

The EPA Has Not Verified that Its Laboratories Comply with Hazardous Waste Requirements

August 14, 2023 | Report No. 23-E-0027





OFFICE OF INSPECTOR GENERAL
U.S. ENVIRONMENTAL PROTECTION AGENCY

August 14, 2023

MEMORANDUM

SUBJECT: The EPA Has Not Verified that Its Laboratories Comply with
Hazardous Waste Requirements
Report No. 23-E-0027

FROM: Sean W. O'Donnell, Inspector General

TO: David Uhlmann, Assistant Administrator
Office of Enforcement and Compliance Assurance

This is our report on the subject evaluation conducted by the U.S. Environmental Protection Agency Office of Inspector General. The project number for this evaluation was [OSRE-FY22-0141](#). 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 Enforcement and Compliance Assurance is responsible for the issues discussed in this report.

In accordance with EPA Manual 2750, your office provided acceptable planned corrective actions and estimated milestone date for Recommendation 2. This recommendation is resolved. A final response pertaining to this recommendation is not required; however, if you submit a response, it will be posted on the OIG's website, along with our memorandum commenting on your response.

Action Required

Recommendation 1 is 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.

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



THE EPA HAS NOT VERIFIED THAT ITS LABORATORIES COMPLY WITH HAZARDOUS WASTE REQUIREMENTS



Photo of a scientist performing work in an EPA lab. (EPA photo)

Purpose:

The U.S. Environmental Protection Agency Office of Inspector General conducted this evaluation to determine whether the EPA has verified that its own laboratories are complying with Resource Conservation and Recovery Act requirements for the management of hazardous waste.

This evaluation supports this EPA mission-related effort:

- *Compliance with the law.*

This evaluation addresses these top EPA [management challenges](#):

- *Enforcing environmental laws and regulations.*
- *Providing for safe use of chemicals.*

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Full list of [EPA OIG reports](#).

Overview

The U.S. Environmental Protection Agency became aware of Resource Conservation and Recovery Act, or RCRA, hazardous waste compliance issues at its labs in 2020. In response, the EPA's Office of Enforcement and Compliance Assurance, or OECA, issued two internal memorandums, one in April 2020 and another in July 2021. The memorandums emphasized that EPA labs must comply with all environmental requirements; should "perform better than, and be a model for, other facilities"; and are subject to enforcement and penalties for noncompliance. In July 2022, the EPA Office of Inspector General [initiated](#) this evaluation to determine whether the EPA verified RCRA compliance at its labs. As of August 2022, neither the EPA nor the authorized states had inspected most EPA labs to verify their compliance with RCRA hazardous waste requirements. Additionally, OECA had not shared the compliance memorandums with authorized state RCRA programs, even though the EPA partners with the states to conduct inspections.

Background

As shown in Figure 1, the EPA has 27 labs located throughout the country. The labs perform scientific, technical, and research services and fall into three categories:

- **National program labs**, which work on a national level and support specific programs on regulations, compliance, and enforcement. For example, the Office of Air and Radiation runs two labs—one in Montgomery, Alabama, and the other in Ann Arbor, Michigan.
- **Research and development labs**, which conduct research to support Agency decisions to safeguard human health and ecosystems from environmental pollutants. The Office of Research and Development runs these labs, which include those in Durham (Research Triangle Park), North Carolina; Cincinnati, Ohio; Ada, Oklahoma; and Corvallis and Newport, Oregon.

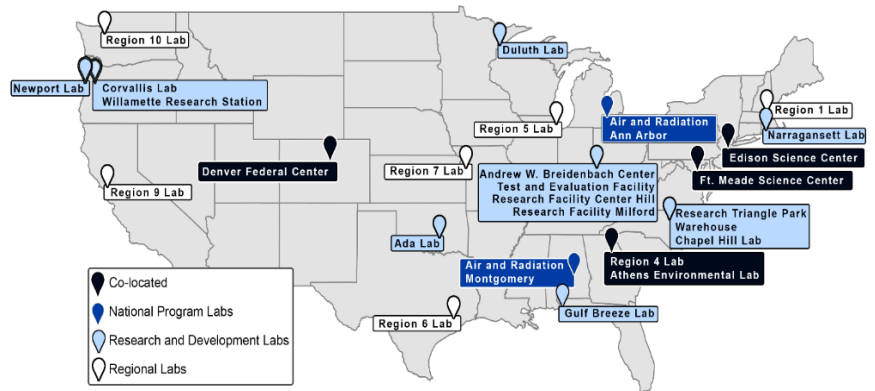
For this report, we defined the following as labs: EPA lab facilities with a RCRA identification number and facilities that generate very small quantities of hazardous waste, which are not required to have a RCRA identification number.

RCRA defines three categories of hazardous waste generators:

- **Very small quantity generators** produce less than or equal to 1 kilogram of acute hazardous waste and less than or equal to 100 kilograms of nonacute hazardous waste in a calendar month.
- **Small quantity generators** produce less than or equal to 1 kilogram of acute hazardous waste and between 100 kilograms and 1,000 kilograms of nonacute hazardous waste in a calendar month.
- **Large quantity generators** produce over 1 kilogram of acute hazardous and/or 1,000 kilograms or more of nonacute hazardous waste in a calendar month.

- **Regional labs**, which were established to provide analytical services and scientific and technical support to the EPA’s regional and program offices. Some of the regional labs are in the same location as other EPA offices or programs.

Figure 1: Map of EPA lab locations and type



Notes: A larger version of this image is in Appendix A. Co-located labs indicate where multiple types of labs are located in the same area. For example, the Fort Meade Science Center includes the Microbiology Lab, which is a national program lab; the Analytical Chemistry Laboratory, which is a national program lab; and the Region 3 lab.

