Audit of the EPA National Center for Radiation Field Operations' Preparedness

August 20, 2025 | Report No. 25-P-0047

OFFICE OF INSPECTOR GENERAL
U.S. ENVIRONMENTAL PROTECTION AGENCY

Abbreviations

EPA	U.S. Environmental Protection Agency
FY	Fiscal Year
NCP	National Oil and Hazardous Substances Pollution Contingency Plan
NCRFO	National Center for Radiation Field Operations
OIG	Office of Inspector General
ORIA	Office of Radiation and Indoor Air
ORIA RERT ConOps	Office of Radiation and Indoor Air Radiological Emergency Response Team Concept of Operations Plan
RERP	Radiological Emergency Response Plan
RERT	Radiological Emergency Response Team

Key Definitions

Exercise	Any activity beyond classroom training that provides the RERT members with experience related to their response functions.
Radiological Incident	Refers to radiological emergency responses and nonemergency responses, such as assessments at sites contaminated with radioactive material.
Radionuclides	Radioactive forms of an element.
Site Assessments	Nonemergency assessments of sites contaminated with radioactive materials.

Cover Image

The National Center for Radiation Field Operations' Mobile Command Post. (EPA OIG image)

25-P-0047
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At a Glance

Audit of the EPA National Center for Radiation Field Operations' Preparedness

Why We Did This Audit

To accomplish this objective:

The U.S. Environmental Protection Agency Office of Inspector General conducted this audit to determine to what extent the EPA National Center for Radiation Field Operations has the capability—including appropriate management and internal control, resources, and staff qualifications—to successfully fulfill its roles and responsibilities in preparing for and responding to radiological incidents. ***Radiological incidents*** refer to radiological emergency responses and nonemergency responses, such as assessments at sites contaminated with radioactive material.

As a component of the EPA's Radiological Emergency Response Team, the National Center for Radiation Field Operations prepares for, plans for, and responds to radiological emergencies nationwide. Specifically, it coordinates field capabilities for preparedness planning, assesses sites contaminated with radioactive material, and conducts on-site monitoring during a radiological incident. The National Center for Radiation Field Operations may also support other agencies since the most significant radiological emergencies rely on federal interagency teams.

To support these EPA mission-related efforts:

- *Improving air quality.*
- *Ensuring the safety of chemicals.*

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List of OIG reports.

What We Found

We found that the National Center for Radiation Field Operations, or NCRFO, needs to take steps to improve its preparedness to respond to radiological emergencies. While the NCRFO successfully conducted nonemergency responses, such as site assessments, we found that it was not fully prepared for the one emergency response it conducted during the period we reviewed. In addition, from October 2017 through January 2024, the EPA regions responded to approximately 90 percent of radiological incidents without participation from the NCRFO, as the regions do not always require the center's specialized experience. This limited participation has led to the center being underutilized by the EPA and impedes NCRFO personnel from gaining valuable field experience. In addition, the NCRFO did not always meet annual exercise expectations, which further limited staff's experience. While the coronavirus pandemic prevented the center's participation in exercises during 2020 and 2021, we found that the center also did not have full participation in other years not affected by the pandemic.

Further, we identified other factors that could hinder the center's preparedness. The NCRFO's succession plans did not adequately identify staff backups, and staff attrition affected the number of staff who had experience with responding to radiological incidents. Additionally, staff did not always meet minimum training requirements for field deployment because of insufficient internal controls, and some mission-critical equipment was not deployable because of the lack of maintenance and limited funds to replace outdated equipment. When considered cumulatively, these factors could hinder the NCRFO's ability to effectively fulfill its roles and responsibilities in preparing for and responding to radiological emergencies.

> **Without adequate experience with exercises, training, and responding to radiological incidents, the NCRFO may lack the skills needed to effectively assist other federal agencies during a radiological emergency.**

Recommendations and Planned Agency Corrective Actions

We recommend that the assistant administrator for Air and Radiation assess the NCRFO to determine the most efficient and effective use of the center's expertise and resources based on the Agency's responsibilities for responding to radiological emergencies and nonemergencies. Depending on the results of that assessment, we recommend that the assistant administrator for Air and Radiation develop a comprehensive strategy to improve the center's preparedness to ensure that it can effectively fulfill its roles and responsibilities in responding to radiological emergencies. This strategy should include a process to ensure that staff participate in an annual exercise, a plan to promote the NCRFO within the EPA, a method to document and track training for all employees, a succession plan, a plan to modernize equipment, a method to track all equipment, and performance measures to ensure that the center is prepared to respond to a radiological emergency. The Agency agreed with our recommendations. However, the planned corrective actions were not complete, and we consider the recommendations unresolved with resolution efforts in progress.

OFFICE OF INSPECTOR GENERAL
U.S. ENVIRONMENTAL PROTECTION AGENCY

August 20, 2025

MEMORANDUM

SUBJECT: Audit of the EPA National Center for Radiation Field Operations' Preparedness
Report No. 25-P-0047

FROM: Nicole N. Murley, Acting Inspector General

TO: Aaron Szabo, Assistant Administrator
Office of Air and Radiation

This is our report on the subject audit conducted by the U.S. Environmental Protection Agency Office of Inspector General. The project number for this audit was OA-FY24-0032. 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.

The Office of Air and Radiation is responsible for the issues discussed in this report.

Action Required

This report contains unresolved recommendations. EPA Manual 2750 requires that recommendations be resolved promptly. Therefore, we request that the EPA provide us within 60 days its response concerning specific actions in process or alternative corrective actions proposed on the recommendations. This response will be posted on the OIG's website, along with our memorandum commenting on the response. The response should be provided as an Adobe PDF file that complies with the requirements of section 508 of the Rehabilitation Act of 1973, as amended. The final response should not contain data that your office does not want released to the public; if the response contains such data, your office should identify the data for redaction or removal along with corresponding justification.

We will post this report to our website at www.epaoig.gov.

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Chapter 1
Introduction

Purpose

The U.S. Environmental Protection Agency Office of Inspector General initiated this audit to determine to what extent the EPA National Center for Radiation Field Operations, or NCRFO, has the capability—including appropriate management and internal control, resources, and staff qualifications—to successfully perform its roles and responsibilities in preparing for and responding to radiological incidents. ***Radiological incidents*** refer to radiological emergency responses and nonemergency responses, such as assessments at sites contaminated with radioactive material.

Background

The EPA has the authority and responsibility to respond to many types of radiological incidents. According to the EPA, radiological incidents include radiological emergencies that can vary from "dirty bombs" to foreign radiological releases that might affect the United States. Radiological incidents also include nonemergency assessments of sites that are contaminated with radioactive material, referred to as ***site assessments***. The Radiological Emergency Response Team, or RERT, is an EPA team that supports and responds to radiological incidents. According to the EPA, the NCRFO is an essential part of the EPA's RERT and may support the EPA or other federal, state, tribal, or local organizations at radiological incidents throughout the nation.

The EPA Has the Authority and Responsibility to Respond to Radiological Incidents

The *National Oil and Hazardous Substances Pollution Contingency Plan*, frequently called the *National Contingency Plan* or NCP, sets forth the authorities and responsibilities of federal agencies—including the EPA—for responding to releases of pollutants, oil, and hazardous substances like radionuclides. ***Radionuclides*** are radioactive forms of an element. The NCP, which is codified at 40 C.F.R. part 300, is required by section 105 of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980. The EPA established the RERT, per the NCP, "to provide response and support for incidents or sites containing radiological hazards."

Additionally, the most significant radiological emergencies will require federal interagency teams. The U.S. Department of Homeland Security's *Nuclear/Radiological Incident Annex to the Response and Recovery Federal Interagency Operational Plan* "identifies how federal interagency partners will respond, coordinate national response to nuclear/radiological incidents, and provide recovery support under federal authorities." The plan also identifies the types of incidents for which the EPA would be responsible as the lead federal agency coordinating the federal response. During responses to such incidents, the EPA assesses opportunities for the use of its teams, including its RERT.

