No. 18-1190

IN THE UNITED STATES COURT OF APPEALS
FOR THE DISTRICT OF COLUMBIA CIRCUIT

ENVIRONMENTAL DEFENSE FUND, CENTER FOR BIOLOGICAL DIVERSITY, and SIERRA CLUB,

Petitioners,

v.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY,

Respondent.

APPENDIX TO EMERGENCY MOTION OF JULY 17, 2018
VOLUME I (pages 1–316)

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

July 6, 2018

OFFICE OF
ENFORCEMENT AND
COMPLIANCE ASSURANCE

MEMORANDUM

SUBJECT: Conditional No Action Assurance Regarding Small Manufacturers of Glider Vehicles

FROM: Susan Parker Bodine Su Park Bodine
Assistant Administrator
Office of Enforcement and Compliance Assurance

TO: Bill Wehrum
Assistant Administrator
Office of Air and Radiation

Pursuant to your attached request of July 6, 2018, I am today providing a "no action assurance" relating to: (1) those small manufacturers to which 40 C.F.R. § 1037.150(t) applies that either are manufacturing or that have manufactured glider vehicles in calendar year 2018 (Small Manufacturers); and (2) to those companies to which 40 C.F.R. § 1037.150(t)(1)(vii) applies that sell glider kits to such Small Manufacturers (Suppliers).

As noted in your memorandum, in conjunction with EPA's having promulgated in 2016 the final rule entitled Greenhouse Gas Emissions and Fuel Efficiency Standards for Medium- and Heavy-Duty Engines and Vehicles—Phase 2, *see* 81 Fed. Reg. 73,478 (Oct. 25, 2016) (the HD Phase 2 Rule), the Agency specified that glider vehicles were "new motor vehicles" (and glider vehicle engines to be "new motor vehicle engines") within the meaning of 42 U.S.C. § 7550(3). Effective January 1, 2017, Small Manufacturers were permitted to manufacture glider vehicles in 2017 in the amount of the greatest number produced in any one year during the period of 2010–2014 without having to meet the requirements of 40 C.F.R. § 1037.635 (Interim Allowance). After this transitional period, beginning on January 1, 2018, small manufacturers of glider vehicles have been precluded from manufacturing more than 300 glider vehicles (or fewer, if a particular manufacturer's highest annual production volume between 2010 and 2014 had been below 300 vehicles), unless they use engines that comply with the emission standards applicable to the model year in which the glider vehicle is manufactured. On November 16, 2017, EPA published a notice of proposed rulemaking, proposing to repeal the emissions standards and other requirements of the HD Phase 2 Rule as they apply to glider vehicles, glider engines, and glider kits. *See* 82 Fed. Reg. 53,442 (Nov. 16, 2017) (November 16 NPRM).

We understand that after taking into consideration the public comments received, and following further engagement with stakeholders and other interested entities, the Office of Air and Radiation (OAR) has determined that additional evaluation of several matters is required before it can take final action on the November 16 NPRM. Consequently, OAR now recognizes that finalizing the November 16 NPRM will require more time than it had previously anticipated. In the meantime, Small Manufacturers who, in reliance on the November 16 NPRM, have reached their calendar year 2018 annual allocation under the HD Phase 2 Rule must cease production for the remainder of calendar year 2018 of additional glider vehicles, resulting in the loss of jobs and threatening the viability of these Small Manufacturers.

As noted in your memorandum, OAR now intends to move as expeditiously as possible to undertake rulemaking in which it will consider extending the compliance date applicable to Small Manufacturers to December 31, 2019.

Consistent with the intent and purpose of OAR's planned course of action, this no action assurance provides that EPA will exercise its enforcement discretion with respect to the applicability of 40 C.F.R. § 1037.635 to Small Manufacturers that in 2018 and 2019 produce for each of those two years up to the level of their Interim Allowances as was available to them in calendar year 2017 under 40 C.F.R. § 1037.150(t)(3). This no action assurance further provides that EPA will exercise its enforcement discretion with respect to Suppliers that sell glider kits to those Small Manufacturers to which this no action assurance applies. This no action assurance will remain in effect until the earlier of: (1) 11:59 p.m. (EDT), July 6, 2019; or (2) the effective date of a final rule extending the compliance date applicable to small manufacturers of glider vehicles.

The issuance of this no action assurance is in the public interest to avoid profound disruptions to small businesses while EPA completes its reconsideration of the HD Phase 2 Rule. The EPA reserves its right to revoke or modify this no action assurance.

If you have further questions regarding this matter, please contact Rosemarie Kelley of my staff at (202) 564-4014, or kelley.rosemarie@epa.gov.

Attachment

cc: Byron Bunker, OAR, OTAQ
Rosemarie Kelley, OECA, OCE
Phillip Brooks, OECA, OCE, AED

II.

EPA Memo, Bill Wehrum to Susan Bodine, Enforcement Discretion Regarding Companies that Are Producing or that Have Produced Glider Vehicles in Calendar Year 2018 (July 6, 2018)

MEMORANDUM

SUBJECT: Enforcement Discretion Regarding Companies that Are Producing or that Have Produced Glider Vehicles in Calendar Year 2018

FROM: Bill Wehrum
Assistant Administrator
Office of Air and Radiation

W L Wehrum
7-6-18

TO: Susan Parker Bodine
Assistant Administrator
Office of Enforcement and Compliance Assurance

The Office of Air and Radiation (OAR) requests that the Office of Enforcement and Compliance Assurance (OECA) exercise enforcement discretion (No Action Assurance) with respect to both those small manufacturers to which 40 C.F.R. § 1037.150(t) applies that either are manufacturing or that have manufactured glider vehicles in calendar year 2018 (Small Manufacturers), and to those companies to which 40 C.F.R. § 1037.150(t)(1)(vii) applies that sell glider kits to such small manufacturers (Suppliers). Specifically, as a bridge to a rulemaking in which we will consider extending the deadline for Small Manufacturers to comply with 40 C.F.R. § 1037.635, OAR requests that OECA provide assurance that it will exercise enforcement discretion for up to one year with respect to the applicability to Small Manufacturers and their Suppliers of 40 C.F.R. §1037.635. Further, OAR requests that OECA provide assurance that it will not take enforcement action against those Suppliers that elect to sell glider kits to those Small Manufacturers of glider vehicles to which this No Action Assurance applies.

In conjunction with EPA's having promulgated in 2016 the final rule entitled Greenhouse Gas Emissions and Fuel Efficiency Standards for Medium- and Heavy-Duty Engines and Vehicles–Phase 2, 81 Fed. Reg. 73,478 (Oct. 25, 2016) (the HD Phase 2 Rule), the Agency clarified that glider vehicles were "new motor vehicles" (and glider vehicle engines to be "new motor vehicle engines") within the meaning of 42 U.S.C. § 7550(3). EPA in the HD Phase 2 Rule also stated that glider kits constituted "incomplete motor vehicles." Effective January 1, 2017, Small Manufacturers were permitted to manufacture glider vehicles in 2017 in the amount of the greatest number produced in any one year during the period 2010-2014 without meeting the requirements of 40 C.F.R. § 1037.635 (Interim Allowance). After this transitional period, beginning on January 1, 2018, small manufacturers of glider vehicles have been precluded from manufacturing more than 300 glider vehicles (or fewer, if a particular manufacturer's highest annual production volume from between 2010 and 2014 had been below 300 vehicles), unless they use engines that comply with the emission standards applicable to the model year in which the glider vehicle is manufactured.

On November 16, 2017, EPA published in the *Federal Register* a notice of proposed rulemaking, proposing to repeal the emissions standards and other requirements of the HD Phase 2 Rule as they apply to glider vehicles, glider engines, and glider kits. 82 Fed. Reg. 53,442 (Nov. 16, 2017) (November 16 NPRM). In the November 16 NPRM, EPA proposed an interpretation of the Clean Air Act (CAA) under which glider vehicles would be found not to constitute "new motor vehicles" within the meaning of CAA section 216(3), glider engines would be found not to constitute "new motor vehicle engines" within the meaning of CAA section 216(3), and glider kits would not be treated as "incomplete" new motor vehicles. Under this proposed interpretation, EPA would lack authority to regulate glider vehicles, glider engines, and glider kits under CAA section 202(a)(1). EPA also sought comment on whether, were it not to promulgate this proposed interpretation of the CAA, the Agency should increase the interim provision's allocation available to small manufacturers above the current applicable limits (*i.e.*, at most, 300 glider vehicles per year). 82 Fed. Reg. 53,447. Further, EPA solicited comment on whether the compliance date for glider vehicles and glider kits set forth at 40 C.F.R. § 1037.635 should be extended. *Id.*

After taking into consideration the public comments received, and following further engagement with stakeholders and other interested entities, OAR has determined that additional evaluation of a number of matters is required before it can take final action on the November 16 NPRM. As a consequence, OAR now recognizes that finalizing the November 16 NPRM will require more time than we had previously anticipated.

OAR intends to complete this rulemaking as expeditiously as possible under these circumstances, consistent with the Agency's responsibility to ensure that whatever final action it may take conforms with the Clean Air Act and is based on reasoned decision making. In the meantime, while the emissions standards and other requirements of the 2016 Rule applicable to glider vehicles became effective on January 1, 2017, and the Interim Allowance for calendar year 2017 ceased to apply as of January 1, 2018. As a consequence, Small Manufacturers who, in reliance on the November 16 NPRM, have reached their calendar year 2018 interim annual allocation under the HD Phase 2 Rule must cease production for the remainder of 2018, resulting in the loss of jobs and threatening the viability of these Small Manufacturers.

In light of these circumstances, OAR now intends to move as expeditiously as possible to undertake rulemaking to consider extending the compliance date applicable to Small Manufacturers until December 31, 2019. Concurrently, we intend to continue to work towards expeditiously completing a final rule. OAR requests a No Action Assurance in order to preserve the status quo as it was at the time of the November 16 NPRM until such time as we are able to take final action on extending the applicable compliance date. Specifically, OAR requests that OECA exercise its enforcement discretion with respect to Small Manufacturers who in 2018 and 2019 produce for each of those two years up to the level of their Interim Allowance as was available to them in 2017 under 40 C.F.R. § 1037.150(t)(3). OAR requests that OECA leave this No Action Assurance in place for one year from the date of issuance, or until such time as EPA takes final action to extend the compliance date, whichever comes sooner.

I appreciate your prompt consideration of this request.

III.
Excerpt of Letter from EPA Science Advisory Board Chair to Administrator Pruitt, re: SAB Consideration of EPA Planned Actions in the Fall 2017 Unified Agenda
(June 21, 2018)

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON D.C. 20460

OFFICE OF THE ADMINISTRATOR
SCIENCE ADVISORY BOARD

June 21, 2018

EPA-SAB-18-002

The Honorable E. Scott Pruitt
Administrator
U.S. Environmental Protection Agency
1200 Pennsylvania Avenue, NW
Washington, D.C. 20460

Subject: Science Advisory Board (SAB) Consideration of EPA Planned Actions in the Fall 2017 Unified Agenda of Regulatory and Deregulatory Actions and their Supporting Science

Dear Administrator Pruitt:

As part of its statutory duties, the EPA's Science Advisory Board recently concluded discussions about possible review of the science supporting major EPA planned actions associated with the Fall 2017 Unified Agenda of Regulatory and Deregulatory Actions. The EPA Office of Policy provided notice of the release of this information on December 14, 2017. During its public meeting on May 31, 2018, the SAB discussed whether to review any of the planned regulatory and deregulatory actions in order to provide advice and comment on the adequacy of the scientific and technical basis underlying each, as authorized by section (c) of the Environmental Research, Development and Demonstration Authorization Act.

The SAB focused its attention on nine major planned actions identified by the EPA Office of Policy and published in the *Federal Register*. The SAB convened a Work Group to review the planned actions, conduct fact-finding, and develop recommendations for further consideration by the chartered SAB[1]. At the public meeting, the SAB discussed the Work Group's findings and decided to undertake review of the science supporting two of the actions in the semi-annual Regulatory and Deregulatory Agenda at this time. The SAB also identified one action for which insufficient information was available and deferred a determination until such information is available.

[1] Memorandum: Preparations for Chartered Science Advisory Board (SAB) Discussions of EPA Planned Agency Actions and their Supporting Science in the Fall 2017 Regulatory Agenda
https://yosemite.epa.gov/sab/sabproduct.nsf//9263940BB05B89A885258291006AC017/$File/WG_Memo_Fall17_RegRevAttsABC.pdf

The SAB notes that three of the nine major planned actions are listed as long-term actions and another three are listed as Pre-Rule Stage actions. The Office of Management and Budget defines long-term actions as planned actions “under development but for which the agency does not expect to have a regulatory action within the 12 months after publication of this edition of the Unified Agenda” and notes that some long-term actions may only have abbreviated information. OMB defines the Pre-Rule Stage as “actions agencies will undertake to determine whether or how to initiate rulemaking. Such actions occur prior to a Notice of Proposed Rulemaking (NPRM) and may include Advance Notices of Proposed Rulemaking (ANPRMs) and reviews of existing regulations.” The SAB considered these early stages of rulemaking for the planned actions to facilitate planning and interaction with the Agency and notes that the Board has the option to defer a decision on whether planned actions merit further review until sufficient information is available.

EPA Planned Actions that Merit SAB Review

Reconsideration of Final Determination: Mid Term Evaluation of Greenhouse Gas Emissions Standards for Model Year 2022-2025 Light Duty Vehicles (RIN 2060-AT77): The SAB finds this action merits further review. The SAB Work Group submitted fact-finding questions regarding the types of analyses that may be used to support the action. The EPA responded that the analyses “could be considered to inform the forthcoming NPRM” and that they would assess these issues as they develop the proposed rule. The EPA also responded that the schedule for the rulemaking addressing model years 2022-2025 light-duty vehicle greenhouse gas (GHG) standards has not yet been announced. The SAB notes that EPA, in collaboration with the National Highway Traffic Safety Administration (NHTSA) and the California Air Resources Board (CARB), developed extensive documentation for the mid-term evaluation (MTE), including a technical assessment report and several supporting studies. NHTSA is conducting an MTE and Regulatory Impact Analysis (RIA) regarding fuel economy standards to inform a companion rule to the EPA standards. Key questions that merit an SAB review could include but need not be limited to the following:

- What are the barriers (e.g., price, foregone power or safety) to consumer acceptance of redesigned or advanced technology vehicles, and how might such barriers be overcome?
- Would or could there be a significant “rebound” effect from the deployment of new fuel efficient (and lower GHG-emitting) vehicles, and how might such an effect be mitigated?
- Would requirements for more fuel efficient new vehicles lead to longer retention of older less fuel-efficient vehicles and, if so, would this significantly affect projected emission reductions and have effects on crash-related safety?
- What proportion of vehicle electrification, particularly for plug-in vehicles including plug-in hybrid electric vehicle (PHEV) and battery electric vehicles (BEVs), would be needed to achieve fleet average GHG emission reductions?
- What are the effects, co-benefits or harms in terms of emissions reductions or increases for other pollutants, and costs benefits of technology options?
- What are the projected fleet level GHG emissions and co-pollutant emission changes associated with various scenarios?

Such a review might begin with existing documents developed by EPA, NHTSA and CARB during the MTE process, such as the Draft Technical Assessment Report. To the extent that the agencies have appropriately addressed key issues such as those above with adequate peer review, the scope of SAB review could be narrowed or redirected. A detailed rationale is provided in the Work Group Memorandum [2] and the fact-finding is summarized in Attachment C of that document.

Repeal of Emission Requirements for Glider Vehicles, Glider Engines, and Glider Kits (RIN 2060-AT79): The SAB finds that this action merits review regarding the adequacy of the supporting science. In response to fact-finding questions submitted by the SAB Work Group, the EPA stated that there is "uncertainty about what scientific work, if any, would support" this action, did not describe the approach being taken to develop the needed science, and did not identify any peer review plans. The SAB finds issues, such as: i) determining whether glider vehicles have operational and life cycle emissions less than, comparable to, or greater than new vehicles; ii) answering technical questions regarding the impact of emissions from glider vehicles; and iii) identifying and applying suitable methodologies for assessing the effect of the proposed rule on emissions, air quality and public health, are scientific and technical in nature.

Key questions that merit SAB review could include but need not be limited to the following:

- What are the emission rates of glider trucks for GHGs, nitrogen oxides, particulate matter, and other pollutants of concern? What are the key sources of variability and uncertainty in these rates?
- How do these emission rates compare to those of conventionally manufactured trucks that are: (a) new; and (b) used at prices comparable to the purchase price of a "new" glider truck? What are key sources of variability and uncertainty in the comparisons?
- What is the range of possible market penetration of glider trucks into the on road heavy duty vehicle stock? What is the effect of glider truck penetration into the market on fleet level emissions at national, regional, and local scales in the near-term and long-term, compared to the status quo?
- What are implications of changes in emissions in the near-term and long-term from the penetration of glider trucks regarding GHG emissions, air quality, air quality attainment, and human health, compared to the status quo?

Such a review might begin with existing documents developed by EPA, such as the November 20, 2017 test report in which emissions of gliders and conventionally manufactured trucks were compared, and focus on areas where updates are needed. To the extent that EPA appropriately addresses key issues such as those outlined above with adequate peer review, the scope of SAB review could be narrowed or redirected. A detailed rationale is provided in the Work Group Memorandum[3] and the fact-finding effort is summarized in Attachment C of that document.

[2] Ibid.
[3] Ibid.

EPA Planned Actions Awaiting Further Information for SAB Review

Increasing Consistency, Reliability, and Transparency in the Rulemaking Process (RIN 2010-AA12): The SAB finds that a review of the scientific and technical basis for this planned action should be deferred until more information is available and, at that time, determine if it is appropriate to provide advice and comment. From the information provided by EPA staff and the pre-rule stage status of the action, the SAB finds that there is not enough information to recommend a review of the underlying science at this time. The EPA indicated that this action would not involve basic economic methodology changes. However, given the concern for consistency, such changes may well have to be considered. Depending upon how the action proceeds and the comments on the ANPRM, it may ultimately involve precedential issues and become an influential scientific or technical work product. The SAB also notes that some of the issues presented by the Work Group regarding RIAs may be appropriate for inclusion in this planned action and review by the SAB (see RIN 2060-AT67).

EPA Planned Actions Not Meriting Further SAB Review

State Guidelines for Greenhouse Gas Emissions From Existing Electric Utility Generating Units (RIN 2060-AT67): This planned action does not merit review by the SAB. While the SAB does not wish to provide advice on this planned action, it does find several aspects of the underlying "Regulatory Impact Analysis for the Review of the Clean Power Plan: Proposal" (RIA) dated October 2017 to be appropriate for an advisory activity by the Board. Specifically, the RIA makes assumptions that warrant further review, as follows: i) sensitivity analysis assumptions about mortality associated with particulate matter at concentrations below the current NAAQS; ii) calculations of climate change benefits on a US-only basis rather than a global scale; and iii) application of a 7% discount rate to estimate foregone GHG mitigation benefits which extend across multiple generations. These aspects may be appropriately considered under the planned action, *Increasing Consistency, Reliability, and Transparency in the Rulemaking Process* (RIN 2010-AA12) as noted above.

Review of the Primary National Ambient Air Quality Standards for Sulfur Oxides (RIN 2060-AT68) and *Review of the Secondary National Ambient Air Quality Standards for Ecological Effects of Oxides of Nitrogen, Oxides of Sulfur and Particulate Matter. (RIN 2060-AS35)*: These actions do not merit further SAB consideration. These actions undergo a multi-year detailed review process by the EPA Clean Air Scientific Advisory Committee (CASAC) and its panels. CASAC is a federal advisory committee and has a statutory mandate under the Clean Air Act to advise the Administrator regarding the National Ambient Air Quality Standards (NAAQS). The Sulfur Oxides Review Panel and the Secondary NAAQS Review Panel for Oxides of Nitrogen and Sulfur were specifically constituted, in terms of independent scientific expertise, to review the proposed actions, respectively. CASAC completed its review of the Sulfur Oxides NAAQS on April 30, 2018.

National Emission Standards for Hazardous Air Pollutants for Hydrochloric Acid Production Residual Risk and Technology Review (RIN 2060-AT74): This action does not merit further SAB consideration. While the details of each Residual Risk and Technology Review (RTR) are unique to the sources and pollutants being evaluated, the general approaches and methodologies employed in EPA RTRs have become standardized, have been employed in numerous previous RTRs, and have been subject to multiple peer reviews over the past 17 years, most recently in 2009. As EPA's RTR methodologies are refined and revised over time, there is a need for periodic peer reviews of the changing methods. The SAB is completing a review of recent revisions to the screening methodologies used to support RTR reviews. Given the extensive past and ongoing peer reviews no additional SAB review is warranted.

Pesticides; Agricultural Worker Protection Standard; Reconsideration of Several Requirements (RIN 2070-AK43): This action does not merit further SAB consideration. Per Executive Order 13777, the EPA solicited suggestions about regulations that may be appropriate for repeal, replacement or modification as part of the Regulatory Reform Agenda. Specific changes to the 2015 Worker Protection Standard (WPS) regulations at 40 CFR 170 were suggested and EPA is soliciting public input on these specific revisions. The Federal Insecticide, Fungicide and Rodenticide Act (FIFRA) contains the requirement that EPA must provide copies of draft proposed and final rules to the FIFRA Science Advisory Panel (SAP) for review of any related scientific issues.

Fuels Regulation Modernization - Phase 1 (RIN 2060-AT31): The planned action does not merit further review by the SAB. This long-term action to "streamline and modernize EPA's existing fuels regulations under 40 CFR part 80" is described as "an administrative action to add clarity to the regulations to help improve compliance, and will not change any currently applicable fuel standards or propose new fuel ones." No new scientific techniques or analysis are contemplated under this planned action, as currently described. Also, the process for this action is in an early stage, with publication of proposed and final regulations planned for 2019. As such, consideration by the SAB is not recommended at this stage in the process.

SAB Requests Improvements in the Descriptions of EPA Planned Actions

The SAB thanks the EPA for providing information for consideration but emphasizes that more complete and timely information is required from the Agency to make recommendations and decisions regarding the science supporting planned actions. To improve the process for future reviews of the semi-annual regulatory agenda, the SAB strongly recommends that EPA enhance descriptions of future planned actions by providing specific information on the peer review associated with the science basis for actions and more description of the scientific and technological bases for the actions. In reviewing the Spring 2017 and Fall 2017 Regulatory Agendas, there were several cases where key information about the planned action, its supporting science and peer review were provided only after specific Work Group requests. The SAB finds that the written responses to fact-finding questions were not comprehensive and participation in the fact-finding teleconference was limited. EPA should provide such information in the initial descriptions provided to the Work Group.

Effective SAB evaluation of planned actions requires the EPA to characterize:

- All relevant key information associated with the planned action;

- The science supporting the regulatory action. If there is new science to be used, provide a description of what is being developed. If the Agency is relying on existing science, provide a short description.
- The nature of planned or completed peer review. To the extent possible, provide information about the type of peer review, the charge questions provided to the reviewers, how relevant peer review comments were integrated into the planned action, and information about the qualifications of the reviewer(s).

The SAB urges the Agency to provide more complete information to support future SAB decisions about the adequacy of the science supporting actions in future regulatory agendas.

On behalf of the SAB, I thank you for the opportunity to support EPA through consideration of the science supporting actions in the Agency's regulatory agenda.

Sincerely,

/S/

Dr. Michael Honeycutt, Chair
Science Advisory Board

Enclosure
(1) Summary of Proposed Actions Considered
(2) Roster of SAB Members

IV.
Letter from Tennessee Technological University President Oldham to EPA Administrator Scott Pruitt (Feb. 19, 2018)

Office of the President

TENNESSEE TECH

February 19, 2018

Honorable Scott Pruitt
USEPA Headquarters
William Jefferson Clinton Building
1200 Pennsylvania Avenue, N. W.
Mail Code: 1101A
Washington, DC 20460

Reference: Tennessee Tech University – Summary of Heavy Duty Truck Study and Evaluation of the Phase II Heavy Duty Truck Rule

Mr. Pruitt:

Please be advised that regarding the "Environmental & Economic Study of Glider Kit Assemblers" report, knowledgeable experts within the University have questioned the methodology and accuracy of the report. Therefore, Tennessee Tech University is actively pursuing a peer review of the report and supporting data to assure its validity. The University also is investigating an allegation of research misconduct related to the study. We request that you withhold any use or reference to said study pending the conclusion of our internal investigations.

We sincerely regret any inconvenience this imposes, but our aim is to ensure the absolute integrity and objectivity of any scholarly product of Tennessee Tech. We anticipate a timely and thorough review following which we will inform you of the outcome. Thank you for your assistance and patience as we work through the concerns raised.

Sincerely,

Philip B. Oldham

PBO/ds

Tennessee Tech / Box 5007 Cookeville, TN 38505 / 931-372-3241 / F: 931-372-6332 / www.tntech.edu/president

V.

Letter from EPA to American Lung Association, denying request to extend comment period on the Proposed Rule (Dec. 21, 2017)

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

December 21, 2017

OFFICE OF
AIR AND RADIATION

Mr. Paul G. Billings
Senior Vice President, Advocacy
American Lung Association
1331 Pennsylvania Avenue, N.W.
Suite 1425 North
Washington, D.C. 20004-1710

Dear Mr. Billings:

Thank you for your letter dated December 20, 2017, regarding the Environmental Protection Agency's Proposed Rule "Repeal of Emission Requirements for Glider Vehicles, Glider Engines, and Glider Kits." In your letter, you request that the EPA extend the comment period for this proposed rule by an additional 60 days.

The EPA has considered your request. The EPA continues to believe that the 50-day comment period is appropriate and therefore is denying the request for an extension of the comment period. This proposal is specific to requirements that begin on January 1, 2018, and extending the comment period would hinder the Agency's ability to make a decision in a timely manner.

Again, thank you for your letter. I appreciate the opportunity to be of service and trust the information provided is helpful.

Sincerely,

for William L. Wehrum
Assistant Administrator

VI.

Letter from EPA to Northeast States for Coordinated Air Use Management, denying request to extend comment period on the Proposed Rule (Dec. 20, 2017)

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

December 20, 2017

OFFICE OF
AIR AND RADIATION

Mr. Paul J. Miller
Deputy Director
Northeast States for Coordinated Air Use Management
89 South Street, Suite 602
Boston, MA 02111

Dear Mr. Miller:

Thank you for your letter dated December 14, 2017, regarding the Environmental Protection Agency's Proposed Rule "Repeal of Emission Requirements for Glider Vehicles, Glider Engines, and Glider Kits." In your letter, you request that the EPA extend the comment period for this proposed rule by an additional 30 days.

The EPA has considered your request. The EPA continues to believe that the 50-day comment period is appropriate and therefore is denying the request for an extension of the comment period. This proposal is specific to requirements that begin on January 1, 2018, and extending the comment period would hinder the Agency's ability to make a decision in a timely manner.

Again, thank you for your letter. I appreciate the opportunity to be of service and trust the information provided is helpful.

Sincerely,

William L. Wehrum
Assistant Administrator

VII.

Excerpt of EPA Report: Chassis Dynamometer Testing of Two Recent Model Year Heavy-Duty On-Highway Diesel Glider Vehicles, Docket ID EPA-HQ-OAR-2014-0827-2417 (Nov. 20, 2017)

Chassis Dynamometer Testing of Two Recent Model Year Heavy-Duty On-Highway Diesel Glider Vehicles

November 20, 2017

National Vehicle & Fuel Emissions Laboratory
U.S. Environmental Protection Agency
Ann Arbor, Michigan

Table of Contents

1. Executive Summary

This report summarizes the results from emissions testing of a 2016 model year (MY) Peterbilt 389 sleeper cab tractor and a 2017 MY Peterbilt 579 sleeper cab tractor that were produced as glider vehicles (i.e., a vehicle with a new chassis and a used powertrain). In addition, these glider test results are compared to equivalent tests of conventionally manufactured 2014 and 2015 MY tractors.

The glider vehicles tested include one of the more popular engine and vehicle configurations currently being produced as glider vehicles. These results are useful in evaluating the emission impacts of glider vehicles, and the observations made in this report are consistent with the expected emissions performance of heavy-duty highway diesel engines manufactured in the 1998-2002 timeframe.

The criteria pollutant emissions (NOx, PM, HC, CO) from the 2016 MY Peterbilt 389 and 2017 Peterbilt 579 glider vehicles were consistently higher than those of the conventionally manufactured 2014 and 2015 tractors. The extent to which this occurred depended on the pollutant and the test cycle.

- Under highway cruise conditions, NOx emissions from the Peterbilt 389 and Peterbilt 579 glider vehicles were approximately 43 times as high, and PM emissions were approximately 55 times as high as the conventionally manufactured 2014 and 2015 MY tractors.
- Under transient operations, absolute NOx and PM emissions were higher for the Peterbilt 389 and Peterbilt 579 glider vehicles on all duty cycles. On a relative basis, the glider vehicle NOx emissions were 4-5 times higher, and PM emissions were 50-450 times higher than the conventionally manufactured 2014 and 2015 MY tractors.
- HC and CO emissions for the Peterbilt 389 and Peterbilt 579 glider vehicles were also significantly higher than the conventionally manufactured 2014 and 2015 MY tractors on a relative basis. However, on an absolute basis, they appear to be less of a concern than the NOx and PM emissions.
- CO_2 emissions from the Peterbilt 389 and Peterbilt 579 glider vehicles were lower than the conventionally manufactured vehicles when measured on the chassis dynamometer without taking into account the differences in the aerodynamic drag between the vehicles.

2. Test Program

All testing was conducted by the US Environmental Protection Agency (EPA) in October and November 2017 at the National Vehicle Fuel and Emissions Laboratory (NVFEL). Two glider vehicles were tested on a heavy-duty chassis dynamometer to measure the emissions in a controlled environment. The following subsections describe the elements of the test program.

The testing was conducted using the same test cycles and test procedures that EPA has previously used to measure emissions from heavy-duty diesel vehicles, which allows us to put glider vehicle emission results into context. Comparisons to these other highway heavy-duty vehicles are discussed in Section 4.

2.1 Glider Vehicle Descriptions

Two newer model year glider vehicles with remanufactured pre-2002 MY engines were emissions tested in this program.

2.1.1 Glider #1 Vehicle Description

The first glider vehicle tested (Glider #1) was a 2016 MY Peterbilt 389 Glider-Sleeper with a Fitzgerald-rebuilt 12.7 L Detroit Diesel Series 60 engine with 500 horsepower, an Eaton 13 speed manual transmission, and 3.55 rear axle ratio. The Peterbilt 389 exterior has a traditional design that has a squarer front rather than a more aerodynamic design that is more common for model year 2016 and later model vehicles. The engine did not include an emission label, but is believed to have been remanufactured from an engine originally certified in a model year between 1998 and 2002. It included electronically-controlled fuel injection, but not exhaust gas recirculation or any exhaust aftertreatment. The odometer read 179,273 miles at the start of testing.

The malfunction indicator light (MIL), also known as the check engine light, was illuminated when Glider #1 was received. Upon inspection it was determined that the engine fault code was "Engine Oil Pressure> Fault Mode ID:0-DATA VALID BUT ABOVE NORMAL OPERATIONAL RANGE." EPA tested the as-received condition because it is representative of how the vehicle was driving in the real world. Upon completion of the first set of testing, diagnostics were performed to fix the issue. CAN bus data recorded during testing was reviewed and it was determined that in addition to the oil pressure signal, temperature readings from the fuel, oil and intake air sensor were all dropping low simultaneously. The sensor wiring harness was removed from the vehicle because the MIL was intermittent and identified an error with the oil pressure. The harness was inspected visually and evaluated for electrical continuity. During inspection it was determined that there was oil in the connector of the oil temperature sensor as well as fluid in the connector for the coolant sensor. These connectors were cleaned and the harness was reinstalled. Glider #1 was then driven and it was concluded that the repair was successful. The On-Board Diagnostics (OBD) system did not detect an issue for the remainder of testing. The emissions tests were then repeated to evaluate the emissions of a properly performing vehicle.

2.1.2 Glider #2 Vehicle Description

The second glider vehicle tested (Glider #2) was a 2017 MY Peterbilt 579 Glider-Sleeper cab tractor with a Fitzgerald-rebuilt 12.7 L Detroit Diesel Series 60 engine with 500 horsepower and an Eaton RTX-16710B 10 speed manual transmission. The body of the Peterbilt 579 tractor was more aerodynamic than the Peterbilt 389. Similar to Glider #1, the engine in this vehicle did not include an emission label, but is believed to have been remanufactured from an engine originally certified in a model year between 1998 and 2002. It included electronically-controlled fuel injection, but not exhaust gas recirculation or any exhaust aftertreatment. The vehicle had approximately 30,600 miles at the start of testing. Unlike Glider #1, Glider #2 did not have any check engine light warnings during the testing.

2.2 Road Load Coefficients

Chassis dynamometer testing requires a simulation of the road load impacts, such as aerodynamics and losses associated with the driveline. These parameters simulate the amount of resistance (i.e., load) that the vehicle is under at different vehicle speeds. The actual road load impact varies significantly in-use because it is dependent on variables such as an actual trailer being pulled and the weight of the vehicle. Road load coefficients are frequently determined by conducting coastdown testing prior to chassis dynamometer testing. In this instance, EPA did not conduct coastdown testing to determine the road load coefficients of the vehicles due to the limited amount of time the glider vehicles were on loan to EPA. Rather, we tested the vehicles each with two sets of road load coefficients covering a range of typical operation. The first set of road load coefficients represents a 60,000 pound combined weight of the tractor, trailer, and payload. The second set of road load coefficients represents a less aerodynamic vehicle with 80,000 pound combined weight of the tractor, trailer, and payload. The target and actual road load coefficients used in the testing are shown in Table 1.

Table 1: Road Load Coefficients

	Target Coefficients			Set Coefficients		
Configuration	A (lbf)	B (lbf/mph)	C (lbf/mph^2)	A (lbf)	B (lbf/mph)	C (lbf/mph^2)
Glider #1, 60k Test Weight	345.090	0.0000	0.15380	235.350	-2.1042	0.143390
Glider #1, 80k test weight	446.350	7.76060	0.14780	336.690	5.5976	0.137120
Glider #2, 60k Test Weight	345.090	0.0000	0.15380	204.530	-1.4243	0.145510
Glider #2, 80k test weight	446.350	7.76060	0.14780	314.620	5.9516	0.145980

2.3 Test Fuel

The test fuel used in this program met the EPA highway certification diesel fuel specifications in 40 CFR part 1065. The fuel properties can be found in Table 2. The glider vehicles went through a triple drain and flush procedure as shown in Table 3 to ensure the engine was operating on the test fuel.

Table 2: Certification Diesel Fuel Specifications

FTAG	Fuel Name	ALPHA	BETA	Cetane	Net Heating Value (BTU/lb)	Carbon Weight Fraction	Sulfur (ppm)	Specific Gravity
26758	Federal Cert Diesel 7-15 ppm Sulfur	1.78	0	44.3	18406	0.8699	8.4	0.8536

Table 3: Fuel change procedure

Step	Description
1	With the ignition key in OFF position, drain vehicle fuel completely via installed fuel drain or the fuel rail.
2	Fill fuel tank to 10% with Diesel Fuel, NVFEL FTAG 26758.
3	Operate the vehicle at idle for 10-15 minutes to allow the fuel system to purge and stabilize.
4	Repeat Steps 1-3. (If repeated steps 1-3, move to Step 5)
5	Repeat Steps 1-3, but fill the fuel tank to 100% with NVFEL Diesel Fuel, FTAG 26758.
6	Run vehicle road load derivations.

2.4 Test Cycles

The emission tests for both gliders were conducted on a chassis dynamometer using three different sets of heavy-duty drive cycles representing a variety of operation. A cold start Heavy-Duty Vehicle Urban Dynamometer Driving Schedule (UDDS) sequence, a World Harmonized Vehicle Cycle (WHVC) sequence, and a Super Cycle.

The cold start sequence consisted of the UDDS cycle, a twenty-minute soak period followed by another UDDS, another twenty-minute soak period, a third UDDS cycle and finishing with forty-five minutes of idling. The UDDS sequence is shown in Figure 1.

The World Harmonized Vehicle Cycle (WHVC) was first run as a warmup cycle without emission measurement followed by a second WHVC where emissions were measured. The WHVC cycle is shown in Figure 2.

The Super Cycle followed the WHVC sequence. If more than twenty minutes elapsed between the cycles, then another warm-up WHVC was run without emission measurement to ensure the Super Cycle included a hot start test. The Super Cycle consists of five California Air Resources Board (ARB) Heavy-Duty Transient Cycles (HDT), a ten-minute idle period, and 55 mph and 65 mph cruise cycles with 0.5 mph/sec acceleration/deceleration rates. The Super Cycle trace is shown in Figure 3.

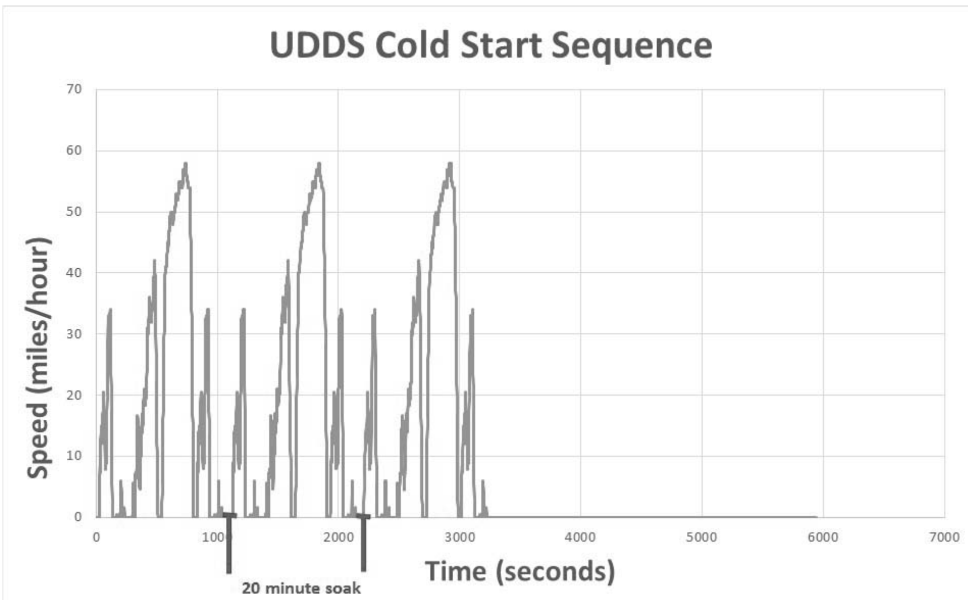

Figure 1: EPA UDDS test cycle speed vs. time profile

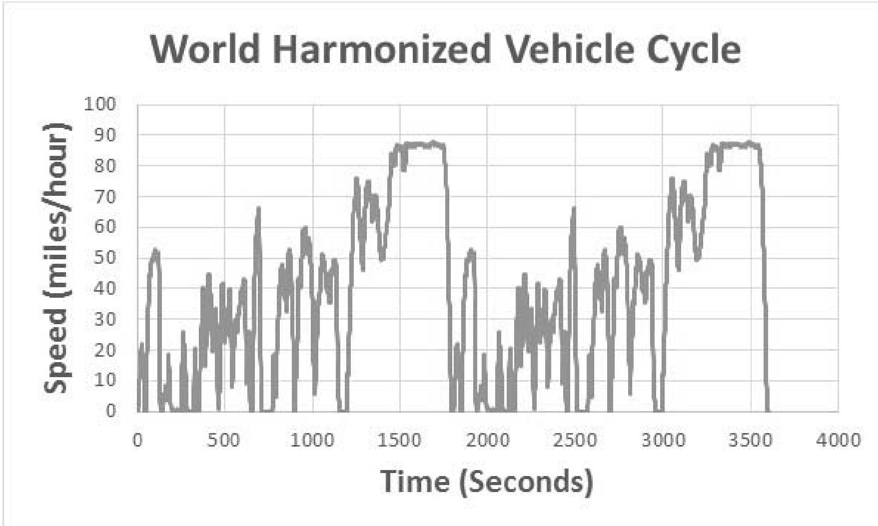

Figure 2: World Harmonized Vehicle Cycle speed vs. time profile

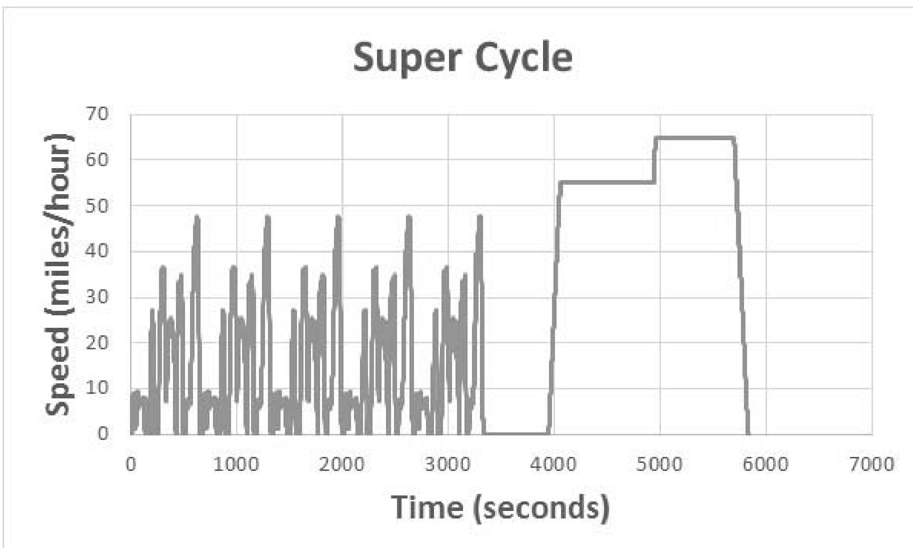

Figure 3: Super Cycle speed vs. time profile

Chassis testing of Glider #2 was also conducted to simulate the engine-based Supplemental Emission Test (SET) defined in 40 CFR 86.1360. Duty cycles were created that matched the defined engine speeds of the SET cycle by driving the vehicle at a constant speed and matched engine torque at the 100%, 75%, 50% and 25% load points at each speed by varying simulated road grade.

The first step of the SET cycle development was to obtain the engine torque curve. This was done by having the dynamometer linearly ramp the vehicle speed from approximately 16 to 68 mph over 315 seconds with the pedal position at 100%. Since the dynamometer was controlling speed for this test instead of torque, the engine power was determined by using the measured power from the dynamometer corrected for the tire and driveline losses by taking the difference of the losses of target and set coefficients and an assumed axle efficiency of 94%. The resulting torque curve from the test is shown in Figure 4. Using the torque curve, the intermediate test speeds "A", "B", and "C" were calculated according to 40 CFR 1065.610.

Finally, three vehicle duty-cycles were created to simulate the engine-based SET on the chassis dynamometer, one for each intermediate speed as shown in Figure 5, Figure 6 and Figure 7. This duty cycle is similar to running the SET as a discrete mode test where the engine is stabilized at each speed and torque setpoint before sampling emissions and the transitions from mode-to-mode are not sampled. The duty cycles were created in this manner because running a Ramped Modal Cycle (RMC) on a chassis dynamometer would be difficult and would not allow for the transmission to be kept in direct drive.

Figure 4 also shows the engine speed and torque where the engine operated for each SET setpoint during the testing. One observation from this figure is that the test speed for the C100 point was slightly lower than the setpoint. This was because the engine was not able to maintain vehicle speed at the defined road grade of the cycle, but since the shift in speed was slight the results were still meaningful for the purpose of this testing.

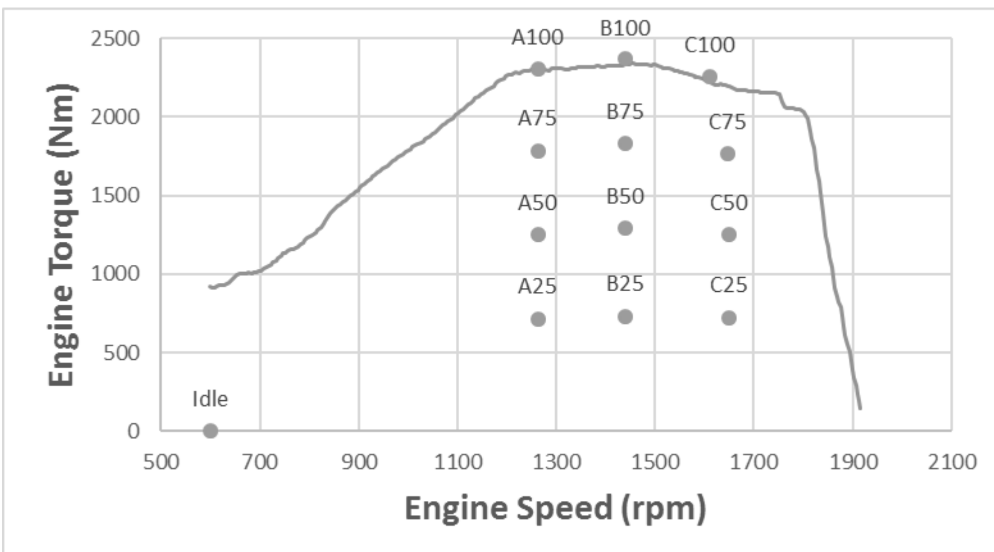

Figure 4: Glider #2 torque curve and SET test points

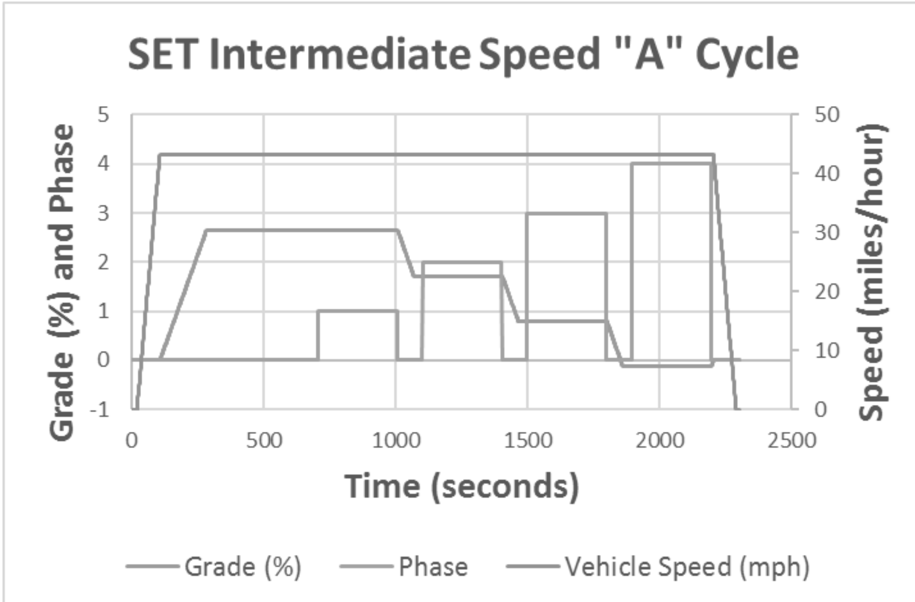

Figure 5: SET Intermediate Speed "A" Cycle speed, grade and phase vs. time

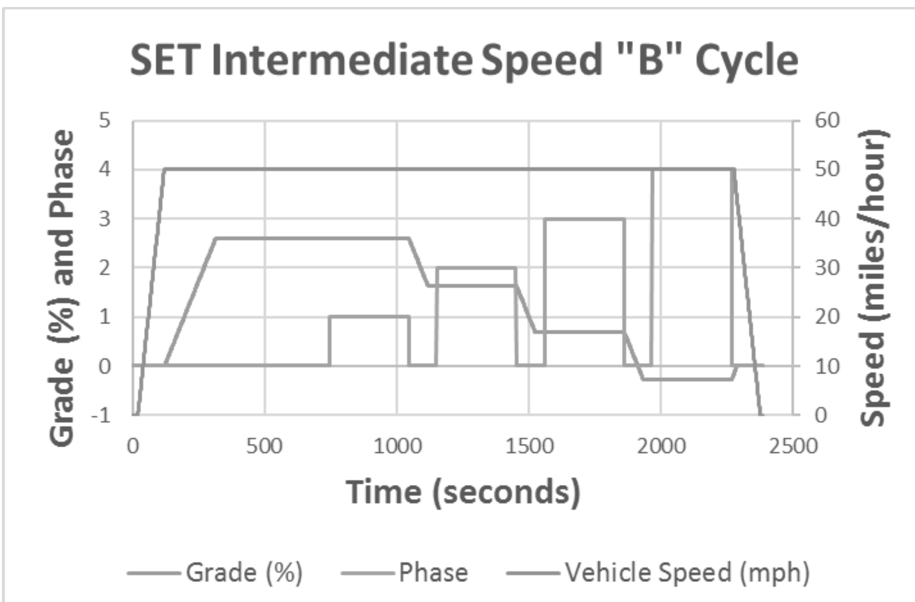

Figure 6: SET Intermediate Speed "B" Cycle speed, grade and phase vs. time

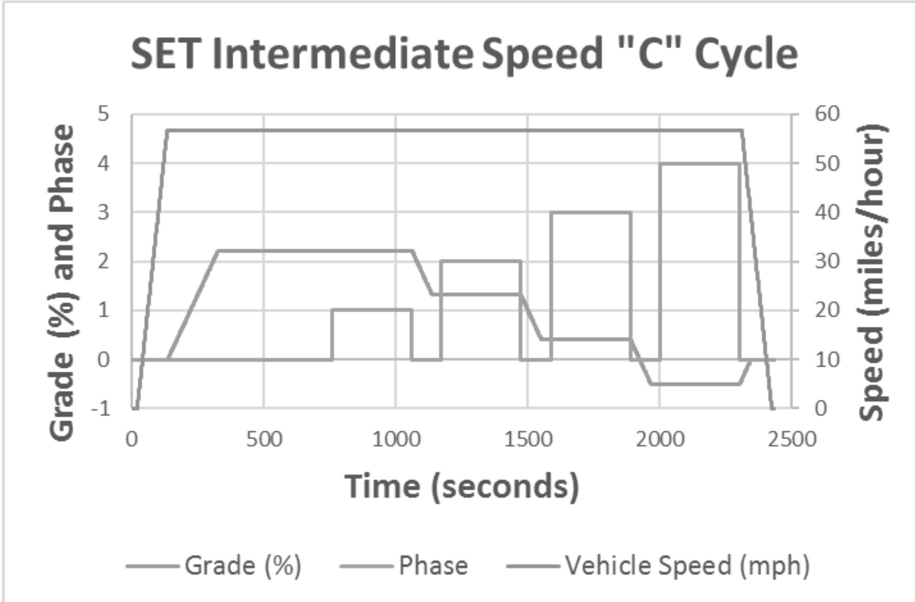

Figure 7: SET Intermediate Speed "C" Cycle speed, grade and phase vs. time

2.5 Vehicle Test Site and Emission Measurements

The chassis dynamometer used for this study is located at the EPA's National Vehicle & Fuels Emissions Laboratory in Ann Arbor, Michigan. The test site features are shown in Figure 8. Table 4 provides information on the test site equipment. The emissions measured include total hydrocarbons (THC), methane (CH_4), nonmethane hydrocarbon (NMHC), carbon monoxide (CO), oxides of nitrogen (NO_X), and particulate matter (PM as PM_{10}).[1] The emission measurement system for both gaseous and PM based pollutants is based on the Horiba MEXA-ONE platform and is compliant with the requirements in 40 CFR part 1066. The particulate matter weighroom is compliant with 40 CFR 1065.190, including temperature and dewpoint control. The PM weighroom was designed to be compliant as a Class 6 cleanroom or better and meets all of the ambient requirements described in 40 CFR part 1065. The Mettler-Toledo microbalance is compliant with the requirements in 40 CFR 1065.290. The microbalance calibration is NIST traceable as required in 40 CFR part 1065. The weighroom and microbalance provide the ability to accurately measure PM mass gain down to the 1 ug level. The system as a whole can measure PM mass emission rates as low 0.001 g/hp-hr and as high as 2 g/hp-hr.

EPA also utilized an AVL Model 483 MicroSoot Sensor to collect continuous soot data on Glider #2 for a subset of the testing. That data is not presented in this test report.

[1] No attempt was made to measure crankcase emissions from the glider vehicles. However, the distinctive odor of blowby exhaust in the test cell during testing of both glider vehicles (compared to testing other vehicles) indicates that that crankcase emissions could be high.

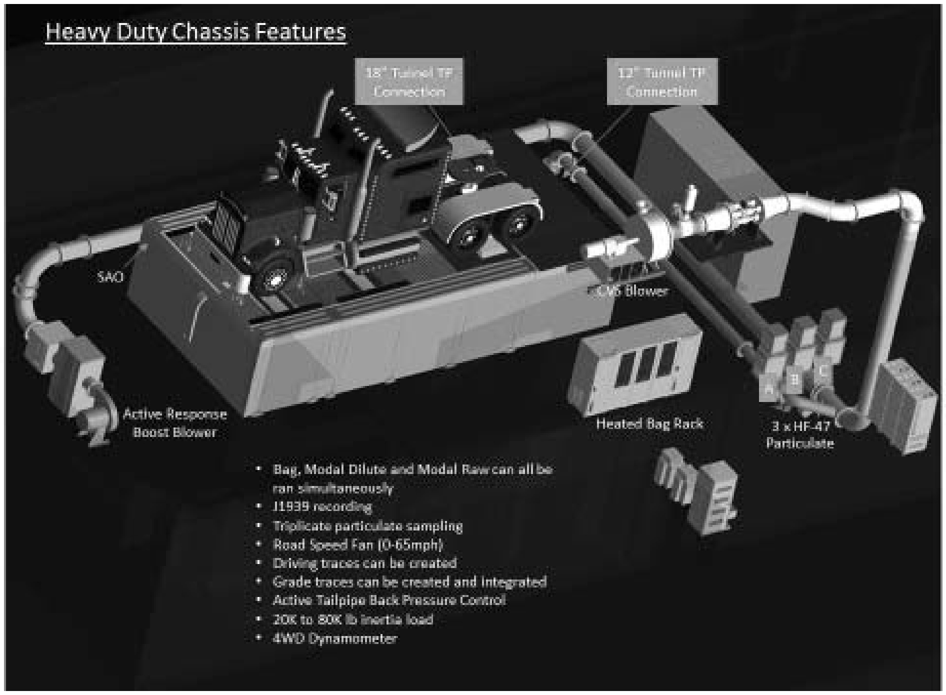

Figure 8: Chassis Dynamometer Overview

Table 4: Test site equipment

Features and Specifications	
4WD Chassis Dynamometer	Type: AIP-ECDM 72H-4WD Operating Speed Range: 0 – 100 mph (0 – 160 km/h) Max Axle Weight of the test vehicle: 44,000 lb (20000 kg) Inertia simulation of up to 80,000 lb (36500 kg)
Fuel	Diesel, Electric, Gasoline & Ethanol Blends
Emissions Sampling	Continuous Gaseous: Raw and Diluted simultaneous Batch: Gaseous Bag
Emission Analyzers	MEXA-ONE platform, Continuous: CO(L), CO(H), CO_2, O_2, THC, CH_4, NO/NOx Batch: CO(L), CO_2(L), THC, CH_4, NO/NOx, N_2O
Dilution Tunnel	Heated 12 inch (30.5cm) and 18 inch (45.7cm) diameter tunnel, 4 Critical Flow Venturis allow flow combinations from 19.8 to 116.1 m^3/min (700 to 4100 scfm). Active tailpipe pressure control
Road Speed Fan	70" x 70" road speed modulated vehicle cooling fan
Particulate	Up to 4 phases sampled in triplicate with secondary dilution available, mass determined with Mettler-Toledo microbalance.
Research Focus	On road heavy-duty and medium-duty vehicles above 20,000 pounds GVWR
CFR scope	40 CFR Part 86 & 1066 define the heavy-duty vehicle test procedures.

There were several verification and maintenance activities conducted in the test site to maintain quality assurance. All analyzer checks were performed according to 40 CFR part 1066 specifications. The activities included, but were not limited to, the following:

- Daily: Cell preparation checks ran included bag leak checks, sample line leak checks and analyzer zero and span checks.
- Weekly: Dynamometer coastdowns at 20,000 lb and 80,000 lb for MAHA 4WD dynamometer, Dynamometer Parasitic Losses Verification, Gravimetric Propane Injection for THC, Sample Analysis Correlations for bag checks on CO, CO_2, CH_4, NO_x emissions.
- Every 35 days: CH_4 Gas Chromatography column efficiency check, NOx converter check, chemiluminescent detector CO_2 + H_2O Quench Check, and gas analyzer linearity checks per 40 CFR part 1066.
- Typically, annually: Flame ionization detector (FID) O_2 inference check, FID response factor check, nondispersive infrared (NDIR) analyzer interference checks, and emissions sampling unit (ESU) leak check.

3. Emissions Results

3.1 Criteria Pollutants

The average emission results of the individual vehicles tested over the UDDS, WHVC, and Super Cycle are found in the following tables for NOx, NMHC, and CO. The other gaseous emissions such as THC, CH_4, and CO_2 are found in Appendices A, B and C.

The UDDS cycle began with a cold start. The testing sequence included an initial cold start UDDS, then a 20-minute soak followed by another UDDS, a 20-minute soak and UDDS followed by 45 minutes of idle. The emission results for testing at 60,000 pounds and 80,000 pounds for both glider vehicles are shown in Table 5. Glider #1, a 2016 MY Peterbilt 389 sleeper cab tractor, values only include the results from the tests after the check engine light issue was fixed. The results represent an average emissions of the tests performed for a given vehicle and configuration. See Appendix A for additional emissions results, including the results from the individual tests and the results from Glider #1 with the check engine light on.

Table 5: UDDS Results from the 2016 MY Peterbilt 389 Glider #1 and 2017 MY Peterbilt 579 Glider #2

UDDS		NO_x			Non-Methane Hydrocarbons (NMHC)			Carbon Monoxide (CO)		
Vehicle Test Weight (lbs)	Vehicle	Cold UDDS (g/mi)	Inter. UDDS (g/mi)	Hot UDDS (g/mi)	Cold UDDS (g/mi)	Inter. UDDS (g/mi)	Hot UDDS (g/mi)	Cold UDDS (g/mi)	Inter. UDDS (g/mi)	Hot UDDS (g/mi)
60,000	Glider #1	27.80	20.24	20.02	0.427	0.437	0.454	13.59	10.91	10.76
	Glider #2	32.42	25.01	23.55	0.613	0.388	0.397	12.32	11.16	10.85
80,000	Glider #1	36.18	27.66	27.04	0.426	0.429	0.436	17.50	15.78	14.86
	Glider #2	40.26	33.50	32.01	0.241	0.063	0.073	15.47	15.13	15.16

For the WHVC, the first cycle was a warmup and emissions were not measured. The average results for the hot start cycle are shown in Table 6. See Appendix B for additional emission results.

Table 6: WHVC Results from the 2016 MY Peterbilt 389 Glider #1 and 2017 MY Peterbilt 579 Glider #2

World Harmonized Vehicle Cycle		NOx	NMHC	CO
Vehicle Test Weight (lbs)	Vehicle	WHVC (g/mi)	WHVC (g/mi)	WHVC (g/mi)
60,000	Glider #1	16.81	0.386	9.24
	Glider #2	20.15	0.290	8.96
80,000	Glider #1	23.43	0.343	13.92
	Glider #2	26.73	0.308	11.86

The Super Cycle provided information across more driving conditions as it contains five ARB Heavy Duty Transient Cycles (HHDDT), a ten-minute idle period followed by 55 mph and 65 mph cruise periods with 0.5 mph/sec acceleration and deceleration rates. The results are shown in Table 7 for 60,000 lb and 80,000 lb loads respectively for both glider vehicles. See Appendix C for additional emission results.

Table 7: Super Cycle Results from the 2016 MY Peterbilt 389 Glider #1 and 2017 MY Peterbilt 579 Glider #2

Super Cycle		NO_x			Non-Methane Hydrocarbons (NMHC)			Carbon Monoxide (CO)		
Vehicle Test Weight (lbs)	Vehicle	ARB Transient 1 (g/mi)	ARB Transient 2 (g/mi)	55/65 Cruise (g/mi)	ARB Transient 1 (g/mi)	ARB Transient 2 (g/mi)	55/65 Cruise (g/mi)	ARB Transient 1 (g/mi)	ARB Transient 2 (g/mi)	55/65 Cruise (g/mi)
60,000	Glider #1	22.26	22.28	13.55	0.705	0.759	0.209	16.68	16.25	1.55
	Glider #2	24.94	24.92	16.64	0.603	0.620	0.157	15.61	15.48	1.41
80,000	Glider #1	29.14	28.68	25.22	0.715	0.710	0.202	21.79	21.10	2.64
	Glider #2	32.57	32.69	28.62	0.563	0.607	0.180	18.07	18.57	2.42

3.2 Particulate Matter (PM)

Particulate matter emissions were measured in triplicate to provide replicate samples for analysis. The glider vehicles emitted significantly more particulate matter than the typical heavy-duty diesel vehicles tested in the laboratory. Therefore, using our typical dilution rates and filter face velocity settings, the filters were overloaded with particulate matter during our initial testing with Glider #1. This caused a PM equipment alarm during phase 2 of the Super Cycle and therefore phases 3 and 4 were not sampled. A picture of the filters is show in Figure 9. Several iterations were performed with different filter face velocity and dilution ratio settings to address the issue. In the end, the filter face velocity was decreased from 100 cm/s to 65 cm/s and a secondary dilution flow was added at 4:1.

Figure 9: PM Filters from Glider #1 testing over the Super Cycle Test[2]

The PM results for each of the test cycles at both test weights for both glider vehicles are shown in Table 8 through Table 10. Each value in the tables reflects the average of all tests for a given vehicle and configuration. The values for Glider #1 only include the emission values for the tests with the check engine light issue fixed. See Appendix A, B, and C for the results from the individual tests, including the Glider #1 tests before the check engine light issue was resolved.

Table 8: UDDS PM Emissions from the 2016 MY Peterbilt 389 Glider #1 and 2017 MY Peterbilt 579 Glider #2

UDDS		Particulate Matter		
Vehicle Test Weight (lbs)	Vehicle	Cold UDDS (mg/mi)	Inter. UDDS (mg/mi)	Hot UDDS (mg/mi)
60,000	Glider #1	500	567	602
	Glider #2	349	371	370
80,000	Glider #1	742	778	737
	Glider #2	451	445	434

[2] A1: Phase 1, hot start ARB Transient cycle; A2: Phase 2, four hot running ARB Transient cycles; A3: 10 minutes of measured idle; A4: 55/65 mph cruise. The PM sampling equipment shut down at phase 2 so filters A3 and A4 were not collecting PM.