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

EPA Regulation of Hazardous Waste

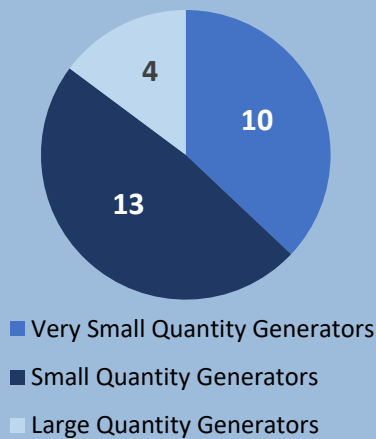
According to the *EPA Hazardous Waste website*, hazardous waste can be simply defined as “a waste with properties that make it dangerous or capable of having a harmful effect on human health or the environment.” RCRA is the primary law governing the generation and disposal of solid and hazardous waste. RCRA authorizes the EPA to develop regulations, guidance, and policies that ensure the safe management and cleanup of solid and hazardous waste.

The EPA may authorize states to implement key provisions of the hazardous waste requirements in lieu of the EPA. If a state program does not exist, the EPA implements the hazardous waste requirements in that state. Because RCRA does not provide for tribal authorization for the hazardous waste program, the EPA also directly implements the RCRA hazardous waste program in Indian Country. Direct implementation includes permitting requirements, enforcement, and corrective action or cleanup.

The regulations for hazardous waste generators, found at 40 C.F.R. part 262, establish basic hazardous waste management standards. The regulations require hazardous waste generators to appropriately identify and safely handle hazardous waste to protect human health and the environment, while minimizing interference with daily business operations.

The regulatory burden increases with the amount of waste generated, so large quantity generators have more regulatory requirements than very small quantity generators. Hazardous waste generators are required to determine their generator category status based on the

Figure 2: Number of EPA labs in each hazardous waste generator category as of August 2022



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



An improper waste container found during an EPA lab inspection. (EPA image)

amount of hazardous waste they generate each month. Generator category status may change from month to month.

The EPA's labs fall into multiple hazardous waste generator categories, with 23 of 27 being small quantity generators or very small quantity generators as of August 2022, as shown in Figure 2. Examples of hazardous waste generated at EPA labs include corrosive liquids such as acids, halogenated solvents, flammable gasses and liquids, broken lead-acid batteries, and waste that contains mercury.

RCRA Compliance Monitoring and Inspections

The EPA and authorized states conduct on-site RCRA inspections and off-site compliance monitoring activities for RCRA-regulated entities. On-site inspections normally include a walkthrough of the facility and a review of RCRA documents and relevant processes. Authorized states conducted 95 percent of all RCRA inspections from 2015 to 2021. Off-site compliance monitoring activities may include a review of facility reports, testing and monitoring data, financial records, or electronic manifest and biennial report data. The EPA and states enter RCRA inspection data into RCRAInfo, an EPA data system that stores information from RCRA compliance monitoring activities.

Audits and Self-Assessments at EPA Labs

EPA labs are subject to audits and self-assessments designed to help them comply with applicable safety, health, and environmental requirements. The Safety and Sustainability Division, within the EPA's Office of Mission Support, conducts safety, health, and environmental management—or SHEM—audits at each EPA lab every three years. These audits are considered external or third party. If the Safety and Sustainability Division identifies findings during a SHEM audit, it enters the findings into an Office of Mission Support database. The database tracks violations and sends reminders to lab managers until their labs return to compliance.

Self-Policing Policies and eDisclosure

The EPA created self-policing policies, such as the EPA's audit policy, which aims to protect human health and the environment by encouraging regulated facilities to voluntarily discover and fix violations of environmental requirements. The self-policing policies incentivize regulated facilities to self-disclose violations of federal environmental laws and regulations. Facilities that self-disclose violations may be eligible for reduced civil penalties. To be eligible for penalty reduction, the entity must meet certain requirements, such as voluntary and systematic discovery of the violation, prompt disclosure, and prompt correction of the violation. Regulated facilities have self-disclosed over 2,800 violations using the eDisclosure system, a system that receives and processes violations, since the EPA launched the system in 2015.

2020 and 2021 EPA Lab Compliance Memorandums

On April 24, 2020, OECA sent a memorandum to the leaders of the EPA's program and regional offices about environmental compliance at

“EPA labs and facilities must comply with all environmental requirements. ... They should perform better than, and be a model for, other facilities.”

—April 2020 EPA lab compliance memorandum

“With this memorandum the U.S. Environmental Protection Agency reaffirms its commitment to ensure environmental compliance and serve as a leader in its management of EPA facilities and laboratories.”

—July 2021 EPA lab compliance memorandum

RCRA Inspections

OECA partners with EPA regions and authorized states to conduct RCRA inspections. OECA oversees compliance monitoring activities, provides national guidance, and sets inspection goals for EPA regions and authorized states. The minimum inspection frequency goal for large quantity generators is one inspection every five years. OECA has not set inspection frequency goals for small or very small quantity generators. However, OECA’s policy allows for flexibility. Under this policy, EPA regions and authorized states may inspect fewer of their large quantity generators and instead inspect the other types of generators.

the EPA’s labs. The memorandum stated that OECA had become aware of RCRA compliance issues in several EPA labs, including improper management of universal waste, failure to make hazardous waste determinations, and failure to label waste. The memorandum provided information on compliance assistance available for the labs and stressed how important it is for EPA labs to comply with applicable environmental requirements.

On July 29, 2021, OECA, along with the Office of Mission Support and the Office of Research and Development, sent another memorandum to EPA leadership that reinforced and expanded on the previous memorandum about environmental compliance at EPA labs. The memorandum stressed that EPA labs should meet numerous environmental requirements from RCRA, as well as the Clean Air Act and the Clean Water Act.

Both memorandums shared a commitment to environmental compliance at EPA labs and emphasized that EPA labs are subject to the same enforcement and penalties for noncompliance as other regulated entities. Neither memorandum was shared with authorized state programs.

