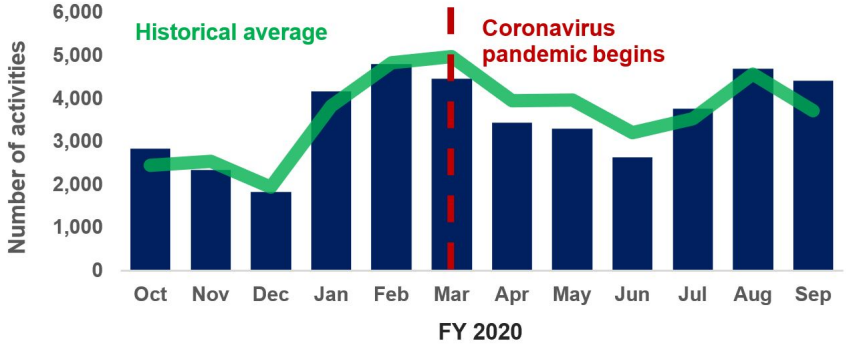
OFFICE OF INSPECTOR GENERAL
U.S. ENVIRONMENTAL PROTECTION AGENCY

CUSTOMER SERVICE ★ INTEGRITY ★ ACCOUNTABILITY

Improving air quality

Total National Reported Clean Air Act Compliance-Monitoring Activities Decreased Slightly During Coronavirus Pandemic, but State Activities Varied Widely

Report No. 22-E-0008 **November 17, 2021**



Report Contributors:

Kevin Good
Erica Hauck
Tina Lovingood
Renee McGhee-Lenart
Wendy Wierzbicki

Abbreviations:

CAA	Clean Air Act
CAA CMS	Clean Air Act Stationary Source Compliance Monitoring Strategy
C.F.R.	Code of Federal Regulations
ECHO	Enforcement and Compliance History Online
EPA	U.S. Environmental Protection Agency
FCE	Full-Compliance Evaluation
FY	Fiscal Year
ICIS-Air	Integrated Compliance Information System-Air
OECA	Office of Enforcement and Compliance Assurance
OIG	Office of Inspector General
PCE	Partial-Compliance Evaluation
SOP	Standard Operating Procedure

Cover Image:

All air-related compliance-monitoring activities conducted, as reported by state and local agencies, at Title V-major sources nationwide in fiscal year 2020 compared to the historical average, by month, based on data from the EPA's Enforcement and Compliance History Online website. The historical average for October, November, and December is based on fiscal years 2017–2019 data. The historical average for all other months is based on fiscal years 2016–2019 data. (EPA OIG image)

EPA Office of Inspector General
1200 Pennsylvania Avenue, NW (2410T)
Washington, D.C. 20460
(202) 566-2391
www.epa.gov/oig

Subscribe to our Email Updates
Follow us on Twitter @EPAoig
Send us your Project Suggestions

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

22-E-0008
November 17, 2021

Total National Reported Clean Air Act Compliance-Monitoring Activities Decreased Slightly During Coronavirus Pandemic, but State Activities Varied Widely

Why We Did This Evaluation

We conducted this evaluation to:

- Assess the impacts of the coronavirus pandemic on the number and type of compliance-monitoring activities taken by state and local agencies at facilities that emit air pollution.
- Determine what guidance the U.S. Environmental Protection Agency provided to state and local agencies to target or prioritize compliance-monitoring activities at facilities and how agencies conducted those tasks during the pandemic.

The EPA's *Clean Air Act Stationary Source Compliance Monitoring Strategy* recommends the frequency and type of activities to be conducted by delegated state and local agencies, which then report those activities to the EPA. We relied on those reported activities for our findings and recommendations.

This evaluation supports an EPA mission-related effort:

- *Improving air quality.*

This evaluation addresses these top EPA management challenges:

- *Overseeing states implementing EPA programs.*
- *Maintaining operations during pandemic responses.*

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

List of OIG reports.

What We Found

Compliance-monitoring activities are important to ensure that facilities comply with applicable Clean Air Act requirements and air regulations to protect human health and the environment and deter violations that result in excess emissions.

The coronavirus pandemic marginally impacted the total number of nationwide compliance-monitoring activities at facilities that emit air pollution. However, activities varied widely among states and territories, with reported changes in activities at high-emitting sources in fiscal year 2020 ranging from an 88-percent decline to a 234-percent increase. Substantially lower levels of compliance monitoring limit the deterrent effect that consistent monitoring can have on facilities' noncompliance and increase the risk that noncompliance could go undetected at facilities.

State and local agencies shifted some types of compliance-monitoring activities from on-site to off-site. This shift is in accordance with guidance the EPA issued in July 2020, which provided some flexibility to state and local agencies to count off-site compliance-monitoring activities toward the *Clean Air Act Stationary Source Compliance Monitoring Strategy*, or CAA CMS, commitments for full compliance evaluations. The EPA, however, has not yet assessed the impact of this flexibility on the use of off-site full-compliance evaluations to ensure that evaluations are consistent with the CAA CMS. In addition, while the EPA convened a workgroup to explore using remote video to conduct off-site partial-compliance evaluations, the Agency has not yet determined the conditions under which remote video is technically, legally, and programmatically feasible and has not finalized its draft standard operating procedures.

While the EPA did not issue pandemic-specific guidance on how state and local agencies should prioritize facilities for compliance monitoring, the three state and local agencies we reviewed told us that they prioritized activities at the largest emitters of air pollution to meet their commitments under the CAA CMS.

Recommendations and Planned Agency Corrective Actions

We recommend that the EPA address the needs of agencies that had significant declines in compliance-monitoring activities. We also recommend internal controls to strengthen the EPA's oversight of off-site compliance-monitoring activities. The EPA provided acceptable corrective actions and planned completion dates for our six recommendations. All recommendations are resolved with corrective actions pending.

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

THE INSPECTOR GENERAL

November 17, 2021

MEMORANDUM

SUBJECT: Total National Reported Clean Air Act Compliance-Monitoring Activities Decreased Slightly During Coronavirus Pandemic, but State Activities Varied Widely
Report No. 22-E-0008

FROM: Sean W. O'Donnell

TO: Lawrence Starfield, Acting Assistant Administrator
Office of Enforcement and Compliance Assurance

This is our report on the subject evaluation conducted by the Office of Inspector General of the U.S. Environmental Protection Agency. The project number for this evaluation was OE-FY21-0065. 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 primarily responsible for the subjects discussed in this report.

In accordance with EPA Manual 2750, your office provided acceptable planned corrective actions and estimated milestone dates in response to the OIG recommendations. All recommendations are resolved and no further response to this report is required. If you submit a response, however, it 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.

Table of Contents

Chapters

—continued—

Appendixes

Chapter 1
Introduction

Purpose

The U.S. Environmental Protection Agency's Office of Inspector General initiated this evaluation to assess how the coronavirus pandemic—that is, the SARS-CoV-2 virus and resultant COVID-19 disease—has impacted air compliance-monitoring activities undertaken by EPA-delegated state and local agencies to confirm that facilities that emit air pollution are complying with the Clean Air Act, or CAA, and federal air regulations. The OIG's objectives were to:

- Assess the impacts of the pandemic on the number and type of compliance-monitoring activities taken by state and local agencies at facilities that emit air pollution.
- Determine what guidance the EPA has provided to state and local agencies to target or prioritize compliance-monitoring activities at facilities.
- Determine how state and local agencies have targeted or prioritized compliance-monitoring activities at facilities during the pandemic.

Top Management Challenges Addressed

This evaluation addresses the following top management challenges for the Agency, as identified in OIG Report No. 20-N-0231, *EPA's FYs 2020–2021 Top Management Challenges*, issued July 21, 2020:

- Overseeing states implementing EPA programs.
- Maintaining operations during pandemic responses.

Background

The world first became aware of the SARS-CoV-2 virus and resultant COVID-19 disease in December 2019, and the COVID-19 disease quickly spread and became a global pandemic. On March 11, 2020, the World Health Organization declared the SARS-CoV-2 virus outbreak a pandemic, and on March 13, 2020, the president declared the pandemic to be a national emergency. States and territories across the United States implemented measures to reduce and slow the spread of the virus, such as stay-at-home orders restricting people from leaving their homes except for essential reasons. Per the Centers for Disease Control and Prevention, from March 1 through May 31, 2020, 42 states and territories issued mandatory stay-at-home orders, eight issued advisory stay-at-home orders, and six did not issue any such orders. In a March 26, 2020 memorandum from the EPA to its governmental and private sector partners, the Agency recognized the potential impacts from the coronavirus pandemic, including worker shortages and travel and social distancing restrictions issued by governments and corporations or recommended by the Centers for Disease Control and Prevention to limit the spread of the COVID-19 disease.

Clean Air Act Compliance Monitoring

The Clean Air Act calls for state and local agencies to work with the EPA to reduce air pollution. The EPA has delegated much of the implementation of CAA programs to state and local agencies, which for the purposes of this report includes any delegated agency, whether it is a state, tribal, territorial, or local agency. These agencies in turn conduct most compliance-monitoring activities at regulated stationary source facilities. The CAA defines a *stationary source* as any building, structure, facility, or installation which emits or may emit any air pollutant. Examples of stationary sources include factories, power plants, and refineries. Compliance monitoring at stationary sources consists of activities undertaken by air regulators to assess whether a regulated source is complying with requirements in the CAA and EPA regulations.

The EPA distinguishes among three types of stationary sources for the purposes of compliance-monitoring activities:

- **Title V-major sources**, which are large facilities that emit regulated pollutants over certain levels measured by tons per year—referred to as major-source thresholds—and have to obtain operating permits under Title V of the CAA. In general, Title V-major sources have the potential to emit over 100 tons per year of a regulated pollutant or lower in areas with poor air quality. Some Title V-major sources may be megasites, which the EPA characterizes as "extremely large, complex facilities."
- **Synthetic-minor sources**, which are facilities that have the potential to emit regulated pollutants at or above major-source thresholds but agree to enforceable restrictions to limit their emissions below these thresholds to avoid being subject to more stringent requirements for Title V-major sources. Such enforceable restrictions, also called limitations, are included in a facility's air permit. A subset of synthetic-minor facilities, known as SM-80s, are sources that emit regulated pollutants at or above 80 percent of major-source thresholds. Synthetic-minor sources are referred to as "synthetic" because they would be Title V-major sources if not for their enforceable permit restrictions.
- **True minor sources,** which are facilities that have the potential to emit regulated pollutants below major-source thresholds.

These distinctions in source types impact compliance-monitoring requirements for the facility and the frequency with which the compliance-monitoring activity at the facility should occur.

State and local agencies with delegated authority conduct the following air-related compliance-monitoring activities at regulated sources:

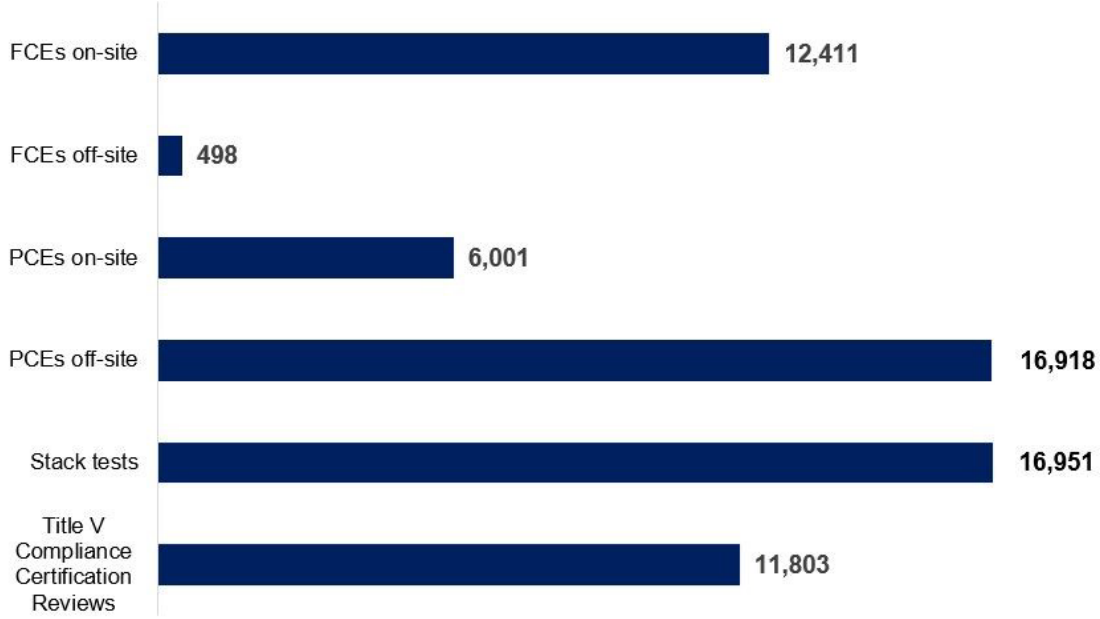
- **Full-compliance evaluations,** or FCEs, are comprehensive evaluations conducted on-site or off-site to assess CAA compliance of a facility as a whole, covering all regulated pollutants and all regulated emission units within the facility.
- **Partial-compliance evaluations,** or PCEs, are targeted evaluations conducted on-site or off-site to assess a facility's CAA compliance regarding a subset of processes, regulated pollutants, regulatory requirements, or emission units.
- **Stack tests reviews** are assessments of the results of stack tests conducted at a facility. Stack tests are conducted to assess whether pollution-control equipment is operating as intended to

assure emission limitations are being met. Stack test reviews may be conducted as part of an FCE or PCE.

