



December 14, 2015

VIA ELECTRONIC DELIVERY

The Honorable Fred Upton
Chairman
Committee on Energy & Commerce

The Honorable Frank Pallone, Jr.
Ranking Member
Committee on Energy & Commerce

The Honorable Timothy F. Murphy
Chairman
Subcommittee on Oversight &
Investigations
Committee on Energy & Commerce
United States House of Representatives
2125 Rayburn House Office Building
Washington, DC 20515

The Honorable Diana L. DeGette
Ranking Member
Subcommittee on Oversight &
Investigations
Committee on Energy & Commerce
United States House of Representatives
2322A Rayburn House Office Building
Washington, DC 20515

Dear Chairman Upton, Chairman Murphy, Ranking Member Pallone, and Ranking Member DeGette:

On behalf of Volkswagen Group of America, Inc. (“VWGoA”), Volkswagen AG, and Audi AG (collectively, the “Company”), I write in response to your letter dated November 23, 2015 containing additional questions for the record regarding the October 8, 2015 hearing entitled “Volkswagen Emissions Cheating Allegations: Initial Questions.” As you know, the Company remains committed to assisting the Committee on Energy and Commerce (the “Committee”) in its inquiry, as it continues to work to develop solutions for its customers in the midst of internal and external investigations. To this end, please find enclosed the following initial responses to certain of the Committee’s questions, which reflect the Company’s present information and understanding:

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Questions from Chairman Murphy

Question 1: Mr. Horn, please describe your background with Volkswagen: a) When did you start as President of and CEO of Volkswagen Group of America? b) Prior to that, what was your involvement in the U.S. market?

Response: Mr. Horn joined VWGoA as CEO and President in January 2014. Prior to January 2014, Mr. Horn served as the Global Head of After Sales at Volkswagen AG. This position at Volkswagen AG includes responsibility for the U.S. market.

Question 2: Describe your basic function as CEO as it relates to Volkswagen's U.S. operations? a) What is your role in certifying the information provided to federal regulators, if any? b) If not you, who at VW Group of America certifies the information submitted to federal regulators?

Response: VWGoA is the authorized U.S. importer of Volkswagen and Audi vehicles. The Chief Executive Officer is the highest ranking officer of VWGoA. VWGoA does not certify information provided to federal emission regulators. Volkswagen's Environmental Engineering Office ("EEO") formats, as appropriate, and forwards to federal emissions regulators information and material prepared by responsible departments of Volkswagen AG and Audi AG.

Question 3: As CEO what weekly reporting do you receive relating to issues such as compliance issues or safety issues?

Response: The CEO of VWGoA receives regular management briefings, which include information about quality, compliance, and safety matters, presented by VWGoA's Group Quality Department.

Question 4: Please describe VW's operations in Auburn Hills, Michigan, and at the Oxnard, California facility, how the operations relate and reporting relationships to you and Germany.

Response: The EEO in Auburn Hills, Michigan communicates with U.S. emissions regulators and trade groups on behalf of Volkswagen Group companies, including the manufacturers Volkswagen AG and Audi AG. The Oxnard, California facility is a testing center capable of conducting certification level emissions testing for U.S. state and federal standards. Activities at both locations are conducted pursuant to a service

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agreement between VWGoA and Volkswagen AG and annual operating plans or project orders from Volkswagen AG, Audi AG or other Volkswagen Group manufacturers.

Question 5: In your testimony before the Committee, you stated that you learned of the defeat device subject to the September 18, 2015 Notice of Violation shortly before a September 3, 2015 meeting with the EPA and CARB where VW admitted the existence of the defeat device. a) Who informed you of this information? b) Were you provided with an explanation as to why it had not been previously disclosed? If so, please explain.

Response: VWGoA understands that, to the best of Mr. Horn's recollection, he was informed of this information at a meeting with counsel shortly before the September 3, 2015 meeting with the EPA and CARB. In addition, around August 21, 2015, Mr. Horn was forwarded an email in which the term "defeat device" was used. That email was sent from Annette Hebert at CARB to EEO. Mr. Horn does not recall being provided with any explanation as to why it was not previously disclosed.