Responsible Offices

OECA’s Office of Compliance is responsible for the national RCRA compliance-monitoring program, which includes establishing policies and defining expectations for inspections and other compliance monitoring activities. In this role, OECA works with the EPA’s headquarters, the ten EPA regions, and authorized states to implement compliance monitoring for the RCRA program. OECA’s Federal Facilities Enforcement Office is responsible for compliance assistance, monitoring, and enforcement of RCRA at federal facilities.

The Office of Mission Support’s Office of Administration’s Safety and Sustainability Division is responsible for protecting EPA employees, implementing the national SHEM program, and minimizing the EPA’s impact on the environment. The Office of Land and Emergency Management’s Office of Resource Conservation and Recovery is responsible for implementing the RCRA program. It develops regulations, policy, and guidance for a national waste management program under RCRA. The Office of Research and Development’s Office of Resource Management is responsible for administrative and operational support, including program accountability, policy, operations, and SHEM activities, for the Office of Research and Development.

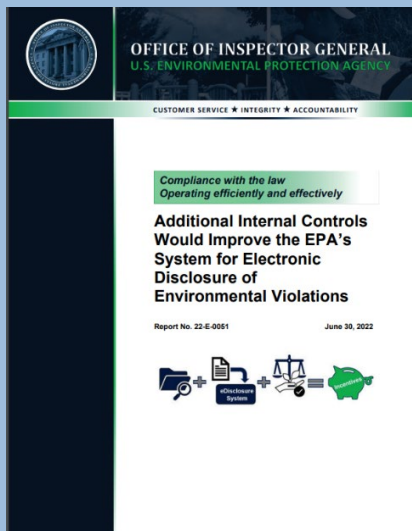
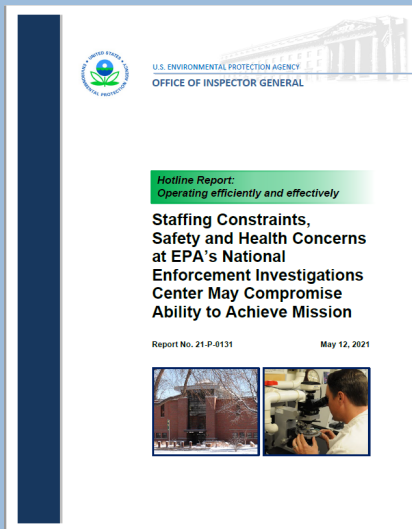
Scope and Methodology

See Appendix B for a description of our scope and methodology.

Prior Reports

The EPA OIG has issued two reports relevant to this evaluation:

- OIG Report No. [21-P-0131](#), *Staffing Constraints, Safety and Health Concerns at EPA’s National Enforcement Investigations*



Screenshots of the prior report cover pages. (EPA OIG images)

Center May Compromise Ability to Achieve Mission, issued May 12, 2021, found persistent concerns regarding uncompleted internal safety and health audits and management reviews, hazardous waste mismanagement, noncompliance with safety procedures, and staff concerns about safety and health at the National Enforcement Investigations Center. The report made ten recommendations, including developing a process to follow up on inspection findings and confirm whether corrective actions effectively address findings, and developing metrics on safety, health, and work environment to incorporate into performance evaluations for management. The EPA agreed with these recommendations. As of April 2023, the corrective actions were pending with a due date of June 28, 2024.

- OIG Report No. [22-E-0051](#), *Additional Internal Controls Would Improve the EPA's System for Electronic Disclosure of Environmental Violations*, issued June 30, 2022, found that the EPA did not have adequate internal controls or guidance for effective monitoring of the eDisclosure data system and risked missing significant concerns in the submissions. The report made four recommendations, including developing guidance for EPA staff who monitor eDisclosure submissions and developing performance measures for the eDisclosure program. The EPA agreed with the recommendations. As of April 2023, the corrective actions were pending with a due date of September 29, 2023.

What We Found

The EPA did not verify that its own labs complied with the RCRA hazardous waste requirements. After OECA became aware of RCRA hazardous waste compliance issues at several Agency labs in 2020, it issued two internal memorandums that emphasized that EPA labs must comply with all environmental requirements; should “perform better than, and be a model for, other facilities”; and are subject to enforcement and penalties for noncompliance. However, as of August 2022, OECA had not inspected most EPA labs to verify their compliance with RCRA hazardous waste requirements. Additionally, OECA had not shared the 2020 and 2021 compliance memorandums with authorized state RCRA programs, even though the EPA partners with the states to conduct inspections.

One of the EPA’s 13 small quantity generator labs did not meet the 2021 deadline for renotifying the EPA of its generator status. In addition, one of the EPA’s four large quantity generator labs did not file the required biennial report with the EPA in 2017 and 2019.

OECA stated in the 2020 and 2021 memorandums that the EPA’s labs can use eDisclosure to self-disclose violations of environmental laws and regulations. While the EPA’s labs conduct self-audits and receive SHEM audits, as of January 17, 2023, no labs had reported violations in eDisclosure. As of June 1, 2023, OECA had not provided written

Figure 3: EPA labs by inspection frequency category as of August 2022



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

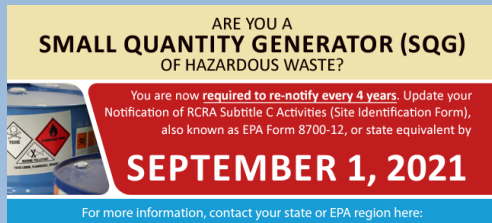
guidance, beyond the two memorandums, to the EPA labs on what types of violations should be reported using eDisclosure. On October 13, 2022, OECA’s Federal Facilities Enforcement Office stated that it was in the process of targeting EPA labs for inspection in fiscal year 2023.