- **Title V compliance certification reviews** are reviews of self-certification reports submitted by facilities that are subject to the Title V requirements of the CAA pertaining to operating permits. In these reports, facilities certify whether they are in compliance with their Title V operating permits. Title V compliance-certification reviews may be conducted as part of an FCE or PCE.

Based on EPA data, for fiscal years 2016–2020, state and local agencies conducted about 98.5 percent of all air-related compliance-monitoring activities, with the EPA conducting the remaining 1.5 percent. Figure 1 shows the average number of compliance-monitoring activities per year reported by state and local agencies from FYs 2016 through 2019 by type of activity.

Figure 1: Average number of compliance-monitoring activities reported per year by state and local agencies at all types of stationary sources, FYs 2016–2019



Source: OIG analysis of data in the EPA's Enforcement Compliance History Online. (EPA OIG image)

EPA's CAA Compliance-Monitoring Strategy and Compliance-Monitoring Strategy Plans

The EPA's 2016 *Clean Air Act Stationary Source Compliance Monitoring Strategy*, or CAA CMS, provides guidance to delegated state and local air agencies on developing and implementing stationary source compliance-monitoring programs. The CAA CMS is based on the federal fiscal year and focuses on Title V-major and SM-80 sources of air pollution; the CAA CMS does not list minimum frequencies for other synthetic minor and true minor sources. Throughout this report, fiscal year refers to the federal fiscal year, which runs from October 1 through September 30. The CAA CMS recommends that FCEs be completed at certain minimum frequencies depending on the type of facility, as shown in Table 1.

Table 1: Minimum FCE frequencies recommended by the CAA CMS by type of facility

Type of facility	Minimum FCE frequency recommended by the CAA CMS
Title V-major	Once every two fiscal years.
Megasite	Once every three fiscal years.
SM-80	Once every five fiscal years.

Source: OIG assessment of the CAA CMS. (EPA OIG table)

We refer to these frequencies as CAA CMS commitments for FCEs. While the CAA CMS policy provides for both on-site and off-site FCEs, it states that an on-site visit should be conducted, at a minimum, once every five fiscal years at all Title V-major sources. On-site FCEs are conducted to ensure a compliance presence in the field, verify record reviews, observe modifications or new construction, and identify any Title V-major permit deviations. In the years when an FCE is not conducted, state and local agencies should review annual compliance certifications submitted by Title V facilities and the underlying reports supporting those certifications.

According to the CAA CMS, delegated state and local agencies should submit a CAA CMS plan to the appropriate EPA region for discussion and approval every two years, although annual submission is encouraged, and an alternative time frame may be approved under certain circumstances. These CAA CMS plans should identify all Title V-major and SM-80 sources and the fiscal year in which each source will receive an FCE. If delegated agencies want to request different facility evaluation frequencies than those identified in the CAA CMS policy, the delegated agencies are to negotiate the alternative frequencies with their EPA region and develop an alternative CAA CMS plan.

In July 2020, the EPA issued guidance providing flexibility to state and local agencies to count off-site compliance-monitoring activities toward CAA CMS commitments and to adjust their compliance-monitoring coverage and frequency because of the pandemic in consultation with their respective EPA regions, without having to submit an alternative CAA CMS plan.

Health Impacts from Stationary Sources of Air Pollution

Title V-major and larger synthetic-minor sources have the potential to emit large amounts of harmful air pollutants, which can pose serious health concerns when the pollutants accumulate in high-enough concentrations. Table 2 describes the health impacts of air pollutants that are either directly emitted by stationary sources of air pollution or formed through chemical reactions in the atmosphere. Most of the pollutants can impact the respiratory system, which is of particular concern for those with the COVID-19 disease. Studies suggest that there may be a link between long-term exposure to air pollution, including particulate matter, ozone, and hazardous air pollutants, and the likelihood for more severe health outcomes for those who contract the SARS-CoV-2 virus. Research suggests that more severe health outcomes may result directly from pollutants causing damage to the lungs and reducing the lungs' ability to expel pathogens, as well as indirectly by aggravating preexisting cardiovascular and respiratory conditions.

Table 2: Health impacts from common stationary source pollutants

Pollutant	Health impacts
Ozone*	Variety of problems, such as sore or scratchy throat; coughing; inflamed and damaged airways; and aggravated lung diseases, such as asthma, emphysema, and chronic bronchitis. Lungs may also become more susceptible to infection.
Particulate matter	Variety of problems, including decreased lung function, increased respiratory problems, and premature death in people with heart and lung disease.
Carbon monoxide	Exposure to high levels can cause dizziness, confusion, and death. Short-term exposure to high levels may result in reduced oxygen to the heart accompanied by chest pain.
Sulfur dioxide	Short periods of exposure can harm the respiratory system and make breathing difficult.
Nitrogen dioxide	Short periods of exposure can irritate airways and aggravate respiratory diseases, particularly asthma. Longer exposures can contribute to the development of asthma and increase susceptibility to respiratory infections.
Volatile organic compounds*	Can cause eye, nose, and throat irritation; headaches, loss of coordination, and nausea; and damage to the liver, kidney, or nervous system.
Hazardous air pollutants	Can cause cancer or other serious health problems.

Source: OIG analysis of EPA information. (EPA OIG table)

*Ozone is formed when volatile organic compounds react with nitrogen oxides in sunlight.

Minimum Reporting Requirements for Compliance-Monitoring Activities

The EPA has identified the minimum data requirements that state and local agencies are to report to the EPA in order for the Agency to oversee state and local compliance-monitoring activities. These minimum data requirements are identified in the EPA's information-collection request titled *Air Stationary Source Compliance and Enforcement Information Collection Reporting (Renewal)*. According to the EPA's information-collection request, activities are to be reported when they occur at the following sources:

- Title V-major sources.
- Synthetic-minor sources.
- Sources included in a state or local agency's CAA CMS plan.
- Sources subject to a National Emission Standard for Hazardous Air Pollutants under 40 C.F.R. part 61.
- Sources subject to a formal enforcement action.
- Sources with a high-priority violation as defined by EPA policy.

State and local agencies are to report certain compliance-monitoring activities for these types of facilities within certain periods of time. Specifically, state and local agencies are to report:

- On-site and off-site FCEs and Title V compliance certification reviews within 60 days of the activity.
- Stack test reviews within 120 days of the stack test being performed.

State and local agencies are generally not required to report on-site or off-site PCEs but may do so voluntarily.

State and local agencies report the required compliance-monitoring information to the EPA through the Agency's Integrated Compliance Information System for Air, or ICIS-Air, database. The information in ICIS-Air is publicly available through the Agency's Enforcement and Compliance History Online, or ECHO, website. Since ECHO's launch in 2002, use of ECHO website data has increased from approximately 1 million queries in 2003 to approximately 3.5 million queries in 2020. In addition to providing enforcement and compliance data to the public, regulated entities, nongovernmental organizations, press, government regulators, and academic researchers, ECHO also provides access to data analysis and program-management tools.

EPA Oversight of State and Local Compliance-Monitoring Programs

Three of the main tools the EPA uses to oversee state and local compliance-monitoring programs are the CAA CMS plans, data reported by state and local agencies in ICIS-Air, and the State Review Framework. Under the State Review Framework, the EPA regions review state and local agencies' compliance-monitoring and enforcement programs and assess CAA CMS plan implementation and accuracy of reported data. State Review Framework metrics include data completeness, data accuracy, timeliness of data entry, and completion of CAA CMS commitments. The EPA generally conducts a review under the State Review Framework for each state once every five years. According to the Office of Enforcement and Compliance Assurance, or OECA, EPA regional offices have discretion on how often to review local agencies. The EPA makes the results of these reviews publicly available on its State Review Framework website.

Responsible Offices

OECA and the EPA regions' enforcement offices are responsible for overseeing and making sure delegated state and local agencies implement a compliance-monitoring program that ensures source compliance with statutory and regulatory requirements and take appropriate enforcement action when sources do not meet those requirements.

Scope and Methodology

We conducted this evaluation from January through August 2021. We conducted this evaluation 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, competent, and relevant evidence to provide a reasonable basis for our findings, conclusions, and recommendations based on our objectives. We believe that the evidence obtained provides a reasonable basis for our findings, conclusions, and recommendations.

To answer our objectives, we reviewed EPA regulations, policies, procedures, and guidance related to compliance monitoring. We also reviewed memorandums issued by OECA during the coronavirus pandemic to identify guidance to state and local agencies on how to target or prioritize facilities for compliance-monitoring activity. We also interviewed staff and managers from OECA on several occasions.

To assess the impact of the coronavirus pandemic on state and local agencies' compliance-monitoring activities, we downloaded data from the ECHO State Air Dashboard on March 18, 2021. We compared compliance-monitoring activity in the third and fourth quarters of FY 2020—April through September

2020—to FYs 2016–2019. We selected the third and fourth quarters of FY 2020 because they cover the months after the pandemic began. We refer to the average for the four preceding fiscal years as the historical average.

Our review included state and local agency-reported data in the 50 states, as well as Puerto Rico, the U.S. Virgin Islands, and the District of Columbia. While some states have multiple agencies that conduct CAA compliance-monitoring activities, we conducted our overall analysis at the state or territory level, thus aggregating the data reported by all the agencies within the state or territory. We did not review compliance-monitoring activities reported in ECHO for which the EPA was the lead agency because our objective is focused on activities conducted by state and local agencies.

Our review covered the following compliance-monitoring activities:

- On-site and off-site FCEs.
- On-site and off-site PCEs.
- Stack test reviews.
- Title V compliance certification reviews.

For our analysis, we categorized the data by on-site and off-site compliance-monitoring activities. We defined on-site compliance-monitoring activities as on-site FCEs and on-site PCEs and off-site compliance-monitoring activities as off-site FCEs, off-site PCEs, stack test reviews, and Title V compliance certification reviews. We understand that some stack test reviews may have been conducted on-site, but they were not specified in the ECHO data. As such, some stack test reviews that were actually conducted on-site may be categorized in our analysis as off-site activities.

Our review included compliance-monitoring activities for all Title V-major sources, synthetic-minor sources, and true minor sources reported to ICIS-Air and included in ECHO. OECA staff, however, told us that the data are most reliable for sources covered by the EPA's information-collection request, in particular for Title V-major sources. As a result, we separated activity by type of source and conducted in-depth analyses of compliance-monitoring data for Title V-major sources.

In addition, we selected three state and local agencies for review:

- The Georgia Environmental Protection Division in Region 4.
- The Indiana Department of Environmental Management in Region 5.
- California's South Coast Air Quality Management District in Region 9. Its jurisdiction includes sources in San Bernardino, Riverside, Orange, and Los Angeles Counties.

We selected this judgmental sample of agencies based on (1) the size of the state compliance monitoring program, (2) significant declines in compliance monitoring activities in the third and fourth quarters of FY 2020 as reported by state and local agencies, and (3) whether they have areas with poor air quality.

We interviewed these agencies and their corresponding EPA regions about what trends in compliance-monitoring activity occurred during the pandemic, what guidance state and local agencies received from the EPA during the pandemic, and how state and local agencies targeted or prioritized facilities for

compliance-monitoring activities during the pandemic. We also reviewed documentation provided by the state and local agencies, such as governors' executive orders issued, during the pandemic, guidance the agencies received from the EPA during the pandemic, and internal agency policies or procedures for inspections during the pandemic.

Data Limitations

We did not conduct independent verification of the accuracy of compliance-monitoring data in ECHO. Instead, our analyses, conclusions, and recommendations relied on data reported by state and local agencies to ICIS-Air and included in ECHO. In addition, because the EPA does not require state and local agencies to report PCEs, our analysis of PCEs is limited only to the ones that were voluntarily reported by state and local agencies. Further, the EPA does not require compliance-monitoring data for most minor sources to be reported, so our data are limited to the ones that were voluntarily reported by state and local agencies. We focused on the number of compliance-monitoring activities conducted and reported by state and local agencies. We did not assess the quality of the activities that were undertaken, such as whether FCEs contained all the elements laid out in the CAA CMS.