Table 9: WHVC PM Emissions from the 2016 MY Peterbilt 389 Glider #1 and 2017 MY Peterbilt 579 Glider #2

World Harmonized Vehicle Cycle		Particulate Matter
Vehicle Test Weight (lbs)	Vehicle	WHVC (mg/mi)
60,000	Glider #1	560
	Glider #2	349
80,000	Glider #1	745
	Glider #2	426

Table 10: Super Cycle PM Emissions from the 2016 MY Peterbilt 389 Glider #1 and 2017 MY Peterbilt 579 Glider #2

Super Cycle		Particulate Matter		
Vehicle Test Weight (lbs)	Vehicle	ARB Transient 1 (mg/mi)	ARB Transient 2 (mg/mi)	55/65 Cruise (mg/mi)
60,000	Glider #1	1028	997	177
	Glider #2	653	677	78
80,000	Glider #1	1340	1288	169
	Glider #2	701	705	90

3.3 Conversion of Distance Specific Emissions to Engine Work Specific Emissions

NOx, PM, CO, and HC emissions from highway heavy-duty diesel vehicles are controlled through EPA emission standards based on engine dynamometer testing using engine test cycles. There are various ways to estimate engine work from vehicle testing. The most common is to use engine reported speed and torque to calculate power. This methodology works well for modern engines where the engine's reference torque is known. Since the reference torque was not known for this engine, the engine work was estimated by using the chassis dynamometer target coefficients and the simulated vehicle mass, along with estimates for driveline efficiency.

To calculate the axle power, a modified version of Equation 1 in 40 CFR 1066.210 was used as shown in Equation A below.[3] This equation was modified in two ways. The first was multiplying the equation by vehicle speed to calculated power instead of force. The second

[3] See https://ecfr.io/Title-40/se40.37.1066_1210 for the description of the equation and units.

modification was removing the road grade terms from the equation since none of the cycles tested included road grade.

$$P_{\text{wheel,i}} = \left(A + B \cdot v_{\text{i}} + C \cdot v_{\text{i}}^2 + M_{\text{e}} \cdot \frac{v_{\text{i}} - v_{\text{i-1}}}{t_{\text{i}} - t_{\text{i-1}}} \right) \cdot v_{\text{i}} \text{, Eq. A}$$

Equation B was to used calculate engine power from wheel power. For this equation the axle and transmission efficiencies were estimated to be 94 percent. These values were based on the 2018 baseline data from the Heavy-Duty Greenhouse Gas and Fuel Efficiency Standards - Phase 2 rule.

$$P_{\text{engine,i}} = \frac{P_{\text{wheel,i}}}{0.94^2} \text{, Eq. B}$$

All of the points where engine power was below zero were set to zero before the power was integrated to calculate work. This was done to be consistent with how work specific emissions are calculated in 40 CFR part 1065. Finally, all the tests and phases where the vehicle, configuration, and vehicle speed trace were the same, were averaged together. This was done because the only source of variation for this analysis is the slight changes in driven vehicle speed from test to test. The coefficient of variation was typically below 2 percent for the tests, which is below other sources of error that could influence this analysis to calculate engine work from chassis dynamometer tests. Table 11 contains a summary of the conversion rates for the glider vehicles.

Table 11: Summary of vehicle miles per engine horsepower-hour

Glider Vehicle	Test Weight (pounds)	WHVC Phase 1	HD UDDS Phase 1, 2 and 3	Super Cycle Phase 1 and 2	Super Cycle Phase 4
		miles / (hp-hr)			
#1	60,000	0.321	0.293	0.271	0.362
#1	80,000	0.224	0.201	0.189	0.228
#2	60,000	0.320	0.286	0.266	0.362
#2	80,000	0.219	0.198	0.188	0.229

This analysis estimates the engine work from chassis dynamometer testing and does not take into account a number of additional sources of load on the engine. Two of these sources are the engine accessory load and the additional power from when the engine is idling at a higher speed during warm-up.

3.4 Simulated HD Federal Test Procedure and Supplemental Emission Test Results

The on-highway heavy-duty engine emission standards are in grams per horsepower-hour based on engine test cycles. The current exhaust emissions standards for heavy-duty engines are 0.2 g/hp-hr for NOx, 0.01 g/hp-hr for PM, 15.5 g/hp-hr for CO, and 0.14 g/hp-hr for NMHC.[4] The emission standards are evaluated over a transient cycle, the Heavy-Duty Federal Test Procedure (HD Engine FTP) cycle, and a steady-state cycle.

To conduct a rough comparison of the emissions over a transient cycle to the engine emissions standards, we calculated the estimated NOx, PM, CO, and NMHC emissions in grams per horsepower-hour using the conversion rates shown in Table 11. The comparison was limited to the chassis test results from the UDDS cycle because this is the vehicle cycle that was used originally to create the HD Engine FTP cycle. As shown in Table 12 and Table 13, the estimated NOx and PM emissions results are significantly higher than the model year 2010 and later on-highway heavy-duty diesel emission standards, and are more typical of the emission results expected from an on-highway heavy-duty diesel engine built between model years 1998 and 2002.

Table 12: Estimated Grams of NOx and NMHC per Horsepower-Hour Results over the UDDS Cycle for 2016 MY Peterbilt 389 Glider #1 and 2017 MY Peterbilt 579 Glider #2

UDDS		NO_x			Non-Methane Hydrocarbons (NMHC)		
Vehicle Test Weight (lbs)	Vehicle	Cold UDDS (g/hp-hr)	Inter. UDDS (g/hp-hr)	Hot UDDS (g/hp-hr)	Cold UDDS (g/hp-hr)	Inter. UDDS (g/hp-hr)	Hot UDDS (g/hp-hr)
60,000	Glider #1	8.15	5.93	5.87	0.125	0.128	0.133
	Glider #2	9.27	7.15	6.74	0.175	0.111	0.114
80,000	Glider #1	7.27	5.56	5.44	0.086	0.086	0.088
	Glider #2	7.97	6.63	6.34	0.048	0.013	0.015

[4] See 40 CFR 86.007-11 for emission standards and supplemental requirements for 2007 and later model year diesel heavy-duty engines and vehicles.

Table 13: Estimated Grams of CO and PM per Horsepower-Hour Results over the UDDS Cycle for 2016 MY Peterbilt 389 Glider #1 and 2017 MY Peterbilt 579 Glider #2

UDDS		Carbon Monoxide (CO)			Particulate Matter		
Vehicle Test Weight (lbs)	Vehicle	Cold UDDS (g/hp-hr)	Inter. UDDS (g/hp-hr)	Hot UDDS (g/hp-hr)	Cold UDDS (g/hp-hr)	Inter. UDDS (g/hp-hr)	Hot UDDS (g/hp-hr)
60,000	Glider #1	3.98	3.20	3.15	0.146	0.166	0.176
	Glider #2	3.52	3.19	3.10	0.100	0.106	0.106
80,000	Glider #1	3.52	3.17	2.99	0.217	0.228	0.216
	Glider #2	3.06	3.00	3.00	0.089	0.088	0.086

Chassis testing of Glider #2 was also conducted to simulate the engine-based steady state cycle, the Supplemental Emission Test (SET), as discussed in Section 2.4. The simulation was conducted by running a series of steady-state cycles with varying grade using the mass and road load coefficients of the 80,000 pound vehicle. The engine power for each SET test point was determined using the method defined in Section 3.3 and the corresponding speed and torque values are shown in Table 14.

Table 14: Engine Speed and Torque at SET Test Points

Test Point	Engine Speed (rpm)	Engine Torque (Nm)
A100	1262	2302
A75	1262	1783
A50	1263	1251
A25	1262	716
B100	1440	2371
B75	1440	1831
B50	1440	1289
B25	1440	732
C100	1610	2255
C75	1648	1764
C50	1648	1249
C25	1648	722
Idle	600	0

The overall emission test results from the SET are shown in Table 15. For the "idle" test point of the SET, the idle results from the 3rd phase of the Super Cycle were used. The NO_x emissions are consistent with the results of the UDDS but the CO and PM emissions are measurably lower. This is not surprising since the transient CO and PM emissions are likely a result of poor air fuel ratio control and mixing during transient operation when compared to the steady-state operation that the SET captures.

Table 15: Glider #2 Simulated SET Results

Test Point	THC (g/hp-hr)	CO (g/hp-hr)	NOx (g/hp-hr)	N2O (g/hp-hr)	CH4 (g/hp-hr)	NMHC (g/hp-hr)	PM (g/hp-hr)
A100	0.0382	1.3560	6.817	0.00166	0	0.0399	0.028
A75	0.0343	0.8307	6.540	0.00177	0.00030	0.0355	0.016
A50	0.0320	0.5130	6.369	0.00205	0	0.0338	0.017
A25	0.0578	0.3805	6.001	0.00285	0	0.0607	0.019
B100	0.0375	0.7036	6.996	0.00180	0	0.0395	0.027
B75	0.0359	0.4510	7.379	0.00193	0.0002	0.0380	0.017
B50	0.0333	0.3316	6.880	0.00215	0	0.0351	0.015
B25	0.0569	0.3850	5.733	0.00296	0	0.0599	0.024
C100	0.0361	0.3926	6.020	0.00211	0	0.0385	0.040
C75	0.0394	0.2950	7.236	0.00226	0	0.0420	0.028
C50	0.0405	0.2648	6.594	0.00254	0	0.0427	0.024
C25	0.0635	0.3939	5.997	0.00340	0	0.0666	0.031
Idle*	5.002	23.72	113.5	0.0690	0.018	5.0127	0.175
Weighted 40 CFR 86.1362	0.0446	0.6182	6.73	0.00219	7.53E-05	0.0467	0.025
*Idle emissions are in (grams/hr)							

4. Comparison to other HD Vehicle Emission Performance

The emission results from the glider vehicles were compared to two other recent model year tractors. The vehicle specifics of these two other tractors are listed below.

- The day cab tractor tested was a 2015 MY International Day Cab with over 10,000 miles. The vehicle contained a 2015 MY Cummins ISX 600 HP engine, an Eaton 13 speed automated manual transmission, and a 3.55 rear axle ratio.
- The sleeper cab tractor tested was a 2014 MY Freightliner Cascadia with 362,652 miles. The vehicle contained a 2014 MY Detroit Diesel DD-15 505 HP engine, an Eaton 10 speed manual transmission, and a 3.55 rear axle ratio.

A principle difference between these vehicles and the 2016 MY Peterbilt 389 and 2017 MY Peterbilt 579 glider vehicles are the engines. The glider vehicles use a rebuilt engine that was originally manufactured in the 1998-2002 timeframe, while the two comparison vehicles have engines certified to the 2014 MY and 2015 MY EPA emissions standards and utilize cooled exhaust gas recirculation (EGR), diesel particulate filters, and selective catalytic reduction (SCR) systems.

All of the tractors were tested in the same HD chassis dynamometer cell as the glider vehicles. The target road load coefficients for the International day cab matched the glider vehicles when tested at 60,000 pounds. The target road loads of the Freightliner sleeper cab matched the glider vehicles when tested at 80,000 pounds. This means that the comparisons reflect differences observed for the drivetrain (engine, transmission, and axle) of the vehicles, but do not account for differences associated with the vehicles' aerodynamics or tire performance. The road load coefficients for both of these vehicles are show in Table 16.

Table 16: Road Load Coefficients

	Target Coefficients			Set Coefficients		
Configuration	A (lbf)	B (lbf/mph)	C (lbf/mph^2)	A (lbf)	B (lbf/mph)	C (lbf/mph^2)
2015 MY International Day Cab, 60k Test Weight	345.090	0.0000	0.15380	75.100	-0.7408	0.143200
2014 MY Freightliner Sleeper Cab, 80k Test Weight	446.350	7.76060	0.14780	294.170	6.0668	0.139900

As shown in the following figures, we compared the emission rates from the gliders to that of the comparable tractor configuration. The glider results in the figures represent the average of all of the tests for a given vehicle configuration, excluding the tests with the MIL on for Glider #1.[5] Figure 10 through Figure 13 compare the 2016 MY and 2017 MY Peterbilt Gliders at 60,000 pound test weight to the 2015 MY International Day Cab at the same test weight and road load coefficients over the Super Cycle. Figure 14 through Figure 17 show the emission rate differences between the 2016 MY and 2017 MY Peterbilt Gliders at 80,000 pound test weight to the 2014 MY Freightliner Sleeper Cab at the same test weight and road load coefficients over the ARB Transient Cycle.

The NOx, CO, THC, and PM emissions from the glider vehicles were significantly higher than the newer model year tractors over all cycles.

[5] See Appendix A, B, and C for the emission rates before and after the repair.

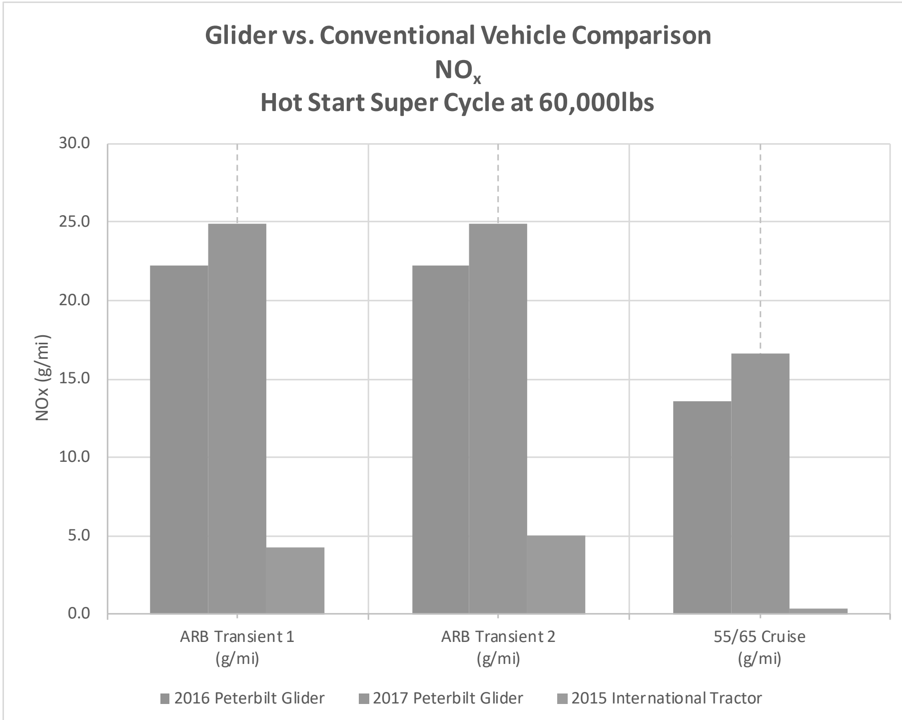

Figure 10: NOx Emissions Comparison of 2015 MY Day Cab to the 2016 MY Peterbilt 389 Glider #1 and 2017 MY Peterbilt 579 Glider #2 over the Super Cycle

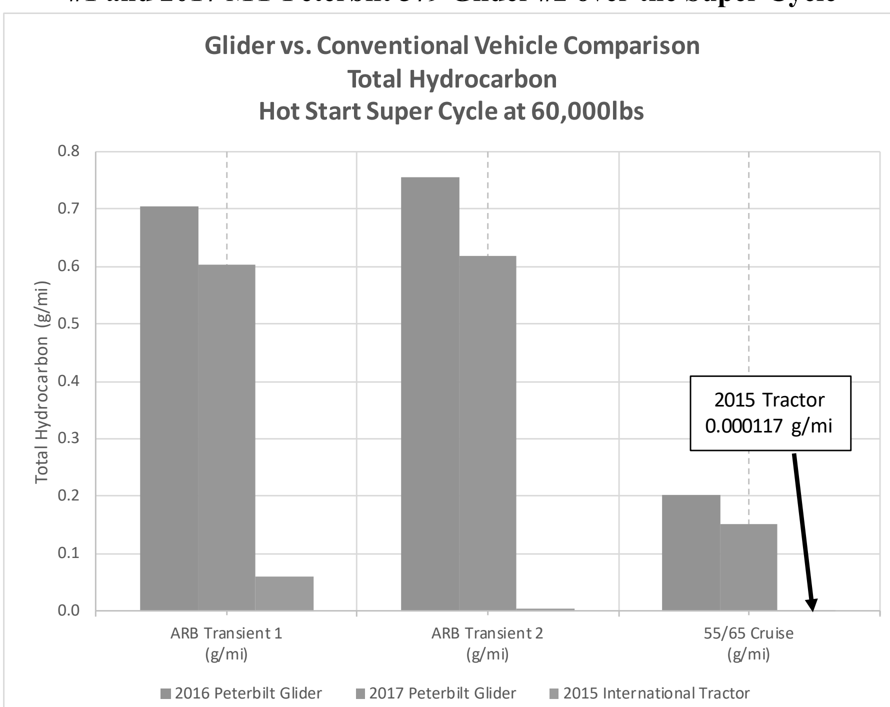

Figure 11: THC Emissions Comparison of 2015 MY International Tractor to the 2016 MY Peterbilt 389 Glider #1 and 2017 MY Peterbilt 579 Glider #2 over the Super Cycle

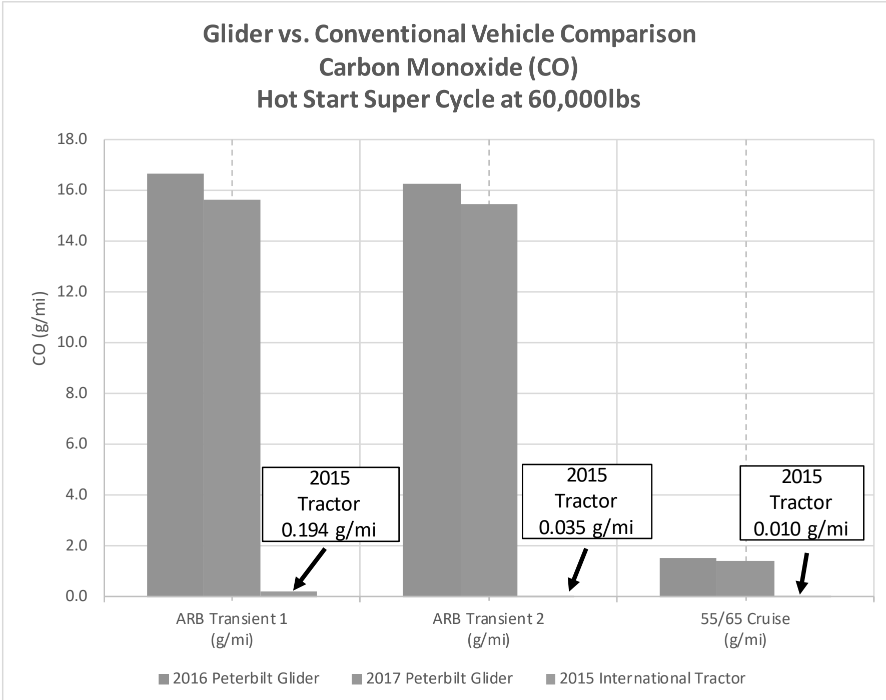

Figure 12: CO Emissions Comparison of 2015 MY Day Cab to the 2016 MY Peterbilt 389 Glider #1 and 2017 MY Peterbilt 579 Glider #2 over the Super Cycle

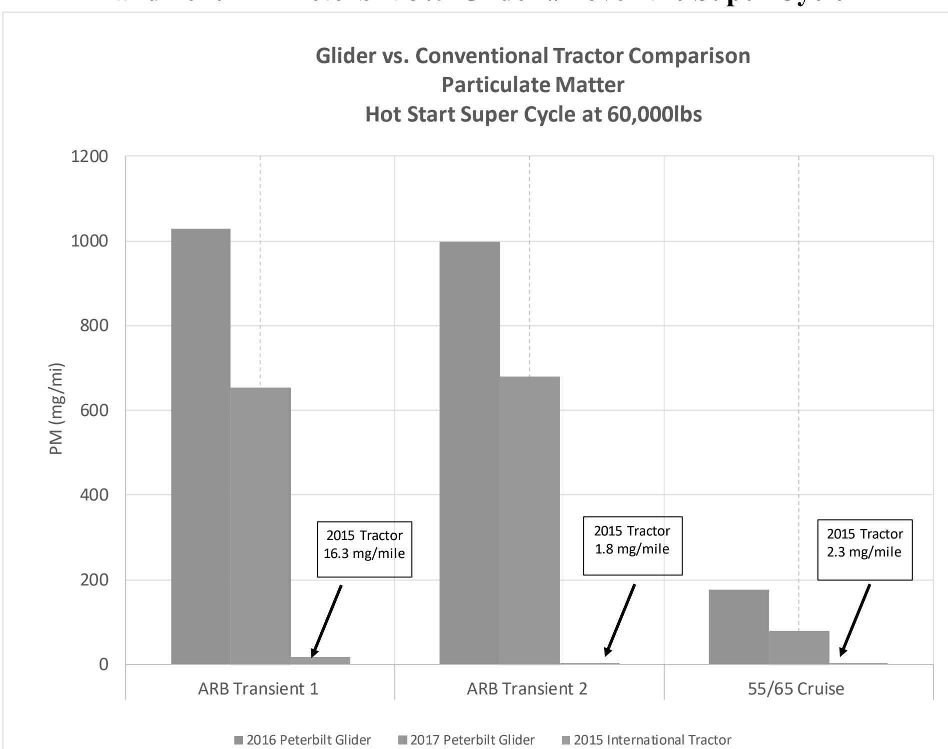

Figure 13: PM Emissions Comparison of 2015 MY Day Cab to the 2016 MY Peterbilt 389 Glider #1 and 2017 MY Peterbilt 579 Glider #2 over the Super Cycle

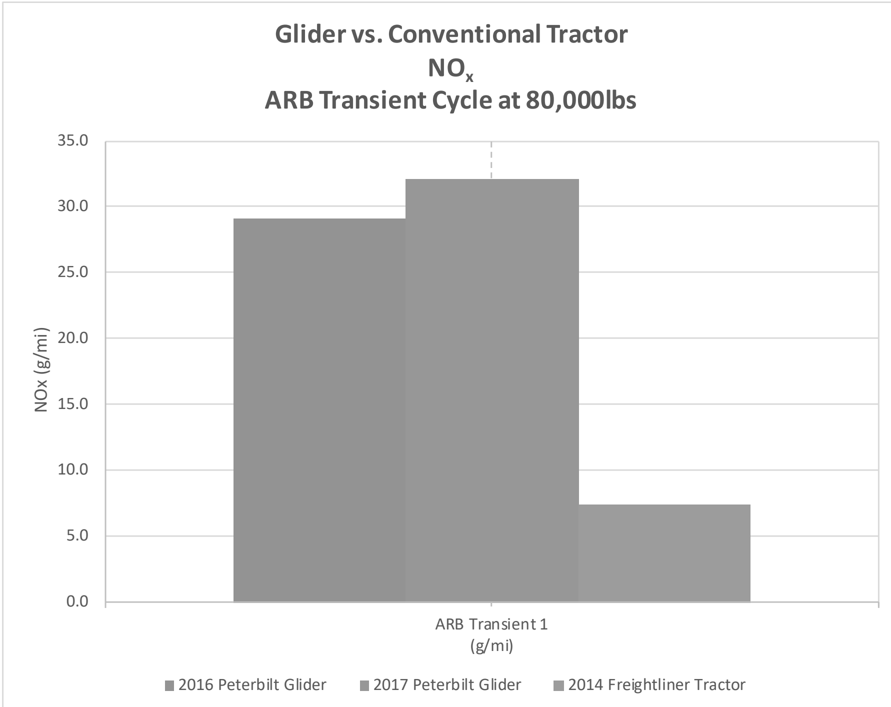

Figure 14: NOx Emissions Comparison of 2014 MY Freightliner to the 2016 MY Peterbilt 389 Glider #1 and 2017 MY Peterbilt 579 Glider #2 over the ARB Transient Cycle

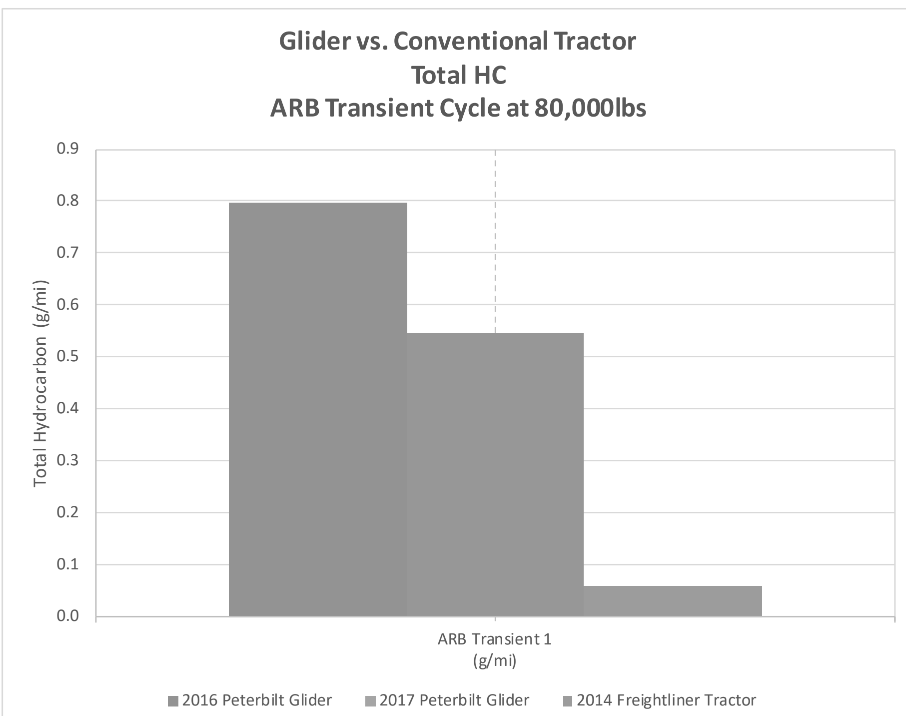

Figure 15: HC Emissions Comparison of 2014 MY Freightliner to the 2016 MY Peterbilt 389 Glider #1 and 2017 MY Peterbilt 579 Glider #2 over the ARB Transient Cycle

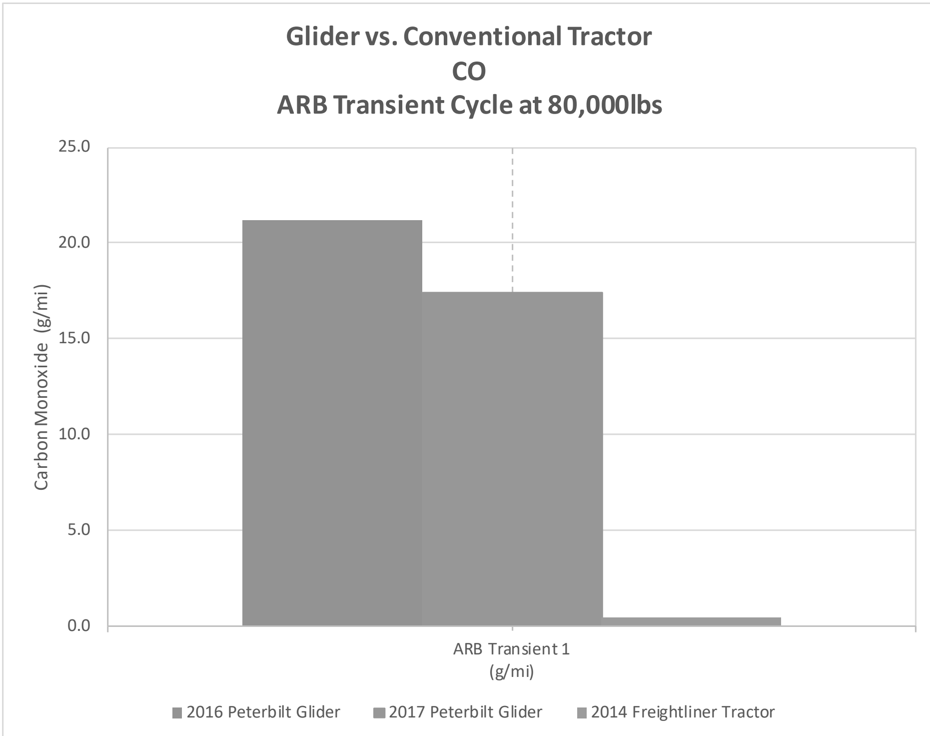

Figure 16: CO Emissions Comparison of 2014 MY Freightliner to the 2016 MY Peterbilt 389 Glider #1 and 2017 MY Peterbilt 579 Glider #2 over the ARB Transient Cycle

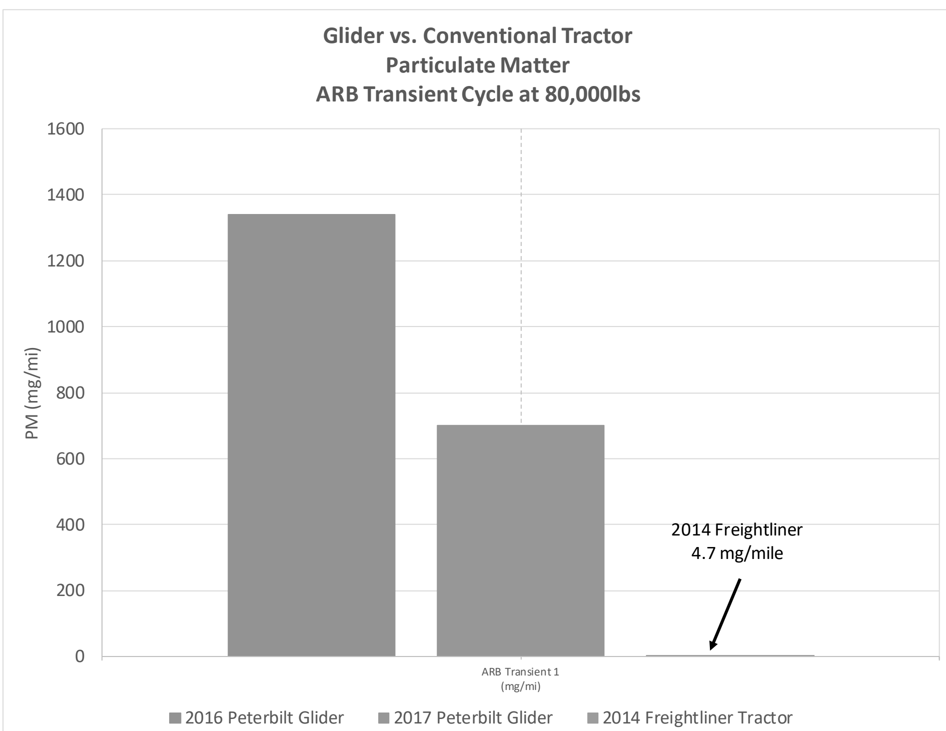

Figure 17: PM Emissions Comparison of 2014 MY Freightliner to the 2016 MY Peterbilt 389 Glider #1 and 2017 MY Peterbilt 579 Glider #2 over the ARB Transient Cycle

We also compared the CO_2 emissions of the Peterbilt 389 and Peterbilt 579 glider vehicles to the International and Freightliner conventional tractors. CO_2 emissions are directly proportional to the road load of the vehicle. Because we did not measure the actual road load of the vehicles, we used the same target road load coefficients in the two sets of comparisons (at 60,000 and 80,000 pounds). Therefore, this comparison only evaluates the performance of the powertrain and may not be representative of the difference in CO_2 emission that these vehicles would experience in-use. Figure 18 and Figure 19 show comparisons of the powertrain performance. In all cases, the CO_2 emissions were lower in the glider powertrains. This is not unexpected given the known trade-off between NOx and CO_2 emissions with respect to injection timing and similar engine calibration techniques and the relatively higher NOx emissions for the 2016 MY Peterbilt 389 and 2017 MY Peterbilt 579 glider vehicles shown in the previous tables and figures.

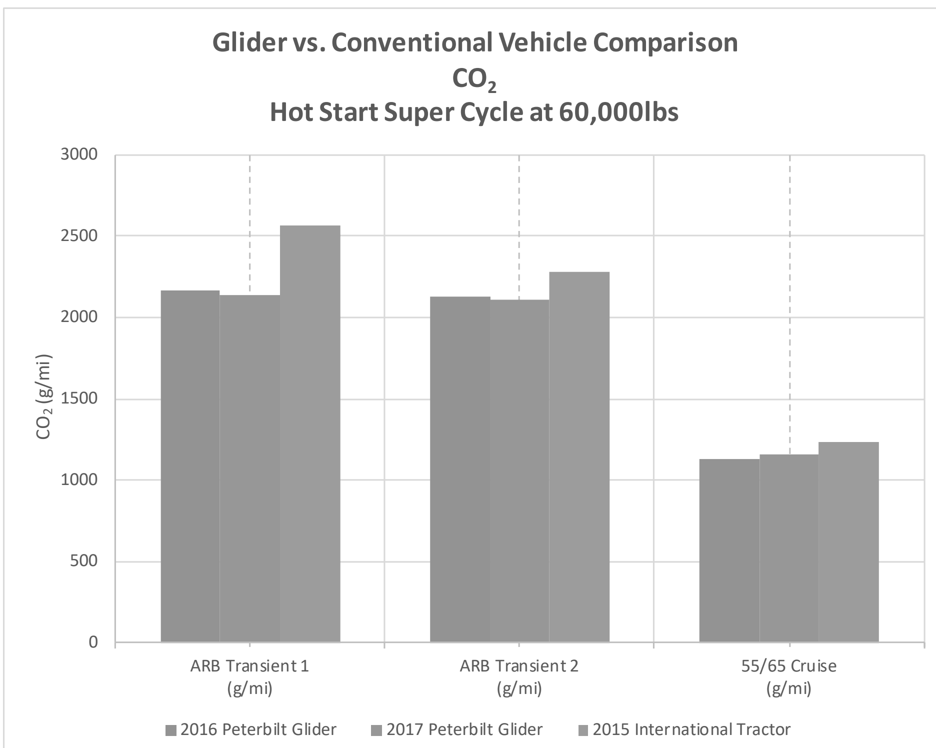

Figure 18: CO_2 Emissions Comparison of 2015 MY International to the 2016 MY Peterbilt 389 Glider #1 and 2017 MY Peterbilt 579 Glider #2 over the Super Cycle

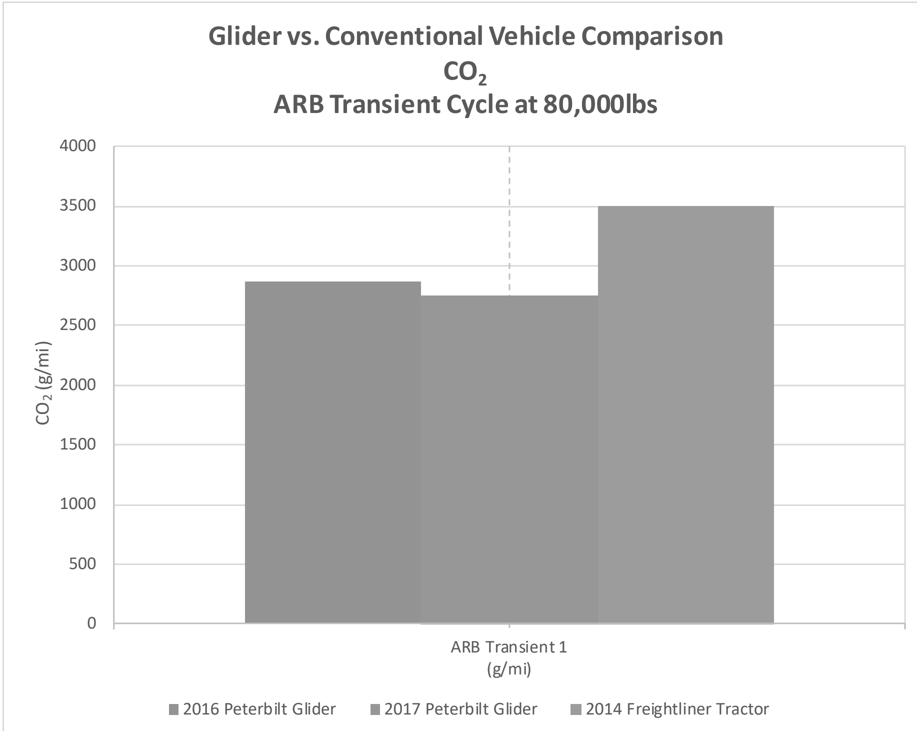

Figure 19: CO_2 Emissions Comparison of 2014 MY Freightliner to the 2016 MY Peterbilt 389 Glider #1 and 2017 MY Peterbilt 579 Glider #2 over the ARB Transient Cycle

VIII.

EPA, Proposed Rule, Repeal of Emission Requirements for Glider Vehicles, Glider Engines, and Glider Kits, 82 Fed. Reg. 53442 (Nov. 16, 2017)

States Coast Guard, and local or state law enforcement vessels, are prohibited from entering the restricted area without permission from the USAF 81st Security Forces Anti-Terrorism Office, KAFB or its authorized representative.

(2) The restricted area is in effect twenty-four hours per day and seven days a week (24/7).

(3) Should warranted access into the restricted navigation area be needed, all entities are required to contact the USAF 81st Security Forces Anti-Terrorism Office, KAFB, Biloxi, Mississippi, or its authorized representative.

(c) *Enforcement.* The regulation in this section shall be enforced by the USAF 81st Security Forces Anti-Terrorism Office, KAFB and/or such agencies or persons as that office may designate.

Dated: November 9, 2017.

Thomas P. Smith,

Chief, Operations and Regulatory Division, Directorate of Civil Works.

[FR Doc. 2017–24892 Filed 11–15–17; 8:45 am]

BILLING CODE 3720–58–P

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Parts 1037 and 1068

[EPA–HQ–OAR–2014–0827; FRL–9970–61–OAR]

RIN 2060–AT79

Repeal of Emission Requirements for Glider Vehicles, Glider Engines, and Glider Kits

AGENCY: Environmental Protection Agency (EPA).

ACTION: Proposed rule.

SUMMARY: The Environmental Protection Agency (EPA) is proposing to repeal the emission standards and other requirements for heavy-duty glider vehicles, glider engines, and glider kits based on a proposed interpretation of the Clean Air Act (CAA) under which glider vehicles would be found not to constitute ''new motor vehicles'' within the meaning of CAA section 216(3), glider engines would be found not to constitute ''new motor vehicle engines'' within the meaning of CAA section 216(3), and glider kits would not be treated as ''incomplete'' new motor vehicles. Under this proposed interpretation, EPA would lack authority to regulate glider vehicles, glider engines, and glider kits under CAA section 202(a)(1).

DATES:

Comments: Comments on all aspects of this proposal must be received on or before January 5, 2018.

Public Hearing: EPA will hold a public hearing on Monday, December 4, 2017. The hearing will be held at EPA's Washington, DC campus located at 1201 Constitution Avenue NW., Washington, DC. The hearing will start at 10:00 a.m. local time and continue until everyone has had a chance to speak. More details concerning the hearing can be found at *https://www.epa.gov/regulations-emissions-vehicles-and-engines/regulations-greenhouse-gas-emissions-commercial-trucks.*

ADDRESSES: Submit your comments, identified by Docket ID No. EPA–HQ–OAR–2014–0827, at *http://www.regulations.gov.* Follow the online instructions for submitting comments. Once submitted, comments cannot be edited or removed from *Regulations.gov.* The EPA may publish any comment received to its public docket. Do not submit electronically any information you consider to be Confidential Business Information (CBI) or other information whose disclosure is restricted by statute. Multimedia submissions (audio, video, etc.) must be accompanied by a written comment. The written comment is considered the official comment and should include discussion of all points you wish to make. The EPA will generally not consider comments or comment contents located outside of the primary submission (*i.e.*, on the Web, cloud, or other file sharing system). For additional submission methods, the full EPA public comment policy, information about CBI or multimedia submissions, and general guidance on making effective comments, please visit *http://www.epa.gov/dockets/commenting-epa-dockets.*

Docket: All documents in the docket are listed on the *www.regulations.gov* Web site. Although listed in the index, some information is not publicly available, *e.g.,* confidential business information or other information whose disclosure is restricted by statute. Certain other material, such as copyrighted material, is not placed on the Internet and will be publicly available only in hard copy form. Publicly available docket materials are available either electronically through *www.regulations.gov* or in hard copy at the following location:

Air and Radiation Docket and Information Center, EPA Docket Center, EPA/DC, EPA WJC West Building, 1301 Constitution Ave. NW., Room 3334, Washington, DC. The Public Reading Room is open from 8:30 a.m. to 4:30 p.m., Monday through Friday, excluding legal holidays. The telephone number for the Public Reading Room is (202) 566–1744, and the telephone number for the Air Docket is (202) 566–1742.

FOR FURTHER INFORMATION CONTACT: Julia MacAllister, Office of Transportation and Air Quality, Assessment and Standards Division, Environmental Protection Agency, 2000 Traverwood Drive, Ann Arbor, MI 48105; telephone number: 734–214–4131; email address: *hearing_registration-asd@epa.gov.*

SUPPLEMENTARY INFORMATION:

Does this action apply to me?

This action relates to a previously promulgated final rule that affects companies that manufacture, sell, or import into the United States glider vehicles. Proposed categories and entities that might be affected include the following:

Category	NAICS code [a]	Examples of potentially affected entities
Industry	336110, 336111, 336112, 333618, 336120, 441310.	Motor Vehicle Manufacturers, Engine Manufacturers, Engine Parts Manufacturers, Truck Manufacturers, Automotive Parts and Accessories Dealers.

Note: [a] North American Industry Classification System (NAICS).

This table is not intended to be exhaustive, but rather provides a guide for readers regarding entities likely covered by these rules. This table lists the types of entities that we are aware may be regulated by this action. Other types of entities not listed in the table could also be regulated. To determine whether your activities are regulated by this action, you should carefully examine the applicability criteria in the referenced regulations. You may direct questions regarding the applicability of this action to the persons listed in the preceding **FOR FURTHER INFORMATION CONTACT** section.

I. Introduction

The basis for the proposed repeal of those provisions of the final rule entitled Greenhouse Gas Emissions and Fuel Efficiency Standards for Medium- and Heavy-Duty Engines and Vehicles—Phase 2 (the Phase 2 rule) [1] that apply to glider vehicles, glider engines, and glider kits is EPA's proposed interpretation of CAA section 202(a)(1) and sections 216(2) and 216(3), which is discussed below. Under this proposed interpretation: (1) Glider vehicles would not be treated as ''new motor vehicles,'' (2) glider engines would not be treated as ''new motor vehicle engines,'' and (3) glider kits would not be treated as ''incomplete'' new motor vehicles. Based on this proposed interpretation, EPA would lack authority to regulate glider vehicles, glider engines, and glider kits under CAA section 202(a)(1).

This proposed interpretation is a departure from the position taken by EPA in the Phase 2 rule. There, EPA interpreted the statutory definitions of ''new motor vehicle'' and ''new motor vehicle engines'' in CAA section 216(3) as including glider vehicles and glider engines, respectively. The proposed interpretation also departs from EPA's position in the Phase 2 rule that CAA section 202(a)(1) authorizes the Agency to treat glider kits as ''incomplete'' new motor vehicles.

It is settled law that EPA has inherent authority to reconsider, revise, or repeal past decisions to the extent permitted by law so long as the Agency provides a reasoned explanation. This authority exists in part because EPA's interpretations of the statutes it administers ''are not carved in stone.'' *Chevron U.S.A. Inc.* v. *NRDC, Inc.* 467 U.S. 837, 863 (1984). If an agency is to ''engage in informed rulemaking,'' it ''must consider varying interpretations and the wisdom of its policy on a continuing basis.'' *Id.* at 863–64. This is true when, as is the case here, review is undertaken ''in response to . . . a change in administration.'' *National Cable & Telecommunications Ass'n* v. *Brand X Internet Services,* 545 U.S. 967, 981 (2005). A ''change in administration brought about by the people casting their votes is a perfectly reasonable basis for an executive agency's reappraisal of the costs and benefits of its programs and regulations,'' and so long as an agency ''remains within the bounds established by Congress,'' the agency ''is entitled to assess administrative records and evaluate priorities in light of the philosophy of the administration.'' *Motor Vehicle Manufacturers Ass'n.* v. *State Farm Mutual Automobile Insurance Co.,* 463 U.S. 29, 59 (1983) (Rehnquist, J., concurring in part and dissenting in part).

After reconsidering the statutory language, EPA proposes to adopt a reading of the relevant provisions of the CAA under which the Agency would lack authority under CAA section 202(a)(1) to impose requirements on glider vehicles, glider engines, and glider kits and therefore proposes to remove the relevant rule provisions. At the same time, under CAA section 202(a)(3)(D), EPA is authorized to ''prescribe requirements to control'' the ''practice of rebuilding heavy-duty engines,'' including ''standards applicable to emissions from any rebuilt heavy-duty engines.'' 42 U.S.C. 7521(a)(3)(D).[2] If the interpretation being proposed here were to be finalized, EPA's authority to address heavy-duty engine rebuilding practices under CAA section 202(a)(3)(D) would not be affected.

II. Background

A. Factual Context

A glider vehicle (sometimes referred to simply as a ''glider'') is a truck that utilizes a previously owned powertrain (including the engine, the transmission, and usually the rear axle) but which has new body parts. When these new body parts (which generally include the tractor chassis with frame, front axle, brakes, and cab) are put together to form the ''shell'' of a truck, the assemblage of parts is referred to collectively as a ''glider kit.'' The final manufacturer of the glider vehicle, *i.e.,* the entity that takes the assembled glider kit and combines it with the used powertrain salvaged from a ''donor'' truck, is typically a different manufacturer than the original manufacturer of the glider kit. *See* 81 FR 73512–13 (October 25, 2016).

B. Statutory and Regulatory Context

Section 202(a)(1) of the CAA directs that EPA ''shall by regulation prescribe,'' in ''accordance with the provisions'' of section 202, ''standards applicable to the emission of any air pollutant from any . . . new motor vehicles or new motor vehicle engines.'' 42 U.S.C. 7521(a)(1). CAA section 216(2) defines ''motor vehicle'' to mean ''any self-propelled vehicle designed for transporting persons or property on a street or highway.'' 42 U.S.C. 7550(2). A ''*new* motor vehicle'' is defined in CAA section 216(3) to mean, as is relevant here, a ''motor vehicle the equitable or legal title to which has never been transferred to an ultimate purchaser.'' 42 U.S.C. 7550(3) (emphasis added). A ''new motor vehicle engine'' is similarly defined as an ''engine in a new motor vehicle'' or a ''motor vehicle engine the equitable or legal title to which has never been transferred to the ultimate purchaser.'' *Id.* [3]

Comments submitted to EPA during the Phase 2 rulemaking stated that gliders are approximately 25% less expensive than new trucks,[4] which makes them popular with small businesses and owner-operators.[5] In contrast to an older vehicle, a glider requires less maintenance and yields less downtime.[6] A glider has the same braking, lane drift devices, dynamic cruise control, and blind spot detection devices that are found on current model year heavy-duty trucks, making it a safer vehicle to operate, compared to the older truck that it is replacing.[7]

Some commenters questioned EPA's authority to regulate glider vehicles as ''new motor vehicles,'' to treat glider engines as ''new motor vehicle engines,'' or to impose requirements on glider kits. Commenters also pointed out what they described as the overall environmental benefits of gliders. For instance, one commenter stated that ''rebuilding an engine and transmission uses 85% less energy than manufacturing them new.'' [8] Another commenter noted that the use of glider vehicles ''improves utilization and reduces the number of trucks required to haul the same tonnage of freight.'' [9] This same commenter further asserted that glider vehicles utilizing ''newly rebuilt engines'' produce less ''particulate, NO_X, and GHG emissions

[1] 81 FR 73478 (October 25, 2016).

[2] EPA has adopted regulations that address engine rebuilding practices. *See, e.g.,* 40 CFR 1068.120. EPA is not proposing in this action to adopt additional regulatory requirements pursuant to 42 U.S.C. 7521(a)(3)(D) that would apply to rebuilt engines installed in glider vehicles.

[3] The definitions of both ''new motor vehicle'' and ''new motor vehicle engine'' are contained in the same paragraph (3), reflecting the fact that ''[w]henever the statute refers to 'new motor vehicle' the phrase is followed by 'or new motor vehicle engine.' '' *See Motor and Equipment Manufacturers Ass'n* v. *EPA,* 627 F.2d 1095, 1102 n.5 (D.C. Cir. 1979). As Title II currently reads, the term ''new motor vehicle'' appears some 32 times, and in all but two instances, the term is accompanied by ''new motor vehicle engine,'' indicating that, at the inception of Title II, Congress understood that the regulation of *engines* was essential to control emissions from ''motor vehicles.''

[4] Response to Comments for Joint Rulemaking, EPA–426–R–16–901 (August 2016) at 1846.

[5] EPA–HQ–OAR–2014–0827–1964.

[6] EPA–HQ–OAR–2014–0827–1005.

[7] *Id.*

[8] EPA–HQ–OAR–2014–0827–1964.

[9] EPA–HQ–OAR–2014–0827–1005.

. . . compared to [a] worn oil burning engine which is beyond its useful life.'' [10]

In the Phase 2 rule, EPA found that it was ''reasonable'' to consider glider vehicles to be ''new motor vehicles'' under the definition in CAA section 216(3). *See* 81 FR 73514 (October 25, 2016). Likewise, EPA found that the previously owned engines utilized by glider vehicles should be considered to be ''new motor vehicle engines'' within the statutory definition. Based on these interpretations, EPA determined that it had authority under CAA section 202(a) to subject glider vehicles and glider engines to the requirements of the Phase 2 rule. As for glider kits, EPA found that if glider vehicles are new motor vehicles, then the Agency was authorized to regulate glider kits as ''incomplete'' new motor vehicles. *Id.*

C. Petition for Reconsideration

Following promulgation of the Phase 2 rule, EPA received from representatives of the glider industry a joint petition requesting that the Agency reconsider the application of the Phase 2 rule to glider vehicles, glider engines, and glider kits.[11] The petitioners made three principal arguments in support of their petition. First, they argued that EPA is not authorized by CAA section 202(a)(1) to regulate glider kits, glider vehicles, or glider engines. Petition at 3–4. Second, the petitioners contended that in the Phase 2 rule EPA ''relied upon unsupported assumptions to arrive at the conclusion that immediate regulation of glider vehicles was warranted and necessary.'' *Id.* at 4. Third, the petitioners asserted that reconsideration was warranted under Executive Order 13783. *Id.* at 6.

The petitioners took particular issue with what they characterized as EPA's having ''assumed that the nitrogen oxide ('NO_X') and particulate matter ('PM') emissions of glider vehicles using pre-2007 engines'' would be ''at least ten times higher than emissions from equivalent vehicles being produced with brand new engines.'' Petition at 5, *citing* 81 FR 73942. According to the petitioners, EPA had ''relied on no actual data to support this conclusion,'' but had ''simply relied on the pre-2007 standards.'' *Id.* In support, the petitioners included as an exhibit to their petition a letter from the President of the Tennessee Technological University (''Tennessee Tech''), which described a study recently conducted by Tennessee Tech. This study, according to the petitioners, had ''analyz[ed] the NO_X, PM, and carbon monoxide . . . emissions from both remanufactured and OEM engines,'' and ''reached a contrary conclusion'' regarding glider vehicle emissions. Petition at 5.

The petitioners maintained that the results of the study ''showed that remanufactured engines from model years between 2002 and 2007 performed roughly on par with OEM 'certified' engines,'' and ''in some instances even out-performed the OEM engines.'' *Id.* The petitioners further claimed that the Tennessee Tech research '' 'showed that remanufactured and OEM engines experience parallel decline in emissions efficiency with increased mileage.' '' *Id., quoting* Tennessee Tech letter at 2. Based on the Tennessee Tech study, the petitioners asserted that ''glider vehicles would emit less than 12% of the total NO_X and PM emissions for all Class 8 heavy duty vehicles . . . not 33% as the Phase 2 Rule suggests.'' *Id., citing* 81 FR 73943.

Further, the petitioners complained that the Phase 2 rule had ''failed to consider the significant environmental *benefits* that glider vehicles create.'' Petition at 6 (emphasis in original). ''Glider vehicle GHG emissions are less than those of OEM vehicles,'' the petitioners contended, ''due to gliders' greater fuel efficiency,'' and the ''carbon footprint of gliders is further reduced by the savings created by recycling materials.'' *Id.* The petitioners represented that ''[g]lider assemblers reuse approximately 4,000 pounds of cast steel in the remanufacturing process,'' including ''3,000 pounds for the engine assembly alone.'' *Id.* The petitioners pointed out that ''[r]eusing these components avoids the environmental impact of casting steel, including the significant associated NO_X emissions.'' *Id.* This ''fact,'' the petitioners argued, is something that EPA should have been considered but was ''not considered in the development of the Phase 2 rule.'' *Id.*

EPA responded to the glider industry representatives' joint petition by separate letters on August 17, 2017, stating that the petition had ''raise[d] significant questions regarding the EPA's authority under the Clean Air Act to regulate gliders.'' [12] EPA further indicated that it had ''decided to revisit the provisions in the *Phase 2 Rule* that relate to gliders,'' and that the Agency ''intends to develop and issue a **Federal Register** notice of proposed rulemaking on this matter, consistent with the requirements of the Clean Air Act.'' [13]

III. Basis for the Proposed Repeal

A. Statutory Analysis

EPA is proposing that the statutory interpretations on which the Phase 2 rule predicated its regulation of glider vehicles, glider engines, and glider kits were incorrect. EPA proposes an interpretation of the relevant language of the CAA under which glider vehicles are excluded from the statutory term ''new motor vehicles'' and glider engines are excluded from the statutory term ''new motor vehicle engines,'' as both terms are defined in CAA section 216(3). Consistent with this interpretation of the scope of ''new motor vehicle,'' EPA is further proposing that it has no authority to treat glider kits as ''incomplete'' new motor vehicles under CAA section 202(a)(1).

As was noted, a ''new motor vehicle'' is defined by CAA section 216(3) to mean, in relevant part, a ''motor vehicle the equitable or legal title to which has never been transferred to an ultimate purchaser.'' 42 U.S.C. 7550(3). In basic terms, a glider vehicle consists of the new components that make up a glider kit, into which a previously owned powertrain has been installed. Prior to the time a completed glider vehicle is sold, it can be said that the vehicle's ''equitable or legal title'' has yet to be ''transferred to an ultimate purchaser.'' It is on this basis that the Phase 2 rule found that a glider vehicle fits within the definition of ''new motor vehicle.'' 81 FR 73514 (October 25, 2016).

EPA's rationale for applying this reading of the statutory language was that ''[g]lider vehicles are typically marketed and sold as 'brand new' trucks.'' 81 FR 73514 (October 25, 2016). EPA took note of one glider kit manufacturer's own advertising materials that represented that the company had '' 'mastered the process of taking the 'Glider Kit' and installing the components to work seamlessly *with the new truck.*' '' *Id.* (emphasis added in original). EPA stated that the ''purchaser of a 'new truck' necessarily takes initial title to that truck.'' *Id.* (citing statements

[10] *Id.*

[11] *See* Petition for Reconsideration of Application of the Final Rule Entitled ''Greenhouse Gas Emissions and Fuel Efficiency Standards for Medium- and Heavy-Duty Engines and Vehicles—Phase 2 Final Rule'' to Gliders, from Fitzgerald Glider Kits, LLC; Harrison Truck Centers, Inc.; and Indiana Phoenix, Inc. (July 10, 2017) (Petition). Available in the rulemaking docket, EPA–HQ–OAR–2014–0827, and at *https://www.epa.gov/sites/production/files/2017-07/documents/hd-ghg-fr-fitzgerald-recons-petition-2017-07-10.pdf.*

[12] *See, e.g.,* Letter from E. Scott Pruitt, EPA Administrator, to Tommy C. Fitzgerald, President, Fitzgerald Glider Kits (Aug. 17, 2017). Available in the rulemaking docket, EPA–HQ–OAR–2014–0827, and at *https://www.epa.gov/sites/production/files/2017-08/documents/hd-ghg-phase2-ttma-ltr-2017-08-17.pdf.*

[13] *Id.*

on the glider kit manufacturer's Web site). EPA rejected arguments raised in comments that ''this 'new truck' terminology is a mere marketing ploy.'' *Id.* Rather, EPA stated, ''it obviously reflects reality.'' *Id.*

In proposing a new interpretation of the relevant statutory language, EPA now believes that its prior reading was not the best reading, and that the Agency failed to consider adequately the most important threshold consideration: *i.e.,* whether or not Congress, in defining ''new motor vehicle'' for purposes of Title II, had a specific intent to include within the statutory definition such a thing as a glider vehicle—a vehicle comprised both of new *and* previously owned components. *See Chevron,* 467 U.S. at 843 n.9 (Where the ''traditional tools of statutory construction'' allow one to ''ascertain[ ] that Congress had an intention on the precise question at issue,'' that ''intention is the law and must be given effect.''). Where ''Congress has not directly addressed the precise question at issue,'' and the ''statute is silent or ambiguous with respect to the specific issue,'' it is left to the agency charged with implementing the statute to provide an ''answer based on a permissible construction of the statute.'' *Id.* at 843.

Focusing solely on that portion of the statutory definition that provides that a motor vehicle is considered ''new'' prior to the time its ''equitable or legal title'' has been ''transferred to an ultimate purchaser,'' a glider vehicle would appear to qualify as ''new.'' As the Supreme Court has repeatedly counseled, however, that is just the beginning of a proper interpretive analysis. The ''definition of words in isolation,'' the Court has noted, ''is not necessarily controlling in statutory construction.'' *See Dolan* v. *United States Postal Service,* 546 U.S. 481, 486 (2006). Rather, the ''interpretation of a word or phrase depends upon reading the whole statutory text, considering the purpose and context of the statute,'' and ''consulting any precedents or authorities that inform the analysis.'' *Id.* Similarly, in seeking to ''determine congressional intent, using traditional tools of statutory construction,'' the ''*starting point* is the language of the statute.'' *See Dole* v. *United Steelworkers of America,* 494 U.S. 26, 35 (1990) (emphasis added) (internal citation omitted). At the same time, ''in expounding a statute,'' one is not to be ''guided by a single sentence or member of a sentence,'' but is to ''look to the provisions of the whole law, and to its object and policy.'' *Id.* (internal citations omitted).

Assessed in light of these principles, it is clear that EPA's reading of the statutory definition of ''new motor vehicle'' in the Phase 2 rule fell short. First, that reading failed to account for the fact that, at the time this definition of ''new motor vehicle'' was enacted, it is likely that Congress did not have in mind that the definition would be construed as applying to a vehicle comprised of new body parts and a previously owned powertrain. The manufacture of glider vehicles to salvage the usable powertrains of trucks wrecked in accidents goes back a number of years.[14] But only more recently—after the enactment of Title II—have glider vehicles been produced in any great number.

Furthermore, the concept of deeming a motor vehicle to be ''new'' based on its ''equitable or legal title'' not having been transferred to an ''ultimate purchaser'' appears to have originated with an otherwise unrelated federal statute that predated Title II by a few years—*i.e.,* the Automobile Information Disclosure Act of 1958, Public Law 85–506 (Disclosure Act).[15] The history of Title II's initial enactment and subsequent development indicates that, in adopting a definition of ''new motor vehicle'' for purposes of the Clean Air Act, Congress drew on the approach it had taken originally with the Disclosure Act.

Among other things, the Disclosure Act requires that a label be affixed to the windshield or side window of new automobiles, with the label providing such information as the Manufacturer's Suggested Retail Price. *See* 15 U.S.C. 1232 (''Every manufacturer of *new automobiles* distributed in commerce shall, prior to the delivery of any *new automobile* to any dealer, or at or prior to the introduction date of new models delivered to a dealer prior to such introduction date, securely affix to the windshield, or side window of *such automobile* a label . . . .'') (emphases added). The Disclosure Act defines the term ''automobile'' to ''include[ ] any passenger car or station wagon,'' and defines the term ''new automobile'' to mean ''an automobile the equitable or legal title to which has never been transferred by a manufacturer, distributor, or dealer to an ultimate purchaser.'' *See* 15 U.S.C. 1231(c), (d).

In 1965, Congress amended the then-existing Clean Air Act, and for the first time enacted provisions directed at the control of air pollution from motor vehicles. *See* Clean Air Act Amendments of 1965, Public Law 89–272 (1965 CAA). Included in the 1965 CAA was a brand new Title II, the ''Motor Vehicle Air Pollution Control Act,'' the structure and language of which largely mirrored key provisions of Title II as it exists today. Section 202(a) of the 1965 CAA provided that the ''Secretary [of what was then the Department of Health, Education and Welfare] shall by regulation, giving appropriate consideration to technological feasibility and economic costs, prescribe . . . standards applicable to the emission of any kind of substance, from any class or classes of *new motor vehicles or new motor vehicle engines,* which in his judgment cause or contribute to, or are likely to cause or to contribute to, air pollution which endangers the health or welfare of any persons . . . .'' Public Law 89–272, 79 Stat. 992 (emphasis added).

Section 208 of the 1965 CAA defined ''motor vehicle'' in terms identical to those in the CAA today: ''any self-propelled vehicle designed for transporting persons or property on a street or highway.'' Public Law 89–272, 79 Stat. 995. The 1965 CAA defined ''new motor vehicle'' and ''new motor vehicle engine'' to mean, as relevant here, ''a motor vehicle the equitable or legal title to which has never been transferred to an ultimate purchaser; and the term 'new motor vehicle engine' '' to mean ''an engine in a new motor vehicle or a motor vehicle engine the equitable or legal title to which has never been transferred to the ultimate purchaser.'' *Id.* Again, in relevant part, the 1965 CAA definitions of these terms were identical to those that currently appear in CAA section 216(3).

While the legislative history of the 1965 CAA does not expressly indicate that Congress based its definition of ''new motor vehicle'' on the definition of ''new automobile'' first adopted by the Automobile Information Disclosure Act of 1958, it seems clear that such was the case. The statutory language of the two provisions is identical in all pertinent respects,[16] and there appears to be no other federal statute, in existence prior to enactment of the 1965

[14] EPA–HQ–OAR–2014–0827–1964.

[15] The provisions of the Disclosure Act are set forth at 15 U.S.C. 1231–1233.

[16] Further, the 1965 CAA's definition of ''ultimate purchaser,'' as set forth in section 208(5), for the most part tracks the Disclosure Act's earlier-enacted definition: ''The term 'ultimate purchaser' means, with respect to any new automobile, the first person, other than a dealer purchasing in his capacity as a dealer, who in good faith purchases such new automobile for purposes other than resale.'' *Compare* 1965 CAA section 208(5), Public Law 89–272, 79 Stat. 995 *with* 15 U.S.C. 1231(g). Such is the case, too, with respect to the 1965 CAA's definition of ''manufacturer.'' *Compare* 1965 CAA section 208(1), Public Law 89–272, 79 Stat. 994–995 *with* 15 U.S.C. 1231(a).

CAA, from which Congress could have derived that terminology.

