacted caused any changes in Community Involvement Activities?	130	78	208
24: If yes to Question 23, please provide a brief explanation in the text box.			
25: Has COVID-19 impacted your ability to conduct required Community Involvement Activities?	59	149	208
26: If yes to Question 25, please provide a brief explanation in the text box.			
27: Has COVID-19 affected the amount of site-specific time you have been able to charge in timekeeping systems?	38	207	245
28: If yes to Question 27, please provide a brief explanation in the text box.			

Region setup questions	
	Site ID/OU Count
29: How many sites and operable units do you oversee that have COVID-19 impacts? (Enter a number)	743
30: For your site name/ID and operable unit(s), please choose the site name and operable unit from the list and answer the following questions.	
31: Please enter the site name that is missing from the pick list here.	

Questions 32–39 were repeated for each site and operable unit identified in Question 29–31.

	Feasibility study	Focused feasibility study	Remedial design	Remedial investigation	Five-year review	Removal Action	Remedial Action	Other not listed	Total
32: Please choose the type of action taking place at site and operable unit. (Please add a brief description in the text box.)	33	13	60	100	103	32	183	118	642

	EPA enforcement lead	PRP lead	Fund or EPA lead	Federal facility lead	State lead	Superfund alternative lead	Other not listed
33: What type of lead is the site? Choose 1. (Please add a brief description in the text box, or NA if not applicable.)	13	170	138	119	25	4	18

34: Did you make any of the following changes for your site and operable unit? If yes, select all that apply	Count
1. Reduction or increase in scope of work.	4
2. Suspension in response action work.	14
3. Used enforcement discretion such as a party requested and received any flexibility, mutual assent, or force majeure accommodation.	6
4. Changes in lead, such as EPA lead, Responsible Party lead, State or Tribal lead, enforcement lead, etc.	1
5. Changes to remedy in a decision document (ROD, AROD, ESD).	2
6. Extra time allotted to critical milestones in the planned schedule for investigation, design, or cleanup.	64
7. Personnel limitations on site due to social distance requirements.	29
8. Routine site maintenance practices changed.	10
9. Other changes not listed here. (Please add a brief explanation.)	32
10. No changes were needed for the cleanup plan.	156

35: Were there any actual impacts to schedules at your site and operable unit that have occurred due to the COVID-19 pandemic?	No schedule changes.	Schedule changes were less than one week.	Schedule changes were greater than one week and less than one month.	Schedule changes were greater than one month and less than six months.	Schedule changes were greater than six months.
1. Contractors access to the site was delayed.	251	17	54	104	53
2. Labs were closed or delayed, and samples could not get analyzed as scheduled.	396	8	29	34	12
3. Social distancing restrictions limiting the number of personnel on site such as 50% capacity limit drove schedule changes.	367	13	23	45	31
4. Personnel tested positive or were sick with COVID-19 and not available to work.	422	13	31	12	1

35: Were there any actual impacts to schedules at your site and operable unit that have occurred due to the COVID-19 pandemic?	No schedule changes.	Schedule changes were less than one week.	Schedule changes were greater than one week and less than one month.	Schedule changes were greater than one month and less than six months.	Schedule changes were greater than six months.
5. Cleanup teams did not have access to sanitizers (spray bottle?) to clean equipment.	476	1	1	1	0
6. Insufficient PPE.	465	5	2	5	2
7. Travel restrictions precluded access to site.	282	14	36	84	63
8. COVID-19 testing was not available and resulted in schedule delays.	462	6	1	5	5
9. Other not listed here. (Please add a brief explanation or select “No Schedule Changes” and enter “NA” in the text box.)	415	4	10	20	30

36: Were there any actual impacts to costs at your site and operable unit that have occurred due to the COVID-19 pandemic?	No cost changes	Cost changes were less than \$1,000	Cost changes were greater than \$1,000 and less than \$10,000	Cost changes were greater than \$10,000 and less than \$100,000	Cost changes were greater than \$100,000	Cost impact is not known or is not knowable (for example, site is a PRP or another Agency lead)
1. The site is a PRP lead or a Federal Facility and we do not know the cost impact.	438	6	6	9	7	13
2. Contractor costs changed due to COVID-19.	400	18	22	21	5	13
3. Labs costs changed due to COVID-19.	442	9	12	4	0	12
4. Personnel costs changed due to COVID-19.	434	7	18	5	2	13
5. Equipment costs changed due to COVID-19.	447	6	7	6	1	12
6. PPE costs changed.	418	34	10	3	2	12
7. Travel costs changed.	408	33	22	5	1	10
8. COVID-19 testing costs changed.	461	2	2	1	0	13
9. Other costs changed not listed here. (Please add a brief explanation or select “No Cost Changes” and enter “NA” in the text box.)	431	19	6	5	6	12