The EPA Did Not Verify Compliance at All of Its Labs

OECA did not verify that the EPA labs complied with the RCRA hazardous waste requirements after it issued the 2020 and 2021 memorandums affirming its commitment to environmental compliance at EPA labs. Federal facilities, such as EPA labs, are required to comply with RCRA and related environmental regulations and are subject to penalties for violations. According to RCRAInfo and as shown in Figure 3, EPA or authorized states conducted RCRA inspections of three of the 27 EPA labs after OECA issued the first memorandum in 2020. In addition, according to RCRAInfo, the EPA or authorized states last inspected six labs in the period 2010–2019, and 18 labs were last inspected prior to 2010 or have never been inspected.

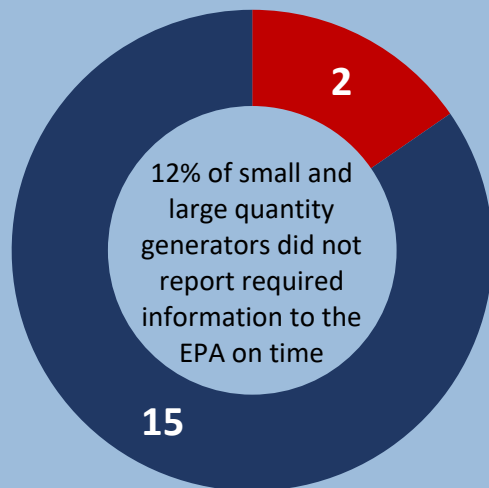
Since OECA issued the 2020 and 2021 memorandums stating its awareness of RCRA compliance issues at several EPA labs and affirming its commitment to environmental compliance at the labs, OECA has not performed oversight to verify that all EPA labs comply with RCRA hazardous waste requirements. Inspections are a primary source of compliance monitoring information used for oversight. A RCRA inspection of each EPA lab would assess and document whether the labs are in compliance with RCRA regulatory requirements. While RCRA inspections are not required for most EPA labs because they are small or very small quantity generators, without inspections, OECA is missing an important source of monitoring information to verify compliance with the regulations. Further, without RCRA inspections, there is no assurance that the EPA labs are in compliance with RCRA regulatory requirements.

When we asked OECA what mechanisms were implemented to track and verify compliance with RCRA at EPA labs, none were identified. Additionally, OECA’s Federal Facilities Enforcement Office said that it had limited inspection resources and that the EPA labs did not emerge as priorities during inspection planning and targeting efforts. OECA also noted that pandemic restrictions curtailed compliance monitoring efforts in 2020 and 2021. However, we concluded that OECA should have been able to conduct 27 EPA lab inspections because according to the EPA’s data, the EPA and authorized states conducted more than 11,000 on-site RCRA inspections in each of those years. By OECA not inspecting EPA labs regularly, especially when it is aware of compliance issues, OECA appears to treat EPA labs differently than it treats other regulated facilities. This conflicts with OECA’s reported commitment to environmental compliance at the EPA labs and its statements that EPA labs are subject to the same enforcement actions and penalties as other regulated facilities.



Example of EPA outreach materials used to inform small quantity generators about the new renotification requirement. (EPA image)

Figure 4: Small and large quantity generators did not meet reporting requirements



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

Two EPA Labs Did Not Report Required Information to the EPA by the Deadline

RCRA generator regulations, updated by the Hazardous Waste Generator Improvements Rule in 2016, require that small quantity generators renotify the EPA of their hazardous waste generator status every four years. The first deadline for renotification was on September 1, 2021. The purpose of the renotification requirement is to improve the EPA’s data on the small quantity generator universe that the Agency uses for outreach, compliance assistance, and oversight activities.

Similarly, RCRA generator regulations require large quantity generators to file a biennial report regarding the nature, quantities, and disposition of hazardous waste generated at their facility. The deadline for large quantity generators to file the biennial report is March 1 of the following even-numbered year. The biennial report is a collection of data on the generation, management, and final disposition of hazardous wastes regulated under RCRA, and it is used by the public, government agencies, and the regulated community.

As shown in Figure 4, two of the EPA’s 17 small and large quantity generator labs did not report required information to the EPA on time. One of the EPA’s small quantity generator labs did not renotify the EPA of its generator status by the September 2021 deadline. Additionally, one of the EPA’s four large quantity generator labs did not file RCRA biennial reports in 2017 and 2019, as required. The lab submitted the reports after we asked about them in 2022. The two EPA labs told us that they missed their reporting deadline due to a lack of knowledge of the requirements or a lack of internal controls. They also stated that they were implementing new controls or updating their policies to prevent them from missing the deadline again.

OECA’s 2020 and 2021 memorandums stated that EPA labs should “perform better than, and be a model for, other facilities.” If EPA labs do not report required information to the EPA or report the information late, EPA data about hazardous waste generators and their activities becomes outdated and potentially inaccurate. In addition, EPA labs cannot be viewed as models for other facilities, as described in the memorandums, if they do not comply with RCRA reporting regulations. OECA acknowledged in the April 2020 memorandum that compliance issues are important, “especially for an agency like ours that is charged with ensuring that all regulated entities comply with environmental requirements.”

No EPA Labs Reported Violations in eDisclosure

The EPA’s audit policy encourages regulated entities to voluntarily disclose and correct violations of federal environmental laws and regulations that they have discovered. In the 2020 and 2021 memorandums, OECA suggested that the EPA labs self-disclose violations—although OECA did not give the EPA labs guidance on what types of violations they should report—using the Agency’s eDisclosure system and self-policing policies. Facilities that self-disclose violations may be eligible for reduced penalties. Despite OECA’s suggestion and

incentives, according to a staff member in OECA, the EPA labs did not report SHEM audit and self-assessment findings in eDisclosure.