EPA Plans Describe the Radiological Emergency Response Team's Roles, Responsibilities, and Expectations

The EPA Office of Radiation and Indoor Air, or ORIA, has developed plans that identify RERT roles, responsibilities, and expectations, including the *Environmental Protection Agency Radiological Emergency Response Plan,* or RERP*,* and the *Office of Radiation and Indoor Air Radiological Emergency Response Team Concept of Operations Plan,* or ORIA RERT ConOps. The RERP represents the EPA's concept of operations consistent with the NCP. This plan states that the RERT responds to radiological emergencies and provides expertise in radiation monitoring, radionuclide analyses, health physics, and risk assessments. The RERP also states that the RERT contributes to Agency preparedness by (1) maintaining a RERT that can respond to radiological emergencies quickly and effectively; (2) identifying key RERT roles, filling these roles with competent individuals, and providing adequate training in a timely manner; (3) procuring RERT equipment and vehicles and ensuring that they are maintained and calibrated and inventory records are up to date; and (4) updating equipment to enhance RERT effectiveness.

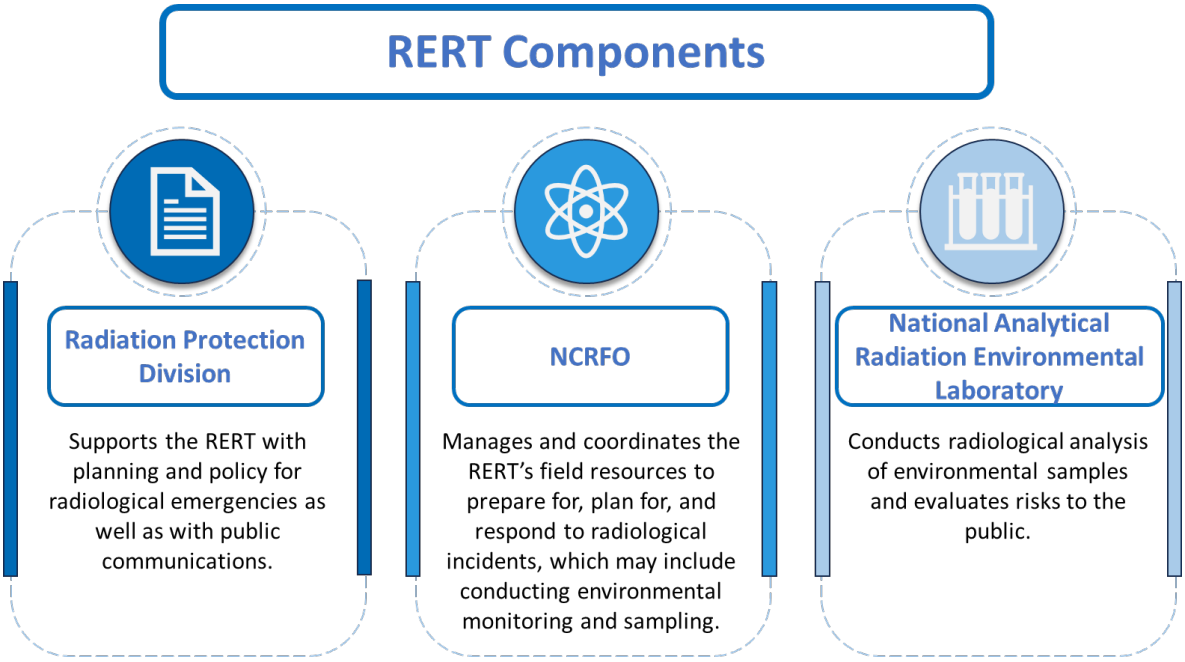
The EPA's ORIA RERT ConOps supplements the information in the RERP. It "provides RERT personnel, EPA management, EPA regions and their Superfund and Emergency Management Divisions, and other partner organizations with an overview of the process by which ORIA will provide a coordinated and effective response to radiological/nuclear incidents." Per the EPA's ORIA RERT ConOps, the "RERT members are expected to participate in one ORIA-wide or national-level exercise each year." Additionally, the plan states that management should annually review trainings and exercises for all RERT members.

> **Exercise**
>
> The ORIA RERT ConOps defines an ***exercise*** as any activity beyond classroom training that provides the RERT members with experience related to their response functions.

The National Center for Radiation Field Operations Is a Component of the Radiological Emergency Response Team

The RERT is staffed by personnel from ORIA, which includes the Radiation Protection Division, the National Analytical Radiation Environmental Laboratory, and the NCRFO, as shown in Figure 1. There is also regional RERT liaison support. The Radiation Protection Division is based at EPA headquarters in Washington, D.C., and is intended to support the RERT with planning and policy for radiological emergencies as well as with public communications. The division uses inter- and intra-agency coordination to accomplish these tasks. The National Analytical Radiation Environmental Laboratory is based in Montgomery, Alabama, and was established to conduct radiological analyses of environmental samples and evaluate risks to the public.

Figure 1: The RERT's components



Source: OIG summary of EPA information. (EPA OIG image)

According to the EPA's NCRFO webpage, the center, based in Las Vegas, Nevada, "is an essential component of EPA's Radiological Emergency Response Team (RERT) and is key to EPA's response to radiological emergencies and accidents nationwide." The NCRFO is intended to manage and coordinate the RERT's field resources to prepare for, plan for, and respond to radiological incidents. These resources include handheld field monitoring equipment, environmental sampling equipment, and the Mobile Command Post, which should provide responders with an enclosed space that allows them to direct and monitor field activities. Specifically, the NCRFO's established roles and responsibilities in preparing for and responding to a radiological emergency include (1) coordinating RERT field capabilities for preparedness planning, (2) assessing sites contaminated with radioactive material, (3) managing ORIA's field resources, and (4) providing training on field response operations.

Organization of the NCRFO

The NCRFO includes the director's office, the Center for Radiation Preparedness and Response, the Center for Planning and Training, and the Tribal Air Monitoring Support Center, as shown in Figure 2. The NCRFO director's office is responsible for budget, human resources, and scientific technical activities to support the NCRFO's customers, such as the EPA and other federal agencies, states, and tribes. The Center for Radiation Preparedness and Response's functional statement says that it is responsible for leading the NCRFO's technical services and field equipment management during radiological incidents. The Center for Planning and Training's functional statement says that it is responsible for NCRFO planning and training, which includes participating in ORIA's national strategic planning processes, developing strategic and local planning documents, conducting outreach to EPA regions for planning

purposes, managing personal protection equipment and respirators, tracking training and certification needs for personnel, developing training programs and field exercises, and providing training in collaboration with the Center for Radiation Preparedness and Response. According to the EPA's NCRFO webpage, the NCRFO also should support tribes in improving environmental knowledge through the Tribal Air Monitoring Support Center.

NCRFO personnel are considered to be RERT personnel and are placed on one of two RERT teams—the Forward Team or the Support Team. According to the NCRFO, the Forward Team consists of staff who have the knowledge, skills, and experience to deploy equipment and to assess whether an area is contaminated with radioactive material. ORIA stated that the Support Team staff should be trained in various emergency response roles that support the technical effort and the overall incident, such as preparing materials or equipment used by the Forward Team. In addition, the NCRFO stated that the Support Team does not operate independently in the contaminated area and is trained to assist the Forward Team. As of January 2024, there were 11 members of the Forward Team and seven members of the Support Team, as shown in Figure 2.

