



THE EPA CONTINUES TO FAIL TO MEET INSPECTION REQUIREMENTS FOR HAZARDOUS WASTE TREATMENT, STORAGE, AND DISPOSAL FACILITIES



A treatment, storage, and disposal facility. (EPA image)

Evaluation Purpose:

Our objective was to determine the extent to which the U.S. Environmental Protection Agency met its statutory requirement to complete inspections of treatment, storage, and disposal facilities. The project number for this evaluation was [OSRE-FY22-0023](#).

This evaluation supports this EPA mission-related effort:

- *Compliance with the law.*

This evaluation addresses a top EPA management challenge:

- *Enforcing environmental laws and regulations.*

Contributors:

Bao Chuong
Steve Hanna
Lauretta Joseph
Jayne Lilienfeld-Jones
Gaida Mahgoub
Alicia Mariscal

Address inquiries to our public affairs office at (202) 566-2391 or OIG_WEBCOMMENTS@epa.gov.

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

Why We Did This Evaluation

The U.S. Environmental Protection Agency’s Office of Inspector General [initiated](#) this evaluation to determine the extent to which the EPA completed statutorily required inspections of treatment, storage, and disposal facilities, or TSDFs. Specifically, we conducted this follow-up evaluation to assess whether inspection rates of TSDFs have changed since our 2016 report on the same topic: OIG Report No. [16-P-0104](#), *EPA Has Not Met Statutory Requirements for Hazardous Waste Treatment, Storage and Disposal Facility Inspections, but Inspection Rates Are High*, issued March 11, 2016.

Background

Hazardous Waste and the Resource Conservation and Recovery Act

Hazardous waste is waste with properties that make it dangerous or capable of having a harmful effect on human health or the environment. The Resource Conservation and Recovery Act, known as RCRA, is the primary law governing the disposal of hazardous waste. The purpose of the Act is to manage hazardous waste in a manner that protects human health and the environment. With the authority provided under RCRA subtitle C, the EPA established a comprehensive regulatory hazardous waste program to ensure that hazardous waste is managed safely from “cradle to grave,” meaning from the time it is created; while it is transported, treated, and stored; and until it is disposed. This hazardous waste program is referred to as the EPA’s “RCRA program.” Under RCRA, the EPA can authorize qualified states to implement their own hazardous waste programs, known as “authorized state” programs. The EPA oversees authorized state programs, including the completeness and accuracy of state TSDF inspections.

Disposal of hazardous waste occurs at and by TSDFs, which provide temporary storage and final treatment or disposal for hazardous wastes. According to the EPA, since TSDFs manage hazardous waste and may conduct activities with a high degree of risk, they are stringently regulated. The TSDF regulations for hazardous waste—which are found in 40 C.F.R.

parts 260–273—establish general standards for facility management; specific provisions governing hazardous waste management units; and additional precautions to protect soil, groundwater, and air.

TSDF Inspections

According to the EPA’s October 2014 *RCRA Orientation Manual*, “Facility inspections by federal and state officials are the primary tool for monitoring compliance” with TSDF requirements. As shown in Table 1, RCRA and applicable EPA guidance outline the required minimum frequency of inspections for three categories of TSDFs: TSDFs owned or operated by the federal government; TSDFs operated by a state, local, or tribal government; and TSDFs operated by a nongovernment entity, which includes TSDFs owned by states, localities, or tribes but not operated by them. An inspection conducted by either the EPA or an authorized state program fulfills the RCRA inspection requirement for federal government and nongovernment TSDFs, while only an EPA inspection counts toward the RCRA inspection requirement for state, local, and tribal TSDFs.

Table 1: Required RCRA inspections

TSDF category	Minimum inspection frequency	Entity that conducts inspection
Federal government	Annual	EPA or authorized state program
State, local, and tribal	Annual	EPA only
Nongovernment	Once every two years	EPA or authorized state program

Source: OIG summary of RCRA TSDF inspection requirements. (EPA OIG table)

Issued in September 2015 and revised in December 2021, the EPA’s *Compliance Monitoring Strategy for the Resource Conservation and Recovery Act (RCRA) Subtitle C Program*, known as the CMS, defines many types of on-site and off-site TSDF inspections. On-site inspections include compliance evaluation, groundwater monitoring, and operation and maintenance inspections. Off-site inspections include financial and nonfinancial record reviews. Section 3007 of RCRA, however, requires a “thorough inspection of every” TSDF, and the CMS defines thorough inspections as being on-site compliance evaluation inspections. The CMS does provide that, for operating TSDFs with good compliance histories,¹ a focused compliance inspection can qualify as a thorough inspection. The other types of inspections defined by the CMS are not statutorily required.