There was some confusion among the staff we spoke with about who should report violations in eDisclosure and what types of violations they should report. According to the Office of Mission Support, the SHEM audits conducted at EPA labs generally find some RCRA violations, such as hazardous wastes that are not properly labeled. The Office of Mission Support said that it considers itself a third-party auditor and, therefore, the labs could self-disclose any violations discovered during its SHEM audits. Staff from one lab met with OECA officials to ask for guidance on what types of violations they should report in eDisclosure and were purportedly told not to report minor findings. OECA said that it had a leadership change after it issued the 2020 and 2021 memorandums and current staff were not aware of the prior leaders' expectations. An OECA staff member confirmed that a major incentive for using eDisclosure is the possibility of reduced penalties, and the more EPA labs are inspected, the more likely they are to self-inspect and report any violations found in e-Disclosure. If the EPA labs find violations and do not report them in eDisclosure, the labs do not appear to serve as models for other facilities.

Recommendations

We recommend that the assistant administrator for Enforcement and Compliance Assurance:

1. Implement mechanisms to verify EPA lab compliance with hazardous waste requirements, including small quantity generator status renotification and large quantity generator biennial reporting.
2. Determine, in coordination with the Office of Mission Support, which hazardous waste-related findings EPA labs should report in eDisclosure and communicate the reporting expectations to the labs.

Agency Response and OIG Assessment

Appendix C includes OECA's response to our draft report. OECA also provided technical comments, which we considered as we finalized this report.

For Recommendation 1, the EPA agreed to implement mechanisms to verify EPA lab compliance with hazardous waste requirements and provided three corrective actions it will take. We accept its proposed corrective actions 1.a., to share the 2020 and 2021 memos with authorized state partners, and 1.c., to add questions to the self-assessment tool for labs regarding the small quantity generator renotification requirement and the large quantity generator biennial reporting requirement. OECA's proposed corrective action 1.b. does not meet the intent of our recommendation. This proposed corrective action commits to identifying a target list of EPA labs to be inspected for compliance with hazardous waste requirements. The EPA or authorized states would inspect these labs, with the goal of three

inspections per fiscal year for the next three years. We believe it is necessary to have a corrective action that addresses the completion of initial inspections of all EPA labs and not just the creation of the targeted list. The Agency communicated the importance of lab compliance with RCRA and other statutes in its 2020 and 2021 memorandums. As we have illustrated in this report, OECA has performed no specific follow-up to verify that the EPA labs are compliant with RCRA. Proposed corrective action 1.b. would only result in inspections of nine labs in three years, or one-third of the total number of EPA labs, with no commitment for additional lab inspections in future years. For these reasons, Recommendation 1 is unresolved.

OECA's response to the draft report and technical comments emphasize that the RCRA facility universe is very large, resources are limited, most labs are either small quantity generators or very small quantity generators, and facilities that manage large volumes of hazardous waste pose a greater risk to communities. However, OECA's *2021 RCRA Compliance Monitoring Strategy* specifies that authorized state programs should be able to comprehensively inspect all regulated facilities, including small and very small quantity generators. According to the strategy, authorized states are supposed to inspect 20 percent of the combined universe of large quantity generators and reverse distributors (applicable to pharmaceutical manufacturers) every year. The strategy does not establish a specific goal for the number of annual small quantity generator or very small quantity generator inspections. OECA's large quantity generator flexibility policy allows the EPA regions and authorized states to inspect fewer of their large quantity generators and instead inspect the other types of generators or other RCRA handler facilities. The 2020 and 2021 memorandums did not emphasize EPA lab compliance based on generator status. An initial inspection of all EPA labs irrespective of their generator status seems consistent with the priority implied by the two memorandums.

We note that the EPA and authorized states perform many small quantity generator and very small quantity generator inspections every year. For example, in fiscal year 2022, RCRAInfo data as of January 2023 show a total of 13,795 total on-site inspections. According to RCRAInfo, 5,908, or 43 percent, of these were small quantity generator and very small quantity generator inspections. The 23 EPA labs that are small quantity generators and very small quantity generators would be 0.4 percent of the total small quantity generator and very small quantity generator universe that were inspected in 2022, which is a very low percentage to inspect given the emphasis that the 2020 and 2021 memorandums placed on EPA lab RCRA compliance. In OECA's response to the draft report, it highlighted the recent hiring of two new lab inspectors, who would be able to inspect EPA labs for RCRA compliance if states are unable to perform inspections.

As a corrective action for Recommendation 2, OECA plans to issue another memorandum to the EPA labs encouraging the use of eDisclosure. We expect this new memorandum will provide guidance or contact information for EPA labs that may be unclear about what to

report in eDisclosure. Recommendation 2 is resolved with corrective action pending.

We note other issues in OECA's response to the draft report:

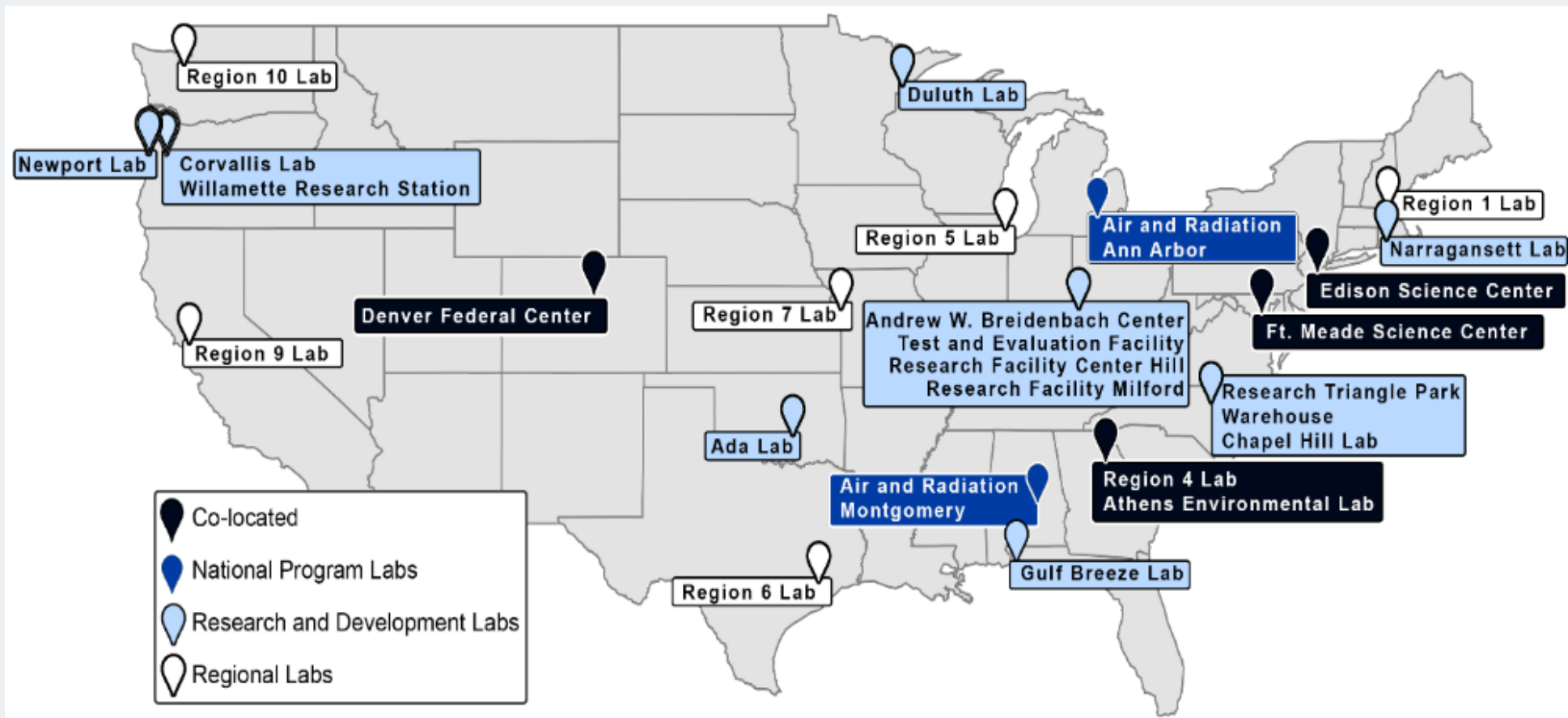
- OECA said that the Office of Mission Support's Safety and Sustainability Division staff who conduct SHEM audits at EPA labs every three years document the audits in the division's audit finding tracking system. This system is internal to the EPA, while RCRA inspections documented in RCRAInfo are available to the OIG, state partners, and the public through OECA's [Enforcement and Compliance History Online](#). Documenting regulatory compliance information in a database available to others increases transparency and trust in government.
- OECA stated that only three of the EPA labs are large quantity generators. We identified four large quantity generator labs in RCRAInfo as of August 2022: Edison Environmental Science Center (NJ1680090015); Fort Meade Environmental Science Center (MDR000000984); Research Triangle Park (NC2750890004); and Chapel Hill Laboratory (NCD980515308), which is located within the University of North Carolina at Chapel Hill. Even though the EPA does not control the hazardous waste disposal at the latter site, it is part of a large quantity generator, so for the purposes of this report, it was counted as such. Additionally, the Edison Environmental Science Center lab changed to a small quantity generator in RCRAInfo on July 18, 2023, after we received the EPA's response to our draft report. Since it was a large quantity generator in RCRAInfo in August 2022 while we conducted our work, we counted it as such in our report.

Status of Recommendations

Rec. No.	Page No.	Subject	Status ¹	Action Official	Planned Completion Date
1	8	Implement mechanisms to verify EPA lab compliance with hazardous waste requirements, including small quantity generator status renofication and large quantity generator biennial reporting.	U	Assistant Administrator for Enforcement and Compliance Assurance	
2	8	Determine, in coordination with the Office of Mission Support, which hazardous waste-related findings EPA labs should report in eDisclosure and communicate the reporting expectations to the labs.	R	Assistant Administrator for Enforcement and Compliance Assurance	10/31/23

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

Map of EPA Lab Locations and Type



Note: Co-located labs indicate where multiple types of labs are located in the same area. For example, the Fort Meade Science Center includes the Microbiology Lab, which is a national program lab; the Analytical Chemistry Laboratory, which is a national program lab; and the Region 3 lab.

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

Scope and Methodology

We conducted this evaluation from July 2022 to May 2023 in accordance with the *Quality Standards for Inspection and Evaluation* published in December 2020 by the Council of the Inspectors General on Integrity and Efficiency. Those standards require that we perform the evaluation to obtain sufficient and appropriate evidence to support our findings.

We gathered and analyzed data on each EPA lab from RCRAInfo and EPA websites. We researched and reviewed background and criteria documents, such as RCRA and related environmental statutes and regulations; the EPA's compliance monitoring strategy; the EPA's audit policy, including eDisclosure; the EPA's SHEM program; environmental management systems; and various internal EPA reports on its labs. We interviewed staff from OECA, the Office of Research and Development, the Office of Resource Conservation and Recovery in the Office of Land and Emergency Management, and the Safety and Sustainability Division in the Office of Mission Support. We also communicated with five EPA labs to determine the extent to which they met certain RCRA reporting requirement deadlines.