Figure 2: The NCRFO's components

Source: OIG summary of EPA information. (EPA OIG image)

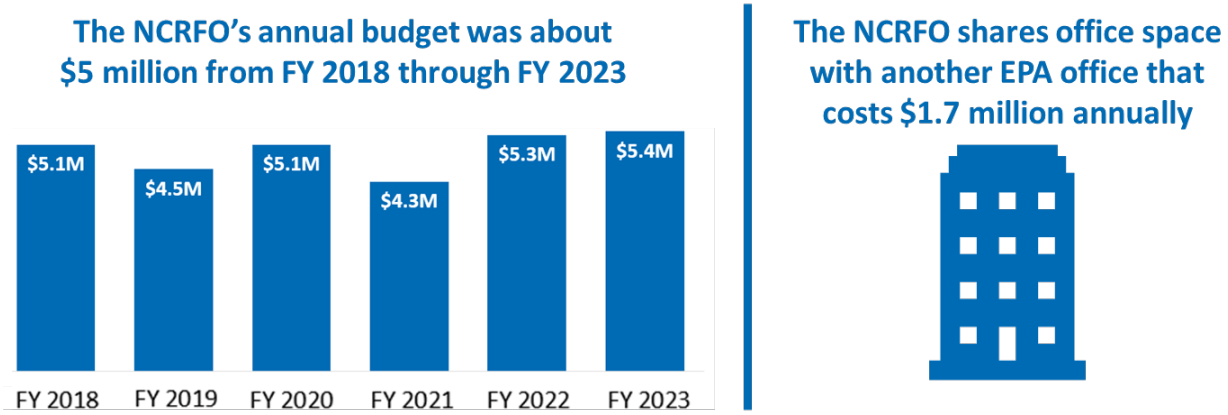
Responsible Offices

The NCRFO is located within ORIA, which is located within the EPA Office of Air and Radiation. According to that office's webpage, "ORIA's mission is to protect the public and the environment from the risks of radiation and indoor air pollution." To prepare for radiological incidents, ORIA develops plans and procedures that address training and exercises. The office coordinates across the Agency and with other federal, state, tribal, and nongovernmental organizations to carry out its mission.

The NCRFO's annual budget from fiscal year 2018 through 2023 ranged from approximately $4.3 million to $5.4 million, with an average budget of about $5 million, as shown in Figure 3. On average during this six-year period, about 65 percent of the NCRFO's annual budget went to personnel compensation and

benefits. The NCRFO and the EPA Office of Land and Emergency Management share an office building and warehouse in Las Vegas with an annual rent of about $1.7 million.

Figure 3: NCRFO budget and annual rent for FYs 2018–2023



Source: OIG analysis of NCRFO budget. (EPA OIG image)
Note: M = Million.

Scope and Methodology

We conducted this performance audit from January 2024 to June 2025 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 objective. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objective.

We assessed the internal controls necessary to satisfy our audit objective.[1] In particular, we assessed the internal control components—as outlined in the U.S. Government Accountability Office's *Standards for Internal Control in the Federal Government*—significant to our audit objective. Any internal control deficiencies we found are discussed in this report. Because our audit was limited to the internal control components deemed significant to our audit objective, it may not have disclosed all internal control deficiencies that may have existed at the time of the audit. For this performance audit, we considered all actions, documentation, and personnel related to the Tribal Air Monitoring Support Center—which included one Support Team member—as out of scope, since this center primarily does not respond to radiological incidents.

To answer our objective, we assessed several different areas relating to preparedness and the ability to respond to radiological incidents, including the NCRFO's past performance and experience with responding to radiological incidents, NCRFO staff participation in exercises, staff attrition and succession planning, completion of minimum training requirements for field deployment, and readiness and

[1] An entity designs, implements, and operates internal controls to achieve its objectives related to operations, reporting, and compliance. The U.S. Government Accountability Office sets internal control standards for federal entities in GAO-14-704G, *Standards for Internal Control in the Federal Government*, issued September 10, 2014.

accountability of equipment. Specifically, we reviewed project documentation for all NCRFO responses to radiological emergencies and site assessments from October 2017 through January 2024 to determine whether the NCRFO met stated objectives. Further, we assessed the number of staff at the NCRFO at the time of our review to determine how many of those staff participated in NCRFO responses to radiological incidents. We also reviewed the number of exercises NCRFO staff participated in during the same time frame and how many staff participated in each exercise. To assess staff attrition, we determined the number of NCRFO staff who left the center from calendar year 2018 through calendar year 2023 and reviewed NCRFO documents to determine whether the center had an adequate succession plan in place.

To assess whether staff were meeting minimum training requirements for deployment, we reviewed training documents for eight required courses from FY 2018 through FY 2023 for two of the 17 federal employees who were working in the NCRFO offices covered by our audit as of January 2024. In total, we reviewed 92 training courses, since one training is required every two years. The employees that we selected were from the Center for Planning and Training and the Center for Radiation Preparedness and Response and had been employed by the NCRFO since before FY 2018.

To assess whether equipment was accounted for, we reviewed equipment inventory processes and documentation for all equipment in 2022 and 2023. During a visit to the center in March 2024, we also conducted an on-site inventory of mission critical equipment—using a list generated by the NCRFO—to confirm the presence of items and equipment readiness. Additionally, we reviewed inventory documentation of the NCRFO's on-site sealed radiation sources.[2]

In addition, we reviewed ORIA and NCRFO policies, procedures, and guidance related to roles, responsibilities, expectations, and preparation for incident responses. We also interviewed managers from three ORIA components—the National Analytical Radiation Environmental Laboratory, the NCRFO, and the ORIA Immediate Office—to determine the working relationships among the three components. We also interviewed the ORIA director, NCRFO management, and managers from the EPA Office of Land and Emergency Management Environmental Response Team in Las Vegas, Nevada. Further, we interviewed staff in EPA Regions 3 and 6 based on the number of radiological incidents they responded to and because they had previously worked with the NCRFO. We also identified ten nonsupervisory employees at the NCRFO for interviews to gain insight into the overall climate at the NCRFO and the employees' workload. Lastly, we reviewed interviews with NCRFO management and the EPA regions conducted for a previously canceled 2020 OIG audit of the NCRFO.

[2] According to the NCRFO Radiation Safety Office, sealed radioactive sources are radioactive substances that are permanently sealed in a capsule or bonded in a solid form to prevent the release of the radioactive material.

Prior OIG Report and Audits

The EPA OIG issued Report No. 20-P-0066, *EPA Can Improve Incident Readiness with Better Management of Homeland Security and Emergency Response Equipment*, on January 3, 2020. The report found that the EPA needed to improve its management of homeland security and emergency response equipment. The OIG recommended that the EPA maintain a list of incident equipment and a tracking system for Homeland Security and Emergency Response equipment, add missing equipment to the Agency Asset Management System, implement controls for unused or broken equipment status, and verify controls for keeping unused or broken equipment. All the recommendations are resolved with corrective actions completed.

Given the NCRFO's role in the EPA's preparation for, response to, and training for radiological incidents, we previously proposed two audits to determine whether the NCRFO was adequately managed to meet its mission and responsibilities. Per an OIG project notification memorandum to the Agency, we planned an audit in 2016 to assess "longstanding operational deficiencies relative to quality assurance requirements and staff technical competencies at the [NCRFO]." This audit was initiated based on a referral from the OIG Office of Investigations. However, the audit was canceled because the NCRFO took numerous actions to address operational deficiencies, and we found that it was premature to review the NCRFO's operations. In February 2020, we initiated another audit to determine whether the NCRFO had the capability to perform its roles and responsibilities in preparing for and responding to radiological emergencies. This audit was canceled because of the coronavirus pandemic, which left us unable to perform on-site work. We initiated the audit that is the subject of this report to follow through on the previous audits that were cancelled.