2016 OIG Report on TSDF Inspections

On March 11, 2016, we issued Report No. [16-P-0104](#), *EPA Has Not Met Statutory Requirements for Hazardous Waste Treatment, Storage and Disposal Facility Inspections, but Inspection Rates Are High*. In that report, we showed that while the EPA completed 91 percent of the overall required TSDF inspections for fiscal year 2014, the inspection rates varied by TSDF category: 85 percent of required inspections were completed for federal government TSDFs; 54 percent for state, local, and tribal TSDFs;

Key Terms

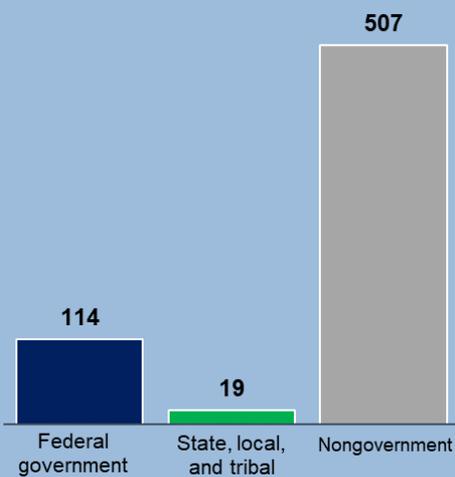
A **compliance evaluation inspection** is an on-site evaluation of the compliance status of the site with regard to all applicable RCRA regulations and permit requirements.

A **focused compliance inspection** is an on-site inspection that addresses only a specific portion of the applicable RCRA regulations.

¹The CMS clarifies that the statutory requirements for TSDF inspections do not apply to TSDFs that are no longer receiving waste but have land-based units that preclude clean closure of the site. The CMS sets the minimum inspection frequency for those TSDFs as once every three years.

Number of TSDFs Examined

For this evaluation, we examined compliance evaluation inspections for three categories of TSDFs across a seven-year period: FYs 2015–2021.



Source: OIG representation of evaluation scope. (EPA OIG image)

and 94 percent for nongovernment TSDFs. We also surveyed EPA regions, who underscored the importance of inspections, including that TSDFs are more likely to comply with RCRA when they anticipate an inspection and that frequent regulatory presence at TSDFs improves compliance more than other tools and activities. To address our findings, we recommended that the EPA implement management controls to complete all required TSDF inspections. The EPA agreed that it was not meeting the TSDF inspection requirements and attributed that fact to competing priorities and a lack of sufficient resources. The EPA proposed acceptable corrective actions to address our recommendation and, according to the Agency's audit tracking system, completed these corrective actions in August 2018.

Responsible Offices

One task of the Office of Land and Emergency Management is to provide policy, guidance, and direction for the Agency's emergency response and waste programs. Within the Office of Land and Emergency Management, the Office of Resource Conservation and Recovery is responsible for implementing RCRA. The Office of Enforcement and Compliance Assurance, or OECA, is responsible for enforcing the nation's environmental laws, including TSDF inspections under RCRA. According to OECA, it works with EPA regional offices and partners with state governments, tribal governments, and other federal agencies to enforce these laws.