Agency Response



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

OFFICE OF
ENFORCEMENT AND
COMPLIANCE ASSURANCE

June 1, 2023

MEMORANDUM

SUBJECT: Response to Office of Inspector General Draft Report: “*The EPA Has Not Verified That Its Laboratories Comply with Hazardous Waste Requirements,*” Project No. OSRE-FY22-0141, May 2, 2023

FROM: Lawrence E. Starfield
Acting Assistant Administrator

LAWRENCE STARFIELD Digitally signed by
LAWRENCE STARFIELD
Date: 2023.06.01
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TO: Stephen Hanna
Acting Director
Office of Special Review and Evaluation

EPA’s Office of Enforcement and Compliance Assurance (OECA) appreciates the opportunity to comment on the Office of Inspector General’s (OIG) May 2, 2023, draft report, “*The EPA Has Not Verified That Its Laboratories Comply with Hazardous Waste Requirements.*” This response has been developed in coordination with several other offices within EPA, including the Office of Mission Support (OMS) and the Office of Research and Development (ORD).

EPA agrees with the OIG on the importance of EPA laboratories and facilities (labs) complying with all environmental regulatory requirements, and that they should perform better than, and be a model for, other regulated entities. As the April 24, 2020 and July 29, 2021 memoranda “Assuring Environmental Compliance at EPA Laboratories and Facilities,” make clear, OECA is committed to ensuring environmental compliance by EPA labs.

OECA Inspections

OECA agrees that inspections can be an important component of ensuring compliance. However, OECA must balance competing priorities and funding constraints for inspections, and inspections are not the only tool used

to ensure compliance by regulated entities.¹ This is especially true in the case of EPA labs, which 24 out of 27 are either small quantity generators (SQGs) or very small quantity generators (VSQGs) of hazardous waste, regulated under the Resource Conservation and Recovery Act (RCRA). When inspection targeting lists are created, key factors are considered, including relative risk to human health and the environment. As a result, in past years, EPA lab SQGs and VSQGs have not been inspection priorities in regional planning and targeting efforts. However, OECA notes that for the three large quantity generator (LQG) labs, two were inspected in 2022, and the third will be inspected in 2023. Further, in response to Recommendation #1, OECA commits to sharing the 2020 and 2021 Agency memoranda with our RCRA-authorized state partners to encourage inspections of EPA labs, and OECA will identify a target list of EPA labs for inspection with a goal of three inspections for each of the next three fiscal years.

In addition to inspections, EPA often relies on other tools to meet its oversight responsibilities.

OMS Audits

In the case of EPA labs, OMS conducts Safety, Health, and Environmental Management (SHEM) audits generally every three years. The OMS audits are intended to assess the effectiveness of SHEM programs/systems; determine the status of the lab's conformance with applicable environmental, fire protection, and safety and health laws, regulations, and agency policies; and provide recommendations to improve compliance or correct identified compliance problems.

Although these OMS audits are not regulatory compliance inspections, their findings are documented in comprehensive and detailed reports and entered into the Safety and Sustainability Division's (SSD) audit finding tracking system (EPOCH). The EPOCH system tracks all findings until closure and sends quarterly reminder emails to both the SHEM Manager and the laboratory's senior management on the status of any current open findings. These SHEM audits provide EPA labs with findings, and EPA labs are required to address those findings.

In addition to SHEM audits conducted every three years, EPA labs are required to submit an annual senior manager certification to SSD that their location has conducted a self-assessment and completed the Self-Assessment Tool (SAT) verifying that the senior manager at the site has been briefed on the results. OMS/SSD uses the SAT tool to verify the laboratory has conducted self-assessments each year. The SAT provides SHEM assessors with a diagnostic approach in conducting SHEM program compliance evaluations at EPA facilities. The SAT currently includes almost 30 questions related to hazardous waste management. As part of OECA's response to Recommendation #1 concerning RCRA compliance responsibilities, OECA commits to working with OMS to include additional questions in the SAT to ensure that EPA labs are certifying that they have timely submitted small quantity generator re-notifications and large quantity generator biennial reports.

Regulatory Compliance Assessments

In addition to OECA's regulatory inspections, and OMS's SHEM audits and lab self-assessments, other EPA actions support the goal of EPA laboratory compliance with regulatory requirements. For example, OECA's National Enforcement Investigations Center (NEIC) (which shares a lab with EPA Region 8) has created a multi-disciplinary waste team to manage hazardous waste and to address any concerns or issues that may arise from hazardous waste management. RCRA-credentialed inspectors from NEIC conduct self-assessments of their compliance with RCRA requirements, and their waste team manager and lab manager work together to determine and address root causes of any non-compliance. The waste team includes NEIC management, NEIC

¹ Approximately 1.3 million facilities have notified the government that they are regulated under the Resource Conservation and Recovery Act (RCRA), 42 U.S.C. § 6901 et seq.

and Region 8 waste management staff, NEIC and Region 8 RCRA-credentialed inspectors, NEIC and Region 8 health and safety managers, and the NEIC evidence coordinator. This team meets bi-weekly to discuss waste management and to address concerns/issues before they become a regulatory compliance issue. Internal self-assessments are conducted, and all observations are addressed. The waste team attends annual state sponsored RCRA training to ensure that they are informed of new regulations and requirements. The proactive approach by NEIC/Region 8 to waste management ensures that the accumulation time periods for hazardous waste storage are always met (e.g., shipping waste every 90-100 days, despite being a small quantity generator allowed 180 days accumulation time).

ORD Training and Program Reviews

As EPA explained during interviews with the OIG, EPA's ORD has a number of mechanisms and best practices in place to help their labs comply with their hazardous waste requirements. For example, upon request, ORD's Office of Resource Management (ORM) provides environmental technical support for their laboratory site operations. The support includes, but is not limited to, training new SHEM Managers, assisting with environmental permit applications, environmental regulatory plan development, reviewing hazardous waste shipment documentation as well as supporting episodic generation events due to laboratory clean-outs. ORD conducts environmental regulatory program reviews of their site laboratory operations, including site walk-throughs, staff interviews, record reviews and recommendations to strengthen the regulatory compliance programs. ORD/ORM also offers multiple trainings, including annual Hazardous Waste Management training and triannual Department of Transportation (DOT) Hazardous Material training for their SHEM and Facility Managers.