Question 6: In May 2014, independent researchers published a report that first identified higher than expected on-road emissions in VW vehicles, prompting investigations by CARB and EPA. a) When did VW become aware of this research? b) What steps did VW take to evaluate the conclusions of the research? c) Where was this done or who was responsible for this?

Response: Volkswagen became aware of the West Virginia study sometime in April or May of 2014. With respect to the other aspects of the question, these matters are currently under active investigation. As the Committee is aware, the Company is conducting investigations on a world-wide scale into all aspects of the emissions issue. While these thorough investigations have already begun, any information developed at this stage is preliminary. The Company asks for your continued understanding as it completes the work necessary to determine the answers to these important questions.

Question 7: EPA and CARB both described a series of presentations or discussions with VW in the wake of this research in May 2014. a) Who from VW was interacting with the EPA and CARB? Were those individuals part of VW of America, VW AG or both? b) What did VW of America understand about the cause of the higher on-road emissions between May 2014 and the voluntary recall in December 2014?

Response: These matters are currently under active investigation. As the Committee is aware, the Company is conducting investigations on a world-wide scale into all aspects

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of the emissions issue. While these thorough investigations have already begun, any information developed at this stage is preliminary. The Company asks for your continued understanding as it completes the work necessary to determine the answers to these important questions.

Question 8: In December 2014, VW conducted a voluntary recall that at least in part sought to address the higher on-road emissions in MY2009-MY2014 vehicles subject to these allegations. a) Who was responsible for developing the technical solution implemented in December 2014? b) What role did VW of America have in developing and validating that solution? c) At that time, did you or anyone in VW of America have any knowledge of the alleged defeat device? If so, why did you not fix it at that time?

Response: The technical solution implemented as part of the December 2014 voluntary recall was developed by the Powertrain Development Department at Volkswagen AG in Germany. With respect to the other aspects of your question, these matters are currently under active investigation. As the Committee is aware, the Company is conducting investigations on a world-wide scale into all aspects of the emissions issue. While these thorough investigations have already begun, any information developed at this stage is preliminary. The Company asks for your continued understanding as it completes the work necessary to determine the answers to these important questions.

Question 12: Press reports suggest that VW installed this software in 2008 because the company could not balance emissions standards and cost controls. a) Is this true and if so, who was responsible for these decisions? b) This software appears rather sophisticated and complex, yet the company could not figure out how to control emissions during on road testing to meet emissions standards? c) This apparently went on years - if the company knew the vehicles did not meet emissions standards, why was it allowed to persist for so many years? Did the company make any effort to develop solutions to bring the vehicles into compliance?

Response: These matters are currently under active investigation. As the Committee is aware, the Company is conducting investigations on a world-wide scale into all aspects of the emissions issue. While these thorough investigations have already begun, any information developed at this stage is preliminary. The Company asks for your continued understanding as it completes the work necessary to determine the answers to these important questions.

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Question 14: The alleged "defeat device" was initially installed in vehicles with NOx traps but later migrated to future generations of vehicles. Please explain the three different generations of vehicles. a) If VW took the step of installing more effective and proven NOx reduction technology - selective catalytic reduction (SCR) - in second and third generation vehicles included in this alleged violation, why did it need to include the defeat device in these vehicles? i) Were these vehicles unable to meet emissions standards, even with this more proven technology? ii) Is this true for all generations of vehicles that include the SCR technology?

Response: There are three generations of subject 2.0L TDI vehicles.

- **Generation 1** These vehicles contain the EA189 engine and include the following model year vehicles: 1) the 2009 Jetta and Sportwagen; 2) the 2010-2011 Golf, Jetta, Sportwagen, and Audi A3; and 3) the 2012-2014 Golf, Jetta, Sportwagen, Beetle, and Audi A3.
- **Generation 2** These vehicles also contain the EA189 engine and include 2012-2014 model year Passat vehicles.
- **Generation 3** These vehicles contain the EA288 engine and include the 2015 Passat, Golf, Jetta, Sportwagen, Beetle, and Audi A3 model year vehicles.