Scope and Methodology

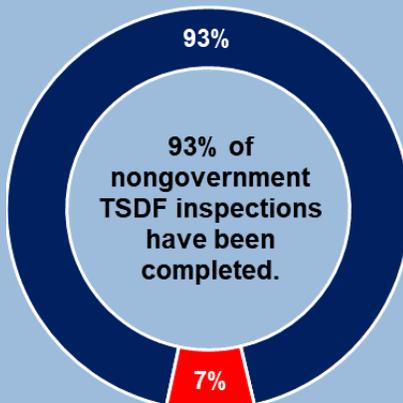
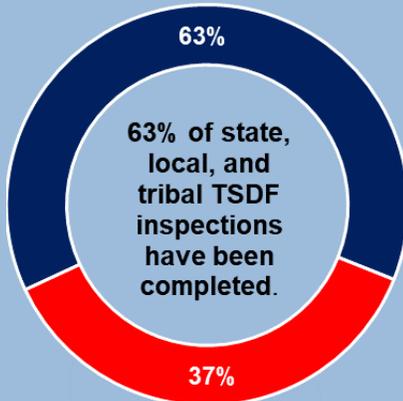
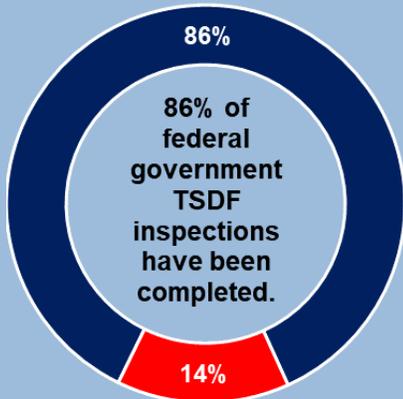
See Appendix A for a description of our scope and methodology.

What We Found

Mandatory TSDF Inspections Requirements Are Still Not Being Met

Our assessment of TSDF inspection rates remains unchanged from our 2016 report: the EPA has not met the statutory requirements for completing thorough inspections at all operating TSDFs either annually or once every two years, as outlined in Table 1 above, but inspection rates are nonetheless generally high. From FYs 2015 through 2021, the EPA completed 91 percent of the required TSDF inspections overall. If we exclude FYs 2020 and 2021 from our assessment, as activities those years were adversely impacted by coronavirus (that is, the SARS-COV-2 virus and resultant COVID-19 disease) pandemic restrictions, the overall inspection rate was 95 percent. Although the EPA stated in its response to our 2016 report that resource limitations caused by other competing priorities contributes to its failure to meet statutory inspection rates, during the course of this follow-up evaluation we concluded that the underlying cause is a lack of prioritizing statutorily required inspections. If TSDF inspection rates do not meet statutory requirements, the EPA does not ensure TSDF compliance with RCRA and may not be protecting human health and the environment from hazardous waste contamination in the manner directed by Congress.

Overall Average TSDF Inspection Rates, FYs 2015-2021



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

Inspection Rates Are High but Still Fall Short of Statutory Requirements

The TSDF inspection rates for the seven-year period we examined continue to fall short of 100-percent achievement of RCRA requirements. While the overall average TSDF inspection rates from FYs 2015 through 2021 continued to be high for federal government and nongovernment TSDFs at 86 percent and 93 percent respectively, the overall average EPA inspection rate for state, local, and tribal TSDFs remained relatively low at 63 percent. When we excluded pandemic-restricted FYs 2020 and 2021 from our analysis, the overall average inspection rates increased but still did not fully meet RCRA requirements. Table 2 shows the overall percent of inspections conducted compared to our 2016 report findings, while Figure 1 shows the percent of inspections not conducted each year.

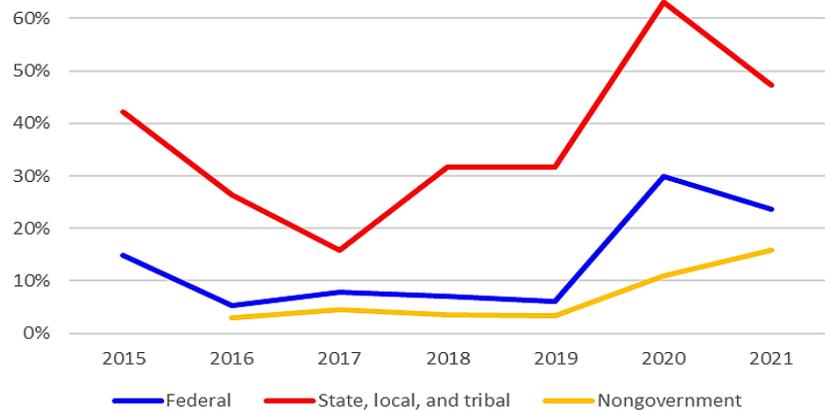
Table 2: Overall average inspection rate by TSDF category

Follow-up report findings for FYs 2015–2021				2016 OIG report findings for FY 2014
Total number of TSDFs*	Inspection frequency	Total number of inspections required	Overall average inspection rate**	Overall average inspection rate
Federal government TSDFs				
114	Annually	798	86% (92%)	85%
State, local, and tribal TSDFs				
19	Annually	133	63% (71%)	54%
Nongovernment TSDFs				
507	Every two years***	3,042	93% (96%)	94%
Overall inspection rate:				91%
Overall inspection rate excluding FYs 2020–2021:				95%