Subsequently, the statutory language from the 1965 CAA, defining the terms ''motor vehicle,'' ''new motor vehicle,'' ''new motor vehicle engine,'' ''ultimate purchaser,'' and ''manufacturer'' was incorporated verbatim in the Air Quality Act of 1967 (1967 AQA). *See* Public Law 148, 81 Stat. 503. The Clean Air Act Amendments of 1970 (1970 CAAA) did not change those definitions, except to add the language regarding ''vehicles or engines imported or offered for importation'' that currently appears in CAA section 216(3). *See* Public Law 91–604, 84 Stat. 1694, 1703.[17]

The fact that Congress, in first devising the CAA's definition of ''new motor vehicle'' for purposes of Title II, drew on the pre-existing definition of ''new automobile'' in the Automobile Information Disclosure Act of 1958 serves to illuminate congressional intent. As with the Disclosure Act, Congress in the 1965 CAA selected the point of first transfer of ''equitable or legal title'' to serve as a bright line—*i.e.,* to distinguish between those ''new'' vehicles (and engines) that would be subject to emission standards adopted pursuant to CAA section 202(a)(1) and those existing vehicles that would not be subject. Insofar as the 1965 CAA definition of ''new motor vehicle'' was based on the Disclosure Act definition of ''new automobile,'' it would seem clear that Congress intended, for purposes of Title II, that a ''new motor vehicle'' would be understood to mean something equivalent to a ''new automobile''—*i.e.,* a true ''showroom new'' vehicle. It is implausible that Congress would have had in mind that a ''new motor vehicle'' might also include a vehicle comprised of new body parts and a previously owned powertrain.

Given this, EPA does not believe that congressional intent as to the meaning of the term ''new motor vehicle'' can be clearly ascertained on the basis of an isolated reading of a few words in the statutory definition, where that reading is divorced from the structure and history of the CAA as a whole. Based on that structure and history, it seems likely that Congress understood a ''new motor vehicle,'' as defined in CAA § 216(3), to be a vehicle comprised entirely of new parts and certainly not a vehicle with a used engine. At a minimum, ambiguity exists. This leaves EPA with the task of providing an ''answer based on a permissible construction of the statute.'' *Chevron,* 467 U.S. at 843.

1. Glider Vehicles

EPA is proposing to interpret ''new motor vehicle,'' as defined in CAA § 216(3), as not including glider vehicles. This is a reasonable interpretation—and commonsense would agree—insofar as it takes account of the reality that significant elements of a glider vehicle (*i.e.,* the powertrain elements, including the engine and the transmission) are previously owned components. Under the Phase 2 rule's interpretation, in contrast, the act of installing a previously owned powertrain into a glider kit—*i.e.,* something that, as is explained further below, is not a ''motor vehicle'' as defined by the CAA—results in the creation of a *new* ''motor vehicle.'' EPA believes that Congress, in adopting a definition of ''new motor vehicle'' for purposes of Title II, never had in mind that the statutory language would admit of such a counterintuitive result.

In other words, EPA now believes that, in defining ''new motor vehicle,'' Congress did not intend that a vehicle comprised of a new outer shell conjoined to a previously owned powertrain should be treated as a ''new'' vehicle, based solely on the fact that the vehicle may have been assigned a new title following assembly. In this regard, insofar as Title II's regulatory regime was at its inception directed at the emissions produced by new vehicle *engines,*[18] it is not at all clear that Congress intended that Title II's reach should extend to a vehicle whose outer parts may be ''new'' but whose engine was previously owned.

2. Glider Engines

EPA proposes to find that, since a glider vehicle does not meet the statutory definition of a ''new motor vehicle,'' it necessarily follows that a glider engine is not a ''new motor vehicle engine'' within the meaning of CAA section 216(3). Under that provision, a motor vehicle engine is deemed to be ''new'' in either of two circumstances: (1) The engine is ''in a new motor vehicle,'' or (2) the ''equitable or legal title'' to the engine has ''never been transferred to the ultimate purchaser.'' The second of these circumstances can never apply to a glider engine, which is invariably an engine that has been previously owned.

As to the first circumstance, a glider engine is installed in a glider kit, which in itself is not a ''motor vehicle.'' A glider kit becomes a ''motor vehicle'' only after an engine (and the balance of the powertrain) has been installed. But while adding a previously owned engine to a glider kit may result in the creation of a ''motor vehicle,'' the assertion that the previously owned engine thereby becomes a ''*new* motor vehicle engine'' within the meaning of CAA section 216(3), due to the engine's now being in a ''new motor vehicle,'' reflects circular thinking. It presupposes that the installation of a (previously owned) engine in a glider kit creates not just a ''motor vehicle'' but a ''new motor vehicle.'' EPA is proposing to interpret the relevant statutory language in a manner that rejects the Agency's prior reliance on the view that (1) installing a previously owned engine in a glider kit transforms the glider kit into a ''new motor vehicle,'' and (2) that, thereafter, the subsequent presence of that previously owned engine in the supposed ''new motor vehicle'' transforms that engine into a ''new motor vehicle engine'' within the meaning of CAA section 216(3).

3. Glider Kits

Under EPA's proposed interpretation, EPA would have no authority to regulate glider kits under CAA section 202(a)(1). If glider vehicles are not ''new motor vehicles,'' which is the interpretation of CAA section 216(3) that EPA is proposing here, then the Agency lacks authority to regulate glider kits as ''incomplete'' new motor vehicles. Further, given that a glider kit lacks a powertrain, a glider kit does not explicitly meet the definition of ''motor vehicle,'' which, in relevant part, is defined to mean ''any *self-propelled* vehicle.'' 42 U.S.C. 7550(2) (emphasis added). It is not obvious that a vehicle without a motor could constitute a ''motor vehicle.''

4. Issues for Which EPA Seeks Comment

EPA believes that its proposed interpretation is the most reasonable reading of the relevant statutory language, and that its proposed determination, based on this interpretation, that regulation of glider vehicles, glider engines, and glider kits is not authorized by CAA section 202(a)(1) is also reasonable. EPA seeks comment on this interpretation.

Comments submitted in the Phase 2 rulemaking docket lead EPA to believe that a glider vehicle is often a suitable option for those small businesses and independent operators who cannot afford to purchase a new vehicle, but

[17] The legislative history of both the 1967 AQA and 1977 CAAA is silent with respect to the origin of Title II's definitions of ''new motor vehicle,'' ''new motor vehicle engine,'' ''ultimate purchaser,'' and ''manufacturer,'' which further underscores that Congress had originally derived those definitions from the Disclosure Act.

[18] *See* footnote 3, *supra.*

who wish to replace an older vehicle with a vehicle that is equipped with up-to-date safety features. EPA solicits comment and further information as to this issue. EPA also solicits comment and information on whether limiting the availability of glider vehicles could result in older, less safe, more-polluting trucks remaining on the road that much longer. EPA particularly seeks information and analysis addressing the question whether glider vehicles produce significantly fewer emissions overall compared to the older trucks they would replace.

EPA also seeks comment on the matter of the anticipated purchasing behavior on the part of the smaller trucking operations and independent drivers if the regulatory provisions at issue were to repealed. Further, EPA seeks comment on the relative expected emissions impacts if the regulatory requirements at issue here were to be repealed or were to be left in place.

Finally, EPA seeks comment on whether, if the Agency were to determine not to adopt the interpretation of CAA sections 202(a)(1) and 216(3) being proposed here, EPA should nevertheless revise the ''interim provisions'' of Phase 2 rule, 40 CFR 1037.150(t)(1)(ii), to increase the exemption available for small manufacturers above the current limit of 300 glider vehicles per year. EPA seeks input on how large an increase would be reasonable, were the Agency to increase the limit in taking final action. Further, EPA seeks comment on whether, if the Agency were to determine not to adopt the statutory interpretation being proposed here, EPA should nevertheless extend by some period of time the date for compliance for glider vehicles, glider engines, and glider kits set forth in 40 CFR 1037.635. EPA seeks comment on what would be a reasonable extension of the compliance date.

B. Conclusion

EPA has a fundamental obligation to ensure that the regulatory actions it takes are authorized by Congress, and that the standards and requirements that it would impose on the regulatory community have a sound and reasonable basis in law. EPA is now proposing to find that the most reasonable reading of the relevant provisions of the CAA, including CAA sections 202(a)(1), 216(2), and 216(3) is that glider vehicles should not be regulated as ''new motor vehicles,'' that glider engines should not be regulated as ''new motor vehicle engines,'' and that glider kits should not be regulated as ''incomplete'' new motor vehicles. Based on this proposed interpretation, EPA is proposing to repeal those provisions of the Phase 2 rule applicable to glider vehicles, glider engines, and glider kits.

IV. Public Participation

We request comment by January 5, 2018 on all aspects of this proposal. This section describes how you can participate in this process.

Materials related to the Heavy-Duty Phase 2 rulemaking are available in the public docket noted above and at: *https://www.epa.gov/regulations-emissions-vehicles-and-engines/regulations-greenhouse-gas-emissions-commercial-trucks.*

1. How do I prepare and submit information?

Direct your submittals to Docket ID No. EPA–HQ–OAR–2014–0827. EPA's policy is that all submittals received will be included in the public docket without change and may be made available online at *www.regulations.gov,* including any personal information provided, unless the submittal includes information claimed to be Confidential Business Information (CBI) or other information whose disclosure is restricted by statute.

Do not submit information to the docket that you consider to be CBI or otherwise protected through *www.regulations.gov.* The *www.regulations.gov* Web site is an ''anonymous access'' system, which means EPA will not know your identity or contact information unless you provide it in the body of your submittal. If you submit an electronic submittal, EPA recommends that you include your name and other contact information in the body of your submittal and with any disk or CD–ROM you submit. Electronic files should avoid the use of special characters, any form of encryption, and be free of any defects or viruses. For additional information about EPA's public docket visit the EPA Docket Center homepage at *http://www.epa.gov/epahome/dockets.htm.*

EPA will hold a public hearing on the date and at the location stated in the **DATES** Section. To attend the hearing, individuals will need to show appropriate ID to enter the building. The hearing will start at 10:00 a.m. local time and continue until everyone has had a chance to speak. More details concerning the hearing can be found at *https://www.epa.gov/regulations-emissions-vehicles-and-engines/regulations-greenhouse-gas-emissions-commercial-trucks.*

2. Submitting CBI

Do not submit this information to EPA through *www.regulations.gov* or email. Clearly mark the part or all of the information that you claim to be CBI. For CBI information in a disk or CD–ROM that you mail to EPA, mark the outside of the disk or CD–ROM as CBI and then identify electronically within the disk or CD–ROM the specific information that is claimed as CBI). In addition to one complete version of the comment that includes information claimed as CBI, a copy of the comment that does not contain the information claimed as CBI must be submitted for inclusion in the public docket. Information so marked will not be disclosed except in accordance with procedures set forth in 40 CFR part 2.

3. Tips for Preparing Your Comments

When submitting comments, remember to:

- Identify the action by docket number and other identifying information (subject heading, **Federal Register** date and page number).
- Explain why you agree or disagree; suggest alternatives and substitute language for your requested changes.
- Describe any assumptions and provide any technical information and/or data that you used.
- If you estimate potential costs or burdens, explain how you arrived at your estimate in sufficient detail to allow for it to be reproduced.
- Provide specific examples to illustrate your concerns, and suggest alternatives.
- Explain your views as clearly as possible, avoiding the use of profanity or personal threats.
- Make sure to submit your comments by the comment period deadline identified in the **DATES** section above.

V. Statutory and Executive Order Reviews

(1) Executive Order 12866: Regulatory Planning and Review and Executive Order 13563: Improving Regulation and Regulatory Review

This action is a significant regulatory action that was submitted to the Office of Management and Budget (OMB) for review. Any changes made in response to OMB recommendations have been documented in the docket.

(2) Executive Order 13771: Reducing Regulations and Controlling Regulatory Costs

This action is expected to be an Executive Order 13771 deregulatory action. This proposed rule is expected to provide meaningful burden reduction by eliminating regulatory requirements for glider manufacturers.

(3) Paperwork Reduction Act (PRA)

This action does not impose an information collection burden under the PRA because it does not contain any information collection activities. It would only eliminate regulatory requirements for glider manufacturers.

(4) Regulatory Flexibility Act (RFA)

I certify that this action will not have a significant economic impact on a substantial number of small entities under the RFA. In making this determination, the impact of concern is any significant adverse economic impact on small entities. An agency may certify that a rule will not have a significant economic impact on a substantial number of small entities if the rule relieves regulatory burden, has no net burden, or otherwise has a positive economic effect on the small entities subject to the rule. Small glider manufacturers would be allowed to produce glider vehicles without meeting new motor vehicle emission standards. We have therefore concluded that this action will have no adverse regulatory impact for any directly regulated small entities.

(5) Unfunded Mandates Reform Act (UMRA)

This action does not contain any unfunded mandate as described in UMRA, 2 U.S.C. 1531–1538, and does not significantly or uniquely affect small governments. The action imposes no enforceable duty on any state, local, or tribal governments.

(6) Executive Order 13132: Federalism

This action does not have federalism implications. It will not have substantial direct effects on the states, on the relationship between the national government and the states, or on the distribution of power and responsibilities among the various levels of government.

(7) Executive Order 13175: Consultation and Coordination With Indian Tribal Governments

This action does not have tribal implications as specified in Executive Order 13175. This proposed rule will be implemented at the Federal level and affects glider manufacturers. Thus, Executive Order 13175 does not apply to this action.

(8) Executive Order 13045: Protection of Children From Environmental Health Risks and Safety Risks

This action is not subject to Executive Order 13045 because it is not an economically significant regulatory action as defined by Executive Order 12866. However, the Emission Requirements for Glider Vehicles, Glider Engines, and Glider Kits was anticipated to lower ambient concentrations of $PM_{2.5}$ and some of the benefits of reducing these pollutants may have accrued to children. Our evaluation of the environmental health or safety effects of these risks on children is presented in Section XIV.H. of the HD Phase 2 Rule.[19] Some of the benefits for children's health as described in that analysis would be lost as a result of this action.

In general, current expectations about future emissions of pollution from these trucks is difficult to forecast given uncertainties in future technologies, fuel prices, and the demand for trucking. Furthermore, the proposed action does not affect the level of public health and environmental protection already being provided by existing NAAQS and other mechanisms in the CAA. This proposed action does not affect applicable local, state, or federal permitting or air quality management programs that will continue to address areas with degraded air quality and maintain the air quality in areas meeting current standards. Areas that need to reduce criteria air pollution to meet the NAAQS will still need to rely on control strategies to reduce emissions. To the extent that states use other mechanisms in order to comply with the NAAQS, and still achieve the criteria pollution reductions that would have occurred under the CPP, this proposed rescission will not have a disproportionate adverse effect on children's health.

(9) Executive Order 13211: Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution, or Use

This action is not a ''significant energy action'' because it is not likely to have a significant adverse effect on the supply, distribution, or use of energy.

(10) National Technology Transfer and Advancement Act (NTTAA)

This rulemaking does not involve technical standards.

[19] 81 FR 73478 (October 25, 2016).

(11) Executive Order 12898: Federal Actions To Address Environmental Justice in Minority Populations, and Low-Income Populations

Pursuant to Executive Order 12898 (59 FR 7629, February 16, 1994), EPA considered environmental justice concerns of the final HD Phase 2 rule. EPA's evaluation of human health and environmental effects on minority, low-income or indigenous populations for the final HD Phase 2 rule is presented in the Preamble, Section VIII.A.8 and 9 (81 FR 73844–7, October 25, 2016). We have not evaluated the impacts on minority, low-income or indigenous populations that may occur as a result of the proposed action to rescind emissions requirements for heavy-duty glider vehicles and engines. EPA likewise has not considered the economic and employment impacts of this rule specifically as they relate to or might impact minority, low-income and indigenous populations.

List of Subjects in 40 CFR Parts 1037 and 1068

Environmental protection, Administrative practice and procedure, Air pollution control, Confidential business information, Labeling, Motor vehicle pollution, Reporting and recordkeeping requirements, Warranties.

Dated: November 9, 2017.

E. Scott Pruitt,

Administrator.

For the reasons set out in the preamble, title 40, chapter I of the Code of Federal Regulations is proposed to be amended as set forth below.

PART 1037—CONTROL OF EMISSIONS FROM NEW HEAVY-DUTY MOTOR VEHICLES

■ 1. The authority for part 1037 continues to read as follows:

Authority: 42 U.S.C. 7401–7671q.

Subpart B—[Amended]

■ 2. Section 1037.150 is amended by removing and reserving paragraph (t) as follows:

§ 1037.150 Interim provisions.

* * * * *

(t) [Reserved]

* * * * *

Subpart G—[Amended]

§ 1037.635 [Removed]

■ 3. Section 1037.635 is removed.

Subpart I—[Amended]

■ 4. Section 1037.801 is amended by removing the definitions ''glider kit'' and ''glider vehicle'' and revising the definitions of ''manufacturer'' and ''new motor vehicle'' to read as follows:

§ 1037.801 Definitions.

* * * * *

Manufacturer has the meaning given in section 216(1) of the Act. In general, this term includes any person who manufactures or assembles a vehicle (including a trailer or another incomplete vehicle) for sale in the United States or otherwise introduces a new motor vehicle into commerce in the United States. This includes importers who import vehicles for resale.

* * * * *

New motor vehicle has the meaning given in the Act. It generally means a motor vehicle meeting the criteria of either paragraph (1) or (2) of this definition. New motor vehicles may be complete or incomplete.

(1) A motor vehicle for which the ultimate purchaser has never received the equitable or legal title is a new motor vehicle. This kind of vehicle might commonly be thought of as ''brand new'' although a new motor vehicle may include previously used parts. Under this definition, the vehicle is new from the time it is produced until the ultimate purchaser receives the title or places it into service, whichever comes first.

(2) An imported heavy-duty motor vehicle originally produced after the 1969 model year is a new motor vehicle.

* * * * *

PART 1068—GENERAL COMPLIANCE PROVISIONS FOR HIGHWAY, STATIONARY, AND NONROAD PROGRAMS

■ 5. The authority for part 1068 continues to read as follows:

Authority: 42 U.S.C. 7401–7671q.

Subpart B—[Amended]

■ 6. Section 1068.120 is amended by revising paragraph (f)(5) to read as follows:

§ 1068.120 Requirements for rebuilding engines.

* * * * *

(f) * * *

(5) The standard-setting part may apply further restrictions to situations involving installation of used engines to repower equipment.

* * * * *

[FR Doc. 2017–24884 Filed 11–15–17; 8:45 am]

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IX.
Letter from Administrator Pruitt, responding to the Petition for Reconsideration
(Aug. 17, 2017)

E. SCOTT PRUITT
ADMINISTRATOR

August 17, 2017

Mr. Tommy C. Fitzgerald
President
Fitzgerald Glider Kits
1225 Livingston Highway
Birdstown, Tennessee 38549

Dear Mr. Fitzgerald:

Thank you for your letter of July 10, 2017, requesting that the U.S. Environmental Protection Agency reconsider the requirements for gliders under the final rule titled *Greenhouse Gas Emissions and Fuel Efficiency Standards for Medium- and Heavy-Duty Engines and Vehicles – Phase 2* (81 FR 73478, October 25, 2016) (*Phase 2 Rule*). Your letter raises significant questions regarding the EPA's authority under the Clean Air Act to regulate gliders as well as the soundness of the EPA's technical analysis used to support the requirements.

More specifically, your letter states that the EPA lacks authority over glider *vehicles* because they are not "new" motor vehicles and glider *kits* because they do not fall within the Clean Air Act's definition of "motor vehicle." In addition, it also raises concerns that the EPA relied upon "unsupported assumptions rather than data" with regard to the emission impacts of glider vehicles.

In light of these issues, the EPA has decided to revisit the provisions in the *Phase 2 Rule* that relate to gliders. We intend to develop and issue a Federal Register notice of proposed rulemaking on this matter, consistent with the requirements of the Clean Air Act.

If you have any questions regarding this response, you may contact Bill Charmley in the Office of Transportation and Air Quality at (734) 214-4466.

Respectfully yours,

Scott Pruitt

E. Scott Pruitt

1200 PENNSYLVANIA AVE. NW • MAIL CODE 1101A • WASHINGTON, DC 20460 • (202) 564-4700 • FAX: (202) 501-1450

X.
Petition for Reconsideration of Application of HDP2 Rule to Gliders, submitted by Fitzgerald Glider Kits, Harrison Truck Centers, Inc., and Indiana Phoenix, Inc. to EPA (July 10, 2017)

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EXECUTIVE SECRETARIAT

July 10, 2017

Scott Pruitt, Administrator
Environmental Protection Agency
1200 Pennsylvania Avenue, N.W.
Washington, DC 20460

Re: Petition for Reconsideration of Application of the Final Rule Entitled "Greenhouse Gas Emissions and Fuel Efficiency Standards for Medium- and Heavy-Duty Engines and Vehicles—Phase 2 Final Rule" to Gliders

Pursuant to 5 U.S.C. § 553(e) and 42 U.S.C. § 7607(d)(7)(B), Fitzgerald Glider Kits, LLC ("Fitzgerald"), Harrison Truck Centers, Inc. ("Harrison"), and Indiana Phoenix, Inc. ("Indiana Phoenix") (collectively, "Petitioners"), on behalf of the glider industry, hereby request that the Environmental Protection Agency ("EPA") reconsider the application of the final rule entitled "Greenhouse Gas Emissions and Fuel Efficiency Standards for Medium- and Heavy-Duty Engines and Vehicles—Phase 2 Final Rule," 81 Fed. Reg. 73,478 (Oct. 25, 2016) ("Phase 2 Rule"), to "gliders."[1]

Background

"Gliders" are medium- and heavy-duty trucks that are assembled by combining certain new truck parts (that together constitute a "glider kit") with the refurbished powertrain—the engine, the transmission, and typically the rear axle—of an older truck. The glider kit generally includes the tractor chassis with frame, front axle, cab, and brakes. 81 Fed. Reg. at 73,512. A glider is manufactured by combining the powertrain from the used vehicle with the parts in the glider kit.

Gliders are approximately 25% less expensive than new trucks, a significant cost savings for small businesses and owner-operators. Envtl. Prot. Agency & Dep't of Transp., Response to Comments for Joint Rulemaking ("RTC"), at 1846 (Aug. 2016) (comment of GATR Truck Center). Businesses and drivers that cannot afford a new truck often purchase gliders as an alternative to continuing to drive their older vehicle. *Id.* at 1825 (comment of Clarke Power Services). Glider kits can also extend the working life of a damaged vehicle. *Id.* Gliders also require less maintenance, yielding less downtime, and have modern safety features and amenities. *Id.* Overall, they offer a more economical option for smaller fleets and owner-operators to maintain the reliability of their commercial trucking operations.

In the Phase 2 Rule published October 25, 2016, EPA for the first time mandated that glider kits, glider vehicles, and rebuilt engines installed in gliders (hereinafter "gliders") satisfy

[1] The Phase 2 Rule was jointly promulgated by EPA and the National Highway Traffic Safety Administration ("NHTSA"), an agency within the Department of Transportation ("DOT"). Because Petitioners request reconsideration of only certain elements of the Phase 2 Rule that were promulgated pursuant to EPA's Clean Air Act authority, this Petition is directed to EPA, and not NHTSA or DOT.

emissions standards applicable to new motor vehicles and new motor vehicle engines. The regulations accomplish this by ignoring the age of the engine and other powertrain elements installed in gliders and applying instead emissions standards based on the "calendar year in which assembly of the glider is completed." 81 Fed. Reg. at 73,943; *see* 40 C.F.R. § 1037.635. In other words, if a glider assembler installs a reclaimed engine in a glider in 2017, that engine must be certified to comply with all emissions standards applicable to new engines from model year 2017, regardless of the actual model year of the engine. "This requirement applies to all pollutants, and thus encompasses criteria pollutant standards as well as the separate [greenhouse gas ("GHG")] standards." 81 Fed. Reg. at 73,943; *see* 40 C.F.R. § 1037.635.

Recognizing that the new standards applied to gliders in the Phase 2 Rule were both sudden and onerous, the Phase 2 Rule purports to provide some "transitional flexibilities," 81 Fed. Reg. at 73,942, but these provisions are not enough to prevent a devastating impact on the glider industry when the standards become almost fully applicable to gliders on January 1, 2018. In 2017, glider assemblers are permitted to produce a limited number of gliders exempt from the regulations. The number of gliders exempted in 2017 for any particular company is equivalent to the "highest annual production of glider kits and glider vehicles for any year from 2010 to 2014" by the company. 40 C.F.R. § 1037.150(t)(3). Because of the growth of their business since 2014, this provision has forced Fitzgerald, Harrison, and Indiana Phoenix to scale back production in 2017 to a certain degree, but it has allowed for continued operation. Beginning January 1, 2018, however, the 2017 regime is replaced with an allowance to build only 300 gliders per year that are exempt from the regulations. *Id.* § 1037.105(t)(1)(ii). This stringent production cap would effectively destroy the glider industry.[2]

Despite EPA's stated goal to reduce greenhouse gas emissions, EPA did not perform any actual testing to analyze the environmental impact of remanufactured engines and gliders compared to new Original Equipment Manufacturer ("OEM") vehicles. Instead, it relied on unsubstantiated assumptions about the number of older engines used in gliders and the emissions from engines used in gliders.

If left in place, the Phase 2 Rule would significantly curtail American manufacturing and effectively shut down the glider industry and the nearly 20,000 jobs it supports across the nation. For example, Fitzgerald, which is based out of Tennessee and Kentucky, is currently responsible for 1,600 direct and indirect jobs in those two states alone and several thousand more associated with suppliers across the country. Yet, if this regulation goes into full effect, by the end of the year, the company will be forced to cut production and its workforce by 90%. Harrison, based in Iowa, employs approximately 450 people, and its suppliers account for many more glider-related jobs. Indiana Phoenix, based in Indiana, directly employs over a 100 people in Avilla, Indiana. The Phase 2 Rule, if it takes effect, would put more job opportunities out of reach for economically challenged areas already struggling with unemployment. Additionally, it would force small businesses to buy more expensive new vehicles instead of growing their business and creating jobs.

[2] There are additional exceptions from the general requirement for engines from more recent model years or with relatively few miles of engine operation. *See* 40 C.F.R. §§ 1037.150(t)(2); 1037.635(c). These carve outs do not apply to the vast majority of the gliders assembled by companies like Fitzgerald and Harrison, which tend to use engines from earlier model years and that have been subjected to normal use.

<u>Bases for Reconsideration</u>

EPA should reconsider the application of the Phase 2 Rule to glider kits, glider vehicles, and rebuilt engines installed in gliders for three reasons: (1) Section 202(a) of the Clean Air Act does not authorize EPA to regulate gliders; (2) EPA's prior decision to regulate gliders was based on unsupported assumptions rather than data; and (3) reconsideration is warranted under Executive Order 13783.

1. Section 202(a) of the Clean Air Act Does Not Authorize EPA to Regulate Gliders

The Phase 2 Rule relied on EPA's authority under section 202(a) of the Clean Air Act to regulate emissions from "new motor vehicles" and "new motor vehicle engines." 42 U.S.C. § 7521(a)(1). Because glider vehicles are not "new motor vehicles" and glider engines are not "new motor vehicle engines," EPA lacked authority under this provision to apply the Phase 2 Rule to gliders.

A glider is not a "new motor vehicle" because the most significant parts of the vehicle—the engine, transmission, and typically the rear axle—are not new. A vehicle is a "new motor vehicle" within the meaning of the Clean Air Act only if "equitable or legal title" to the vehicle has "never been transferred to an ultimate purchaser." 42 U.S.C. § 7550(3). For gliders, the "legal or equitable" title to the main components of the vehicle had previously "been transferred to an ultimate purchaser"—the owner of the donor truck. Simply adding new parts to a used truck does not make it a "new motor vehicle." The Phase 2 Rule's consideration of this issue was arbitrary and capricious and contrary to law. The Rule indicated first that EPA's authority could not be challenged because EPA had implicitly found gliders to be new vehicles in its Phase 1 Rule, which granted an interim exemption for gliders. 81 Fed. Reg. at 73,513-14. EPA, however, had an obligation to determine in the Phase 2 Rule that it had authority to act. *See Louisiana Pub. Serv. Comm'n v. FCC*, 476 U.S. 355, 374 (1986) ("[A]n agency literally has no power to act . . . unless and until Congress confers power upon it."); *Arlington v. FCC*, 133 S. Ct. 1863, 1880 (2013) (same). The Phase 2 Rule also erroneously based its interpretation of the Clean Air Act on marketing materials from the Fitzgerald web site. 81 Fed. Reg. at 73,514. EPA's legal authority does not turn on how a glider is described in marketing materials. EPA should reconsider this issue and conclude that because the principal parts of a glider are used, a glider is not a "new motor vehicle."

Such a conclusion would be consistent with the treatment of this issue by the National Highway Traffic Safety Administration ("NHTSA"). NHTSA's regulations make clear that a truck is not considered to be "newly manufactured" if the "engine, transmission, and drive axle(s) (as a minimum) of [an] assembled vehicle are not new" and at least two of those three components come from the same donor vehicle. 49 C.F.R. § 571.7(e). Gliders do not fall within this definition. EPA failed adequately to explain its departure from NHTSA's approach.

Moreover, "glider kits" do not even fall within the Clean Air Act's definition of "motor vehicle." Under the Act, a "motor vehicle" must be "self-propelled." 42 U.S.C. § 7550(2). But a glider kit lacks an engine, transmission, and often a rear axle. A collection of parts lacking these key components obviously is not "self-propelled." The Phase 2 Rule relies on particular provisions authorizing regulation of specific vehicle components. 81 Fed. Reg. at 73,514; *see* 42 U.S.C. § 7521(a)(5)(A) (fueling systems); *id.* § 7521(a)(6) (onboard vapor recovery systems). But there is no provision authorizing regulation of the parts that make up a glider kit. The fact that the Clean Air Act allows EPA to regulate certain specified vehicle components, but not the components in a glider kit, undermines the Phase 2 Rule's application to glider kits. Congress understood how to grant EPA authority to regulate vehicle components but declined to authorize regulation of glider kits. *See TRW, Inc. v. Andrews*, 534 U.S. 19, 28-29 (2001) (applying *expressio unius* canon of construction). Under the interpretation set forth in the Phase 2 Rule, there would be no limit on EPA's authority to regulate parts of vehicles.

The Phase 2 Rule also states that EPA has authority to regulate "incomplete vehicles" and "vehicle components" under Section 202(a). *See* 81 Fed. Reg. at 73,514. It first points to language from Section 202(a)(1) stating that EPA has authority "whether such [new motor] vehicles . . . are designed as complete systems or incorporate devices to prevent or control . . . pollution." 42 U.S.C. § 7521(a)(1). This portion of section 202(a)(1), however, merely provides that emissions standards are limited to the useful life of a vehicle or engine. *See id.* It does not purport to expand EPA's authority in the first sentence of that section. *See id.* ("The Administrator shall by regulation prescribe (and from time to time revise) in accordance with the provisions of this section, standards applicable to the emission of any air pollutant from any class or classes of *new motor vehicles* . . . ." (emphasis added)).[3]

Finally, the Phase 2 Rule erred in concluding that glider engines are "new motor vehicle engines" under the Act. A "new motor vehicle engine" is defined as either (1) "an engine in a new motor vehicle," or (2) a "motor vehicle engine the equitable or legal title to which has never been transferred to the ultimate purchaser." 42 U.S.C. § 7550(3). Because a glider is not a new motor vehicle, a glider engine is not "an engine in a new motor vehicle." *Id.* And because a glider engine has previously been owned, title in the engine has previously been "transferred to an ultimate purchaser." *Id.*

For all of these reasons, Petitioners respectfully suggest that EPA reconsider its authority to regulate gliders under Section 202(a) of the Clean Air Act.

2. EPA's Prior Decision To Regulate Gliders Was Based on Unsupported Assumptions Rather than Data

The Phase 2 Rule relied upon unsupported assumptions to arrive at the conclusion that immediate regulation of glider vehicles was warranted and necessary. First, the Phase 2 Rule assumed that *all* glider engines would be older engines from before 2002. *See* 81 Fed. Reg. at

[3] The Phase 2 Rule also indicated that EPA's authority to regulate "defeat devices" "support[ed] the actions EPA is taking [under section 202] with respect to . . . glider kits." 81 Fed. Reg. at 73,518. There is no basis for this contention. Under the Act, a defeat device is "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 [Clean Air Act] regulations." 42 U.S.C. § 7522(a)(3)(B) (emphasis added). But the "principal effect" of a glider kit is not to "bypass, defeat, or render inoperative" some "device" or "element of design" in a vehicle. The Rule never explained what device or element of design it thought was being defeated.

73,943 ("The modeling also assumed that these gliders emit at the level equivalent to the engines meeting the MY 1998-2001 standards . . . ."); RTC 1960-1961. EPA indicated that it believed "*most* glider vehicles currently being produced use remanufactured engines of this vintage," *id.* (emphasis added), but it made no effort to quantify what percentage of glider engines in fact would fall within this category and instead assumed that *all* of them would. In fact, the model year of the engines used in glider vehicles varies depending on the donor vehicle or owner and includes engines from after 2002.

EPA also assumed that the nitrogen oxide ("NO_x") and particulate matter ("PM") emissions of glider vehicles using pre-2007 engines would be at least ten times higher than emissions from equivalent vehicles being produced with brand new engines. *See id.* at 73,942. But EPA relied on no actual data to support this conclusion; it simply relied on the pre-2007 standards. *Id.* A recent study by Tennessee Technological University ("Tennessee Tech") analyzing the NO_x, PM, and carbon monoxide ("CO") emissions from both remanufactured and OEM engines reached a contrary conclusion. *See* Exhibit 1 (Letter to the Hon. Diane Black from Philip B. Oldham, President, Tennessee Technological University, and Thomas Brewer, Associate Vice President, Center for Intelligent Mobility (June 15, 2017)). The results showed that remanufactured engines from model years between 2002 and 2007 performed roughly on par with OEM "certified" engines, and in some instances even out-performed the OEM engines. *See id.* at 1. Tennessee Tech's research also "showed that remanufactured and OEM engines experience parallel decline in emissions efficiency with increased mileage." *Id.* at 2. Tennessee Tech also estimated that glider vehicles would emit less than 12% of the total NO_x and PM emissions for all Class 8 heavy duty vehicles, *see id.*, not 33% as the Phase 2 Rule suggests, *see* 81 Fed. Reg. at 73,943. Tennessee Tech's findings constitute new information, developed since the Phase 2 Rule was promulgated, and provide a basis for EPA to reconsider the existing rule pursuant to Section 307 of the Clean Air Act. 42 U.S.C. § 7607(d)(7)(B); *see* S. Rep. No. 91-1196, at 41-42 (1970) ("[N]ew information . . . may dictate a revision or modification of any promulgated standard or regulation established under the [Clean Air] act."); *Oljato Chapter of the Navajo Tribe v. Train*, 515 F.2d 654, 660 (D.C. Cir. 1975) (same).

EPA also did not account for its own low-sulfur diesel rule. Starting in 2006, EPA required that diesel fuel refiners produce diesel fuels with a 97% lower sulfur content. *See* 40 C.F.R. §§ 80.500, 80.520. This reduction of sulfur significantly reduced the amount of NO_x, PM, and other pollutants emitted from diesel engines, including gliders and other heavy-duty truck tractors. This reduction was not taken into account in the development of the Phase 2 Rule for gliders.

The Phase 2 Rule also erroneously assumed that the only explanation for the growth of the glider vehicle market was that glider assemblers sought to avoid the increasingly restrictive emission standards for engines in new OEM tractors. 81 Fed. Reg. at 73,943. The reality is that glider vehicles do not directly compete with new OEM tractors. For most individuals or companies that purchase gliders, the choice is not between a glider or a new tractor. The choice is between a glider and continuing to run their old tractor. Further, glider vehicle assemblers often take the lead on forward-thinking research and development that benefits the entire industry, including innovative research on fuel additives, emission devices, and tire and wheel combinations in small production runs. *See* Exhibit 1, at 2. Glider assemblers are currently testing components, light weight drive systems, alternative fuel mixtures, autonomous drive systems, light weight body materials, and intelligent transportation systems. *Id.* In short, the glider assemblers are a complementary part of the medium- and heavy-duty truck industry, not direct competitors to OEMs.

Finally, the Phase 2 Rule failed to consider the significant environmental *benefits* that glider vehicles create. Glider vehicle GHG emissions are less than those of OEM vehicles due to gliders' greater fuel efficiency, and the carbon footprint of gliders is further reduced by the savings created by recycling materials. Gliders are 20% more fuel efficient than OEM vehicles. *See id.* Moreover, gliders reuse engines and other components, instead of casting new parts. Glider assemblers reuse approximately 4,000 pounds of cast steel in the remanufacturing process, including 3,000 pounds for the engine assembly alone. *Id.* Reusing these components avoids the environmental impact of casting steel, including the significant associated NO_x emissions. *See, e.g.*, National Emission Standards for Hazardous Air Pollutants: Integrated Iron and Steel Manufacturing, 68 Fed. Reg. 27,646 (May 20, 2003); Envtl. Prot. Agency, *Alternative Control Techniques Document – NO_x Emissions From Iron and Steel Mills*, EPA-453/R-94-065 (Sept. 1994); *see also* Exhibit 1, at 2. Given their better fuel efficiency and reuse of cast steel, gliders have a lower carbon footprint than OEM vehicles, a fact not considered in the development of the Phase 2 Rule.

In light of the new information developed by Tennessee Tech and the unsupported assumptions that form the basis for the Phase 2 Rule as it applies to gliders, EPA should reconsider the rule.

3. Reconsideration Is Warranted under Executive Order 13783

The March 28, 2017 Executive Order, "Presidential Executive Order on Promoting Energy Independence and Economic Growth," further highlights why EPA should reconsider the Phase 2 Rule as it applies to gliders. Exec. Order No. 13,783 (Mar. 28, 2017). The Executive Order rescinds (among other things) the June 2013 report from the Executive Office of the President, titled "The President's Climate Action Plan," and instructs EPA and all other federal agencies to "identify existing agency actions related to or arising from" the now-rescinded plan and to "suspend, revise, or rescind, or publish for notice and comment proposed rules suspending, revising, or rescinding any such actions, as appropriate and consistent with law and with the policies set forth in section 1 of th[e] order." *Id.* §§ 3(b), (d). The Phase 2 Rule is a direct product of the Climate Action Plan. 81 Fed. Reg. at 73,480. And reconsideration of the application of the Phase 2 Rule to gliders is consistent with the Executive Order's stated purpose of avoiding environmental regulation that "constrain[s] economic growth" and "prevent[s] job creation" and ensuring that "environmental regulations comply with the law, are of greater benefit than cost, and are developed through transparent processes that employ the best available peer-reviewed science and economics." Exec. Order No. 13,783 §§ 1(a), (e). Because the Phase 2 Rule is related to the rescinded Climate Action Plan, and because the portion of the Rule that applies to gliders conflicts with the policies set forth in Section 1 of the Order, EPA should reconsider the rule. Based on that reconsideration, EPA should "suspend, revise, or rescind" the Rule as applied to gliders, including, as necessary, by promulgating new regulations. *See id.* § 3(d).

Conclusion

For the foregoing reasons, Petitioners respectfully request EPA to reconsider application of the Phase 2 Rule to gliders. Given the impending January 1, 2018 compliance date, which will effectively eliminate the industry, Petitioners request that EPA complete this reconsideration as soon as possible.

Respectfully,

Fitzgerald Glider Kits, LLC
Tommy C. Fitzgerald, President

Harrison Truck Centers, Inc.
Dustin Petersen, Shareholder

Indiana Phoenix, Inc.
Dane Keener, General Manager

EXHIBIT 1

Office of the President

TENNESSEE TECH

June 15, 2017

The Honorable Diane Black
1131 Longworth HOB
Washington, DC 20515

Reference: Tennessee Tech University – Summary of Heavy Duty Truck Study and Evaluation of the Phase II Heavy Duty Truck Rule

Congressman Black:

From September 2016 – November 2016, the Tennessee Technological University Department of Civil and Environmental Engineering ("Tennessee Tech") conducted the first phase of its research on the environmental and economic impact of the Greenhouse Gas Emissions and Fuel Efficiency Standards for Medium- and Heavy-Duty Engines and Vehicles – Phase 2 rule ("Phase 2 Rule") published October 25, 2016. The key areas of research were to (1) Compare Glider Kit compliance with the Phase 2 Rule; (2) Perform high level environmental footprint and economic study of OEM manufacturing vs. assembly of remanufactured components (Glider Kits); and (3) Evaluate industry optimization plans to address future environmental regulations including but not limited to production vehicles, component assembly, and facility compliance.

To carry out the environmental footprint component of the research, Tennessee Tech tested thirteen heavy-duty trucks on a common chassis dynamometer at a common site; eight trucks were remanufactured engines and five were OEM "certified" engines, all with low mileage (NOTE: These Base Line Setting Phase I results were completed by testing only one Glider Kit manufacturer's product and one OEM's product). Each vehicle was evaluated for fuel efficiency, carbon monoxide (CO), particulate matter (PM) emissions and nitrogen oxide (NO_x). The results of the emissions test were compared with the 2010 EPA emissions standards for HDVs. Our research showed that optimized and remanufactured 2002-2007 engines and OEM "certified" engines performed equally as well and in some instances out-performed the OEM engines. (see also Appendix A for more detailed test results).

Summary Chart of Phase 1 Test Results	
Emission Standard	**Result**
CO	All vehicles met the standard
PM	All vehicles met the standard
NO_x	None of the vehicles met the standard

Tennessee Tech / Box 5007 Cookeville, TN 38505 / 931-372-3241 / F: 931-372-6332 / www.tntech.edu/president

Congressman Black
June 15, 2017

While none of the vehicles met the NO_x standard, a glider remanufactured engine achieved the best result of any engine tested (see Appendix A). Further, our research showed that remanufactured and OEM engines experience parallel decline in emissions efficiency with increased mileage. Contrary to the assertion in the Phase 2 Rule, it is our estimate that the glider kit HDVs would emit less than 12% of the total NO_x and PM emissions, not 50%, for all Class 8 HDVs. Should the Phase 2 glider cap be fully implemented on January 1, 2018, there is little doubt that consumers utilizing glider vehicles, due to economic considerations, will delay purchasing new equipment and consequently, slow the reduction of engine emissions nationwide. In this regard, the Phase 2 rule is counter-productive to its stated intent.

In addition to equal or lower emissions, glider kits have a smaller carbon footprint than OEM vehicles due to fuel efficiency and recycling of materials. Comparisons between 2016 glider kit vehicles and new EPA compliant vehicles for fuel efficiency reflect that glider kits are 20% more efficient on fuel consumption. Glider vehicles also reuse engines and other components in the remanufacturing process, resulting in the reuse of approximately 4,000 pounds of cast steel. The engine assembly alone accounts for approximately 3,000 pounds of recycled cast steel. Thus, the well-documented environmental impact of casting steel, including the significant NOx emissions, is avoided by reusing cast steel components in glider vehicles. Consequently, given the superior fuel efficiency and the reuse of cast steel, glider vehicles have a lower carbon footprint than OEMs. None of these facts were considered in the development of the Phase 2 rule.

From an economic standpoint, Tennessee Tech examined the impact of the Phase 2 Rule sales cap of 300 units for glider kits would have on the State of Tennessee. The 300 unit sales cap represents 9% of Fitzgerald's current sales. It is estimated that a 91% reduction in output by Fitzgerald would result in a direct loss of approximately 947 jobs and a loss of approximately $512 million of economic output in the State of Tennessee alone. This impact takes into account the direct and indirect economic impact, including expenditures on labor, operations and maintenance as well as changes in the supply chain throughout the state. Additionally, on a broader scale, the economic impact of the Phase 2 Rule could easily exceed $1 billion nationwide due to thousands of permanent job losses and supply chain interruption and reduction. The Phase 2 Rule failed to sufficiently evaluate and consider these impacts.

Finally, this phase of the research shows that trucking companies that utilize glider kit HDVs in their fleets are vigilant in maintenance and elect to optimize their fleets to maximum efficiency throughout the life span of the vehicle. Further, glider kit assemblers facilitate research and development for OEM's by conducting innovative research for fuel additives, emission devices, tire and wheel combinations in small production runs and are currently testing components, light weight drive systems, alternative fuel mixtures, autonomous drive systems, light weight body materials, and intelligent transportation systems. As a general statement, our observation is glider assemblers are in tune with industry needs and cutting edge innovation.

Tennessee Tech will continue to evaluate HDV engines during Phase II of the research in 2017. Such effort will be conducted in conjunction with the Oak Ridge National Lab - Fuel Engines & Emissions Research Center. The goals of the next phase include development of engineering and manufacturing solutions that exceed EPA emission standards, a focused research, development, and testing plan for NO_x emissions, and to continue testing to demonstrate continuous improvement of emissions from remanufactured heavy-duty engines.

Sincerely,

Philip B. Oldham
President

Thomas Brewer
Associate Vice President
Center for Intelligent Mobility

APPENDIX A: Testing Results from Tennessee Tech Phase 1 Heavy Duty Vehicle Study			
Engine	**Type**	**CO (g/HP * hr) (2010 standard = 15.5)**	**PM**
Detroit Diesel DD15	ReMan	0.290	BTD
Caterpillar CT13	ReMan	0.212	BTD
Detroit Diesel Series 60	ReMan	1.553	BTD
Detroit Diesel Series 60	ReMan	1.959	BTD
Detroit Diesel Series 60	ReMan	0.015	BTD
Detroit Diesel Series 60	ReMan	0.317	BTD
Detroit Diesel Series 60	ReMan	0.483	BTD
Detroit Diesel Series 60	ReMan	0.467	BTD
Detroit Diesel DD15	OEM	0.491	BTD
Detroit Diesel DD15	OEM	1.169	BTD
Detroit Diesel DD15	OEM	0.556	BTD
Detroit Diesel DD15	OEM	0.098	BTD
Detroit Diesel DD15	OEM	1.558	BTD

*BTD=below threshold detection point

** NO_x (g/HP * HP) (2010 standard = 0.2); All tested engines were higher than the standard and ranged from a low of 0.44 to a high of 6.45. The lowest tested NOx was a Fitzgerald – Reman Detroit Diesel DD 15 using proprietary Fitzgerald engine design and set up. That same engine also tested at the 0.290 Co rate.

Package Details:

- Washington Express tracking number: 2589830
- Package Sent To:

  Cheryl Woodward
  Environmental Protection Agency
  1200 Pennsylvania Avenue, N.W.
  North Building
  Washington, DC 20004
  US

- Client/Matter/Sender: 2214062/00120/02092
- Ready Time: 03:15 PM
- Service: Regular
- Packaging: Env-Package-Book
- Pieces: 1
- Weight: unspecified
- Instructions: Please wait at security till 4:30pm and Cheryl Woodward will meet you there at exactly 4:30pm to except the envelope.

XI.

Excerpt of Calendar of then-EPA Administrator Scott Pruitt (May 8, 2017)

Time 12:00 PM – 1:00 PM
Subject Lunch with Sam Wade (CEO, National Rural Water Association)
Location (b) (6) [redacted]
Show Time As Busy
Attendees

Name <E-mail>	Attendance
(b)(6) Pruitt Cal. Acct [redacted] <(b)(6) Pruitt Cal. Acct [redacted]	Organizer
Greenwalt, Sarah <greenwalt.sarah@epa.gov>	Required

Saturday, May 6, 2017

Time 9:45 AM – 10:15 AM
Subject (b) (6) [redacted]
Show Time As Busy

Monday, May 8, 2017

Time 7:00 AM – 7:25 AM
Subject Cheryl to Open Administrator's Office for Cleaning
Recurrence Occurs every Monday, Tuesday, Wednesday, Thursday, and Friday effective 4/3/2017 until 5/31/2017 from 7:00 AM to 7:25 AM
Show Time As Busy

Time (b) (6), (b) (7) (C) [redacted] TUL [redacted]
Show Time As Busy
(b) (6), (b) [redacted]

[redacted] (b)(6) DC-Area Airpt, (b) (7)(C) [redacted]
Show Time As Busy
(b) (7)(C), (b) (6) [redacted]

Time 12:45 PM – 1:45 PM
Subject Lunch with Sen. Murkowski
Location (b) (7)(C), (b) (6) [redacted]
Show Time As Busy
(b) (7)(C), (b) (6) [redacted]
Attendees

Name <E-mail>	Attendance
(b)(6) Pruitt Cal. Acct [redacted] <(b)(6) Pruitt Cal. Acct [redacted]	Organizer
Lyons, Troy <lyons.troy@epa.gov>	Required
Jackson, Ryan <jackson.ryan@epa.gov>	Required

Time (b) (5) DPP [redacted]
Subject
Location
Show Time As

(b) (5) DPP [redacted]

Time 2:00 PM – 2:30 PM
Subject Briefing re: Meeting with Tommy Fitzgerald
Location Administrator's Office
Show Time As Busy
Handling: Ryan Jackson

Attendees

Name <E-mail>	Attendance
(b)(6) Pruitt Cal. Acct. [redacted] <(b)(6) Pruitt Cal. Acct. [redacted]	Organizer
Brown, Byron <brown.byron@epa.gov>	Required

Time 2:15 PM – 2:45 PM
Subject Meeting with Tommy Fitzgerald
Location Adminsitrator's office
Show Time As Busy
Topic: GHG phase 2 sale and assembly of Gilder Kits; goes into effect in Jan of next year and will put out hundreds of jobs

Attendees: Tommy C. Fitzgerald, Tommy A. Fitzgerald (Jr.), Joe DePew , Don Shandy

POC(b)(6) Tommy C. Fitzgerald email [redacted]
<mailto(b)(6) Tommy C. Fitzgerald email [redacted] (b) (6) [redacted]

Attendees

Name <E-mail>	Attendance
(b)(6) Pruitt Cal. Acct. [redacted] <(b)(6) Pruitt Cal. Acct. [redacted]	Organizer
Jackson, Ryan <jackson.ryan@epa.gov>	Required
Brown, Byron <brown.byron@epa.gov>	Required
Eric Vance (Vance.Eric@epa.gov) <Vance.Eric@epa.gov>	Required

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Time 2:45 PM – 3:00 PM
Subject Depart Office for White House
Show Time As Busy

Time (b) (5) DPP [redacted]
Subject

XII.
Declarations

1. Dorothy Brandt, Environmental Defense Fund member

DECLARATION OF DOROTHY BRANDT

I, Dorothy Brandt, under penalties of perjury, declare as follows:

1. I am a member of Environmental Defense Fund ("EDF") and have been a member since 2018. I am also a member of Moms Clean Air Force, a special project of EDF that works to unite moms and dads to protect our children's health from the harmful effects of air pollution. I have been a member of Moms Clean Air Force since 2016.

2. I am 73 years old. I currently reside with my 73-year-old husband and 46-year-old daughter in West Seattle, Washington. For many decades my family has lived along Puget Sound, including about 15 years near the Port of Tacoma and almost twenty years in Seattle.

3. I previously worked as a teacher for twenty-five years and as a school principal for three. After retiring, I went back to graduate school to earn a degree in theology. For over eight years, I have worked as a lay minister. For example, I served as a pastoral counselor to women at Fort Lewis during the second Iraq War.

4. I have long been concerned about children's health and how it is affected by pollution, both due to my work as an educator and the experiences of my own family. My oldest daughter was diagnosed with asthma as a teenager and continues to suffer from this condition to this day.

5. I joined EDF and Moms Clean Air Force due to my concerns about pollution and its effects on my family's health and my own health. I understand from my involvement with EDF and Moms Clean Air Force that the Environmental Protection Agency ("EPA") has recently made a decision stating that it will not enforce the current regulations establishing a 300-per-year production limit for pollution-standard-exempt "glider" trucks, applicable to all production of glider vehicles through 2019. I am also aware that uncontrolled glider trucks emit multiple times more soot and smog-causing pollution as compared to freight trucks with modern pollution controls. EPA's action will allow the sale of a significantly higher number of these highly polluting vehicles.

6. As a Moms Clean Air Force volunteer, I have testified twice at public hearings to raise concerns about air pollution issues, including testifying against former EPA Administrator Scott Pruitt's November 2017 proposed rule that would have repealed pollution limits for "glider" freight trucks at EPA's hearing on the subject.

7. I am personally exposed to diesel freight truck pollution every day. My family's home is located less than one mile from a terminal that is part of the Port of Seattle, which gets heavy freight truck traffic from trucks coming and going to pick up goods. I also travel to downtown Seattle five times a week to attend church at different locations: Plymouth Congregational Church at 6th Ave. and

Seneca St. (which is almost directly adjacent to I-5, a major highway and heavy freight traffic corridor); Christ Our Hope Catholic Church at 2nd Ave. and Stewart St.; and others. I take the bus and then walk through downtown to get to church. Both while on the bus and while walking, I am surrounding by a lot of tractor-trailer traffic and frequently exposed to the harmful pollution emitted from these vehicles.

8. In general, my main form of exercise is vigorous walking. I walk in my neighborhood as well as in my daily routine—for example I choose to take the bus and walk to church as well as walk to the grocery store. I frequently must change my routes in order to avoid major freeways and other large sources of freight truck pollution. When I am walking and being exposed to freight truck traffic pollution, I can feel my eyes watering. I know that individuals who frequently exercise outdoors face increased health risks from the harms associated with air pollution exposure, especially on high pollution days.

9. I also regularly drive on major freeways including I-5, which have a lot of tractor-trailer traffic. In particular, in recent months I have been traveling by car on I-5 once a month from Seattle to visit family in Portland, Oregon. When in a car, I notice when surrounding freight truck pollution is particularly bad and try to close the vents to reduce my and my family's exposure to it.

10. About ten years ago I developed a heart condition—arrhythmia—that predisposes individuals to stroke, heart disease, and cardiac arrest. I now take medication for this condition.

11. From my work with Moms Clean Air Force, I am aware that people like me with preexisting cardiopulmonary issues are at higher risk for health impacts from air pollution, and that air pollution can exacerbate heart conditions. I am also aware that air pollution levels are heightened near roadways due in part to heavy-duty freight trucks, which makes me particularly concerned about my health and exposure to this pollution due to the fact that my daily routine frequently brings me into close proximity with heavy freight truck pollution.

12. I am also concerned about the health of my husband who is also exposed to a large amount of diesel freight truck traffic from the location of our home as well as his travel to downtown Seattle five days a week for work (also by bus and walking).

13. Similarly, I worry about our daughter's health and exposure to air pollutants. She also lives in our home and travels into downtown Seattle as many as seven days a week. She recently finished chemotherapy treatment for breast cancer. I am deeply concerned about her health and reducing any exposure she may face to diesel pollution. I understand from my work with Moms Clean Air Force that

diesel exhaust can lead to health problems including cancer, and can most likely increase the risk of lung cancer and possibly other cancers.

14. I am strongly opposed to EPA's recent action. Because of the location of our home and daily activities, my family and I are very frequently in close proximity to roads with high quantities of freight truck traffic. We are already exposed to significant amounts of diesel freight truck pollution in our everyday life, and this action—by increasing the number of uncontrolled "glider" freight trucks on the road, emitting disproportionately high levels of diesel pollution—will further increase our already high levels of diesel pollution exposure. I am concerned that this action will harm my health and that of my family by increasing our exposure to air pollution and exacerbating our existing health conditions. I am also concerned it will impact our daily life by forcing us to take more measures and change our activities and daily patterns in order to avoid the greater levels of air pollution.

I declare that the foregoing is true and correct.

Executed on: July 13, 2018

July 13, 2018
Dorothy J. Brandt

Dorothy Brandt

XII.
Declarations

2. Elizabeth Brandt, Environmental Defense Fund member

DECLARATION OF ELIZABETH BRANDT

I, Elizabeth Brandt, under penalties of perjury, declare as follows:

1. I am a member of Environmental Defense Fund (EDF) and have been a member since 2018. I am also a member of and consultant for Moms Clean Air Force, a special project of EDF that works to unite moms and dads to protect our children's health from the harmful effects of air pollution. I have been a member of Moms Clean Air Force since 2013 and have worked for them as a field consultant since 2017.

2. I currently reside in Chevy Chase in Montgomery County, Maryland with my husband and my two daughters, who are aged two and five. We have lived in our current location for the past two years, since August 2015.

3. Previously, we lived in West Seattle, a neighborhood adjacent to the Port of Seattle. My office at that time was in the Delridge neighborhood of Seattle, which is highly impacted by pollution related to the Port of Seattle.

4. I joined EDF and Moms Clean Air Force because I am deeply concerned about assuring clean air for my children, members of my family, and others. I previously worked for seven years as a child welfare social worker before moving to Maryland. My concern about the impacts of air pollution on kids was heightened after the birth of my children, and I started volunteering and now working for Moms Clean Air Force to help protect against air pollution.

5. As part of my work for Moms Clean Air Force, I read and familiarize myself with literature on different kinds of air pollution and their health impacts. Prior to my work in child welfare, I worked on public health projects in Oregon and Alaska, and earned a master's degree in social work. My education and work experience help me understand the framework of public health and has provided me with a great deal of contact with people who live in areas with environmental problems and people who are experiencing illness and disability.

6. Due to my work and reports that I am familiar with, I understand that EPA recently made a decision stating that it will not enforce against any manufacturer or supplier the current regulations establishing a 300-per-year production limit for pollution-standard-exempt "glider" trucks. I further understand that this decision applies to all production of non-compliant glider vehicles through 2019. I am also aware that uncontrolled glider trucks emit many times more soot and smog-causing pollution as compared to freight trucks with modern pollution controls and this action will allow the sale of a much higher number of these highly polluting vehicles.

7. I am deeply concerned that EPA's action will worsen the levels of pollution that my family and I experience.

8. Through my work and my life experience, I am aware that diesel pollution has a variety of harmful health impacts, both directly and indirectly, because some

of its components contribute to soot and smog (ground-level ozone) pollution. I know that exposure to ozone—which can be formed in part through precursors like NOx found in diesel pollution—may induce asthma development in children, increase susceptibility to respiratory infections, and also impair children's lung growth. In addition, exposure to particulate matter pollution (also known as soot) can interfere with the growth and work of the lungs and increases the risk of heart disease, lung cancer, and asthma attacks.

9. Through my work and the published reports I read in the course of my work with Moms Clean Air Force, I am aware that areas in and around my community sometimes exceed the federal air quality standard for ozone pollution. Specifically, my home and surrounding area was designated as an 8-hour Ozone nonattainment area on July 20, 2012 (77 Fed. Reg. 30,088) (under 2008 Ozone standards). I am also aware that particulate and other air pollution levels may be heightened near roadways, and that children are among those at higher risk for health impacts from air pollution near roadways.

10. I have concerns for my own health and that of my family due to exposure to poor air quality caused in part by pollution from diesel freight trucks. I take steps to try to reduce my own and my family's exposure to air pollution.

11.My family moved to Montgomery County from a Seattle neighborhood with significant levels of diesel freight truck and other forms of pollution. When moving, we were looking for a home with less exposure to air pollution.

12.Even in Montgomery County, my family and I are still regularly exposed to freight truck pollution in our daily lives. Our home is located approximately 1,100 feet (350 meters) from Maryland Route 410 ("East-West Highway"), a major thoroughfare with significant freight truck traffic, and is close to Lyttonsville Road, which freight trucks use to connect from the highway to an industrial area nearby.

13.I often walk in my neighborhood for exercise and to run errands. My concern about the impact of freight truck pollution on my health frequently causes me to change my path to avoid areas with many freight trucks, particularly in the summer when ozone pollution problems are exacerbated by high temperatures.

14.I take my daughters to the nearby Silver Spring YMCA, located at 9800 Hastings Dr., as frequently as four times per week in the summer and twice a week the rest of the year. My daughters enjoy swimming in the outdoor pool there, which is located less than 150 feet (50 meters) from the Beltway, Interstate 495, a major thoroughfare for heavy-duty freight trucks. My daughters go to preschool at the Chevy Chase United Methodist Church on Connecticut Avenue, a busy road that also has freight truck traffic. This road is formally known as Maryland Route 185.

15. The pollution from freight trucks causes my family and me to experience respiratory symptoms. My daughters and I start to cough when we walk alongside roads with freight truck traffic.

16. I notice when the Maryland Department of the Environment issues "code orange" or "code red" warnings on days when ozone levels are expected to be unhealthfully high. On days when ozone levels are high, I notice that my daughters get short of breath, particularly in the summer. On high ozone days, I try to keep my daughters indoors and restrict their outdoor activities in order to reduce their exposure to ozone pollution.

17. Although my daughters currently do not have asthma, I know that it is not uncommon for children to develop childhood asthma. I worry about the levels of pollution my daughters are exposed to and will be exposed to in the future as they continue to use the pool at the YMCA and engage in other outdoor activities at the YMCA, their preschool, and elsewhere in our community. I am concerned that I will either need to reduce their outdoor activities, or risk that the development of their young lungs will be harmed by air pollution exposure.

18. Because of EPA's action, more "glider" trucks will be on the road skirting modern pollution limits, and my family and I will face higher levels of particle and

ozone pollution. This action will negatively impact my family by increasing the frequency of poor air quality, and thereby increasing the frequency that my family and I will have to curtail and modify our daily lives and activities. The increased air pollution from this action will also negatively impact my family by increasing risks to our health, in particular, the likelihood that my daughters may develop lung conditions like asthma. EPA's action harms my family's well-being.

I declare that the foregoing is true and correct.

Executed on: July 13, 2018

Elizabeth Brandt

XII.
Declarations

3. Janet DietzKamei, Center for Biological Diversity member

DECLARATION OF JANET DIETZKAMEI

I, Janet DietzKamei, state and declare as follows:

1. I am over 18 years of age and competent to give this declaration. I have personal knowledge of the following facts, and if called as a witness could and would testify competently to them. As to those matters which reflect an opinion, they reflect my personal opinion and judgment on the matter.

2. I live in Fresno, California, and have lived there since 2003. I am retired from a career as a Federal employee, having worked for the Air Force, the U.S. Department of the Treasury, the Veterans' Administration and the United States Department of Agriculture Forest Service for 25 years.

3. I am deeply concerned and care greatly about the quality of the air in Fresno and the surrounding areas. The poor air quality in my home town, my community and California's air-polluted Central Valley makes me severely ill, and I am keenly interested in doing all I can to improve the air I must breathe. I have been a member of the Center for Biological Diversity (the "Center") since 2017, and I rely upon the Center to represent my interests in protecting our air quality and our environment through the gathering and dissemination of information about air pollution, advocacy to remediate that pollution, and enforcement of our environmental laws. I also have been a member of the Central Valley Air Quality Coalition ("CVAQ") since June, 2016 and have been active with CVAQ since May, 2015. Since December 2015, I have also been active with the Fresno Environmental Reporting Network ("FERN"). CVAQ and FERN are organizations that monitor and report on the pollution in our air and advocate on behalf of myself and other citizens to reduce that pollution.

4. I understand that several years ago, the Environmental Protection Agency issued a rulemaking tightening the emission standards for harmful emissions from the nation's fleet of new heavy duty trucks, and that in this rulemaking, EPA exempted a limited number of so-called "glider trucks" from these pollution limit. EPA restricted

the exemption to 300 trucks per year, per company, for a limited number of years. Glider trucks use rebuilt engines within a newly-built truck body, a practice originally employed only in the few instances when recent-vintage engines were salvaged from wrecked trucks and rebuilt for further use.

5. I also know that in recent days, EPA made a decision stating that it will no longer enforce these 300-per year, per company limits against any company and any of its suppliers, nationwide, through 2019. Because glider truck engines do not comply with the latest emission control standards and are sometimes decades old, they emit enormous amounts of the pollutants that cause me to suffer severe health problems, including particulate matter and ozone-causing pollution. These emissions can be 40 times or more as much as those from heavy-duty trucks that comply with current emission limits. I understand that EPA's decision not to enforce the current limits on these trucks will allow the sale of thousands more of these massively polluting vehicles.