With respect to the other aspects of the question, these matters are currently under active investigation. As the Committee is aware, the Company is conducting investigations on a world-wide scale into all aspects of the emissions issue. While these thorough investigations have already begun, any information developed at this stage is preliminary. The Company asks for your continued understanding as it completes the work necessary to determine the answers to these important questions.

Question from The Honorable Morgan H. Griffith

Question 1: Would you please notify the committee of any and all offers the company makes to impacted VW diesel customers?

Response: On November 9, 2015, VWGoA and Audi of America provided Volkswagen and Audi 2.0L TDI customers a goodwill package as a first step to restoring trust and to thank them for their patience as the Company works to develop approved remedies. The package included a \$500 prepaid Visa card, another \$500 for use at a dealership, and three years of 24-hour Roadside Assistance. The Company remains

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committed to assisting the Committee in its inquiry, and it will continue to keep the Committee informed as it works to develop solutions for customers.

Questions from The Honorable Yvette Clarke

Question 1: During the hearing, you stated that there was “a group of rogue software engineers in Germany” who developed and disseminated the defeat device. When did Volkswagen become aware of this “group of rogue software engineers?”

Response: While Mr. Horn did not specifically state that “a group of rogue software engineers in Germany” developed and disseminated the defeat device, with regard to the development of the software and the knowledge of others in the Company, these matters are currently under active investigation. As the Committee is aware, the Company is conducting investigations on a world-wide scale into all aspects of the emissions issue. While these thorough investigations have already begun, any information developed at this stage is preliminary. The Company asks for your continued understanding as it completes the work necessary to determine the answers to these important questions.

Question 2: How did Volkswagen become aware of this “group of rogue software engineers?”

Response: These matters are currently under active investigation. As the Committee is aware, the Company is conducting investigations on a world-wide scale into all aspects of the emissions issue. While these thorough investigations have already begun, any information developed at this stage is preliminary. The Company asks for your continued understanding as it completes the work necessary to determine the answers to these important questions.

Question 3: Please provide us with the names, location, and contact information for this “group of rogue software engineers.”

Response: These matters are currently under active investigation. As the Committee is aware, the Company is conducting investigations on a world-wide scale into all aspects of the emissions issue. While these thorough investigations have already begun, any information developed at this stage is preliminary. The Company asks for your continued understanding as it completes the work necessary to determine the answers to these important questions.

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Question 4: If your claim is true that this defeat device is attributable to “a group of rogue software engineers,” then these software engineers would possess an extremely high acumen for subterfuge. How did this “group of rogue software engineers” manage to circumvent their Volkswagen coworkers, management, internal auditors, and whoever else is responsible for verifying performance results? How did “the group of rogue software engineers” manage to develop and disseminate the defeat device without anyone else knowing about it?

Response: These matters are currently under active investigation. As the Committee is aware, the Company is conducting investigations on a world-wide scale into all aspects of the emissions issue. While these thorough investigations have already begun, any information developed at this stage is preliminary. The Company asks for your continued understanding as it completes the work necessary to determine the answers to these important questions.

Question 5: Do you believe that what your company did was unfair to both the consumer and the rest of the auto industry in the United States?

Response: On numerous occasions, VWGoA has apologized to its customers and to the public on behalf of the Company. Volkswagen remains committed to providing a remedy for consumers, and to restoring the trust of its customers, dealerships, employees, the regulators, and the American public.

Question from the Honorable Gene Green

Question 1: The Steering Committee of VW's Supervisory Board met on Wednesday, September 25, 2015 to discuss preliminary findings of an internal probe into the scandal. What were the preliminary findings of VW's Steering Committee?

Response: These matters are currently under active investigation. As the Committee is aware, the Company is conducting investigations on a world-wide scale into all aspects of the emissions issue. While these thorough investigations have already begun, any information developed at this stage is preliminary. The Company asks for your continued understanding as it completes the work necessary to determine the answers to these important questions.