Source: OIG analysis of TSDF inspection requirements and EPA data. (EPA OIG table)

- * We examined only those TSDFs that were subject to inspection requirements all seven years.
- ** Black text represents the average inspection rates for the entire seven-year period. Blue text represents inspection rates that exclude pandemic-restricted FYs 2020–2021.
- *** From FYs 2015 through 2021, there were six two-year inspection cycles (FYs 2015–2016, FYs 2016–2017, FYs 2017–2018, FYs 2018–2019, FYs 2019–2020, and FYs 2020–2021), for a total of 3,042 inspections required (6 cycles x 507 TSDFs).

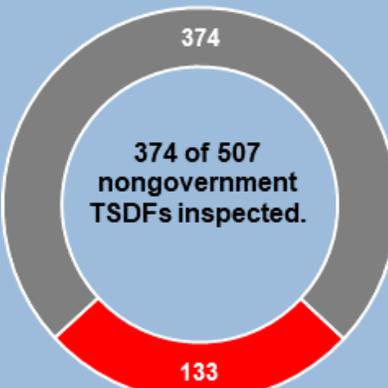
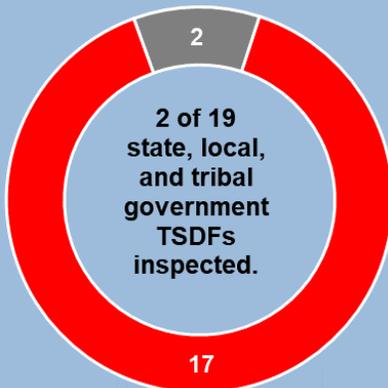
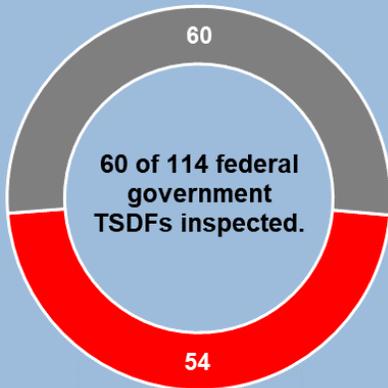
Figure 1: Percent of TSDFs not inspected by fiscal year*



Source: OIG analysis of Enforcement and Compliance History Online data. (EPA OIG image)

* For nongovernment TSDFs, which are inspected once every two years, the data point for each fiscal year in this figure encompasses a two-year cycle. Since 2016 represents the 2015–2016 cycle, there is no data point to include for 2015.

Number of TSDFs Inspected at Required Frequency, FYs 2015–2021



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

Inspection rates also continued to vary by TSDF category and the frequency of inspections for each TSDF fell short of the statutory requirements. Although the overall inspection rates for the seven-year period we examined were high compared to the overall number of inspections required, Table 3 shows the variability in inspection rates and frequencies by TSDF category. When we analyzed whether inspections of each TSDF were completed either every year or every two years, as required, we found that only 53 percent of federal government TSDFs; 11 percent of state, local, and tribal TSDFs; and 74 percent of nongovernment TSDFs were inspected at the required frequency from FYs 2015 through 2021. Some TSDFs were rarely or never inspected. Specifically, 12 federal government; six state, local, and tribal; and 49 nongovernment TSDFs were inspected fewer than five times over that seven-year period. Of these, one federal government and four nongovernment TSDFs were never inspected.

Table 3: Inspection frequency by TSDF category

Total number of TSDFs*	Inspection frequency	TSDFs inspected at required frequency across entire seven-year period: FYs 2020–2021	
		Number	Percentage**
Federal government TSDFs			
114	Annually	60	53% (81%)
State, local, and tribal TSDFs			
19	Annually	2	11% (37%)
Nongovernment TSDFs			
507	Every two years	374	74% (90%)

Source: OIG analysis of TSDF inspection requirements and EPA data. (EPA OIG table)

* We examined only those TSDFs that were subject to inspection requirements all seven years.