Coronavirus Pandemic

The president declared the coronavirus pandemic a national emergency on March 13, 2020, and only mission-critical travel for federal employees was recommended at that time. In March 2022, EPA policy set forth guidance that fully vaccinated employees could travel with no restrictions. In April 2023, the president signed a bill ending the national emergency.

Chapter 2
Limited Field Experience and Resources Could Hinder the NCRFO's Capability to Effectively Respond to a Radiological Emergency

We identified several factors related to the NCRFO's preparedness that, when considered cumulatively, could hinder the center's ability to effectively respond to a radiological emergency. These factors are (1) staff's limited experience responding to radiological incidents with the NCRFO, (2) not being fully prepared to respond to a radiological emergency, (3) NCRFO staff not always meeting annual expectations for ORIA-wide or national-level exercises, (4) staff not always meeting minimum required training for field deployment, and (5) not all mission-critical equipment being ready for deployment. The NCRFO has demonstrated the ability to respond to site assessments, although it conducted only four such assessments from October 2017 through January 2024. We found that the EPA regions conducted approximately 90 percent of the EPA responses to radiological incidents during that time period without NCRFO participation, which limited the number of opportunities for NCRFO staff to gain vital field experience. Restrictions on travel during the coronavirus pandemic prevented NCRFO staff from participating in exercises in 2020 and 2021. However, participation was still limited in years not affected by the pandemic. Staff attrition and inadequate succession planning could further limit the NCRFO's experience and preparedness. Without adequate experience, the NCRFO may not be ready to successfully respond to a radiological emergency to help limit potential human and environmental exposure to harmful radiation.

The NCRFO Responds to and Provides Support for Radiological Incidents

As described in the NCP, the RERT was established to respond to and provide support for incidents or sites containing radiological hazards. The *Nuclear/Radiological Incident Annex to the Response and Recovery Federal Interagency Operational Plan* also states that the RERT may provide support for a radiological emergency. According to the EPA, the NCRFO is an essential component of the RERT and is intended to serve in key roles during the EPA's response to radiological emergencies and accidents nationwide. Specifically, the NCRFO's Center for Radiation Preparedness and Response provides specialized expertise to field responses and site work through technical consultation and direct and indirect field support to the EPA regions, the Office of Land and Emergency Management, other EPA offices, federal agencies, states, and tribes.

The NCRFO Had Limited Experience with Responding to Radiological Incidents

From October 2017 through January 2024, the NCRFO responded to only four site assessments and one radiological emergency. While the NCRFO successfully conducted the site assessments with the EPA

regions, the center was not fully prepared for the emergency response. In addition, NCRFO staff participation in response to these radiological incidents was limited and affected by staff attrition. Only three of the 11 Forward Team members employed at the center as of January 2024 had participated in a radiological incident response with the NCRFO. Further, the EPA regions conducted approximately 90 percent of the EPA responses to radiological incidents without NCRFO participation, which limited the center's ability to gain important experience that could help it prepare for future radiological emergencies. This limited participation could also demonstrate that the NCRFO is not being utilized efficiently by the EPA.

The NCRFO Successfully Conducted Site Assessments, but It Was Not Fully Prepared for Its One Emergency Response

The NCRFO is capable of successfully conducting site assessments in the EPA regions. However, the NCRFO conducted only four site assessments over the six-year period that we reviewed, and all four were done in 2018 and 2019.[3] Our review of the project documentation for the four site assessments indicated that the NCRFO met the objectives for Regions 3, 6, and 9. The NCRFO met the regions' objectives by operating specialized equipment to detect radiological activity at two sites, supporting a region in the removal of 431 potentially radioactive contaminated items from a residence, and conducting oversight of contractors. Regions 3 and 6 commended the NCRFO on its ability to help meet their needs and stated that they would use the NCRFO again for its technical expertise.

In contrast, the NCRFO was not fully prepared for the one emergency response that it conducted during the period that we reviewed. At the request of Region 9, the NCRFO responded to a radiological emergency resulting from the Woolsey Fire in California. The NCRFO deployed on November 12, 2018, with RadNet deployable monitors to perform radiation monitoring and air sampling around the Santa Susana Field Laboratory. Three of the five deployable monitors had technical issues and, therefore, yielded unreliable data. On November 18, the NCRFO replaced all the deployable monitors. In addition to the technical issues, according to the NCRFO, the RadNet deployable monitors rely on outdated technology, making it difficult to access the monitors' data.

ORIA also told us that the NCRFO did not quickly and correctly send air samples to the National Analytical Radiation Environmental Laboratory for analyses. According to the laboratory, some air samples did not have a chain-of-custody form and lacked data fields, resulting in insufficient and inaccurate documentation. The laboratory had to resolve these issues through conference calls with the NCRFO. The ORIA director also said that some samples were not submitted as quickly as they could have been. The laboratory stated that these issues did not impact the integrity of the air samples. The mishandling of samples, however, could have delayed the EPA's ability to access critical data. Further,

[3] The NCRFO responded to a site assessment in March 2024, but that assessment was outside our review period. Additionally, in July and October 2024, Regions 2 and 9 reached out to the center to discuss its capabilities in assisting with site assessments. For one of these, the NCRFO said that it has developed a draft proposal. For the other, no official planning had begun as of May 2025.

the NCRFO did not complete a lessons-learned activity to identify the cause and prevent the reoccurrence of similar issues during an emergency response.

Although the NCRFO eventually collected quality air monitoring data, it took the center six days from the date of deployment to start collecting usable data. Based on Region 9's Generic Data Quality Objectives Process Documents, the emergency response needed to proceed immediately because the air contaminants posed a significant imminent threat to human health and the environment. In an emergency, delayed access to crucial data could negatively affect human health and the environment.

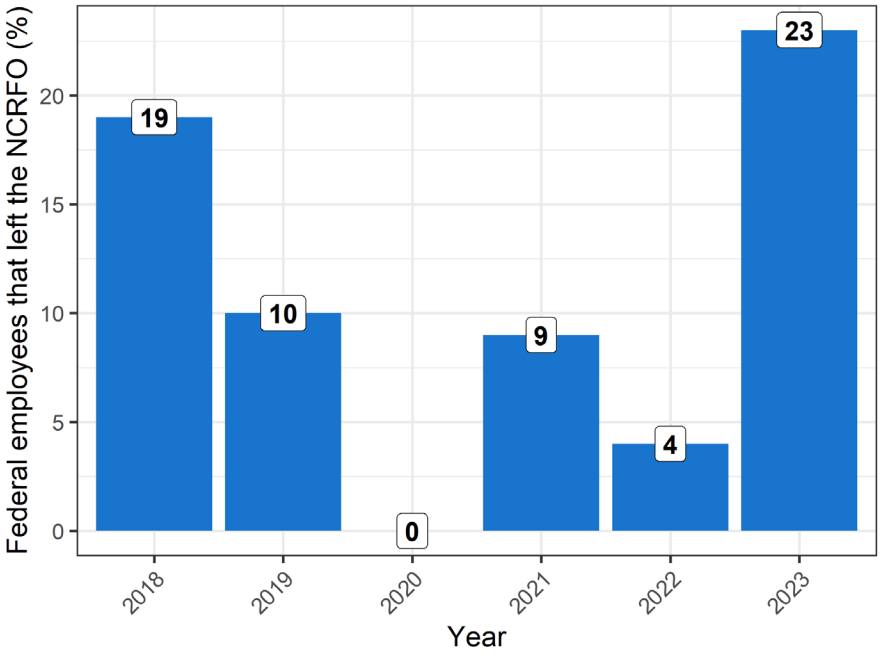
Few Forward Team Members Responded to a Radiological Incident with the NCRFO Because of Staff Attrition and Limited Use of the NCRFO by the Regions

Of the 11 Forward Team members at the NCRFO as of January 2024, only three, or approximately 27 percent, participated in a site assessment or an emergency response with the NCRFO during the years covered by our review. Only one of these three Forward Team members responded to both a site assessment and a radiological emergency. This means that approximately 73 percent of the Forward Team did not have experience responding to a radiological incident with the NCRFO. We identified two factors that led to the limited field experience: staff attrition and the EPA regions did not regularly use the NCRFO when responding to radiological incidents.

