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

OFFICE OF
ENFORCEMENT AND
COMPLIANCE ASSURANCE

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Mr. Keith Cavallini
President
Green Diesel Engineering, L.L.C.,
1032 Rig Street
Commerce Township, MI 48390

Re: Notice of Violation of the Clean Air Act

Dear Mr. Cavallini:

The United States Environmental Protection Agency ("EPA") has investigated and continues to investigate Green Diesel Engineering, L.L.C., ("GDE" or "You") for noncompliance with the Clean Air Act ("CAA"), 42 U.S.C. §§ 7401-7671q, and its implementing regulations. EPA continues to investigate several parts and components sold and/or offered for sale by GDE but by this letter puts You on notice regarding at least six (6) products that are particularly egregious in light of the time and effort invested by many parties in bringing into compliance the Fiat Chrysler Automobiles (FCA) Model Year 2014-2016 Ram 1500 and Jeep Grand Cherokee 3.0L diesel vehicles (FCA Subject Vehicles). Specifically, EPA has determined that these parts are capable of and purposely designed for reversing the Approved Emissions Modification ("AEM") specified by the terms of the Consent Decree ordered on May 3, 2019, by Judge Edward Chen of the Northern District of California ("the FCA Consent Decree") for the FCA Subject Vehicles

As summarized in this Notice of Violation ("NOV"), the EPA has determined that You offered for sale and/or sold parts or components that have a principal effect of altering or bypassing emission control systems or elements of design on the FCA Subject Vehicles. Such emission control systems and elements of design are installed by vehicle or engine original equipment manufacturers ("OEMs") in order to comply with CAA emission standards. The EPA has also determined that You knew or should have known that these parts or components were offered for sale or installed for such use or put to such use. Therefore, You violated sections 203(a)(3)(A) and 203(a)(3)(B) of the CAA, 42 U.S.C. § 7522(a)(3)(A-B).

Law Governing Alleged Violations

This NOV arises under Part A of Title II of the CAA, 42 U.S.C. §§ 7521-7554, and the regulations promulgated thereunder. In creating the CAA, Congress found, in part, that "the increasing use of motor

vehicles ... has resulted in mounting dangers to the public health and welfare."[1] Congress' purpose in creating the CAA, in part, was "to protect and enhance the quality of the Nation's air resources so as to promote the public health and welfare and the productive capacity of its population," and "to initiate and accelerate a national research and development program to achieve the prevention and control of air pollution."[2]

EPA's allegations here concern parts or components for motor vehicles and engines subject to emission standards.[3] The CAA requires EPA to prescribe and revise, by regulation, standards applicable to the emission of any air pollutant from new motor vehicles or new motor vehicle engines that cause or contribute to air pollution which may reasonably be anticipated to endanger public health or welfare.[4] As required by the CAA, the emission standards "reflect the greatest degree of emission reduction achievable through the application of [available] technology."[5] EPA promulgated specific emission standards for each of these motor vehicles and engines for each pollutant and year of manufacture.[6]

The CAA makes it a violation "for any person to manufacture or sell, or offer to sell, or install, any part or component intended for use with, or as part of, any motor vehicle or motor vehicle engine, where a principal effect of the part or component is to 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."[7] It is also a violation to cause any of the foregoing acts.[8]

EPA Certification Program

EPA administers a certification program to ensure that every motor vehicle and motor vehicle engine introduced into United States commerce satisfies applicable emission standards. Under this program, the EPA issues certificates of conformity ("COCs"), and thereby approves the introduction of motor vehicles or motor vehicle engines into United States commerce. To obtain a COC, a vehicle manufacturer must submit a COC application to EPA for each engine family or test group of vehicles that it intends to enter into United States commerce.[9] The COC application must include, among other things, the identification of the covered engine family, a description of the motor vehicle or engine and