** Blue text represents inspection rates that exclude pandemic-restricted FYs 2020–2021.

As previously stated, the CMS allows focused compliance inspections to be used in lieu of a compliance evaluation inspection in some cases. Although our evaluation focused on compliance evaluation inspections, we conducted additional analysis that considered both compliance evaluation inspections and focused compliance inspections. Those joint inspection rates were similar to the rates for only compliance evaluation inspections, which are outlined in Tables 2 and 3.

When we asked OECA why the corrective actions taken in response to our 2016 report recommendation did not appear to have fulfilled the statutory inspection requirement, OECA said that the EPA and states continue to complete statutory inspections as budgets and numbers of staff decrease. OECA also noted that “the [TSDF] inspection frequency continues to be significantly higher than virtually any other enforcement program.”

Inspection Priorities Do Not Clearly Include Mandatory Inspections

The CMS includes a “TSDF Prioritization Scheme” that was developed in response to our 2016 report. However, while the prioritization scheme does state that no TSDFs will be excluded from the inspection requirements, it does not explicitly state that the statutorily required



TSDFs. (EPA images)

TSDF inspections will be performed by an authorized state program or the EPA, nor does it indicate that RCRA statutory inspections are a top priority of OECA. The CMS states:

The inspection prioritization scheme is a tool to assist RCRA regulators when deciding which facilities to inspect in 2-year mandatory statutory cycle to prioritize them using a consistent approach that distinguishes lower from higher priorities. This does not exclude any facilities from the TSDF operating universe, nor does this exclude any facilities from inspections.

When we asked OECA about the apparent lack of priority given to statutorily required TSDF inspections, OECA said that statutory inspections are important and that “[t]o the extent practicable, EPA and authorized or approved states work together towards RCRA program goals to ensure the most serious environmental problems caused by noncompliance are addressed.” However, this response does not explain why the statutorily required TSDF inspections have not been completed. Every year, the EPA and authorized states perform more than 10,000 on-site inspections of TSDFs and other RCRA-regulated entities, such as hazardous waste generators and transporters, so prioritizing inspections required by RCRA should be feasible.

Conclusions

While inspection rates remain high overall, the EPA continues to fall short of RCRA’s TSDF inspection requirements, despite the 2016 OIG report recommendation and the Agency’s agreement to implement the recommendation. A lack of EPA prioritization of inspections appears to be the underlying cause for this failure. If the statutorily required TSDF inspections are not completed, hazardous waste leaks could go unidentified and may not be mitigated in a timely manner, which increases the possibility of human health exposure and environmental contamination.

Recommendation

As previously recommended in our 2016 report, we continue to recommend that the assistant administrator for Enforcement and Compliance Assurance:

1. Implement management controls to complete the required treatment, storage, and disposal facility inspections.

Agency Response and OIG Assessment

OECA provided a response to the draft report on May 11, 2022 (Appendix B), concurring with our recommendation and proposing corrective actions with planned completion dates. OECA did not provide any technical comments for us to consider.

In its response, OECA stated, “We are fully prepared to accept and implement the recommendation to implement management controls to ensure TSDFs are inspected and that the Agency is carefully tracking progress.” OECA said that it will “work with regions and states to develop a plan that balances the desire to achieve the statutory goal with the

need to monitor the highest-risk facilities with limited resources.” This statement does not commit to meeting its statutory obligations and suggests that required statutory inspections might not be conducted due to other priorities and resource deployment decisions. As a result, we do not accept the Agency’s corrective-action proposal, and the recommendation is unresolved.

OECA’s response twice mentioned its desire to discuss specific issues with us, but it was unable to meet with us before submitting its response to our draft report. OECA’s response noted the following three issues:

- **Use of multiple inspection types to meet the statutory requirement.**
 - *OECA’s position:* OECA stated that inspections—such as corrective-action compliance evaluations, case development inspections, or operation and maintenance inspections—could fulfill the requirement for a thorough TSDF inspection.
 - *OIG response:* We agree that the definition of a thorough inspection should be determined by OECA and authorized state programs, in conjunction with EPA oversight.
- **Prioritization of inspections.**
 - *OECA’s position:* OECA stated that the completion of the statutorily required TSDF inspections is an important priority, as demonstrated by the high inspection rates of over 91 percent, which is higher than virtually any other enforcement program. Further, OECA stated its belief that, given the structure of the RCRA program and available resources, it is successfully managing the national program to reduce the risk of harm to human health and the environment.
 - *OIG response:* We acknowledge that inspection rates are high. However, the facts are that the Agency is still not complying with the statutorily mandated 100-percent inspection rate.
- **Inclusion of inspection data from FYs 2020 and 2021.**
 - *OECA’s position:* OECA requested that we exclude the data from FYs 2020 and 2021 because many on-site inspections could not be performed due to the coronavirus pandemic.
 - *OIG response:* We acknowledge that the pandemic-restricted years could be considered outliers. However, we retained the FYs 2020 and 2021 data to present a complete and transparent picture of inspection rates. Our report clearly indicates that inspections in FYs 2020 and 2021 were impacted by the pandemic. Our report tables also display inspection rate data with and without the pandemic-restricted years.

Status of Recommendation

RECOMMENDATIONS

Rec. No.	Page No.	Subject	Status ¹	Action Official	Planned Completion Date
1	6	Implement management controls to complete the required treatment, storage, and disposal facility inspections.	U	Assistant Administrator for Enforcement and Compliance Assurance	

¹ C = Corrective action completed.

R = Recommendation resolved with corrective action pending.

U = Recommendation unresolved with resolution efforts in progress.

Scope and Methodology

We conducted this evaluation from November 2021 to April 2022 in accordance with the *Quality Standards for Inspection and Evaluation* published in January 2012 by the Council of the Inspectors General on Integrity and Efficiency. Those standards require that we perform the evaluation to obtain sufficient and appropriate evidence to support our findings.

To answer our objective, we analyzed TSDF inspection data from FYs 2015 through 2021 from two sources: the EPA's RCRAInfo database and the EPA's Hazardous Waste Dashboard in the Enforcement and Compliance History Online system. We focused our evaluation on compliance evaluation inspections. To obtain an understanding of RCRA program inspections generally and TSDF inspections specifically, we interviewed the appropriate EPA staff and reviewed relevant documents, such as the CMS and the *RCRA Orientation Manual*.

Agency Response to Draft Report



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

OFFICE OF
ENFORCEMENT AND
COMPLIANCE ASSURANCE

May 11, 2022

MEMORANDUM

SUBJECT: EPA Comments on the OIG April 21, 2022 Draft Report: “The EPA Continues to Fail to Meet Inspection Requirements for Hazardous Waste Treatment, Storage, and Disposal Facilities,” Project No. OSRE-FY22-0023

FROM: Lawrence E. Starfield, Acting Assistant Administrator

LAWRENCE STARFIELD Digitally signed by
LAWRENCE STARFIELD
Date: 2022.05.11
16:09:55 -04'00'

TO: Laretta Joseph, Director
Programs, Offices, and Centers Oversight Directorate
Office of Special Review and Evaluation
Office of Inspector General

Thank you for the opportunity to comment on the Office of Inspector General’s (OIG’s) April 21, 2022 draft report, “The EPA Continues to Fail to Meet Inspection Requirements for Hazardous Waste Treatment, Storage, and Disposal Facilities,” Project No. OSRE-FY22-0023. The OIG audit is a follow-up evaluation to their 2016 report on the same topic: OIG Report No. 16-P-0104. This response has been developed in coordination with the Office of Land and Emergency Management.

As we stated in response to the 2016 report, the Office of Enforcement and Compliance Assurance (OECA) agrees that the fundamental issue the OIG is addressing in these reports is important: protecting the public and the environment from improper handling of hazardous waste. This is why we continue to thoroughly inspect these facilities at a very high rate, even though our resources to do so have been reduced over several years.

OECA would like to further discuss three issues with OIG. First, the OIG limited its analysis of the rate of TSDF inspections to two types of inspections: the comprehensive evaluation inspection (CEI) and, evaluated but not included in the final rate, the focused compliance inspections (FCI). The CEI and the FCI are not the only types of inspections that can serve as a thorough inspection of a TSDF. The RCRA Compliance Monitoring Strategy (CMS) relays that a CEI is generally the standard for a thorough inspection and that a FCI can be used in lieu of a CEI, but it also allows for other types of inspections to fulfill the requirement of thoroughly inspecting these facilities, such as corrective action compliance evaluations, case development

inspections, or operation and maintenance inspections. Strategically relying on other types of inspections that are appropriate for the status of a given TSDf is one way EPA and states maximize limited resources to achieve a high level of compliance monitoring coverage. If the OIG were to include other types of inspections in its analysis, the inspection rate of TSDfs is likely higher than the already very high rate of 91%.