First, high staff attrition at the NCRFO, particularly in 2023, contributed to the limited field experience. From calendar year 2018 through calendar year 2023, based on data provided by the center, the number of NCRFO federal employees ranged from 20 to 23 employees, with an average of about 22 employees in each calendar year. In that time frame, 14 federal employees left the NCRFO. Of those, five left in 2023, which resulted in the NCRFO losing about 23 percent of its staff, as shown in Figure 4. Additionally, three of the five employees who left in 2023 were Forward Team members. The high attrition resulted in a loss of knowledge and expertise.

Despite the high attrition, the NCRFO lacked a sufficient succession plan. The NCRFO's succession plan did not specify backup staff for all positions or training requirements for staff in new positions. Three NCRFO employees stated that they had inadequate training resources and two NCRFO employees said that they lacked backups. For example, a source told us that one person does a job that was previously done by many people, and we found that this person had no backup. As stated to us in an interview, one NCRFO staff member became the lead of a critical NCRFO program after only a few hours of training, and the job was self-taught.

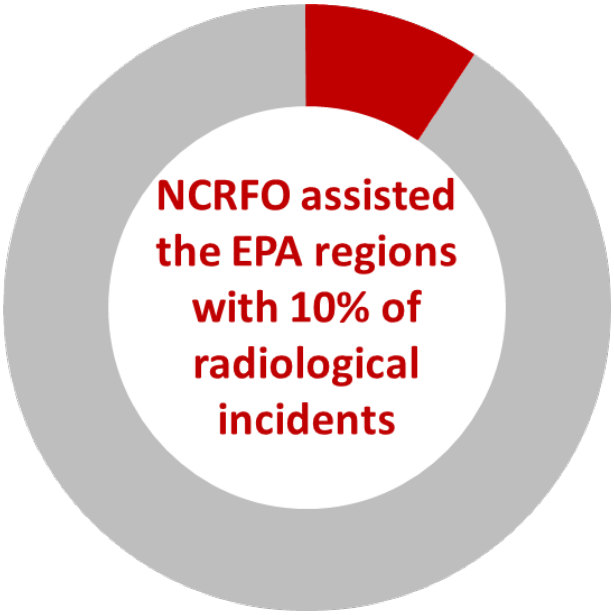
Figure 4: The NCRFO experienced the highest attrition in 2023



Source: OIG analysis of NCRFO based on employment data provided by the center. (EPA OIG image)

Second, the NCRFO rarely participated in EPA regional responses to radiological incidents. When considering all radiological incidents that the EPA regions responded to during the period of our review, we found that approximately 90 percent of responses to radiological incidents were conducted by the EPA regions without participation from the NCRFO. This situation limited NCRFO staff's ability to gain important experience in preparing for radiological emergencies. Based on data provided by the Agency, the EPA regions supported or led response activities at 48 radiological incidents from October 2017 through January 2024. The NCRFO assisted at five, or roughly 10 percent, of these, as shown in Figure 5. Four of these responses were site assessments and one was a radiological emergency.

Figure 5: Percentage of times the NCRFO assisted the EPA with radiological incidents



Source: OIG analysis of EPA radiological incidents. (EPA OIG image)

Based on our interviews, Regions 3 and 6 know the NCRFO's capabilities, but the EPA regions, other EPA offices, and the states have their own resources for radiological incidents and rarely require the NCRFO's skills. For example, according to Region 6, it will not reach out to the NCRFO if it, the state, or the U.S. Department of Energy can manage the radiological incident. The NCRFO is called in when its skills are needed, such as when there is a highly complex issue that requires assistance from the NCRFO's health physicists or specialized radiological monitoring equipment that the regions may not have. Regions may opt to respond to incidents without the NCRFO because (1) the sites contaminated with radioactive material may be Superfund sites and contractors are often used at the sites instead, since the EPA has standing contracts and the ability to subcontract for additional expertise if needed; (2) the regions pay for NCRFO personnel to travel to sites, and (3) the regions may want their own staff to respond so that they gain experience and hone their skills.

Due to the NCRFO's limited participation in site assessments, the NCRFO's expertise and resources may not be utilized as efficiently as, or to the greatest extent, possible. Additionally, routinely participating in site assessments will allow NCRFO staff to sharpen their skills so that they continue to meet the needs of the regions. More importantly, it will provide the practice and preparation needed to effectively respond to a nationwide radiological emergency. Without adequate experience with responding to site assessments, the NCRFO could lack the necessary skills to respond effectively and produce timely and accurate results during a radiological emergency, which could put public health and the environment at risk.

The NCRFO Did Not Always Meet Expectations for Exercises or Required Training

"Exercises involving radiological materials are essential preparation for a response," per the EPA's RERP. Additionally, "EPA personnel involved in radiological response are expected to participate in available exercises to help improve EPA's preparedness." The ORIA RERT ConOps also details the expectation that the RERT participate in one ORIA-wide or national-level exercise annually. We found that the NCRFO did not meet this expectation every year, including in years not affected by the coronavirus pandemic. Further, NCRFO staff must complete required training courses to maintain preparedness, but some staff did not complete the minimum required training in a timely manner, only partially completed the minimum required training, or did not complete the minimum required training at all. We found that insufficient internal controls resulted in the training deficiencies.

The NCRFO Did Not Meet Annual Exercise Expectations in Some Years

The EPA's ORIA RERT ConOps states that the RERT, which includes the NCRFO, is expected to participate in either an ORIA-wide or a national-level exercise annually. An example of a national-level exercise is the Cobalt Magnet exercise. According to a National Nuclear Security Administration briefing, Cobalt Magnet "is a Department of Energy(DOE)/National Nuclear Security Administration(NNSA)-led [exercise] that focuses on managing the off-site consequences of a radiological … incident." We found that the NCRFO did not always meet the ORIA RERT ConOps annual exercise expectation because of the coronavirus pandemic; the absence of an annual exercise requirement to maintain qualifications; and, per the ORIA director, limited staff resources.

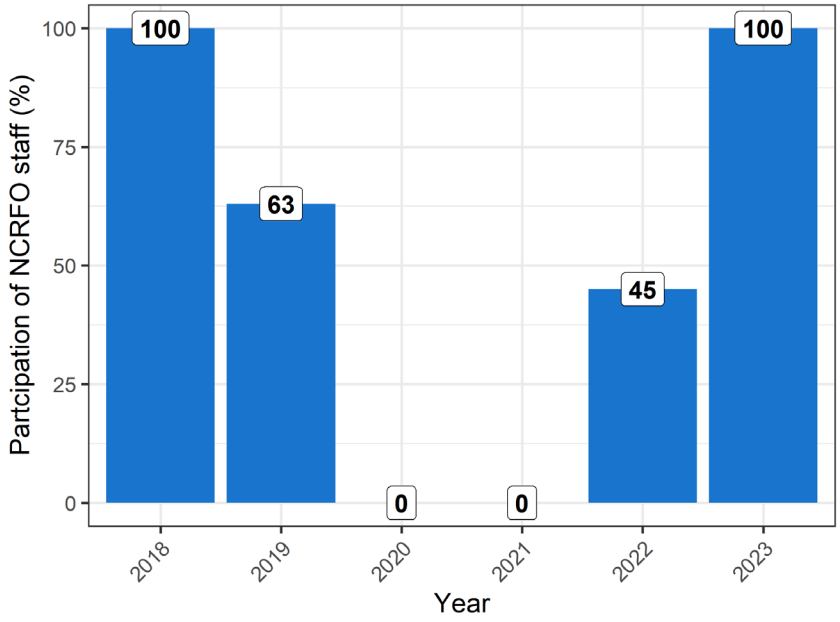
In 2018, all NCRFO staff participated in an ORIA-wide exercise, as shown in Figure 6. The ORIA director said that ORIA has not coordinated an ORIA-wide exercise since then. In 2019, approximately 63 percent of the NCRFO's staff participated in a national-level exercise. Additionally, approximately 45 percent of the NCRFO's staff participated in a national-level exercise in 2022. All NCRFO staff participated in a RadResponder exercise in 2023; however, this was a virtual event that did not include other ORIA components.