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[1] CAA§ 10l(a)(2), 42 U.S.C. § 740l(a)(2).
[2] CAA § l01(b)(l)-(2), 42 U.S.C. § 740l(b)(l)-(2).
[3] See generally 40 C.F.R. Part 86, Subpart A (setting emission standards for these categories).
[4] CAA §§ 202(a)(l) and (3XB), 42 U.S.C. §§ 752l(a)(l) and (3)(8).
[5] CAA § 202(a)(3)(A)(i), 42 U.S.C. § 752l(a)(3)(A)(i).
[6] See, e.g., heavy-duty diesel engine emission standards at 40 C.F.R. §§ 86.004-11, 86.007-11, 86.099-11 and light duty vehicle emission standards at 40 C.F.R. § 86.1811-04. See also 40 C.F.R. §§ 86 .090-8 (l 990 and later model year light-duty vehicles); 86.094-9 (l 994 and later model year light-duty trucks); 86 .001-9 (200 I and later model year light-duty trucks); 86.004-9 (2004 and later model year light-duty trucks); 86.091-10 (l 991 and later model year Otto-cycle heavy-duty engines and vehicles); 86.008-10 (2008 and later model year Otto-cycle heavy-duty engines and vehicles).
[7] CAA § 203(a)(3)(B), 42 U.S.C. § 7522(a)(3)(B).
[8] CAA § 203(a), 42 U.S.C. § 7522(a).
[9] See 40 C.F.R. §§ 86 .004-21 and 86.1844-01. Motor vehicles can be certified in a motor vehicle test group or engine family. For simplicity, for the remainder of this NOV, EPA will use the nomenclature "motor vehicles" to refer to both motor vehicles and motor vehicle engines.

its emission control systems, all auxiliary emission control devices ("AECDs")[10] and the engine parameters they sense, as well as test results from a test vehicle or engine showing that it satisfies the applicable emission standards.[11]

Motor vehicle manufacturers employ many devices and elements of design to meet emission standards to obtain COCs. Element of design means "any control system (i.e., computer software, electronic control system, emission control system, computer logic), and/or control system calibrations, and/or the results of systems interaction, and/or hardware items on a motor vehicle or motor vehicle engine."[12] For example, manufacturers employ retarded fuel injection timing as a primary emission control device for emissions of oxides of nitrogen ("NOx"). Manufacturers also employ certain hardware devices as emission control systems to manage and treat exhaust to reduce levels of regulated pollutants from being created or emitted into the ambient air. For diesel-fueled motor vehicles, these emission control devices include diesel particulate filters, exhaust gas recirculation systems ("EGR"), diesel oxidation catalysts, and selective catalytic reduction. All modem motor vehicles are also equipped with electronic control modules ("ECMs"). ECMs continuously monitor engine and other operating parameters and control the emission control devices, such as the fueling strategy.

In addition, an onboard diagnostic system ("OBD") with the capacity to detect, identify and record malfunctions must be installed and operated on motor vehicles under section 202(m) of the CAA, 42 U.S.C. § 7521(m), and the implementing regulations.[13] Manufacturers are required to demonstrate (using EPA specified test procedures) that the OBD system detects and identifies malfunctions, including any sensor or other component deterioration or malfunction which renders that sensor or component incapable of performing its function as part of the OBD system.

Background on the FCA Subject Vehicles

As alleged in the civil complaint filed by the United States Department of Justice on behalf of EPA on May 23, 2017, Fiat Chrysler equipped over 100,000 EcoDiesel Ram 1500 and Jeep Grand Cherokee vehicles (Model Years 2014-2016) sold in the United States with illegal and undisclosed software that causes the emission control system to operate differently during emission control tests than when it is driven on the road. The United States alleged that one or more of these software features, as configured in Fiat Chrysler's vehicles, are defeat devices. The result was vehicles that met emission standards during standard regulatory testing, but that emitted air pollutants, including oxides of nitrogen (NO_X), at higher rates when the vehicles are driven on the road, much higher than the EPA and California emission standards allow. NO_X pollution contributes to harmful ground-level ozone and fine particulate matter. These pollutants are associated with a range of serious health effects, including asthma attacks, respiratory illnesses, and other respiratory-related or cardiovascular-related effects, including damage to lung tissue and premature death.