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Questions from the Honorable Paul D. Tonko

Question 1: After VW was impacted by an issue involving the use of a defeat device in 1974, what measures were taken by the company to ensure there was more oversight of the potential for a defeat device application? Is there a corporate measure in place to address defeat devices?

Response: These matters are currently under active investigation. As the Committee is aware, the Company is conducting investigations on a world-wide scale into all aspects of the emissions issue. While these thorough investigations have already begun, any information developed at this stage is preliminary. The Company asks for your continued understanding as it completes the work necessary to determine the answers to these important questions.

Question 2: What explanation was given to consumers about why VW's December 2014 recall was necessary?

Response: The vehicle owner communication related to the December 12, 2014, "Emissions Service Action 23N5 – ECM Software," included the following:

“What is the issue and what will we do? Some vehicles may experience exhaust turbocharger failure (under extreme cold weather conditions) in a brief time period after initial vehicle start up. This condition could cause a MIL ON and possible vehicle performance problems. To diminish this condition Volkswagen will momentarily decrease vehicle turbocharger boost pressure only during extreme cold start parameters to assure necessary turbocharger performance.

In addition, the vehicle’s engine management software has been improved to assure your vehicle’s tailpipe emissions are optimized and operating efficiently. Under certain operating conditions, the earlier strategy may have increased the chance of the vehicle’s MIL light illuminating. If the MIL illuminates for any reason, your vehicle will not pass an IM emissions inspection in some regions.”

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Information provided in connection with this inquiry may contain confidential business information, and the Company expressly requests protection of that information. Further, production of the enclosed information is not intended to constitute a waiver of the attorney-

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client, attorney work product, or any other applicable rights or privileges in this or any other forum, and the Company expressly reserves its rights in this regard. Moreover, information and data produced in connection with this inquiry may contain material non-public information that should be kept confidential. In light of these concerns, I would therefore ask that Committee staff provide me with advance notice and an opportunity to be heard if, notwithstanding my request that such materials and information be kept confidential, the Committee discloses any such materials or information.

As discussed with Committee staff, the Company looks forward to continuing to work with the Committee in a cooperative manner.



Steven R. Ross
Counsel for Volkswagen Group of America, Inc.,
Volkswagen AG, and Audi AG



January 28, 2016

VIA ELECTRONIC DELIVERY

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Dear Chairman Upton, Chairman Murphy, Ranking Member Pallone, and Ranking Member DeGette:

On behalf of Volkswagen Group of America, Inc. (“VWGoA”), Volkswagen AG, and Audi AG (collectively, the “Company”), I write in further response to your letter dated November 23, 2015 containing questions for the record regarding the October 8, 2015 hearing entitled “Volkswagen Emissions Cheating Allegations: Initial Questions.” As you know, the Company remains committed to assisting the Committee on Energy and Commerce (the “Committee”) in its inquiry, as it continues to work to develop solutions for its customers in the midst of internal and external investigations. To this end, please find enclosed the following additional responses to certain of the Committee’s questions, which reflect the Company’s present information and understanding:

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Questions from Chairman Murphy

Question 9: In your testimony, you reference the Engine and Drivetrain Division within the Engineering and Development Division and you reference the Product Safety Committee. Please describe the roles of each of these organizations within VW and, in particular, the roles with regard to engine development and validation.

Response: The Powertrain Development Division is part of the Development Center at Volkswagen AG. It consists of four main departments: Transmissions; Diesel Engine; Gasoline Engine; and Electric Components/Electronics, including e-drive train development.

The Powertrain Development Division has been in charge of all design aspects of the affected four-cylinder, 2.0L diesel engines—Generations 1, 2, and 3—for the U.S. market, including the application and adaptation to other brand products, such as the Audi A3.