Second, although OIG correctly notes that OECA's Compliance Monitoring Strategy does not explicitly state that the statutorily required TSDf inspections are a "top priority," this activity is an important priority of OECA, as demonstrated by the fact that over 91% of TSD facilities were inspected during the review period between FY 2015 and FY 2021), a rate significantly higher than virtually any other enforcement program. As noted in OECA's response to the 2016 final report, there would be some very low priority TSDf facilities that may not be inspected even after the recommended corrective actions are fulfilled and that continues to be true.

The top 50 TSDfs (less than 5% of the TSDfs) manage 85% of the waste; the remaining TSDfs manage a relatively small percentage of waste. To achieve its mission of protecting human health and the environment, the Agency must focus resources on the greatest potential risks and address the most significant issues identified. OECA formalized a prioritization policy¹ in December 2017 in response to the OIG Report No. 16-P-0104. We believe that, given the structure of the RCRA program and current resources available to implement the RCRA compliance assurance and enforcement programs, OECA is successfully managing the national program to reduce the risk of harm to human health and the environment.

Finally, we respectfully request that the OIG not include inspection data from FY 2020 and FY 2021 in the data analysis. During those years, many inspectors were not able to conduct onsite inspections due to the pandemic, and the inclusion of numbers from those years may confuse the analysis. Per the OIG draft report, removing those years from the analysis would result in a reported inspection rate of 95%.

While we hope to discuss these issues further, we are fully prepared to accept and implement the recommendation to implement management controls to ensure TSDfs are inspected and that the Agency is carefully tracking progress. We will discuss options with our regional counterparts and states to develop a plan that balances the desire to achieve the statutory goal with the need to monitor the highest-risk facilities with limited resources.

¹ EPA's TSDf Inspection Prioritization Scheme Components:

1. Identify facilities that are not actively treating and/or disposing waste to make sure their operating status is up to date using the database of record,
2. Identify facilities that may be inspected due to other ongoing activities, such as already under an enforcement action, and
3. Identify facilities that are permitted for storage only.

Agreement

No.	OIG Recommendation	Qualifications/ Comments for OIG Recommendation	High-Level Intended Corrective Action(s)	Estimated Completion by Quarter and FY
1	Implement management controls to complete the required treatment, storage, and disposal facility inspections.		<ol style="list-style-type: none">1. OECA will consult our regional counterparts and state partners to better understand the facilities that are not inspected at the required frequencies and the reasons why.2. With that information, we will work with regions and states to develop a plan that balances the desire to achieve the statutory goal with the need to monitor the highest-risk facilities with limited resources.	<ol style="list-style-type: none">1. 1st Quarter FY 20232. 2nd Quarter FY 2024

If you have any questions regarding this response, please contact Gwendolyn Spriggs, OECA's Audit Follow-Up Coordinator, at (spriggs.gwendolyn@epa.gov).

cc: Barry Breen, Acting Assistant Administrator, OLEM

David Cozad, OECA Senior Advisor

John Dombrowski, Director, OECA/OC Rosemarie Kelley, Director, OECA/OCE Carolyn Hoskinson, Director, OLEM/ORCR

Distribution

The Administrator
Deputy Administrator
Chief of Staff, Office of the Administrator
Deputy Chief of Staff, Office of the Administrator
Agency Follow-Up Official (the CFO)
Assistant Administrator for Enforcement and Compliance Assurance
Assistant Administrator for Land and Emergency Management
Principal Deputy Assistant Administrator for Enforcement and Compliance Assurance
Principal Deputy Assistant Administrator for Land and Emergency Management
Deputy Assistant Administrator for Land and Emergency Management
Agency Follow-Up Coordinator
General Counsel
Associate Administrator for Congressional and Intergovernmental Relations
Associate Administrator for Public Affairs
Director, Office of Continuous Improvement, Office of the Chief Financial Officer
Director, Office of Resource Conservation and Recovery, Office of Land and Emergency Management
Audit Follow-Up Coordinator, Office of the Administrator
Audit Follow-Up Coordinator, Office of Enforcement and Compliance Assurance
Audit Follow-Up Coordinator, Office of Land and Emergency Management