RadResponder

"RadResponder is a free web-based platform that standardizes how all federal, state, local, tribal, and territorial disaster-response organizations collect, store, use, and manage radiological data following a disaster or man-made event."

—U.S. Department of Homeland Security

Figure 6: The percentage of NCRFO staff members that participated in either an ORIA-wide or national-level exercise from 2018 through 2023



Source: OIG analysis of NCRFO exercises. (EPA OIG image)

While NCRFO staff did not fully participate in ORIA-wide and national-level exercises during certain years, they did participate in other types of exercises. However, none of these exercises had full NCRFO staff participation. Based on data that the NCRFO provided, the center participated in nine exercises, which we considered either not ORIA-wide or not national-level, or we concluded that the NCRFO did not provide sufficient documentation to support whether the exercises were ORIA-wide or national-level exercises. These exercises, nevertheless, did provide NCRFO staff with opportunities to build partnerships with other response organizations, which is critical during a large-scale radiological emergency that requires federal interagency partnerships. For example, NCRFO staff completed radiological exercises with the Federal Bureau of Investigation, U.S. Department of Energy, U.S. Army, and Federal Emergency Management Agency.

The NCRFO did not meet annual exercise expectations and had partial participation in exercises because of three factors. First, the NCRFO did not participate in an ORIA-wide or national-level exercise and only participated in one other exercise in 2020 and 2021 because of the coronavirus pandemic. The NCRFO's ability to travel and conduct exercises was halted from March 2020, when the Office of Management and Budget recommended only mission-critical travel because of the pandemic, through March 2022, when the EPA removed the travel restrictions. However, even in 2019 and 2022, years not affected by the pandemic, the NCRFO did not have full participation. Second, there was no clear mandatory requirement in the NCRFO's personnel training guidance that staff participate in at least one exercise annually to maintain their qualifications. The NCRFO's new training manual, not in place at the time of our review, requires participation in at least one comprehensive exercise, drill, or real-world operation annually for staff to maintain their position certification. Third, the ORIA director said that ORIA-wide

and national-level exercises require staff resources that ORIA does not have. A statement from ORIA also said that partial participation in exercises is due to the center conducting exercises similar to the ways it would deploy, and it would rarely deploy as a whole team.

NCRFO Staff Did Not Always Meet Minimum Training Requirements for Field Deployment

We reviewed whether two Forward Team members who were employed at the NCRFO from FY 2018 through FY 2023 met the minimum training requirements for field deployment during that entire period. In total we reviewed 92 training courses. We found that, in some instances, these members did not complete the courses in a timely manner; they only partially completed the courses, or they did not complete the courses at all. Specifically:

- Thirteen of the 92 required minimum training courses were completed late, 19–60 days after that year's training period.
- Three of the 92 required minimum training courses were partially completed. We defined ***partially completed*** as a training that either did not have a testing official signature or did not meet the training hour requirement. One member partially completed the Respirator Fit training in FY 2019, and one member partially completed the Quality Assurance training in 2021 and in 2023.[4]
- Two of the 92 required minimum training courses were not completed. For one fiscal year, one member did not complete the Radiation Safety training and Respirator Fit training.

In total we found problems with 18 required training courses—approximately 20 percent of the total courses that we reviewed. These deficiencies in training maintenance were due to insufficient internal controls to ensure that team members completed required training on time. One internal control weakness we identified was the NCRFO's training database usability. According to an NCRFO internal assessment from 2022, its training database "is not as user-friendly nor as effective in data retrieval by other staff, including the auditor, when searching training status, training expiration dates, or staff qualifications of proficiency." In our review of the database, we found that the database was comprehensive, but that unfamiliar users could find it complicated because of a lack of instructions and some data not being easily accessible. In addition, the NCRFO still had difficulties locating specific training records. If the training database is not easy to understand and use, it could prevent timely identification of training deficiencies and could lead to uncertainty about training completion.

If staff lack the required training, they may not have time to complete the training prior to responding to a radiological emergency. An emergency response requires quick action, while some trainings require hours to complete. For example, the Hazardous Waste Operations and Emergency Response training,

[4] For this specific training, we reviewed calendar years since the NCRFO Quality Assurance manager usually analyzes the training every January.

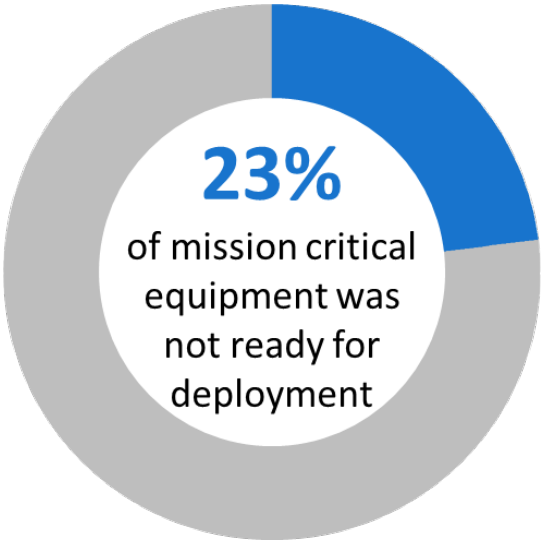
which was the most frequent late training in our analysis, requires eight hours to complete. Deploying without the minimum required training could put the responders' health and safety at increased risk.

The NCRFO's Mission-Critical Equipment Was Not Always Ready for Deployment

We found that not all mission-critical equipment was ready to be deployed, and some equipment was being calibrated or had outdated information technology, according to NCRFO staff. Additionally, the NCRFO did not have a formal sign-in and sign-out mechanism for all equipment.

The NCRFO identified 184 items in its equipment inventory as mission-critical. These items include high-volume air samplers, vehicles, and generators. We found that 43 pieces of mission-critical equipment were not ready for deployment. In other words, approximately 23 percent of all mission-critical equipment was not ready for deployment, as shown in Figure 7. Of the 43 pieces, 11 pieces were being calibrated; six pieces had never been used; 20 pieces had outdated technology; one piece, the Mobile Command Post, had electrical issues and could not be turned on during our site visit; two pieces were out for repair or scheduled for repair; one piece was loaned out; and two pieces had been removed from the NCRFO's physical inventory, but their removals were not documented.

Figure 7: Percentage of NCRFO mission-critical equipment that was not ready for deployment



Source: OIG analysis of NCRFO equipment.
(EPG OIG image)

Of the equipment that had outdated information technology, most pieces were RadNet deployable monitors, as shown below. The RadNet deployable monitors comprised 20 pieces, or approximately 11 percent, of the 184 pieces of equipment that we reviewed. The equipment's outdated information technology is incompatible with Agency network security requirements. Therefore, we considered the equipment as not ready for deployment.