OECA's Audit Policy

Pursuant to OECA's Audit Policy, regulated entities are encouraged to voluntarily discover environmental violations, promptly disclose these violations to EPA, and expeditiously correct and prevent recurrence of future environmental violations. OECA's online eDisclosure system modernizes the implementation of the Audit Policy and continues to provide federal penalty mitigation for those self-disclosed violations that meet the Audit Policy. As the eDisclosure portal is open to all regulated entities, it cannot serve as a repository solely for audit findings from EPA lab SHEM audits. However, any potential violations that EPA labs identify during SHEM audits may be self-disclosed into eDisclosure, provided that the EPA lab believes it meets the conditions of the Audit Policy.

The 2020 and 2021 OECA memoranda reminded EPA labs that they, like other regulated entities, can voluntarily self-disclose and correct violations or potential violations of environmental law pursuant to the OECA's Audit Policy. In response to Recommendation #2, EPA commits to sending a new memorandum to all EPA labs *encouraging* the use of eDisclosure for violations – including hazardous waste-related violations – that a lab believes meet the Audit Policy, so that EPA labs can serve as a model for other regulated entities.

Key Information Discussed During EPA-OIG Meetings and Technical Comments List

During discussions prior to the issuance of the draft report, OECA's Federal Facilities Enforcement Office (FFEO) provided OIG with information on its recent affirmative steps to help ensure EPA labs comply with their RCRA regulatory requirements. However, specific mention of these activities is not found in the draft report. OECA has provided suggested language in the Draft Report Technical Comments to identify FFEO's recent enforcement-related efforts in this area, including the following actions in 2022:

- FFEO reviewed its list of all EPA labs and targeted labs for inspections where inspections had not been previously conducted or were in communities with environmental justice concerns.

- FFEO contacted several authorized state partners to seek inspections of the EPA labs identified in the targeting effort. FFEO did not coordinate this effort with EPA regions to avoid the appearance of a potential conflict of interest.
- FFEO added two RCRA-credentialed inspectors to its staff, giving it the capability to inspect EPA labs for RCRA compliance if RCRA-authorized state partners are unable to commit to the inspections.

EPA also notes that the descriptions of some OIG-EPA conversations in the draft report differ from the notes and recollections of the EPA participants. For completeness, EPA has added remarks about these conversations in the Draft Report Technical Comments list. For example, OIG described an “OECA” answer to its question asking why EPA had not inspected more EPA labs since compliance issues at EPA labs became known. The draft report characterizes OECA’s answer as: “OECA said it focuses its inspections on external facilities,” and “OECA also noted that pandemic restrictions curtailed compliance monitoring efforts in 2020 and 2021.” However, OECA’s FFEO provided a comprehensive explanation in an October 13, 2022, written response that does not reference external facilities:

FFEO does not have knowledge of past targeting efforts by EPA regions; however, in past federal facility compliance monitoring efforts, labs did not emerge as priorities for inspection in regional planning and targeting efforts. Limits in EPA inspection resources, and EPA’s and OECA’s competing priorities also impacted the types of federal facilities that regions and Headquarter offices could inspect. Also, in 2020 and 2021, EPA’s compliance monitoring efforts were at a stop or significantly curtailed due to pandemic restrictions. However, FFEO is in the process of targeting EPA labs for inspection in FY23. FFEO now has the capacity to conduct RCRA inspections as it has recently added 2 RCRA-credentialed inspectors to its staff.

Summary

EPA agrees with the importance of labs’ compliance with environmental law requirements, and is committed to take – and has already begun taking – additional actions to ensure that EPA labs are a model for other regulated entities. The table below provides corrective actions to resolve Recommendations #1 and #2, including estimated timeframes for completion.

At the same time, we would ask that the report acknowledge that most labs are small (or very small) generators of hazardous waste, and this results in a lower prioritization for inspections as compared to facilities that handle large amounts of hazardous waste that pose a greater threat to communities; as noted above, OECA cannot inspect the full regulated universe of RCRA-regulated facilities.² We would also ask that the draft report make note of the other compliance tools that help EPA labs maintain compliance with hazardous waste requirements, such as the OMS SHEM audits and lab self-assessments and ORD reviews.

² See note 1, above.

Table of Corrective Actions

Rec #	OIG Report Recommendations	Corrective Actions	Completion Dates
1	<p>OECA Recommendation: Implement mechanisms to verify EPA lab compliance with hazardous waste requirements, including small quantity generator status renotification and large quantity generator biennial reporting.</p>	<p>EPA agrees with this recommendation.</p> <p>1.a. OECA commits to sharing the OECA 2020 and 2021 memos with our RCRA-authorized state partners and to encourage inspections of EPA labs by authorized states.</p> <p>1.b. OECA commits to identifying a target list of EPA labs to be inspected for compliance with hazardous waste requirements by EPA or authorized states with the goal of 3 inspections per fiscal year for the next 3 years. At least 3 EPA labs have already been inspected since 2020.</p> <p>1.c. OECA commits to working with OMS to add question(s) to the Self-Assessment Tool (SAT), related to timely submitting SQG renotifications and LQG biennial reporting.</p>	<p>October 31, 2023</p> <p>October 31, 2023</p> <p>October 31, 2023</p>
2	<p>OECA Recommendation: Determine, in coordination with the Office of Missions Support which hazardous waste-related findings EPA labs should report in eDisclosure and communicate the reporting expectations to the labs.</p>	<p>EPA agrees with this recommendation.</p> <p>OECA commits to sending a new memo to all EPA labs encouraging the use of eDisclosure for violations -- including hazardous waste-related violations that the lab believes meets the Audit Policy -- so that EPA labs are a model for other regulated entities.</p>	<p>October 31, 2023</p>

If you have any questions regarding this final response, please contact Gwendolyn Spriggs, OECA Audit Liaison, at spriggs.gwendolyn@epa.gov.

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