



At a Glance

Why We Did This Project

We conducted this audit to determine whether, in light of the 2015 Volkswagen (VW) emissions fraud case, the U.S. Environmental Protection Agency (EPA) currently has internal controls that can effectively detect and prevent on-road light-duty vehicle emissions fraud. Effective internal controls provide reasonable—though not absolute—assurance that the potential for fraud is minimized.

The EPA's light-duty vehicle compliance program implements mobile source regulations for cars and trucks weighing up to 14,000 pounds. The EPA conducts various types of testing at its laboratory in Ann Arbor, Michigan, to verify that light-duty vehicles adhere to these regulations.

In addition to this audit of the light-duty vehicle compliance program, the Office of Inspector General (OIG) has another ongoing project examining the EPA's on-road heavy-duty vehicle and engine compliance program.

This report addresses the following:

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

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EPA Did Not Identify Volkswagen Emissions Cheating; Enhanced Controls Now Provide Reasonable Assurance of Fraud Detection

What We Found

Overall, the EPA demonstrated that its current internal controls are effective and operate in an integrated manner to detect and prevent noncompliance in the light-duty vehicle sector. Noncompliance can and has led to excess emissions of pollutants, which have significant and quantifiable negative impacts on human health and the environment.

After uncovering VW's emissions fraud, the EPA's light-duty vehicle compliance program added controls to effectively detect and prevent noncompliance—a precursor to potential fraud.

In 2015, after being alerted to high emissions from VW vehicles by a third-party study, the EPA determined that VW used a "defeat device" in its diesel vehicles. This device fully activated the emission control system during regulatory testing (also referred to as "standard test cycles") but deactivated key functionality during all other kinds of operation, including normal driving. The EPA said it did not detect VW's fraud earlier because (1) light-duty diesels were a very small fraction of the total light-duty vehicle population and did not merit extraordinary oversight; (2) VW did not disclose, as required, the presence of a software design feature that modifies the way the emission control system operates when certain vehicle parameters exist; and (3) the EPA relied on standard test cycles and had no controls to detect VW's sophisticated defeat device.

Since the discovery of VW's emissions fraud in 2015, the EPA has responded to the risk of defeat devices by augmenting its testing with new control activities known as "special testing." By screening for defeat devices using variations of the standard test cycles, new test cycles, and Portable Emissions Monitoring Systems that measure on-road emissions, special testing can detect whether any design features are altering the operation of emission control systems. The EPA has effectively used special testing to detect noncompliance by other manufacturers.

While the OIG found that the EPA demonstrated that its existing internal controls are effective, we also identified some areas where these controls could be further strengthened. These improvements will help the EPA better address strategic risks and achieve compliance with mobile source regulations.

Recommendations and Planned Agency Corrective Actions

We made seven recommendations to the Assistant Administrator for Air and Radiation on defining performance measures; conducting a formal risk assessment; formalizing the role of special testing; tracking compliance issues; better using remote sensing and other data sources; updating email inboxes maintained for feedback; and developing protocols for sharing information with the EPA's regulatory partner, the California Air Resources Board. The EPA agreed with all of our recommendations and provided acceptable corrective actions, two of which are completed.