Source: OIG photo of a RadNet deployable air monitor at the NCRFO. (EPA OIG image)

We also identified overdue calibration for high-pressure ion chambers. These were not on the NCRFO's mission-critical equipment list, but the NCRFO used the high-pressure ion chambers to conduct radiation monitoring during its 2018 emergency response deployment. The NCRFO has ten high-pressure ion chambers. We found that the NCRFO sent five of these out for calibration in January 2024, although the high-pressure ion chambers had been due for calibration up to seven months prior. Equipment that is not routinely calibrated could produce unreliable data if used by the NCRFO during an emergency response. Also, sending the equipment out for calibration—which can take several months—all at once, instead of in a staggered manner, leaves the NCRFO with a reduced amount of operational equipment.

Equipment that is not ready for deployment could cause a problem during an emergency response or site assessment. However, equipment readiness is more critical for radiological emergencies. A site assessment would provide the NCRFO more time to prepare equipment, identify equipment operation issues, and ensure that equipment is calibrated. In contrast, an emergency would provide the NCRFO less time to identify the best equipment to take, and taking ineffective equipment could result in inaccurate or delayed data collection. The NCRFO deputy director told us that the center has had limited funds to modernize outdated equipment, which has resulted in the NCRFO using ineffective equipment such as the RadNet deployable monitors that had technical issues during the response to the Woolsey Fire in 2018. According to the NCRFO, from October 2023 through March 2024, the NCRFO committed about $617,000, including $360,000 from Superfund tax resources, to upgrade equipment or to fund new equipment.

We also found that staff did not always sign equipment in and out, as required by EPA Chief Information Officer Directive No. 2105-P-02.0, *EPA QA Field Activities Procedure*. The stated purpose of the procedure is to provide "a comprehensive, coordinated approach for consistent implementation of the EPA Field Operations Group Operational Guidelines for Field Activities." The procedure requires staff to maintain records of when measurement equipment is signed in and out. This practice was not consistent at the NCRFO. We found that the NCRFO did not maintain the documentation for all the equipment we reviewed. The NCRFO does not have a standardized or formal sign-in and sign-out procedure that all equipment leads use. Instead, each equipment lead develops an individualized procedure to track equipment. Standardized usage logs can help management decide what equipment to remove or replace. Usage logs can also incorporate calibration information to help staff monitor calibration due dates.

Conclusions

The NCRFO is one component of the RERT that is intended to serve in key roles during the EPA's response to radiological emergencies. However, the deficiencies we identified in this report could hinder the NCRFO's ability to successfully fulfill its roles and responsibilities in preparing for and responding to radiological emergencies. Given the center's role in responding to radiological emergencies, it is vital that it be well prepared.

The NCRFO is also intended to respond to nonemergencies by assessing sites contaminated with radioactive material. While the NCRFO has demonstrated that it can assist regions with nonemergency site assessments, the center's participation in such assessments has been limited; the regions responded to most radiological incidents without participation from the NCRFO because they do not always require the NCRFO's specialized skill set. This limited participation has led the center to be underutilized for radiological incidents, while preventing the center's staff from gaining valuable field experience. Given the limited utilization and other deficiencies identified in this report, the EPA should assess the center to determine its most efficient and effective use and, depending on that assessment, implement strategic planning to ensure that it can successfully respond to a radiological emergency.

Recommendations

We recommend that the assistant administrator for Air and Radiation:

1. Assess the National Center for Radiation Field Operations to determine the most efficient and effective use of the center's expertise and resources based on the Agency's responsibilities for responding to radiological emergencies and nonemergencies. The assessment should include but is not limited to the following:

    a. The importance of the center to the EPA's operational readiness to respond to radiological incidents.

b. The role of the center in meeting the EPA's responsibilities under the Nuclear/Radiological Incident Annex to the Response and Recovery Federal Interagency Operational Plan and the National Oil and Hazardous Substances Pollution Contingency Plan.

c. The availability, expertise, and location of response personnel with specialized radiological knowledge within the EPA.

d. The impact of the center on the mission success of other stakeholders—including EPA regions; state, local, and tribal responders; and other federal agencies such as the U.S. Department of Energy.

e. Opportunities, such as site assessments, that exist to maximize the utility of the center's skills and expertise.

f. The optimal size and staff composition of the center.

2. Depending on the results of the Recommendation 1 assessment, develop a comprehensive strategy to improve the National Center for Radiation Field Operations' preparedness to ensure that it can effectively fulfill its roles and responsibilities in responding to radiological emergencies. The strategy should include the establishment and implementation of the following:

    a. A process to ensure that all Radiological Emergency Response Team staff participate in one national-level or Office of Radiation and Indoor Air-wide exercise annually to prepare for a radiological emergency and to confirm that the Radiological Emergency Response Team has plans and procedures that are regularly tested and practiced. A lessons-learned activity should be completed and documented for each exercise to identify areas in which additional training or preparation is required.

    b. A plan to promote the National Center for Radiation Field Operations' expertise and availability throughout the Agency to ensure that staff routinely participate in radiological site assessments to hone skills and abilities.

    c. A method to consistently document and track training for all employees and management.

    d. A succession plan.

    e. A plan to modernize equipment.

f. A method to track all accountable equipment by documenting when equipment is issued, when equipment is returned, when equipment needs to be calibrated, and when equipment was calibrated.

g. A review process that includes performance measures to ensure that the center is prepared to respond to a radiological emergency.

Agency Response and OIG Assessment

Appendix A includes the Agency's response to our draft report. The Office of Air and Radiation agreed with our recommendations and provided proposed corrective actions with estimated completion dates.

For Recommendation 1, the Agency did not provide a complete proposed corrective action that fully meets the intent of our recommendation. Specifically, the Office of Air and Radiation's proposed corrective action did not address how the Agency will assess the NCRFO to determine the most efficient and effective use of the center given its responsibilities within the EPA. Rather, the Agency's response stated that ORIA will assess the importance, role, mission, location, size, and staff composition of the NCRFO. In order to resolve this recommendation, the Office of Air and Radiation needs to provide a complete response to specifically address how it plans to assess the NCRFO to ensure that it is being utilized as efficiently and effectively as possible within the EPA. We consider this recommendation unresolved and will work with the Agency to gain resolution.

For Recommendation 2, the Agency stated that it will develop "a strategic action plan to improve NCRFO's preparedness." However, the Office of Air and Radiation's response did not provide enough details on how certain plans or processes would be developed and implemented to improve the NCRFO's preparedness. For example, the response did not indicate that a lessons-learned activity would be completed after exercises, and that plans would be developed to market the NCRFO and modernize outdated equipment, as recommended. Additionally, the Office of Air and Radiation proposed more lenient criteria than what our recommendation states regarding staff participation in exercises. Specifically, based on criteria previously developed by ORIA, we recommend that all RERT staff participate in one national-level or ORIA-wide exercise annually to prepare for a radiological emergency. The Agency's response stated that all members of the Forward Team will participate in an exercise annually but did not mention members of the Support Team. In order to resolve this recommendation, the Office of Air and Radiation needs to provide a complete response to address each component of the recommendation on how it plans to improve the NCRFO's preparedness. We consider this recommendation unresolved and will work with the Agency to gain resolution.