Prior Report

We previously evaluated the EPA's oversight of state and local compliance-monitoring programs in Report No. 16-P-0164, *Clean Air Act Facility Evaluations Are Conducted, but Inaccurate Data Hinder EPA Oversight and Public Awareness*, issued May 3, 2016. We found that Region 9's management controls could be improved, in part because 89 percent of the 35 local air districts in California had outdated CAA CMS plans. We found, as a result, that the EPA had less assurance that local agencies in California were conducting adequate compliance activities, which increased the risk that excess emissions could impact human health and the environment. We recommended that the Region 9 administrator "direct California's local air districts that do not have a current CAA CMS plan to submit draft plans to Region 9 by a specific date" and "provide guidance to California's local air districts as to how and when to submit new draft CAA CMS plans in the future." The EPA reported that corrective actions to address this recommendation were complete as of July 2016. OECA told us that it continues to believe that Region 9 has sufficient assurance that the California local air districts are implementing adequate compliance-monitoring programs and conducting adequate compliance activities. We may conduct future work in this area.

Chapter 2
Pandemic Had Small Impact on Total Number of Reported Compliance-Monitoring Activities, but State and Territory Activities Varied Widely, and Off-Site Activities Have Not Been Assessed

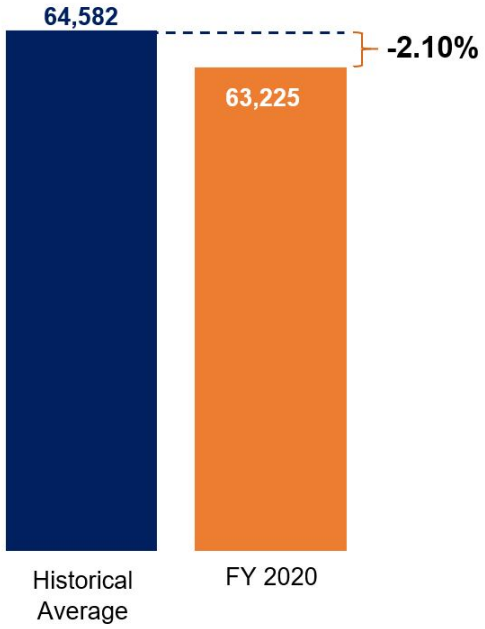
The coronavirus pandemic marginally impacted the total number of nationwide compliance-monitoring activities at facilities that emit air pollution, but the number of activities varied widely among states and territories. Some states and territories had substantial declines, which we define as a decrease of 25 percent or more, in compliance-monitoring activities in FY 2020, while others had marginal declines or increases. Substantially lower levels of compliance monitoring activity could limit the deterrence effect that consistent monitoring can have on facilities and increase the risk that noncompliance could go undetected at facilities.

In response to the pandemic, state and local agencies shifted the type of some compliance-monitoring activities from on-site to off-site. This shift is in accordance with OECA guidance that provided some flexibility to state and local agencies to count off-site compliance-monitoring activities toward CAA CMS commitments for FCEs. The EPA has not yet assessed the impact of this flexibility on the use of off-site FCEs to ensure that they are consistent with the elements of an FCE as described in the CAA CMS. In addition, while the EPA convened a workgroup to explore the use of remote video to conduct off-site PCEs, the Agency has not completed its assessment. We believe that there are opportunities for the EPA to assess the effectiveness of off-site FCEs conducted during the pandemic and complete its assessment of the feasibility of remote video in lieu of on-site activities. Completing these actions could enable the EPA to develop guidance for future emergencies and enhance the efficiency of compliance activities during normal operations.

Total Air Compliance-Monitoring Activities in FY 2020 Were Slightly Below Historical Average

The number of total compliance-monitoring activities conducted by state and local agencies at all facilities as reported in ECHO decreased by 2.1 percent in FY 2020 compared to the average for FYs 2016–2019. This represents a decline of 1,357 activities—from a historical average of 64,582 activities per year to 63,225 activities in FY 2020, as shown in Figure 2. This total includes the six types of compliance-monitoring activities reported in ICIS-Air: on-site FCEs, off-site FCEs, on-site PCEs, off-site PCEs, stack test reviews, and Title V compliance certification reviews.

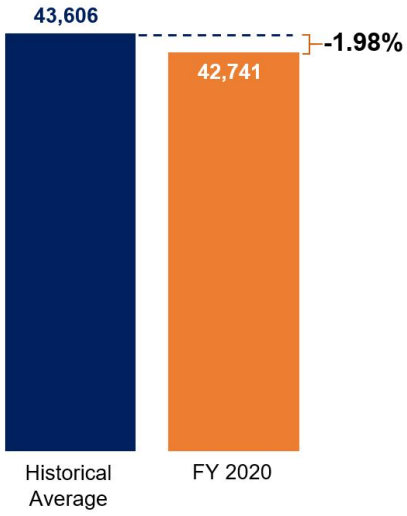
Figure 2: Total compliance-monitoring activities at all types of stationary sources in FY 2020 compared to the historical average



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

For Title V-major sources, the decline in FY 2020 compliance-monitoring activities was slightly less than it was for all types of sources. Specifically, as shown in Figure 3, total activities conducted at Title V-major sources decreased from a historical average of 43,606 activities per year to 42,741 in FY 2020, a decline of 1.98 percent.

Figure 3: Total compliance-monitoring activities at Title V-major sources in FY 2020 compared to the historical average



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

Number of Compliance-Monitoring Activities in FY 2020 Varied Across States and Territories

State and local agency-reported data show that total compliance-monitoring activities at Title V-major sources decreased in 33 of 53 states and territories and increased in 20 states. The range of decreases spanned from 1 percent to 88 percent, as shown in Appendix A. For example, activities in Puerto Rico and the U.S. Virgin Islands declined by over 85 percent and activities in Oregon, Vermont, and Massachusetts declined by over 30 percent compared to the historical average. Ten states and territories had a 25-percent or more decline in activities in FY 2020, which we consider to be a substantial decline. A substantial decline in compliance monitoring could:

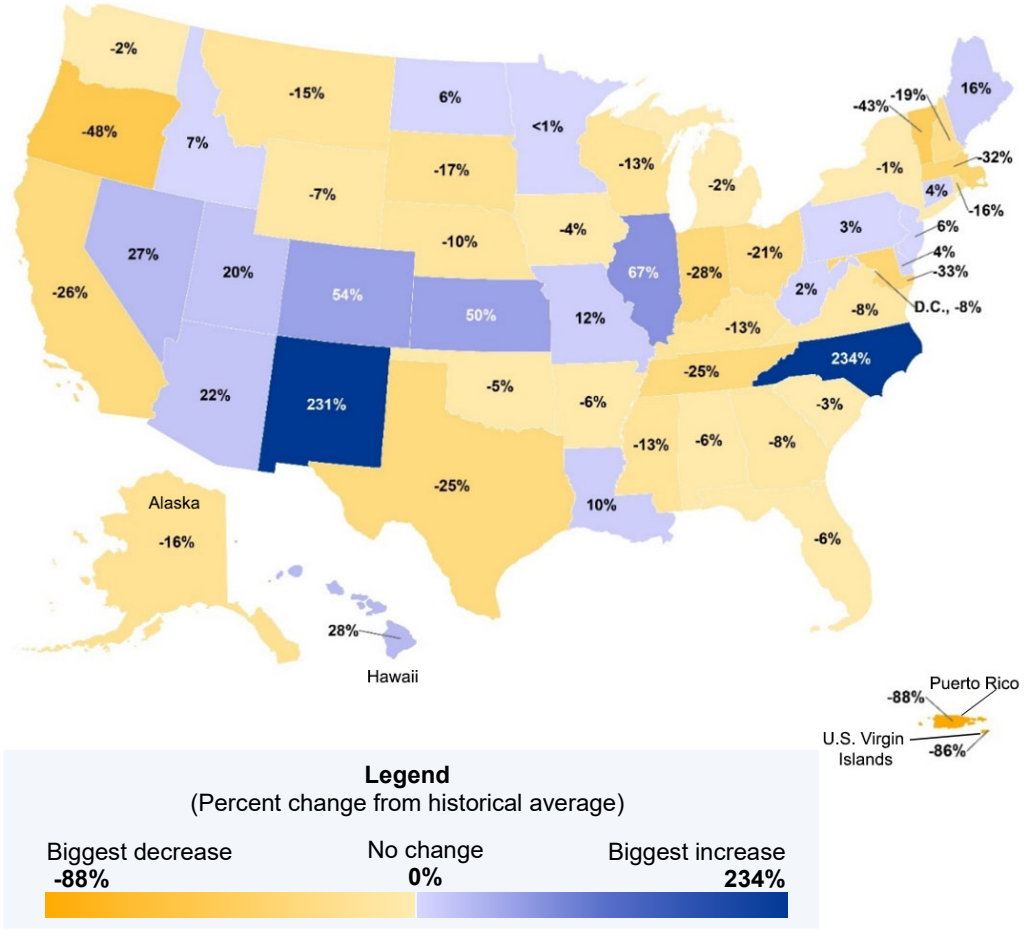
- Limit the deterrent effect that consistent monitoring has on facilities' noncompliance.
- Increase the risk that noncompliance could go undetected at facilities.

According to the Agency, although some states and local agencies conducted fewer compliance-monitoring activities in FY 2020 than the historical average, they still met their CAA CMS commitments, which OECA told us is a benchmark for providing the needed oversight for deterring noncompliance. This is because those states and local agencies typically conduct more activities than are recommended in the CAA CMS. The three state and local agencies we reviewed told us this was the case for them in FY 2020.

Twenty states had increases in total compliance monitoring, ranging from less than 1 percent to 234 percent. For example, activities in North Carolina and New Mexico increased by over 200 percent and activities in Illinois, Colorado, and Kansas increased by 50 percent or more compared to the historical average.

Figure 4 illustrates the trend in compliance-monitoring activities for all 50 states, the District of Columbia, Puerto Rico, and the U.S. Virgin Islands. Appendix A contains data on total compliance-monitoring activities at Title V-major sources for each of these entities.

Figure 4: Percent change in states' and territories' FY 2020 total compliance monitoring activities at Title V-major sources compared to the historical average



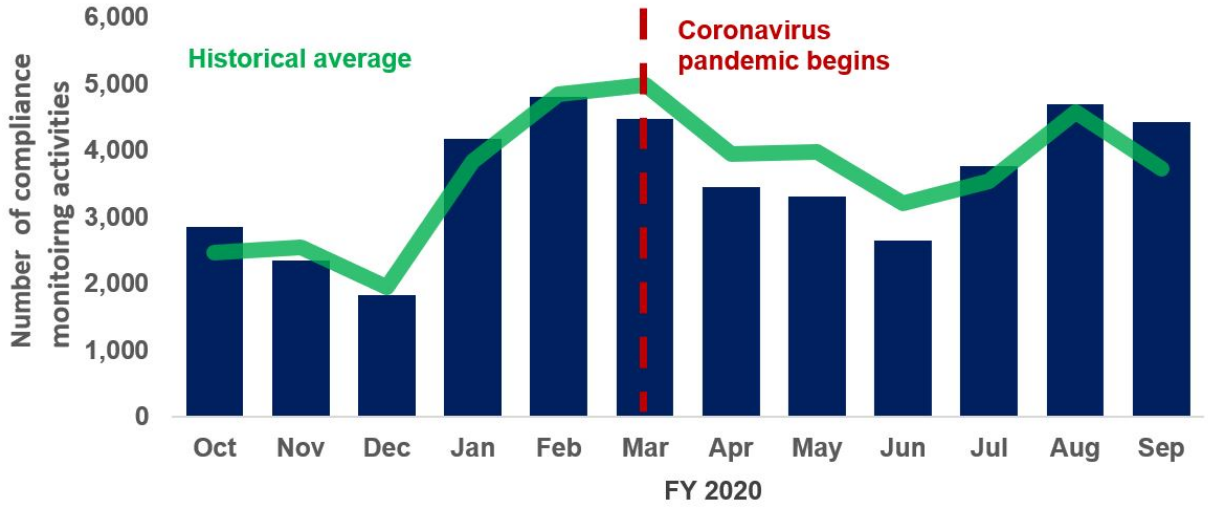
Source: OIG image based on ECHO data. (EPA OIG image)

Note: Values are rounded.

