



U.S. HOUSE OF REPRESENTATIVES
COMMITTEE ON ENERGY AND COMMERCE

October 6, 2015

TO: Members, Subcommittee on Oversight and Investigations

FROM: Committee Majority Staff

RE: Hearing on “Volkswagen’s Emissions Cheating Allegations: Initial Questions”

I. INTRODUCTION

On Thursday, October 8, 2015, at 10:00 a.m. in 2123 Rayburn House Office Building, the Subcommittee on Oversight and Investigations will hold a hearing entitled “Volkswagen’s Emissions Cheating Allegations: Initial Questions.” This hearing will examine the available facts and the initial compliance and consumer issues stemming from Volkswagen AG’s reported use of engine software that would reduce the effectiveness of emissions control systems in certain make and model year diesel passenger vehicles in the United States, in apparent violation of the Clean Air Act and its implementing regulations.

II. WITNESSES

There will be two witness panels:

Panel 1:

- Michael Horn, President and Chief Executive Office, Volkswagen Group of America.

Panel 2:

- Christopher Grundler, Director, Office of Transportation and Air Quality, Office of Air and Radiation; and
- Phillip Brooks, Director, Air Enforcement Division, Office of Enforcement and Compliance Assurance, U.S. Environmental Protection Agency.

III. SUMMARY

On September 18, 2015, the Environmental Protection Agency (EPA) issued a Notice of Violation (NOV) to Volkswagen AG, Audi AG, and Volkswagen Group of America (collectively, VW) based on a determination “that VW manufactured and installed defeat

devices" in certain model year Volkswagen and Audi diesel passenger cars.¹ The agency alleged that VW installed engine software that "sensed" when the vehicles were undergoing emissions testing and ensured emissions control systems were operating to pass the tests. During normal vehicle use, according to the agency, the software would "switch" to a different mode that produced emissions of nitrogen oxides (NOx) up to 10 to 40 times above current EPA standards. The California Air Resource Board (CARB), which investigated the matter with EPA, issued its own "In-Use Compliance Letter" to VW at the same time.²

The installation and use of a component — in this case engine software — to "bypass, defeat, or render inoperative elements of the vehicles' emission control system," would violate the Clean Air Act (CAA) and EPA regulations.³ The alleged violations involve MY2009 to MY2015 VW and Audi vehicles equipped with 2.0 liter diesel engines, a vehicle population of approximately 480,000 in the United States.⁴ Press reports in the wake of EPA's announcement suggest the violations could affect approximately 11 million vehicles worldwide.⁵

EPA and CARB have initiated enforcement investigations, which are ongoing. No fines or recalls to bring the vehicles into compliance have been announced to date. EPA also is expanding its review of other vehicles. The agency notified automakers on September 25, 2015, that it would add to its regimen of "confirmatory testing additional evaluations to look for additional defeat devices."⁶ Multiple agencies and foreign governments also have launched their own investigations into VW's conduct.

VW has publically admitted and apologized for violating EPA's regulations and currently is conducting its own investigation and examining solutions to fix the software. The company also has announced significant changes to its leadership and corporate structure. On September 23, 2015, the company's CEO, Dr. Martin Winterkorn, resigned.⁷ He was replaced by Matthias Muller, who most recently led the company's Porsche division. In addition, on September 25, 2015, the company has suspended the leaders of the VW, Audi, and Porsche research and development divisions and announced a restructuring of its North American business unit. The company has set aside more than \$7 billion to address this alleged violation.

¹ Notice of Violation, EPA to Volkswagen AG, Audi AG and Volkswagen Group of America (September 18, 2015) available at <http://www3.epa.gov/otaq/cert/documents/vw-nov-caa-09-18-15.pdf>, at 1 (hereinafter, NOV).

² Letter from Cal. Air Resources Board to VW (September 18, 2015) available at http://www.arb.ca.gov/newsrel/in_use_compliance_letter.htm, at 1 (Hereinafter, CARB Letter)

³ NOV, at 1-2.

⁴ Affected U.S. diesel models, according to EPA: MY2009 VW Jetta, Jetta Sportwagen; MY2010 VW Golf, Jetta, Jetta Sportwagen, Audi A3; MY2011 VW Golf, Jetta, Jetta Sportwagen, Audi A3; MY2012 to MY2015 VW Beetle, Beetle Convertible, Golf, Jetta, Jetta Sportwagen, Passat, and Audi A3.