The Volkswagen AG Product Safety Committee has no role in engine development and verification. Rather, the committee determines and initiates measures to ensure product safety for the Volkswagen brand. The members and their deputies are designated by the Volkswagen AG Board of Management. When potential safety-related issues arise, the committee is tasked by the Board to: 1) evaluate and assess the matter by tasking engineering, quality, and/or production departments to make presentations regarding the issue and the potential solutions; 2) make the necessary decisions and approve or reject the proposed remedies; and 3) when necessary, promptly implement relevant measures. If ever additional fact finding becomes necessary, the committee may establish a task force to further investigate the issue and find technical solutions. The committee is also responsible for responding to government bodies and consumer protection associations relating to product safety and consumer protection.

Question 10: Please describe the engine development process at Volkswagen A.G., including but not limited to a description of the quality control and quality assurance process.

Response: The Powertrain Development Division is part of the Development Center at Volkswagen AG and develops powertrain components for the Volkswagen Group. In addition to the development of new engines, the department adapts the various engine types to the different technical requirements, markets, and customer demands globally.

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Given the complex emissions regulations of some markets, specialized local support is provided.

Particular single engine components are designed and adjusted by individual engineers working within given timeframes and technical requirements. The timeframe to develop a new engine is typically 48 months, and the process consists of the following steps:

- First, the Drivetrain Development Department defines key elements of the project, including necessary calculations, field analyses, dimensions and positioning of the drivetrain in the engine compartment, and quality goals.
- Second, required diagnostics are specified, including target fuel consumption and emissions levels based on relevant legal and environmental regulations.
- Third, existing engine performance benchmarks are noted based on historical tests.
- Fourth, testing begins on updated engine prototypes, and results are documented and analyzed to guide the further development process. Depending on the circumstances, these results are combined with various other testing, including simulated assembly tests, digital package analysis of the drivetrain, and testing related to the manufacturing process.
- Fifth, the engine's functionality is verified, various design characteristics—including engine weight, emissions, and fuel consumption—are checked against target benchmarks, and diagnostics are adjusted accordingly. At this stage, prototypes are installed on vehicles for testing outside of the Engine Development team. Additional design adjustments are also made.
- Sixth, the engine's overall performance and fuel consumption are again checked, and its operation and combustion processes are finalized.
- Seventh, generally nine months before the engine design is incorporated into consumer models, engine development testing concludes, and the design team verifies that all internal engine development targets have been achieved.
- Eighth, test production begins for the new engine design, and on-board diagnostics and durability testing is concluded.

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- Ninth, engines are made available for Volkswagen's Quality Department to conduct validation testing. This process is focused on ensuring reliability and durability.

Question 11: It is our understanding that VW does not currently have a certificate of conformity for MY2016 vehicles.

- a) **In your written testimony you stated that VW withdrew the application for a certificate of conformity for 2016 vehicles due to the existence of a previously undisclosed auxiliary emissions control device (AECD). i) Did you withdraw the application for all 2016 vehicles or only certain makes and models? ii) Does this AECD exist in all 2016 vehicles? iii) What is the nature and function of this previously undisclosed AECD? i) Explain how it is similar or different to the AECD's subject to the September 18, 2015 Notice of Violation from the EPA. iv) When was it discovered and why was it not previously disclosed?**
- b) **Was the AECD's subject to the September 18, 2015 Notice of Violation from the EPA included in 2016 vehicles? a) If so, how did it affect the emissions performance of these vehicles? b) If not, what changes occurred for MY2016 that prompted VW not to include the same software that was included in previous MY vehicles?**

Response: VWGoA submitted an initial application for certification for the 2016 model year 2.0L TDI vehicles on August 12, 2015 and it has not been withdrawn. A request for "conditional" certification was later filed and was withdrawn in October, 2015. There is no current certificate of conformity for these vehicles. With respect to the other aspects of your question, these matters are currently under active investigation. As the Committee is aware, the Company is conducting investigations on a world-wide scale into all aspects of the emissions issue. While these thorough investigations have already begun, any information developed at this stage is preliminary. The Company asks for your continued understanding as it completes the work necessary to determine the answers to these important questions.