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[10] An AECD is "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." 40 C.F.R. § 86.082-2.

[11] 40 C.F.R. §§ 86.004-21, 86.007-21, 86.094-21, 86.096-21; see also EPA, Advisory Circular Number 24-3: Implementation of Requirements Prohibiting Defeat Devices for On-Highway Heavy-Duty Engines (Jan. 19, 2001).

[12] 40 C.F.R. § 86.1803-01. See also 40 C.F.R. § 86.094-2.

[13] See 40 C.F.R. §§ 86.005-17, 86.007-17, 86 .1806-05; and § 86.1806-17 (for model year 2017 and later vehicles).

The Consent Decree as entered by Judge Chen of the Northern District of California requires FCA to, among other things, implement a recall and repair program that: (a) removes or otherwise neutralizes all defeat devices in the vehicles and (b) modifies the vehicles' software so that the vehicles meet the emission standards to which the vehicles were originally certified. Fiat Chrysler tested vehicles with the new software and demonstrated to EPA and California that the repaired vehicles will meet the applicable emission standards. EPA and California also tested the repaired vehicles and determined that the vehicles perform the same on emission tests as they do under normal driving conditions. These software calibrations are key to the compliance of the FCA Subject Vehicles. As described further below, the products manufactured and sold by GDE that modify the calibrations are likely to undercut the remedy that the court put in place to protect human health and the environment.

In addition to the recall, Fiat Chrysler agreed pay a civil penalty of $305 million to settle claims of cheating emission tests and failing to disclose unlawful defeat devices. Fiat Chrysler also will implement a program to mitigate excess pollution from these vehicles.

Alleged Violations

EPA has determined that GDE manufactured, offered for sale and/or sold parts or components that have a principal effect of altering or bypassing emission control systems or elements of design on the FCA Subject Vehicles. At a minimum, between May 3, 2019 and the present GDE sold, or "offered to sell" (i.e. marketed) six models of these "defeat device" products to owners of the FCA Subject Vehicles that have received the AEM under the FCA Consent Decree (collectively, "GDE's FCA Tunes"):

1. *the Ram 1500 EcoDiesel Hot Tune,*
2. *the Ram 1500 EcoDiesel Tune Update,*
3. *the Grand Cherokee EcoDiesel (WK2) Hot Tune,*
4. *the Grand Cherokee EcoDiesel ("WK2") Tune Update,*
5. *the EcoDiesel AEM Tune Update, and*
6. *the EcoDiesel Transmission Tune Update.*

EPA continues to investigate other parts and components sold and/or offered for sale by GDE.

The product descriptions for both the EcoDiesel AEM Tune Update and the EcoDiesel Transmission Tune Update specifically "offers to sell" (i.e. pointedly markets) these FCA Tunes to owners of FCA Subject Vehicles who have received the AEM under the FCA Consent Decree. EPA has information that GDE's Grand Cherokee EcoDiesel Tune Update also renders inoperative the FCA Consent Decree AEM and information indicating that the Ram 1500 EcoDiesel Tune Update operates the same way. EPA also has information that two Hot Tunes, which GDE has offered to sell since prior to the FCA Consent Decree can also effectively render inoperative the FCA Consent Decree AEM on FCA Subject Vehicles.

EPA's preliminary findings regarding GDE's FCA Tunes show that these defeat devices are specifically designed and marketed to alter the performance of the AEM in the FCA Subject Vehicles. As of the date of this letter, GDE continues to offer 5 of these 6 tunes for sale on its website: https://www.greendieselengineering.com/

Through the sale of these tunes, GDE rendered inoperative FCA's software, including the AEM. FCA's software contains elements of design installed in compliance with applicable regulations. The tunes and tuners that GDE sold bypass, defeat, or render inoperative these elements of design. As stated above, the OBD system is an element of design that motor vehicle manufacturers employ to meet emission standards and must be described in great detail in OEM applications to the EPA for COCs. GDE's products disrupt the capacity of the OBD system to detect, identify, and record malfunctions. GDE's FCA Tunes also deactivate the EGR, one of the key emissions controls on the FCA Subject Vehicles.