Status of Recommendations

Rec. No.	Page No.	Recommendation	Status*	Action Official	Planned Completion Date
1	18	Assess the National Center for Radiation Field Operations to determine the most efficient and effective use of the center's expertise and resources based on the Agency's responsibilities for responding to radiological emergencies and nonemergencies. The assessment should include but is not limited to the following: a. The importance of the center to the EPA's operational readiness to respond to radiological incidents. b. The role of the center in meeting the EPA's responsibilities under the Nuclear/Radiological Incident Annex to the Response and Recovery Federal Interagency Operational Plan and the National Oil and Hazardous Substances Pollution Contingency Plan. c. The availability, expertise, and location of response personnel with specialized radiological knowledge within the EPA. d. The impact of the center on the mission success of other stakeholders—including EPA regions; state, local, and tribal responders; and other federal agencies such as the U.S. Department of Energy. e. Opportunities, such as site assessments, that exist to maximize the utility of the center's skills and expertise. f. The optimal size and staff composition of the center.	U	Assistant Administrator for Air and Radiation	—
2	19	Depending on the results of the Recommendation 1 assessment, develop a comprehensive strategy to improve the National Center for Radiation Field Operations' preparedness to ensure that it can effectively fulfill its roles and responsibilities in responding to radiological emergencies. The strategy should include the establishment and implementation of the following: a. A process to ensure that all Radiological Emergency Response Team staff participate in one national-level or Office of Radiation and Indoor Air-wide exercise annually to prepare for a radiological emergency and to confirm that the Radiological Emergency Response Team has plans and procedures that are regularly tested and practiced. A lessons-learned activity should be completed and documented for each exercise to identify areas in which additional training or preparation is required. b. A plan to promote the National Center for Radiation Field Operations' expertise and availability throughout the Agency to ensure that staff routinely participate in radiological site assessments to hone skills and abilities. c. A method to consistently document and track training for all employees and management. d. A succession plan. e. A plan to modernize equipment. f. A method to track all accountable equipment by documenting when equipment is issued, when equipment is returned, when equipment needs to be calibrated, and when equipment was calibrated. g. A review process that includes performance measures to ensure that the center is prepared to respond to a radiological emergency.	U	Assistant Administrator for Air and Radiation	—

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

Agency Response to Draft Report

ASSISTANT ADMINISTRATOR FOR AIR AND RADIATION
WASHINGTON, D.C. 20460

July 7, 2025

MEMORANDUM

SUBJECT: Response to the Office of Inspector General Draft Report, *Audit of the EPA National Center for Radiological Field Operation's Preparedness,* Project No. OA-FY24-0032, June 9, 2025

FROM: Abigale Tardif
Principal Deputy Assistant Administrator
Office of Air and Radiation

Abigale Tardif

TO: Erica Hauck, Director
Pollution Control and Cleanup Directorate
Office of Audit, Office of Inspector General

Thank you for the opportunity to respond to the recommendations in the draft report titled "Audit of the EPA National Center for Radiological Field Operation's Preparedness." The following is a summary of the Office of Air and Radiation's (OAR's) position with respect to the report's recommendations. We agree with both recommendations and have provided a summary of intended corrective actions.

SUMMARY OF RESPONSE

In this report, the Office of the Inspector General (OIG) audit team focused on the capacity and capability of the National Center for Radiological Field Operations (NCRFO) to successfully complete its roles and responsibilities for radiological emergency preparedness and response. In the text of the report, OIG provides information on funding and leasing costs which make it very clear that NCRFO shares a budget with another EPA office. However, the associated charts do not make this point clear, and as such, it could be misconstrued that the entirety of the funding and leasing costs are for NCRFO alone.

OAR appreciates the OIG's efforts to help improve preparedness efforts at NCRFO and notes that NCRFO has already completed several actions responsive to recommendations made in the report since the audit was completed:

- In 2024, NCRFO hired qualified individuals for seven hard-to-fill vacancies in support of radiological field operations.
- Utilizing Superfund tax funding, NCRFO replaced $300K of aging equipment.
- NCRFO developed and implemented a commercial driver's license proficiency program, deployment proficiency program, and trailer towing proficiency program, and completed two significant information technology improvement projects.
- NCRFO personnel provided radiological support for the 2024 EPA Airborne Spectral Photometric Environmental Collection Technology exercise, participated in the large-scale full-field exercise Cobalt Magnet 2025 with Canada, Michigan, Ohio, Illinois, and DOE/NNSA in March 2025, and joined the Department of Energy Consequence Management Home Team for the April 2025 RAPTER exercise at the Nevada National Security Site.
- NCRFO assisted pre-planning activities for the 2025 Presidential Inauguration and recently hosted the U.S. Navy Pacific Fleet to discuss future potential projects and exercises.

NCRFO recently completed a field deployment to the Fairmont Brine Processing Site in Fairmont, West Virginia, and plans are underway to provide field support to West Lake Landfill Superfund Site in Bridgetown, Missouri, and Pinenut Mine Haul Route Radiological Survey in Havasupai, Arizona.

RESPONSE TO REPORT RECOMMENDATIONS

Responses to the OIG's specific recommendations for OAR are as follows:

Recommendation 1: Assess the National Center for Radiological Field Operations to determine the most efficient and effective use of the center's expertise and resources based on the Agency's responsibilities for responding to radiological emergencies and non-emergencies.

Response 1: OAR agrees with this recommendation. The Office of Radiation and Indoor Air (ORIA) will, on an annual basis, assess the importance, role, mission, location, size and staff composition of NCRFO. In addition, ORIA will, on an annual basis, assess opportunities to contribute to the mission success of stakeholders, utilize assets for collateral duties including site assessment, and interface with other radiological expertise across EPA. The first assessment will be completed concurrently with the annual Office of Management and Budget (OMB) program-wide assessment of preparedness by the end of fiscal year 2025. Following the first year, ORIA will modify the OMB annual assessment of preparedness to ensure incorporation of all aspects of NCRFO's preparedness highlighted by OIG.

Planned Completion Date: Annual assessment of NCRFO's preparedness with associated recommendations for needed improvements will be conducted before the end of each fiscal year. The first assessment, incorporating all aspects of preparedness highlighted by OIG, will be completed by September 2025.

Recommendation 2: Depending on the results of the assessment in Recommendation 1, develop a comprehensive strategy to improve the National Center for Radiological Field Operation's preparedness to ensure it can effectively fulfill its roles and responsibilities in responding to radiological emergencies.

Response 2: OAR agrees with this recommendation. The annual assessment of NCRFO's preparedness will identify areas where improvements are needed. This information will be used to develop and update a strategic action plan to improve NCRFO's preparedness. This strategic action plan will be presented for concurrence by ORIA to OAR management annually to ensure that support and resources are available and that NCRFO is well prepared to complete its role in responding to radiological emergencies. At a minimum, the strategic action plan will include the following:

- NCRFO will track exercise and drill participation, and robust plans will be put in place to ensure 100% of forward team personnel participate in a well-documented exercise or drill each year. Percent of forward team personnel participating in an exercise or drill will be assessed each year at the end of the fiscal year, starting with September 2025.
- NCRFO will develop two promotional documents to highlight the capabilities of NCRFO to share with the EPA Regions by December 2025. In addition, NCRFO will maintain continuous contact with the EPA Regions, other EPA Special Teams, and DOE NNSA.
- NCRFO will track training completion for all staff and will finalize updates to its training program documentation by June 2026.
- NCRFO will provide an annual formal hiring priorities plan to ORIA each year at the end of the fiscal year, starting in September 2025. In addition, NCRFO will develop a formal succession plan by September 2027.

  NCRFO will utilize Superfund tax funding to update older or outdated equipment. For Fiscal Year 2025, as resources are available as a matching funding requirement, Superfund tax funding will be utilized to further update equipment.
- NCRFO will update its equipment calibration program by July 2027, which will move more calibrations in-house and implement tracking utilizing Microsoft™ Lists and SharePoint.

Planned Completion Date: A strategic action plan, hiring priorities plan, and exercise and drill participation assessment will be completed by the end of fiscal year in September 2025, updated annually thereafter. Two NCRFO promotional documents will be completed and distributed to the Regions by December 2025. Updated training

program documentation will be completed by June 2026. Updated equipment calibration program will be completed by July 2027. Formal succession plan will be completed by September 2027.

CONTACT INFORMATION

If you have any questions regarding this response, please contact Grant Peacock, OAR Audit Liaison, at peacock.grant@epa.gov or 202-564-6732.

Appendix B

Distribution

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