Total Compliance-Monitoring Activities Started Increasing in July 2020

State and local agency-reported data show that the number of total compliance-monitoring activities at Title V-major sources was lower than the historical average from March through June 2020 but higher than the national average from July through September 2020, as shown in Figure 5. Specifically, we found that the number of compliance-monitoring activities at Title V-major sources was 16 percent below the historical average in the third quarter of FY 2020, which covers the period from April through June 2020. In contrast, the number of compliance-monitoring activities at Title V-major sources was 9 percent above the historical average in the fourth quarter of FY 2020, which covers from July through September 2020, which indicates that, on a national level, state and local agencies were able to recover in July through September and partially make up for the decreases they experienced in the earliest months of the pandemic.

Figure 5: Total compliance-monitoring activities at Title V-major sources nationwide in FY 2020 compared to the historical average,* by month



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

* The historical average for October, November, and December is based on FYs 2017–2019 data. The historical average for all other months is based on FYs 2016–2019 data.

State and Local Agencies Reduced On-Site Activities and Increased Off-Site Activities During the Pandemic

State and local agencies decreased the number of on-site compliance-monitoring activities in FY 2020. Specifically, on-site compliance-monitoring activities at Title V-major sources in FY 2020 declined by 25 percent—on-site FCEs and on-site PCEs declined by 19 percent and 34 percent respectively when compared to the historical average. Off-site activities, however, increased by 4 percent. Although the shift to off-site activities is reasonable given the challenges posed by the pandemic and the need to protect the safety of inspectors, off-site activities may not be as effective as on-site activities in assessing compliance or detecting violations. For example, the CAA CMS notes that an on-site visit should be conducted, at a minimum, once every five fiscal years at all Title V-major sources to ensure a compliance presence in the field, verify record reviews, and observe modifications or new construction at a facility.

Safety Concerns and Stay-At-Home Orders Led to Decreased On-Site Compliance-Monitoring Activities

Forty-five of the 48 states and territories we reviewed that issued mandatory or advisory stay-at-home orders had decreases in on-site compliance-monitoring activities from April through June 2020 when compared to their historical average. An Indiana Department of Environmental Management manager told us that its on-site FCEs dropped in April because it was under governor orders to not conduct inspections except in critical situations like emergency responses. Similarly, a manager from the Georgia Environmental Protection Division told us that the division stopped conducting on-site inspections in mid-March 2020 and resumed them at the end of May 2020.

A South Coast Air Quality Management District manager told us that the district's field inspectors were deemed to be essential workers, so they were not restricted by the state's stay-at-home orders.

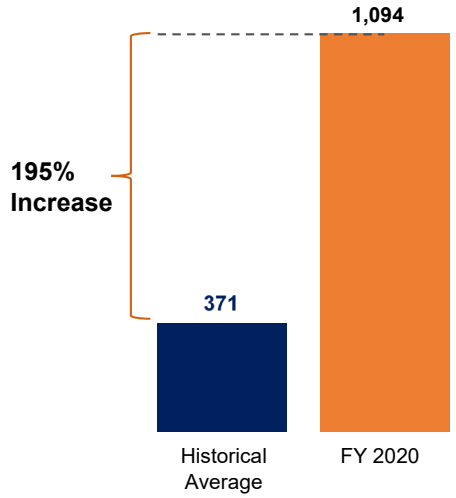
However, the district temporarily paused on-site inspections while it evaluated how to safely conduct on-site activities and developed protocols for inspectors. The manager told us that this was done to protect the safety of not only the district's staff but also the facility personnel and members of the public with whom inspectors regularly come into contact, such as through the complaint response process. The manager also said that many facilities also attempted to limit access to outsiders during the first days of the pandemic until safety protocols were developed and negotiated. The manager further said that the South Coast Air Quality Management District started conducting on-site activities again in April 2020 and, following a pause of in-person facility visits during the summer because of COVID-19, became fully operational in November 2020.

Appendix B shows the level of compliance-monitoring activities for each of the state and local agencies we reviewed on a month-by-month basis for FY 2020.

Off-Site Compliance-Monitoring Activities, Including FCEs, Increased in FY 2020

While on-site compliance-monitoring declined in FY 2020, off-site compliance-monitoring activities increased. For example, off-site compliance-monitoring activities at Title V-major sources increased by 4 percent in FY 2020 compared to the historical average. This overall increase in off-site activities was due to increased use of off-site PCEs and off-site FCEs. The increase in the use of off-site FCEs is noteworthy because their use has historically been very low. Specifically, the number of off-site FCEs conducted by state and local agencies at Title V-major sources in FY 2020 increased by 195 percent compared to the historical average, as shown in Figure 6. State and local agencies in 36 of the 53 states and territories we reviewed increased their use of off-site FCEs at Title V-major sources in FY 2020. Agencies in 14 of these 36 states and territories reported conducting off-site FCEs for the first time in FY 2020.

Figure 6: Off-site FCEs at Title V-major sources in FY 2020 compared to the historical average



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

EPA Has Not Assessed Impact of Increased Use of Off-Site Compliance-Monitoring Activities

In July 2020, OECA issued guidance informing state and local agencies that OECA would count off-site compliance-monitoring activities toward state and local agencies' CAA CMS commitments during the pandemic. This guidance was intended to provide flexibility to state and local agencies in meeting compliance-monitoring commitments under several environmental programs, not just air. As such, the guidance referred generally to compliance-monitoring commitments rather than specifically to FCEs, which are only used in the air program. Because CAA CMS commitments are made for FCEs, we conclude that the guidance was intended to provide flexibility in using off-site activities to meet FCE commitments.

According to the CAA CMS, an FCE is intended to be a comprehensive evaluation that assesses compliance of the facility as a whole and addresses all regulated pollutants at all regulated emission units. FCEs are generally intended to be conducted on-site. However, the CAA CMS policy states that the types of facilities where an FCE can be conducted without an on-site visit are "limited to a small universe of facilities and source categories" and that examples of where an off-site FCE may be appropriate "include, but are not limited to, a gas-fired compressor station, a boiler in a large office or apartment building, a peaking station and a gas turbine." The CAA CMS states that off-site FCEs are to be reported only when state and local agencies are able to complete an FCE without having to conduct an on-site visit to assess control devices and process operating conditions. Moreover, the CAA CMS states that "decisions on whether an on-site evaluation is not necessary should be made on a facility-specific basis." The CAA CMS does not specify facility conditions, such as risk level or size under which an off-site FCE may be appropriate.

At least one state agency, the Georgia Environmental Protection Division, expanded the types of facilities where it conducted off-site FCEs beyond the examples identified in the CAA CMS. For example, it conducted off-site FCEs at facilities in industries such as wood pellet manufacturing, medical device sterilization, textile finishing, and fabric coating. A manager from the Georgia Environmental Protection Division told us that most of the facilities where the off-site FCEs were conducted would be followed up in the next year with an on-site FCE. However, given the large increase in off-site FCEs conducted in FY 2020, other state and local agencies may have similarly expanded their use to include facilities not specifically identified in the CAA CMS or be using off-site FCEs to count toward their CAA CMS commitments.

While the flexibility provided by OECA's guidance during the pandemic can be positive, it increases the risk that state and local agencies may conduct off-site FCEs at facilities where the EPA did not intend or count an activity as an off-site FCE when it does not meet the requirements under the CAA CMS. OECA's guidance encouraged state and local agencies to discuss plans to substitute off-site compliance-monitoring activities for FCEs with their region and document any agreements. OECA managers told us that OECA has not conducted a formal assessment of state and local agencies' use of off-site FCEs during the pandemic to determine whether they align with the CAA CMS. OECA should assess whether off-site FCEs at types of facilities other than those specifically identified in the CAA CMS are appropriate.

Regions Provided Instruction to State and Local Agencies on What Constitutes an Off-Site FCE That Was Not Intended by OECA to Be Official Policy

State and local agencies received instructions from regions during the pandemic on what constitutes an off-site FCE that were not included in the CAA CMS policy or intended by OECA to be official policy. In a September 3, 2020 email, a Region 4 manager told a Georgia Environmental Protection Division manager that off-site FCEs need to include "a remote video or some type of visual component." Region 4 told us this guidance came from OECA. A South Coast staff member told us that they had also heard this instruction from Region 9. OECA managers said that they had conversations with some regional offices about what would be needed to qualify as an off-site FCE and that they discussed that the EPA regions need to consider the use of remote video or photographs in some cases to bolster activities to meet FCE requirements. OECA managers told us that it was not their intention that it be formal policy for all off-site FCEs to require a video or visual component and that this decision should be made on a case-by-case basis.

The CAA CMS, as noted above, provides for instances in which an FCE can be conducted off-site and does not require the use of a remote video or other visual component. The differing instruction provided by the regions and the CAA CMS could result in inconsistent implementation of off-site FCEs. For example, some state and local agencies may only count off-site evaluations as FCEs if they include a remote video or visual component while others may not require a remote or video component.

EPA Convened Workgroup to Test Using Remote Video to Conduct Off-Site PCEs but Has Not Yet Finalized Procedures

In April 2020, the EPA, in coordination with the Environmental Council of the States, assembled the Remote Video Partial Compliance Evaluation workgroup to test the use of remote video to address the coronavirus pandemic's constraints on the ability of inspectors to perform routine on-site compliance-monitoring activities for various environmental programs.

The Environmental Council of the States is a national nonprofit association made up of state and territorial environmental agency leaders that focuses on improving the capability of state environmental agencies to protect and improve human health and the environment.

The EPA charged the workgroup with launching several pilot projects to explore whether the use of remote video for off-site PCEs is feasible from a legal, technical, and programmatic perspective. The EPA envisioned that the pilot projects would test the use of live video—a representative of the regulated facility would walk around the facility with a camera and focus on items of interest to an inspector participating remotely on the live video call.

Workgroup documents also stated that if the pilot projects were successful, remote video PCEs could also be used after the pandemic to increase efficiency and supplement scarce government inspection resources to remotely view facility operations. For example, an OECA manager said that there are several states, such as those with large land masses where an inspector has to drive a day or two to conduct an on-site inspection, that are interested in using remote video to expand their reach. Although time frames were established in the workgroup documents for beginning the pilot projects, the documents did not establish time frames for when the results and lessons learned from the pilot projects would be used to establish new policies or procedures.

State and Local Agencies Have Used Remote Video but Documented Results Are Limited

Air-related pilot projects conducted by state and local agencies have included the use of live video (1) for inspectors to remotely observe stack tests and (2) to conduct a virtual tour or walk-through to observe operating conditions. Documented results from these pilot projects are limited, and the workgroup has not made a formal determination, including documentation, of the parameters or conditions under which the use of remote video to conduct PCEs is feasible from a legal, technical, and programmatic perspective.

Workgroup Developed Draft Standard Operating Procedures that Have Not Been Finalized

The Remote Video Partial Compliance Evaluation workgroup held meetings approximately every two weeks and developed draft guidance documents in September 2020 regarding remote video PCEs, including a standard operating procedure describing how to plan for and conduct off-site PCEs using remote video communication tools.

Two states and one EPA region told us that the draft SOP should be finalized, and OECA believed that, while the preferred method is on-site inspections, remote video could be used in limited circumstances to supplement certain on-site activities more efficiently during normal operations. In April 2021, OECA managers said that it was premature to finalize the SOP or recommend remote video as a tool because they were still collecting comments and input from the states and gathering information through the various pilot projects on the legal, technical, and programmatic feasibility of using remote video to conduct off-site PCEs. OECA managers told us that the workgroup does not have a time frame for finalizing the SOP.

State and Local Agencies Requested Information on How Remote Video Activities Could Be Used to Meet FCE Commitments

One programmatic issue that the workgroup and draft SOP have not addressed is whether and how remote video activities may be used to meet FCE commitments under the CAA CMS. While the purpose of the workgroup was to determine whether using remote video to conduct PCEs is feasible from a legal, technical, and programmatic perspective, some state and local agencies asked how remote video could be used to meet CAA CMS FCE commitments. OECA managers said that they do not envision remote video replacing on-site FCEs, but a state or local agency could use remote video in conjunction with reviewing a facility's records to meet the EPA's definition of an FCE per the CAA CMS under certain conditions. The EPA has not provided additional documentation about these conditions, and the draft SOP does not identify what documentation would be needed for a state and local agency to use remote video in conjunction with a records review to qualify as an off-site FCE.

Conclusions

In order to maintain effective compliance monitoring in the future, the EPA should assess lessons learned from the pandemic relating to the needs of air agencies in the states and territories with substantial declines in compliance-monitoring activities because of the pandemic, the flexibility provided by the EPA to state and local agencies to use off-site compliance-monitoring activities to meet CAA CMS commitments, and the use of remote video to conduct off-site compliance-monitoring

activities. Lower levels of compliance monitoring during the pandemic or in future emergencies could result in a diminished deterrent effect against noncompliance and less assurance that facilities are complying with statutory and regulatory requirements intended to protect human health and the environment.