6. I am deeply concerned that this new EPA decision to permit thousands more of these glider trucks to be built will worsen the levels of air pollution that make me ill. More glider vehicles on the road will mean more of that pollution, and I fear that my daily life activities will be even more restricted because I cannot help but breathe the pollution these vehicles cause.

7. Since about 2009, or some six years after moving to Fresno, I have suffered from severe asthma. I had allergies before moving to Fresno in 2003, but never had asthma. Around 2009, I was diagnosed with asthma after having a severe reaction to an unknown trigger pollutant when I was in Virginia on vacation. Within 5 days of the onset of this reaction, I was in the Emergency Room ("ER") with severe bronchitis, exceedingly sick. The consulting doctor was leaning toward admitting me to hospital. I was prescribed inhalers and other asthma relieving medications with the understanding that if I did not improve, I would return to the ER. Until the ER visit in

Virginia, I had not known that I had asthma. After I was diagnosed, I realized that I had been suffering from asthma-related sicknesses since 2006.

8. Air quality in Fresno and the San Joaquin Valley is among the worst in the nation, and the many cars and very large number of trucks on the road in Fresno and in the Valley contribute enormously to the problem. My house is located about 1,400 feet from the busy California Highway 180 freeway as the crow flies. I must monitor both the particulate matter and the ozone in my area on a daily and sometimes hourly basis, and when the air quality for either of these pollutants turns from good to moderate, I am severely affected. When ozone reaches about 69 ppb, I cannot leave the house, and when PM2.5 reaches about 25 micrograms per cubic meter, I cannot leave the house without wearing a mask, and even then I still take the risk of suffering a severe and debilitating asthma attack.

9. I also cannot leave my house any time there is smoke in the air. During the months of November through February, my asthma symptoms are exacerbated by smoky air. To prevent pollutants picked up while outside from coming into our home, my husband and I take off our outside clothing when we come inside and put on clean clothing only worn inside of the house. I have towels on my sofa and chairs which can be washed after visitors sit on our furniture. No one can wear shoes inside of our house. We have a nine-pound dog which lives inside of the house. When he returns from a walk, or goes out for potty breaks, we wash his feet and wipe him with a damp towel as soon as he comes back in.

10. Asthma has made me exceedingly sick. When I suffer an attack, it is difficult just to breathe. A particularly severe attack occurred in the summer of 2012 when I simply went outside to take my dog for a walk. Even though I wore a mask because particulate matter and ozone were in the moderate level, I began having trouble breathing as I could not inhale any air. Feeling faint and lightheaded, I panicked and turned around to go back home. I nearly lost consciousness right there on the road. I believe that only the adrenaline produced by my panic allowed me to

make it back home, where I administered asthma medication and then passed out. The mask only protected me from the PM2.5 particulates, not the ozone, a lesson I learned that day. The entire experience was horrific. Because I never want to experience such an attack again, I now do not leave my home if either the particulate matter or the ozone is not within the "good" range as indicated by real-time monitoring websites. I access those sites with my computer or on the phone, and often again on my phone after leaving my house to make sure the air quality has not changed. I receive alerts on my phone indicating air quality has degraded to air I can not breathe. I depend upon these alerts to keep me safe. I now have my own monitor for PM2.5. I always consult it before I go outside. It gives me "real-time" readings of PM2.5 air quality. This past winter, I did not become air pollution sick due to the readings I used from my personal monitor positioned in my back yard. I have it hanging outside at the same level where I am breathing air.

11. When I begin having an attack, I feel a heaviness in my chest and cannot get air. Often I also start coughing. I feel like a fish out of water, gasping. If I am outside and begin to feel this chest pressure, shortness of breath, and/or coughing, I go into a building, a house, a car, or anywhere else that is enclosed so that I am better sheltered from the polluted air. Other effects of particulate matter and ozone air pollution on my health sometimes include sneezing and sniffling, feeling tired, achy, suffering from headaches, and feeling as if I am about to come down with a cold or flu. I also have a chronic cough when the particulate matter count increases. I love to ride my bike and have been an avid outdoor person for my entire life, but now must spend most of my time inside my house. Because my activity level is so severely restricted, I now also suffer from unhealthy weight gain. To protect myself from pollutants, I always check air quality before going to the gym to do some water aerobics. Sometimes there is an unexpected trigger, and when I do drive to the gym, I sometimes cannot walk from the parking lot to the gym because I begin to feel an asthma attack coming on, and I must drive back home.

12. Many of my friends and acquaintances and their children who live in Fresno or elsewhere in the Central Valley suffer from asthma or other severe health complications because of the air pollution caused by motor vehicles and the many trucks that drive on our highways. I am concerned for them as well and fear for their well-being. During periods when air pollution is above moderate, many asthmatics end up in Central Valley Emergency Rooms and hospitals. I do all I can possibly do to avoid becoming so ill.

13. I travel on many highways in Fresno, the Central Valley and elsewhere, including the following freeways: locally, California State Routes 180, 168, 41, and 99; more distantly, California State Routes 58, 14, 46, 138, 52, 125, 94, 152, 156, 25, 129, 1, 17, 84, 185, 238, 24, 20, 65, 29, 53; U.S. Routes 101, 50; and Interstates 5, 15, 215, 8, 805, 880, 680, 580, 980, 80. I estimate that during some weeks, I drive as many as 340 to 690 miles, though on occasion I will not drive during any given week. Overall, I estimate that I travel about 980 miles per month. I travel to care for relatives and friends, to work with organizations engaged in fighting the pollution that makes me so ill, and to go on business trips with my husband. Because there is little public transportation in my neighborhood, I cannot avoid using these freeways. I encounter numerous trucks during these trips, am often stuck in traffic, and sometimes am stuck immediately behind heavy duty trucks. I always keep my car's air control on so that as little outside air as possible reaches me, but I always fear the heavy-duty truck exhaust will reach me and make me ill.

14. As long as EPA does not enforce the 300 vehicles-per-year, per-manufacturer limit on glider trucks, many more such trucks will be built, sold, and driven on the roads, increasing the pollution so harmful to me many times over. As a result, the air I must breathe will often continue to be too polluted, and I will become sick or be compelled to stay shut into my house. EPA's decision not to enforce present limits on glider truck production therefore causes direct and severe harm to me personally. If more uncontrolled glider trucks are sold, my health will continue to

suffer and get even worse, and my quality of life cannot improve. I suffer emotional distress knowing that even more deadly truck pollution will be emitted from these glider trucks and make me severely ill. But if EPA's decision not to enforce current limits on their production is reversed, particulate matter and ozone pollution will remain lower, days when the air quality remains good will increase, my health will be less affected and I will be able to leave my house more often.

15. EPA announced its non-enforcement decision without providing any notice or opportunity to comment. This lack of notice and comment opportunity deprives me of my procedural rights to be informed about forthcoming agency action so that I can talk about these events and rely on the Center to comment on them, inform others about them, and seek to stop or alter them because they affect me and my friends and neighbors negatively or if they are unlawful. I am active in learning about and disseminating information about Fresno's poor air quality and its causes. When the air quality permits it, I speak about the effects of air pollution on my health at local, district and state-level air quality board meetings and I travel to Sacramento to speak to lawmakers on the subject. I also participate in air quality improving workshops and air quality improving training on subjects such as electric vehicle programs. I am currently attending workshops, participating in, and following Fresno City Plans to develop strategies to reduce city vehicle usage, including promoting and improving city transportation such as bus service. My ability to learn about, speak about, and prevent additional air pollution is impeded by EPA's taking action without providing advance notice and an opportunity to comment, and by failing to provide information about what its actions will do to overall air quality and therefore, to my health and the health of my friends and neighbors. I have been deprived of my ability to obtain information about this action before it took place, and could not rely on the Center to submit comments in opposition. It has also deprived me of the opportunity to communicate with others about this action so it might be stopped. As such, the

decision not to enforce glider truck limits currently in place without notice or comment has harmed my procedural rights as a citizen and a member of the Center.

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16. However, if EPA's decision not to enforce the glider limits is overturned and EPA must provide notice and an opportunity to comment regarding any such decision, the violation of these procedural and informational rights will be effectively resolved.

I declare under penalty of perjury that the foregoing is true and correct and was executed on July 13, 2018 at Fresno, California.

Janet DietzKamei

XII.
Declarations

4. Margaret "Peggy" Evans, Sierra Club member

DECLARATION OF MARGARET EVANS

I, Margaret Evans, declare as follows:

1. My name is Margaret ("Peggy") Evans. I am over 18 years old. The information in this declaration is based on my personal experience and my review of publicly available information.

2. My primary residence is in Cookeville, Tennessee, 38506. My husband and I have lived in Cookeville for over 40 years and at my current address for approximately 20 years. We are both retired.

3. I am a member of the Sierra Club. My husband and I joined the organization in 1994. We joined the Sierra Club because we are concerned about environmental issues, in particular air pollution. The Sierra Club is one of the largest environmental organizations and they work hard to ensure that their members and the public at large have access to clean air.

4. My husband and I live approximately 3 blocks from the Interstate 40 highway that crosses Tennessee. We travel several interstate highways as well as the SR111. In the past twenty years I have seen more and more heavy-duty trucks in these highways. My family and I are constantly exposed to air pollution from these vehicles when we drive these roads to visit each other.

5. I always keep up with the news, especially the local news. From reading the newspapers, I am aware that gliders are trucks with old engines in new bodies that emit many times more nitrogen oxides (NOx) and particulate matter (PM) than modern truck engines, and that these vehicles drive on Tennessee highways. I know that NOx and PM pollution can lead to respiratory illnesses in children and the elderly. Given our home's proximity to the I-40 highway, I constantly worry about the air pollution from the high levels of heavy-duty truck traffic in the area.

6. I understand that the U.S. Environmental Agency (EPA) during the Obama administration required glider manufacturers to meet all applicable pollution requirements for heavy-duty trucks. However, under that regulation, small manufacturers are allowed to produce a maximum of 300 gliders per year in order to prevent economic harm to these manufacturers while ensuring that there is only a limited number of these heavily-polluting trucks on the road. I am also aware that last year the EPA proposed a regulation to cancel all requirements on gliders, and that the Sierra Club submitted comments to oppose this measure.

7. I know that Fitzgerald, the country's largest glider manufacturer, is based in Tennessee and owns several plants in the state. I live about 30 minutes down the I-40 from Fitzgerald's Crossville Plant, and I know that these gliders

travel down the I-40 since it is the only highway near that plant. I also drive regularly on the SR111 to go to visit my children and grandchildren, who live in Chattanooga. I know there are also gliders driving on that road.

8. A few days ago I learned from the local and national newspapers that EPA has decided not to enforce the limit on the amount of gliders that Fitzgerald and other glider manufacturers can produce without appropriate pollution controls. This means that these companies can immediately manufacture as many dirty gliders as they want. It is well known and especially concerning that the information used by the EPA in its earlier effort to roll back the regulations for gliders comes from a Tennessee Tech University study that inaccurately said that gliders are as efficient and clean as trucks with brand new engines. From what I have read, I think the study said this because Fitzgerald paid for it and the researcher was a graduate student with no experience in this subject. The university withdrew the study, so EPA has no basis to allow the proliferation of these dirty trucks. EPA's mission is to protect the environment and public health.

9. By allowing more gliders to be produced and to operate on our highways, EPA is enabling a significant increase in harmful air pollution. I am extremely concerned that this additional pollution will harm my health and that of my grandchildren and my husband.

10. I understand that the Sierra Club is suing the EPA and asking the court to annul or suspend the agency's decision to not enforce the glider requirements. I support the Sierra Club filing this case and representing my interests and those of my family because I am concerned about the huge amount of pollution that gliders are spewing into the air and the further damage they will do if they are not controlled. Gliders pollute much more than brand new truck engines, and this pollution will harm the environment, my health and that of my family, and of the public at large.

I declare under penalty of perjury under the laws of the United States of America that the foregoing is true and correct. Executed in Cookeville, Tennessee, on July 13, 2018.

Margaret "Peggy" Evans

Margaret "Peggy" Evans

XII.
Declarations

5. Andrew Linhardt, Deputy Advocacy Director, Sierra Club Clean Transportation for All Campaign

DECLARATION OF ANDREW LINHARDT

I, Andrew Linhardt, declare as follows:

1. I am the Deputy Advocacy Director of the Sierra Club Clean Transportation for All Campaign. I previously held the positions of Legislative Director for Transportation and Associate Director for Legislative and Administrative Advocacy at Sierra Club.

2. In my current role, I manage and coordinate Sierra Club's policies and efforts on behalf of its members to advocate for greenhouse gas reductions and greater fuel efficiency from our nation's fleet. While at the Sierra Club, I have worked on numerous matters involving the Environmental Protection Agency's (EPA) greenhouse gas regulations and the National Highway Traffic Safety Administration's (NHTSA) corporate average fuel (CAFE) standards for light-duty and heavy-duty vehicles.

3. Sierra Club is a non-profit membership organization incorporated under the laws of the State of California, with its principal place of business in Oakland. Sierra Club's mission is to explore, enjoy and protect the wild places of the Earth; to practice and promote the responsible use of the Earth's resources and ecosystems; to educate and enlist humanity to protect and restore the quality of the natural and human environment; and to use all lawful means to carry out these objectives.

4. Sierra Club has 802,560 members, according to data updated in May, 2018. Sierra Club has members who reside in every state and the District of Columbia. These include members living in close proximity to heavily-traveled highways, including highways with significant heavy-duty truck traffic. They also include members in states and counties that have been designated non-attainment for ozone and particulate matter, pollution that is caused by vehicles, among other sources. These members have a strong interest in protecting human health and the environment from air pollution from vehicles, including gliders, which are at stake in this litigation.

5. As part of carrying out this mission, for decades the Sierra Club has used the traditional tools of advocacy--organizing, lobbying, litigation, and public outreach—to push for policies that decrease air and climate pollution by reducing our nation's dependence on fossil fuels. Sierra Club has a long history of involvement in vehicle regulations aimed at reducing pollution and lessening our dependence on oil as a transportation fuel.

6. Sierra Club has long advocated for climate regulations for vehicles. In 2002, Sierra Club and other organizations filed a lawsuit against EPA requesting the agency to regulate greenhouse gases from motor vehicles. EPA settled that lawsuit and denied the petition in 2003, on the grounds that the agency lacked authority to do so. Sierra Club and numerous states and environmental

organizations challenged that denial, ultimately leading to the Supreme Court's decision in *Massachusetts v. EPA*, which held that greenhouse gases are air pollutants subject to regulation under the Clean Air Act. 549 U.S. 497 (2007).

7. The Supreme Court's ruling resulted in EPA's issuance of a finding that six greenhouse gases endanger the public health and welfare of current and future generations, which forms the basis of the agency's greenhouse gas regulations for light-duty and heavy-duty vehicles. *Endangerment and Cause or Contribute Findings for Greenhouse Gases Under Section 202(a) of the Clean Air Act*, 74 Fed. Reg. 66,496 (Dec. 15, 2009).

8. In 2010, NHTSA and EPA jointly issued CAFE and greenhouse gas emission standards for light-duty vehicles. *Light-Duty Vehicle Greenhouse Gas Emission Standards and Corporate Average Fuel Economy Standards; Final Rule*, 75 Fed. Reg. 25,324 (May 7, 2010). Sierra Club and others submitted comments on the proposed rule and intervened in the industry's lawsuit challenging the standards. *Coalition for Responsible Regulation, Inc. v. EPA*, 684 F.3d 102 (D.C. Cir. 2012), *rev'd on other grounds sub nom. Utility Air Regulatory Group v. EPA*, 134 S. Ct. 2427 (2014). NHTSA and EPA updated these standards in 2012. *2017 and Later Model Year Light-Duty Vehicle Greenhouse Gas Emissions and Corporate Average Fuel Economy Standards*, 77 Fed. Reg. 62,624 (Oct. 15, 2012).

9. In 2011, NHTSA and EPA adopted CAFE and greenhouse gas

standards for heavy-duty trucks, updating these standards in 2016. *Greenhouse Gas Emission Standards and Fuel Efficiency Standards for Medium- and Heavy-Duty Engines and Vehicles; Final Rule*, 76 Fed. Reg. 57,106 (Sep. 15, 2011); *Greenhouse Gas Emissions and Fuel Efficiency Standards for Medium- and Heavy-Duty Engines and Vehicles-Phase 2*, 81 Fed. Reg. 73,478 (Oct. 25, 2016). Sierra Club and others intervened to defend those rules against industry challenges. *Truck Trailer Manufacturers Association v. EPA*, Nos. 16-1430, 16-1447 (D.C. Cir. 2017). Recently, the Sierra Club and its allies challenged EPA's final action entitled *Mid-Term Evaluation of Greenhouse Gas Emissions Standards for Model Year 2022-2025 Light-Duty Vehicles*, 83 Fed. Reg. 16,077 (Apr. 13, 2018), No. 18-1139 (D.C. Cir. 2018).

10. Together with other organizations, the Sierra Club has in the past challenged NHTSA's CAFE standards for light-duty vehicles for failure to comply with the relevant requirements under the Energy Policy and Conservation Act. *Center for Biological Diversity v. National Highway Traffic Safety Administration*, 538 F.3d 1172 (9th Cir. 2008). More recently, the Sierra Club and its allies challenged NHTSA's indefinite delay of a prior rule that adjusted CAFE civil penalties for inflation, a delay that violated the Federal Civil Penalties Inflation Adjustment Act Improvements Act. *Natural Resources Defense Council v. National Highway Traffic Safety Administration*, __ F.3d __, No. 17-2780, 2018

WL 3189321 (2d. Cir. 2018).

11. For years, the Sierra Club has actively participated in the rulemaking and litigation around EPA's National Ambient Air Quality Standards that regulate criteria air pollutants, many of which are emitted by vehicles. These conventional pollutants contribute to the formation of smog and soot, which cause respiratory and heart disease, and even premature death. *See, e.g.*, *American Lung Association v. EPA*, No. 17-1172 (D.C. Cir. 2017).

12. Sierra Club has strongly advocated against EPA's efforts to roll back emission standards for glider vehicles due to the enormous levels of pollution emitted by these vehicles and the resulting impacts on public health. Gliders are heavy-duty trucks that consist of all brand-new components except for the engine and transmission, which come from previously used vehicles.

13. Older engines are much dirtier than newer engines. In the heavy-duty truck standard, EPA stated that emissions of nitrogen oxides (NOx) and particulate matter (PM) of any glider vehicles with pre-2007 engines are at least ten times higher than emissions from trucks with brand new engines. In addition, engines manufactured before 2002, which EPA reported are the majority of engines in gliders currently driving the roads, emit 20 to 40 times more NOx and PM than brand new engines.

14. Until the Obama administration issued its greenhouse gas standards

for heavy-duty trucks, criteria pollutant standards for new motor vehicle engines included a loophole for gliders by subjecting heavy-duty engines to the standards applicable to the engine's year of manufacture, instead of the vehicle's year of manufacture. This loophole allowed manufacturers to install older engines in glider kits and market them as brand new vehicles.

15. Truck manufacturers took advantage of this loophole as heavy-duty truck standards became more stringent. In the heavy-duty truck standard, EPA reported that glider production had grown from a few hundred to thousands of vehicles and, based on comments from industry, including from glider manufacturers, estimated that glider production grew to 10,000 vehicles in 2015 and it could be assumed that, if uncontrolled, manufacturers would produce even more of these vehicles.

16. In Phase 2 of EPA's standards for heavy-duty trucks, EPA decided to close the glider loophole by clarifying that glider vehicles and glider engines are new motor vehicles and new motor engines, respectively, subject to regulation under the Clean Air Act. EPA also clarified that glider kits are new motor vehicles, and these manufacturers are responsible for ensuring that their vehicles comply with the applicable vehicle standards. EPA, however, did not eliminate the loophole entirely, retaining a limited exemption for gliders produced by small manufacturers. Currently, small manufacturers are allowed to produce a maximum

of 300 glider vehicles unless they use engines that comply with the heavy-duty truck standards.

17. In November 2017, EPA published a proposed rule to undo the Obama administration's work to close the glider loophole. EPA offered a new legal interpretation that completely excludes gliders from regulation, in contravention of the Clean Air Act. While EPA's proposed rule has not yet been finalized, the agency is now attempting to circumvent the standards by promising industry that the agency will not enforce them until EPA finalizes its new rule.

18. On July 6, 2018, EPA provided a blanket "no action assurance" applicable to all glider truck manufacturers and their suppliers, effectively inviting manufacturers to violate the annual 300-glider cap while the agency moves to revoke it in a future rule. EPA recognized that this assurance is necessary because small manufacturers, in reliance on the proposed repeal of the glider standards, have reached their calendar year 2018 annual cap under the Phase 2 rule.

19. On July 10, 2018, Sierra Club and its allies submitted to EPA an administrative request to immediately withdraw the agency's decision to cease enforcement of the glider truck requirements. This abdication of the agency's duties is unlawful and extremely harmful to public health. According to EPA, every year of uncontrolled glider production can cause up to 1600 premature deaths from particulate matter alone, as well as cancer and respiratory illnesses

through the life of those vehicles. EPA has not acted on our petition.

20. Sierra Club's instant challenge to EPA's July 6 decision not to enforce its standards for glider vehicles is necessary to avoid immediate harm from the additional pollution that these vehicles are now be able to emit. Gliders are the dirtiest vehicles driving the roads and thus, even a brief period of unregulated glider production would have substantial and irreparable consequences. If successful, our petition will result in a court order overturning EPA's decision not to enforce the standards, which will remove a deadly loophole that would have resulted in far more gliders on the roads and associated air pollution that would harm our members and the public at large.

I declare under penalty of perjury that the foregoing is true and correct to the best of my knowledge and belief. Executed on July 16, 2018.

Andrew Linhardt

XII.
Declarations

6. Dana Lowell, M.J. Bradley & Associates (including Memorandum re: Excess Emissions from Non-Enforcement of EPA Glider Standards ("MJB Report"))

DECLARATION OF DANA M. LOWELL

I, Dana M. Lowell, declare as follows:

1. I am the Senior Vice President & Technical Director of M.J. Bradley & Associates LLC (M.J. Bradley), a strategic environmental consulting firm with offices in Washington, D.C. and Concord, Massachusetts. I have worked in M.J. Bradley's advanced vehicle technology group for over thirteen years, providing strategic analysis, project management, and technical support to mobile source emissions reductions programs. I received my Bachelor of Science degree in Mechanical Engineering from Princeton University, and my Master in Business Administration from the New York University Leonard N. Stern School of Business.

2. I understand that EPA's recent non-enforcement action allows manufacturers and suppliers to exceed limits under current regulations that cap production at 300 uncontrolled gliders per year. I further understand that this EPA action immediately increases allowable production of non-compliant glider vehicles through 2019.

3. In the appended report, I have conducted analysis to estimate the magnitude of excess emissions and associated health impacts that will result from

EPA's decision to decline to enforce the emission standards applicable to heavy-duty "glider" trucks.

4. I used assumptions in U.S. Environmental Protection Agency modeling, an estimated number of available production allowances, and 2017 glider registration data to calculate the annual excess emissions of nitrogen oxides ("NOx") and particulate matter ("PM") caused by EPA's non-enforcement action.

5. The analysis estimates that EPA's decision not to enforce these standards will result in at least 11,190 additional non-compliant glider vehicles being produced and sold in 2018-2019.

6. I used EPA's Motor Vehicle Emission Simulator (MOVES) modeling system to project resultant emissions from these additional glider vehicles. The analysis shows that the estimated number of additional gliders produced and sold in 2018 and 2019 will result in excess emissions of almost 23,000 tons of excess NOx and over 300 tons of excess PM in 2019, compared to an equal number of new trucks with new engines compliant with current emission standards.

7. Over their lifetime, these 11,190 glider trucks are associated with more than 430,000 tons of excess NOx and more than 7,300 tons of excess PM. Based on EPA methodologies for analyzing the health effects of PM 2.5 emissions, the 11,190 additional gliders estimated to be produced and sold in 2018-2019 will

result in \$6.7 - \$14.5 billion in additional health-related damages. This includes an estimated additional 760 – 1,746 premature deaths.

8. The appended report describes these conclusions in greater detail and sets forth the methodologies and information used to arrive at these results.

I declare under penalty of perjury that the foregoing is true and correct.

Dana M. Lowell

Dated: July 13, 2018

MJB & A

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To: Alice Henderson, EDF

From: Dana Lowell, MJB&A

Date: July 16, 2018

Re: **Excess Emissions from Non-Enforcement of EPA Glider Standards**

As requested, MJB&A conducted analysis to estimate the magnitude of excess emissions and associated health impacts that will result from EPA's decision to decline to enforce the emission standards applicable to heavy-duty "glider" trucks. These standards were adopted by EPA in October 2016, as one element of updates to the Code of Federal Regulations, Title 40, Parts 1037 and 1068 (40 CFR 1037, 1068)[1]. These standards, which required that most gliders be equipped with engines compliant with current new engine emission standards, were to be fully implemented as of the 2018 model year. In November 2017, the current administration proposed to repeal these standards, based on a new interpretation that gliders do not constitute "new motor vehicles" within the meaning of the Clean Air Act, and therefore EPA cannot regulate the engines installed in gliders as "new motor vehicle engines".[2]

EPA has not yet finalized that repeal proposal, though on Friday, July 6, 2018, the agency issued a broad-based memorandum indicating it would not enforce the 2016 final rule glider provisions. In particular, the memo stated that:

> *"EPA will exercise its enforcement discretion with respect to the applicability of 40 C.F.R. § 1037.635 to Small Manufacturers that in 2018 and 2019 produce for each of those two years up to the level of their Interim Allowances as was available to them in calendar year 2017 under 40 C.F.R. § 1037.150(1)(3)" and that "EPA will exercise its enforcement discretion with respect to Suppliers that sell glider kits to those Small Manufacturers to which this no action assurance applies."*

EPA likewise indicated that it was planning additional actions to weaken or eliminate glider standards, including "extending the compliance date applicable to Small Manufacturers to December 31, 2019".

Small Manufacturer Interim Allowances available in 2017 were determined by each manufacturer's highest annual production of glider kits and glider vehicles for any year from 2010 to 2014[3]. EPA has not publicly stated the magnitude of these allowances; however, based on actual new glider truck registrations in calendar year 2017

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[1] U.S. Environmental Protection Agency, *Greenhouse Gas Emissions and Fuel Efficiency Standards for Medium- and Heavy-Duty Engines and Vehicles—Phase 2*, Federal Register, Vol. 81, No. 206, pg 73478-74274Tuesday, October 25, 2016.

[2] U.S. Environmental Protection Agency, *Repeal of Emission Requirements for Glider Vehicles, Glider Engines, and Glider Kits,* Federal Register, Vol. 82, No. 220, pg 53442 – 53449, Thursday, November 16, 2017.

[3] All current glider manufacturers qualify as small manufacturers eligible for Interim Allowances, in accordance with the definitions in the regulation.

we estimate that the total number of allowances that EPA will provide to small manufacturers in 2018 and 2019 will be at least 6,595 glider units per year. This would equate to an additional 5,595 gliders per year, above the more limited Small Manufacturer allowances available under the glider provisions included in the October 2016 final rule[4], estimated by EPA at the time to total 1,000 units per year for all manufacturers. For the remaining 6 months of 2018, this would mean, on average, over 930 additional glider sales per month, or about 30 additional glider sales per day.[5]

EPA's blanket decision to cease enforcing the more stringent limits on 2018 -2019 sales of glider trucks with non-compliant engines will mean that a substantial number of newly manufactured cab/chassis will likely enter service in 2018 and 2019 as glider trucks equipped with older, used engines that per EPA's MOVES emissions model[6] emit nitrogen oxides (NOx) at rates twenty-eight times the emission rates of trucks equipped with new, compliant engines, and that emit up to ten times as much particulate matter (PM). Recent testing conducted by EPA shows that real-world emissions from gliders with used engines could be even higher.

Based on the estimated number of allowances that will be available, and recent trends in glider sales, MJB&A projects that EPA's decision not to enforce the glider standards in the 2016 final rule will result in at least 11,190 excess non-compliant gliders[7] being sold in 2018-2019. If EPA extends compliance deadlines and ultimately repeals the glider standards, 50,000 – 100,000 additional non-compliant gliders could be sold through 2025.

See Table 1 for a summary of the projected excess emissions, based on EPA's MOVES model, that will result from these additional gliders with non-compliant engines expected to be sold in 2018 and 2019. As shown, the excess gliders produced in 2018-2019 will emit almost 23,000 tons of excess NOx and over 300 tons of excess PM in 2019. Annual NOx emissions from these glider trucks will peak in 2020 at over 30,000 tons, and annual PM emissions will peak in 2022 at almost 500 tons. In 2025 over 95 percent of these gliders will likely still be on the road and will still be emitting over 24,000 tons excess NOx and over 400 tons excess PM per year.

Some of these glider trucks produced in 2018 – 2019 will likely still be on the road in 2049, and by then their cumulative life-time excess emissions will total more than 430,000 tons NOx and more that 7,300 tons PM.

Based on EPA's analysis of the health effects of $PM_{2.5}$, and $PM_{2.5}$ precursors[8] emitted by onroad vehicles, the life-time excess emissions from a single glider truck with a non-compliant used engine will cause health-related

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[4] For each small manufacturer, in 2018 and later years annual allowances for production of gliders with non-compliant engines was set at the manufacturer's highest annual production between 2010-2014, or 300 glider units per year, which ever was lower.

[5] To the extent there is pent-up demand for gliders, as EPA's no action letter suggests, these averages may underestimate near-term sales impacts.

[6] This is a detailed model, based on years of collected certification and in-use test data, which is used by EPA to estimate emissions from a range of onroad vehicles, both for annual emissions inventory development and for evaluating the effect of regulatory programs. See: U.S. Environmental Protection Agency, *Motor Vehicle Emission Simulator (MOVES),* https://www.epa.gov/moves.

[7] Over and above the estimated 1,000 non-compliant gliders per year allowed under the 2016 final rules.

[8] $PM_{2.5}$ is particulate matter with aerodynamic diameter less than 2.5 microns. Virtually all PM emitted by diesel vehicles is $PM_{2.5}$. $PM_{2.5}$ precursors are substances, including NOx, that contribute to formation of secondary $PM_{2.5}$ in the atmosphere.

damages, including increased mortality and morbidity, with a monetized value of $0.6 - $1.3 million[9]. Over their life-time the estimated 11,190 additional gliders that EPA will now allow to be produced in 2018-2019 will therefore result in $6.7 - $14.5 billion in additional health-related damages[10]. This includes an additional 760 – 1,746 premature deaths.

Table 1 Estimated Excess Emissions from Non-enforcement of Glider Rules in 2018 and 2019

Gliders built in 2018-2019			2018	2019	2020	2025	2035	2045
Additional Gliders on the road [1]			5,595	11,190	11,190	10,910	10,463	10,071
Annual Excess Emissions	NOx	Tons	7,583	22,749	30,250	24,348	10,649	3,804
	PM	Tons	101.7	305.0	423.3	419.1	183.3	65.5
Cumulative Excess Emissions	NOx	thousand tons	7.6	30.3	60.6	197.3	363.2	431.5
	PM	thousand tons	0.10	0.41	0.83	3.10	5.96	7.13

Source: MJB&A analysis

BACKGROUND – GLIDER RULES

Glider trucks are newly manufactured cab/chassis that incorporate used engines rather than new engines. The production and sale of glider trucks was originally allowed under 40 CFR 86.004-40, 1037, and 1068 to accommodate situations where relatively new vehicles were damaged extensively, but without destroying the engine. EPA allowed an owner to purchase a newly manufactured cab/chassis and transfer the old engine to this new vehicle without that engine then having to meet the emission standard for the model year applicable for the new cab/chassis.

As shown in Figure 1, prior to 2010 annual sales of gliders were less than 1,200 vehicles[11]. Between 2009 and 2015 glider sales increased by an average of more than 1,300 per year, reaching over 8,500 in 2015. Glider sales

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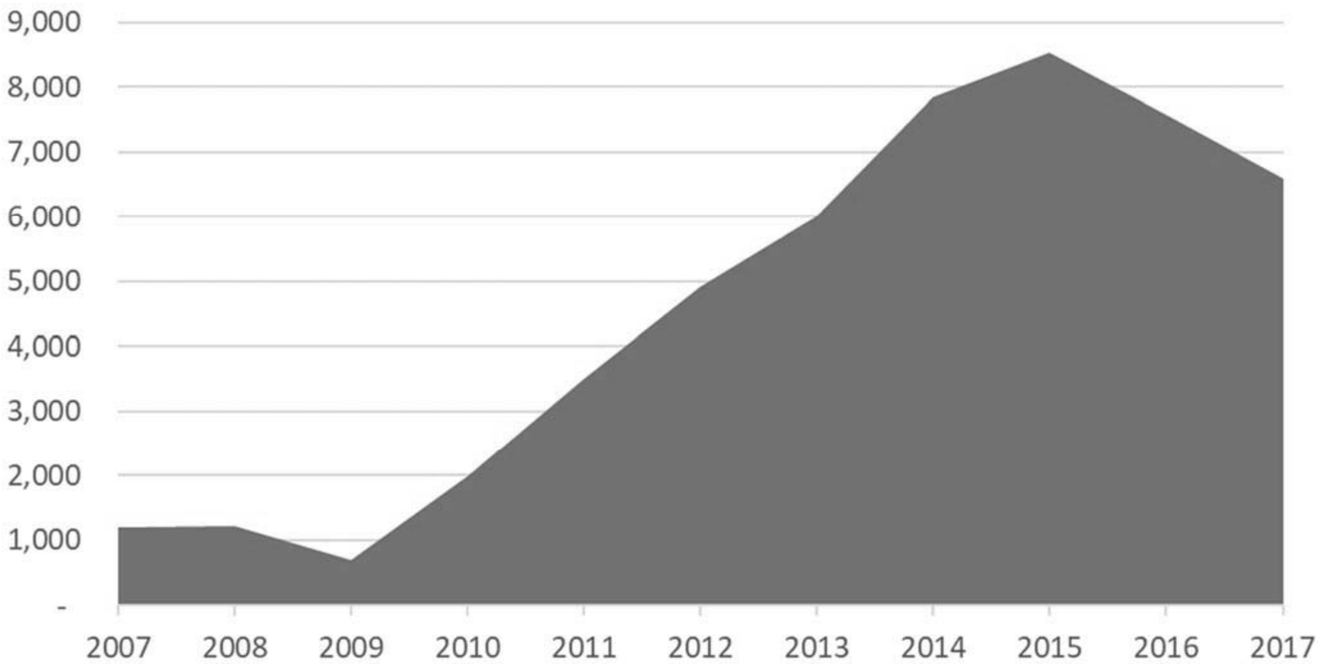
[9] Environmental Defense Fund, et al; *Comments of Environmental Defense Fund, the Environmental Law & Policy Center, and WE ACT for Environmental Justice on the Environmental Protection Agency's Proposed Rule, Repeal of Emission Requirements for Glider Vehicles, Glider Engines, and Glider Kits, 82 Fed. Reg. 53,442 (November 16, 2017), EPA-HQ-OAR-2014-0827*, Appendix B, Potential Emission and Health Impacts of Glider Kits, Table 6. This analysis is based on data from U.S. Environmental Protection Agency, *Technical Support Document, Estimating the Benefit per ton of Reducing PM2.5 Precursors from 17 Sectors*, January 2013.

[10] The range of emission damage estimates derives from two different methodologies for calculating health effects which EPA identified in the scientific literature, as well as the use of two different discount rates (3% and 7%) to calculate the net present value of out-year effects. These values are in 2013 dollars.

[11] Registrations of gliders made with cab/chassis from one major manufacturer, PACCAR, are estimated for the years 2007 – 2014; data on actual registrations was unavailable due to inconsistencies in the way the manufacturer coded the model year in the Vehicle Identification Number of glider kits it sold. Between 2015 and 2017 PACCAR supplied glider kits for 44 percent of the glider trucks registered in those years, and this graph assumes that PACCAR had the same market share in prior years.

fell slightly in 2016 and 2017, likely reflecting the anticipated restrictions that would have been imposed by EPA's 2016 final glider rules, and also mirroring a decline in the over-all heavy-truck market.

Figure 1 Annual U.S. New Glider Registrations, 2007 -2017



Source: IHS/Polk Automotive[12]

Information submitted to EPA as comments in response to their proposed glider rules[13] indicates that most glider trucks sold in the last few years have been put in service with model year 2003, or earlier, engines. These engines are well past their initial emission warranty period and emit NOx at rates twenty-eight times or more the emission

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[12] IHS/Polk Automotive maintains a database of all new vehicle registrations in the U.S each year, which is compiled from data provided by the motor vehicle departments in all 50 states. For each vehicle the database includes information on the model year, vehicle type/configuration, manufacturer, and vehicle owner (entity that registered it). The vehicle information is based on data encoded by the primary manufacturer in the unique Vehicle Identification Number (VIN) assigned to each vehicle. For glider trucks, only the manufacturer of the glider kit (cab/chassis) is encoded. Information about the secondary glider truck manufacturer that purchased the kit, installed a used engine, and sold the final vehicle to a user is not encoded in the VIN. Vehicles are registered by the end-user – the entity that purchased the glider truck from the secondary manufacturer.

[13] EDF et al., *Comment on Environmental Protection Agency's Proposed Rule, Real of Emission Requirements for Glider Vehicles*, at 22 (Jan. 5, 2018), EPA-HQ-OAR-2014-0827-4863; citing Glider Engines, and Glider Kits, Redacted Letter from Charles Moulis to William Charmley, Nov. 15, 2017, EPA-HQ-OAR-2014-0827-2379, https://www.regulations.gov/document?D=EPA-HQ-OAR-2014-0827-2379 ("Nearly all engines for recent glider production are 1998-2002 pre-EGR engines.").

rate of new engines compliant with current EPA new engine emission standards[14]. These older engines also emit ten times or more PM than new engines. Based on the comments received, EPA indicates that virtually all glider trucks are Class 8 (gross vehicle weight rating >33,000 pounds) combination truck-tractors. These vehicles are typically used for both short-haul (regional) and long-haul freight applications. When used for long-haul freight, annual vehicle mileage can exceed 100,000 miles in the first six to eight years of a truck's life.

In response to this recent, significant, increase in annual glider sales EPA included new restrictions on glider production in the 2016 final rule, beginning with the 2017 model year, and phasing into an annual limit of 300 gliders per small manufacturer starting in 2018. EPA estimated that this would result in limiting total glider vehicle sales with non-compliant engines to approximately 1,000 per year in 2018 and later years[15]. The agency noted this was in line with the original intent of allowing used engines to be recycled into new glider vehicles.

METHODOLOGY AND ASSUMPTIONS

To conduct this analysis MJB&A used assumptions for annual vehicle mileage throughout a truck's life, annual vehicle survival rates, and engine emission rates contained in EPA's Motor Vehicle Emission Simulator (MOVES) Model[16], to estimate total annual emissions of NOx and PM each year that a truck is in service. This was done for both Class 8 tractors and Class 8 single-unit trucks.

See Figures 2 and 3 which summarize these estimates for Class 8 tractors. The data shown in Figures 2 and 3 for model year 1998 – 2003 trucks, and 2017 and later trucks, are consistent with assumptions used by EPA, when conducting an analysis of glider emissions in response to comments received on the original proposed glider rule[17]. Annual values for Class 8 single unit trucks follow a similar pattern but are lower in magnitude due to assumed lower annual mileage per vehicle.

As shown, as a group of trucks ages, annual emissions per truck of both NOx and PM decrease, due primarily to lower annual miles driven, but also due to retirement of some of the original trucks in the group. In addition, these graphs clearly illustrate that trucks with older engines (model year 1998 - 2003) have significantly higher emissions each year than trucks with model year 2017 and later engines, which meet current, more stringent EPA new engine emission standards. Over 30-years, a glider truck with a used 1998-2003 model year engine will emit 41.5 tons more NOx and 0.68 tons more PM than a truck with a new, model year 2017 engine.

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[14] This estimate is based on EPA's MOVES emissions model. Recent testing by EPA indicates that real world emissions from glider trucks with used engines could actually be significantly higher.

[15] Greenhouse Gas Emissions and Fuel Efficiency Standards for Medium- and Heavy-Duty Engines and Vehicles— Phase 2, 81 Fed. Reg. 73585 (Oct. 25, 2016) ("EPA believes that its changes will result in the glider market returning to the pre-2007 levels, in which fewer than 1,000 glider vehicles will be produced in most years.").

[16] U.S. Environmental Protection Agency, *Motor Vehicle Emission Simulator (MOVES),* https://www.epa.gov/moves

[17] U.S. Environmental Protection Agency, EPA-420-R-16-901, August 2016, *Greenhouse Gas Emissions and Fuel Efficiency Standards for Medium- and Heavy-Duty Engines and Vehicles -Phase 2 Response to Comments for Joint Rulemaking, Appendix A to Section 14 – Sensitivity Analysis of Glider Impacts.* In their analysis EPA did not estimate emissions from model year 2004 - 2006 trucks.

Figure 2 Projected Annual NOx Emissions, Class 8 Tractors (tons/year/original vehicle)

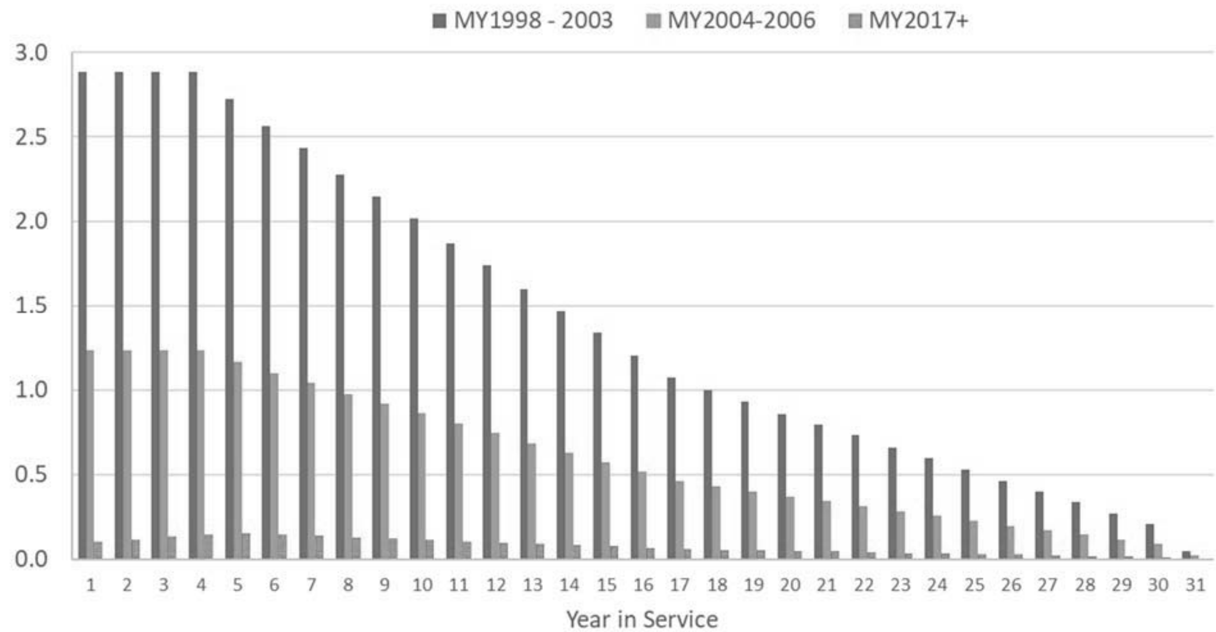
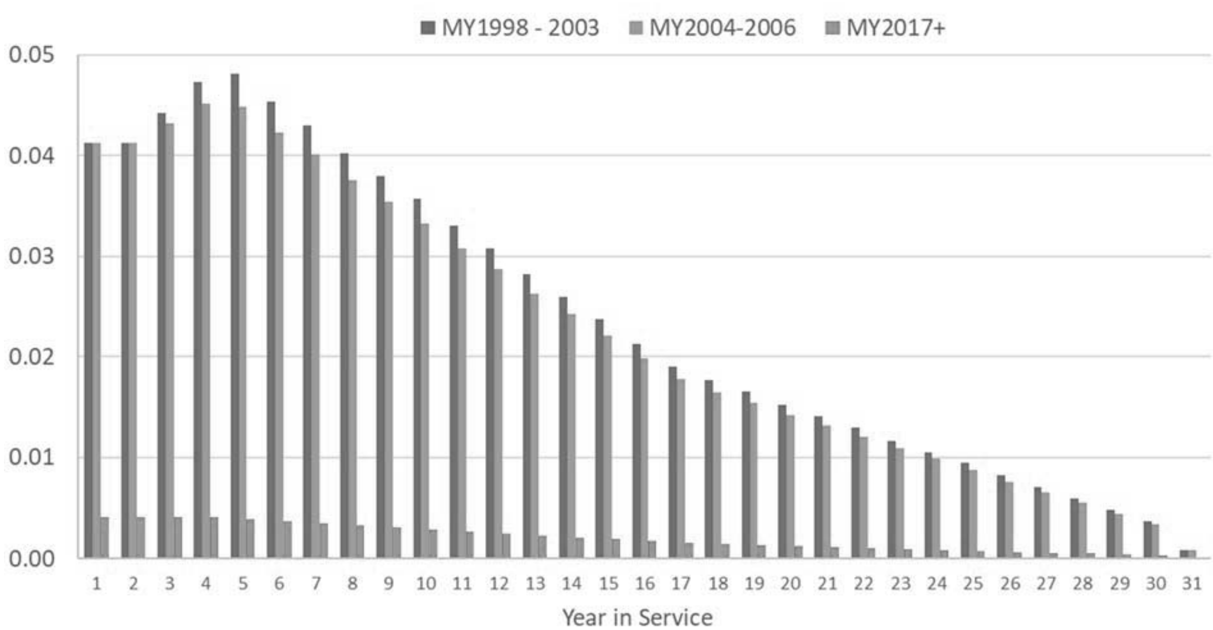


Figure 3 Projected Annual PM Emissions, Class 8 Tractors (tons/year/original vehicle)



Available evidence indicates that most glider vehicles that have entered service in the past 5 years have been equipped with used engines originally manufactured between model year 1998 and 2003. Approximately 1.1 million Class 8 trucks were sold in the U.S. between 1998 and 2003, of which approximately 800,000 were truck-tractors[18]. According to EPA truck survival assumptions, at least 79,000 of these trucks have likely already been retired – the engines from these retired trucks are the source of used engines installed in gliders. Based on EPA's assumed truck survival rates, and projected annual glider sales, there will likely be a sufficient supply of used engines from this group of trucks (model year 1998 – 2003) to supply the glider market through at least 2030, after which the used engines installed in gliders might start to come from trucks originally sold in model years 2004 – 2006. In any event, the used engines installed in glider trucks built in 2018 and 2019 will almost certainly continue to come from this older age group because glider manufacturers will likely continue to install used engines originally manufactured prior to model year 2003 for as long as possible. Engines manufactured beginning in model year 2004 were required to comply with more stringent emission standards which necessitated implementation of exhaust gas recirculation (EGR) to reduce NOx emissions. These technology changes for model year 2004 and later engines increased maintenance requirements and reduced fuel economy compared to earlier model year engines.

For this analysis we assumed that the number of glider trucks produced in both 2018 and 2019 would be equal to the number sold in 2017 (6,595 units each year).[19] This is a conservative estimate as it represents the number of Small Manufacturer Interim Allowances actually used in 2017; under EPA's recently announced non-enforcement action the same number of small manufacturer allowances that were available in 2017 will also be made available in 2018 and 2019.[20]

This will result in at least 13,190 new gliders being put on the road in 2018 and 2019. Under EPA's original 2016 glider rule a more limited small manufacturer exemption was allowed, which EPA estimated at the time to amount to 1,000 allowable units per year with non-compliant engines. As such, EPA's decision not to enforce the 2016 final glider provisions in 2018 and 2019 will likely result in at least 11,190 additional new gliders with used, non-compliant engines entering service.

To calculate emissions from these non-compliant gliders, the number of excess gliders sold each model year (5,595 in 2018 and 5,595 in 2019) was multiplied by the model year 1998 – 2003 annual emissions factors (Figures 2 and 3) for each future year the trucks would be in service. For each calendar year, total non-compliant glider emissions for both model years (2018 and 2019) were then summed. The calculation was then repeated for the same number of "compliant" trucks equipped with model year 2017+ engines. For each calendar year the "excess" emissions that will result from repeal of the glider rules was calculated by subtracting the estimated emissions from compliant trucks from estimated emission from non-compliant trucks.

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[18] Based on annual new truck registrations tracked by IHS/Polk Automotive.

[19] These actual sales figures for 2017 are consistent with, though slightly higher than, EPA's projection of the highest annual sales of gliders in model years 2010-2014. *See* EPA, Greenhouse Gas Emissions and Fuel Efficiency Standards for Medium- and Heavy-Duty Engines and Vehicles - Phase 2 Response to Comments for Joint Rulemaking at 1961 (August, 2016). This could be due both to the fact that actual sales exceeded projections (as the data suggests) and because the 2017 allowable cap is very likely higher than the sales in any individual year between 2010 and 2014.

[20] It is possible that not all allowances *available* in 2017 were used, so the available allowances in 2018 and 2019 under EPA's non-enforcement action may be higher than 6,595 units.

To calculate the monetized value of negative health effects associated with these excess NOx and PM emissions, we used per-truck estimates developed by the Environmental Defense Fund[21], using the same incidence-per-ton methodology that was previously employed by EPA to evaluate the effect of limiting glider truck sales[22]. Both the EDF and EPA analyses relied on prior work done by EPA to estimate the health effects of directly emitted particulate matter, as well as the health effects of secondary PM formed in the atmosphere due to emission of PM precursors, including NOx[23]. This prior work by EPA indicates that emissions from onroad vehicles in 2020 will produce negative health effects with a monetized value of $7,000 - $17,000 per ton of NOx emitted and $350,000 - $860,000 per ton of PM emitted (2010 dollars). The estimated monetized damages of both PM and NOx emissions (2010 $/ton) increase slightly for emissions in later years.

Using these $/ton values, and estimates of annual excess emission per glider, the EDF analysis estimates that life-time excess emissions from 1,000 glider trucks equipped with used, non-compliant engines, will produce $0.6 - $1.3 billion in emission damages (2013$), or $0.6 - $1.3 million in damages per glider truck[24]. The estimated health effects include 68 – 156 premature deaths per 1,000 glider trucks[25]. As noted above, for the remainder of 2018, on average, EPA's non-enforcement decision will likely result in 30 additional glider sales per day. At these average values, each day's worth of sales, over their lifetime, would result in between 2.0 and 4.7 premature mortalities.

EDF also used EPA's COBRA model to do a more detailed analysis of the health effects of excess glider emissions[26]. The COBRA model is a detailed model that can be used to calculate health effects from emission

[21] Environmental Defense Fund, et al; *Comments of Environmental Defense Fund, the Environmental Law & Policy Center, and WE ACT for Environmental Justice on the Environmental Protection Agency's Proposed Rule, Repeal of Emission Requirements for Glider Vehicles, Glider Engines, and Glider Kits, 82 Fed. Reg. 53,442 (November 16, 2017), EPA-HQ-OAR-2014-0827*, Appendix B, Potential Emission and Health Impacts of Glider Kits, Table 6.

[22] U.S. Environmental Protection Agency, EPA-420-R-16-901, August 2016, *Greenhouse Gas Emissions and Fuel Efficiency Standards for Medium- and Heavy-Duty Engines and Vehicles -Phase 2 Response to Comments for Joint Rulemaking, Appendix A to Section 14 – Sensitivity Analysis of Glider Impacts.*

[23] U.S. Environmental Protection Agency, *Technical Support Document, Estimating the Benefit per ton of Reducing PM2.5 Precursors from 17 Sectors*, January 2013.

[24] This is consistent with, but slightly higher than EPA's estimate of $0.3 - $1.1 million in life-time emission damages per glider truck. See footnote 22.

[25] Environmental Defense Fund, et al; *Comments of Environmental Defense Fund, the Environmental Law & Policy Center, and WE ACT for Environmental Justice on the Environmental Protection Agency's Proposed Rule, Repeal of Emission Requirements for Glider Vehicles, Glider Engines, and Glider Kits, 82 Fed. Reg. 53,442 (November 16, 2017), EPA-HQ-OAR-2014-0827*, Appendix B, Potential Emission and Health Impacts of Glider Kits, Table 6.

[26] COBRA was developed specifically for use in local and state assessments of energy and environmental programs. One relevant aspect of COBRA is that on-road mobile sources are broken down into several categories, including heavy-duty diesel vehicles. See User's Manual for the Co-Benefits Risk Assessment Health Impacts Screening and Mapping Tool

changes at the county, state, or national level. EDF's estimates of total monetized health effects from the COBRA model were consistent with their results using the incidence-per-ton methodology[27].

(COBRA), Version: 3.0, U.S. EPA (Sept. 2017). https://www.epa.gov/statelocalenergy/co-benefits-risk-assessment-cobra-health-impacts-screening-and-mapping-tool.

[27] Environmental Defense Fund, et al; *Comments of Environmental Defense Fund, the Environmental Law & Policy Center, and WE ACT for Environmental Justice on the Environmental Protection Agency's Proposed Rule, Repeal of Emission Requirements for Glider Vehicles, Glider Engines, and Glider Kits, 82 Fed. Reg. 53,442 (November 16, 2017), EPA-HQ-OAR-2014-0827*, Appendix B, Potential Emission and Health Impacts of Glider Kits, Tables 7 and 8.

MJB & A M.J. Bradley & Associates LLC

Dana M. Lowell
Senior Vice President & Technical Director
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Dana has worked in MJB&A's advanced vehicle technology group since 2004, providing strategic analysis, project management, and technical support to mobile source emissions reduction programs. His mobile source project work includes evaluation and implementation of advanced diesel emissions controls, alternative fuels, and advanced hybrid and fuel cell electric drives, as well as development and implementation of diesel emissions testing programs for a range of onroad and nonroad heavy-duty vehicle types. Dana brings to clients a wealth of practical knowledge and experience, the real-world perspective of a major fleet operator, and a proven track record in technology implementation.

Dana has 25 years professional experience in the transportation and government sectors. Prior to joining MJB&A, Dana spent seven years as the Assistant Chief Maintenance Officer for Research & Development at MTA New York City Transit's Department of Buses. In his role with NYC Transit, Dana was responsible for both evaluation and implementation of clean fuel technology programs, including technology and vehicle testing, emissions testing and fleet emissions modeling, component/vehicle specification, maintenance program analysis, applications engineering support, financial analysis, budget development and planning, procurement support, and project management. Under his leadership, NYC Transit developed and executed an aggressive program to implement new technologies fleet-wide, resulting in the creation of NYC Transit's Clean Fuel Bus Program to reduce exhaust emissions from the fleet of 4,500 fixed-route transit buses.

A recognized electric drive and clean fuel expert within transit, Dana has made numerous presentations at industry conferences and workshops sponsored by APTA, TRB, SAE, US EPA, the Canadian Urban Transit Association, the Electric Power Research Institute, the National Parks Service and the World Bank. He has also served on advisory committees for the Harvard Center for Risk Analysis and the US EPA's Environmental Technology Verification Program.

Areas of Expertise

- Advanced vehicle emissions reduction technologies
- Vehicle technology development and deployment
- Transit maintenance management
- Vehicle emissions testing
- Diesel inspection and maintenance programs
- Transit vehicle specification and procurement support
- Life cycle cost modeling and financial analysis
- Project management

Representative MJB&A Projects

- New York City E3 Electric Truck Demonstration Project
- New York EV Charging Infrastructure Roadmap
- TransLink Low Carbon Fleet Plan

- NRDC State-Level Plug-in Electric Vehicle Cost-Benefit Analysis
- Ceres Plug-in Vehicle Charging Infrastructure Analysis
- TCI Northeast Charging Infrastructure Gap Analysis
- Environmental Defense Pipeline Blowdown Emissions and Mitigation Options
- Milwaukee County Transit Alternative Fuel Analysis
- TransLink – Alternative Fuel Transit Options and Modeling Tool
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- City of Pittsburgh Fleet Sustainability Analysis
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- New York City Marine Ferry Emissions Test Program
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- Federal Motor Carrier Safety Administration, Recommended Updates to Safety Regulations to Accommodate Electric Drive Vehicles
- Refinery Gas Engine Test Program
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- Port Authority of Allegheny County Bus Fleet Emissions Analysis
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- Environmental Defense Fund, Policy Options to Reduce Fugitive Emissions from Natural Gas Production Facilities
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- Clean Air Task Force, Diesel Emissions Reduction Policy Toolkits
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- American Bus Association, Comparison of Coach Bus Service to Amtrak and to the Essential Air Service Program
- ICCT, Policy Options to Address Urban Off-Cycle NOx Emissions from Euro IV/V Trucks
- Chelsea Collaborative, TRU Electrification at New England Produce Center
- Volpe Transportation Center, Fuel Cell Bus Life Cycle Cost Model
- Volpe Transportation Center, Fuel Cell Bus Maintenance Manual & Training Program
- New York Power Authority, Green Fleet Options Analysis
- Clean Air Task Force, Technical Support for Diesel Emission Reduction Policy Development
- Great Lakes Towing, Emissions Testing of SCR-equipped Marine Power Barge
- Conservation Law Foundation, Review of Massachusetts Policies to Reduce GHG from the Transportation Sector
- ICCT, Support for Heavy-Duty Vehicle Fuel Economy/GHG Regulation
- American Lung Association, Technical Support for Energy Policy Development
- CSX, Gen-set Locomotive Emissions Testing
- Keyspan Energy Delivery, Current and Proposed Transportation Technology Review
- Environment Canada, Oil Sands Sector Emission Reduction Feasibility Study
- Translink/GVTA, Bus Technology Demonstration Program, Phase 1, 2, 3 & 4
- Massachusetts Bay Transportation Authority (MBTA), In-service CNG Bus Test Program
- MBTA, Development of an Enhanced Bus Emissions Monitoring and Control Program
- American Bus Association, Transit Modes & GHG Offset Analysis
- Nicholas Institute, BEST BUS Life Cycle Cost and Emissions Model
- PANYNJ, Brooklyn Cruise Terminal Shore Power Feasibility Study
- Massachusetts Department of Environmental Protection, Diesel Engine Retrofits in the Construction Industry: A How to Guide
- STAPPA/ALAPCO, Guidance for the Control of Fine Particulate Matter Emissions from Industry Sectors
- ESP, U.S./Mexican Border Remote Sensing Emissions Testing Project
- Environmental Defense, New York City Idling Emissions Calculator
- NRDC, MTA New York City Transit Bus Fleet Emissions Analysis
- NESCAUM, Region 1 and Region 2 Marine Engine Repower Project
- Northeast Utility Truck Retrofit Program

Prior Work Experience

July1996 – May 2004	MTA New York City Transit, Department of Buses *Assistant Chief Maintenance Officer, Research & Development*
March 1993 – June 1996	MTA New York City Transit, Dept. of Capital Programs *Manager of Capital Investment Analysis*
Feb 1990 - Feb 1993	City of New York, Office of Management and Budget *Supervising Project Manager, Value Engineering*
Sept 1985 – Sept 1989	United States Army, 299th Engineer Battalion *Battalion Adjutant; Combat Engineer Platoon Leader*

Education

Leonard N. Stern School of Business, New York University, New York, NY

Masters of Business Administration; co-major in Management and Operations Management, 1995
Mayor's Graduate Scholarship; Dean's Award for Academic Excellence

Princeton University, Princeton, NJ

Bachelor of Science in Mechanical Engineering, 1985
Summa Cum Laude; Phi Beta Kappa; Tau Beta Pi
Four-year R.O.T.C. scholarship; Distinguished Military Graduate

Professional Activities

- NESCAUM/MassDEP training on short-lived climate forcers, 2010
- Massachusetts Department of Environmental Protection and MASS Highway diesel retrofit training, 2008
- Chair of Hybrid Bus Working Group, Electric Bus Subcommittee; American Public Transit Association, September 1999 – May 2003
- Member, Technical Advisory Panel for Project C-10 - Transit Bus Technology Related Research; Transit Cooperative Research Program
- Member, Technical Council; Transit Standards Consortium, November 2000 – December 2002
- Member, Technical Screening Committee, FY 2000 Research Program; Transportation Research Board
- Organizer and Session Chair, SAE TOPTEC: Hybrid Electric Vehicles in the Bus & Truck Markets; SAE International, New York, NY, May 2000

- Panelist, Alternative Fuels CUTRcast web-panel session; Center for Urban Transportation Research, July 2000; www.nctr.usf.edu/netcast/altfuels.htm
- Member, Technical Review Panel; U.S. Environmental Protection Agency Environmental Technology Verification Program, November 2000
- Member, Advisory Panel on Alternative Propulsion Technologies; Harvard Center for Risk Analysis, October 1999
- Trainer on alternative fuel technologies; National Park Service Training Session on Alternative Transportation Systems, Philadelphia, PA, November 1999
- Member, Peer Review Panel, South Boston Piers Area Transit Way, Massachusetts Bay Transportation Authority, Boston, MA
- Member, Clean Propulsion & Support Technology Committee, American Public Transportation Association

Conference Presentations

- International Association of Ports and Harbors Conference, IAPH 2013
- ICCT International Workshop on Reducing Air Emissions from Shipping, Shanghai, China, 2012
- IUAPPA, World Clean Air Congress, 2010
- Transportation Research Board Annual Meeting, 2006
- World Resources Institute/USAID Workshop on Coupling GHG Reductions with Transport & Local Emissions Management, 2005
- World Bank Training Session on Diesel Pollution, 2004
- World Bank Clean Air Initiative – Diesel Days, Washington DC, January 2003
- Philadelphia Diesel Difference Conference, Philadelphia, PA, May 2003
- Diesel Engine Emissions Reduction (DEER) Conference, US Department of Energy, Newport, RI, August 2003
- EPA-NESCAUM Diesel Retrofit Workshop, New York, NY, October 2003
- SAE Truck and Bus Meeting, November, 2003
- Better Air Quality for Asia Workshop (BAQ 2003), World Bank, Manila, Philippines, December 2003 – video presentation
- Transportation Research Board, 2002 Annual meeting, January 2002
- APTA 2002 Bus & ParaTransit Conference, American Public Transit Association, May 2002
- EESI/NESEA Congressional Briefing on Cleaner Transportation Technologies, Washington, DC, May 2002
- APTA 2001 Bus & ParaTransit Conference, American Public Transit Association, May 2001
- CUTA Annual Conference, Canadian Urban Transportation Association, June 2001

- World Bank Clean Air Initiative Workshop for Lima and Callao, Lima, Peru, July 2001
- World Bus and Clean Fuel Expo 2001, August 2001
- North East Sustainable Energy Association (NESEA), Energizing Schools 2001 Conference, October 2001
- SAE Truck and Bus Meeting, November, 2001
- Transportation Research Board, 2000 Annual meeting, January 2000
- APTA 2000 Bus & ParaTransit Conference, American Public Transit Association, May 2000
- Electric Bus Users Group Workshop, Electric Power Research Institute, March 2000
- Diesel Emissions Control Retrofit Workshop, Corning Inc., March 2000
- Board of Directors Alternative Fuels Workshop, Washington Metropolitan Area Transit Authority, July 2000
- SAE Hybrid Electric Vehicles TOPTEC, May 1999
- Bus Technology & Management Conference, American Public Transit Association, May 1998
- NAEVI 98, North American EV & Infrastructure Conference and Exposition, December 1998

Publications

- Moynihan, P, Danos, T, Seamonds, D and Lowell, D, "Evaluation of Exhaust Emissions from Two Repowered Passenger Ferries Equipped with Oxidation Catalyst After-Treatment" submitted to Rolls-Royce Marine North America, Inc. for the NYSERDA NYC Private Ferry Fleet Emissions Reduction Program – Phase V, December 2014
- Lowell, D, "Electric Drive Vehicle Systems, Draft Final Report" Federal Motor Carrier Safety Administration, July 2014
- Lowell, D., Seamonds, D., "Coming Soon To a Fleet Near You: EPA/NHTSA Fuel Efficiency and GHG Standards For Medium- and Heavy-Duty Trucks", Environmental Energy Insights, May 2014
- Lowell, D., "Short-term Climate Impact of Diesel Emission Reduction Projects", Clean Air Task Force, December 2013
- Lowell, D., "Comparison of Modern CNG, Diesel and Diesel Hybrid-Electric Transit Buses: Efficiency & Environmental Performance", November 2013
- Lowell, D., "Port Authority of Allegheny County Bus Fleet Emissions 2005 – 2019", Pittsburgh Foundation, October 2013
- Lowell, D., Seamonds, D., "New York City Commercial Refuse Truck Age-out Analysis", Environmental Defense Fund and New York City Business Integrity Commission, September 2013
- Wang, H., Lutsey, N., Lowell, D., "Consideration of the Lifecycle Greenhouse Gas Benefit from Liquefied Natural Gas as an Alternative Marine Fuel", submitted to International Maritime

Organization, Sub-committee on Bulk Liquids and Gas by Institute of Marine Engineering, Science and Technology (IMarEST), October 2013

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- Whitman, A., Lowell, D., Balon, T., "Electric Vehicle Grid Integration in the U.S., Europe, and China: Challenges and Choices for Electricity and Transportation Policy", International Council on Clean Transportation and Regulatory Assistance Project, July 2013
- Lowell, D. and Seamonds, D., "Supporting Passenger Mobility and Choice by Breaking Modal Stovepipes: Comparing Amtrak and Motor Coach Service", July 2013, American Bus Association Foundation
- Sharpe, B., Clark, N. and Lowell, D., "Trailer Technologies for increased heavy-duty vehicle efficiency: technical, market, and policy considerations", White Paper, International Council on Clean Transportation, June 2013
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XII.
Declarations

7. Dennis Lynch, Sierra Club member

DECLARATION OF DENNIS LYNCH

I, Dennis Lynch, declare as follows:

1. I am a member of the Sierra Club, the Transportation Chair at the Sierra Club Tennessee Chapter, and the Chair of the Sierra Club Chickasaw Group since 2012. I am also a member of the volunteer committee of the Sierra Club National Clean Transportation for All Campaign.