⁵ Mark Thompson and Ivana Kottasova, CNN Money, *Volkswagen scandal widens* (September 22, 2015) available at, <http://money.cnn.com/2015/09/22/news/vw-recall-diesel/>.

⁶ EPA Update on Recent Volkswagen Announcement (September 25, 2015) available at <http://yosemite.epa.gov/opa/admpress.nsf/Press%20Releases%20from%20Headquarters?OpenView>

⁷ Jack Ewing, N.Y. Times, *Volkswagen C.E.O. Martin Winterkorn Resigns Amid Emissions Scandal* (Sept. 23, 2015) available at http://www.nytimes.com/2015/09/24/business/international/volkswagen-chief-martin-winterkorn-resigns-amid-emissions-scandal.html?_r=0

IV. **BACKGROUND**

A. ***Clean Air Act and EPA Regulations***

The Clean Air Act and its implementing regulations are intended to protect human health and the environment by limiting pollution caused by emissions from various sources. Title II of the CAA grants EPA the authority to establish and regulate emissions standards for mobile sources, including automobiles. Among the pollutants regulated under Title II, significant attention is placed on NOx.⁸ In combination with volatile organic compounds (VOCs), NOx contributes to the production of ground-level ozone.

Current emissions requirements for new motor vehicles, known as “Tier 2” standards, were promulgated in 2000 and phased in beginning in MY2004 vehicles, with full compliance required by MY2009.⁹ The Tier 2 standards required manufacturers to reduce NOx emissions by 88% to 95%, depending on vehicle type, though compliance is based on fleet-wide emissions, rather than certification of each individual vehicle.¹⁰ In 2014, new Tier 3 standards went into effect and will generally be phased in between MY2017 and MY2025.¹¹

Compliance with EPA’s motor vehicle emissions standards is governed by section 203 of the CAA. Prior to introducing a vehicle for sale in the United States, manufacturers must demonstrate that the vehicle meets emissions standards and obtain a certificate of conformity (COC) from the EPA. In the COC application submitted to the EPA, the manufacturer must list all auxiliary emission control devices (AECDs) installed on the vehicle.¹² An AECD is defined as “any element of design which senses temperature, vehicle speed, engine RPM, transmission gear, manifold vacuum, or any other parameter for the purpose of activating, modulating, delaying or deactivating the operation of any part of the emission control system.”¹³ The manufacturer must also justify each AECD and explain why it is not a “defeat device.”¹⁴ An AECD is considered a “defeat device” if it:

. . . reduces the effectiveness of the emission control system under conditions which may reasonably be expected to be encountered in normal vehicle operation and use, unless: (1) Such conditions are substantially included in the Federal emission test procedure; (2) The need for the AECD is justified in terms of protecting the vehicle against damage or accident; (3) The AECD does not go beyond the requirements of engine starting; or (4) The AECD applies only to emergency vehicles . . .¹⁵

It is a violation of the CAA to manufacture or sell any part or component if it will:

⁸ The EPA estimates that on-road vehicles account for 38% of NOx emissions.

⁹ [CRS Report R43497, Tier 3 Motor Vehicle Standards](#) (April 28, 2014) at 1-2.

¹⁰ *Id.*, at 2.

¹¹ *Id.*, at 3-4.

¹² NOV, at 2.

¹³ 40 C.F.R. § 86.1803-01

¹⁴ 40 C.F.R. § 86.1844-01(d)(11).

¹⁵ 40 C.F.R. § 86.1803-01.

. . . bypass, defeat, or render inoperative any device or element of design installed on or in a motor vehicle or motor vehicle engine in compliance with regulations under this subchapter, and where the person knows or should know that such part or component is being offered for sale or installed for such use or put to such use.¹⁶

It is also a violation to sell, market, or import any new motor vehicle if it is not covered by a valid EPA-issued COC.¹⁷ Violations of these provisions are subject to civil penalties of up to \$3,750 and \$37,500, respectively, for any vehicle sold, marketed, or imported on or after January 13, 2009.¹⁸

EPA's Office of Transportation and Air Quality (OTAQ) oversees a broad set of compliance activities to ensure that vehicles manufacturers satisfy regulatory requirements. These include the review of COC applications and a variety of testing and other requirements that occur over the life a vehicle. In addition to review of manufacturer supplied testing data, EPA's own testing may include so-called "confirmatory testing," both random and targeted, and in use compliance testing. In addition, OTAQ conducts defect reporting programs and recall programs. According to available historical data, emissions recalls affect about three million vehicles annually.¹⁹

B. Timeline

Set forth below is a timeline of key events related to the VW emissions allegations. Note that the Committee's investigation is ongoing; the Committee will be receiving documents and collecting information in coming weeks that will illuminate the facts and circumstances of these events.²⁰ The information in this timeline is largely drawn from public sources and is presented to assist Committee Members during the hearing before the Subcommittee.