Without assessing the use of off-site FCEs during the pandemic, the EPA does not have assurance that activities reported as off-site FCEs were conducted at the proper types of facilities or represented a comprehensive compliance determination for the entire facility. Completing its assessment of the remote video pilot projects is important so that the EPA can finalize its SOP and state and local agencies have a standardized approach to use remote video during emergencies or to improve the efficiency of normal operations.

Recommendations

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

1. In coordination with the EPA regional offices, evaluate the needs of the state and local agencies in states and territories that had significant declines, as determined by the EPA, in their total compliance-monitoring activities for fiscal year 2020 to determine whether technical assistance is needed and provide it as appropriate.

2. Assess a portion of off-site full-compliance evaluations reported by state and local agencies during the coronavirus pandemic to determine whether they meet the requirements of a full-compliance evaluation.

3. After assessing a portion of the off-site full-compliance evaluations reported by state and local agencies during the coronavirus pandemic, determine whether additional guidance on what constitutes an off-site full-compliance evaluation, the types of facilities where an off-site full-compliance evaluation is appropriate, and when a remote visual component is necessary. If such a determination is made, issue updated guidance on off-site full-compliance evaluations.

4. Determine and document the conditions or parameters under which the use of remote video to conduct off-site partial compliance evaluations is feasible from a legal, technical, and programmatic perspective.

5. Finalize the Remote Video Partial Compliance Evaluation workgroup's standard operating procedures.

6. Determine whether and how remote video can be used in conjunction with a document review to qualify as a full-compliance evaluation for purposes of the *Clean Air Act Stationary Source Compliance Monitoring Strategy* and provide instructions to state and local agencies.

Agency Response and OIG Assessment

The Agency responded to our draft report on September 22, 2021. See Appendix C for the Agency's full response. The Agency suggested revisions to our recommendations, which we did not make because we believe they were either unnecessary or combined actions in such a way that the proposed revisions changed the intent of the recommendations. For example, the Agency suggested we combine

Recommendations 4, 5, and 6 into a new recommendation with revised language. We do not agree with combining these recommendations because each recommendation is a distinct, discrete action that needs to be taken by the Agency.

The Agency provided acceptable corrective actions and planned completion dates in its September 22, 2021 response for Recommendations 1, 2, 3, and 5. In subsequent communications, the Agency provided acceptable corrective actions and planned completion dates for Recommendations 4 and 6.

For Recommendation 1, the Agency stated that OECA will coordinate with the EPA regional offices in evaluating the needs of the state and territorial agencies with reported declines of 25 percent or more in total compliance-monitoring activities for FY 2020 to determine whether technical assistance is needed. For those agencies determined to be in need of technical assistance, OECA and the regional office will coordinate on the delivery of such assistance, as appropriate. We agree with this planned corrective action.

For Recommendations 2 and 3, the Agency stated that OECA will coordinate with the EPA regional offices in assessing a portion of FY 2020 off-site FCEs reported by state and local agencies during the coronavirus pandemic to determine whether they meet the requirements of an FCE. In completing the assessment, OECA will determine whether additional guidance is needed on what constitutes an off-site FCE. OECA will also determine the sources for which an off-site FCE is appropriate as well as when a remote virtual component would be necessary. If such a determination is made, OECA will issue additional guidance. We agree with this planned corrective action.

For Recommendation 4, the Agency stated that OECA will determine and document the conditions or parameters under which the use of remote video to conduct off-site PCEs is feasible from a legal, technical, and programmatic perspective. We agree with this planned corrective action.

For Recommendation 5, the Agency stated that OECA will coordinate with the EPA regional offices in finalizing the Remote Video Partial Compliance Evaluations SOP. We agree with this planned corrective action.

For Recommendation 6, the Agency stated that OECA will determine whether and how remote video can be used in conjunction with document reviews to qualify as an FCE for the purposes of the CAA CMS and provide instruction to state and local agencies. We agree with this planned corrective action.

All recommendations are resolved with corrective actions pending (Appendix D). The EPA also provided technical comments, and we modified the report as appropriate.

Chapter 3
State and Local Agencies Relied on CAA CMS Guidance to Prioritize Facilities for Compliance Monitoring During the Pandemic

OECA did not provide guidance to state and local agencies on how they should prioritize or target facilities for compliance-monitoring activities during the pandemic. The primary guidance that OECA issued during the pandemic was intended to provide state and local agencies with some flexibility in meeting the commitments they had made under their CAA CMS plans. OECA and Region 5 managers told us that the primary EPA guidance for prioritizing facilities for FCEs is the CAA CMS, and OECA managers said that this guidance applied during the pandemic. Accordingly, staff from the three state and local agencies we reviewed told us that they prioritized conducting FCEs at facilities covered by the CAA CMS during the pandemic and, as result, were able to meet their CAA CMS commitments despite the challenges posed by the pandemic.

EPA Did Not Provide Pandemic-Specific Guidance on How State and Local Agencies Should Prioritize Facilities for Compliance Monitoring

OECA managers said that they did not provide guidance on how states should target or prioritize facilities for compliance-monitoring activities during the pandemic because they wanted to provide as much flexibility to state and local agencies as possible. OECA and two of the three EPA regions we reviewed told us that the primary guidance related to compliance monitoring that the EPA issued during the pandemic was the July 2020 guidance, which was intended to assure state and local agencies that OECA would work with them to adjust inspection commitments made under their CAA CMS plans. However, this guidance did not address how state and local agencies should target or prioritize compliance-monitoring activities during the pandemic. Rather, it was intended to provide states with some flexibility in how to meet the commitments made under their CAA CMS plans.

OECA and Region 5 managers pointed to the CAA CMS as the Agency's primary guidance on prioritization, stating that state and local agencies' prioritization is based on facilities covered by the CAA CMS—that is, Title V-major and SM-80 sources. OECA managers said that this guidance continued to apply during the pandemic. None of the state or local agencies we reviewed stated that they needed any guidance on targeting or prioritizing beyond the CAA CMS.

State and Local Agencies We Reviewed Prioritized Conducting FCEs at Facilities Covered by CAA CMS

During the pandemic, the three state and local agencies we reviewed told us that they prioritized conducting FCEs at facilities covered by the CAA CMS, particularly Title V-major sources, in order to meet the CAA CMS commitments for FCEs and assure a compliance monitoring presence at the largest emitters of air pollution. As a result, all three state and local agencies we reviewed told us that they were able to meet or exceed the CAA CMS commitments for FCEs despite challenges posed by the pandemic, and this was partly because they normally conduct FCEs at more facilities than recommended

by the CAA CMS each year. The CAA CMS recommends that agencies conduct an FCE at all Title V-major sources at least once every two fiscal years and at all SM-80s at least once every five fiscal years.

Although the three state and local agencies we reviewed said that they prioritized facilities covered by the CAA CMS, they also considered other factors when deciding where to conduct compliance-monitoring activities during the pandemic. Specifically:

- They said that they responded to complaints from the public. For example, a manager from the South Coast Air Quality Management District told us that the district continued to respond to all complaints from the public, consistent with its standard practice.
- The Georgia Environmental Protection Division and the Indiana Department of Environmental Management said that they considered past enforcement action at facilities.
- The Georgia Environmental Protection Division said that it considered the size of the facility and whether compliance-monitoring activities could be conducted outside.

Conclusions

While OECA did not issue new guidance on how to prioritize facilities for compliance-monitoring activities during the pandemic, state and local agencies prioritized conducting FCEs at large emitters that are covered by the CAA CMS policy, which continued to apply during the pandemic. As a result, the three state and local agencies we reviewed told us that they were able to meet or exceed the CAA CMS commitments for FCEs despite challenges posed by the pandemic.

Status of Recommendations

RECOMMENDATIONS

Rec. No.	Page No.	Subject	Status[1]	Action Official	Planned Completion Date
1	18	In coordination with the EPA regional offices, evaluate the needs of the state and local agencies in states and territories that had significant declines, as determined by the EPA, in their total compliance-monitoring activities for fiscal year 2020 to determine whether technical assistance is needed and provide it as appropriate.	R	Assistant Administrator for Enforcement and Compliance Assurance	9/30/22
2	18	Assess a portion of off-site full-compliance evaluations reported by state and local agencies during the coronavirus pandemic to determine whether they meet the requirements of a full-compliance evaluation.	R	Assistant Administrator for Enforcement and Compliance Assurance	12/30/22
3	18	After assessing a portion of the off-site full-compliance evaluations reported by state and local agencies during the coronavirus pandemic, determine whether additional guidance on what constitutes an off-site full-compliance evaluation, the types of facilities where an off-site full-compliance evaluation is appropriate, and when a remote visual component is necessary. If such a determination is made, issue updated guidance on off-site full-compliance evaluations.	R	Assistant Administrator for Enforcement and Compliance Assurance	12/30/22
4	18	Determine and document the conditions or parameters under which the use of remote video to conduct off-site partial compliance evaluations is feasible from a legal, technical, and programmatic perspective.	R	Assistant Administrator for Enforcement and Compliance Assurance	12/30/22
5	18	Finalize the Remote Video Partial Compliance Evaluation workgroup's standard operating procedures.	R	Assistant Administrator for Enforcement and Compliance Assurance	12/30/22
6	18	Determine whether and how remote video can be used in conjunction with a document review to qualify as a full-compliance evaluation for purposes of the *Clean Air Act Stationary Source Compliance Monitoring Strategy* and provide instruction to state and local agencies.	R	Assistant Administrator for Enforcement and Compliance Assurance	12/30/22

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

Appendix A

Change in Number of Total Compliance-Monitoring Activities at Title V-Major Sources

Table A-1 contains information on compliance-monitoring activities conducted at Title V-major sources for all states, the District of Columbia, Puerto Rico, and the U.S. Virgin Islands.

Table A-1: Percentage change in total compliance monitoring activities at Title V-major sources in FY 2020 compared to the historical average

State or territory	Average total compliance-monitoring activities per year FYs 2016–2019	Total compliance-monitoring activities in FY 2020	Percentage change between FY 2020 and historical average
Puerto Rico	59	7	–88
U.S. Virgin Islands	7	1	–86
Oregon	295	152	–48
Vermont	25	14	–43
Maryland	715	481	–33
Massachusetts	643	437	–32
Indiana	1,968	1,408	–28
California	2,361	1,756	–26
Texas	1,908	1,426	–25
Tennessee	799	601	–25
Ohio	2,204	1,738	–21
New Hampshire	113	92	–19
South Dakota	180	150	–17
Alaska	741	619	–16
Rhode Island	63	53	–16
Montana	375	320	–15
Wisconsin	793	690	–13
Mississippi	911	793	–13
Kentucky	516	450	–13
Nebraska	157	141	–10
District of Columbia	85	78	–8
Virginia	2,541	2,340	–8
Georgia	3,090	2,857	–8
Wyoming	437	405	–7
Arkansas	578	542	–6
Alabama	1,553	1,465	–6
Florida	2,393	2,261	–6
Oklahoma	1,832	1,745	–5
Iowa	776	743	–4
South Carolina	824	797	–3
Michigan	1,090	1,063	–2
Washington	1,130	1,102	–2
New York	2,311	2,288	–1
Minnesota	595	598	<1
West Virginia	405	413	2
Pennsylvania	3,389	3,485	3
Delaware	395	409	4
Connecticut	160	167	4
North Dakota	135	143	6
New Jersey	314	333	6
Idaho	124	133	7

State or territory	Average total compliance-monitoring activities per year FYs 2016–2019	Total compliance-monitoring activities in FY 2020	Percentage change between FY 2020 and historical average
Louisiana	642	708	10
Missouri	681	762	12
Maine	343	396	16
Utah	220	265	20
Arizona	324	395	22
Nevada	116	148	27
Hawaii	126	161	28
Kansas	353	530	50
Colorado	383	588	54
Illinois	411	688	67
New Mexico	131	434	231
North Carolina	889	2,970	234