37: Were exposures to the human or ecological receptors changed or extended at your site and operable unit due to the COVID-19 pandemic? If yes, select all that apply:	Count
Human Exposure.	26
Ecological Exposure.	5
Both.	7
No changes to Human or Ecological Exposures.	441

38: (If selected in Question 37) Please briefly describe any changes to Human or Ecological Exposure due to COVID-19.

39: Were there changes to any of the following standards for cleanup or work related to your site and operable unit due to COVID-19? Select all that apply	Count
No standards were impacted. (Select this only for no impacts.)	438
Cleanup standards in the record of decision were changed. (Please briefly explain in the text box.)	0
Changes were made in the Quality Assurance Project Plan. (Please briefly explain in the text box.)	9
A waiver was issued due to COVID-19. (Please briefly explain in the text box.)	0
A technical impracticability was issued due to COVID-19. (Please briefly explain in the text box.)	0
Changes were made to other cleanup quality standards. (Please briefly explain in the text box.)	2

40: Do you have any other comments that you would like to add?

Agency Response to OIG Draft Report



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

MEMORANDUM

SUBJECT: Response to Office of Inspector General Draft Report No. OE-FY21-0050
“Coronavirus Pandemic Caused Schedule Delays, Human Health Impacts, and
Limited Oversight at Superfund National Priority List Sites,” dated March 15,
2022

FROM: Barry N. Breen
Acting Assistant Administrator
Office of Land and Emergency Management

BARRY
BREEN

Digitally signed by
BARRY BREEN
Date: 2022.05.04
09:04:05 -0400

Kimberly Y. Patrick
Principal Deputy Assistant Administrator
Office of Mission Support

KIMBERLY
PATRICK

Digitally signed by
KIMBERLY PATRICK
Date: 2022.05.02
17:14:17 -0400

TO: Sean W. O'Donnell, Inspector General
Office of 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. The agency agrees with recommendations 1 and 3 and does not agree with recommendation 2 but has provided a different approach to the recommendation. We have provided high-level intended corrective actions and estimated completion dates below. We have also included a Technical Comments Attachment to supplement this response.

AGENCY'S OVERALL POSITION

Agency staff worked tirelessly to adapt to the ongoing impacts of the COVID 19 pandemic, as evidenced by the adjustments made to managing Superfund sites among varying state and local restrictions and delays and limitations on COVID supplies, testing and vaccinations. Our response to your recommendations reflects the efforts that the agency made, including updating

community involvement guidance, providing information on how to operate in a COVID environment and juggling the many iterations of Federal COVID safety protocols.

Prior to the pandemic, EPA developed guidance on the use of virtual technology as a community engagement tool. In 2017, the EPA's Conflict Prevention and Resolution Center (CPRC) and Superfund Community Involvement and Program Initiatives Branch (CIPIB) developed the "Long Distance Engagement (LDE) Guide" to help EPA Superfund Community Involvement Coordinators (CICs) better use collaborative technologies to engage with communities when travel is not an option. This guide provides CICs with information to help decide when technology (such as online meetings, social media or teleconferencing) might be useful with their community engagement work and includes tools to help plan and conduct those engagements.

In 2020, with the advance of the Coronavirus Disease 2019 (COVID-19) pandemic, EPA updated the LDE guide to reflect tools and techniques used to conduct community involvement during this unprecedented event. The shelter-in-place orders, social distancing requirements and prohibitions on large gatherings resulting from the pandemic prevented CICs from conducting in-person community outreach (*2020 CERCLA Interim Guidance on Public Engagement During COVID-19*). Specific changes made included updating the [List of Technologies](#) section, which EPA updated to provide more in-depth information on all tools and technologies, specifically online meeting platforms and information on conducting outreach to communities without technological access was added.