2. As Transportation Chair, I represent the Sierra Club Tennessee Chapter in several committees focused on local transportation issues, including the Memphis Transit Coalition (of which I am a founding member), the Pedestrian Advisory Council, and the Memphis Area Coalition for Citizens with Disabilities. As Chair of the Chickasaw Group, which is the West Tennessee section of the Chapter, I help further our efforts to expand clean energy and demand-side energy efficiency, electric vehicles, parks, and other public spaces. I contribute ideas and coordinate the Chapter's policy positions, and often participate in public hearings and submit comments on local transportation-related development proposals.

3. I have a strong background on transportation issues. I hold a Bachelor of Science in Mechanical Engineering and a Master of Science in Civil Engineering, both from the Massachusetts Institute of Technology. After I completed my graduate education, I worked on transportation planning

issues at a regional planning agency in Boston, Massachusetts for several years.

4. Since 1978, I live in Memphis, where I relocated to work for Federal Express (now FedEx) for more than two decades. Currently, as a full-time volunteer with the Sierra Club, I get to apply my deep expertise on transportation issues while focusing on the needs of the community.

5. I have been concerned about diesel pollution for many years. Diesel-powered vehicles and engines are the principal source of nitrogen oxides (NOx) and particulate matter (PM) emissions from the U.S. transportation sector. PM pollution causes respiratory and heart disease, and even premature death. NOx contributes to the formation of ground level ozone, which causes asthma and other respiratory conditions.

6. I believe that the Sierra Club's work to clean up our vehicle fleet is critical to improve air quality. In this respect, I have led the Sierra Club's advocacy efforts in Tennessee regarding the use of Volkswagen (VW) Environmental Mitigation Trust funds for the purpose of reducing NOx emissions in the state. Volkswagen admitted to the installation of defeat devices on their diesel cars sold in the U.S., which resulted in misleading NOx emissions statistics that tested much lower than the cars' actual emissions in normal operation. Volkswagen is required to pay multiple types of penalties as a

result. One of those penalties is to provide $2.9 billion to the Environmental Mitigation Trust, $45.8 million of which is allocated to Tennessee. I assisted the Sierra Club in developing its recommendation that the state of Tennessee should allocate these funds specifically to the expansion of electric vehicle charging infrastructure as well as to electric buses (transit, school, and shuttle) and garbage trucks in the state.

7. Heavy-duty trucks are an even larger contributor to NOx pollution in the state than passenger cars, and glider vehicles are the worst emitters among heavy-duty trucks. I understand that gliders sell for about $20,000 less than heavy-duty trucks with brand-new engines, and that they have quickly proliferated in recent years. In EPA's heavy-duty truck regulation, the agency documented, based on public comments, that glider production reached 10,000 vehicles per year in 2015.

8. Gliders are driving on the I-40 highway, which is a large freight pathway and an important east-west route in the United States. I drive the I-40 from Memphis to Nashville about twice a month and see numerous heavy-duty trucks driving these roads at all times. Many of these trucks must be gliders given that Fitzgerald Glider Kits, the largest manufacturer of these vehicles with over 40 percent market share nationally, is located in the state. Fitzgerald's Crossville Plant is in fact adjacent to the I-40. Gliders are also

driving on other Interstates which pass through TN- I-24, I-75, I-65, I-55, and I-81. I also drive on these highways, and I am constantly exposed to the high levels of pollution emitted from these vehicles.

9. The amount of pollution emitted by these vehicles is enormous. In the heavy-duty truck standard, EPA explained that NOx and PM emissions of any glider vehicles using pre-2007 engines are at least ten times higher than emissions from equivalent vehicles being produced with brand new engines. Worse still, engines manufactured before 2002—which according to the EPA are the majority of engines in today's gliders—emit 20 to 40 times more NOx and PM than brand new engines. Experts estimated that the resulting emissions from one year of glider sales is 13 times what the impact of the VW fraud would have been if EPA and the California Air Resources Board had not stopped this practice and all 482,000 VW diesel cars with defeat devices sold in the country were driving the roads. The rollback of glider requirements would provide incentives for increased production, affecting public health and offsetting the benefits of the VW settlement fund and other regulatory efforts to reduce NOx emissions in the state.

10. In the heavy-duty truck regulation EPA estimated that, in 2017, the amount of PM from 10,000 gliders sold per year could cause as much as 1,600 premature deaths over the lifetime of those trucks. The agency also

estimated that three additional model years of uncontrolled glider production would result in up to 6,400 premature deaths, incremental to the 2017 premature mortalities. These estimates are conservative for two reasons. First, it is possible to assume that glider sales in fact exceed 10,000 per year, as documented by heavy-duty truck manufacturers (including glider manufacturers) in comments to the proposed heavy-duty truck standard. Second, EPA considered only fine particulate exposures and did not include additional cancers and mortalities resulting from exposure to diesel exhaust and ground level ozone.

11. I have been paying close attention to the EPA's effort to rollback existing standards for glider vehicles, which require gliders to meet modern pollution control regulations for trucks with newer engines (with some exceptions, as I explain below). The news that Tennessee Technological University published a study that concluded that gliders performed equally as well or even better than heavy-duty trucks with newer engines created a great controversy in the state and inside the university itself. The study was sponsored by Fitzgerald, and it provided a basis for the EPA's proposal to repeal the glider standard last year. The University subsequently disavowed the study after concerns about its methodology and accuracy.

12. Glider manufacturers like Fitzgerald claim that modern pollution control requirements on their vehicles will cripple their business. Over the years, I have seen similar claims from automobile manufacturers when facing regulatory requirements, such as the bumper standard or airbag regulations. When faced with these requirements, industry complained that those regulations would result in massive compliance costs and increases in car prices, but at the end automakers implemented these requirements at reasonable cost. Glider requirements are similar—to enable mass production, glider manufacturers will have to install new engines in glider kits. Environmental requirements will not cripple the glider industry. Unfortunately, small glider manufacturers can produce a maximum of 300 gliders that do not meet the heavy-duty truck standards each year. Just like with bumpers and airbags, the industry must and will find a way to meet environmental requirements cost-effectively.

13. I know that, on July 6, the EPA issued a decision to stop enforcement of the 300-glider cap on glider manufacturers and their suppliers. I became extremely concerned about the implications of this decision and have conferred with my colleagues at the Chapter and at Sierra Club National about the need for immediate action. I support Sierra Club's filing of a petition for review and a motion to vacate or stay the agency's decision. If

Sierra Club is successful, gliders will continue to be required to meet modern emission standards for heavy-duty trucks and manufacturers will not be able to exceed the 300-limit cap, in turn avoiding irreparable injury on myself, our members, Tennessee's residents, and the public at large from additional pollution on our highways.

I declare under penalty of perjury under the laws of the United States of America that the foregoing is true and correct. Executed in Memphis, Tennessee, on July 16, 2018.

Dennis M. Lynch

XII.
Declarations

8. Jim Maddox, President of Tri-State Truck Center

DECLARATION OF JIM MADDOX

I, Jim Maddox, declare as follows:

1. I am the President of Tri-State Truck Center, a new and used heavy-duty truck dealership headquartered in Memphis, Tennessee with nine locations across Arkansas, Mississippi, Missouri, and Tennessee.

2. My grandfather founded the company in 1945, and I have been working at the company since 1972. My children work at the business as well, so we are now a four-generation family of truck dealers.

3. I am a five-time Mack Truck North American Dealer of the Year. Through our local dealerships, Tri-State Truck Center is a member of the Tennessee, Arkansas, Mississippi, and Missouri state trucking associations.

4. Tri-State Truck Center primarily sells, leases and services Class 8 diesel trucks. We sell heavy-duty Mack and Volvo daycab and sleeper tractor units for use with box vans, as well as concrete and dump trucks. Across all our locations, Tri-State sells about 1,500 new freight trucks annually, for around $125,000 each. In addition to sales, providing maintenance and repair services to fleets and drivers is a big part of our business. Our customers represent all types of truck users. We sell to small fleets with five trucks, large customers with fleets of 6,000 trucks, and everyone in between.

5. We have about 380 employees, and roughly 250 of them work on direct maintenance, either in parts or in service. Our dealerships create long-term job opportunities in rural areas, and our employees typically earn a salary of between $50,000 and $125,000 a year. Our staff typically live within 20 to 30 miles of the dealership where they work. We know that our company is only as good as our employees, and we're very proud to have numerous employees who have been with the company for 20, 30, or even 40 years.

6. Over my decades in the heavy-duty diesel truck business, I have seen vehicles improve dramatically as advancing technology has allowed for better pollution controls. Back when I started working in the heavy-duty vehicle industry, I remember times working in the repair shop in the winter when the garage door was closed, and you couldn't see from one side of the shop to the other because of all the diesel exhaust. The other mechanics and I would be working in the shop, running the engines, and inhaling the diesel exhaust. When I got home, sometimes I would cough up black matter.

7. Today, our repair shops are as clean as a pin and the ceilings are white. The exhaust coming out of our trucks is much cleaner than the emissions from freight trucks manufactured even 20 years ago. Heavy-duty diesel engines and powertrains have been constantly improving as the Environmental Protection Agency (EPA) pollution limits get tougher and technology improves, with engine

and vehicle manufacturers frequently updating their engines with new fuel systems and other emission control technologies.

8. Freight truck bodies don't change as often as they do in the light-duty car market—it is not unusual for a truck model to last 12-15 years—but the engine and powertrain improve every year as technology advances. Manufacturers have implemented many advancements in heavy-duty diesel engines over the last ten years. In particular, after EPA heavy-duty truck pollution standards got significantly tougher in 2010, engine manufacturers have had eight years to work with and refine new emission control technologies, such that these new, much cleaner engines work great and are very reliable.

9. I understand that EPA's *Greenhouse Gas Emissions and Fuel Efficiency Standards for Medium- and Heavy-Duty Engines and Vehicles—Phase 2*, 81 Fed. Reg. 73478 (Oct. 25, 2016), requires that new heavy-duty "glider" vehicles comply with emissions standards for new heavy-duty trucks, with flexibilities for small businesses. I understand that EPA's recent memorandum, *Conditional No Action Assurance Regarding Small Manufacturers of Glider Vehicles* (July 6, 2018), assures glider manufacturers and suppliers that EPA will not enforce these existing pollution standards for glider trucks.

10. Because EPA's non-enforcement of the glider vehicle regulations means that there is no longer a level playing field across the heavy-duty vehicles

market, I am concerned that EPA's action will harm my business and the employees we support.

11. Glider vehicles are heavy-duty diesel trucks manufactured by installing an old, remanufactured engine and powertrain into a new truck body. The practice of building glider vehicles originated as a means of salvaging usable engines from otherwise unrecoverable trucks. This was historically done on a small scale. However, as EPA's more protective heavy-duty emission standards came into effect during 2007-2010, the glider vehicle market began a rapid expansion. Glider manufacturers figured out that there was a "loophole" to the emission standards—by remanufacturing old engines and installing them in new truck bodies, they could build and sell new trucks that didn't use modern pollution controls.

12. Glider vehicles enable buyers to avoid emissions standards, numerous safety features, and in some cases the 12% Federal Excise Tax used to maintain our nation's highways.

13. In particular, from numerous conversations with my customers and others in the industry, I understand that some customers have recently purchased glider trucks because they do not create an electronic record ("e-log") of their hours of operation. Without these e-logs, it is difficult to ensure compliance a new safety requirement that caps the number of hours that a trucker may drive before

taking a break.[1] The Federal Motor Carrier Safety Administration projected that this rule, which went into effect on January 1, 2018, would avoid at least 500 crashes each year.[2] Glider vehicles—because they use remanufactured, old engines—are not able to create e-logs and therefore, under the regulation, are exempt from the requirement to comply using e-logs.[3] Instead they are allowed to comply through paper logs of the truck's hours of operation, which are less reliable. In contrast, the addition of pollution controls to modern engines (among other developments) made these engines far more sophisticated and complex, such that they include small computers, called electronic control modules. These modules make it possible to capture engine use data. Under the new rule, truck owners install a third-party device that creates e-logs of precisely when an engine has been running that cannot be altered. Accordingly, because they support the use of e-logs, modern engines ensure compliance with these federal safety standards—whereas glider trucks with older engines do not.

14. Sales of glider trucks harm freight truck dealers like myself, who choose to sell modern trucks that are equipped with current safety and pollution

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[1] Department of Transportation, Federal Motor Carrier Safety Administration, *Electronic Logging Devices and Hours of Service Supporting Documents*, 80 Fed. Reg. 78291, 78295 (Dec. 16, 2015).
[2] *Id.* at 78294.
[3] *See* Matt Cole, *FMCSA: Pre-2000 ELD exemption applies to engine model year, not chassis*, Overdrive, July 28, 2017, https://www.overdriveonline.com/fmcsa-pre-2000-eld-exemption-applies-to-engine-model-year-not-chassis (explaining that, according to FMCSA guidance, "[o]wner-operators with trucks equipped with model year 1999 engines and older will not be not subject to the electronic logging device mandate, regardless of the model year of the truck"); Brian Straight, *ELD "clarification" will hold down costs for some truckers*, Freight Waves, Aug. 3, 2017, https://www.freightwaves.com/news/2017/8/3/eld-clarification-will-hold-down-costs-for-some-truckers.

control technology. My business carefully tracks sales data for the region where Tri-State Truck Center operates. According to sales data, in January 2018, glider vehicles made up about 45% of the heavy-duty diesel trucks sold in the region where Tri-State operates. Out of more than 600 trucks that were sold in that region in January, 270 of them were gliders. According to our sales data, sales of gliders in the region where Tri-State operates in February 2018 returned to about 5% of total sales, which is consistent with glider sales in recent years in our region.

15. EPA's action will allow continued high levels of glider truck sales in the region where Tri-State operates. If glider sales consistently become 45% of sales in our operating region, it would severely threaten my business—but even smaller levels of glider sales eat into the economic health of our dealership.

16. In addition to the sales data we track, I am also aware of competition from glider sales through my conversations with potential customers. For example, I have a longtime customer in Mississippi that buys two to three trucks from my dealership each year. He recently told me that several of his competitors bought glider trucks in order to avoid the new electronic logging requirement. Because his competitors are using paper logs to track their driving time, they can operate for more hours and complete more runs in a given day, giving them a competitive advantage over his fleet. He is now considering switching to purchasing glider vehicles. Similarly, I have a customer in Arkansas that previously bought about 10-

15 new freight trucks from me a year. He recently purchased three new gliders trucks from a glider dealership—not my dealership—so that his truckers can complete their hauls without taking a required break, giving him a significant advantage over his competition. These situations illustrate the economic pressure many fleets may feel if EPA allows the continued sale of unregulated glider trucks, which evade safety and emission requirements—pressure that I am concerned will drive even more fleets to purchase glider vehicles instead of purchasing a modern freight truck from my dealership.

17. Any truck sales that my dealership loses to unfair, unregulated competition from glider vehicles amount to more than just the average of $125,000 in sales revenue that is lost on the upfront purchase. Heavy-duty vehicle maintenance is a major source of revenue for Tri-State Truck Center. In the heavy-duty vehicle industry, there is a generally accepted average of the revenue that a dealership will earn in parts and service over the lifetime of any new truck sold—$4,000 to $5,000 per year, per truck. Accordingly, if a customer elects to purchase a glider vehicle rather than a truck from my dealership, we lose an average of $125,000 in sales revenue but also tens of thousands of dollars over the lifetime of the truck, from the lost maintenance revenue.

18. Our parts and servicing business supports many of our jobs—as noted above, about 250 of our 380 employees work in parts and servicing. These are well

paying, highly skilled jobs: our employees undergo extensive training to maintain a current, thorough understanding of engine and powertrain technology, including emission control technology. We have a full-time employee who works as an in-house trainer, attending Mack and Volvo courses and then running training sessions for our employees at the dealerships.

19. I am concerned that, as long as EPA's non-enforcement policy remains in effect, glider truck sales will continue and increase in my region, and I will lose more freight truck sales, revenue, and future income from parts and servicing—harming my business and our ability to continue to hire and support our employees.

Executed on July 14, 2018

Jim Maddox

XII.
Declarations

9. Bob Nuss, President of Nuss Truck & Equipment

DECLARATION OF ROBERT NUSS

I, Robert Nuss, declare as follows:

1. I am the President of Nuss Truck & Equipment (Nuss Truck), a new and used truck dealership based in Rochester, Minnesota with eight locations, seven in Minnesota, and one in Wisconsin. I have been in the trucking industry for close to 50 years, managing a Minnesota-based dealership for six years (1973-1979) before purchasing Nuss Truck in 1979. During my time as President, Nuss Truck has grown from fewer than 20 employees to the over 320 we have today. This success was recently recognized when I was named American Truck Dealers (ATD) 2017 Truck Dealer of the Year.

2. I served as a Mack Dealer Council Chairman from 1985-1990 and have been active in Volvo and Isuzu National Dealer Advisory Committees. I have also been active in Minnesota's Auto, Truck Dealers, and Trucking Associations.

3. The majority of my business is selling, servicing, and repairing Class 8 diesel trucks. We primarily sell new heavy-duty Mack and Volvo tractor units for use with freight trailers, as well as construction trailer and commercial flat-bed trucks. We have inventories of Mack trucks at seven of our locations, and Volvo trucks at four. Nuss Truck consistently sells over 1,000 new diesel trucks per year.

4. Nuss Truck employs over 320 people, supporting over 200 well-paying jobs in rural communities. The vast majority of Nuss Truck employees work in permanent positions and earn a competitive wage between $40,000 and $80,000 annually. Nuss Truck prioritizes creating and maintaining jobs in the United States, particularly those jobs in rural areas. We employ a wide variety of professionals, including maintenance and repair technicians, truck parts experts, commercial salespeople, and truck drivers. A significant portion of our business is in parts sales and maintenance.

5. Nuss Truck has autonomy in determining which Volvo and Mack trucks to sell. We supply trucks to private carriers, government agencies, and large and small fleets. Our customers are regional and over-the-road fleets that travel across the lower 48 and into Canada. Nuss Truck prioritizes supplying our customers with the most popular products to meet demand, and complying with important emissions and safety regulations.

6. I have seen first-hand a phasing-in of cleaner trucks following a series of health-protecting environmental regulations beginning in the 1990s. I remember the smoke-filled repair shops of the 1970s and how unsafe those working conditions could be. Today, the exhaust coming out of our trucks is significantly cleaner than the trucks manufactured 15 or 20 years ago. These changes are

directly linked to ongoing innovations in emissions technologies driven by regulations.

7. We choose to sell the safest and cleanest trucks possible and refuse to sell glider vehicles with outdated noncompliant engines because they emit more harmful pollution, are less safe for truck drivers and others on the road, and I have concerns that they avoid taxes that fund our highways.

8. Glider vehicles are diesel freight trucks manufactured by adding a donor engine and powertrain to a new truck chassis. A glider kit consists of the chassis, front axle, and body of the truck, before the engine and drivetrain are installed. The practice of building glider vehicles originated as a means of salvaging usable engines from otherwise unusable vehicles.

9. I understand that EPA's recent non-enforcement decision states that it will not enforce the current regulatory limit that prevents glider manufacturers and suppliers from producing more than 300 uncontrolled gliders per year. I further understand that this decision applies to all production of non-compliant glider vehicles through 2019.

10. I am very concerned that EPA's decision not to enforce these glider vehicle regulations will have serious human health and safety implications. In avoiding emissions requirements for other new heavy-duty trucks, glider vehicles emit significantly higher levels of fine particles (PM2.5), and ozone-forming

oxides of nitrogen (NOx). I understand that PM2.5 and other diesel exhaust pollutants are linked to respiratory illness, increased risk of cancer, and premature death. If EPA allows dramatically increased production of glider vehicles, these harmful emissions will drastically increase, and more people will become sick.

11. Glider vehicles also lack many of the safety features that prevent accidents and keep our nation's highways safe. Glider vehicles that rely on older engines lack essential safety mechanisms like roll stability control and collision avoidance, which require a computerized engine.[1] Significantly, those glider vehicles that contain pre-2000 engines also avoid compliance with electronic logging regulations that require monitoring of hours traveled by drivers.[2] Not enforcing these regulations threatens important progress made in reducing emissions and improving safety on our nation's highways.

12. Approximately 200,000 heavy-duty trucks are sold annually in North America,[3] with Mack and Volvo holding roughly 20% of the Class 8 market share.[4] Though gliders were a marginal component of the market until the past decade, the glider truck market is rapidly expanding, as EPA estimated that 10,000

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[1] See NHTSA, Electronic Stability Control Systems on Heavy Vehicles at III-1 (May 2012) (explaining that an ESC system "utilizes computers to control individual wheel brake torque and assists the driver in maintaining control of the vehicle"), https://www.nhtsa.gov/sites/nhtsa.dot.gov/files/136_esc_hvy_veh_pria.pdf.

[2] See Federal Motor Carrier Safety Administration, FAQs on ELD Rule (last updated Dec. 18, 2017), https://www.fmcsa.dot.gov/faq/if-vehicle-registration-commercial-motor-vehicle-reflects-model-year-2000-ornewer-b-0

[3] Oak Ridge National Laboratory, Vehicle Technologies Market Report: Class 8 Truck Sales by Manufacturer, 2012-2016, *available at* https://cta.ornl.gov/vtmarketreport/heavy_trucks.shtml (Figure based on five year average).

[4] Oak Ridge National Laboratory, Vehicle Technologies Market Report: Class 8 Truck Sales by Manufacturer, 2012-2016, *available at* https://cta.ornl.gov/vtmarketreport/heavy_trucks.shtml (Figure based on average market share from 2012-2016. Mack's average market share was 8.66% and Volvo's was 11.41%).

glider vehicles were produced in 2016.[5] Currently, glider vehicles occupy an estimated 5% of the new truck market and glider manufacturers are actively seeking to expand sales. It is my understanding that some glider manufacturer inventories far exceed the production limit of 300 uncontrolled glider trucks per year imposed by federal standards.

13. To grow their customer base, major glider manufacturers aggressively compete with other new heavy-duty truck dealers by advertising their glider vehicles in locations near well-established dealerships.

14. Without these important regulations, I believe glider vehicles could soon occupy 10-15% of the new truck market. As glider trucks become more prevalent in the new truck market, they will also enter the used truck market at growing rates.

15. I have observed a sharp uptick in glider vehicle sales within the new heavy-duty truck market over the last 5-6 years, both within my own customer base, in discussing the trend with industry colleagues, and as covered in the trade press. Glider vehicles have become more popular nationwide, including in the region where my dealerships are located. This increase in sales coincides with the advent of more protective EPA standards for heavy-duty diesel engines and the

[5] Greenhouse Gas Emissions and Fuel Efficiency Standards for Medium- and Heavy-Duty Engines and Vehicles—Phase 2, 81 Fed. Reg. at 73,943 (Oct. 25, 2016).

implementation of Selective Catalytic Reduction (SCR) requirements to reduce NOx emissions.[6]

16. Glider vehicles have grown in popularity as a mechanism for bypassing government regulations. Glider vehicles enable buyers to avoid emissions regulations, electronic logging requirements, and in some cases the 12% Federal Excise Tax used to maintain our nation's highways.[7] Significantly, leading glider retailers intentionally market and feature the absence of emissions control technologies as a selling point.[8]

17. EPA's decision not to enforce these standards will also have a significant economic impact on the freight truck industry. Nuss Truck has already lost business to glider manufacturers and will face greater economic consequences if EPA ceases to enforce its emissions standards applicable to glider vehicles. In the past year, former customers of Nuss Truck, such as Yaggy Trucking, Inc. based in Rochester, Minnesota, and Gold Country Trucking, based in St. Cloud, Minnesota have taken their business to glider manufacturers instead of purchasing our emissions-compliant vehicles. Other new truck dealers will continue to lose

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[6] Control of Air Pollution From New Motor Vehicles: Heavy-Duty Engine and Vehicle Standards and Highway Diesel Fuel Sulfur Control Requirements; Final Rule, 66 Fed. Reg. 5001, 5002 (Jan. 18, 2001).

[7] *See* Tom Berg, *The Return of the Glider*, Truckinginfo (Apr. 30, 2013), https://www.truckinginfo.com/152784/the-return-of-the-glider (explaining that the "IRS closely watches glider transactions," but glider truck sales picked up when the IRS did not appear to significantly changes its rules in 2013, and that according to a representative of Fitzgerald Glider Kits, a glider truck "is generally exempt from the 12% federal excise tax"); Amye Anderson, *Fitzgerald slashes dozens of jobs*, Upper Cumberland Business Journal (June 14, 2018), https://www.ucbjournal.com/breaking-fitzgerald-slashes-dozens-of-jobs (explaining that Fitzgerald has been the subject of six IRS examinations over the last two decades, and successfully appealed five of the cases).

[8] Fitzgerald Glider Kits, What is a Glider Kit?, https://www.fitzgeraldgliderkits.com/what-is-a-glider-kit (last accessed July 13, 2018).

business to glider manufacturers because EPA is not enforcing emissions standards applicable to glider vehicles.

18. Loss of new truck sales has a significant impact on dealers like Nuss Truck that stock and service trucks in compliance with federal emissions standards. Dealers invest millions of dollars in new truck inventories, replacement parts, and service training to keep our customers profitable while running trucks with the most advanced powertrain engines and transmissions. Widespread sale of glider trucks without modern emission controls hurt the important investments that conscientious trucking companies have made in modern technology and safety features.

19. When competing with glider vehicles, Nuss Truck loses $125,000-130,000 in gross sales for each lost truck sale, with additional annual losses in parts and service profits. If my customers choose to purchase 50 glider vehicles over the emissions-compliant trucks that I sell, my business could lose more than $6,000,000 in new truck sales. In addition, my business could lose thousands of dollars per truck annually in parts and service profits. Loss in sales threatens the job security of all of Nuss Truck's employees, but particularly those in sales and maintenance.

20. EPA's decision not to enforce standards applicable to glider vehicles will cause my business to continue to suffer from increased competition from the

glider market. This increased competition will threaten the job security of the over 100 technicians employed by Nuss Truck, who are trained to diagnose and repair modern engines. Loss of sales to glider vehicle manufacturers results in lost opportunity to sell engine warranties that secure years of sales and maintenance work for our technicians. Our technicians are greatly concerned that glider vehicles will result in a loss of customers and business.

21. For the reasons I outline above, I am very concerned that as a result of EPA's decision not to enforce emissions requirements for glider vehicles, human health, safety, and the American economy will suffer.

I declare under penalty of perjury that the foregoing is true and correct.

Robert Nuss

Dated: July 13, 2018

XII.
Declarations

10. Shana Reidy, Environmental Defense Fund member

DECLARATION OF SHANA REIDY

I, Shana Reidy, under penalties of perjury, declare as follows:

1. I have been a member of the Environmental Defense Fund (EDF) since April 2018.

2. I currently reside in Seattle, Washington's Ballard neighborhood with my husband and two sons, who are aged five and seven. We have lived in our current location since 2009.

3. My younger son suffers from Cornelia de Lange Syndrome, a genetic disorder that causes a range of severe medical conditions. In particular, he has been formally diagnosed with chronic lung disease, which makes him acutely sensitive to congestion and respiratory infections. For him, any respiratory infection has the potential to be life threatening, and even simple congestion disrupts his health and our family's daily life.

4. Air pollution is one of the factors that can affect my younger son's lung functioning.

5. I personally notice a physical change in my younger son's health on days when there is poor air quality, such as when the air is smoggy. For example, I notice that my younger son is more likely to experience congestion on these days.

6. When my younger son gets congested, it disrupts our ability to care for his underlying health conditions. In particular, my younger son suffers from severe

sleep apnea. In his early life, he would sometimes turn blue while sleeping from lack of oxygen. To help address his sleep apnea, he usually takes oxygen when he sleeps. But when he is congested, my husband and I face two bad options. If we keep him on oxygen, it causes our younger son a great deal of discomfort to have the oxygen blowing on his irritated, congested throat—and, as a result, he gets extremely fussy and cannot sleep, and either my husband or I am awake all night. If we take the oxygen off, his apnea worsens, leading him to experience long pauses in his breathing that cause his oxygen saturation levels to drop—which affects his ability to concentrate and his sleepiness during the day. Moreover, I am aware from scientific literature that over the long term these impacts are linked to pulmonary hypertension, symptoms of Attention Deficit Disorder and Attention Deficit Hyperactivity Disorder, and a limited ability to concentrate, focus, and be alert during the day.

7. My younger son also is prone to serious respiratory infections, experiencing them three to five times per year. When he was younger, these respiratory infections would typically result in a stay in the hospital. Over the years we have learned how to manage his treatment better, such that now when he gets a respiratory infection, we typically keep him at home. We essentially replicate hospital care in our own home, maintaining a hospital-like setting with medical prescriptions and intensive care. This treatment comes at great disruption to our

lives. Either my husband or I will stay up all night with my son managing his care, which can be a great disturbance as we both work.

8. Because these respiratory infections are potentially life-threatening and at minimum very disruptive to our family's day-to-day life, my family and I work very hard to reduce my younger son's exposure to factors that increase his likelihood of respiratory infections.

9. I have been told by my son's doctor that exposure to air pollution is one factor that will exacerbate his underlying health conditions. In particular, I am concerned that air pollution exposure can increase my younger son's likelihood of developing a respiratory infection.

10. On days when air quality is poor, my family and I change our lifestyle to reduce my younger son's exposure to air pollution. I can ascertain when the air quality is poor because I can feel my own ability to take in a deep breath inhibited by higher-than-normal pollution levels. I also confirm my own sense by checking publicly available air quality information.

11. Because air pollution causes my son to have harmful episodes of congestion and increases his risk of a respiratory infection, my family and I take extensive measures to minimize and protect him from exposure to air pollution. These efforts affect our whole family. When air quality is poor, we keep my younger son inside as much as possible, with the windows and doors shut. We avoid going outside, to

the park, or to the beach, to name a few of the activities we have to forego. My older seven-year-old son, in particular, often wants to engage in these activities. Either he must abstain, or my husband and I are forced to split up. For example, if my older son has a sports game, one of us will accompany him and one of us will stay at home with my younger son. As a result, when air quality is poor we are less able to spend time partaking in the activities we would otherwise enjoy and less able to spend time together as a family. Many people may be less aware of the day-to-day air quality conditions where they live, but air quality and air pollution have an immediate impact on my family's daily activities.

12. My husband and I own a weekend home more than two hours east of Seattle. Because the area has better air quality as compared to where we live in Seattle (unless it's forest fire season), we know the air is safer for our younger son to breathe. We're able to relax and spend more time outdoors doing activities as a family, without constantly having to worry about keeping my younger son protected from air pollution.

13. Unfortunately, we cannot protect our son from all air pollution exposure. In particular, we live in Seattle where we face some of the worst traffic conditions in the country. We live less than two miles (3.2 kilometers) from the I-5 highway, a roadway with significant freight truck traffic. I drive on or near this highway nearly every day either to take my children to school, go to work, or go about my

daily activities. Specifically, I travel with my children on I-5 several times per week to get groceries or other essentials at the local Target or other stores at Northgate Mall, about fifteen minutes away from my home. At least once a week, I travel with my children on I-5 for about 40 minutes each way to visit my parents in Tacoma.

14. About two weekends each month, my family and I drive two and a half to three hours to our cabin in eastern Washington. Our route takes us on I-5 as well as U.S. Highway 2, a two-lane highway that is heavily trafficked by heavy-duty logging trucks.

15. My husband and I try our best to minimize our younger son's exposure to pollution on the highway, for example, by avoiding driving during high-traffic periods. In particular, because Highway 2 is a two-lane logging highway, we try our best to avoid traveling on it during peak traffic to prevent ourselves from being trapped behind a heavy-duty truck and exposed to air pollution. But we are not able to avoid all exposure, both because traffic is unpredictable and because we can't avoid all travel during high-traffic periods, which are fairly common.

16. When we are on the road, we can get stuck in traffic either next to or behind a freight truck. Sometimes my younger son will be in the car as we are in close proximity to or trapped behind a heavy-duty truck with particularly high diesel exhaust emissions. I can smell this exhaust as it permeates our car. At times like

these I am terrified for his health. I take immediate steps to get out of the traffic as quickly as possible, move away from the truck, get off the road, and get fresh air into the car.

17. My younger son currently attends pre-school four days a week at Green Lake Elementary School. At school he spends time outdoors and interacting with the environment whenever the weather allows as an important part of his educational experience. Starting next year, he will attend school there five days a week. Unfortunately, we are not able to control the indoor or outdoor air quality he is exposed to while at school, which is particularly concerning because Green Lake is less than 2,000 feet (600 meters) from I-5.

18.I understand that the U.S. Environmental Protection Agency recently made a decision stating that it will not enforce against any manufacturer or supplier the current regulations establishing a 300-per-year production limit for pollution-standard-exempt "glider" trucks. I further understand that this decision applies to all production of glider vehicles through 2019. I am aware that uncontrolled glider trucks emit many times more soot and smog-causing pollution as compared to freight trucks with modern pollution controls and this action will allow the sale of a much higher number of these highly polluting vehicles.

19. I am deeply concerned that EPA's action will worsen the levels of pollution that my family and I face, increase the frequency of poor air quality days when we

need to restrict our family activities, and create a greater risk that my younger son will suffer from harmful and potentially life-threatening respiratory conditions.

20. More glider vehicles on the road will increase air pollution, increasing the number of days that my family need to restrict our activities to protect my younger son from air pollution exposure, increasing the frequency of his congestion episodes, and increasing the risk that he will suffer a serious respiratory infection.

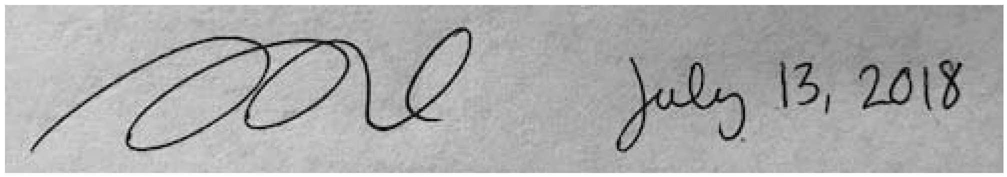
21. More glider vehicles on the road will increase the likelihood of poor air quality near my son's school, where we are less able to control his environment and protect him from air pollution. This will increase the likelihood that he suffers from congestion or a serious respiratory infection.

22. More glider vehicles on the road will increase the likelihood that my family will get trapped near a high polluting freight truck in traffic, in situations where my younger son may be exposed to very high levels of air pollution, increasing the likelihood that he suffers from congestion or a serious respiratory infection.

23. EPA's action means there will be more heavy duty "glider" vehicles on the road that do not meet modern pollution standards. These highly polluting trucks will release more pollution into the air that my family breathes. As a direct result, my family and I will have to take even more steps to protect my younger son from air pollution, and his fragile health will be put at risk. I am thus deeply concerned about EPA's action and the harm it will cause me and my family.

I declare that the foregoing is true and correct.

Executed on: July 13, 2018



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Shana Reidy

XII.
Declarations

11. Dr. Ananya Roy, health scientist and epidemiologist at Environmental Defense Fund

DECLARATION OF DR. ANANYA ROY

I, Dr. Ananya Roy, declare:

1. I am a Health Scientist and a trained epidemiologist at Environmental Defense Fund ("EDF"), a non-profit organization focused on protecting human health and the environment from airborne contaminants by using sound science. I received a doctorate in Environmental Health from Harvard University, after which I have served as a Research Associate at the Environmental and Occupational Health Sciences Institute at University of Medicine and Dentistry in New Jersey (now merged with Rutgers University) and then as a researcher at the Yale School of Public Health. I also have a Master of Science degree in pharmacology from the All India Institute of Medical Sciences (AIIMS) in New Delhi, India.

2. As a Health Scientist for EDF based in Washington, DC, I carry out research and provide scientific evidence to inform policies to protect children, disadvantaged communities, and other vulnerable populations from pollutant exposures that are harmful to their health and wellbeing. I currently lead research on the health effects of ambient air pollution within neighborhoods.

3. I have over nine years of experience studying the effects of air pollution on children's lung development and cardiovascular disease among adults. Most recently my work has focused on traffic-related air pollution and heart

disease and mortality in low income, environmental justice populations living in proximity to high volumes of truck traffic. I have co-authored several peer-reviewed articles evaluating the human health impacts associated with air pollution including, but not limited to *"Ambient Particulate Matter and Lung Function Growth in Children Living in Four Chinese Cities"* published in 2012,[1] *"The Cardiopulmonary Effects of Ambient Air Pollution and Mechanistic Pathways"* published in 2014,[2] and "*High-Resolution Mapping of Traffic Related Air Pollution with Google Street View Cars and Incidence of Cardiovascular Events within Neighborhoods in Oakland, CA*" published in 2018[3]. I have lectured on various environmental and human health topics at the Ernest Mario School of Pharmacy at Rutgers University (2010-2011), and Yale University (2010). I was also a member of the teaching faculty at the Sri Ramachandra University in India (2011).

Emission Requirements for Glider Vehicles, Glider Engines, and Glider Kits

4. Diesel engine exhaust is one of the most dangerous and pervasive forms of air pollution. Diesel exhaust is composed of a complex mixture of

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[1] Roy A, Hi W, Wei F, Korn L, Chapman RS, Zhang J. Ambient particulate matter and lung function growth in children living in four Chinese cities. *Epidemiology*, 2012; 23(3):464-472.

[2] Roy A, Gong J, Zhang J, Kipen HM, Rich DQ, Zhu T, Huang W, Hu M, Wang G, Wang Y, Ping Zhu, Lu S, Ohman-Strickland P, Diehl SR, Thomas D, Eckel SP. The cardiopulmonary effects of ambient air pollution and mechanistic pathways: A comparative hierarchical pathway analysis. PLOS One 2014 Dec 12;9(12):e114913.

[3] Alexeeff, S.E., Roy, A., Shan, J., Liu, X., Messier, K., Apte, J.S., Portier, C., Sidney, S. and Van Den Eeden, S.K., 2018. High-resolution mapping of traffic related air pollution with Google street view cars and incidence of cardiovascular events within neighborhoods in Oakland, CA. Environmental Health, 17(1), p.38.

gaseous and solid materials emitting harmful concentrations of oxides of nitrogen (NO_x), fine particles ($PM_{2.5}$), hydrocarbons (HC), carbon monoxide (CO), and sulfur dioxide (SO_2).

5. A long-standing body of scientific research demonstrates that exposure to diesel exhaust harms human health.[4] Epidemiological and toxicological studies over the past several decades report associations between short-term and long-term diesel exhaust exposures and a range of chronic and acute adverse health impacts.[5]

6. I understand that glider vehicles are heavy-duty freight trucks that typically use older engines that lack modern pollution controls.

7. I am aware that EPA's *Greenhouse Gas Emissions and Fuel Efficiency Standards for Medium- and Heavy-Duty Engines and Vehicles—Phase 2*, 81 Fed. Reg. 73478 (Oct. 25, 2016), required that glider vehicles comply with emissions standards for new heavy-duty trucks, with flexibilities for small businesses. I understand that EPA's recent non-enforcement action allows manufacturers and suppliers to exceed limits under current regulations that cap production at 300 uncontrolled gliders per year. I further understand that this EPA

[4] Health Effects Institute, Special Report 19, Diesel Emissions and Lung Cancer: An Evaluation of Recent Epidemiological Evidence for Quantitative Risk Assessment, at 1 (Nov. 2015), available at https://www.healtheffects.org/system/files/SR19-Diesel-Epidemiology-2015_0.pdf [hereinafter HEI Special Report 19].

[5] HEI Special Report 19, at 1.

action immediately increases allowable production of non-compliant glider vehicles through 2019, imminently harming human health and the environment.

Numerous Studies Have Found that Proximity to Roadways is Associated with Increased Exposure to Diesel Exhaust Pollutants

8. Persons located in vehicles traveling in traffic are generally exposed to higher concentrations of vehicle-related pollutants.[6] Tests measuring pollutant concentrations inside or immediately outside vehicles traveling on roadways indicate that in-vehicle concentrations are higher than ambient concentrations for most pollutants.[7] Studies also show that individuals receive up to 50% of their daily exposure to traffic-related pollutants while traveling in or near vehicles.[8] Average in-vehicle concentrations of $PM_{2.5}$ have been shown to be 2.5 times higher than concentrations measured at regional sites.[9] Significantly, studies show that exhaust from diesel-powered vehicles "could double short-term PM concentrations inside a closely trailing vehicle."[10]

[6] Health Effects Institute, Special Report 17, Traffic Related Air Pollution: A Critical Review of the Literature on Emissions, Exposure, and Health Effects, at 3-7 (Jan. 2010), available at https://www.healtheffects.org/system/files/SR17Traffic%20Review.pdf [hereinafter, HEI Special Report 17].
[7] HEI Special Report 17, at 3-6.
[8] HEI Special Report 17, 3-10
[9] HEI Special Report 17, at 3-7.
[10] HEI, Special Report 17, at 3-8.

9. People located within close proximity to roadways are also exposed to higher concentrations of vehicle-related pollutants.[11] Experts assessed studies measuring near roadside exposure to diesel exhaust pollutants including $PM_{2.5}$, NOx, and CO as well as other traffic-related pollutants,[12] and determined that individuals within 300 to 500 meters from a highway or major roadway are at increased risk of exposure, with greatest risk of exposure experienced within 200 meters.[13] One study showed an average elevated $PM_{2.5}$ level of 15.4 ($\mu g/m^3$) near roadside compared to 12.0 ($\mu g/m^3$) at background levels.[14] Significantly, EPA concluded that pollutant concentrations "emitted from cars, trucks, and other motor vehicles" are generally higher closer to the roadway, with the highest levels found within the first 150 meters of a roadway and reaching background levels within 600 meters.[15]

10. Concentrations of diesel exhaust pollutants decline at different rates with increased distance from a major roadway. Various factors influence the

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[11] HEI Special Report 17, at 3-6. ("Roadway concentrations [are] high compared with ambient concentrations" and are highly variable.).

[12] *See* International Agency for Research on Cancer, IARC: Diesel Engine Exhaust Carcinogenic, at 124, Figure 1.21 (Jun. 12, 2012), *available at* http://monographs.iarc.fr/ENG/Monographs/vol105/mono105.pdf [hereinafter IRAC Monograph] (Other measured pollutants included benzene, metals, elemental carbon, ultrafine particles, PM_{10}, and VOCs.).

[13] HEI Special Report 17, at xv.

[14] IRAC Monograph, at 126 (referencing Phuleria HC, Sheesley RJ, Schauer JJ et al. (2007). Roadside measurements of size-segregated particulate organic compounds near gasoline and diesel-dominated free-ways in Los Angeles, CA. Atmos Environ, 41: 4653-4671).

[15] Environmental Protection Agency, Best Practices for Reducing Near-Road Pollution Exposure at Schools, at 2 (2015), available at https://www.epa.gov/sites/production/files/2015-10/documents/ochp_2015_near_road_pollution_booklet_v16_508.pdf (citing Karner, et al, Near-Roadway Air Quality: Synthesizing the Findings from Real-World Data. 44 Environmental Science & 5334-5344 (2010)).

gradual decline of pollutant concentrations with increased distance from a major roadway, including the type of "pollutant, time of day, and surrounding terrain."[16]

11. Significantly, $PM_{2.5}$ and most other pollutants show either a moderate decline or no decline until 300 meters from a major roadway.[17] In one study, $PM_{2.5}$, VOCs, and fine particle concentrations remained elevated at approximately the same level within 500 meters.[18] NOx levels likewise remain elevated within 500 meters and decline gradually at greater distances from a roadway.[19]

12. It is estimated that about 19% of the U.S. population lives within 500 meters of high volume roads[20] and the CDC estimates that 11 million people live within 500 feet (152.4 meters) of a highway.[21] Significantly, 4.4 million children study in the nearly 8,000 U.S. public schools located "within 500 feet [152.4 meters] of highways, truck routes and other roads with significant traffic."[22]

Diesel Exhaust Emits $PM_{2.5}$ that Harms Human Health

[16] Environmental Protection Agency, Best Practices for Reducing Near-Road Pollution Exposure at Schools, at 2 (2015), available at https://www.epa.gov/sites/production/files/2015-10/documents/ochp_2015_near_road_pollution_booklet_v16_508.pdf (citing Karner, et al, Near-Roadway Air Quality: Synthesizing the Findings from Real-World Data. 44 Environmental Science & 5334-5344 (2010)).
[17] IRAC Monograh, at 125.
[18] IRAC Monograph at 124, Figure 1.21 (referencing Karner, et al, Near-Roadway Air Quality: Synthesizing the Findings from Real-World Data. 44 Environmental Science & 5334-5344 (2010)).
[19] IRAC Monograph at 124, Figure 1.21.
[20] Rowangould, G.M., 2013. A census of the US near-roadway population: Public health and environmental justice considerations. Transportation Research Part D: Transport and Environment, 25, pp.59-67, https://ac.els-cdn.com/S1361920913001107/1-s2.0-S1361920913001107-main.pdf?_tid=e2383e68-59c3-4a18-bb89-300e0bd403ca&acdnat=1531406005_dd8297c23923c47adafde4d290a1ab82
[21] Woghiren-Akinnifesi, E.L., 2013. Residential proximity to major highways—United States, 2010. *CDC Health Disparities and Inequalities Report—United States, 2013*, *62*(3), p.46.
[22] Jaime Smith Hopkins. The invisible hazard afflicting thousands of schools. February 17, 2017. Center for Public Integrity. https://www.publicintegrity.org/2017/02/17/20716/invisible-hazard-afflicting-thousands-schools (Accessed 07/11/2018)

Diesel exhaust is a major source of $PM_{2.5}$, which aggravates respiratory illness, cardiac conditions, and can lead to premature mortality. EPA has concluded that a causal relationship exists between long-term and short-term ambient $PM_{2.5}$ exposures and premature mortality.[23] Long-term $PM_{2.5}$ exposure is linked to cardiovascular effects including heart attacks, stroke, and congestive heart failure.[24] Long-term exposure to $PM_{2.5}$ is also associated with increased rates of developmental and reproductive effects, lung cancer, and increased mortality.[25] Short-term and long-term exposure to $PM_{2.5}$ is also associated with adverse respiratory effects including increased respiratory symptoms, asthma development, and respiratory infections.[26] The strongest evidence that has been observed in short-term $PM_{2.5}$ exposure studies is "increased respiratory-related emergency department visits and hospital admissions for chronic obstructive pulmonary disease (COPD) and respiratory infections."[27]

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[23] Environmental Protection Agency, Control of Air Pollution from Motor Vehicles: Tier 3 Motor Vehicle Emission and Fuel Standards Final Rule; Regulatory Impact Analysis, at 6-2 (Aug. 2014), *available at* https://nepis.epa.gov/Exe/ZyPDF.cgi/P100ISWM.PDF?Dockey=P100ISWM.PDF [hereinafter, EPA 2014 RIA].
[24] EPA 2014 RIA, at 6-2.
[25] EPA 2014 RIA, at 6-2.
[26] EPA 2014 RIA, at 6-2.
[27] U.S. Environmental Protection Agency, National Ambient Air Quality Standards for Particulate Matter, 78 Fed. Reg. 3104 (Jan. 15, 2013).

Diesel Exhaust Emits High Levels of NOx, a Major Precursor for Health Harming Ozone and Linked to Early Onset Childhood Asthma

13. Diesel exhaust also emits high levels of NOx, a major precursor for ozone,[28] which is a contributor to respiratory illness, cardiovascular disease, and premature death. In 2015, EPA affirmed that short-term exposure to ozone has a causal association with decreased lung function, pulmonary inflammation, exacerbated asthma, respiratory-related hospital admissions, and mortality.[29] Short-term exposure may also cause cardiac effects including decreased cardiac function, and increased incidence of cardiovascular disease.[30] Additionally, long-term ozone exposure is likely to cause new-onset asthma, cardiovascular impacts, reproductive and developmental effects, central nervous system effects, and mortality.[31]

14. Exposure to nitrogen dioxide (NO_2), a form of NOx, may also cause respiratory symptoms among adults and children.[32] Close proximity to roadways with elevated concentrations of NOx and NO_2 contributes to the onset of childhood asthma,[33] and may exacerbate asthma symptoms in adults.[34] A 2004 study found increased exposure to NOx and NO was positively associated with prevalence of

[28] U.S. Environmental Protection Agency, Air Emission Sources, Jun. 2, 2017, https://www.epa.gov/air-emissionsinventories/air-emissions-sources.
[29] *See National Ambient Air Quality Standards for Ozone*, 80 Fed. Reg. 65303 (Oct. 26, 2015); *see also* EPA 2014 RIA, at 6-4.
[30] EPA 2014 RIA, at 6-5.
[31] EPA 2014 RIA, at 6-5.
[32] EPA 2014 RIA, at 6-6.
[33] HEI Special Report 17, at 4-25.
[34] HEI Special Report 17, at 4-41.

doctor-diagnosed asthma.[35] Another study in 2008 demonstrated a positive correlation between NO_2 and new-onset asthma among children aged 10-18.[36] Studies spanning decades also demonstrate a causal relationship between close proximity to elevated concentrations of NO_2 and other respiratory effects among children including bronchitis, dry cough, morning cough, breathing difficulty, and conjunctivitis.[37]

15. Furthermore NOx emissions from the transportation sector, including heavy duty diesel trucks, also contribute to secondary $PM_{2.5}$ formation[38].

Children are Particularly Vulnerable to the Health Hazards Associated with Diesel Exhaust

16. Children within close proximity to high-traffic roadways have an increased risk of early on-set asthma[39] and are at greater risk of experiencing decreased lung function and lung development.[40] They are also at increased risk for experiencing ozone-related health effects, as children absorb higher doses of

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[35] HEI Special Report 17, at 4-25; (*referencing* Kim JJ, Smorodinsky S, Lipsett M, Singer BC, Hodgson AT, Ostro B. 2004. Traffic-related air pollution near busy roads: The East Bay Children's Respiratory Health Study. Am J Respir Crit Care Med 170:520–526.).
[36] HEI Special Report 17, at 4-22; (*referencing* Jerrett M, Shankardass K, Berhane K, Gauderman WJ, Künzli N, Avol E, Gilliland F, Lurmann F, Molitor JN, Molitor JT, Thomas DC, Peters J, McConnell R. 2008. Traffic-related air pollution and asthma onset in children: A prospective cohort study with individual exposure measurement. Environ Health Perspect 116:1433–1438.).
[37] HEI Special Report 17, at 4-31, Figure 4.8b.
[38] Environmental Protection Agency. Integrated Science Assessment for Particulate Matter. December 2009 EPA/600/R-08/139F.
[39] HEI Special Report 17, at xii.
[40] HEI 2017 Report, at 4-49.

ambient ozone and "have a higher asthma prevalence" compared to adults.[41] Both short-term and long-term NO_2 exposure studies demonstrate that children are at greater risk of experiencing NO_2-related respiratory impacts.[42] Significantly, studies have shown that adolescents and young adults with long-term exposure to traffic-related pollution are more likely to experience a decrease in lung function.[43] Studies also demonstrate a positive correlation between elevated concentrations of NO_2, ozone, and $PM_{2.5}$ and increased incidence of decreased lung function among children.[44] Long-term exposure to $PM_{2.5}$ is also associated with "increased respiratory symptoms, and asthma development."[45]

Glider Vehicles Emit Diesel Particulate Matter, a Known Human Carcinogen

17. The scientific community has recognized diesel particulate matter as a known human carcinogen. The National Institute for Occupational Safety and Health, International Agency for Research on Cancer, Health Effects Institute, U.S. Department of Health and Human Services National Toxicology Program, U.S.

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[41] EPA 2014 RIA, at 6-5.
[42] EPA 2014 RIA, at 6-7.
[43] HEI 2017 Report, at 4-49.
[44] Gilliland F, Avol E, Berhane K, Gauderman W, Lurmann F. Urman R, Chang R, Rappaport E, Howland S. The Effects of Policy-Driven Air Quality Improvements on Children's Respiratory Health, *Health Effects Institute*, Research Report 190, at 32 (2017), *available at* https://www.healtheffects.org/system/files/GillilandRR190.pdf; *see also* Gauderman WJ, Avol E, Gilliland F, et al. The effect of air pollution on lung development from 10 to 18 years of age. N Engl J Med 2004;351:1057-1067, *available at* https://www.nejm.org/doi/10.1056/NEJMoa040610.
[45] EPA 2014 RIA, at 6-2.

Environmental Protection Agency, and the California Air Resources Board have all determined that diesel exhaust is a known or likely human carcinogen.[46]

18. Studies of long-term exposure to diesel particulate matter also provide evidence supportive of diesel particulate matter's carcinogenic effects. Occupational studies among individuals with routine exposure to diesel exhaust link diesel exhaust exposure to urinary bladder cancer, and show an increased incidence of urinary bladder cancer among bus drivers.[47] These occupational studies also show a positive association between diesel exhaust exposure and increased risk of lung cancer,[48] with one study indicating an increased risk for lung cancer of 20-40% among U.S. transport industry workers.[49] Data also indicates that diesel exhaust induces lung cancer through genotoxic mechanisms including, but not limited to DNA damage, gene and chromosomal mutation, and inflammatory responses.[50]

19. Many of the individual components of diesel exhaust have also been linked to cancer: for example, diesel constituents benzene and 1,3- butadiene are well-characterized human carcinogens, associated with increased risk of leukemia

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[46] U.S. Environmental Protection Agency. 2002. Health Assessment Document for Diesel Engine Exhaust. May 2002. National Center for Environmental Assessment - Office of Research and Development. Washington, DC. EPA/600/8-90/057F (citing sources).
[47] IRAC Report, at 456.
[48] IRAC Report, at 455.
[49] IRAC Report, at 454.
[50] IRAC Report, at 464.

and lymphoma.[51] Several chemicals present in diesel exhaust are also known or suspected to increase breast cancer risk, particularly polycyclic aromatic hydrocarbons (PAHs).[52]

Conclusion

20. EPA's decision not to enforce pollution requirements for glider vehicles and kits will greatly increase the amount of diesel exhaust, releasing high concentrations of NOx and $PM_{2.5}$ emissions on and near major roadways. Individuals exposed to these emissions experience greater risk of adverse health effects including acute and chronic respiratory and cardiac illness, cancer, and premature mortality.

I declare that the foregoing is true and correct.

Ananya Roy, Sc.D

Dated: July 13, 2018

[51] Melnick RL, Huff JE. 1993. 1,3-Butadiene induces cancer in experimental animals at all concentrations from 6.25 to 8000 parts per million. IARC Sci. Publ. 309-322; National Toxicology Program (NTP). 1993. NTP Toxicology and Carcinogenesis Studies of 1,3-Butadiene (CAS No. 106-99-0) in B6C3F1 Mice (Inhalation Studies). 434:1-389; Snyder R. 2002. Benzene and leukemia. Crit. Rev. Toxicol. 32:155-210; Smith MT, Jones RM, Smith AH. 2007. Benzene exposure and risk of non-Hodgkin lymphoma. Cancer Epidem. Biomark. Prev. 16:385-391.

[52] Brody JG, Moysich KB, Humblet O, Attfield KR, Beehler GP, Rudel RA. 2007. Environmental pollutants and breast cancer: epidemiologic studies. Cancer. 109:2667-2771.

XII.
Declarations

12. Kassia Siegel, Director of Climate Law Institute at Center for Biological Diversity

DECLARATION OF KASSIA R. SIEGEL

I, Kassia R. Siegel, declare as follows:

1. I am the director of the Center for Biological Diversity's Climate Law Institute. I have personal knowledge of the facts and statements contained herein and, if called as a witness, could and would competently testify to them.

2. The Center for Biological Diversity (the "Center") is a non-profit corporation with offices in California and throughout the United States. The Center works to protect wild places and their inhabitants. The Center believes that the health and vigor of human societies and the integrity and wildness of the natural environment are closely linked. Combining conservation biology with litigation, policy advocacy, and strategic vision, the Center is working to secure a future for animals and plants hovering on the brink of extinction, for the wilderness they need to survive, and by extension, for the spiritual welfare of generations to come. In my role as director of the Center's Climate Law Institute, I oversee all aspects of the Center's climate and air quality work.

3. The Center works on behalf of its members, who rely upon the organization to advocate for their interests in front of state, local and federal entities, including EPA and the courts. The Center has approximately 63,000 members.

4. The Center has developed several different practice areas and programs, including the Climate Law Institute, an internal institution with the primary mission of curbing global warming and other air pollution, and sharply limiting its damaging effects on endangered species, their habitats, and human health for all of us who depend on clean air, a safe climate, and a healthy web of life.

5. Global warming represents the most significant and pervasive threat to biodiversity worldwide, affecting both terrestrial and marine species from the

tropics to the poles. Absent major reductions in greenhouse gas emissions, by the middle of this century upwards of 35 percent of the earth's species could be extinct or committed to extinction as a result of global warming. With even moderate warming scenarios producing sufficient sea level rise to largely inundate otherwise "protected" areas like the Everglades and the Northwest Hawaiian Islands, climate change threatens to render many other biodiversity conservation efforts futile. To prevent extinctions from occurring at levels unprecedented in the last 65 million years, emissions of carbon dioxide and other greenhouse gases must be reduced deeply and rapidly. Given the lag time in the climate system and the likelihood that positive feedback loops will accelerate global warming, leading scientists have warned that we have only a few decades, at most, to significantly reduce greenhouse gas emissions if we are to avoid catastrophic effects. Deep and immediate greenhouse gas reductions are required if we are to save many species which the Center is currently working to protect, including but not limited to the polar bear, Pacific walrus, bearded seal, ringed seal, ribbon seal, Kittlitz's murrelet, American pika, Emperor penguin, and many species of corals. Leading scientists have also stated that levels of carbon dioxide, the most important greenhouse gas, must be reduced to no more than 350 parts per million (ppm) and likely less than that, "to preserve a planet similar to that on which civilization developed and to which life on Earth is adapted" (J. Hansen et al., *Target Atmospheric CO2: Where Should Humanity Aim?*, 2 Open Atmospheric Sci. J. 217, 218 (2008)). In May of this year, greenhouse gases exceeded 411 ppm for the first time in recorded history. *CO_2 Levels Break Another Record, Exceeding 411 Parts Per Million,* YaleEnvironment 360 (June 7, 2018), *available at* https://e360.yale.edu/digest/co2-levels-break-another-record-exceeding-411-parts-per-million.

6. One of the Climate Law Institute's top priorities is the full and immediate use of the Clean Air Act to rein in greenhouse gases and other pollutants. The Clean Air Act is our strongest and best existing tool for doing so, and we have

long worked through advocacy and litigation to enforce the Clean Air Act's mandates to accomplish this goal. For example, the Center was a Plaintiff in *Massachusetts vs. EPA*, which resulted in the landmark Supreme Court decision finding that greenhouse gases are pollutants under the Clean Air Act, which ultimately led to EPA's first-ever rulemaking to reduce greenhouse gas emissions from passenger cars and light trucks under section 202. That rulemaking is comprised of the *Endangerment and Cause or Contribute Findings for Greenhouse Gases Under Section 202(a) of the Clean Air Act*, 74 Fed. Reg. 66,496 (Dec. 15, 2009) ("Endangerment Finding"), and the *Light-Duty Vehicle Greenhouse Gas Emission Standards and Corporate Average Fuel Economy Standards*, 75 Fed. Reg. 25,324, 25,397 (May 7, 2010), updated twice since then, the last time by EPA and the National Highway Traffic Safety Administration through 2025. *2017 and Later Model year Light-Duty Vehicle Greenhouse Gas Emissions and Corporate Average Fuel Economy Standards, Final Rule,* 77 Fed. Reg. 62624 (Oct. 15, 2012). EPA affirmed these latest light-duty vehicle standards in the *Final Determination on the Appropriateness of the Model Year 2022-2025 Light-Duty Vehicle Greenhouse Gas Emissions Standards under the Midterm Evaluation* (Jan. 2017), *available at* https://nepis.epa.gov/Exe/ZyPDF.cgi?Dockey=P100QQ91.pdf. The Center submitted comments to each of those successor light duty vehicle rules, as well as to the first medium duty/heavy duty vehicle rule and its proposed successor, the *Greenhouse Gas Emissions and Fuel Efficiency Standards for Medium- and Heavy-Duty Engines and Vehicles, Phase 2; Proposed Rule,* 80 Fed. Reg. 40138 (July 13, 2015). The Center has been an active commenter and participant in other vehicle-related greenhouse gas and fuel efficiency rulemakings. For example, as noted below, the Center commented on a proposed rule proposing the repeal of emission regulations for glider trucks, *Repeal of Emission Requirements for Glider Vehicles, Glider Engines, and Glider Kits*, 82 Fed. Reg. 53,442, and it is an intervenor in *Truck Trailer Manufacturers Association, Inc. v. EPA*, No. 16-1430 (D.C. Cir., filed

Oct. 12, 2017), a case involving emission limits for tractor trailers, and a petitioner in *NRDC et al. v. NHTSA*, No. 17-2780 (2nd Cir., filed Sept. 7, 2017), in which the Second Circuit reversed NHTSA's indefinite suspension of inflation adjustments of civil penalties applicable to non-compliance with NHTSA's corporate average fuel efficiency standards for light duty vehicles.