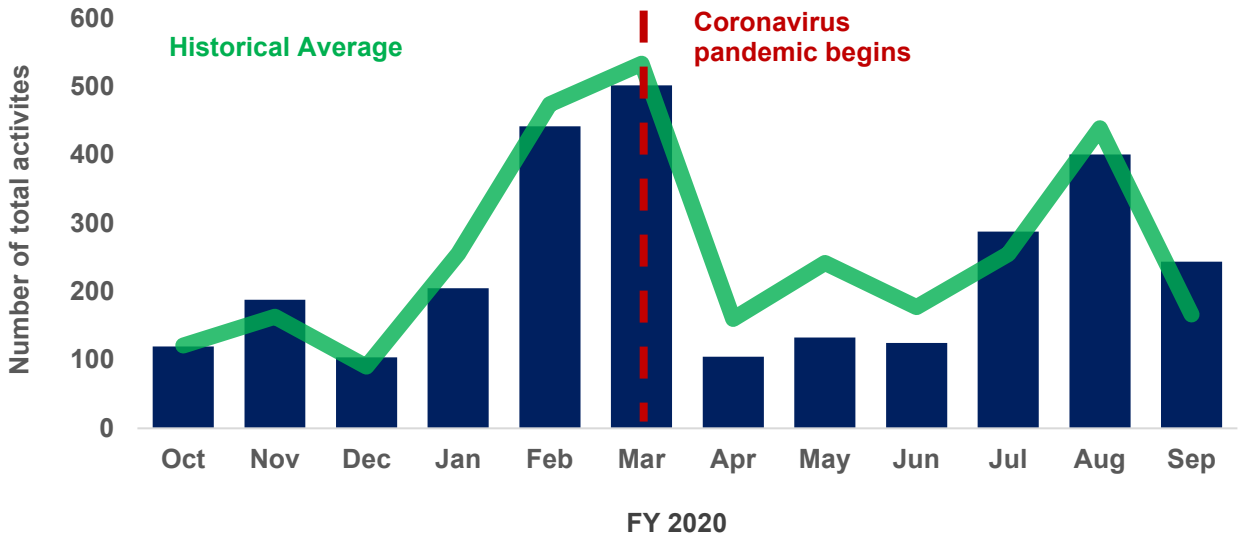
Source: OIG analysis of ECHO data. (EPA OIG table)

Compliance-Monitoring Activities at Title V-Major Sources for State and Local Agencies Reviewed

The figures below show the following for each of the state and local agencies we reviewed: (1) total compliance-monitoring activities at Title V-major sources by month in FY 2020 compared to the historical average; (2) on-site FCEs at Title V-major sources by month in FY 2020 compared to the historical average; and (3) off-site FCEs at Title V-major sources by month in FY 2020 compared to the historical average. The Indiana Department of Environmental Management did not conduct any off-site FCEs in FY 2020.

Georgia

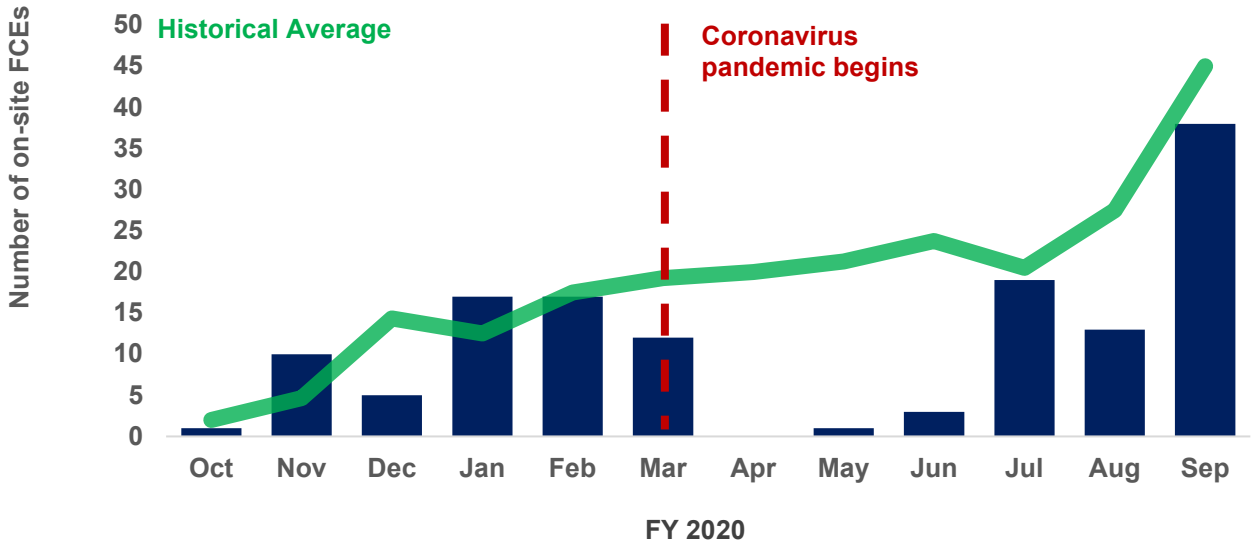
Figure B-1: Total compliance-monitoring activities at Title V-major sources in Georgia in FY 2020 compared to the historical average,* by month



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

* The historical average for October, November, and December is based on FYs 2017–2019 data. The historical average for all other months is based on FYs 2016–2019 data.

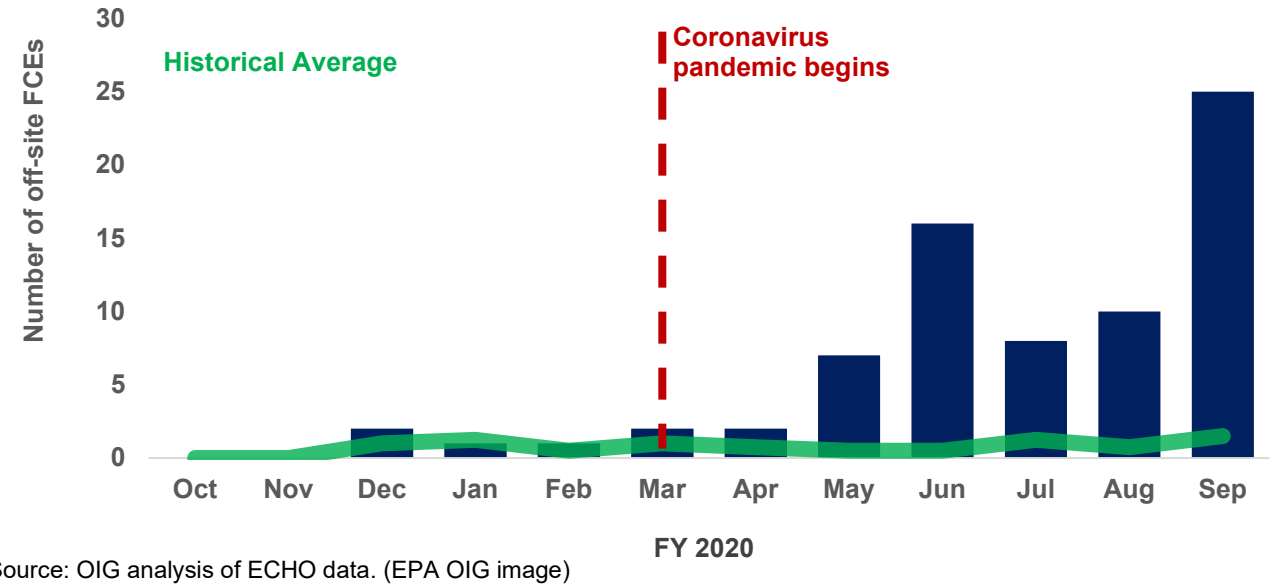
Figure B-2: On-site FCEs at Title V-major sources in Georgia in FY 2020 compared to the historical average,* by month



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

* The historical average for October, November, and December is based FYs 2017–2019 data. The historical average for all other months is based on FYs 2016–2019 data.

Figure B-3: Off-site FCEs at Title V-major sources in Georgia in FY 2020 compared to the historical average,* by month

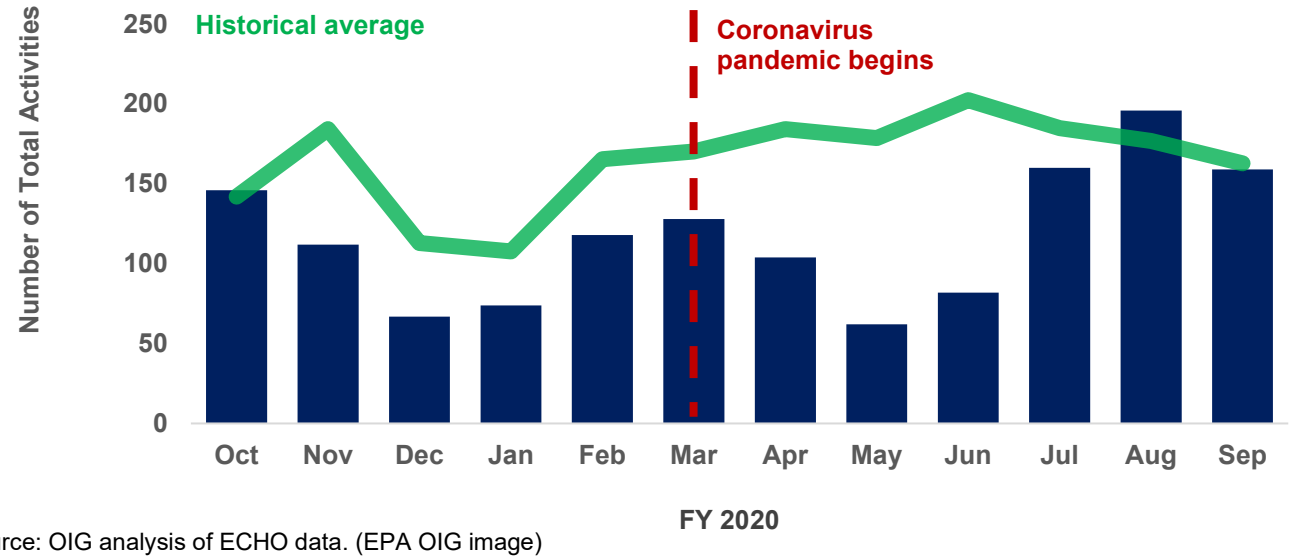


Source: OIG analysis of ECHO data. (EPA OIG image)

* The historical average for October, November, and December is based on FYs 2017–2019 data. The historical average for all other months is based on FYs 2016–2019 data.

Indiana

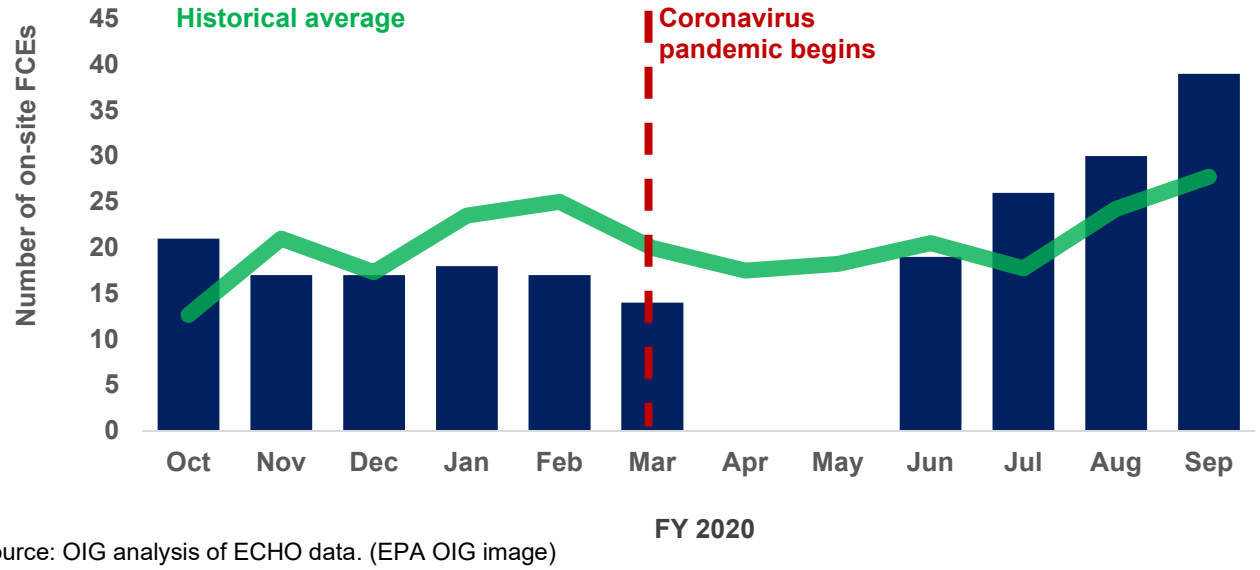
Figure B-4: Total compliance-monitoring activities at Title V-major sources in Indiana in FY 2020 compared to the historical average,* by month



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

* The historical average for October, November, and December is based on FYs 2017–2019 data. The historical average for all other months is based on FYs 2016–2019 data.