- May 2014: A study conducted by independent researchers at West Virginia University (WVU) on behalf of the International Council for Clean Transportation (ICCT) identified significantly higher on-road NOx emissions from two VW vehicles — a 2012 Jetta and a 2013 Passat.²¹ The results of this study were brought to the attention of the EPA, CARB, and VW.
- May 2014 to December 2014: CARB and EPA launched investigations into the higher emissions in VW vehicles. VW initiated testing to replicate the ICCT/WVU research and

¹⁶ CAA Section 203(a)(3)(B), 42 U.S.C. § 7522(a)(3)(B).

¹⁷ CAA Section 203(a)(1), 42 U.S.C. § 7522(a)(1).

¹⁸ NOV, at 5.

¹⁹ See [Vehicle & Engine Compliance Activities: 2009-2011 Compliance Report](http://www3.epa.gov/otaq/documents/cert/420r13006.pdf), EPA, December 2013, available at <http://www3.epa.gov/otaq/documents/cert/420r13006.pdf>.

²⁰ See Committee letters to VW and EPA, available at <http://energycommerce.house.gov/letter/letters-volkswagen-and-epa-regarding-volkswagen-emissions-issues>.

²¹ NOV, at 4.

identify technical causes for the higher on-road emissions observed by the researchers.²² VW asserted to EPA and CARB that “increased emissions from these vehicles could be attributed to various technical issues and unexpected in-use conditions.”²³

- December 2, 2014: VW shared testing results with EPA and CARB and proposed a “recalibration fix for the Gen1 (Lean NOx Trap technology) and Gen2 (Selective Catalytic Reduction (SCR) Technology) . . .”²⁴
- December 2014: VW initiated a voluntary recall of approximately 500,000 vehicles in the United States. The recall included MY2009 to MY2014 diesel vehicles equipped with Gen1 and Gen2 technology.²⁵
- May 6, 2015: CARB commenced testing to confirm that VW’s recall solution addressed the higher on-road emissions.²⁶
- May 6, 2015 to July 2015: CARB conducted laboratory and on-road testing to confirm the efficacy of the recall.²⁷ The testing showed limited improvement, prompting CARB to expand its investigation.²⁸
- July 8, 2015: CARB shared test results with VW and the EPA, prompting a series of technical meetings. According to CARB, in the course of those meetings, “VW disclosed that Gen1, Gen2, and the 2015 model-year improved SCR vehicle (known as Gen3) had a second calibration intended to run only during confirmatory testing.”²⁹
- August 2015: EPA and CARB informed VW that they would not issue certificates of conformity for 2016 vehicles until VW could explain the higher emissions and provide assurance that they would not occur in 2016 vehicles.^{30,31}
- September 3, 2015: VW admitted to EPA and CARB that it had designed and installed what was effectively a defeat device into these vehicles.
- September 18, 2015: EPA sent VW a Notice of Violation. CARB sent VW an in-use compliance letter.
- September 21, 2015: VW CEO, Dr. Martin Winterkorn, issued a public apology.

²² CARB Letter.

²³ NOV, at 4.

²⁴ CARB Letter, at 2.

²⁵ *Id.*

²⁶ *Id.*

²⁷ NOV, at 4.

²⁸ *Id.*

²⁹ CARB, at 2.

³⁰ NOV, at 4.

³¹ EPA has not certified MY2016 vehicles and will not do so until it understands this issue.

- September 23, 2015: Dr. Winterkorn resigned from VW.
- September 25, 2015: EPA announced it is adding additional confirmatory testing of passenger vehicles intended as an effort to identify any additional defeat devices.
- September 25, 2015: VW suspended the leaders of the VW, Audi, and Porsche research and development divisions and announced a restructuring of its North American business unit.

V. Questions and Issues:

The following issues may be addressed at the hearing:

- What has been Volkswagen's response to the EPA allegations?
- What are the available facts concerning VW's violations?
- What is EPA's role in any measures to bring affected VW's into compliance?
- What can VW consumers expect going forward?

VI. Staff Contacts

If you have any questions regarding this hearing, please contact Peter Spencer or John Ohly of the majority Committee staff at (202) 225-2927.