The agency continues to update the guide in 2022. This ongoing revision reflects the latest agency practices and available technologies (e.g., ZoomGov). Additionally, EPA has developed the [Transcription Support Services Pre-Check - Public Comments Submitted as Voice Messages](#) document, which provides a transcription services process when public comments are submitted as voicemail messages. This capability enables/enabled community members to submit public comments when they lack internet access and/or library access due to COVID-19. Two site examples where EPA successfully used this technology was the Milford Contaminated Aquifer (Milford, Ohio) proposed plan open public comment period (December 2021/January 2022) and the USS Lead (East Chicago, Indiana) partial deletion open public comment period (July 2020).

EPA disagrees with the recommendation regarding guidance for conducting oversight of Superfund sites when travel or site access is limited. Due to the dynamic nature of the pandemic and variable local conditions within each state and region, implementing blanket guidance would undermine the regions' flexibility to respond or provide effective oversight considering local conditions. Instead, EPA recommends drafting and disseminating a "lessons-learned" document on oversight during a pandemic.

EPA agrees with the recommendation to develop a policy to provide the necessary tools – such as appropriate testing, vaccination, and supplies – to safely deploy remedial project managers during a pandemic or other emergency. The government's response to the coronavirus pandemic evolved rapidly as the United States' needs changed; the health and safety protocols in place at the pandemic's start were substantially changed by February 2021, the time the RPM survey was conducted; protocols continue to evolve substantially, up to the present. The Office of Mission Support (OMS) has prepared many COVID related safety and health protocols, guidance and procedures to help ensure the ongoing safety and health of EPA employees. This preparation

includes drafting specific testing programs for large-scale emergency response deployments, large vessel work and other mission critical work conditions. Currently OMS, in coordination with the EPA COVID-19 Coordination Team, is finalizing the agency’s national testing program. This program covers all anticipated testing needs, including those of the emergency response workforce. The agency’s labor union partners have undertaken a lengthy review of the testing program.

In the interim, while the national testing program was in development, OMS established and implemented various COVID guidelines and met the requirements of the Safer Federal Workforce Task Force safety principals. EPA’s response to the safety principals is addressed in EPA’s Workplace Safety Plan. Requirements for screening testing programs were announced by the Office of Management and Budget and by the Safer Federal Workforce Task Force in January of 2022. Since that time, EPA’s COVID-19 Coordination Team has worked continuously to develop a screening testing program. Prior to January of 2022, OMS investigated a number of alternatives for creating a more comprehensive COVID-19 testing program, such as through coordinating vaccination efforts under our Interagency Agreement with Federal Occupational Health. Ultimately, OMS successfully requested state assistance to vaccinate our emergency responders. After an initial national disinfection supply order, required by the CARES Act, OMS transferred supply procurement responsibilities to the regions and programs moving forward.

Agreements

No.	Recommendation	High-Level Intended Corrective Action(s)	Estimated Completion by Quarter and FY
1	Develop and implement guidance addressing the use of virtual technologies for public meetings and other community involvement activities. (OLEM)	Documents provided in 2017 and updated in 2020 to specifically address COVID, including the use of virtual technologies for public meetings.	Attachment A - COVID Virtual Headings (April 16, 2020) Attachment B - 2020 CERCLA Interim Guidance on Public Engagement During COVID-19 (March 28, 2020) Attachment C - EPA Long Distance Engagement Guidebook (updated August 4, 2021) Attachment D - Initial OLEM/OPA Guidance on Drafting Communications with Communities/Stakeholders at SF Sites (March 23, 2020) Attachment E - Hosting Virtual Meeting Room Events (March 2020)
3	Develop and implement a policy to provide the necessary tools – such as appropriate testing, vaccination, and supplies – to safely	Develop and implement a policy regarding safe deployment of remedial project managers during a pandemic or other emergency.	April 30, 2023 (3rd Quarter FY 23)

	deploy remedial project managers during a pandemic or other emergency. (OMS, OLEM)		
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Disagreements

No.	Recommendation	Agency Explanation/Response	Proposed Alternative
2	Develop and implement guidance regarding how oversight should be conducted at Superfund sites when travel or site access is limited. (OLEM)	Rather than a formal guidance OSRTI recommends developing a lessons learned document on oversight conducted at Superfund sites when travel or site access is limited by a pandemic.	2 nd Quarter FY23

CONTACT INFORMATION

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Attachments

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