Figure B-5: On-site FCEs at Title V-major sources in Indiana in FY 2020 compared to the historical average,* by month

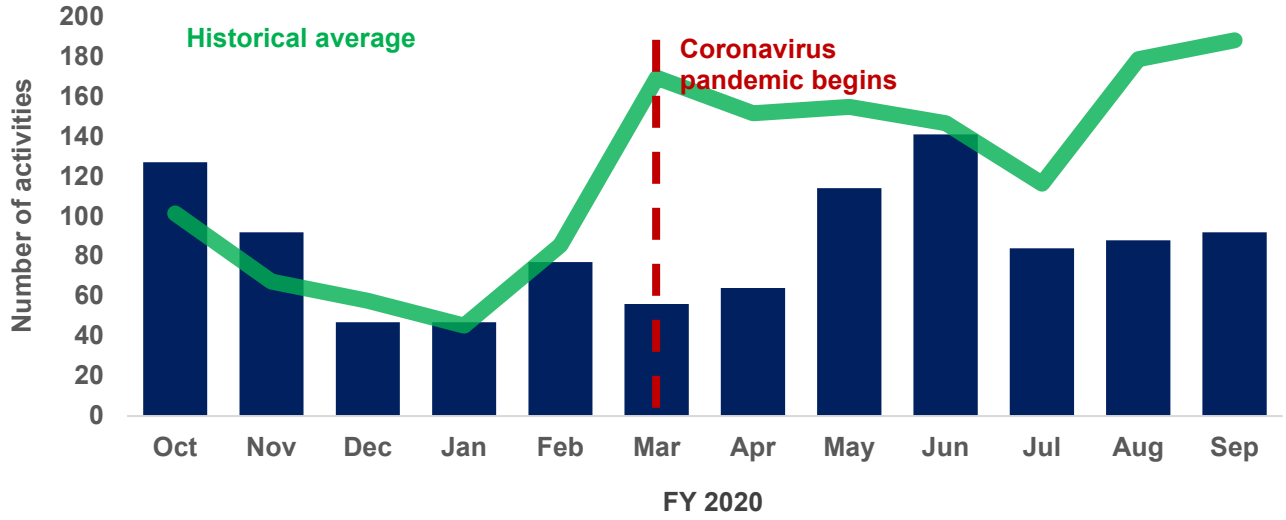


Source: OIG analysis of ECHO data. (EPA OIG image)

* The historical average for October, November, and December is based on FYs 2017-2019 data. The historical average for all other months is based on FYs 2016–2019 data.

South Coast Air Quality Management District (California)

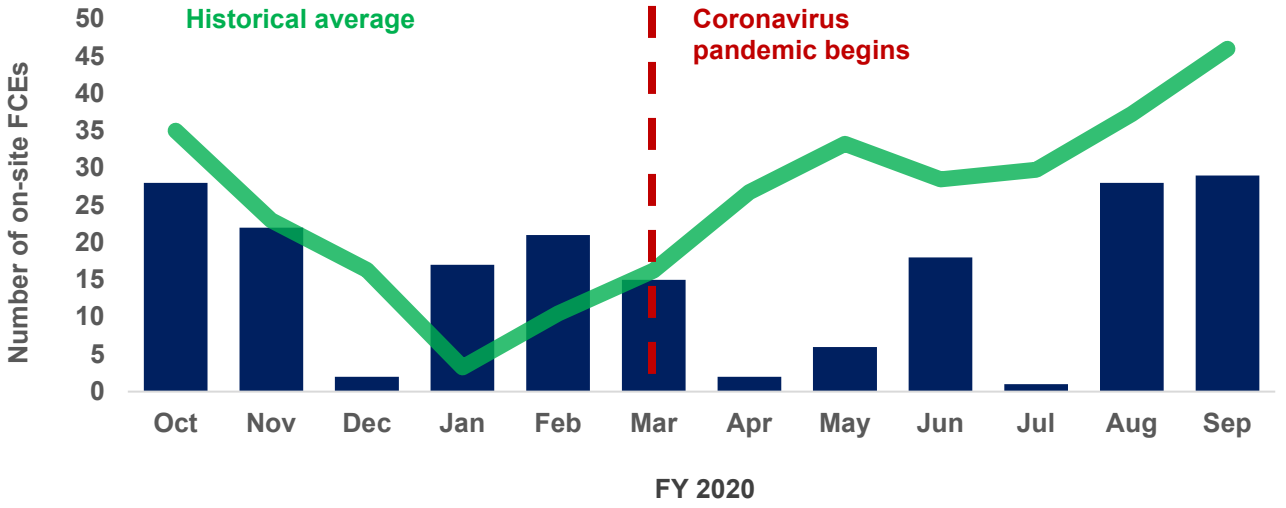
Figure B-6: Total compliance-monitoring activities at Title V-major sources in South Coast in FY 2020 compared to the historical average,* by month



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

* The historical average for October, November, and December is based on FYs 2017–2019– data. The historical average for all other months is based on FYs 2016–2019 data.

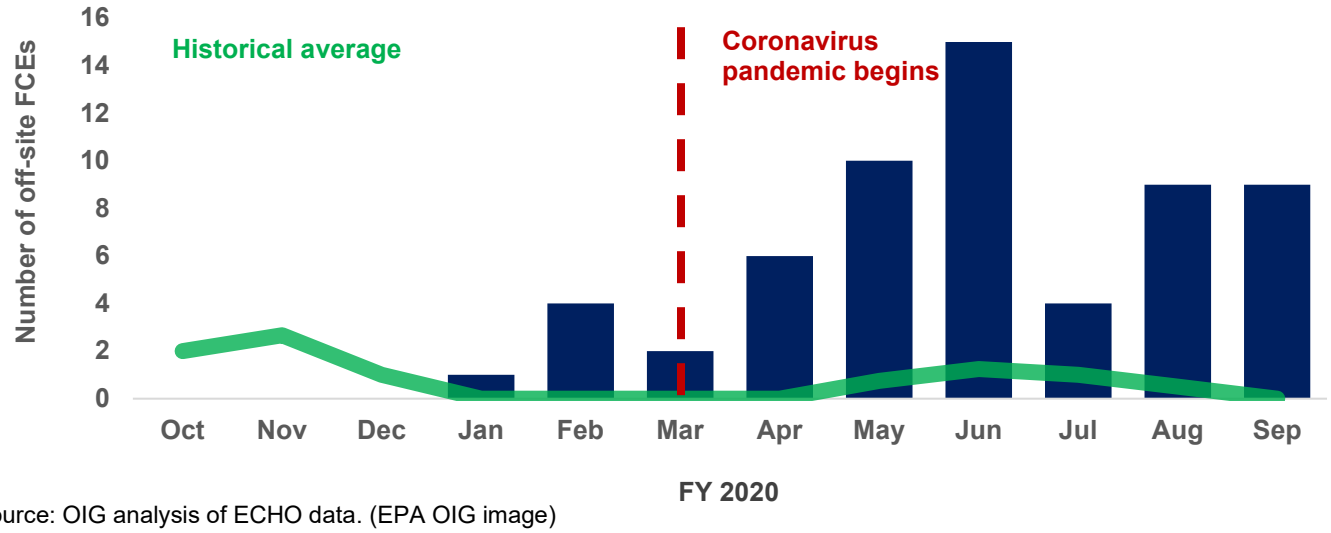
Figure B-7: On-site FCEs at Title V-major sources in South Coast in FY 2020 compared to the historical average,* by month



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

* The historical average for October, November, and December is based on FYs 2017–2019 data. The historical average for all other months is based on FYs 2016–2019 data.

Figure B-8: Off-site FCEs at Title V-major sources in South Coast in FY 2020 compared to the historical average,* by month



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

* The historical average for October, November, and December is based on FYs 2017–2019 data. The historical average for all other months is based on FYs 2016–2019 data.

Agency Response to Draft Report

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

OFFICE OF
ENFORCEMENT AND
COMPLIANCE ASSURANCE

September 22, 2021

MEMORANDUM

SUBJECT: Response to Office of Inspector General Draft Report: "*Total National Clean Air Act Compliance Monitoring Activities Decreased Slightly During Coronavirus Pandemic, but State Activities Varied Widely*." Project No. OE-FY21-0065, August 9, 2021

FROM: Lawrence E. Starfield
Acting Assistant Administrator

LAWRENCE STARFIELD Digitally signed by LAWRENCE STARFIELD Date: 2021.09.22 15:58:58 -04'00'

TO: Tina Lovingood
Director, Pollution Control and Cleanup
Office of Audit
Office of Inspector General

EPA's Office of Enforcement and Compliance Assurance (OECA) appreciates the opportunity to respond to the draft findings and recommendations presented in the Office of Inspector General (OIG) draft report, "*Total National Clean Air Act Compliance Monitoring Activities Decreased Slightly During Coronavirus Pandemic, but State Activities Varied Widely*." In general, OECA is largely in agreement with the OIG findings; however, we do have one remaining concern regarding the assessment of the reported data reviewed by the OIG.

EPA agrees with the OIG on the importance of compliance monitoring activities for assuring facilities comply with applicable Clean Air Act (CAA) requirements and air regulations. We appreciate and agree with the OIG findings that the total number of CAA compliance monitoring activities decreased only slightly during the coronavirus pandemic and delegated agencies were able to continue relying upon the CAA Stationary Source Compliance Monitoring Strategy (CMS) as EPA's primary guidance for prioritizing facilities for evaluation. (OECA provided flexibility to adjust compliance monitoring commitments during the COVID-19 public health emergency in a July 22, 2020 letter, and state and local agencies subject to the review informed the OIG that they were able to continue to meet CMS commitments despite the challenges posed by the pandemic.) We also agree with the OIG's conclusion that, in relying upon the CMS,

delegated agencies continued to prioritize conducting evaluations at the largest emitters of potential excess emissions, consistent with EPA guidance.

As the OIG report points out, many state, local, and territorial agencies shifted the type of some compliance monitoring activities from on-site to off-site compliance monitoring activities in response to the pandemic consistent with our July 22, 2020 letter. As a result, the data reviewed by the OIG showed not only that the number of such activities varied widely among the agencies, but certain agencies reported a substantial decline in activity. We agree with the OIG that consistent monitoring can deter violations that result in excess emissions and a substantial decline in compliance monitoring activities may both limit the deterrent effect on facilities' noncompliance and increase the risk that noncompliance may go undetected.

OECA Concern

In order to **provide context to the data reviewed, we believe it would be beneficial for the OIG report to include a complete assessment of the reported data.** To that end, we request the report be expanded to acknowledge some of the additional factors contributing to the decline in compliance monitoring activities reported to the national CAA compliance and enforcement database, ICIS-Air. Documenting these factors in the report will enable a more comprehensive understanding of the extent to which a reported decline in overall activities actually reduced the deterrent effect or led to an increase in noncompliance going undetected. These factors include the following:

1) In reviewing the data reported by the delegated agencies, the OIG analysis was limited in accounting for all compliance monitoring activity conducted.

a) Some of the data reported by the delegated agencies is voluntarily reported (e.g., off-site partial compliance evaluations), and therefore may not reflect the full or consistent set of activities conducted.
b) Agencies shifted some compliance monitoring activities from on-site to off-site activities in response to the pandemic, consistent with our guidance. However, they are generally not required to report off-site activities in ICIS-Air and may have alternatively documented such activity in another reporting mechanism (e.g., spreadsheet; end-of-year report). Thus, the overall decline in reported compliance monitoring activities as shown in the database may not fully capture all activities conducted.

OIG Response 1: While we agree that delegated agencies are not required to report most off-site PCEs, we do note that they are required to report off-site FCEs and stack tests. We explain in the Scope and Methodology section that reporting of PCEs and activities for most minor sources is voluntary.

2) As the OIG report confirmed, the agencies continued to successfully prioritize full compliance evaluations at the largest emitters of air pollution, Title V major sources. Prior to the pandemic, many agencies typically exceeded their CMS commitments. While agencies reduced their field presence in response to the pandemic, resulting in a decline in reported activity, they managed to still meet their CMS commitments, which is a benchmark for providing the needed oversight for deterring noncompliance.

OIG Response 2: While the three state and local agencies we reviewed told us they typically exceed CAA CMS commitments and were able to still meet them in FY 2020, we do not have evidence that this is the case for all states and territories that reported declines in their compliance monitoring activities. We have added statements to the report to reflect that the Agency told us some states typically exceed their CAA CMS commitments and thus, despite declines, still met commitments in FY 2020. We also added a statement that the three state and local agencies we reviewed told us this was the case for them.

3) The period of the OIG evaluation for which data was compared extended back to fiscal year 2016. During this time, certain states had a decline in their overall source universe. With fewer facilities operating, there necessarily would be a decline in the overall number of compliance monitoring activities. Moreover, the pandemic led to many facilities closing for an extended period in FY 2020. Consequently, activities such as stack test observations were not conducted, leading to a reduced number of overall compliance monitoring activities.

