U.S. Environmental Protection Agency
Office of Inspector General

19-P-0168
June 3, 2019

At a Glance

Why We Did This Project

The Office of Inspector General (OIG) conducted this audit to determine whether the U.S. Environmental Protection Agency's (EPA's) existing internal controls effectively detect and prevent on-road heavy-duty (HD) vehicle emissions fraud. Effective internal controls provide reasonable—though not absolute—assurance that the potential for fraud is minimized.

In May 2018, we issued a companion audit report that focused on the EPA's light-duty vehicle compliance program: OIG Report No. 18-P-0181, *EPA Did Not Identify Volkswagen Emissions Cheating; Enhanced Controls Now Provide Reasonable Assurance of Fraud Detection*.

This report addresses the following:

- *Improving air quality.*
- *Compliance with the law.*

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

List of OIG reports.

EPA Demonstrates Effective Controls for Its On-Road Heavy-Duty Vehicle Compliance Program; Further Improvements Could Be Made

What We Found

The EPA's HD vehicle compliance program currently has controls to effectively detect and prevent noncompliance—a precursor to potential fraud.

The EPA demonstrated that its current internal controls are effective at detecting and preventing noncompliance in the on-road HD vehicle sector. Past instances of noncompliance have resulted in excess emissions of pollutants, which have significant and quantifiable negative impacts on human health and the environment.

The on-road HD sector is the fastest growing transportation sector in the United States based on fuel use and is a significant source of air pollution. Despite having fewer on-road vehicles than the light-duty sector, the HD sector accounted for 35 percent more fine particulate matter emissions in calendar year 2014 than the light-duty sector. Furthermore, the majority of emissions from the on-road HD sector come from diesel engines, which—unlike gasoline engines—typically operate more efficiently under conditions that produce higher emission levels of regulated pollutants like nitrogen oxides and carbon monoxide. Manufacturers may therefore be inclined to configure their diesel engines to operate at higher emission levels. In the 1990s, the EPA discovered that multiple HD manufacturers illegally used electronic engine controls to increase fuel efficiency at the expense of pollution control. This discovery highlighted the importance of compliance oversight and emission control in the HD sector, and the EPA made major changes to the HD vehicle compliance program, including adding regulatory tests to more accurately measure on-road emissions under real-world operating conditions. These changes were fully implemented in 2007.

Although we found that the agency demonstrated that its existing internal controls are effective, we identified specific risks to the EPA's goal of achieving public health and environmental benefits through its HD vehicle compliance program. We also identified areas where existing controls could be strengthened. These improvements will help the EPA better address risks, assure compliance with mobile source regulations, and protect human health and the environment.

Recommendations and Agency Planned Corrective Actions

We made eight recommendations to the Assistant Administrator for Air and Radiation, including defining measures to assess program performance; conducting a formal risk assessment that addresses specific risks; evaluating whether specific programmatic or regulatory changes are necessary; assessing whether the development of data analysis tools is feasible; evaluating opportunities for targeted testing; tracking compliance issues in a standardized manner; and developing procedures and criteria for referring compliance issues to the Office of Enforcement and Compliance Assurance. The EPA agreed with all recommendations. Two recommendations have been completed, and the others are resolved with corrective actions pending.