7. EPA's rulemaking to reduce greenhouse gases from passenger vehicles preceded significant additional regulatory activity for greenhouse gases under other Clean Air Act programs, including rulemakings that enforce the Clean Air Act's PSD permitting program and best available control technology ("BACT") requirements for greenhouse gases emitted by stationary sources and implementation of New Source Performance Standards for various industrial facilities. *E.g., Prevention of Significant Deterioration and Title V Greenhouse Gas Tailoring Rule,* 75 Fed. Reg. 31,514 (2010). EPA's rulemakings were upheld in 2012 in *Coalition for Responsible Regulation v. EPA* (D.C. Cir. 2012) 684 F.3d 102, a matter in which the Center submitted an amicus brief. The Supreme Court affirmed *Coalition for Responsible Regulation* in part, upholding EPA's authority to require BACT for greenhouse gas emissions from facilities that must obtain PSD permits due to their potential to emit non-greenhouse gas pollutants. *See Util. Air Reg. Group v. EPA*, 573 U.S. __, 134 S. Ct. 2427, 2449 (2014).

8. We have also worked to obtain an endangerment finding and emission standards for greenhouse gases from aircraft for more than a decade. In 2007, we and others petitioned EPA to issue an endangerment finding and greenhouse gas standards for aircraft under Clean Air Act section 231. When EPA failed to respond, we and others sued EPA for unreasonable delay in 2010, and obtained a court order requiring EPA to undertake an endangerment finding for aircraft in 2011. *Center for Biological Diversity v. EPA,* 794 F. Supp. 2d 151 (D.D.C. 2011). When EPA failed to act, we notified it of our intent to sue for unreasonable delay in 2014. In 2015, EPA released a proposed endangerment finding and an advance notice of proposed

rulemaking for aircraft greenhouse gases, *Proposed Finding That Greenhouse Gas Emissions from Aircraft Cause or Contribute to Air Pollution That May Reasonably Be Anticipated To Endanger Public Health and Welfare and Advance Notice of Proposed Rulemaking, Proposed Rule*, 80 Fed. Reg. 37758 (July 1, 2015). When EPA failed to finalize the endangerment finding, we filed a second lawsuit in April 2016 to compel EPA to act. *Center for Biological Diversity v. EPA*, No. 1:16-CV-00681. On August 15, 2016, EPA issued the Aircraft Endangerment Finding.

9. We also commented on EPA's proposed rulemakings to set standards and guidelines for greenhouse gas emissions from new, modified/reconstructed, and existing power plants under Clean Air Act sections 111(b) and 111(d). (Center comments, EPA- EPA-HQ-OAR-2011-0660-10171 [June 22, 2012]; HQ-OAR-2013-0495-10119 [May 9, 2014]; EPA-HQ-OAR-2013-0602-25292 [Dec. 1, 2014].) We sought leave from this Court to intervene on behalf of EPA in the ongoing litigation over both the existing and the new, modified/reconstructed final power plant greenhouse gas rulemakings, and were granted that leave. *West Virginia v. EPA,* No. 15-1363 (D.C. Cir. filed October 23, 2015); *North Dakota v. EPA,* No. 15-1381 (D.C. Cir. Oct. 23, 2015). We have since actively participated in that litigation in the D.C. Circuit and the United States Supreme Court, and have commented on EPA's proposal to rescind power plant greenhouse gas regulations, *Proposed Rule: Repeal of Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units*¸82 Fed. Reg. 48,035 (Oct. 16, 2017). We have also been involved in many other Clean Air Act administrative proceedings and legal actions seeking to enforce the Act's provisions for greenhouse gases. For example, the Center and others filed a lawsuit challenging an EPA rule exempting large-scale biomass-burning facilities from carbon dioxide limits under the Clean Air Act. *See Center for Biological Diversity v. EPA,* 722 F.3d 401 (D.C. Cir 2013). On July 12, 2013, this Court overturned EPA's exemption for "biogenic carbon dioxide," confirming that Clean Air Act limits on carbon dioxide pollution apply to industrial

facilities that burn biomass, including tree-burning power plants. *Id.* We have participated in numerous other legal actions, including but not limited to *Sierra Club v. EPA*, 762 F.3d 971 (9th Cir. 2014) (challenging EPA's decision to exempt the Avenal power plant from Clean Air Act requirements applicable at the time of permit issuance), and *Resisting Environmental Destruction on Indigenous Lands v. EPA*, 716 F.3d 1155 (9th Cir. 2013) (challenging errors in air permits that would allow Shell to conduct exploratory drilling in the Arctic ocean). In September, 2010, we petitioned EPA to issue greenhouse gas standards for locomotive engines pursuant to Clean Air Act section 213(a)(5). *Petition for Rulemaking Under the Clean Air Act to Reduce Greenhouse Gas and Black Carbon Emissions from Locomotives* (Sept. 21, 2010). In December 2009, we petitioned EPA to designate greenhouse gases as criteria air pollutants under Clean Air Act section 108 and to issue National Ambient Air Quality Standards (NAAQS) sufficient to protect public health and welfare. *Petition to Establish National Pollution Limits for Greenhouse Gases Pursuant to the Clean Air Act* (Dec. 2, 2009). These examples are illustrative of our advocacy in this area, not exhaustive.

10. In addition to our work on greenhouse pollution, the Center has worked through the Clean Air Act to address other pollutants that adversely impact biodiversity and human health. For example, we filed suit against EPA for failing to review and revise the air quality criteria for oxides of nitrogen and sulfur oxides and the NAAQS for nitrogen dioxide and sulfur dioxide. This case resulted in a court-ordered settlement agreement setting forth deadlines for EPA to update these critically important standards. On February 9, 2010, EPA issued updated primary NAAQS for nitrogen dioxide. *Primary National Ambient Air Quality Standards for Nitrogen Dioxide; Final Rule*, 75 Fed. Reg. 6474 (February 9, 2010). On June 22, 2010, EPA issued updated primary NAAQS for sulfur dioxide. *Primary National Ambient Air Quality Standard for Sulfur Dioxide; Final Rule*, 75 Fed. Reg. 35520 (June 22, 2010). On April 3, 2012, EPA decided not to revise the 40-year-old

secondary NAAQS for sulfur and nitrogen oxides, despite acknowledging ongoing harm to terrestrial and aquatic ecosystems from acid rain and other depositional pollution. *Secondary National Ambient Air Quality Standards for Oxides of Nitrogen and Sulfur*, 77 Fed. Reg. 20218 *(April 3, 2012).* We challenged the latter decision as contrary to the Clean Air Act. *See Ctr. for Biological Diversity v. EPA*, 749 F.3d 1079 (D.C. Cir. 2014). We also filed suit in 2010 against EPA for failing to meet numerous deadlines for limiting dangerous particle pollution, including deadlines for: (a) determining whether areas in five western states are complying with existing air pollution standards, and (b) ensuring that states are implementing legally required plans to meet the standards. *Ctr. for Biological Diversity v. Jackson*, N.D. Cal. No. CV 10-1846 MMC (filed April 29, 2010). This case resulted in another settlement establishing deadlines for EPA to carry out these important duties.

10. In October 2016, EPA promulgated a final rule entitled *Greenhouse Gas Emissions and Fuel Efficiency Standards for Medium- and Heavy-Duty Engines and Vehicles – Phase 2,* 81 Fed. Reg. 73478 (October 25, 2016) (the "2016 Truck Rule") that tightened emission standards for the nation's fleet of medium- and heavy-duty engines and vehicles, including so-called glider trucks. Glider trucks use rebuilt engines within newly-built truck bodies, a practice originally employed only in the few instances when trucks suffered catastrophic accidents and owners salvaged their engines, rebuilt them and used them in newly built truck bodies; that practice had recently expanded to thousands of glider truck sales by a small number of manufacturers, greatly increasing the associated unregulated pollution. In the 2016 Truck Rule, EPA exempted small glider truck manufacturers from the new pollution limits, but restricted the exemption to 300 trucks per year, per manufacturer, beginning in 2018.

11. On November 16, 2017, EPA issued a proposed rule entitled *Repeal of Emission Requirements for Glider Vehicles, Glider Engines, and Glider Kits,* 82 Fed.

Reg. 53,442, which proposed a repeal of the 2016 Truck Rule as applicable to glider trucks. The proposal would have resulted in permanently striking down all emission limits for all pollutants emitted from glider trucks. Because glider truck engines do not comply with the latest emission control standards and are sometimes decades old, they emit enormous amounts of the pollutants that are injurious to human health and the environment. These emissions can be more than 40 times as much as those from all other heavy-duty trucks that comply with current emission limits. Because the engines are clad in new body trucks, glider trucks appear indistinguishable from trucks that comply with the 2016 Truck Rule. EPA's decision not to enforce the 2016 Truck Rule for glider trucks will allow the sale of many more of these massively polluting vehicles.

12. On January 8, 2018, the Center and allies commented on the proposed repeal rule, pointing out its numerous legal, scientific, and factual flaws. Many other organizations, including competitors to glider truck manufactures that do comply with the 2016 Truck Rule, also submitted comments, raising fundamental objections. EPA has failed to follow up its proposed repeal rule with a final rulemaking.

13. On July 6, 2018, without any notice and comment, EPA issued a decision stating that it will not enforce the 2016 Truck Rule emission limits against any glider truck manufacturer or any of their part suppliers nationwide, through July 6, 2019 or until EPA issues a final rule extending the deadline for compliance with the 2016 Truck Rule through December 31, 2019, whichever occurs first.

14. EPA's non-enforcement decision asserts that glider truck manufacturers have already reached the applicable 300 trucks per-annum and per-manufacturer cap and would have to stop their ongoing operations and production but for the non-enforcement decision. That decision will thus result in the immediate further production and sale of many hundreds and thousands of entirely pollutant-unregulated glider trucks. The pollutants created by glider trucks include oxides of nitrogen, particulate matter, ground-level ozone, and greenhouse gases, all of which endanger

human health and welfare and cause serious adverse health effects to the public, including members of the Center. These pollutants particularly affect persons living next to busy highways and freeways. Short-term exposure to emissions of nitrogen dioxide "can aggravate respiratory diseases, particularly asthma, leading to respiratory symptoms (such as coughing, wheezing, or difficulty breathing), hospital admissions and visits to emergency rooms"; longer-term exposure "may contribute to the development of asthma and potentially increase susceptibility to respiratory infections."[1] Emissions of nitrogen oxides also contribute to the formation of tropospheric ozone. Ozone can reduce lung function, harm lung tissue, and trigger a variety of respiratory health problems in humans, and can damage "sensitive vegetation and ecosystems, including forests, parks, wildlife refuges and wilderness areas."[2] Exposure to particulate matter can affect both the lungs and heart and cause premature death in people with heart or lung disease, nonfatal heart attacks, aggravated asthma, decreased lung function, and increased respiratory symptoms, such as irritation of the airways, coughing or difficulty breathing.[3] Members of the Center suffer severely from this pollution. Because EPA's non-enforcement decision will immediately result in the continuing manufacture and sale of additional hundreds and thousands of pollution-unregulated glider trucks, emissions of this pollution on the nation's highways and streets will increase, and will directly affect the health and well-being of our members. Conversely, the reversal of the non-enforcement decision will stop the production and sale of these additional glider trucks, prevent the additional dangerous pollution, improve air quality and increase our members' health and well-being.

[1] EPA, Basic Information about NO2, *available at* https://www.epa.gov/no2-pollution/basic-information-about-no2#Effects.
[2] EPA, Ozone Basics, *available at* https://www.epa.gov/ozone-pollution/ozone-basics#effects.
[3] EPA, Health and Environmental Effects of Particulate Matter (PM), *available at* https://www.epa.gov/pm-pollution/health-and-environmental-effects-particulate-matter-pm.

15. The Center's members rely on the organization to support efforts to increase fuel efficiency and thereby reduce harmful pollution from vehicles, to enforce the provisions of the Clean Air Act and other laws, and to compel glider trucks to meet the stringency levels of the 2016 Truck Rule.

16. The Center's members also rely on the organization to protect their procedural and informational rights. As shown above, the Center, on behalf of its members, frequently comments on agency rulemakings, including many of the regulations affecting motor vehicles, and the Center disseminates the information it obtains, advocates on behalf of more stringent and effective standards, and seeks to enforce applicable laws and regulations to protect its members' health and well-being from the negative effects of vehicle pollution. Because the non-enforcement decision has been implemented without any notice or opportunity to comment, the Center and its members were deprived of the opportunity to weigh in and be heard concerning the ill effects of this decision, to disseminate information about EPA's intended actions to its members, and to seek to change the outcome. The lack of notice and comment directly injured the Center's and its members' procedural and informational rights.

17. Conversely, a reversal of the non-enforcement decision would require EPA to provide notice and comment to the public and follow the applicable procedural rules if it determined to extend the 2016 Truck Rule compliance deadline for glider trucks. Providing notice and the opportunity to comment would allow the Center, on behalf of its members, and those members themselves to submit comments that may influence the agency's ultimate decision and lead it to retain the 2016 Truck Rule and its compliance deadlines and limits for glider trucks. Those

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actions would address both the substantive and the procedural harm caused by the non-enforcement decision.

I declare under penalty of perjury under the laws of the United States of America that the foregoing is true and correct. Executed on July 12, 2018, at Joshua Tree, California.

Kassia R. Siegel

XII.
Declarations

13. John Stith, Director of Database Marketing & Analytics, Environmental Defense Fund

DECLARATION OF JOHN STITH

I, John Stith, declare as follows:

1. I am Director of Database Marketing and Analytics at the Environmental Defense Fund (EDF). I have had this position for more than ten years.

2. My duties include maintaining an accurate list of members. My colleagues and I provide information to members, acknowledge gifts and volunteer actions, and manage the organization's member databases. My work requires me to be familiar with EDF's purposes, staffing, activities, and membership.

3. EDF is a membership organization incorporated under the laws of the State of New York. It is recognized as a not-for-profit corporation under section 501(c)(3) of the United States Internal Revenue Code.

4. EDF relies on science, economics and law to protect and restore the quality of our air, water and other natural resources. EDF employs more than 150 scientists, economists, engineers, business school graduates, and lawyers to help solve challenging environmental problems in a scientifically sound and cost-effective way.

5. It is my understanding that EPA's *Greenhouse Gas Emissions and Fuel Efficiency Standards for Medium- and Heavy-Duty Engines and Vehicles—*

Phase 2, 81 Fed. Reg. 73478 (Oct. 25, 2016) ("Phase 2 Heavy-Duty Standards"), are crucial in limiting emissions of particulate matter (PM) and nitrogen oxides (NOx) from glider vehicles.

6. I understand that glider vehicles are diesel freight trucks manufactured by adding a donor engine and powertrain to a new truck body.

7. I am aware that EPA's recent non-enforcement decision states that it will not enforce the current regulatory limit that prevents glider manufacturers and suppliers from producing more than 300 uncontrolled gliders per year. I further understand that this decision applies to all production of non-compliant glider vehicles through 2019, imminently harming human health and the environment.

8. EDF has a strong organizational interest, and a strong interest that is based in its members' recreational, aesthetic, professional, educational, public health, environmental, and economic interests, in reducing harmful air pollution from the sources addressed by the Phase 2 Heavy-Duty Standards.

9. Through its programs aimed at protecting human health, EDF has long pursued initiatives at the state and national levels designed to reduce emissions of health-harming and climate-altering air pollutants from all major sources, including sources in the transportation sector. This work has addressed emissions of PM and NOx, as well as other harmful pollutants.

10. When an individual becomes a member of EDF, his or her current residential address is recorded in our membership database. The database entry

reflecting the member's residential address is verified or updated as needed. The database is maintained in the regular course of business and each entry reflecting a member's residential address and membership status is promptly updated to reflect changes. I obtained the information about our membership discussed below from our membership database.

11. EDF currently has 452,474 members in the United States. We have members in all 50 states and the District of Columbia.

12. EDF economists with expertise in geographic information systems (GIS) prepared georeferenced EDF membership data, and used traffic data already collected and maintained by the federal government to assess the number of EDF members who live in close proximity to roadways with significant heavy-duty traffic. Using GIS software, the Euclidean (straight line) distance between each member's home and the nearest roadway with significant heavy-duty traffic was calculated. Our economists used the most recent available data from the U.S. Department of Transportation's Highway Performance Monitoring System (HPMS) to identify roadways with annual average daily traffic (AADT) (annual traffic volume divided by 365 days) of at least 40 Class 8 combination vehicles and the proximity of those roadways to the homes of EDF members.[1]

[1] I understand EDF's consultants have estimated that a roadway with AADT of 40 Class 8 combination vehicles could have more than 50 of the excess gliders built in 2018 – 2019 due to EPA's proposed non-enforcement action traveling on it per

13. EDF's analysis has yielded the estimates contained in paragraphs 14 through 19 below.

14. Throughout the United States, 214,830 EDF members live within 2,000 feet (609.60 meters) and 124,284 members live within 1,000 feet (304.80 meters) of a roadway with an AADT of at least 40 combination trucks.

15. 62,862 EDF members live within 500 feet (152.4 meters) of a roadway with an AADT of at least 40 combination trucks, and experience the greatest risk of exposure to health-harming diesel exhaust pollution.

16. EDF member Elizabeth Brandt, from Maryland's Silver Spring neighborhood, lives within 1,100 feet (335.28 meters) of Maryland Route 410, which has an AADT of 115 combination trucks. The segment of Interstate 495 in Elizabeth Brandt's neighborhood has an AADT of 5,369.

17. EDF members Shana Reidy and Dorothy Brandt both live in the Seattle-Tacoma region with three freight corridors along Interstate-5 and Interstate-90 in the nation's top 100 "truck bottlenecks" with the heaviest truck traffic congestion in the country: Interstate-5 at Interstate-90, Interstate-90 at Interstate-405, and Interstate-5 at Interstate-705/State Route 16.[2]

18. Shana Reidy, whose home is in the Ballard neighborhood, lives within 2,100 feet (640 meters) from 15th Avenue Northwest, which has an AADT of

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year, increasing the health risks to individuals living within the range of exposure from these roads.

[2] American Transportation Research Institute, The Nation's Top Truck Bottlenecks of 2018 (Jan. 2018), http://atri-online.org/wp-content/uploads/2018/01/ATRI-Bottleneck-Brochure-2018-01-18.pdf.

1,371. Interstate-5, which runs through Shana Reidy's neighborhood, has an AADT of 4,585.

19. Dorothy Brandt, whose home is in the North Admiral neighborhood, lives within 800 feet (243.84 meters) of Southwest Admiral Way, which has an AADT of 448.

20. EDF members living in these areas and elsewhere have a strong interest in protecting their health, their family's health, and the environment from the air pollution impacts of glider vehicles and in ensuring that pollution limits for these health-harming vehicles are enforced.

I declare under penalty of perjury that the foregoing is true and correct.

John Stith

Dated: July 16, 2018

XII.
Declarations

14. Dr. John Wall, engineer and former Chief Technical Officer of Cummins, Inc.

DECLARATION OF DR. JOHN C. WALL

I, Dr. John C. Wall, declare as follows,

1. I am an engineer and was formerly Vice President and Chief Technical Officer of Cummins, Inc., the world's largest independent manufacturer of heavy-duty diesel engines and related technologies, including emission control systems. I worked at Cummins for nearly 30 years in research and product engineering with a focus on diesel engine emissions and fuel economy. Prior to that, I worked for Chevron Research Company, where I also researched engine lubricants, diesel fuels, and diesel fuel composition effects on emissions, including detailed chemical characterization of diesel engine particulate emissions.

2. I hold a bachelor's and master's degree in mechanical engineering from the Massachusetts Institute of Technology, where I also earned a doctorate of science. My doctoral research was in the area of internal combustion engine efficiency and emissions.

3. I have been recognized as a national expert in diesel engine design with awards including the Society of Automotive Engineers (SAE) Franz Pischinger Award for outstanding innovation and lifetime achievement in the field of powertrain research, design and development, SAE Horning Memorial Award and Arch T. Colwell Merit Award for research in the area of diesel fuel effects on emissions, and the American Society of Mechanical Engineers Soichiro Honda

Medal for outstanding achievement in the field of personal transportation. In 2010, I was elected as a member of the National Academy of Engineering for leadership in the research and development of low-emission, fuel-efficient commercial engines and I have been elected Fellow of the Society of Automotive Engineers.

4. I am active on a number of boards and committees, including the board of Achates Power, Inc.; the National Research Council Board on Energy and Environmental Systems; serving as a technical advisor for the Joint BioEnergy Institute, a Department of Energy "Energy Hub"; and advising Cyclotron Road, an energy technology incubator at Lawrence Berkeley National Laboratory. I am also active on various committees of the National Academy of Engineering.

5. Throughout my career, I have conducted research on and designed heavy-duty diesel engines for mass production. This work requires a close understanding of the interactions of all engine components and subsystems during all phases of engine operation as well as knowledge of manufacturing processes for such engines, including the specific component parts, their durability, maintenance pathways to keep engines running, and end-user customer expectations for value: performance, efficiency, durability and reliability.

Background on Heavy-Duty Engine Technology and Emissions Control Technology

6. **Engine Design:** Diesel freight truck engines are complex systems. Hundreds of principal mechanical components – including cylinder blocks, cylinder heads, pistons, connecting rods, crankshafts, bearings, intake and exhaust valves, turbochargers, fuel systems, cooling systems, gear drive systems, lubrication systems, fuel, air and oil filtration systems, and others – must be designed in an integrated way with all other components and in view of manufacturing requirements. In addition to the core components needed to construct a working engine, modern engines also include multiple control technologies which allow the engine to deliver power and performance reliably and efficiently while restricting emissions of harmful pollutants such as oxides of nitrogen (NOx) and particulate matter (PM). Heavy-duty diesel engines are manufactured to rigorous quality specifications and extremely tight tolerances. For example, fuel systems have component manufacturing machining tolerances for some components to fit together specified in *microns* (millionths of a meter). Engine manufacturers and their supply chain partners have invested heavily in the manufacturing technologies required to produce modern technology engines that meet the demands of customers for performance, fuel efficiency, reliability and durability—*and* that meet public demands for cleaner exhaust emissions.

7. **Emissions Technology:** In addition to base engine components, emission control technologies are integral to engine design and construction. This

is absolutely necessary to protect public health and deliver transportation technologies to the market in a responsible way. These controls have grown more effective over time – as emission standards have driven innovation and as innovation in emission controls has enabled lower emission standards. This interactive dynamic of innovation in emission control technologies and more effective emission standards has been the result of more than three decades of positive collaboration among the heavy-duty diesel engine industry, including its key suppliers, and regulators – notably the U.S. Environmental Protection Agency.

8. **Engine Life Cycle:** In the heavy-duty vehicle industry, it is typical for a diesel engine to be rebuilt three times over the life of the vehicle.[1] Larger fleets might have their own maintenance facilities, while smaller fleets rely on maintenance services at truck dealerships. New freight trucks typically come with an extensive warranty, so that when an engine overhaul is required, the driver can bring the truck into the dealership that sold the truck for service. An engine rebuild can sometimes be conducted in-frame, meaning it stays in the truck, or it is done out-of-frame, meaning the engine is removed for a more extensive overhaul. Often when an engine is removed for rebuilding, the dealer will install a comparable remanufactured engine into the vehicle, so that the truck is not out of

[1] Tom Stricker & Karl Simon, *Heavy-Duty Engine Rebuilding Practices* at 1, 53, U.S. EPA Manufacturers Operations Division (Mar. 21, 1995)

service for an extended period of time.[2] When such a swap occurs, the engine newly-installed in the truck must be built to, at minimum, the specifications required for the model year of the original engine, including the pollution control technology for a truck of that model year—there is no backsliding.

9. **Engine Remanufacturing**: Commercial engine remanufacturing is an intensive disassembly, cleaning, and remanufacturing process that involves cleaning and examining all engine components and deciding if they can be reused, reworked, or must be replaced by newly-manufactured parts. It is generally not a small business or "back yard garage," "under the hood" operation. It is often an out-of-truck engine disassembly and reassembly process, and generally done in an engine remanufacturing plant that is not very different from a new engine assembly plant. Where an engine is rebuilt and reinstalled in its original truck body, or where the engine is replaced with another rebuilt engine, EPA's heavy-duty engine remanufacturing standards require that the engine be rebuilt to the original emissions-certified design specification.[3] This includes a specific "critical parts list" of components to ensure that the exhaust emissions of the engine will be the same as when the engine was originally built and sold. Otherwise, it will violate anti-tampering rules. While this practice of traditional remanufacturing is

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[2] *Id.* at 23.
[3] 40 CFR § 86.004-40(b).

permissible under a specific set of EPA rules, an engine remanufactured to its original model year specifications would be in violation of current emission standards if it were installed and sold in new model year trucks as a *new* model year engine.

10. To be very clear, these remanufactured engines are quite serviceable, but they are not the same as "new model year" engines. Many have warranties, but not like newly-manufactured engine warranties. They have reused and reworked parts. These are intended to be rebuilt engines to legally replace similar engines in old trucks that have been equivalently maintained and reconditioned over time – not as an alternative to current-model-year engines to be sold in current-model-year trucks. *And they don't meet current-model-year emission standards*. This is a critical issue as it relates to "gliders." If these legally and appropriately *remanufactured old engine*s are allowed to be installed and sold in current-model-year vehicles *"as new,"* the emissions impact compared to *new* model year trucks with *new* model year engines will be huge. A rebuilt Model Year 2002 engine installed in a Model Year 2018 truck will have 10 times or more NOx and PM emissions compared to a 2018 engine in a 2018 truck, as described below. Earlier model year engines can emit up to 100 times the NOx and PM emissions of 2018 engines.

History of Heavy-Duty Engine and Vehicle Pollution Controls

11. Responding to concerns about health effects related to exposure to diesel exhaust, in the 1980s the U.S. EPA and the diesel engine industry began a journey in technology development and more protective regulatory standards aimed at addressing those concerns. This process required significant industry investment in research and development of emission control technologies. The Clean Air Act's "lead time and stability" requirements, unique to the U.S., would allow the new technologies to be introduced at a pace that was both responsive to the public need for emission control and also responsive to the industry need to deliver these new technologies into the market with reliability, durability and economic performance for the customers who purchased the new engines.

12. Figure 1 illustrates the most significant steps in emission control technology over the past three decades, indicating advancing technologies in adoption "S" curves on the vertical axis over time, as indicated on the horizontal axis.

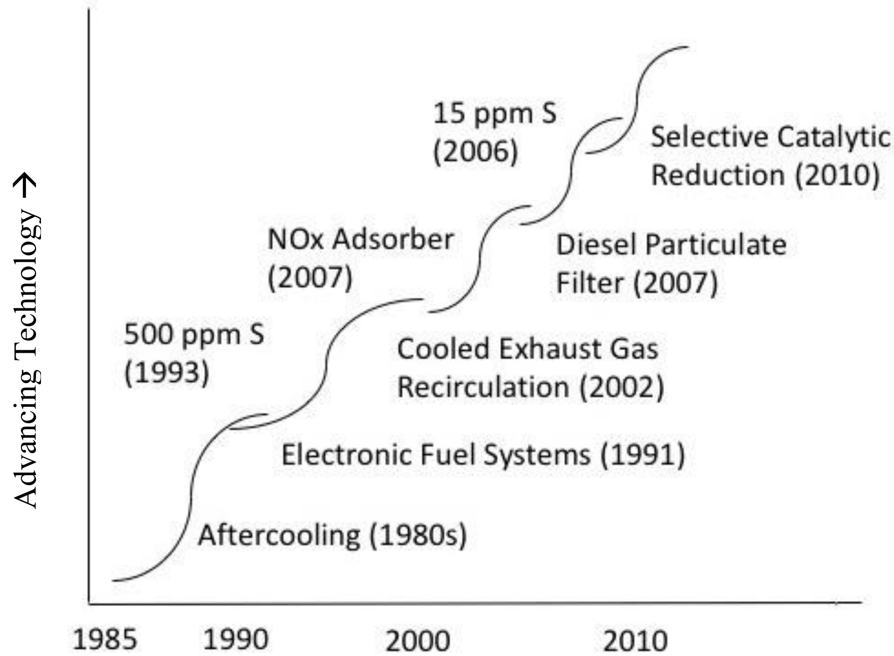

Fig. 1. Evolution of diesel emission control technology in the U.S. Source: John Wall.

13. Initial regulatory standards focused on reducing volatile organic compound (VOC) and NOx emissions, primary contributors to ground-level ozone and smog, which aggravate asthma and contribute to other respiratory health issues. For any internal combustion engine, air is drawn into the engine. Fuel is mixed with the air and burns to produce power. NOx is formed from the nitrogen and oxygen, present in ordinary air, at the high combustion temperatures. Higher temperatures lead to the production of more NOx. “Aftercooling,” introduced on turbocharged diesels in the 1980s, cooled the hot air coming out of the turbocharger before it entered the engine, thereby reducing NOx formation and

emissions while also enhancing performance and fuel economy – a "win-win" for the customer and the environment.

14. By the late 1980s, industry and regulators understood that both NOx and PM would need to be controlled, in order to address not only smog but also emerging health concerns that scientists and health professionals raised with regard to inhalation of diesel particulate matter (soot). And so came the introduction of higher-pressure and electronic fuel systems, optional in 1991 and uniformly applied across all heavy-duty engines by 1994. Electronic fuel systems delivered not only NOx and PM control, but also further improvements in customer value like higher power output, better fuel efficiency, faster transient response, and even better "cruise control."

15. In its 2001 rule (Control of Air Pollution from New Motor Vehicles: Heavy-Duty Engine and Vehicle Standards and Highway Diesel Fuel Sulfur Control Requirements), EPA laid out a framework for the following decade, issuing new health standards to drastically reduce NOx and PM emissions from new heavy-duty vehicles by 90% and 95%, respectively, from 2000 levels by 2010. For 2002 engines, manufacturers found that simple timing adjustments with electronic fuel systems would cost too much in fuel economy, so most engine manufacturers introduced "cooled exhaust gas recirculation," or EGR. This technology allowed further reduction of combustion temperatures without

significantly sacrificing fuel economy. In 2007, EPA's standards for PM emissions drove the uniform introduction of Diesel Particulate Filters (DPF) across all on-highway heavy-duty engines. Cummins introduced "NOx adsorbers" for NOx control on heavy-duty pickup diesel engines to meet the 2010 standards three years early. Most heavy-duty diesel engine manufacturers transitioned to SCR (Selective Catalytic Reduction) systems for NOx control in 2010, and all were applying SCR by 2013. The application of DPF and SCR technology allowed further optimization of the engine combustion process for power, performance, fuel efficiency and durability. And while the SCR system added cost, the upfront cost to consumers was more than offset by the savings from improved fuel economy it gave to 2010 and beyond heavy-duty vehicles and engines, even at the lower NOx level compared to 2007 vehicles and engines.

16. In parallel to engine technology development, diesel fuel manufacturers were required to reduce fuel sulfur from a maximum of 5000 ppm (parts per million) to a maximum of 500 ppm to enable compliance with 1994 particulate standards, then to a maximum of 15 ppm by 2006 to enable catalytic aftertreatment systems for Model Year 2007 vehicles and engines.

17. Model Year 2018 engines are the most powerful, fuel-efficient, and clean diesel engines that have ever been produced. Many incorporate technologies developed in the U.S Department of Energy-sponsored "SuperTruck" program –

putting the most advanced and practical industry- and government-funded fuel efficiency technologies into the hands of customers today. In particular, exhaust aftertreatment systems to control NOx and particulate emissions, introduced on 2007 and 2010 model year and later heavy-duty diesel engines, have enabled the optimization of the in-engine combustion process for better fuel economy and performance in much the same way that catalytic converters on passenger cars enabled automobile manufacturers to meet extremely low emissions requirements with much higher power and better fuel economy than non-catalyst cars.

18. EPA's new non-enforcement policy for glider emission standards tacitly permits glider manufacturers to substitute rebuilt older engines "as new" in newly-manufactured trucks at significantly higher rates. This non-enforcement allows those glider manufacturers and their customers to discard decades of progress in engine technology to reduce pollution and improve engine performance. The rule allows those manufacturers and their customers to use high-emitting engines, harming the health of all those unwittingly exposed to the higher exhaust emissions, including their truck drivers, loading dock workers, maintenance shop mechanics, and the general public. The minor up-front cost savings of installing an old engine in a new truck for an individual glider customer does not outweigh the increased public health benefits of low-emission new engines. Furthermore, allowing this to proceed undermines the economic benefit

to those who are employed in designing and manufacturing new engines to the current, well-justified emission standards.

19. **Magnitude of Emission Reductions Over Time:** In 1988, the emission standards over the new transient Federal Test Procedure were 10.7 g/bhp-hr (grams per brake horsepower hour, a standard unit of measure for heavy duty engine emissions) NOx and 0.60 g/bhp-hr PM. Unregulated emissions prior to this time were on the order of 16 g/bhp-hr NOx and 1 g/bhp-hr PM. Emission standards for MY 1998-2001, immediately predating the first introduction of Exhaust Gas Recirculation (EGR) technology, were 4.0 g/bhp-hr NOx and 0.10 g/bhp-hr PM. Emission standards in effect in 2018 are 0.20 g/bhp-hr NOx and 0.01 g/bhp-hr PM. The 2001 standards, which took effect during 2007-2010, represent a more than 98% reduction in NOx and 99% reduction in PM emissions from engines manufactured before NOx and PM emissions were regulated. Even compared to MY 2001 engines, MY 2018 engines deliver a 95% reduction in NOx and 90% reduction in PM. In fact, the practical reduction in PM from 2001 to 2018 is above 99% due to the efficiency of diesel particulate filters in reducing PM emissions well below the required standard.

20. **System Certification -- Integrated, Certified and Manufactured as "One System"**: While control of emissions moved from internal combustion optimization through 2006 to internal combustion optimization plus exhaust

aftertreatment catalysts in 2007 and beyond, all the engine- and vehicle-installed aftertreatment components are developed and optimized as a complete system. Each aftertreatment component is specifically designed and associated with the base engine and both are operated by a common electronic control system. Engine and exhaust aftertreatment are an integrated unit. Engine and vehicle manufacturers must document manufacturing process controls that ensure that the right exhaust aftertreatment components are being assembled with the associated engine in every new vehicle as part of their EPA emission compliance. All of this integration can be circumvented by non-enforcement of EPA's glider emission standards.

Fair Emissions Enforcement is Good for Business, and Glider Vehicles Undermine Evenhanded Enforcement

21. **New Engine Emissions Regulations are Clear, Doable, Enforceable and *FAIR* Across the Industry** – Heavy-duty diesel emission standards have been developed over time in a generally collaborative process. There were certainly debates between industry and regulators about rate and pace of emission reductions and even lawsuits over the three decades of technology and regulation development. However, the industry as a whole recognized that the only way to implement these changes in a fair and effective way was through clear, doable and enforceable (and enforced) standards, to ensure a level playing field for

all engine and vehicle manufacturers. It was and is a hallmark of U.S. emissions regulatory standards that businesses that invest heavily in research and development and in manufacturing facilities to produce low-emissions engines can count on EPA to enforce the same standards fairly across all competitors, to ensure that *all* invest in technology development and *all* comply with common standards – and if one skirts their committed responsibility and does not comply, there are severe penalties for noncompliance. The recent crackdown on Volkswagen's use of emissions defeat devices in the U.S. sends an important signal to all vehicle and engine manufacturers doing business in the U.S. that compliance is required and will be enforced, and there are severe penalties for noncompliance.

22. **Impact on Business Competitiveness and Environment**: "Gliders," current model year vehicles retrofitted with older engines which are noncompliant with current model year standards, are in complete contrast and conflict with the principles and commitments that obtain in this business and regulatory arena. They violate every principle of business fairness that has been espoused by business participants in the heavy-duty vehicle and engine market from the very beginning of our regulatory history and upheld by the U.S. EPA.

23. **Business Competitive Fairness and U.S. Jobs**: Engine manufacturers and their supply chain partners have spent tens of billions of dollars or more on R&D and manufacturing plants over the past decades and have created

a significant number of new U.S. jobs in engine and component research, engineering, manufacturing, and maintenance of heavy-duty engine systems and vehicles that deliver better value to their customers and better protect public health. The older, rebuilt engines in glider vehicles can emit up to 100 times the NOx and PM of current model year engines. Allowing glider vehicle manufacturers to assemble current model year vehicles with old remanufactured engines completely undermines the integrity of our regulatory and fair business competition environment. And it undermines the U.S. jobs that have been created to design and manufacture new engines and emission control systems, as well as the skilled mechanical technicians who maintain them.

24. **Public Health**: The independent Health Effects Institute (HEI), funded 50/50 by EPA and industry, has been a key research sponsor for laboratory and epidemiological studies on the human health effects of inhalation exposure to diesel exhaust emissions over time. HEI-sponsored studies on “old technology” diesels (engines that did not incorporate the catalytic diesel particulate filters and ultra-low-sulfur fuel that were introduced in 2007) indicated an increased incidence of lung tumors in animals exposed to diesel exhaust. They repeated a similar and more extensive study, the Advance Collaborative Emissions Study (ACES), on “new technology diesels”: Model Year 2007 engines with catalytic diesel particulate traps and ultra-low-sulfur diesel fuel as required of all engine and

fuel manufacturers in 2007, and subsequently Model Year 2010 engines equipped with new Selective Catalytic Reduction (SCR) NOx aftertreatment systems. As a result of the ACES research, HEI declared, "The most comprehensive examination to date of the emissions and health effects of new technology heavy duty diesel (NTDE) engines – engines meeting the US 2007/2010 and EURO VI/6 fuel and emission standards – has demonstrated dramatic improvements in emissions and the absence of any significant health effects (especially cancer)."[4]

25. Allowing large-scale production of gliders that use pre-2007 engines would expose vehicle operators, loading dock workers, mechanics, and the general public to the potential adverse health effects associated with old technology diesels.

Conclusion

26. Allowing EPA's new non-enforcement policy of the glider standards permits widespread manufacture of unregulated "gliders" using engines that do not comply with current emission standards, and unnecessarily exposes the general public and especially vehicle operators and those workers closely associated with these vehicles to potential health risks. Non-enforcement of the rules on the books violates principles of business fairness and undermines new-technology U.S. jobs.

[4] Health Effects Institute, *Comprehensive study finds substantial emissions and health benefits from US 2007/2010 and Euro VI/6 diesel engines* (Dec. 23, 2015), https://www.healtheffects.org/system/files/ACES-Exec-Summ-Press-Release122315_1.pdf.

And it would abrogate all the principles of regulatory development and basic trust between industry and U.S. government agencies, including the EPA and Department of Energy, who have for decades worked together in good faith, invested heavily in research, development and manufacturing, and created substantial U.S. new-technology jobs to deliver products that are safe, efficient, and effective into commerce. Heavy-duty manufacturers said as much to EPA in their testimony and comments opposing the new rule.[5]

I declare the foregoing is true and correct.

John C. Wall

Dated: July 13, 2018

[5] *See* Testimony of Susan Alt, Volvo Group North America, at EPA Hearing (Dec. 4, 2017), https://www.regulations.gov/document?D=EPA-HQOAR-2014-0827-4273; Testimony of Pat Quinn, Heavy-Duty Fuel Efficiency Leadership Group, at EPA Hearing (Dec. 4, 2017), https://www.regulations.gov/document?D=EPA-HQ-OAR-2014-0827-4310; Testimony of Jed Mandel, Truck and Engine Manufacturers Association, at EPA Hearing (Dec. 4, 2017), https://www.regulations.gov/document?D=EPA-HQ-OAR-2014-0827-4299; Comment of the Volvo Group, Docket No. EPA-HQ-OAR-2014-0827-4881 (Jan. 5, 2018), https://www.regulations.gov/document?D=EPA-HQ-OAR-2014-0827-4881; Comment of Navistar, Inc., Docket No. EPA-HQ-OAR-2014-0827-4875 (Jan. 5, 2018), https://www.regulations.gov/document?D=EPA-HQ-OAR-2014-0827-4875; Comment of Manufacturers of Equipment Controls Association, Docket No. EPA-HQ-OAR-2014-0827-4868 (Jan. 5, 2018), https://www.regulations.gov/document?D=EPA-HQ-OAR-2014-0827-4868.

XII.
Declarations

15. Michael Walsh, mechanical engineer and former EPA official

DECLARATION OF MICHAEL WALSH

I, Michael Walsh, declare as follows:

1. I am a mechanical engineer who has spent nearly 50 years working on issues related to motor vehicle pollution. I received a Bachelor of Science degree from Manhattan College in 1966 and pursued graduate study at Princeton University from 1969 to 1970.

2. I am currently an independent technical consultant working with governments and industries around the world, providing recommendations on effective strategies to reduce pollution associated with the transportation sector. Previously, I worked on motor vehicle pollution control efforts for the City of New York from 1970-74, and for the U.S. EPA from 1974-81. I also co-chaired the EPA's Mobile Sources Technical Advisory Committee for 12 years.

3. During my tenure at EPA, I served as Deputy Assistant Administrator for Mobile Source Air Pollution Control from 1977-81. In that role, I led the development of air pollution control standards applicable to medium- and heavy-duty vehicles, including the development of a more realistic emissions testing procedure as well as the world's first diesel particulate standard.

4. After leaving EPA, I became an independent consultant advising governments and industry on motor vehicle pollution control issues, including issues related to heavy-duty vehicles. I helped found the International Council on

Clean Transportation (ICCT), and I continue to advise its Board. ICCT is an organization founded to provide technical and scientific analysis to environmental regulators around the world to help improve the environmental performance of on-road, off-road, marine, and air transportation sources.

5. I have been involved in numerous other activities as well. These include serving as a consultant to the U.S. Senate Committee on Environment and Public Works during the development of the 1990 Clean Air Act Amendments; a member of the Committee for the Study of Public Policy for Surface Freight Transportation, convened by the National Research Council's Transportation Research Board; a member of the National Academy of Engineering Panel on the Future of the Automobile in China; and a member of the Independent Review Panel for EPA's 2007 Heavy-Duty Engine and Vehicle Standards and Highway Diesel Fuel Sulfur Control Requirements.

6. I have been invited to testify before the U.S. House of Representatives and have written several technical papers regarding heavy-duty vehicle emissions. I have also authored papers and made presentations regarding the transportation sector's significant contribution to climate change. I have contributed to the work of the Intergovernmental Panel on Climate Change (IPCC) and was recognized by the IPCC President in association with the 2007 Nobel Peace Prize as an individual who has "contributed substantially to the work of the IPCC over the years."

7. I have received EPA's Lifetime Individual Achievement Award and the California Air Resources Board's Haagen-Smit Award, given in recognition of significant career accomplishments in the air quality field. In 2005, I was selected as a MacArthur Fellow for my work designing and implementing innovative, cost-effective programs to improve air quality across the globe. In 2009, I received the Silver Magnolia Award from the City of Shanghai, given to foreigners in recognition of their contributions to Shanghai's development, and in 2010, I received the Friendship Award from China, which is the country's highest award for international experts.

EPA's Development of Heavy-Duty Vehicle Criteria Pollutant Standards

8. The EPA has spent decades working to reduce criteria pollutant emissions from the heavy-duty vehicle sector. In the 1990s and 2000s, EPA established increasingly protective emissions standards for heavy-duty vehicles and engines, instituting long-term programs to improve testing protocols and ensure compliance. As co-chair of the Mobile Source Technical Advisory Committee during the 1990s, I contributed to the development of those heightened pollution control standards. The history of those standards is relevant here, because glider vehicles are typically not compliant with even these legacy emission standards that are crucial for improving public health.

9. The chart below details the heavy-duty vehicle emission standards for criteria pollutants, including the dramatic pollution reductions that phased in during MY 2004 and MY2007-10. The emission standards are presented in grams per brake horsepower hour, or g/bhp-hr.

EPA Heavy-Duty Diesel Emission Standards			
Model Year Effective	**NOx Emission Limit**	**PM Emission Limit**	**Details**
1988	10.7	0.60	*See* EPA Office of Transportation Air Quality, Document EPA-420-B-16-018, Heavy-Duty Highway Compression-Ignition Engines and Urban Buses: Exhaust Emission Standards (Mar. 2016), https://nepis.epa.gov/Exe/ZyPDF.cgi?Dockey=P100O9ZZ.pdf
1990	6.0	-	
1991	5.0	0.25	
1994	-	0.10	
1998	4.0	-	
1998: Heavy-duty diesel engine manufacturers & EPA enter consent decrees; most manufacturers agree to meet the MY 2004 emission standard by 2002.			
2004	2.5*	-	Tech anticipated for compliance: 2nd gen electronic fuel injection, cooled exhaust gas recirculation (EGR), advanced turbocharging systems, advanced electronic control systems. *See* 62 Fed. Reg. 54694 (Oct. 21, 1997).
2007-10	0.20	0.01	Tech anticipated for compliance: Catalyzed diesel particulate filter, cooled EGR, NOx adsorbers, selective catalytic reduction. *See* 66 Fed. Reg. 5001 (Jan. 18, 2001).

*The MY 2004 standard could be met in two ways: 2.5 g/bhp-hr NOx with a 0.5 g/bhp-hr non-methane hydrocarbon (NMHC) cap, or 2.4 g/bhp-hr NOx.

10. In the 1990s, it became clear that in addition to controlling volatile organic compound (VOC) emissions, reducing oxides of nitrogen (NOx) emissions would be an essential part of an effective strategy to control ground-level ozone. *See* 60 FR 45579, 45580-81. States were struggling to meet their National

Ambient Air Quality Standards (NAAQS) goals by the Clean Air Act deadlines, and because ozone and its precursors travel across long distances, and mobile sources are major emitters of those pollutants, states and localities looked to EPA's national mobile source emission control program to complement their efforts. Both federal regulators and major industry participants recognized that emissions of NOx, PM, and diesel particulate from the heavy-duty freight sector would have to be drastically reduced in order to meet the air quality goals established by many state plans.

11. In 1995, EPA, the California Air Resources Board, and heavy-duty engine manufacturers representing over 90% of annual nationwide sales signed a Statement of Principles, recognizing "the importance of preserving the environment while maintaining a strong industry." 60 FR 45579, 45602. The Statement established a framework to develop and implement new heavy-duty diesel engine standards, particularly a combined non-methane hydrocarbon (NMHC) and NOx standard for MY 2004. 60 FR at 45603. Prior to the MY 2004 standard going into effect for heavy-duty vehicles, the most protective NOx emission standard was 4.0g/bhp-hr (grams per brake horsepower hour, a standard unit of measure for heavy-duty engine emissions), effective 1998; and the standard for particulate matter (PM) was 0.10g/bhp-hr, which took effect in 1994.

12. In 1998, the Department of Justice and EPA entered a consent decree

with seven of the largest heavy-duty diesel engine manufacturers in the country, after EPA alleged that the manufacturers had used defeat devices in violation of the Clean Air Act, resulting in significantly higher NOx and PM emissions from heavy-duty trucks.[1] All parties agreed that starting in the early 1990s, the manufacturers included control software in their heavy-duty diesel engines that caused the engine to switch to a higher-efficiency, more-polluting setting during highway cruising. EPA alleged that because of this technology, most heavy-duty diesel engines manufactured in the 1990s did not comply with emission limits—which were 5.0 g/bhp-hr NOx and 0.10g/bhp-hr PM in 1994. The consent decree required that the manufacturers fix existing engines in order to decrease their NOx emissions, levied $83.4 million in penalties against the companies,[2] and required that six of the manufacturers escalate their compliance timelines to meet the 2.5 g/bhp-hr limit for NMHC+NOx no later than October 1, 2002. *See* 65 FR 59895, 59899

13. EPA issued a final rule establishing the 2004 NOx+NMHC standard in 1997. 62 FR 54694 (Oct. 21, 1997). After an interim review, the agency reaffirmed the appropriateness of that standard in 2000. *See* NPRM, 64 FR 58472

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[1] *See* Order, *United States v. Volvo Truck Corp.*, No. 98-02547 (D.D.C. July 1, 1999) (entering a Consent Decree filed with the court on October 22, 1998).

[2] Hui He et al., *A Historical Review of the U.S. Vehicle Emission Compliance Program and Emission Recall Cases* at 26, ICCT (Apr. 2017), https://www.theicct.org/sites/default/files/publications/EPA-Compliance-and-Recall_ICCT_White-Paper_12042017_vF.pdf.

(Oct. 29, 1999); 65 FR 59895 (Oct. 6, 2000). The standard that became effective in 2004 limited NOx emissions to 2.5g/bhp-hr with a 0.5g/bhp-hr NMHC cap (or 2.4 g/bhp-hr NOx). The 2000 agency action also finalized a "Not-to-Exceed" requirement and testing protocol for all heavy-duty diesel engines, to ensure that emissions do not exceed specified limits "under any engine operation conditions that could reasonably be expected to be seen by that engine in normal vehicle operation and use," plus ambient conditions. 65 FR at 59911. The Not-to-Exceed limit sought to prevent the manufacture of engines that emit at a certain level under testing conditions and at another, higher level in the real world. An earlier version of the Not-to-Exceed limit was required for engine manufacturers in the 1998 consent decree. *Id.* at 59899.

14. EPA estimated that the MY 2004 standard would result in emission reductions of 186,000 tons of NOx and 10,000 tons of NMHC in 2005 from heavy-duty diesel engines, and by 2010 the annual reduction would reach 635,000 tons of NOx and 35,000 tons of NMHC. 65 FR at 59906. In its final rule, EPA observed that the standards would also drive reductions in PM and diesel particulate emissions. *Id.* at 59905. The NOx and NMHC emission reductions driven by the 2004 heavy-duty vehicle standard were important in helping states achieve their 2005 NAAQS attainment deadlines, and EPA identified ten major metropolitan areas with upcoming attainment deadlines that would directly benefit from the

expected emissions reductions from heavy-duty diesel and gasoline vehicles. *Id.* at 59904.

15. Even as EPA issued the MY 2004 standards, the agency observed that additional NOx and NMHC controls would be necessary to prevent emissions increases due to growth in the heavy-duty vehicle market and growth in vehicle miles traveled (VMT). 65 FR at 59905-906. EPA also stated that heavy-duty sector PM and diesel particulate emissions should be further reduced to minimize the adverse health effects of these pollutants.

16. The next phase of the long-term strategy to reduce criteria pollution from heavy-duty vehicles commenced with EPA's 2001 rule establishing standards to reduce heavy-duty engine PM and NOx emissions by 90% and 95%, respectively, below the existing MY 2004 standard levels. Those standards established "a comprehensive national control program that will regulate the heavy-duty vehicle and its fuel as a single system," phased into effect from 2007 to 2010. 66 FR 5001, 5002 (Jan. 18, 2001). The rule reduced the sulfur content of diesel fuel by 97%, effective in 2006, to allow vehicle engines to utilize advanced emission-reduction technologies without being damaged by sulfur. This rule further improved emission levels from the MY 2004 NOx+NMHC standard and the MY 1994 PM standard. *See* 66 FR at 5036.

17. In the 2001 rule, EPA estimated that heavy-duty trucks and buses comprised one-third of all NOx emissions and one quarter of mobile source PM emissions, with even greater contributions in urban areas. The adverse impacts of these pollutants on human health and society are numerous: premature mortality, aggravation of respiratory and cardiovascular diseases, chronic bronchitis, decreased lung function, crop and forestry losses (caused by ozone), substantial visibility impairment, and the acidification, nitrification, and eutrophication of water bodies (caused by NOx). *Id.* at 5006. Furthermore, EPA has concluded that diesel exhaust is likely to be carcinogenic to humans. 66 FR at 5022.

18. The agency projected that the 2010 standards would reduce annual emissions of NOx and PM by 2.6 million and 109,000 tons, respectively. *Id.* at 5002. EPA concluded that the benefits of these advanced, health-protective standards totaled $70.3 billion, including the prevention of 8,300 premature deaths, over 9,500 hospitalizations, and 1.5 million lost work days. *Id.* at 5005. The standards were necessary to help 45 areas across the U.S.—home to 128 million people—achieve compliance with the 1-hour ozone NAAQS; and many localities were also working to achieve the PM10 NAAQS standard. *Id.* at 5006. Reducing criteria pollutant emissions from heavy-duty vehicles would deliver particularly noticeable benefits to low-income neighborhoods in urban areas, because freight truck emissions disproportionately affect those communities. *Id.* at 5007, 5029.

19. The 2001 final rule established a phase-in process for heavy-duty engine and vehicle manufacturers to achieve full compliance with the new criteria pollutant standards. For the 2007-2010 period, EPA adopted a 50/50/50/100 percent phase-in schedule for heavy-duty diesel vehicles. This means that in 2007-2009, manufacturers had to achieve compliance with the new standards in 50% of the engines they produced. In 2010 (and onward), manufacturers had to achieve 100% implementation. *Id.* at 5037-38.

20. The 2010 standards were technologically realistic because recent innovations in diesel emissions control technology allowed for greater reductions in air pollution from heavy-duty engines and vehicles. In the rule, EPA observed that high-efficiency NOx and PM exhaust emission control technologies would be necessary to achieve the new standards, and that manufacturers had been developing and improving these technologies over the past several years. 66 FR at 5007. For example, the agency identified the catalyzed diesel particulate trap, the NOx adsorber, and selective catalytic reduction systems as emerging technologies that engine manufacturers could implement to achieve the standards. *Id.* at 5036.

21. EPA's 2010 standards for heavy-duty vehicles and engines ushered in an era of better, cleaner, diesel technology, reducing PM and NOx emissions by 90% and 95%, respectively. As the popularity of diesel engines has been on the rise for freight movement purposes, resulting in more trucks on the road and more

vehicle miles traveled, these standards are crucial for reducing harmful emissions and improving public health.

Glider Trucks Emit Significantly More Pollution than Modern Heavy-Duty Vehicles

22. Glider trucks surged in popularity as EPA's 2010 heavy-duty emission standards went into effect, with demand driven by freight fleets and drivers seeking vehicles that did not comply with the more protective standards. Estimates provided to EPA indicate that production of glider vehicles has increased by an order of magnitude from what it was during the 2004-2006 period – from a few hundred each year to thousands. These new glider trucks are built primarily using pre-2002 engines.

23. The pre-2002 engines are not compliant with the 2004 NOx+NMHC or the 2010 NOx and PM standards, and therefore the NOx and PM emissions of glider trucks are vastly higher than modern, fully compliant trucks. The current standards for NOx and PM require emissions at least 90 percent lower than the previous standards, so the NOx and PM emissions of any glider vehicles using pre-2007 engines are at least *ten times* higher than emissions from heavy-duty vehicles produced with new engines. Even more damaging are the pre-2002 engines commonly used in glider trucks, which lack both exhaust gas recirculation (EGR) and exhaust aftertreatment—emission control technologies that are now standard

for heavy-duty vehicles. Each glider vehicle on the road using an older engine, instead of a truck with a modern engine, results in significantly higher in-use emissions of air pollutants associated with a host of adverse human health effects.

24. Recent EPA emissions testing has shown that glider trucks emit more pollution than trucks using engines equipped with modern control technology. EPA updated its assessment of the environmental impacts of glider trucks in the 2016 Rule, performing two analyses using the Motor Vehicle Emission Simulator (MOVES) modeling tool.[3] One analysis, projecting future fleetwide emissions if glider vehicle production continued unrestricted, estimated that glider trucks would emit nearly 300,000 tons of NOx and nearly 8,000 tons of PM annually by 2025. The second analysis projected per-vehicle emissions for MY 2017 gliders, finding that—even without any miscalibration—glider vehicles are projected to emit 20 to 40 times as much NOx and PM as the same number of fully compliant vehicles.

25. EPA completed its most recent glider study in November 2017, testing two glider vehicles to determine actual emissions levels. The agency tested a MY 2016 Peterbilt 389 and MY 2017 Peterbilt 579 glider vehicle, and compared them to equivalent tests of two conventionally manufactured MY 2014 and 2015

[3] Memorandum to the Docket, "Emissions Modeling Files for Glider Analysis," Docket ID No. EPA-HQ-OAR-2014-0827-2232 (July 2016), https://www.regulations.gov/document?D=EPA-HQ-OAR-2014-0827-2232.

tractors.[4] The criteria pollutant emissions (NOx, PM, HC, CO) from the glider vehicles were consistently higher than those of the conventionally manufactured tractors. Under highway cruise conditions, NOx emissions from the Peterbilt 389 and Peterbilt 579 glider vehicles were approximately 43 times as high, and PM emissions were approximately 55 times as high as the conventionally manufactured MY 2014 and 2015 tractors. The results from this test program indicate that EPA's initial analysis in its Final 2016 Rule is accurate and, if anything, conservative.

26. Under the 2016 Rule, EPA had restricted the number of glider trucks that could be produced with engines not meeting current emissions standards. Now, with EPA's decision not to enforce these glider standards for 2018-19, the number of glider trucks on the roads can be expected to increase, with a corresponding increase in harmful air pollution.

27. The purpose of the non-enforcement policy is to enable sales of glider vehicles in excess of the limits established in the existing regulations. The glider trucks that are produced and sold under EPA's non-enforcement policy will operate on highways and roads for years to come, emitting pollution at levels far beyond modern freight trucks. Once a super-polluting glider vehicle is sold and a

[4] "Chassis Dynamometer Testing of Two Recent Model Year Heavy-Duty On-Highway Diesel Glider Vehicles", November 20, 2017

buyer takes possession, there is no ready means for the agency to "claw back" the vehicle from the private purchaser, and the likely consequence of each such sale is years of operation and extraordinarily high emissions of each glider vehicle sold. Accordingly, even if the policy is held unlawful, vehicles sold pursuant to the policy will likely be in circulation, causing massive harm to the public, for years hence.

Excess Glider Truck Emissions Have Serious Health Implications

1. Heavy-duty vehicles emit pollutants that contribute to ambient concentrations of ozone, PM, NO2, SO2, CO, and air toxics. These vehicles are significant contributors to emissions of VOC and NOx, which contribute to the formation of both ozone and PM2.5. Glider vehicles, as discussed above, emit these pollutants at significantly higher levels than modern trucks. All of these pollutants have adverse health and environmental impacts.

2. Millions of people across the United States currently live in counties designated nonattainment for one or more of the National Ambient Air Quality Standards—meaning the levels of one or more air pollutants exceed the standard established as safe for human health by the NAAQS. Still more people live in areas with a risk of exceeding the NAAQS in the future. Many Americans continue to be exposed to ambient concentrations of air toxics at levels that have the potential to cause adverse health effects. In addition, populations who live,

work, or attend school near major roads experience elevated exposure concentrations to a wide range of air pollutants.

3. In light of the many adverse effects of PM, NOx, and other criteria pollutants, reducing the number of glider vehicles produced using older engines will yield substantial improvements in public health. An analysis conducted by EPA shows that, using incidence-per-ton estimates, the number of PM2.5-related premature mortalities caused by glider vehicles can be estimated from the lifetime reductions in both NOx (which forms nitrate PM in secondary reactions) and directly emitted PM2.5.[5] Using benefit-per-ton values, the present value of total monetized PM2.5-related benefits associated with these lifetime emission reductions can also be calculated. Cases of premature mortality are presented as a range based on results derived from two studies.[6] Monetized benefits are presented as net present values in 2013$, assuming a 30-year vehicle lifetime and a 3% and 7% discount rate. Both premature mortalities and benefits are shown for model year 2017 glider vehicles based on the increase in lifetime emissions over a fully compliant model year 2017 vehicle. Note that there would be additional benefits

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[5] EPA & NHTSA, *Response to Comments for Joint Rulemaking, Greenhouse Gas Emissions and Fuel Efficiency Standards for Medium- and Heavy-Duty Engines and Vehicles – Phase 2*, at 1965 (Aug. 2016).

[6] Krewski, D. et al., Extended follow-up and spatial analysis of the American Cancer Society study linking particulate air pollution and mortality, Res Rep Health Eff Inst. 2009 May;(140):5-114; discussion 115-36; Lepeule, J. et al., Chronic exposure to fine particles and mortality: an extended follow-up of the Harvard Six Cities study from 1974 to 2009, Environ Health Perspect. 2012 Jul;120(7):965-70. doi: 10.1289/ehp.1104660.

that have not been quantified, such as reducing incidences of cancer, low birth weight, and reduced visibility—as outlined at Paragraph 35 herein.

4. Lifetime NOx and PM Emissions Increases (tons) For Model Year 2017 Glider Vehicles and Associated Impacts:[7]

Increased Lifetime NOx Emissions per 1,000 Glider Vehicles	41,500 Tons
Increased Lifetime $PM_{2.5}$ Emissions per 1,000 Glider Vehicles	680 Tons
Premature Mortalities per 1,000 Glider Vehicles	70-160 Persons
Monetized $PM_{2.5}$-related Benefits Associated with *Reducing* Glider Production	\$0.3-1.1 Billion

5. The glider vehicle pollution standards—which EPA is not enforcing for 2018-19 under its new non-enforcement policy—were projected to prevent the use of super-polluting pre-2002 engines in 5,000 to 10,000 glider vehicles annually, and would prevent the emission of 207,500-415,000 tons of NOx and 3,400-6,800 tons of PM over the lifetime of those vehicles and engines. This is estimated to prevent 350 to 1,600 premature mortalities for each model year of glider vehicle production (and achieve \$1.5 to 11.0 billion in monetized PM2.5-related benefits).

[7] EPA & NHTSA, *Response to Comments for Joint Rulemaking, Greenhouse Gas Emissions and Fuel Efficiency Standards for Medium- and Heavy-Duty Engines and Vehicles – Phase 2*, at 1965 (Aug. 2016). An analysis performed by EDF estimates similar emissions increases and impacts from continued glider production. *See* Comment of EDF, ELPC, & WE ACT for Environmental Justice on EPA's Proposed Rule, *Repeal of Emission Requirements for Glider Vehicles, Glider Engines, and Glider Kits*, 82 Fed. Reg. 53,442, at Appendix B, Table 6 (Jan. 10, 2018), https://www.edf.org/sites/default/files/content/Appendix%20B%20-%20Emission%20and%20Health%20Effects%20of%20Glider%20Vehicles.pdf.