OIG Response 3: According to data in ECHO, at a national level as of October 6, 2021, the number of operating Title V-major facilities was higher in FY 2020 than any other year covered by the scope of our review, which was from FYs 2016 through 2020. Thus, while the number of sources may have declined in some states, the number of operating Title V-major sources was actually highest in FY 2020. Further, we compared the change in number of Title-V major sources to declines in total compliance-monitoring activities at Title V-major sources for the ten states and territories that had declines in FY 2020 of 25 percent or more. We found that the decline in activities could not be fully explained by a decline in Title-V major sources for any of them. Three of the ten states and territories with declines of 25 percent or more had increases in their number of Title-V major sources in FY 2020 compared to the historical average, one had no change, and five had declines between 0.2 percent and 7.3 percent. Only Vermont had a relatively large decline in Title-V major sources of 27.3 percent in FY 2020 compared to the historical average, which is less than its decline of 43 percent in total compliance-monitoring activities. Thus, Vermont's decline cannot be explained fully by the decline in Title-V major sources.

4) With the shifting away from on-site compliance monitoring activity due to the pandemic, the decline in the total number of reported activities is, in part, a result of agencies conducting fewer full compliance evaluations (FCEs) on-site at facilities. A reduced number of on-site FCEs is a consequence of stay-at-home orders, the need to protect the health of inspectors, and facilities not operating during the pandemic. [Note:

Once we are able to move beyond the pandemic, it would be helpful to analyze the extent to which agencies shifted away from conducting on-site FCEs at facilities during the pandemic with the resumption of a more normal inspection schedule and whether agencies are shifting back to on-site activities to ensure the necessary and appropriate field presence.]

OIG Response 4: We agree that the decline in total number of compliance-monitoring activities is in part due to a decline in on-site FCEs, which was the result of stay-at-home orders and the need to protect the health of inspectors. We believe this is adequately reflected in the report.

For your consideration, attached are Technical Comments that highlight the above comments and supplement this overall response.

For the recommended corrective actions, EPA appreciated the August 27, 2021 meeting with the OIG to discuss suggested changes. We have proposed revisions to the recommendations consistent with our discussion and believe implementation of the OIG recommendations as revised would be beneficial. We acknowledge your email of September 9, 2021, which indicates your office would not accept our proposed revisions. However, we continue to believe the revisions are appropriate and request that you review our proposed corrective actions and reconsider the recommendation revisions. We provide below OECA's narrative response to the revised recommendations and a table with the suggested corrective actions with an estimated timeframe for completion.

OIG Recommendation 1
EPA Response
OECA will coordinate with the EPA regional offices in evaluating the needs of the state and territorial agencies with reported declines of 25% or more in total compliance monitoring activities for fiscal year 2020 to determine if technical assistance is needed. For those agencies determined to be in need of technical assistance, OECA and the regional office will coordinate on the delivery of such assistance, as appropriate.

OIG Response 5: We agree with the Agency's proposed corrective actions in response to Recommendation 1. The Agency also provided an acceptable planned completion date as shown in the table below. Thus, Recommendation 1 is resolved with corrective actions pending.

OIG Recommendation 2
EPA Response
OECA will coordinate with the EPA regional offices in assessing a portion of fiscal year 2020 off-site FCEs reported by state and local agencies during the coronavirus pandemic to determine if they meet the requirements of a full compliance evaluation. In completing the assessment, OECA will determine if additional guidance is needed on what constitutes an off-site FCE, the

sources for which an off-site FCE is appropriate, and when a remote virtual component would be necessary. If such a determination is made, OECA will issue additional guidance.

OIG Response 6: We note that these corrective actions are in response to Recommendations 2 and 3, which the Agency suggested we combine into one recommendation (see "Table of Corrective Actions" below). The Agency refers to it here as Recommendation 2. We do not agree with combining these two recommendations since they are both distinct, discrete actions. We do agree with the Agency's proposed corrective actions and believe they are responsive to both Recommendations 2 and 3. The Agency also provided acceptable planned completion dates as shown in the table below for Recommendation 2 and in subsequent communications for Recommendation 3. Thus, Recommendations 2 and 3 are resolved with corrective actions pending.

OIG Recommendation 3
EPA Response
OECA will coordinate with the EPA regional offices in finalizing the Remote Video Partial Compliance Evaluations standard operating procedures.

OIG Response 7: The Agency proposed that we combine Recommendations 4, 5, and 6 into one recommendation with revised language (see "Table of Corrective Actions" below). The Agency refers to it here as Recommendation 3. We do not agree with combining them since they are distinct, discrete actions, and the Agency's proposed edits change the intent of Recommendation 4. We note that this proposed corrective action and planned completion date as shown in the table below were only responsive to Recommendation 5 and were appropriate to resolve Recommendation 5 but did not provide corrective actions for Recommendations 4 and 6. In subsequent communications, the Agency provided acceptable corrective actions and planned completion dates for Recommendations 4 and 6. Thus, Recommendations 4, 5, and 6 are resolved with corrective actions pending.

Table of Corrective Actions

Rec #	IG Draft Report Recommendations	EPA Suggested revisions	Corrective Action and Completion Dates
1	In coordination with the EPA regional offices, evaluate the needs of the state and local agencies in states and territories that had significant declines, as determined by the EPA, in their total compliance monitoring activities for fiscal year 2020 to determine whether technical assistance is needed and provide it as appropriate.	In coordination with the EPA regional offices, evaluate the needs of the state and local agencies in states and territories that had ~~significant declines, as determined by the EPA,~~ substantial declines, as considered by the OIG to be a decline of 25 percent or more, in their total compliance monitoring activities at major sources for fiscal year 2020 to determine whether technical assistance is needed and provide it as appropriate.	June 30, 2022, for completing evaluation of needs. September 30, 2022, to commence technical assistance for those state and territorial agencies determined to be in need of such assistance.

2	Assess a portion of off-site full compliance evaluations reported by state and local agencies during the coronavirus pandemic to determine whether they meet the requirements of a full compliance evaluation.	Combine Recs 2 – 3 to: In coordination with the EPA regional offices, assess a portion of off-site FCEs reported by state and local agencies during the coronavirus pandemic (fiscal year 2020) to determine whether they meet the requirements of an FCE. In completing the assessment, determine if additional guidance is needed on what constitutes an off-site FCE, the sources for which an off-site FCE is appropriate, and when a remote virtual component would be necessary. If such a determination is made, issue additional guidance.	December 30, 2022, for completing assessment of a portion of fiscal year 2020 off-site FCEs and, if necessary, issue additional guidance.
3	After assessing a portion of the off-site full compliance evaluations reported by state and local agencies during the coronavirus pandemic, determine whether additional guidance on what constitutes an off-site full compliance evaluation, the types of facilities where an off-site full compliance evaluation is appropriate, and when a remote visual component is necessary. If such a determination is made, issue updated guidance on off-site full compliance evaluations.		
4	Determine and document the conditions or parameters under which the use of remote video to conduct off-site partial compliance evaluations is feasible from a legal, technical, and programmatic perspective.	Combine Recs 4 – 6 to: Finalize the Remote Virtual Partial Compliance Evaluation (RVPCE) workgroup's standard operating procedures (SOP). Recognizing the high-level procedure needs to be adaptable for use across programs, the final procedure should provide guidance on conditions or parameters to ensure legal, technical, and programmatic sufficiency in any resulting enforcement response. Specific to the CAA stationary source program, the SOP also will provide guidance on the use of RVCPEs in conjunction with document reviews to qualify as an off-site FCE for purposes of the Clean Air Act Stationary Source Compliance Monitoring Strategy.	December 30, 2022, for finalizing RVPCE SOP.
5	Finalize the Remote Video Partial Compliance Evaluation workgroup's standard operating procedures.		
6	Determine whether and how remote video can be used in conjunction with document reviews to qualify as a full compliance evaluation for purposes of the *Clean Air Act Stationary Source Compliance Monitoring Strategy* and provide instruction to state and local agencies.		

OIG Response 8: As stated in OIG Responses 5, 6, and 7, we do not agree with the Agency's proposed edits to our recommendations, and the recommendations remain as stated in Chapter 2. However, the Agency did provide acceptable corrective actions and planned completion dates for all recommendations, either in this memorandum or in subsequent communications. Thus, all recommendations are resolved with corrective actions pending. Appendix D provides a table showing all agreed-upon corrective actions and planned completion dates.

If you have any questions regarding this response, please contact Gwendolyn Spriggs, OECA Audit Liaison, at spriggs.gwendolyn@epa.gov or (202) 564-2439.

Attachment

cc: David Cozad, Senior Advisor, OECA
John Blevins, Acting Regional Administrator, Region 4
Cheryl Newton, Deputy Regional Administrator, Region 5
Deborah Jordan, Deputy Regional Administrator, Region 9
John Dombrowski, OECA
Jacqueline Robles Werner, OECA
Rochele Kadish, OECA
Tony Miller, OECA
Rick Duffy, OECA
Bob Scinta, OECA
Robert Lischinsky, OECA
Gwendolyn Spriggs, OECA
Erica Hauck, OIG

Appendix D

Agreed-Upon Corrective Actions and Planned Completion Dates

Recommendation	Agreed-Upon Corrective Action	Agreed-Upon Planned Completion Date
In coordination with the EPA regional offices, evaluate the needs of the state and local agencies in states and territories that had significant declines, as determined by the EPA, in their total compliance-monitoring activities for fiscal year 2020 to determine whether technical assistance is needed and provide it as appropriate.	OECA will coordinate with the EPA regional offices in evaluating the needs of the state and territorial agencies with reported declines of 25 percent or more in total compliance-monitoring activities for FY 2020 to determine whether technical assistance is needed. For those agencies determined to be in need of technical assistance, OECA and the regional office will coordinate on the delivery of such assistance, as appropriate.	9/30/22
Assess a portion of off-site full compliance evaluations reported by state and local agencies during the coronavirus pandemic to determine whether they meet the requirements of a full compliance evaluation.	OECA will coordinate with the EPA regional offices in assessing a portion of FY 2020 off-site FCEs reported by state and local agencies during the coronavirus pandemic to determine whether they meet the requirements of an FCE. In completing the assessment, OECA will determine whether additional guidance is needed on what constitutes an off-site FCE, the sources for which an off-site FCE is appropriate, and when a remote virtual component would be necessary. If such a determination is made, OECA will issue additional guidance.	12/30/22
After assessing a portion of the off-site full compliance evaluations reported by state and local agencies during the coronavirus pandemic, determine whether additional guidance on what constitutes an off-site full compliance evaluation, the types of facilities where an off-site full compliance evaluation is appropriate, and when a remote visual component is necessary. If such a determination is made, issue updated guidance on off-site full compliance evaluations.		
Determine and document the conditions or parameters under which the use of remote video to conduct off-site partial compliance evaluations is feasible from a legal, technical, and programmatic perspective.	OECA will determine and document the conditions or parameters under which the use of remote video to conduct off-site PCEs is feasible from a legal, technical, and programmatic perspective.	12/30/22
Finalize the Remote Video Partial Compliance Evaluation workgroup's standard operating procedures.	OECA will coordinate with the EPA regional offices in finalizing the Remote Video Partial Compliance Evaluations SOP.	12/30/22
Determine whether and how remote video can be used in conjunction with document reviews to qualify as a full compliance evaluation for purposes of the *Clean Air Act Stationary Source Compliance Monitoring Strategy* and provide instruction to state and local agencies.	OECA will determine whether and how remote video can be used in conjunction with document reviews to qualify as an FCE for the purposes of the *Clean Air Act Stationary Source Compliance Monitoring Strategy* and provide instruction to state and local agencies.	12/30/22

Appendix E

Distribution

The Administrator
Deputy Administrator
Chief of Staff, Office of the Administrator
Deputy Chief of Staff, Office of the Administrator
Assistant Administrator for Enforcement and Compliance Assurance
Regional Administrators, Regions 1–10
Agency Follow-Up Official (the CFO)
Agency Follow-Up Coordinator
General Counsel
Associate Administrator for Congressional and Intergovernmental Relations
Associate Administrator for Public Affairs
Principal Deputy Assistant Administrator for Enforcement and Compliance Assurance
Regional Deputy Administrators, Regions 1–10
Director, Office of Continuous Improvement, Office of the Chief Financial Officer
Director, Office of Regional Operations
Audit Follow-Up Coordinator, Office of the Administrator
Audit Follow-Up Coordinator, Office of Enforcement and Compliance Assurance
Audit Follow-Up Coordinators, Regions 1–10