GDE knew or should have known that these products were sold, offered for sale, or installed in order to bypass, defeat, or render inoperative devices or elements of design that control emissions of regulated air pollutants. Furthermore, GDE knew or should have known that these products were sold, offered for sale, or installed on motor vehicles because each product was designed and marketed for use on a specific make, model, and year of motor vehicles, thus altering the OEM configuration certified by EPA for a specific model year.

For all of these reasons, GDE knew or should have known that they sold, offered for sale, or installed parts or components for motor vehicles or motor vehicle engines with a principal effect of bypassing, defeating, or rendering inoperative devices or elements of design that control emissions of regulated air pollutants.[14]

Enforcement

The EPA may bring enforcement actions for violations of sections 203(a)(3)(A) and 203(a)(3)(B) of the CAA, 42 U.S.C. § 7522(a)(3)(A-B), under its administrative authority or request that the United States Department of Justice file a civil complaint in federal district court.[15] Persons who violate sections 203(a)(3)(A) and 203(a)(3)(B) of the CAA, 42 U.S.C. § 7522(a)(3)(A-B), may be subject to an injunction and/or civil penalty of up to $4,735 for each violation.[16]

EPA requests that you immediately cease sale of the six (6) tunes identified above as GDE's FCA Tunes, as well as any other parts, tunes, or components capable of defeating, bypassing, or rendering inoperative any emission control systems or elements of design on the FCA Subject Vehicles. Thereafter, please provide the following statement, signed by an authorized company official:

> *I hereby certify that, as of [DATE], all employees of Green Diesel Engineering, L.L.C., were instructed not to sell any parts, tunes, or components capable of defeating, bypassing, or rendering inoperative any emission control systems or elements of design on the Fiat Chrysler Automobiles (FCA) Model Year 2014-2016 Ram 1500 and Jeep Grand Cherokee 3.0L diesel vehicles, and, to the best of my knowledge and belief, Green Diesel Engineering, L.L.C., has not*

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[14] EPA has initiated enforcement actions that are now concluded for similar operations. See, e.g., In re H & S Performance, LLC, Consent Agreement and Final Order (EAB Dec. 17, 2015) (CAFO resolving civil liability for purveyors of custom software defeat devices that utilized Bully Dog platforms); see also United States v. Edge Products, LLC. , No. I: l 3cv00010-TS (Dist. Utah April 23, 2013); United States v. Casper 's Electronics, Inc., No. I :06cv3542 (N.D. lll Aug. 28, 2007).

[15] CAA §§ 204 and 205, 42 U.S.C. §§ 7523 and 7524.

[16] Id.; the EPA has implemented statutorily-mandated inflation adjustments by periodically updating maximum penalty levels as codified at 40 C.F.R. § 19.4.

manufactured or sold, or offered to sell, or installed any such parts since [DATE].

Please provide the requested certification, via courier service or overnight delivery, to:

Caitlin Meisenbach
Attorney Advisor
Office of Enforcement and Compliance Assurance
United States Environmental Protection Agency
1200 Pennsylvania Avenue, NW
William Jefferson Clinton Federal Building, Room 1117-A
Washington, D.C. 20004

The EPA is available to discuss this matter with you in further detail upon your request. Please have your attorney contact Caitlin Meisenbach, the EPA attorney assigned to this matter, within 10 days of receipt of this Notice of Violation. Ms. Meisenbach can be reached at (202) 565-0062 or meisenbach.caitlin@epa.gov.

Sincerely,

Phillip A. Brooks
Director
Air Enforcement Division
Office of Civil Enforcement

Enclosures