6. As described above, EPA's sensitivity analysis uses estimates of the benefits from reducing the incidence of PM2.5-related health impacts. These estimates, which are expressed per ton of PM2.5-related emissions avoided due to glider vehicle production limits, represent the total monetized value of quantified human health benefits (including reduction in both premature mortality and premature morbidity) from reducing each ton of directly emitted PM2.5, or its precursors (e.g., NOx), from on-road mobile sources.

7. The table below, from EPA's 2016 rulemaking, shows the quantified PM2.5-related benefits captured in the per-ton estimates, as well as unquantified PM2.5 effects the per-ton estimates are unable to capture.

8. Human Health and Welfare Effects of PM2.5[8]

POLLUTANT	QUANTIFIED AND MONETIZED IN PRIMARY ESTIMATES	UNQUANTIFIED EFFECTS
$PM_{2.5}$	Adult premature mortality Acute bronchitis Hospital admissions: respiratory and cardiovascular Emergency room visits for asthma Nonfatal heart attacks (myocardial infarction) Lower and upper respiratory illness Minor restricted-activity days Work loss days Asthma exacerbations (asthmatic population) Infant mortality	Cancer, mutagenicity, and genotoxicity effects Chronic and sub chronic bronchitis cases Strokes and cerebrovascular disease Low birth weight Pulmonary function Chronic respiratory diseases other than chronic bronchitis Non-asthma respiratory emergency room visits Visibility Household soiling

[8] 81 Fed. Reg. at 73885; EPA & NHTSA, *HDP2 RTC* at 1966 (Aug. 2016).

9. This sensitivity analysis uses per ton benefits estimates taken from the "Technical Support Document Estimating the Benefit per Ton of Reducing PM2.5 Precursors from 17 Sectors," U.S. Environmental Protection Agency, Office of Air and Radiation, Office of Air Quality Planning and Standards, Research Triangle (2013).

10. EPA's sensitivity analysis, using benefit-per-ton values, only estimates the economic value of the human health benefits associated with the resulting reductions in PM2.5 exposure. Thus, the per-ton estimates do not reflect cancers attributable to exposure to diesel PM exhaust, a likely human carcinogen. However, it captures other benefits related to reductions in diesel PM (chiefly, benefits related to cardiovascular health endpoints) to the extent that diesel PM is included in measured PM2.5. Furthermore, due to analytical limitations with the benefit per ton method, this analysis does not estimate reductions in premature mortality and other benefits resulting from reductions in population exposure to other criteria pollutants such as ozone. However, it is likely that the ozone-related benefits associated with reducing emissions of NOx and VOC emitted by glider vehicles using high polluting engines are substantial. Finally, the benefits per-ton method does not monetize all the potential health and welfare effects associated with reduced concentrations of PM2.5.

11. In sum, EPA developed its criteria pollutant standards for heavy-duty vehicles and engines through an extensive, thoughtful process, with engagement and innovative new technology developments from engine and vehicle manufacturers. The current popular glider vehicles circumvent those standards, often to operate at emissions levels that have not been compliant since 2002. The heightened emissions resulting from EPA's new non-enforcement policy for glider emission standards are incredibly harmful to human health.

I declare under penalty of perjury that the foregoing is true and correct.

Executed on July 14, 2018

Michael P. Walsh

Michael Walsh

i. EPA Chart: Heavy-Duty Diesel Exhaust Emission Standards

Office of Transportation and Air Quality
EPA-420-B-16-018
March 2016

Heavy-Duty Highway Compression-Ignition Engines and Urban Buses: Exhaust Emission Standards

	Year	HC (g/bhp-hr)	NMH C (g/bhp-hr)	NMHC + NOx g/bhp-hr)	NOx (g/bhp-hr)	PM (g/bhp-hr)	CO (gbhp-hr)	Idle CO (percent exhaust gas flow)	Smoke [a] (Percentage)	Useful Life (hours/years/miles)	Warranty Period (years/miles)
Federal [b]	1974-78	-	-	16	-	-	40	-	20 / 15 / 50	-	-
	1979-84	1.5	-	10	-	-	25	-	20 / 15 / 50	-	-
	1985-87	1.3	-	-	10.7	-	15.5	-	20 / 15 / 50	LHDDE: - / 8 / 110,000 MHDDE: - / 8 / 185,000 HHDDE: - / 8 / 290,000	-
	1988-89	1.3 [d]	-	-	10.7	0.6	15.5	0.5 [c]	20 / 15 / 50	1990-97 and 1998+ for HC, CO, and PM: LHDDE: - / 8 / 110,000 MHDDE: - / 8 / 185,000 HHDDE: - / 8 / 290,000 1994+ urban buses for PM only: - / 10 / 290,000 1998+ for NOx: LHDDE: - / 10 / 110,000 MHDDE: - / 10 / 185,000 HHDDE: - / 10 / 290,000	5 / 100,000 [q]
	1990	1.3 [d]	-	-	6.0	0.6	15.5	0.5 [c]	20 / 15 / 50		
	1991-93	1.3	-	-	5.0 [ABT]	0.25 [ABT] 0.10 [e]	15.5	0.5 [c]	20 / 15 / 50		
	1994-97	1.3	-	-	5.0 [ABT]	0.1 [ABT] 0.07[f], 0.05 [g]	15.5	0.5 [c]	20 / 15 / 50		
	1998-2003	1.3	-	-	4.0 [ABT]	0.1 [ABT] 0.05 [g]	15.5	0.5 [c]	20 / 15 / 50		
	2004-2006 [h]	-	-	2.4 (or 2.5 with a limit of 0.5 on NMHC) [o] [ABT [i, j]]	-	0.1 0.05 [g]	15.5	0.5	20 / 15 / 50	For all pollutants: [p] LHDDE: - / 10 / 110,000 MHDDE: - / 10 / 185,000 HHDDE: 22,000 / 10 / 435,000	LHDDE: 5 / 50,000 All other HDDE: 5 / 100,000 [q]
	2007+ [h, k, l, m, n]	-	0.14 [o]	2.4 (or 2.5 with a limit of 0.5 on NMHC) [ABT]	0.2 [o]	0.01	15.5	0.5	20 / 15 / 50		

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Notes:

The test procedures are the EPA Transient Test Procedure and the EPA Smoke Test Procedure.

a Percentages apply to smoke opacity at acceleration/lug/peak modes.

b Standards for 1990 apply only to diesel-fueled heavy-duty engines (HDE). Standards for 1991+ apply to both diesel- and methanol-fueled HDEs. Standards that apply to urban buses specifically are footnoted.

c This standard applies to the following fueled engines for the following model years: methanol - 1990+, natural gas and liquefied petroleum gas (LPG) - 1994+.

d For petroleum-fueled engines, the standard is for hydrocarbons (HC). For methanol-fueled engines, the standard is for total hydrocarbon equivalent (THCE).

e Certification standard for urban buses for 1993.

f Certification standard for urban buses from 1994-95.

g Certification standard for urban buses from 1996 and later. The in-use standard is 0.07.

h Load Response Test certification data submittal requirements take effect for heavy-duty diesel engines beginning in model year 2004. The following requirements take effect with the 2007 model year: steady-state test requirement and Not-to-Exceed (NTE) test procedures for testing of in-use engines. On-board diagnostic requirements applicable to heavy-duty diesel vehicles and engines up to 14,000 pounds gross vehicle weight rating (GVWR) phase in from the 2005 through 2007 model years.

Continued

i The modified averaging, banking, and trading program for 1998 and later model year engines applies only to diesel cycle engines. Credits generated under the modified program may be used only in 2004 and later model years.

j For heavy-duty diesel engines, there are three options to the measurement procedures currently in place for alternative fueled engines: (1) use a THC measurement in place of an non-methane hydrocarbon (NMHC) measurement; (2) use a measurement procedure specified by the manufacturer with prior approval of the Administrator; or (3) subtract two percent from the measured THC value to obtain an NMHC value. The methodology must be specified at time of certification and will remain the same for the engine family throughout the engines' useful life. For natural gas vehicles, EPA allows the option of measuring NMHC through direct quantification of individual species by gas chromatography.

k Starting in 2006, refiners must begin producing highway diesel fuel that meets a maximum sulfur standard of 15 parts per million (ppm).

l Subject to a Supplemental Emission Test (1.0 x Federal Test Procedure [FTP] standard (or Family Emission Limit [FEL]) for nitrogen oxides [NOx], NMHC, and particulate matter [PM]) and a NTE test (1.5 x FTP standard [or FEL] for NOx, NMHC, and PM).

m EPA adopted the lab-testing and field-testing specifications in 40 CFR Part 1065 for heavy-duty highway engines, including both diesel and Otto-cycle engines. These procedures replace those previously published in 40 Code of Federal Regulations (CFR) Part 86, Subpart N. Any new testing for 2010 and later model years must be done using the 40 CFR Part 1065 procedures.

n Two-phase in-use NTE testing program for heavy-duty diesel vehicles. The program begins with the 2007 model year for gaseous pollutants and 2008 for PM. The requirements apply to diesel engines certified for use in heavy-duty vehicles (including buses) with GVWRs greater than 8,500 pounds. However, the requirements do not apply to any heavy-duty diesel vehicle that was certified using a chassis dynamometer, including medium-duty passenger vehicles with GVWRs of between 8,500 and 10,000 pounds.

o NOx and NMHC standards will be phased in together between 2007 and 2010. The phase-in will be on a percent-of-sales basis: 50 percent from 2007 to 2009 and 100 percent in 2010.

p Note that for an individual engine, if the useful life hours interval is reached before the engine reaches 10 years or 100,000 miles, the useful life shall become 10 years or 100,000 miles, whichever occurs first, as required under Clean Air Act section 202(d).

q Years or miles, whichever comes first but never less than the basic mechanical warranty for the engine family.

Code of Federal Regulations (CFR) citations:

- 40 CFR 86.099-11 Emission standards for 1999 and later model year diesel heavy-duty engines and vehicles.
- 40 CFR 86.004-11 Emission standards for 2004 and later model year diesel heavy-duty engines and vehicles.
- 40 CFR 86.007-11 Emission standards and supplemental requirements for 2007 and later model year diesel heavy-duty engines and vehicles.

XII.
Declarations

16. Omega Wilson, President of West End Revitalization Association

DECLARATION OF OMEGA R. WILSON

I, Omega R. Wilson, declare as follows:

1. I am the co-founder and President of the West End Revitalization Association (WERA), a 501-(c)(3) non-profit organization based in Mebane, North Carolina, including Alamance County and Orange County. I have extensive experience on issues relating to human health impacts associated with goods movement in the freight, rail, air, and marine transportation sectors. This includes: a) human exposure to air, water, and soil contamination; b) construction displacement of homes, churches, cemeteries, and small businesses without fair compensation of low-income African American communities and tribal groups; c) exclusion of official public comment and input of impacted residents by local/state/federal government agencies and their paid contractors; and d) filing formal complaints at the U.S. Department of Justice for violations for Title VI of the Civil Rights Act of 1964, Environment Justice Executive Order 12898 of 1994, and several federal public and environmental health statutes.

2. I reside in Mebane, North Carolina.

3. I was appointed as a "community perspective" member of the Environmental Protection Agency's (EPA) National Environmental Justice

Advisory Council (NEJAC) from 2007 to 2010. One of the NEJAC workgroups on which I served was "*Reducing Air Emissions Associated with Goods Movement: Working towards Environmental Justice*" from 2007 to 2009.[1] The Goods Movement workgroup submitted recommendations in November 2009, which the full NEJAC members adopted in July 2010 under Federal Advisory Committee Act (FACA) guidelines.[2]

4. For over 15 years I have served on and provided input to the coordinating committee of the North Carolina Environmental Justice Network (NCEJN). I authored "*Lack of Basic Amenities: Indicators of Health Disparities in Low-Income Minority Communities and Tribal Areas*" published by the North Carolina Medical Journal in May 2011.[3] I co-authored *"The West End Revitalization Association (WERA)'s Right to Basic Amenities Movement: Voice and Language of Ownership and Management of Public Health Solutions in Mebane, North Carolina"* published in the Progress in Community Health Partnerships Journal by The Johns Hopkins University Press,[4] and other scholarly

[1] *See e.g.* National Environmental Justice Advisory Council, Reducing Air Emissions Associated With Goods Movement: Working Towards Environmental Justice (2009), *available at* https://www.epa.gov/sites/production/files/2015-02/documents/2009-goods-movement.pdf.
[2] Pub. L. 92–463, 86 Stat. 770, enacted October 6, 1972.
[3] Omega Wilson, Lack of Basic Amenities: Indicators of Health Disparities in Low-Income Minority Communities and Tribal Areas, 72(2) N C Med J. 145 (2011).
[4] Omega R. Wilson, et al., The West End Revitalization Association (WERA)'s Right to Basic Amenities Movement: Voice and Language of Ownership and Management of Public Health Solutions in Mebane, North Carolina, 2 Progress in Commun. Health P'ships 237 (2008).

presentations focusing on the impacts of pollution from goods movement on environmental justice communities.

5. Environmental justice communities are made-up of predominantly low-income and/or minority populations located in close proximity to environmental and human health hazards. In screening for environmental justice communities, the EPA considers environmental factors including air toxics concentrations, diesel particulate matter levels, ozone concentration, particulate matter (PM) levels, lead paint exposure, dust exposure, and proximity to vehicle traffic, potential chemical accident sites, wastewater discharge sites, hazardous waste management facilities, and Superfund sites.

6. Executive Order 12898 (1994), requires federal agencies, including the EPA, to "make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations."[5] A 2011 Memorandum of Understanding reaffirms the Executive's commitment to enforce Executive Order 12898; declares "the continued importance of identifying and addressing environmental justice considerations in agency programs, and activities;" and renews the process "for agencies to provide environmental justice strategies and

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[5] 59 Fed. Reg. 7629 (Feb. 16, 1994).

implementation progress reports."[6] The 2011 Memorandum and Executive Order 12898 indicate an area of focus to be "*impacts from commercial transportation and supporting infrastructure.*"[7]

7. I founded WERA in 1994 with fellow community members to support access to basic public health amenities for marginalized and minority communities. WERA serves residents, homeowners, and landowners of five African American communities in Alamance County and Orange County, North Carolina, as well as impacted areas in other states.

8. In 1994, when the North Carolina Department of Transportation (NCDOT) revealed plans for the construction of a 27-mile highway through two historic African American and Native American heritage communities in Mebane, our residents mobilized to protect their families from the negative effects of this proposed development.[8] Homeowners already had been denied basic amenities for decades, such as safe drinking water, clean groundwater and a functioning sewage system—and the highway project would cause even more detriment to the local community and environment.[9]

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[6] Memorandum of Understanding on Environmental Justice and Executive Order 12898, at 3, available at https://www.epa.gov/sites/production/files/2015-02/documents/ej-mou-2011-08.pdf.
[7] *Id.* at 3.
[8] West End Revitalization Association, *History*, *available at* http://www.wera-nc.org/history.htm (last accessed Apr. 18, 2018).
[9] *See* EPA, *Failing Septic Systems and Contaminated Well Waters: African-American Communities in Mebane, North Carolina* (Dec. 20, 2002), *available at* http://www.wera-nc.org/News/epa/epaej_1202.htm (last accessed Apr. 18, 2018).

9. After learning from U.S. Department of Justice (DOJ) officials that every taxpaying community is entitled to basic amenities guaranteed by the government, homeowners organized WERA to give our community a voice and challenge the planned eight-lane interstate corridor. In 1999, WERA developed a list of public health disparities and submitted administrative complaints to DOJ under Title VI of the Civil Rights Act of 1964[10] and referenced the Environmental Justice Executive Order 12898 of 1994.[11]

10. In 1999, DOJ requested federal government agencies to investigate their lack of oversight of civil rights laws and public health statutes during the highway planning process that had been going on for 16 years, without opportunities for public input. That included DOJ's own Civil Rights Division, EPA, the U.S. Department of Housing and Urban Development (HUD), the U.S. Department of Agriculture, and the U.S. Department of Commerce.

11. Following the WERA administrative complaints, a moratorium was placed by DOJ on NCDOT 119-bypass and overpass construction from 1999 until 2016, to ensure that safeguards to mitigate the potential impacts of the construction were put in place. Some essential infrastructure was finally provided to the West End Community in Alamance County—sewer lines were installed in one African

[10] West End Revitalization Association, *History*, *available at* http://www.wera-nc.org/history.htm (last accessed Apr. 18, 2018).
[11] *See* Executive Order 12898 of February 11, 1994; Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, 59 Fed. Reg. 7629 (Feb. 16, 1994).

American impacted community for the first time; underground storage tanks were removed from nearby commercial properties; and homes rehabbed, sidewalks installed and dirt streets paved for the first time. Even so, over 400 homes still lack these basic amenities.

12. In 2016, the NCDOT, with federal funds, proceeded with 119-bypass/overpass highway corridor construction. The highway project adversely impacts WERA communities in a number of ways, including causing health-harming air pollution from heavy-duty trucks during construction and once the road is opened.

13. Hundreds of construction vehicles will emit diesel pollution for many years with the expansion and construction of the highway, mega industrial, and distribution sites that are being built and expanded in coordination with the NCDOT highway project.

14. Part of the justification for the highway expansion is to facilitate freight shipping from a nearby industrial park, the North Carolina Industrial Center (NCIC),[12] which includes a Ford Motor Company facility and distribution centers for Walmart ($100-million construction cost for distribution center is the largest in the USA), and Lidl of Germany ($125-million construction cost distribution

[12] North Carolina Department of Transportation, NC 119 Relocation Record of Decision, at 4 (Dec. 2009), *available at* https://www.ncdot.gov/projects/nc119relocation/download/ROD.pdf.

center). "Goods movement" diesel engine traffic will increase to and from the NCIC and the North Carolina Commerce Park, which are located between N.C. 119 and Trollingwood-Hawfields Road, and between U.S. 70 and Interstate 40/85 in Mebane.[13] These North Carolina "dry land port" construction projects on the east coast of the United States for national and international growth will increase highway corridor diesel vehicle movement and emissions to and from air, rail, and marine ports twenty hours a day.

15. WERA communities likewise face the air pollution impacts from diesel locomotive engines that run along the rail line connecting the industrial parks to the mainline that parallels U.S. 70.[14]

16. Environmental justice communities experience disproportionate impacts of pollution resulting from the goods movement supply chain. The goods movement supply chain includes mining raw materials, manufacturing, warehousing, transportation, ports, public distribution, and end use. Pollution resulting from the goods movement supply chain includes diesel emissions from transportation corridors and air, rail, and water ports.

[13] For example, the German company, Lidl, has built a 900,000-square-foot distribution center at the N.C. Commerce Park. *See* The Times-News, Chasing commerce: Industrial parks continue to grow (January 2017), *available at* http://www.thetimesnews.com/news/20170121/chasing-commerce-industrial-parks-continue-to-grow.
[14] *See, e.g.*, The Times-News, New track opens at Mebane industrial center (Dec. 15, 2016), *available at* http://www.thetimesnews.com/news/20161215/new-track-opens-at-mebane-industrial-center.

17. The movement of goods via freight transportation relies on diesel engines that emit PM, oxides of nitrogen (NOx), sulfur oxides (SOx), and other pollutants that are harmful to human health. Communities living near significant diesel emitting sources, such as ships, trains, and freight trucks are more likely to be exposed to elevated levels of diesel exhaust through direct exposure and elevated regional air pollutants. Significantly, the communities living near diesel emitting sources and experiencing the greatest exposure to diesel emissions are often environmental justice communities, made up of low-income and minority populations.

18. The physical human health impacts experienced by environmental justice communities as a result of close proximity to high concentrations of diesel emissions include increased risks of cancer, cardiovascular disease, asthma, other respiratory illness, and premature death from vehicular accidents. Children in these environmental justice communities experience increased rates of early on-set asthma and reduced lung function. These heavy trafficked areas also increase risks from school buses picking up children daily.

19. The economic impacts on environmental justice communities include increased health insurance costs due to higher premiums and exclusions related to chronic illness, and decreased property values due to close proximity to major sources of pollution.

20. I understand that glider vehicles are heavy-duty freight trucks that typically use older engines that lack modern pollution controls.

21. I understand that EPA's recent non-enforcement decision states that it will not enforce the 300 glider per year production exemption limit under current regulations against any manufacturer or supplier. I further understand that this decision applies to all production of non-compliant glider vehicles through 2019, imminently harming human health and the environment.

22. I understand that the memorandum outlining the non-enforcement policy, issued on July 6, 2018, does not address the impact of glider vehicles on environmental justice communities located near heavy freight traffic areas.

23. Based on my knowledge of the health impacts of diesel engine emissions, I am concerned that the final rulemaking will have a severe and disproportionate human health impact on environmental justice communities such as the communities in North Carolina that WERA represents. These communities already bear disproportionate impacts of air quality hazards because of their close proximity to multiplying pollution sources such as long-term highway construction, transportation corridors, industrial facilities, and wastewater treatment plants.

24. EPA's decision not to enforce standards for glider vehicles will expose low-income and minority populations to increased levels of harmful

pollutants. I am very concerned that it will amplify incidence of respiratory and cardiac-related chronic illness in environmental justice communities that are already overburdened by nearby sources of air pollution.

25. I am also concerned that increased diesel pollution from glider vehicles will depress property values in communities such as those that WERA represents.

I declare under penalty of perjury that the foregoing is true and correct.

Omega R. Wilson

Omega R. Wilson

Dated July 12, 2018

XIII.

EDF, Center for Biological Diversity, and Sierra Club's Request for Immediate Withdrawal or Administrative Stay of EPA's Non-Enforcement Decision, to EPA Acting Administrator Wheeler (July 10, 2018)

July 10, 2018

Andrew K. Wheeler
Acting Administrator, United States
Environmental Protection Agency
Office of the Administrator Code 1101A
1200 Pennsylvania Ave NW
Washington, D.C. 20460

RE: Request For Immediate Withdrawal Or Administrative Stay Of Unlawful Decision To Cease Enforcement Of Regulatory Limits On Pollution From Super-Polluting "Glider" Diesel Freight Trucks

Dear Acting Administrator Wheeler:

The Environmental Defense Fund, Center for Biological Diversity, and Sierra Club respectfully request that you immediately withdraw or stay EPA's attached decision to **cease enforcing** certain air-pollutant-emission limits that the Clean Air Act and EPA's own duly promulgated regulations impose on heavy-duty "glider" diesel freight trucks.[1] This blatant and "extreme … abdication of [your agency's] statutory responsibilities" is not only illegal,[2] it is extraordinarily harmful to public health (as EPA's own data show) and to the vast majority of truck manufacturers, who must comply with the emission limitations that the agency is unlawfully not enforcing for their competitors.

As you know, a "glider" is a heavy-duty diesel truck assembled by installing a used engine and powertrain in a new truck body, known as a "glider kit." But even the "used" engine is a freshly-remanufactured part. Prior to assembly, a glider engine is wholly rebuilt to "significantly increase [its] service life."[3] Unsurprisingly, then, gliders are "marketed and sold as 'brand new' trucks" and compete in the same market as heavy-duty trucks with brand-new parts.[4] Finally, and most importantly for present purposes, gliders are "new motor vehicles," as that term is defined in the Clean Air Act.[5] This means that a newly manufactured glider is properly subject to the same air-pollution regulations as any other heavy-duty truck that enters the American marketplace.

Gliders must meet modern emission standards for new heavy-duty trucks in order to safeguard public health. Left unregulated, a glider engine emits orders of magnitude more harmful pollution than a heavy-duty truck engine designed to comply with those standards.[6] EPA's own estimates from 2016 indicate that, as compared to a world where all new heavy-duty trucks meet the standards that apply to other new heavy-duty trucks, every model year of glider production at

[1] *See* 5 U.S.C. § 705.
[2] *Heckler v. Chaney*, 470 U.S. 821, 833 n.4 (1985).
[3] 40 C.F.R. § 1068.120(b). *See also* EPA, *Greenhouse Gas Emissions and Fuel Efficiency Standards for Medium- and Heavy-Duty Engines and Vehicles—Phase 2*, 81 Fed. Reg. 73478, 73518 n.93 (Oct. 25, 2016) (Phase 2 Rule) ("[A]ll of the donor engines installed in glider vehicles are rebuilt.").
[4] Phase 2 Rule, 81 Fed. Reg. at 73514.
[5] 42 U.S.C. § 7550(3).
[6] Phase 2 Rule, 81 Fed. Reg. at 73943.

then-current production rates would increase pollution of nitrogen oxides (NO_x) and fine particulate matter ($PM_{2.5}$) by 415,000 tons and 6,800 tons, respectively.[7] Those are *huge* numbers, and EPA concluded that if production continued on pace, glider vehicles would account for about one third of total NOx and PM emissions from the heavy duty truck sector by 2025, even though gliders would constitute only 5% of heavy-duty trucks on the road.[8] And those pollution estimates are almost certainly too low, as indicated by more recent tests of glider vehicles conducted by EPA in 2017.[9] Even using the agency's conservative 2016 estimates, every year of unregulated glider production can be expected to cause 700 to1600 premature deaths from $PM_{2.5}$ pollution alone, not to mention cancers, respiratory ailments, and other serious health problems, through the life of those vehicles.[10] It is virtually impossible to avoid those consequences once heavy-duty glider trucks are sold because the Act regulates vehicles almost exclusively at the point of manufacture. Even a brief period of unregulated glider production, then, will have substantial and irreparable consequences. To put it bluntly but accurately: EPA's avowed decision to stop enforcing these critical air-pollution protections will kill and sicken Americans on a large scale.

Importantly, EPA's *existing* regulations already allow each small manufacturer to produce 300 heavy-duty glider vehicles per year that are exempt from current pollution control requirements applicable to all other newly sold heavy-duty trucks (in addition to allowing unlimited production of glider vehicles that *do* satisfy those requirements), in order to accommodate the historical but extremely limited role of gliders as a means to salvage engines from wrecked vehicles.[11] These regulations were validly promulgated and never challenged in court by any glider manufacturer.

This state of affairs was apparently unsatisfactory to ex-Administrator E. Scott Pruitt, who proposed last November to reinterpret the statutory term "new motor vehicle" to exclude gliders completely—ignoring the plain language of the Clean Air Act, and conceding that its legislative history lacks evidence to support the proposal, but basing his proposal on a *possible* construction of an entirely different law enacted for an entirely different purpose.[12] The agency appears to have realized that its proposal was irredeemably flawed after receiving comments of the undersigned organizations and a host of other entities, including States, NGOs, modern engine manufacturers, and trucking-industry stakeholders, who saw the proposed rule for what it was: an illegal effort to codify a competitive advantage for a small cadre of favored manufacturers to the detriment of literally everyone else. The agency's ill-advised proposal did not hold up for other reasons as well, most notably a public renunciation of the sole "study" on which EPA had rested its tentative but still indefensible suggestion that heavy-duty glider trucks might not

[7] *See ibid.*; EPA & NHTSA, *Response to Comments for Joint Rulemaking, Greenhouse Gas Emissions and Fuel Efficiency Standards for Medium- and Heavy-Duty Engines and Vehicles – Phase 2*, at 1965 (Aug. 2016) ("Response to Comments").

[8] *See* Phase 2 Rule, *supra* n.6.

[9] EPA, "Chassis Dynamometer Testing of Two Recent Model Year Heavy-Duty On-Highway Diesel Glider Vehicles," Nov. 20, 2017, Docket No. EPA-HQ-OAR-2014-0827-2417.

[10] Response to Comments at 1881; *see also* Phase 2 Rule at 73836, 73943.

[11] 40 C.F.R. § 1037.105(t)(1)(ii). This exemption expires in 2021, *ibid.*, but EPA also created permanent exemptions for gliders with engines that are less traveled or more modern. *See id.* §§ 1037.150(t)(2)(vii)(2) and 1037.635(c)(1).

[12] EPA, *Repeal of Emission Requirements for Glider Vehicles, Glider Engines, and Glider Kits*, 82 Fed. Reg. 53442, 53444–46 (Nov. 16, 2017) ("Proposed Repeal").

actually pollute more than heavy-duty trucks powered by modern engines with the latest emission-control technologies.[13] If that were so, of course, there would be no need for the agency to revisit its glider-specific regulations because heavy-duty glider trucks could simply comply with the standards applicable to all other heavy-duty trucks.

EPA initially seemed in a rush to finalize the proposed rule, denying requests for an extension of the comment period that were filed by EDF and other interested parties concerned about the lack of information disclosed by the agency and its untenable legal, scientific and factual conclusions. But once the comment period closed, the proposal sat for six months with no action by EPA.

Until last Friday, the effective date of Mr. Pruitt's resignation as Administrator. Late that night, without meeting even the barest standard of transparency, EPA announced that it was "exercising its enforcement discretion in 2018 and 2019,"[14] and inviting companies to violate the annual cap of 300 exempted gliders per year per manufacturer during that period while the agency attempts to develop a defensible rationale for lifting that cap.

The following Monday, on the first day of your tenure as Acting Administrator, EPA published to its website a letter memorializing the blanket nonenforcement decision previously announced. That letter, attached here for your reference, is styled a "Conditional No Action Assurance," but there is nothing "conditional" about it. Assistant Administrator Susan Parker Bodine states in no uncertain terms that "I am today providing a 'no action assurance'" to all "Small Manufacturers" of heavy-duty glider trucks and all "Suppliers" of heavy-duty glider kits.[15] The letter provides that its "no action assurance will remain in effect" for a full calendar year (and apply to two full years of unlawful glider production), unless EPA finalizes a "rule extending the compliance date applicable to small manufacturers of glider vehicles."[16]

By way of explanation, EPA states only that it has "determined that additional evaluation of several [unnamed] matters is required before it can take final action on the" rule it proposed eight months ago. The letter also alludes to unnamed glider manufacturers who allegedly "reli[ed] on" the agency's proposed rule—instead of relying on EPA's actual standards on the books—that "have reached the[]" 2018 annual limit of 300 super-polluting glider trucks and now wish to violate existing law by producing more. The letter states that EPA is "exercis[ing] its enforcement discretion with respect to the applicability of 40 C.F.R. § 1037.635" for all affected manufacturers and suppliers, inviting them to engage in the illegal production of glider vehicles up to the "highest annual production of glider kits and glider vehicles for any year from 2010 to

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[13] *See* Letter of Philip B. Oldham, President, Tennessee Tech University, to E. Scott Pruitt (Feb. 19, 2018), at https://www.edf.org/sites/default/files/content/EDF%20Second%20Supplemental%20Comment%20re%20TTU%20Study%202.27.18%20Final2.pdf (explaining that "knowledgeable experts within the University have questioned the methodology and accuracy of the report," and that TTU is "investigating an allegation of research misconduct related to the study"); Proposed Repeal, 82 Fed. Reg. at 53444.

[14] *See* Eric Lipton, *On Last Day for its Chief, E.P.A. Grants a Loophole*, New York Times, July 7, 2018, page A12 (quoting EPA Press Secretary Molly Block).

[15] Environmental Protection Agency, *Conditional No Action Assurance Regarding Small Manufacturers of Glider Vehicles* (July 6, 2018), *available at* https://www.epa.gov/enforcement/conditional-no-action-assurance-regarding-small-manufacturers-glider-vehicles. (emphasis added).

[16] *Id*. (emphasis added).

2014." The result of this action will be an enormous increase in harmful pollution from what is permitted under the current regulations.[17]

One struggles to imagine a more blatant flouting of the rule of law. Finding itself unable to justify a change to a validly promulgated regulation, EPA has announced that it will not enforce that regulation for at least a year (and with respect to two full vehicle model years), by which time EPA hopes to have divined a reason to make the change. In effect, EPA has substituted a sweeping, general non-enforcement decision for what otherwise would have been a deeply flawed final rule. The agency's decision not to enforce an entire regulation, full stop, "represents [its] final … position on this issue, has the status of law, and has an immediate and direct effect" on glider manufacturers and suppliers, their industry competitors, and (most importantly) the public at large.[18] The agency has offered essentially no explanation, let alone a "reasoned" one, for its decision to ignore existing law.[19]

It is telling that this indefensible decision to stop enforcing this vital regulation took place under cloak of administrative darkness, during the final night of Mr. Pruitt's tenure. This decision mocks basic norms of transparency and accountability, as well as the rule of law, and it severely and needlessly harms the public that EPA is entrusted to serve.[20]

The agency's definitive refusal to enforce vital health protections is flagrantly unlawful and must be reversed. At a minimum, to prevent irreparable harm to our members and to the public at large, and pursuant to Federal Rule of Appellate Procedure 18(a)(1), the undersigned request that you issue a stay of this unlawful and injurious decision immediately.

Respectfully submitted,

<u>/s/ Vickie Patton</u>
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[17] 40 C.F.R. § 1037.150(t)(3).
[18] *Clean Air Council v. Pruitt*, 862 F.3d 1, 6 (D.C. Cir. 2017) (quoting *Int'l Union, United Mine Workers of America v. Mine Safety & Health Admin.*, 823 F.2d 608, 615 (D.C. Cir. 1987)).
[19] *Encino Motorcars, LLC v. Navarro*, 136 S. Ct. 2117, 2125 (2016).
[20] *See, e.g.*, 42 U.S.C. § 7401(b)(1).

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XIV.

13 States' Request for Immediate Withdrawal or Administrative Stay of EPA's Non-Enforcement Decision, to EPA Acting Administrator Wheeler (July 13, 2018)

Attorneys General of California, Connecticut, Illinois, Maine, Maryland, Massachusetts, New Jersey, New York, North Carolina, Oregon, Pennsylvania, Vermont, and Washington and the Pennsylvania Department of Environmental Protection and the California Air Resources Board

July 13, 2018

VIA EMAIL AND OVERNIGHT MAIL

Andrew K. Wheeler
Acting Administrator, United States
Environmental Protection Agency
William Jefferson Clinton Building
1200 Pennsylvania Ave N.W.
Washington, D.C. 20004

Re: *Request for Withdrawal or Administrative Stay of United States Environmental Protection Agency's "Conditional No Action Assurance Regarding Small Manufacturers of Glider Vehicles"*

Dear Acting Administrator Wheeler:

The Attorneys General of California, Connecticut, Illinois, Maine, Maryland, Massachusetts, New Jersey, New York, North Carolina, Oregon, Pennsylvania, Vermont, and Washington, and the Pennsylvania Department of Environmental Protection and the California Air Resources Board (the "States") write to respectfully request that you immediately withdraw or issue an administrative stay of the United States Environmental Protection Agency's ("EPA's") unlawful de facto suspension of its duly promulgated regulation limiting the production of highly polluting glider vehicles and glider kits ("Glider Rule").[1] See Susan P. Bodine, Assistant Administrator, "Conditional No Action Assurance Regarding Small Manufacturers of Glider Vehicles" (July 6, 2018) ("de facto suspension" or "suspension").

As discussed below, EPA's de facto suspension of the Glider Rule is clearly unlawful. While framed as an exercise of enforcement discretion, EPA's action "amount[s] to an abdication of its statutory responsibility[y]"[2] to implement the Glider Rule and circumvents the substantive and procedural requirements that EPA must meet in order to modify a rule. Further, the action violates EPA's own longstanding policy against "no action assurances," and its practice of issuing such assurances only in narrow circumstances not applicable here, such as where there will not be an increase in environmental harm. Here, based on EPA's own data, the detrimental effect of EPA's suspension on public health and the environment will be dramatic. Therefore, absent quick action on your part to withdraw or stay EPA's de facto suspension, the States are prepared to take action in court.

[1] The Glider Rule is part of the Greenhouse Gas Emissions and Fuel Efficiency Standards for Medium- and Heavy-Duty Engines and Vehicles—Phase 2 (81 Fed. Reg. 73, 478 (Oct. 25, 2016)).
[2] See *Heckler v. Chaney*, 470 U.S. 821, 833, fn. 4 (1985).

The Glider Rule, proposed in 2015 and adopted in 2016 as part of the Phase 2 heavy-duty vehicle fuel efficiency and greenhouse gas emissions standards rulemaking, struck a compromise between the interests of small businesses that salvage and refurbish engines from damaged trucks and the severe public health and environmental impacts from these old, highly polluting engines.[3] After a yearlong transition period, glider manufacturers are subject to limits on the use of *non-emissions compliant* engines, based on historic sales of gliders for their original purpose—to salvage relatively new engines from damaged trucks.[4] The de facto suspension perversely incentivizes the more recent "tenfold increase in glider kit production since the [model year] 2007 criteria pollutant emission standards took effect," an increase that "reflects an attempt to avoid these more stringent standards and (ultimately) the Clean Air Act."[5]

The facts demonstrate that EPA is using a "no action" assurance here because it recognizes it cannot lawfully support an amendment of the Glider Rule. EPA as much as admits that it cannot go forward with its Proposed Repeal without developing a new rationale and evidence to support it, due to concerns raised by public comment.[6] EPA also admits that it must undertake notice and comment rulemaking to alter a duly promulgated rule, such as the Glider Rule—not just issue a memorandum.[7] Further, it is well established that EPA must have statutory authority for any changes it proposes, and particularly for modification of effective dates or compliance dates of rules already in effect.[8]

EPA supplies no good reasons to support its action. EPA's de facto suspension of the Glider Rule from July 2018 through July 2019 will allow the manufacturers of *non-emission compliant* glider vehicles and glider kits to raise their production to many times the level that would otherwise be permissible[9] without fear of enforcement by EPA. Based on data EPA relied on in adopting the Glider Rule in 2015, adding this number of gliders to our nation's roads would lead to hundreds of premature deaths[10] and well over one hundred thousand tons of NOx and diesel particulate matter ("PM") pollution.[11] Without acknowledging the increased risk of premature deaths and other public health and environmental harms the de facto suspension will cause, EPA contends that it will prevent economic harms to manufacturers. However, in addition to the fact that such economic harms are speculative (given that these manufacturers could still

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[3] See, e.g., 81 FR at 73944-45; see also Response to Comments, Appendix A, EPA-426-R-16-901 (Aug. 2016) at 1963, Figures A-2 and A-3 (charting the difference in emissions between gliders and other new trucks) (Attachment A).

[4] See Response to Comments, Appendix A, EPA-426-R-16-901 (Aug. 2016) at 1961, Figure A-1 (Attachment B). The data from 2000-2009 reflects the historic number of engines salvaged from damaged trucks, while the numbers post-2009 reflect glider manufacturers expansion into use of non-emissions compliant engines sourced from trucks that had not been damaged in accidents. See 81 Fed. Reg. at 73,943.

[5] 81 Fed. Reg. at 73,943.

[6] De Facto Suspension at 2.

[7] *Id.*

[8] EPA should be well aware of these requirements, having been reminded of them recently by the Court of Appeals for the D.C. Circuit. See *Clean Air Council v. Pruitt*, 862 F.3d 1, 4 (D.C. Cir. 2017); see also *Natural Resources Defense Council v. National Highway Traffic Safety Administration*, -- F.3d --, 2018 WL 3819321 at *12 (2d Cir. June 29, 2018) (holding that an agency may not alter a rule without notice and comment, nor does an agency have any inherent authority to stay a final rule).

[9] See Response to Comments, Appendix A, EPA-426-R-16-901 (Aug. 2016) at 1964.

[10] *Id.* at 1877 (5,000-10,000 additional gliders would emit enough particulate matter pollution to cause 350 to 1,600 premature deaths).

[11] *Id.* at 1875-1876.

produce emission compliant trucks[12]), unsupported and unquantified, EPA failed to consider the far greater economic consequences of the health impacts of increased glider sales—consequences EPA itself estimated to be, on average, from $300,000 to $1,100,000 *for each non-emissions compliant additional glider sold*.[13]

Further, EPA has not met any of the procedural requirements for the suspension of a rule. No proposal was put to the public and no comment was sought. No data or analysis accompanied EPA's arbitrary suspension. Indeed, the memoranda constituting the action were not even released publicly until three days after their issuance. And, the dates of the memoranda indicate that this decision was made with less than a single day's consideration.

EPA cannot avoid these legal requirements by elevating form over substance and seeking to paint its action as an unreviewable exercise of enforcement discretion. EPA's decision not to apply the limitations to any gliders for the next twelve months is a sweeping "abdication of its statutory responsibilities," not an exercise of enforcement discretion. EPA's action also clearly violates its own longstanding "*Policy Against 'No Action' Assurances*," which dates to the Reagan Administration.[14] The 1984 policy expressly states that it "applies in all contexts, including assurances requested: …on the basis that revisions to the underlying legal requirement are being considered,"[15] as is the case with EPA's de facto suspension. The 1984 policy allows for exceptions only in narrow cases, for example, where necessary "to allow action to avoid extreme risks to public health and safety."[16] Here, EPA's action does not avoid such risks, but instead creates them.[17] In short, EPA's action is an unlawful rule suspension masquerading as an exercise of enforcement discretion.

[12] See 81 Fed. Reg. 73,518; 40 C.F.R. §§ 1037.150(t) and (t)(1)(vii).
[13] Response to Comments, Appendix A, EPA-426-R-16-901 (Aug. 2016) at 1965.
[14] Courtney M. Price, Assistant Administrator For Enforcement and Compliance Monitoring, Policy Against "No Action" Assurances, (Nov. 16, 1984) (Attachment C).
[15] *Id.* at 2. In reaffirming the 1984 policy against "no action assurances" eleven years later, EPA called the policy "a necessary and critically important element of the wise exercise of the Agency's enforcement discretion…." Steven A. Herman, Assistant Administrator, Processing Requests for Use of Enforcement Discretion (Mar. 3, 1995) (Attachment D).
[16] *Id.* at 2.
[17] EPA's present "no action assurance" differs substantially from those that came before it, either because in prior examples EPA has expressly found that the no action assurance will not increase environmental harm, or because EPA has identified technical barriers, or because EPA needed additional time to respond to a court order.

Given the absence of any rational or lawful basis to maintain EPA's de facto suspension, and in light of the imminent threat posed to public health and the environment, we respectfully request, pursuant to Federal Rule of Appellate Procedure 18(a)(1), that EPA immediately withdraw or administratively stay its action.

Yours Sincerely,

FOR THE STATE OF CALIFORNIA

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cc: Susan Parker Bodine, Assistant Administrator, Office of Enforcement and Compliance Assurance, EPA (via email)
Bill Wehrum, Assistant Administrator, Office of Air and Radiation, EPA (via email)

Encl.

ATTACHMENT A

Figure A-2: Annual Per-Vehicle NOx Emissions (tons/year)
For Model Year 2017 Glider Vehicles and Other New Vehicles

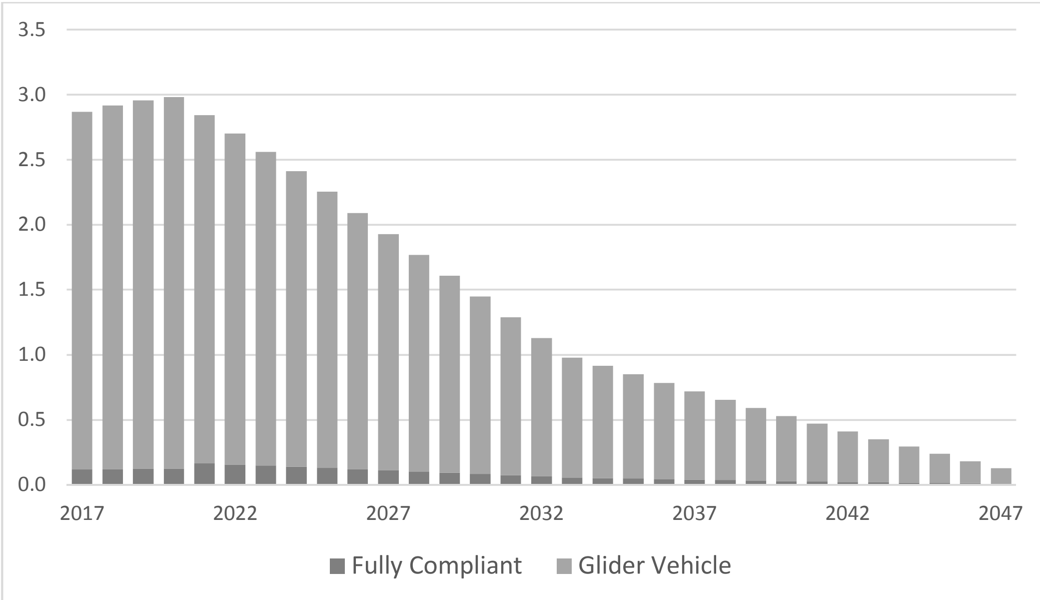
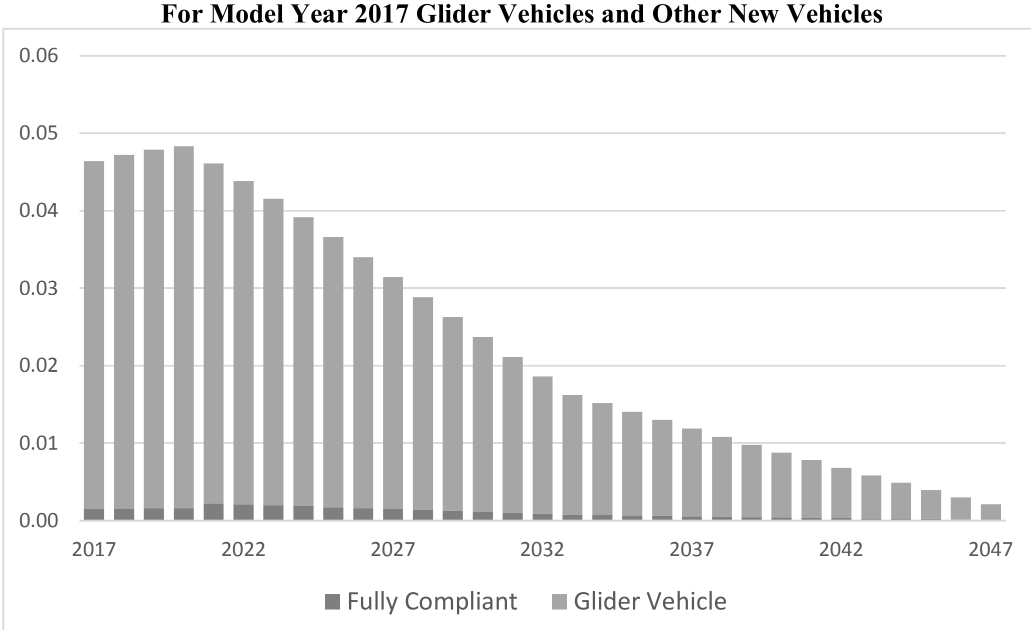


Figure A-3: Annual Per-Vehicle PM Emissions (tons/year)
For Model Year 2017 Glider Vehicles and Other New Vehicles

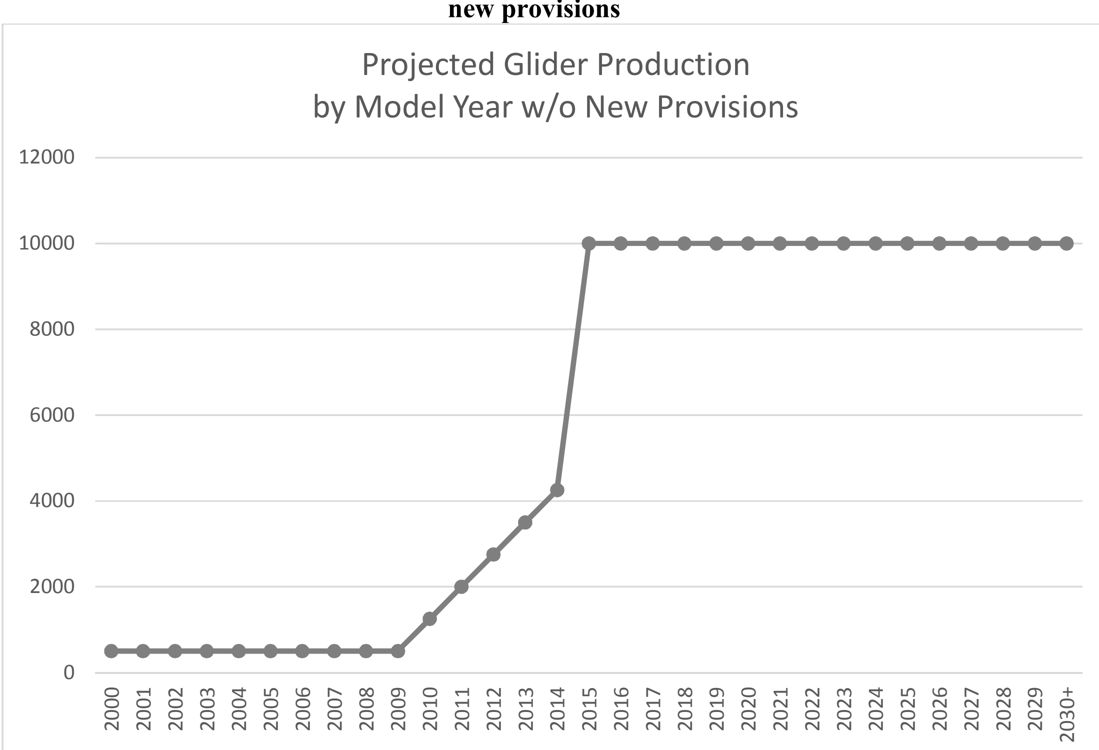


ATTACHMENT B

Fleetwide Emission Projections

Based on public comments, EPA is estimating that approximately 10,000 gliders will be produced in 2016. Consistent with this, the modeling of gliders discussed here assumed annual glider sales of 10,000 for 2015 and later. As noted above, the modeling assumed that these gliders emit at the level equivalent to the engines meeting the MY 1998-2001 standards without miscalibration.

Figure A- 1: Glider vehicle production projected for fleetwide analysis without new provisions



We modeled impacts on NOx and PM inventories with and without restrictions for two calendar years: 2025 and 2040. The restrictions were modeled as limiting sales in 2018 and later to 1,000 new gliders each year. This control case roughly approximates the restrictions being adopted for 2018 and later, and is consistent with the proposed requirements. The total number of vehicles was held constant by increasing the number of fully compliant vehicles (i.e., vehicles with engines meeting 2017 and later standards for NOx and PM) by 9,000 for each model year after 2017. However, we recognize that the actual number of gliders produced annually under the control case may vary by year and/or be higher or lower than 1,000. The results are shown below. This control scenario does not reflect the restrictions being adopted for 2017. See the model year analysis below for the impacts of model year 2017 glider vehicles.

ATTACHMENT C

EC-P-1998-125

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

GM #34
SE. 1-5

NOV 16 1984

OFFICE OF
ENFORCEMENT AND
COMPLIANCE MONITORING

MEMORANDUM

SUBJECT: Policy Against "No Action" Assurances

FROM: Courtney M. Price Courtney M. Price
Assistant Administrator for Enforcement
and Compliance Monitoring

TO: Assistant Administrators
Regional Administrators
General Counsel
Inspector General

This memorandum reaffirms EPA policy against giving definitive assurances (written or oral) outside the context of a formal enforcement proceeding that EPA will not proceed with an enforcement response for a specific individual violation of an environmental protection statute, regulation, or other legal requirement.

"No action" promises may erode the credibility of EPA's enforcement program by creating real or perceived inequities in the Agency's treatment of the regulated community. This credibility is vital as a continuing incentive for regulated parties to comply with environmental protection requirements.

In addition, any commitment not to enforce a legal requirement against a particular regulated party may severely hamper later enforcement efforts against that party, who may claim good-faith reliance on that assurance, or against other parties who claim to be similarly situated.

This policy against definitive no action promises to parties outside the Agency applies in all contexts, including assurances requested:

- both prior to and after a violation has been committed;
- on the basis that a State or local government is responding to the violation;

- on the basis that revisions to the underlying legal requirement are being considered;

- on the basis that the Agency has determined that the party is not liable or has a valid defense;

- on the basis that the violation already has been corrected (or that a party has promised that it will correct the violation); or

- on the basis that the violation is not of sufficient priority to merit Agency action.

The Agency particularly must avoid no action promises relating either to violations of judicial orders, for which a court has independent enforcement authority, or to potential criminal violations, for which prosecutorial discretion rests with the United States Attorney General.

As a general rule, exceptions to this policy are warranted only

- where expressly provided by applicable statute or regulation (e.g., certain upset or bypass situations)

- in extremely unusual cases in which a no action assurance is clearly neccessary to serve the public interest (e.g., to allow action to avoid extreme risks to public health or safety, or to obtain important information for research purposes) and which no other mechanism can address adequately.

Of course, any exceptions which EPA grants must be in an area in which EPA has discretion not to act under applicable law.

This policy in no way is intended to constrain the way in which EPA discusses and coordinates enforcement plans with state or local enforcement authorities consistent with normal working relationships. To the extent that a statement of EPA's enforcement intent is necessary to help support or conclude an effective state enforcement effort, EPA can employ language such as the following:

"EPA encourages State action to resolve violations of the _______________ Act and supports the actions which __(State)__ is taking to address the violations at issue. To the extent that the State action does not satisfactorily resolve the violations, EPA may pursue its own enforcement action."

I am requesting that any definitive written or oral no action commitment receive the advance concurrence of my office. This was a difficult decision to reach in light of the valid concerns raised in comments on this policy statement; nevertheless, we concluded that Headquarters concurrence is important because the precedential implications of providing no action commitments can extend beyond a single Region. We will attempt to consult with the relevant program office and respond to any formal request for concurrence within 10 working days from the date we receive the request. Naturally, emergency situations can be handled orally on an expedited basis.

All instances in which an EPA official gives a no action promise must be documented in the appropriate case file. The documentation must include an explanation of the reasons justifying the no action assurance.

Finally, this policy against no action assurances does not preclude EPA from fully discussing internally the prosecutorial merit of individual cases or from exercising the discretion it has under applicable law to decide when and how to respond or not respond to a given violation, based on the Agency's normal enforcement priorities.

cc: Associate Enforcement Counsels
OECM Office Directors
Program Compliance Office Directors
Regional Enforcement Contacts

ATTACHMENT D

EC-P-1998-07

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

MAR 03 1995

OFFICE OF
ENFORCEMENT AND
COMPLIANCE ASSURANCE

MEMORANDUM

SUBJECT: Processing Requests for Use of Enforcement Discretion

FROM: Steven A. Herman
Assistant Administrator

TO: Assistant Administrators
Regional Administrators
General Counsel
Inspector General

In light of the reorganization and consolidation of the Agency's enforcement and compliance assurance resources activities at Headquarters, I believe that it is useful to recirculate the attached memorandum regarding "no action" assurances[1] as a reminder of both this policy and the procedure for handling such requests. The Agency has long adhered to a policy against giving definitive assurances outside the context of a formal enforcement proceeding that the government will not proceed with an enforcement response for a specific individual violation of an environmental protection statue, regulation, or legal requirement. This policy, a necessary and critically important element of the wise exercise of the Agency's enforcement discretion, and which has been a consistent feature of the enforcement program, was formalized in 1984 following Agency-wide review and comment. Please note that OECA is reviewing the applicability of this policy to the CERCLA enforcement program, and will issue additional guidance on this subject.

A "no action" assurance includes, but is not limited to: specific or general requests for the Agency to exercise its enforcement discretion in a particular manner or in a given set of circumstances (i.e., that it will or will not take an enforcement action); the development of policies or other statements purporting to bind the Agency and which relate to or would affect the Agency's enforcement of the Federal environmental laws and regulations; and other similar requests

[1] Courtney M. Price, Assistant Administrator for Enforcement and Compliance Monitoring, Policy Against "No Action" Assurances (Nov. 16, 1984) (copy attached).

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for forbearance or action involving enforcement-related activities. The procedure established by this Policy requires that any such written or oral assurances have the advance written concurrence of the Assistant Administrator for Enforcement and Compliance Assurance.

The 1984 reaffirmation of this policy articulated well the dangers of providing "no action" assurances. Such assurances erode the credibility of the enforcement program by creating real or perceived inequities in the Agency's treatment of the regulated community. Given limited Agency resources, this credibility is a vital incentive for the regulated community to comply with existing requirements. In addition, a commitment not to enforce a legal requirement may severely hamper later, necessary enforcement efforts to protect public health and the environment, regardless of whether the action is against the recipient of the assurances or against others who claim to be similarly situated.

Moreover, these principles are their most compelling in the context of rulemakings: good public policy counsels that blanket statements of enforcement discretion are not always a particularly appropriate alternative to the public notice-and-comment rulemaking process. Where the Agency determines that it is appropriate to alter or modify its approach in specific, well-defined circumstances, in my view we must consider carefully whether the objective is best achieved through an open and public process (especially where the underlying requirement was established by rule under the Administrative Procedures Act), or through piecemeal expressions of our enforcement discretion.

We have recognized two general situations in which a no action assurance may be appropriate: where it is expressly provided for by an applicable statute, and in extremely unusual circumstances where an assurance is clearly necessary to serve the public interest and which no other mechanism can address adequately. In light of the profound policy implications of granting no action assurances, the 1984 Policy requires the advance concurrence of the Assistant Administrator for this office. Over the years, this approach has resulted in the reasonably consistent and appropriate exercise of EPA's enforcement discretion, and in a manner which both preserves the integrity of the Agency and meets the legitimate needs served by a mitigated enforcement response.

There may be situations where the general prohibition on no action assurances should not apply under CERCLA (or the Underground Storage Tanks or RCRA corrective action programs). For example, at many Superfund sites there is no violation of law. OECA is evaluating the applicability of no action assurances under CERCLA and RCRA and will issue additional guidance on the subject.

Lastly, an element of the 1984 Policy which I want to highlight is that it does not and should not preclude the Agency from discussing fully and completely the merits of a particular action, policy, or other request to exercise the Agency's enforcement discretion in a particular manner. I welcome a free and frank exchange of ideas on how best to respond to violations, mindful of the Agency's overarching goals, statutory directives, and enforcement and compliance priorities. I do, however, want to ensure that all such requests are handled in a consistent and coordinated manner.

Attachment

cc: OECA Office Directors
Regional Counsels
Regional Program Directors

XV.

Eric Lipton, *‘Super Polluting’ Trucks Receive Loophole on Pruitt’s Last Day*, N.Y. Times (July 6, 2018)

The New York Times

'Super Polluting' Trucks Receive Loophole on Pruitt's Last Day

By Eric Lipton

July 6, 2018

WASHINGTON — In the final hours of Scott Pruitt's tenure as administrator, the Environmental Protection Agency moved on Friday to effectively grant a loophole that will allow a major increase in the manufacturing of a diesel freight truck that produces as much as 55 times the air pollution as trucks that have modern emissions controls.

The move by the E.P.A. came after intense lobbying by a small set of manufacturers that sell glider trucks, which use old engines built before new technologies significantly reduced emissions of particulates and nitrogen oxide that are blamed for asthma, lung cancer and other ailments.

It was just as strongly opposed by an unusual alliance of public health groups like the American Lung Association, environmental groups like the Environmental Defense Fund and major industry players like United Parcel Service, the largest truck fleet owner, and Volvo Group, one of the largest truck manufacturers.

The shift in agency policy came quietly late Friday, the last day of work for Mr. Pruitt, who resigned after several ethics scandals. But agency officials confirmed to The New York Times that, through the end of 2019, the E.P.A. will not enforce an annual cap of 300 gliders per manufacturer that had been imposed in January.

The glider truck concept began so the engines of relatively new trucks that had been involved in accidents could be transferred to new truck bodies. But as the emissions control requirements went into effect in recent years, companies like Fitzgerald Glider Kits of Crossville, Tenn., began to attract thousands of buyers from around the United States — including many small fleet owners — that wanted to evade the new rules, getting trucks they argued were cheaper to run.

Sales of glider trucks could return to 10,000 units annually, about 4 percent of new heavy-duty truck sales. Kyle Dean Reinford for The New York Times

Fitzgerald made about 3,000 of these trucks in 2017, a production rate that it will now be allowed to return to. An estimated 10,000 glider trucks were sold nationally in 2015 — about 4 percent of new heavy-duty truck sales — and production could soon return to that level.

"The Agency is exercising its enforcement discretion in 2018 and 2019," Molly Block, an agency spokeswoman, said in a statement late Friday, meaning that it is notifying glider manufacturers that even though the limit legally remains in place, the companies can effectively ignore it.

The agency, she said, is also considering formally delaying the 300-unit cap until December 2019 — by which point it hopes to have permanently repealed the cap.

The rollback was immediately condemned by environmental groups, which have appealed to the White House to block the E.P.A. from creating the loophole. They noted that the effort to reduce air pollution caused by diesel trucks had been embraced by Democratic and Republican administrations for nearly two decades.

Vickie Patton, the general counsel at the Environmental Defense Fund, blamed both Mr. Pruitt and Andrew Wheeler, the No. 2 official at the E.P.A. who will become its acting administrator.

"Pruitt and Wheeler are creating a loophole for super polluting freight trucks that will fill our children's lungs with toxic diesel pollution, ignoring public comments from moms and leading businesses across the country," she said.

A label detailing a truck’s emissions exemption. Glider trucks produce as much as 55 times the air pollution as trucks with modern emissions controls.
Kyle Dean Reinford for The New York Times

Ms. Block did not respond when asked what role, if any, Mr. Wheeler played in the decision.

One year’s worth of truck sales was estimated to release 13 times as much nitrogen oxide as all of the Volkswagen diesel cars with fraudulent emissions controls, a scheme that resulted in a criminal case against the company and more than $4 billion in fines.

Mr. Pruitt had championed the rollback, claiming that the E.P.A. did not have the legal authority to force companies like Fitzgerald to significantly reduce production of glider trucks. But that move came only after Fitzgerald donated tens of thousands of dollars to Representative Diane Black, Republican of Tennessee, who is a candidate for governor there, and who asked Mr. Pruitt to reverse the rule.

Mr. Pruitt announced his intention to eliminate the 300-unit limit last year, but it was slowed down by the White House. Agency officials said the White House asked the E.P.A. to do a more comprehensive study of the environmental and economic impacts of his proposal — an unusual move during the Trump administration.

Executives at Fitzgerald did not respond Friday to a request for comment. But in an opinion piece written in April, Tommy Fitzgerald Sr., its chief executive, praised Mr. Pruitt and blamed industry competitors, like Volvo, that sell new trucks for the now-delayed regulatory effort.

(Emails released through a Freedom of Information request show that E.P.A. officials had been working with an executive from Volvo Group North America to perform tests on glider trucks that would be used to challenge the effort by Mr. Pruitt.)

“The new truck industry conspired with the Obama EPA to try to put us out of business,” Mr. Fitzgerald wrote, adding, “Our goose was cooked until President Trump and Pruitt came to town.”

A version of this article appears in print on July 7, 2018, on Page A12 of the New York edition with the headline: On Last Day For Its Chief, E.P.A. Grants A Loophole

XVI.

Eric Lipton, *How $225,000 Can Help Secure a Pollution Loophole at Trump's E.P.A.*, N.Y. Times (Feb. 15, 2018)

The New York Times

TRUMP RULES

How $225,000 Can Help Secure a Pollution Loophole at Trump's E.P.A.