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Question 13: EPA's compliance schedule requires multiple levels of confirmatory testing by the manufacturer and EPA, both pre-production, during manufacturing and post-production. a) Who at VW is responsible for conducting confirmatory emissions testing? b) Do these tests typically include on-road tests? i) If not, what tests are conducted? c) Who provides the results of this testing to EPA? d) To your knowledge, did VW's in-use confirmatory testing ever reveal an abnormality or the existence of this defeat device? i) If so, was that information withheld from EPA? e) Did EPA ever conduct surveillance testing on any of the vehicles containing the alleged defeat device? i) If so, when and what tests were conducted?

Response: As described in the question, the manufacturer and EPA conduct confirmatory emissions testing on vehicles to be offered for sale in the U.S.

- a) Manufacturer pre-production confirmatory testing is conducted at the emission test facilities at Volkswagen AG and Audi AG. Post-production manufacturer testing is conducted at the VWGoA Technical Center in Oxnard, California.
- b) At the time of the certification of the vehicles in question, no on-road confirmatory emissions testing had been conducted. i) Depending on the model year and regulatory/policy requirements in effect, pre-production confirmatory emissions testing by the manufacturer may include the federal test procedure ("FTP") and highway test cycle ("HWFET"), as well as the Supplement Federal Test Procedure ("SFTP"), evaporative emission test procedure and cold temperature emissions tests. Post-production testing may also include these test cycles.
- c) Pre-production emissions testing and certification is provided to the EPA by responsible certification departments at Volkswagen AG and Audi AG, through EEO. Post-production test results are provided by the Technical Center emissions lab and submitted to EPA through EEO.
- d) During the 2013 calendar year, EPA initiated in-use surveillance testing on 2010 model year 2.0L TDI Diesel Test Group AVWXV02.0U5N. It is our understanding that testing included FTP and US06 cycles. During the 2015 calendar year, EPA initiated in-use surveillance testing on 2013 model year 2.0L TDI Diesel test group DVWXV02.0U5N. It is our understanding that testing included FTP, HWFET, and US06 cycles.

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With respect to the other aspects of your question, these matters are currently under active investigation. As the Committee is aware, the Company is conducting investigations on a world-wide scale into all aspects of the emissions issue. While these thorough investigations have already begun, any information developed at this stage is preliminary. The Company asks for your continued understanding as it completes the work necessary to determine the answers to these important questions.

Question from The Honorable Morgan H. Griffith

Question 1: Would you please notify the committee of any and all offers the company makes to impacted VW diesel customers?

Response: In addition to the information provided by the Company in its initial, December 14, 2015 response to your question, on January 11, 2016, the Company extended a goodwill package to owners of 3.0L Volkswagen brand models affected by the TDI emissions issue.

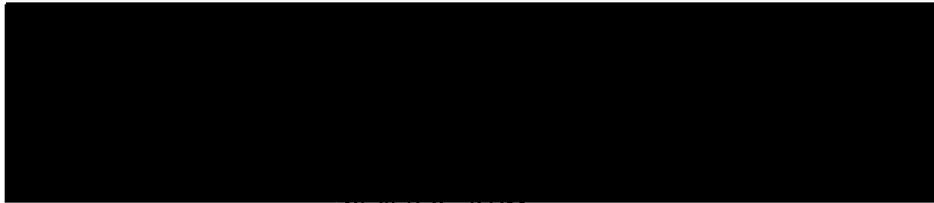
Further, please note that the Company has retained Kenneth R. Feinberg to design and administer an out-of-court, independent claims resolution program to address claims related to the 2.0L and 3.0L TDI vehicles affected by the emissions compliance issue. It believes Mr. Feinberg will develop an independent, fair and swift process for resolving these claims.

* * *

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As discussed with Committee staff, the Company looks forward to continuing to work with the Committee in a cooperative manner.



STEVEN R. ROSS
Counsel for Volkswagen Group of America, Inc.,
Volkswagen AG, and Audi AG