By Eric Lipton

Feb. 15, 2018

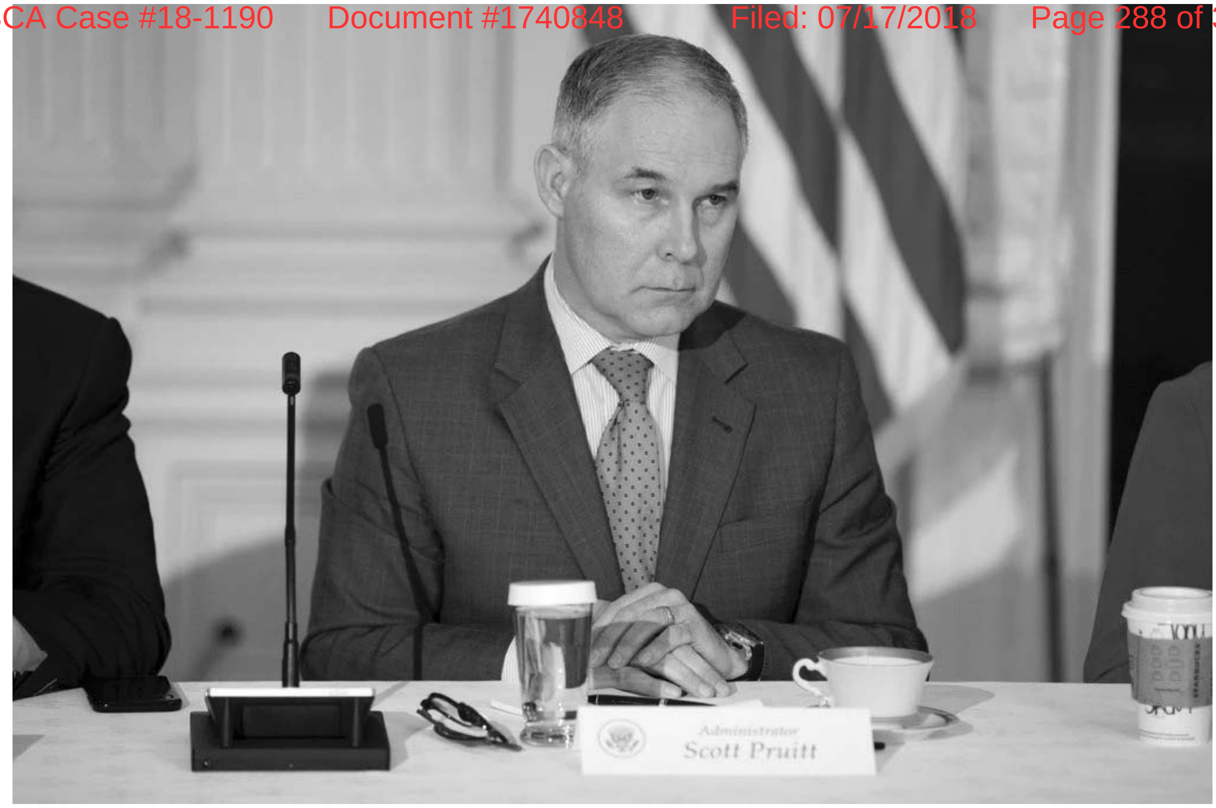
CROSSVILLE, Tenn. — The gravel parking lot at the Fitzgerald family's truck dealership here in central Tennessee was packed last week with shiny new Peterbilt and Freightliner trucks, as well as a steady stream of buyers from across the country.

But there is something unusual about the big rigs sold by the Fitzgeralds: They are equipped with rebuilt diesel engines that do not need to comply with rules on modern emissions controls. That makes them cheaper to operate, but means that they spew 40 to 55 times the air pollution of other new trucks, according to federal estimates, including toxins blamed for asthma, lung cancer and a range of other ailments.

The special treatment for the Fitzgerald trucks is made possible by a loophole in federal law that the Obama administration tried to close, and the Trump administration is now championing. The trucks, originally intended as a way to reuse a relatively new engine and other parts after an accident, became attractive for their ability to evade modern emissions standards and other regulations.

The survival of this loophole is a story of money, politics and suspected academic misconduct, according to interviews and government and private documents, and has been facilitated by Scott Pruitt, the administrator of the Environmental Protection Agency, who has staked out positions in environmental fights that benefit the Trump administration's corporate backers.

Fitzgerald welcomed President Trump at one of its dealerships during the campaign, and it sells baseball caps with the slogan "Make Trucks Great Again."



Scott Pruitt, the administrator of the Environmental Protection Agency.
Tom Brenner/The New York Times

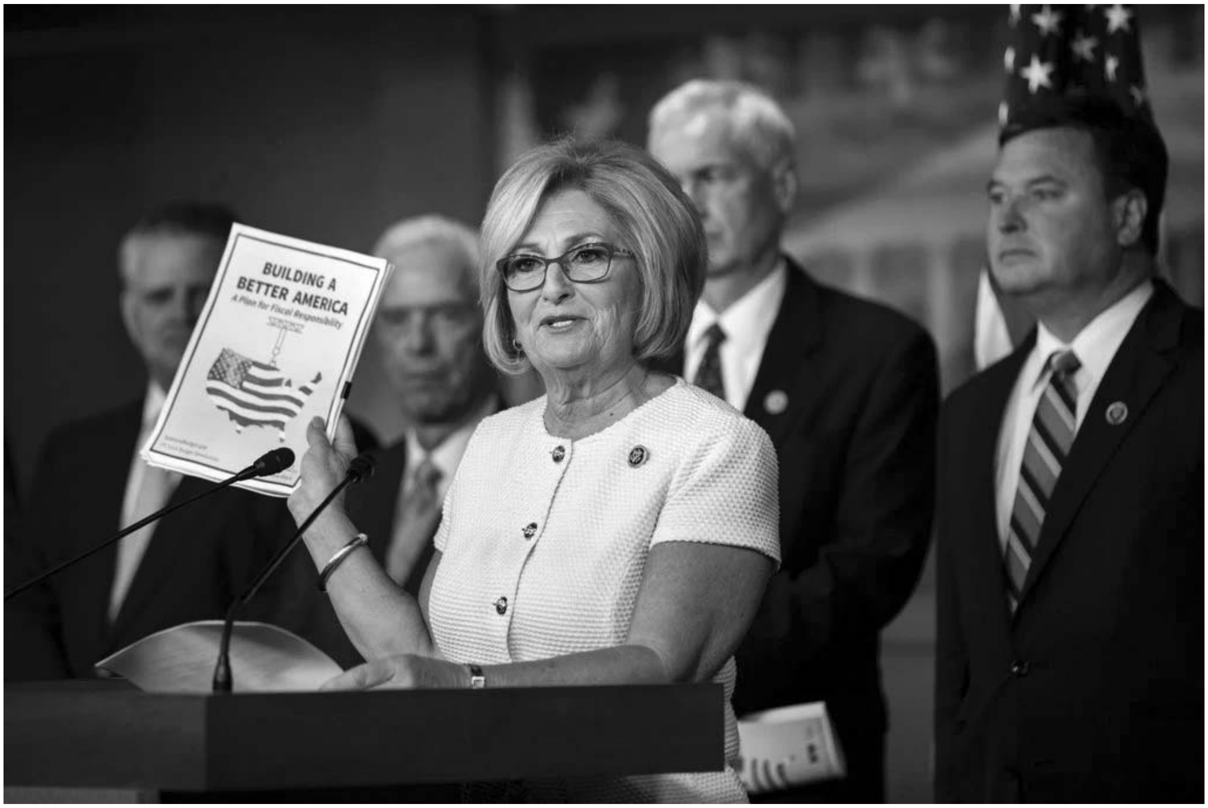
The loophole has been condemned in recent weeks by an array of businesses and environmentalists: major truck makers like Volvo and Navistar; fleet owners like the United Parcel Service; lobbying powerhouses like the National Association of Manufacturers; health and environmental groups like the American Lung Association and the Consumer Federation of America; and some Fitzgerald competitors in Tennessee, Texas and Oklahoma, Mr. Pruitt's home state.

"This just does not make any sense to me," said Christine Todd Whitman, who served as head of the E.P.A. during the first George W. Bush administration. "Everybody breathes the same air, Democrats or Republicans. It does not matter. This is about keeping people healthy."

But the Fitzgerald family has had influential allies. In addition to Mr. Pruitt, they include Representative Diane Black, a Republican who is a candidate for Tennessee governor, and Tennessee Technological University, a state university that produced a study minimizing pollution problems associated with the trucks.

Ms. Black introduced legislation in 2015 to protect the loophole when it was first in line to be eliminated by a stricter diesel emissions rule under the Obama administration. That bill failed, but after the election of Mr. Trump, she turned to Mr. Pruitt to carve out an exemption to the new rule — scheduled to take effect last month — and presented him with the study from Tennessee Tech.

Fitzgerald had not only paid for the study, which has roiled the faculty at Tennessee Tech and is the subject of an internal investigation, but it had also offered to build a new research center for the university on land owned by the company. And in the six weeks before Mr. Pruitt announced in November that he would grant the exemption, Fitzgerald business entities, executives and family members contributed at least $225,000 to Ms. Black's campaign for governor, campaign disclosure records show.



Representative Diane Black, a Tennessee Republican who is running for governor, received at least $225,000 in campaign contributions from Fitzgerald business entities, executives and family members. Jim Lo Scalzo/European Pressphoto Agency

The multiple donors allowed the company to circumvent a Tennessee state law intended to limit the size of campaign contributions by corporations and political action committees. The donations — many of which came through a series of limited liability companies tied to the family — represented 12 percent of the money Ms. Black had raised from outside sources through last month, the records show.

Tommy Fitzgerald, an owner of Fitzgerald, said the actions by Ms. Black and Mr. Pruitt were good public policy and not special favors to his company.

"I don't know why anyone would want to kill all these jobs," Mr. Fitzgerald said, referring to the several hundred people he said he employs at his dealerships, many of them in rural areas. "It does not make any sense."

Chris Hartline, a spokesman for Ms. Black, said the congresswoman had stood up for a constituent and was not influenced by the campaign donations, which he said complied with state law. "There are very few companies willing to try and keep manufacturing jobs in rural Tennessee today, and Diane fights hard to support the few that do," Mr. Hartline said.

An E.P.A. spokeswoman, Liz Bowman, said that Mr. Pruitt remained committed to protecting clean air. But, she said, he agreed with a legal argument made by Ms. Black and Fitzgerald that the agency did not have the authority to limit sales.

Matt Moorehead at a CB Trucking garage in Cookeville, Tenn.
Kyle Dean Reinford for The New York Times

"E.P.A. is acting on behalf of anyone who sees merit in upholding and perhaps even bolstering the credibility of our laws and the role of Congress," Ms. Bowman said.

She said that the money donated to Ms. Black had no impact on the decision by Mr. Pruitt.

New Trucks, Old Engines

The trucks sold by Fitzgerald are known as "gliders" because they are manufactured without engines and are later retrofitted with the rebuilt ones. Gliders are popular among small trucking companies and individual truck owners, who say they cannot afford to buy or operate vehicles with new engines and modern emissions controls.

The trucks, which Fitzgerald claims burn less fuel per mile and are cheaper to repair, have been on the market since at least the 1970s. But after the federal government moved to force improvements in truck emissions, with standards that were first enacted during the Clinton administration and took full effect by 2010, gliders became a way for trucking companies to legally skirt the rules.

Dealers like Fitzgerald buy truck bodies from Peterbilt, Freightliner and other manufacturers and typically install 1990s-era engines, recovered from salvage yards, that its employees rebuild down to their cores. The used engines and other remanufactured parts allow dealers to claim that the new trucks predate emissions requirements, and therefore should be exempt.

Nationally, an estimated 10,000 glider trucks were sold in 2015 — or about 4 percent of all new heavy-duty truck sales — the last full year for which data is available, up from fewer than 1,000 in 2010. Fitzgerald is the industry's largest dealer in retrofitting the trucks by selling so-called glider kit trucks, for about $130,000. Modern trucks, which also include collision avoidance equipment, cost between $145,000 and $170,000, dealers said.

"I hate government mandates," said Paul Bailey, a state senator and the operations manager at CB Trucking in Cookeville, Tenn., which hauls everything from building supplies to mustard in its fleet of 60 glider trucks, two-thirds of which were purchased from Fitzgerald.

The glider trucks take advantage of other regulatory loopholes. Since most of the engines were manufactured before 1999, the trucks are exempt from a federal law that went into effect in December intended to prevent accidents caused by fatigued drivers. The law requires commercial truck drivers to use an electronic logging system to track how many hours they spend behind the wheel, and to take mandatory breaks. The law covers truck engines manufactured after 1999.

The glider trucks, in some cases, also are not subject to a 12 percent federal excise tax imposed on truck sales, because they are not considered new trucks. Ms. Black intervened with the Internal Revenue Service last year, along with three other members of Congress, to protect that tax break.

A Fitzgerald salesman boasted last week that all 150 trucks on the company's Crossville lot had been sold as trucking companies rushed to avoid the Obama-era emissions standards and the electronic tracking rule.

"We cannot build them quick enough," said the salesman, Cody Poston. A second Fitzgerald salesman said the company had pending customer orders for 300 more and had about 2,000 glider trucks on the way to his sales lot.

Representative Black visiting a Fitzgerald warehouse in 2015, the year she introduced legislation to protect a loophole that benefits the dealer.

Matt Moorehead, who helps maintain trucks at the CB Trucking garage in Cookeville, said glider trucks allow small companies and individual drivers to compete with big trucking companies.

He said the trucks are easier to repair and, by some accounts, burn less diesel fuel per mile. And by avoiding the electronic tracking system, drivers can continue to use paper logs, which can be more easily manipulated to allow flexibility in driving and rest times.

"When you got a load of eggs and milk to deliver, these rules can force you to stop driving when you are just a few miles short of your destination," he said of the electronic tracking.

After E.P.A. officials, during the Obama administration, saw a surge in the number of glider trucks being sold, the agency moved to prohibit any company from manufacturing more than 300 of them per year, effectively killing the industry that had emerged to help sidestep the rules.

Fitzgerald, with Ms. Black's help, submitted a petition in July asking Mr. Pruitt to suspend the cap and declare that all gliders made by Fitzgerald and at least two other dealers — Iowa-based Harrison Truck Centers and Indiana Phoenix of Avilla, Ind. — be exempted because the new emissions requirements applied only to "new motor vehicle engines."

Terry Dotson, president of Worldwide Equipment Enterprises, a chain of dealerships that sells trucks with modern emissions systems. Kyle Dean Reinford for The New York Times

To bolster their argument, Fitzgerald submitted the study conducted by Tennessee Tech in late 2016. The study, which Mr. Pruitt cited in the E.P.A.'s November announcement of the rollback, concluded that emissions from the company's trucks were as clean as those with modern systems.

The push by Fitzgerald had started by May, according to a calendar of Mr. Pruitt's visitors, when Mr. Pruitt and his chief of staff met with executives from Fitzgerald and Donald Shandy, an Oklahoma lawyer who knows Mr. Pruitt from his tenure as Oklahoma's attorney general.

By September, to keep the momentum going, Fitzgerald had hired its first full-time federal lobbyist — a former aide to Ms. Black.

'Super-Polluting Trucks'

Terry Dotson, president of Worldwide Equipment Enterprises, a Kentucky-based chain of truck dealerships that sells vehicles with modern emissions controls, said he remembered going into repair garages years ago when it was hard to breathe because of soot.

Mr. Dotson says he voted for President Trump and is a strong backer of the coal industry, which relies on his trucks for mining operations. But he does not agree with the administration's carve-out for glider trucks.

A label on a Fitzgerald rig explains the provision granting the truck an exemption from modern emissions controls. Kyle Dean Reinford for The New York Times

"I want Mr. Fitzgerald to make a fortune and be a happy man," Mr. Dotson said outside one of his Knoxville, Tenn., dealerships. "But everybody ought to play by the same set of rules."

Truck manufacturers, as well as shipping companies like UPS, fear that a permanent loophole would encourage other truck dealers to enter the glider business, further undermining efforts to reduce health hazards associated with diesel exhaust and creating unfair competition for them. The National Association of Clean Air Agencies, representing state regulators, and the attorneys general from 12 states have joined in protesting the rollback.

Chet France, former director of assessment and standards at the E.P.A. Office of Transportation and Air Quality, says there are enough truck engines in salvage yards to support the glider market for decades.

"We are talking about super-polluting trucks that are going to put the health of thousands of people at risk," said Mr. France, who worked at the E.P.A. for 30 years under Democratic and Republican administrations and is a consultant to the Environmental Defense Fund. "And for what?"

The E.P.A. estimates that over the life of every 10,000 trucks without modern emissions systems, up to 1,600 Americans would die prematurely, and thousands more would suffer a variety of ailments including bronchitis and heart attacks, particularly in cities with air pollution associated with diesel-powered trains, ships and power plants.

An industrial park in Sparta, Tenn., where the Fitzgeralds intend to build a research center for Tennessee Tech University. Kyle Dean Reinford for The New York Times

The health threats are caused by nitrogen oxide and tiny particles of dust and soot that create haze in the air.

In November, just days after Mr. Pruitt said he would eliminate the glider cap, staff members at the E.P.A. submitted an analysis to the agency's rule-making docket that contradicted the conclusions from Fitzgerald and Tennessee Tech that glider trucks created no more pollution than trucks with updated emissions systems.

The analysis said E.P.A. tests found that the Fitzgerald trucks emitted nitrogen oxide levels during highway operations that were 43 times as high as those from trucks with modern emissions control systems. The air pollution from these glider trucks was so bad that one year's worth of truck sales was estimated to release 13 times as much nitrogen oxide as all of the Volkswagen diesel cars with fraudulent emissions controls, a scheme that resulted in a criminal case against the company and more than $4 billion in fines.

When testing the glider trucks in stop-and-go traffic, the E.P.A. report said, the testing equipment shut down because of the extreme level of particulates.

“The filters were overloaded with particulate matter,” said the report, which included a photograph of the white filter that had turned pitch black.

President Trump at a meeting at Fitzgerald Peterbilt in August 2016.

In recent weeks, other questions have been raised about the accuracy of the Tennessee Tech study, the role engineering experts at the university played in it, and the relationship between Fitzgerald and the university.

The signature of Tennessee Tech’s president, Philip B. Oldham, appeared on the study, which was included in the petition Fitzgerald submitted in July to eliminate the cap. In April, Mr. Oldham was photographed with Mr. Fitzgerald at the Bristol Motor Speedway in Tennessee, where Fitzgerald sponsors the Fitzgerald Glider Kits 300, a Nascar Xfinity Series stock car race. Mr. Oldham presided over an event at the university in August, where Fitzgerald announced it would build a new academic research center for the university.

Some faculty members say the university appears to have been used by Fitzgerald as part of its lobbying campaign.

"Our reputation has recently been damaged because of a study funded by Fitzgerald Glider Kits and used to influence federal policy," said a faculty senate resolution passed late last month. Christy Killman, president of the faculty senate, said the results of the study "raised a red flag."

Mr. Oldham did not respond to a request for comment, but he sent a letter to Ms. Killman this month confirming that a "misconduct in research" investigation had been started, at the faculty's request, adding that he wanted to ensure the university's reputation as an "honest broker of knowledge."

The public comment period on Mr. Pruitt's intention to repeal the annual cap on glider trucks has passed. Ms. Bowman, the E.P.A. spokeswoman, says the agency is now reviewing the comments before Mr. Pruitt announces a final decision.

"Continuing to improve air quality is a stated priority of Administrator Pruitt's," Ms. Bowman said. "Any comments received that raise concerns with the ability to maintain that goal are closely considered and analyzed."

At Fitzgerald's sales lot, employees said last week that there was no need to worry about pollution from the trucks, adding that they had emissions test results to prove it.

"They are just as clean," Mr. Poston said of the gliders, compared with modern trucks, "if not cleaner."

Hiroko Tabuchi contributed reporting from New York

A version of this article appears in print on Feb. 15, 2018, on Page A1 of the New York edition with the headline: Steering Big Rigs Around Emissions Standards

XVII.

Comment of Robert Markley, General Manager, Scaffidi Trucks, on EPA Proposed Gliders Rule (Jan. 5, 2018)

regulations.gov
Your Voice in Federal Decision-Making

Comment submitted by Robert Markley, General Manager, Scaffidi Trucks

The is a Comment on the **Environmental Protection Agency** (EPA) Proposed Rule: **Repeal of Emission Requirements for Glider Vehicles, Glider Engines, and Glider Kits**

For related information, **Open Docket Folder**

Comment Period Closed
Jan 5 2018, at 11:59 PM ET

ID: EPA-HQ-OAR-2014-0827-4766
Tracking Number: 1k2-90qo-e67l

Document Information

Date Posted:
Jan 8, 2018

RIN:
2060-AS16

Show More Details

Comment

As it relates to the EPA to repeal or relax the volume cap in 2018 for glider manufacturers:

As the general manager of Scaffidi Trucks in Stevens Point and Tomahawk Wisconsin I feel it would be doing a disservice to our employees along with so many that are affected by this potential relax of a law that is already too relaxed.

Starting at the OEM level so much is invested and by law must be met in order to sell Class 8 vehicles. The standards are high so that everyone along with generations to come can have clean air in which to live. All New units leaving manufacturing plants must meet specified EPA levels of NOX emitted to the atmosphere. Then the glider kits manufacturing has no emissions that are regulated.

The dealer next work has also invested heavily into training sales representatives, parts and service personal. Training doesnt stop as improvements are being made constantly along with new EPA laws being implemented. Then dealers have tooling cost, computer software cost, parts inventories that are constantly going up to make sure availability backs the repair process.

Glider kits are making a strong foothold in the logging sector along with other sectors. We at Scaffidi have been combating this issue for years and with the law looking to relax the number of these units being sold is going to grow exponentially. Not because the price is less, but do to not having emission components and in some cases avoiding Federal Taxes on new equipment.

It is thought these units are for the consumer that cannot afford a new vehicle. This just isnt true. The purchasers of glider kits have new units in their fleets or have been past new vehicle purchasers. We have several names of customers that we have quoted new Mack units to or didnt even accept a quote because they just wanted to purchase glider kits. We also have some that have told us they purchased and didnt talk to any dealers to get ideas for cost comparisons.

Below is a list of customers that we know have purchased glider kits in

2017. This Im sure isnt a complete list, but what I believe to be a large list for this kind of manufacturing.

Franks Logging, Peshtigo 1
Low Impact Logging, Butternut 1
Stacy Suzin Trucking, Winter 2
Select Logging, Hayward 1
Connors Forest Products, Laona 1
Mojo Trucking, Laona 1
ZK Trucking, Wabeno 1
T.J. Peche Trucking, Medford 1
Kyle Thums, Medford 1
Thurs Trucking, Athens 1
Central Wi Lumber, Marathon 1
Kramer Trucking, Medford -1
Schreiner Trucking, Athens 1
Niemi Trucking, Hurley 1
Marshall Giese Trucking, Crivitz 1

I have already sent letters to Wisconsin Congressman Kind in regards to the repeal act as this is repeal is detrimental to the Dealer network as a whole.

Thank you in advance for reconsidering the repel or relax the volume cap of glider kit manufacturing.

Robert Markley - General Manager

Scaffidi Trucks
201 Green Ave. N. Stevens Point, WI 54481
Phone: 715-344-4100 Cell 715-347-0502
Email: rmarkley@scaffidi.com

XVIII.

Comment of Jerry Gray, Manager, Gray Logging LLC, on EPA Proposed Gliders Rule (Dec. 5, 2017)

Gray Logging LLC

665 SW Harvey Greene Dr.
Madison, FL 32340
Phone 850-973-3863 Fax 850-973-3924

Docket Number: EPA-HQ-OAR-2014-0827

To whom it may concern,

The repeal of the Phase 2 Rule concerning Glider Kits would be a great benefit to the trucking industry. Our company is a consumer of the glider kits and have had wonderful results with our purchase. The gliders were significantly less than the purchase price of a new vehicle. Our gliders get the best fuel mileage of all the trucks in our fleet and have had the fewest breakdowns which has led to less down time and maintenance cost. We are able to build the type of truck that gives our company the best performance options in our industry. If the glider industry is subjected to the same regulations as the new vehicle industry our company would not be able to stay in business due to the added maintenance costs and the higher purchase price of a new truck with the emissions standards and DEF systems. Thank you for your time and consideration in this matter.

Sincerely,

Jerry Gray
Manager, Gray Logging LLC

XIX.

EPA, Memorandum of George Mitchell re: EPA Teleconference with Tennessee Tech University Regarding Glider Test Report, Docket ID EPA-HQ-OAR-2014-0827-2416 (Nov. 13, 2017)

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
NATIONAL VEHICLE AND FUEL EMISSIONS LABORATORY
2000 TRAVERWOOD DRIVE
ANN ARBOR, MI 48105-2498

OFFICE OF
AIR AND RADIATION

November 13, 2017

MEMORANDUM

SUBJECT: EPA Teleconference with Tennessee Tech University Regarding Glider Test Report Summarized in June 2017 Letter; Tennessee Tech University – Summary of Heavy Duty Truck Study and Evaluation of the Phase II Heavy Duty Truck Rule

FROM: George Mitchell, Mechanical Engineer, Assessment and Standards Division Office of Transportation and Air Quality

TO: Greenhouse Gas Emissions Standards and Fuel Efficiency Standards for Medium- and Heavy-Duty Engines and Vehicles - Phase 2 - Docket EPA-HQ-OAR-2014-0827

This memo documents a telephone meeting held on November 7, 2017 between representatives of Tennessee Tech University and EPA to discuss testing methodology, facilities and equipment used to generate data summarized and attached to a July 2017 letter to EPA Administrator, Scott Pruitt, Re: *Petition for Reconsideration of Application of the Final Rule Entitled "Greenhouse Gas Emissions and Fuel Efficiency Standards for Medium- and Heavy-Duty Engines and Vehicles – Phase 2 Final Rule" to Gliders*.

The meeting attendees from Tennessee Tech University included:

Thomas Brewer
Mark Davis
Justin Swafford

The meeting attendees from EPA included:

Bill Charmley
Angela Cullen
George Mitchell
Chuck Moulis
James Sanchez

Prior to the phone conversation EPA provided Tennessee Tech a list of questions regarding topics of interest. After introductions Bill Charmley outlined EPA's interest in TTU's testing and results and Thomas Brewer explained TTU's involvement with Fitzgerald Glider Kits. TTU testing of glider vehicles evolved from a Fitzgerald request to review the Heavy Duty Truck

Study and Evaluation of the Phase II Heavy Duty Truck Rule impact on the glider kit industry. Discussion then moved to EPA's areas of interest. Those questions and corresponding answers are below.

<u>Test Laboratory & Test Equipment</u>

1. **The June 2017 letter discussed both a facility operated by Tennessee Tech, and also facilities operated by Oak Ridge National Laboratory (ORNL). What facility(s) were used for the emissions testing program?**

TTU indicated that they had in place a MOU with ORNL and conducted regularly discussions regarding possible collaborations. TTU indicated that the facility used for the heavy-duty vehicle testing and emissions data collection was located in the town of Rickman (Rickman Facility) and owned by the Fitzgerald automotive companies. While the test facility was owned by Fitzgerald, TTU staff and students performed all emissions testing and data analysis presented in the June 2017 letter.

2. **Please describe the engine or vehicle dynamometer type used.**

TTU indicated that the chassis dynamometer at the Rickman Facility was an eddy current absorber type manufactured by Power Test Inc., model EC-Series. TTU provided EPA with a link to the product brochure for the EC-Series: https://powertestdyno.com/wp-content/uploads/sites/2/2016/03/EC-Series-Chassis-Dynamometers.pdf. A copy is attached to this memo.

3. **What approach was used for collecting gaseous emissions?**
   - **Raw, dilute? Constant Volume Sampling system, other?**

TTU indicated that raw gas sampling was used with the sample probe inserted directly into the vehicles exhaust stack. To calculate mass emission rates, exhaust flow rate was determined using engine speed, displacement, and intake manifold pressure and temperature.

4. **What emissions analyzer equipment was used for CO2, CO, NOx, THC, other gaseous measurements?**

TTU stated that they used an Enerac M500 combustion analyzer. Information on the Enerac M500 is available at:
http://www.enerac.com/?gclid=CjwKCAiA0IXQBRA2EiwAMODil3yWqJPIH_iPqWvItRX4XCTFW5AH7NMLbixJE36OP1-1Ycnz9uwx8BoCDMMQAvD_BwE
In addition, information regarding the specifications for the Enerac M500 is attached to this memo.

5. **What emissions equipment was used to sample particulate matter**
   - **Mass based filter? What size and type of filters were used?**

- **PM filter weighting room specifications and mass scale equipment?**

TTU stated that no particulate matter samples were collected during testing. The sample probe filter used with the Enerac M500 was visibly inspected for particulate matter. Particulate quantification was subjective in that it was visual only. TTU stated that they performed a smoke test but did not elaborate.

<u>Test Procedures & Test Cycles</u>

6. **What laboratory procedures were used for this test program? For example, test procedures specified by the Society of Automotive Engineers, the International Standards Organization, US EPA engine-vehicle emissions test procedures, internal Tennessee Tech test procedures?**

TTU used an in-house drive cycle and test procedure. That procedure was provided to EPA, and is summarized below. A copy of the TTU test procedure is attached to this memo.

- 5 min. vehicle warmup – procedure not specified
- Combustion analyzer installed to collect data regarding CO, NO, NO2, O2, and CO2 @ 0.1 Hz
- Test Cycle: 50 seconds 100% load, 50 seconds 75% load, 50 seconds 50% load, 50 seconds 25% load, 50 seconds idle. Data collected during each load point and idle.
- Data collected: Power, Engine Speed, Road Speed, Turbo Temp, Boost Pressure, Torque
- RPM, boost pressure, and intake temperature is used to estimate exhaust mass flow rate
- Emissions per hour is divided by dynamometer-read Wheel Horse Power and assuming 100% drivetrain efficiency for estimating engine power.

7. **What vehicle or engine test cycles (duty cycles) were used for the test program?**
   - **Were both engine/vehicle cold-starts and hot-start tests performed?**

All testing was performed warm. TTU stated that individual vehicle tests were not repeated. See above for the actual test cycle as described.

8. **How were vehicle road-load coefficients determined for vehicle testing, and what were the values used?**

Conventional road-load coefficients were not used. Rear wheel horsepower was used to estimate load, 100% power was estimated to be near 1600 rpm, vehicle speed was held constant at test load points.

<u>Test Articles (the vehicles)</u>

9. **Is information available for each of the test articles regarding engine and vehicle mileage and age?**

This question was not directly addressed during the conference call. However, TTU stated that 5 Freightliner vehicles were new. EPA requested this information via email as a follow-up to the conference call.

10. Are the NOx emission levels associated with each test article reported in the June 2017 letter available?

This question was not asked during the call, but was requested by EPA in an email as a follow-up to the conference call.

Attachments

- Attachment A: June 15, 2017 Tennessee Tech letter summarizing heavy-duty vehicle emissions test results
- Attachment B: Tennessee Tech Center for Intelligent Mobility – "Test Procedure / Protocols for Heavy Duty Class 8 – Emissions Testing"
- Attachment C: Brochure from Power Test Incorporated with specifications of the EC-Series Chassis Dynamometer
- Attachment D: Brochure from Enerac with specifications for the Micro-Emissions Analyzer Model 500

Office of the President

TENNESSEE TECH

June 15, 2017

The Honorable Diane Black
1131 Longworth HOB
Washington, DC 20515

Reference: Tennessee Tech University – Summary of Heavy Duty Truck Study and Evaluation of the Phase II Heavy Duty Truck Rule

Congressman Black:

From September 2016 – November 2016, the Tennessee Technological University Department of Civil and Environmental Engineering ("Tennessee Tech") conducted the first phase of its research on the environmental and economic impact of the Greenhouse Gas Emissions and Fuel Efficiency Standards for Medium- and Heavy-Duty Engines and Vehicles – Phase 2 rule ("Phase 2 Rule") published October 25, 2016. The key areas of research were to (1) Compare Glider Kit compliance with the Phase 2 Rule; (2) Perform high level environmental footprint and economic study of OEM manufacturing vs. assembly of remanufactured components (Glider Kits); and (3) Evaluate industry optimization plans to address future environmental regulations including but not limited to production vehicles, component assembly, and facility compliance.

To carry out the environmental footprint component of the research, Tennessee Tech tested thirteen heavy-duty trucks on a common chassis dynamometer at a common site; eight trucks were remanufactured engines and five were OEM "certified" engines, all with low mileage (NOTE: These Base Line Setting Phase I results were completed by testing only one Glider Kit manufacturer's product and one OEM's product). Each vehicle was evaluated for fuel efficiency, carbon monoxide (CO), particulate matter (PM) emissions and nitrogen oxide (NO_x). The results of the emissions test were compared with the 2010 EPA emissions standards for HDVs. Our research showed that optimized and remanufactured 2002-2007 engines and OEM "certified" engines performed equally as well and in some instances out-performed the OEM engines. (see also Appendix A for more detailed test results).

Summary Chart of Phase 1 Test Results	
Emission Standard	**Result**
CO	All vehicles met the standard
PM	All vehicles met the standard
NO_x	None of the vehicles met the standard

Tennessee Tech / Box 5007 Cookeville, TN 38505 / 931-372-3241 / F: 931-372-6332 / www.tntech.edu/president

While none of the vehicles met the NO_x standard, a glider remanufactured engine achieved the best result of any engine tested (see Appendix A). Further, our research showed that remanufactured and OEM engines experience parallel decline in emissions efficiency with increased mileage. Contrary to the assertion in the Phase 2 Rule, it is our estimate that the glider kit HDVs would emit less than 12% of the total NO_x and PM emissions, not 50%, for all Class 8 HDVs. Should the Phase 2 glider cap be fully implemented on January 1, 2018, there is little doubt that consumers utilizing glider vehicles, due to economic considerations, will delay purchasing new equipment and consequently, slow the reduction of engine emissions nationwide. In this regard, the Phase 2 rule is counter-productive to its stated intent.

In addition to equal or lower emissions, glider kits have a smaller carbon footprint than OEM vehicles due to fuel efficiency and recycling of materials. Comparisons between 2016 glider kit vehicles and new EPA compliant vehicles for fuel efficiency reflect that glider kits are 20% more efficient on fuel consumption. Glider vehicles also reuse engines and other components in the remanufacturing process, resulting in the reuse of approximately 4,000 pounds of cast steel. The engine assembly alone accounts for approximately 3,000 pounds of recycled cast steel. Thus, the well-documented environmental impact of casting steel, including the significant NOx emissions, is avoided by reusing cast steel components in glider vehicles. Consequently, given the superior fuel efficiency and the reuse of cast steel, glider vehicles have a lower carbon footprint than OEMs. None of these facts were considered in the development of the Phase 2 rule.

From an economic standpoint, Tennessee Tech examined the impact of the Phase 2 Rule sales cap of 300 units for glider kits would have on the State of Tennessee. The 300 unit sales cap represents 9% of Fitzgerald's current sales. It is estimated that a 91% reduction in output by Fitzgerald would result in a direct loss of approximately 947 jobs and a loss of approximately $512 million of economic output in the State of Tennessee alone. This impact takes into account the direct and indirect economic impact, including expenditures on labor, operations and maintenance as well as changes in the supply chain throughout the state. Additionally, on a broader scale, the economic impact of the Phase 2 Rule could easily exceed $1 billion nationwide due to thousands of permanent job losses and supply chain interruption and reduction. The Phase 2 Rule failed to sufficiently evaluate and consider these impacts.

Finally, this phase of the research shows that trucking companies that utilize glider kit HDVs in their fleets are vigilant in maintenance and elect to optimize their fleets to maximum efficiency throughout the life span of the vehicle. Further, glider kit assemblers facilitate research and development for OEM's by conducting innovative research for fuel additives, emission devices, tire and wheel combinations in small production runs and are currently testing components, light weight drive systems, alternative fuel mixtures, autonomous drive systems, light weight body materials, and intelligent transportation systems. As a general statement, our observation is glider assemblers are in tune with industry needs and cutting edge innovation.

Congressman Black
June 15, 2017

Tennessee Tech will continue to evaluate HDV engines during Phase II of the research in 2017. Such effort will be conducted in conjunction with the Oak Ridge National Lab - Fuel Engines & Emissions Research Center. The goals of the next phase include development of engineering and manufacturing solutions that exceed EPA emission standards, a focused research, development, and testing plan for NO_x emissions, and to continue testing to demonstrate continuous improvement of emissions from remanufactured heavy-duty engines.

Sincerely,

Philip B. Oldham
President

Thomas Brewer
Associate Vice President
Center for Intelligent Mobility

APPENDIX A: Testing Results from Tennessee Tech Phase 1 Heavy Duty Vehicle Study			
Engine	**Type**	**CO (g/HP * hr) (2010 standard = 15.5)**	**PM**
Detroit Diesel DD15	ReMan	0.290	BTD
Caterpillar CT13	ReMan	0.212	BTD
Detroit Diesel Series 60	ReMan	1.553	BTD
Detroit Diesel Series 60	ReMan	1.959	BTD
Detroit Diesel Series 60	ReMan	0.015	BTD
Detroit Diesel Series 60	ReMan	0.317	BTD
Detroit Diesel Series 60	ReMan	0.483	BTD
Detroit Diesel Series 60	ReMan	0.467	BTD
Detroit Diesel DD15	OEM	0.491	BTD
Detroit Diesel DD15	OEM	1.169	BTD
Detroit Diesel DD15	OEM	0.556	BTD
Detroit Diesel DD15	OEM	0.098	BTD
Detroit Diesel DD15	OEM	1.558	BTD

*BTD=below threshold detection point

** NO_x (g/HP * HP) (2010 standard = 0.2); All tested engines were higher than the standard and ranged from a low of 0.44 to a high of 6.45. The lowest tested NOx was a Fitzgerald – Reman Detroit Diesel DD 15 using proprietary Fitzgerald engine design and set up. That same engine also tested at the 0.290 Co rate.

TCIM

Tennessee Center for Intelligent Mobility

Test Procedure / Protocols for Heavy Duty Class 8 – Emissions Testing

Test Procedure is as follows:

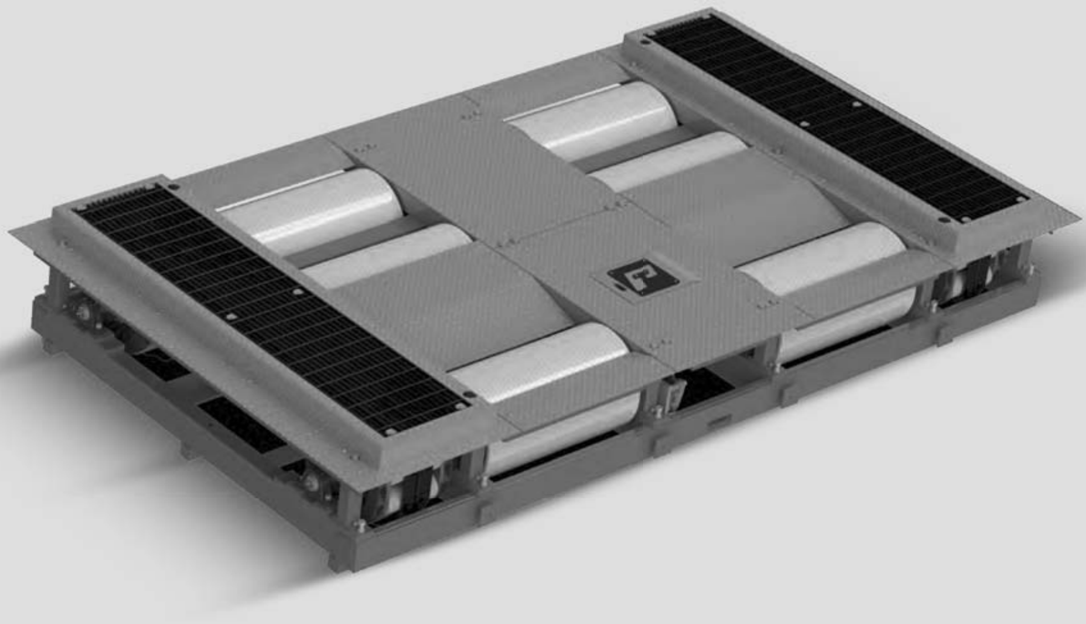
- Vehicle placed on a Powertest EC Series Chassis Dynamometer and connected to the Data Computer through the On Board Diagnostics port
- Vehicles allowed to warm up - 5 minutes
- ENERAC M-500 Combustion Efficiency Analyzer (with a CO, NO, NO2, O2, and CO2 sensor and Precooler) is placed in the Vehicle Exhaust Output Stack
- Exhaust Analyzer set to record data every 10 seconds
- Powertest Chassis Dynamometer set to record (Power, Engine Speed, Road Speed, Turbo Temp, Boost Pressure, Torque, Time / Every Second)
- Truck / Engine operated on the following Test Cycles
- 50 seconds 100% load
- 50 seconds 75% load
- 50 seconds 50% load
- 50 seconds 25% load
- 50 seconds idle
- Vehicle allowed to cool down and data processed

Data is processed as follows:

- Data from Exhaust Analyzer and Dynamometer is aligned by time
- RPM, boost pressure, and intake temperature is used to estimate exhaust mass flow rate
- This flow rate is applied to the PPM output of exhaust emissions
- The total emissions per hour is divided by dynamometer-read Wheel Horse Power (assuming 100% drivetrain efficiency, which is a worst case scenario)

PowerTest

Product Brochure
Chassis Dynamometers



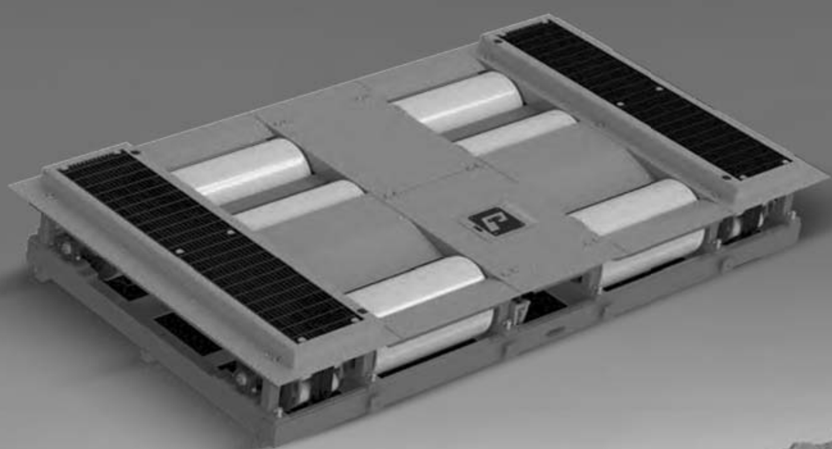
EC-Series Chassis Dynamometers

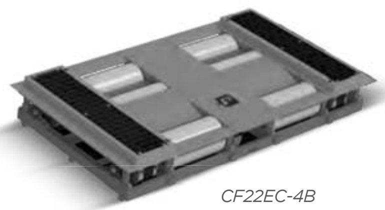
www.pwrtst.com

We Make It Better

Rugged Construction. Accurate, Repeatable Results. Builds New Business.

- Identify new driveline problems leading to additional shop work
- Verify shop repairs are done right the first time to minimize "come-backs"
- Simulate real-world load conditions and varying terrain
- Troubleshoot inside cab with DDDL, Cat ET, Cummins INSITE™ and other systems
- Eliminate liability and time of road testing
- Document test results and generate performance graphs
- Conduct controlled break-ins after engine rebuild
- Determine trade-in value and upsell extended warranties with confidence
- Retrofits economically into most existing dyno pits





CF22EC-4B

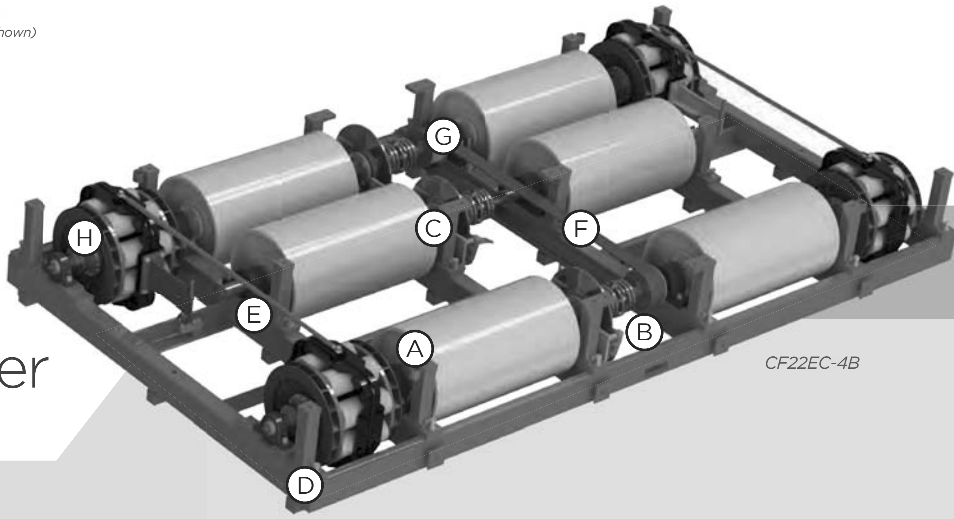
CF22EC-4RB
CF22EC-4LB (not shown)

EC-Series Dynamometers

The Power Test EC-series of chassis dynamometers is built tough to give you years of dependable results and increased business. Featuring air-cooled eddy current load absorbers, the EC-series is designed to provide a heavy duty, cost effective dynamometer solution without reliance on water or a cooling system.

In addition to air-cooled load absorbers, the EC-Series features a precision ground, heavy duty steel frame, dynamically balanced rollers with proprietary siped traction grooves and Power Test's PowerNet CD computerized data acquisition and control system. The EC-Series chassis dynamometers are available with the absorbers on all four corners or in four left or four right configurations.

The EC-Series has been designed to fit into most existing chassis pits with minimal or no modifications necessary. The need for cooling towers, pumps and water treatment is eliminated by using eddy current load absorbers.

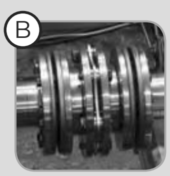


CF22EC-4B

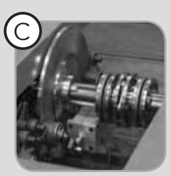
Features That Matter

It's what's under the cover that counts.

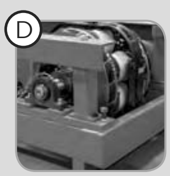
20" Concentric Welded Rolls
Thick walled rolls that are precision machined, stronger and dynamically balanced.



Steel Flex Disc Couplings
No backlash, no maintenance with easy serviceability.



Roll Brakes
Pneumatic disc brakes which require less maintenance.



Unitized Box Tube Frame
Rigid, welded, corrosion resistant frame that is stress-relieved and precision ground - no floor shims needed.

Four bolt Roller bearings
Rigid and long lasting.

Belt Driven Design
Higher HP capacity, no gearbox, less maintenance and long belt life.

Taper Lock Hub
Allows easy roll shaft disassembly and inexpensive replacement.

Electric Eddy Current Absorber
Eliminates the installation cost, repairs and maintenance of a water system. Only requires a 220 VAC/40 Amp electrical circuit.

Lubrication
Easy access single point lubrication manifold. *(not shown in above diagram because located on top frame)*

Testing Controls & Data Acquisition

PowerNet CD - The Future of In-Frame Testing

The PowerNet CD data acquisition and control system is designed to take chassis dynamometer testing to the next level. PowerNet CD utilizes a networked computer system to provide automated, repeatable vehicle tests - all controlled from a rugged wireless hand held device operated from the driver's seat! With the PowerNet CD data acquisition and control system, vehicle and work order information can be entered, then the desired tests can be recalled and run. For diagnostic purposes, engine-specific software service tools may also be connected to perform cylinder cutouts, reset cruise limits and perform other engine tests.

Standard ECM Interface

When connected to the system, electronically controlled engines can transmit valuable engine data, which is automatically merged with dynamometer information to be viewed, stored, reported and graphed. All of this information can be seen on the wireless hand held controller.

The Wireless Hand Held Controller

Power Test's wireless hand held controller provides the ultimate in behind the wheel instrumentation and control. The touch screen interface device is all that is needed to perform the tests. From behind the wheel, the operator selects a test pattern to be run, engages the throttle, and literally watches the vehicle automatically run through the steps of a repeatable test.

Detailed Information Reporting with PowerNet CD

PowerNet CD provides colorful screen captures, easy-to-read performance reports, and graphical charts. Now results obtained during a vehicle test, combined with vehicle specific information, can be confidently presented as a final confirmation of quality assurance - all with just a few clicks of the mouse.

Flexible Testing Modes

Setpoint Operation

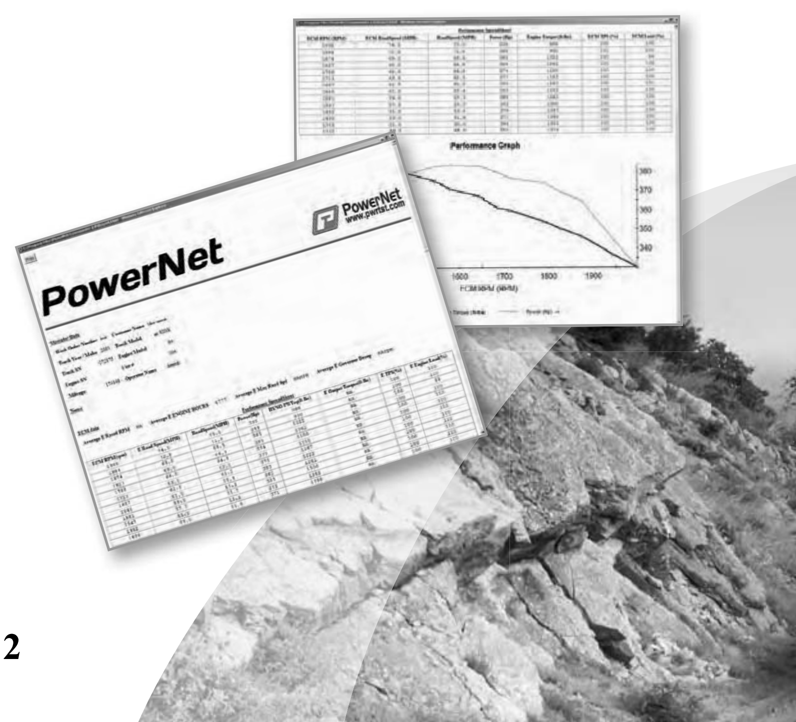
- allows the operator to enter a specific value for speed or horsepower on the hand held controller.
- Dyno load is automatically adjusted and maintained until the next value is entered.
- Increase or decrease these values incrementally or by entering the next numeric value.

Pattern Run Mode

- Allows the operator to run a desired test cycle created with PowerNet and begins by a touch of a button on the hand held controller.
- Created on the Commander PC by selecting setpoints, the mode of operation, and entering the length of time each point is run, a pattern is constructed and it can easily be recalled and run from the hand held controller.

Manual Operation

- Allows the operator to have complete control over the chassis dynamometer's applied load.
- The operator decides how much horsepower or speed should be reached by the engine and the duration of each test.



Chassis Dynamometer Specifications

Horsepower**

CF22EC-4	
622 HP	45 mph
720 HP	60 mph
800 HP	90 mph

Absorber
- Air-cooled eddy current load absorbers

Controls
- PowerNet CD data acquisition and control system
- Ethernet-based communications between included
- Windows®-based PC and dynamometer controller
- Wireless hand held controller

Roll Specs
- 20″ diameter, precision balanced rolls
- Proprietary siped traction grooves
- 24″ roll spacing
- 36″ inner track width
- 108″ outer track width

Wheelbase
- 45″-60″ accommodation

Maximum Speed
- 90 mph (145 kph) continuous
- 120 mph (185 kph) intermittent

Axle Weight
- 30,000 lbs. (13,636 kg) maximum per axle

Frame
- Precision ground, heavy duty structural steel
- Above ground installation kit available

Power
- 120 VAC single phase, 60 Hz, 15 Amps (controller)
- 230 VAC single phase, 60 Hz, 40 Amps (CF22EC-4)

All specifications subject to change

Accessory Options

Power Test manufactures a complete line of chassis dynamometer accessories to fit your specific testing needs. Some of those accessories include exhaust hood, above grade installation kit, pressure and temperature sensor kits, fuel measurement system and smoke opacity meter.

Designed To Meet Your Needs

Power Test has the knowledge and experience to design and manufacture custom chassis dynamometers to meet your specific needs. Many options are available including roll size, number of axles, weight capacity, power absorption, and the PowerNet CD control system.

We Make It Better

Who We Are

Power Test, Inc. is an industry leader in the design, manufacture and sale of dynamometers, heavy equipment testing systems and related data acquisition and control systems. For nearly 40 years, Power Test has provided specialized test equipment to manufacturers, rebuild facilities and distributors in the mining, oil & gas, power generation, marine, trucking, construction, rail, and military markets in over 80 countries on six continents. Our headquarters and manufacturing operations are located in Sussex, WI with sales representatives worldwide.

How We Work

The Power Test team of innovative engineers, designers, software developers and sales consultants will SOLVE YOUR CHALLENGES with logical solutions. Our skilled machinists, fabricators, electronic technicians and assemblers build products to meet your unique needs. Our technical service experts are dedicated to working with you, anywhere and anytime. They travel the globe to ensure your equipment is running right and your staff is trained to operate it. Our exceptional product life and manufacturing expertise made us an industry-leading dynamometer manufacturer, as evidenced by our first machine sold, which is still in active use today!

PowerTest AIDCO TEST SYSTEMS STUSKA DYNAMOMETERS

Commitment to Exceeding Customer Expectations

Power Test is committed to customer satisfaction which extends to every area of our business. We consistently focus on reducing your maintenance costs and preventing equipment downtime. You can rely on Power Test's Technical Service team to provide training and support when you need it.

A 13 Month Return on Your Investment?? *(an example)*

Estimated Investment

Purchase of dyno, PowerNet CD controller and exhaust hood	$150,000
Pit construction, installation and expenses	+ 30,000
Total Investment	**$180,000**

Estimated Monthly Operating Revenue and Expenses

Dyno runs per month (assumes 2 trucks/day)	50 @ $200 average revenue	$10,000
Dyno labor cost at .5 hours per run	25 labor hours/month @ $45/hr.	- 1,125
Dyno electricity cost per month (estimated)	1,000kWh @ $.10/kWh	- 100
Incremental shop repairs identified by dyno	25 new repairs @ $400 each	+ 10,000
Incremental shop cost for parts and labor	25 repairs @ $200 cost each	- 5,000
Total incremental monthly profit from dyno		**$13,775**
Total incremental yearly profit from dyno		**$165,300**

Break-Even time = 13 months* ($180,000 investment ÷ $13,775 profit/month)
This is one example. Talk to your Power Test sales representative to determine the Break-Even for your location.
**Does not include the additional benefit of the Federal Tax Section 179 accelerated depreciation deduction.*

Power Test Incorporated
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ENERAC 500

Handheld Combustion Efficiency Emissions Analyzer

- O_2
- CO
- NO
- NO_2
- NO_x
- SO_2
- DRAFT
- COMBUSTIBLES (HCs)

MADE IN THE USA

A NEW GENERATION IN HANDHELD COMBUSTION AND EMISSIONS MONITORING

The ENERAC 500 is everything you ever wanted in a low-cost, easy-to-use emissions monitoring system.

RUGGED

- Heavy Duty Aluminum Case
- Simple Modular Design
- 2 Year Warranty
- Download Latest Firmware Upgrades from our Website

COMPREHENSIVE

- Basic O_2-Efficiency Analyzer
- CO, Combustibles & Draft options
- NO, NO_2 & SO_2 Options
- Expandable Emissions Package
- Thermoelectric Condenser
- Built-in Printer
- Interface Computer Software

AFFORDABLE

- Buy Only What You Need and Add Later
- Reduce Testing Costs
- Reduce Energy Costs
- Receive a Generous Trade-In Allowance on your old analyzer.
- No-charge Loaners Available

ENERAC™ invented the first electronic portable multi-parameter combustion analyzer in 1979 (in the U.S.A.). ENERAC™ still services this analyzer today as well as all others ENERAC has manufactured. The ENERAC™ Model 500 is a low-cost, easy to use (no technical expertise needed, etc.) portable combustion efficiency emissions analyzer.

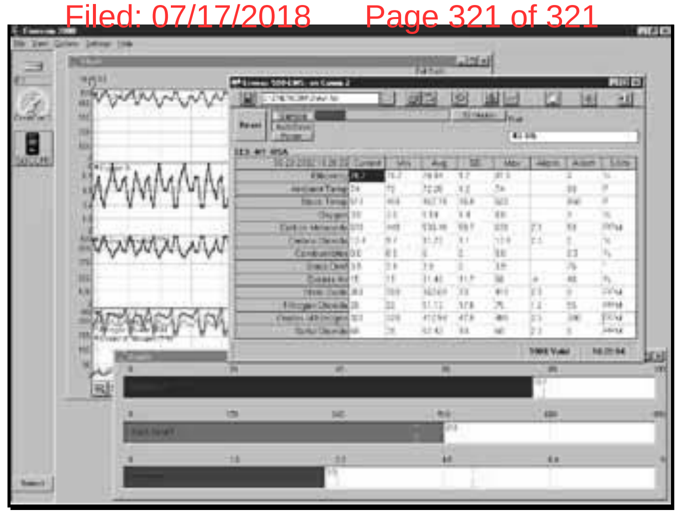
The ENERAC™ 500 is perfect for both determining the efficiency of a combustion source as well as collecting advanced emissions data for internal use or for local, state and federal emissions reporting requirements (a compliance-level portable combustion analyzer). The ENERAC™ 500 is perfect for testing various combustion sources, such as boilers, burners, engines, turbines, generators, kilns, dryers, heaters and ovens, just to name a few. Equally, with a simple combustion efficiency test or a more advanced combustion emissions test, the ENERAC™ 500 is designed to provide years of trouble-free service. It is flexible enough to be tailored to meet your specific needs, yet simple enough to be completely maintained in the field. Advanced design, rugged construction and an impressive array of options are its hallmark. Constructed as a field workhorse, the ENERAC™ 500 can be upgraded at any time (adding options to the same unit) to meet your changing needs.

The ENERAC™ 500 provides a comprehensive range of automatic emissions calculations (grams/brake horsepower hour; pounds/million Btu) advanced enercom windows software, two way communications and factory support. From low NO_x burners (0.1 ppm NOx resolution) to large rich burn engines (5,000ppm NO_x/20,000ppm CO,) the ENERAC™500 is designed to help you meet your needs of various monitoring applications at an affordable price.

MEASURED PARAMETERS	RANGE	RESOLUTION	ACCURACY
1. AMBIENT TEMPERATURE Type RTD	0-150˚F	1˚F or C	+/- 2˚F M
2. STACK TEMPERATURE(Net) Type K Thermocouple	0-2000˚F (1100˚C)	1˚F or C	+/- 2˚F M
3. OXYGEN (O_2) Electrochemical Cell	0-25%	0.1%	+/- 0.2% M
4. CARBON MONOXIDE (CO) Electrochemical Cell	0-500 0-2000 or 0-20000PPM	1 PPM	+/- 0.2% M**
5. NITRIC OXIDE (NO) Electrochemical Cell	0-300 0-2000 or 0-4000 PPM	0.1 PPM 1 PPM 1 PPM	+/- 0.2% M**
6. NITROGEN DIOXIDE (NO_2) Electrochemical Cell	0-500 or 0-1000 PPM	0.1 PPM 1 PPM	+/- 0.2% M**
7. SULFUR DIOXIDE (SO_2) Elecrochemical Cell	0-2000 PPM	1 PPM	+/- 0.2% M**
8. COMBUSTIBLES Catalytic Sensor	0-5%	0.1%	+/- 0.2%(CH_4)M
9. STACK DRAFT	+10" to 40" WC	0.1˚ WC	+/- 0.2% M
10. SMOKE TEST	ASTMD method D2156		

COMPUTED PARAMETERS	RANGE	RESOLUTION	ACCURACY
1. COMBUSTION EFFICIENCY	0-100%	0.1%	+/- 1%
2. CARBON DIOXIDE (CO_2)	0-40%	0.1%	+/- 2%
3. EXCESS AIR	0-1000%	1%	+/- .2%
4. OXIDES OF NITROGEN (NO_x)	0-800 0-3000 0-5000 PPM or other	0.1 PPM 1 PPM 1 PPM	+/- 4%
5. POUNDS / MILLION Btu (CO, NO, NO_2, SO_2)	0-99.99 #/mBtu	0.01 #/B	+/- 2%
6. GRAMS / BRAKE-HP-HR (CO, NO, NO_2, SO_2)	0-99.99/bhp-hr	0.01g/bhp-hr	+/- 2%

Oxygen Correction factor for emissions adjustable 0.20% in 1% steps plus TRUE.
*Accuracy (M: Measured) When calibrated prior to use per ENERAC™ specifications.
**+/- 1 to 2 ppm for less than 100 ppm range
Note: Other sensor ranges available for parameters of interest
H2S sensor (0-200ppm) Can be substituted for another sensor slot!



ENERCOM WINDOWS SOFTWARE

MODEL 500 SPECIFICATIONS

PHYSICAL:

1. CASE: 9.75" x 4" x 2.75" Aluminum case with
2. magnetic support. Weight: 3 lbs.
3. PROBE: 9" L x 3.8" OD (other lengths available) Inconel steel stack probe. Probe housing connects to instrument via a 10 ft. Viton hose (other lengths available) and water trap and thermoelectric condenser. Maximum continuous temperature: 2000 F.

ELECTRICAL POWER:

1. BATTERY: 4-6 VDC. Rechargeable NiMH (included) or 4 disposable AA alkaline cells. Approx. 6-8 hours operating time (1.5 hours with T'cooler)
2. AC Charger: 120/240v. 60/50 hz. 9vdc output

DISPLAY:
Four line by 16 character Liquid Crystal Display with backlight illumination.

PRINTER:
Internal 2" thermal printer.

DATA STORAGE:
Internal: 400 individually selectable buffers hold one complete set of measurements each in non-volatile memory. Buffer contents can be sent to printer or serial port. Data is stored by pressing the STORE key or automatically on a periodic basis.

ENERAC 500 PRINTOUT

```
 ENERAC M500
Serial #: 000000
Company Name

Time: 12:00:00
Date: 01/31/03

Fuel: #2 OIL

Effic:  79.5 %
Amb Temp: 75 F
Stack T: 425 F
Oxygen:  6.0 %
CO:       490 PPM
CO2:     11.2 %
Combust: 0.2 %
Draft:   3.5 "
Ex.Air:   37 %
NO:       325 PPM
NO2:       60 PPM
NOX:      385 PPM
SO2:       40 PPM
Oxygen Ref:TRUE
```

COMMUNICATIONS:
Serial Port (RS-232C port) settings: 9600,N,8,1
USB Port
Bluetooth Wireless (Class 1 – 100m)

FUELS:
15 Fuels: #2 Oil, #4 Oil, #6 Oil, Natural Gas, Anthracite, Bituminous, Lignite, Wood (50% H2O), Wood (0% H2O), Kerosene, Propane, Butane, Coke Oven Gas, Blast Furnace & Sewer Gas.
Custom fuels available on request or by customer programming using ENERCOM software

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Email:sales@enerac.com • www.enerac.com