August 5, 2016

John C. Cruden Esq.
Assistant Attorney General,
U.S. Department of Justice--ENRD, P.O. Box 7611,
Washington, D.C. 20044-7611

In Re: Volkswagen "Clean Diesel" Marketing, Sales Practices, and Products Liability Litigation, Case No: MDL No. 2672 CRB (JSC), and D.J. Ref. No. 90-5-2- 1-11386

Dear Assistant Attorney General Cruden:

Transportation Energy Partners (TEP) appreciates the opportunity to provide public comments on the draft partial settlement between the U.S. government and Volkswagen (VW) published on July 6, 2016. TEP is a national non-profit organization, which conducts outreach and education to promote clean transportation fuels and vehicles that provide greater energy security for the United States. We work closely with the 87 grassroots Clean Cities coalitions and the 15,000 stakeholders that participate in the U.S. Department of Energy's (DOE) Clean Cities program, focused on deployment of cleaner transportation technologies.

Overall, TEP agrees with the framework and focus of the proposed settlement which requires VW to: (1) make whole VW customers that have been harmed by the company's actions; (2) invest in mitigation actions that will reduce diesel emissions, especially in disadvantaged communities; and (3) invest in strategies that will advance markets for Zero Emission Vehicles (ZEV).

We write to urge the government, the court and the other parties to modify the Consent Decree to enable the use of the Environmental Mitigation Trust and the National and California ZEV Investment Plan funds in ways that will provide faster and greater reductions of nitrogen oxides ("NOx") emissions at lower cost. We believe strongly that TEP's requested changes outlined below will result in directing more of these emission reductions to the communities and regions where they are most needed.

General Recommendations

Recommendation #1: The final settlement should formally encourage the states and VW to consult and work with Clean Cities coalitions as local partners to help identify, select and administer projects under both the Environmental Mitigation Trust and the ZEV Investment Strategy.

There are currently 87 local, state, and regional Clean Cities coalitions across the country that are part of the U.S. Department of Energy's Clean Cities program. The Clean Cities program was created in 1993, pursuant to the Energy Policy Act of 1992, to promote alternative fuels and advanced technology vehicles as a key strategy to reduce America's dependence on petroleum as a transportation fuel and to decrease harmful air emissions from mobile sources. The Clean Cities coalitions are active in 45 states and work with more than 15,000 public and private sector stakeholders to promote cleaner transportation solutions.

The Clean Cities coalitions have helped hundreds of public and private sector fleets convert to cleaner vehicles and fuels. They have worked in partnership with numerous public and private entities to install alternative fuel infrastructure, including natural gas, propane, advanced ethanol, biodiesel fueling, and electric charging stations. Additionally, they have conducted successful education and outreach programs informing transportation stakeholders and the general public about the many benefits of cleaner fuels and vehicles. According to the Department of Energy, Clean Cities coalition activities are now saving well over 1 billion gallons of petroleum a year and the program is on track to save 2.5 billion gallons a year by 2025. By implementing a multitude of clean transportation projects, the coalitions are also helping to eliminate tens of millions of tons of harmful air emissions from transportation sources each year.

The Clean Cities coalitions have a proven track record of working with public and private sector partners to develop and manage a wide range of successful clean transportation projects with verifiable benefits to communities across the U.S. Over the past decade, Clean Cities coalitions have directly managed hundreds of million dollars in federal and state grant funding. They have led successful projects funded by the American Reinvestment and Recovery Act (ARRA), the Department of Transportation's Congestion Mitigation and Air Quality (CMAQ) program, the Department of Energy's Vehicle Technologies Program, and the EPA's Diesel Emissions Reduction Act (DERA) program. In addition, coalitions have partnered with numerous state funding programs to implement successful petroleum saving, emission reduction projects. In carrying out these projects, the coalitions have consistently leveraged more than ten dollars for every grant dollar invested.

In playing their role as local implementers, Clean Cities coalitions can help ensure that funds are targeted and spent well, with accountability to leverage maximum impact for air quality benefits and market acceleration of ZEVs. Through their twenty plus years of working in the alternative fuels arena, Clean Cities coalitions have gained extensive knowledge about which vehicle technologies can achieve projected mobile source emission reductions and those that cannot. Moreover, Clean Cities coalition project results can be verified at minimal cost by the Department of Energy labs that track and monitor various alternative fuel technologies.

Given their substantial expertise in alternative fuels and advanced technology vehicles, their large and growing network of transportation energy stakeholders, their vast reservoir of experience, their access to the DOE national labs, and their proven track record of implementing successful, community-based clean transportation projects, the Clean Cities coalitions are uniquely qualified, and suited to play a major role in managing and leading projects funded by the settlement. Therefore, the final settlement should formally recognize the Coalitions as key partners in implementing the Mitigation Trust and the ZEV Investment Plan.

Recommendation #2: The final consent decree should provide the public an opportunity to provide formal input on the National and California ZEV Investment Plans and Beneficiary Mitigation Plans before they are approved.

TEP greatly appreciates the opportunity to comment on the Consent Decree. We also appreciate the provisions within the Consent Decree that make the documents, plans, and reports created in connection with the ZEV investment plans and the Environmental Mitigation Trust expenditures publicly available. In the spirit of promoting additional public engagement, we request that the public be provided a meaningful opportunity to comment on the proposed ZEV investment plans and the

Beneficiary Mitigation Plans before they are approved. This will help to ensure appropriate engagement among the public, States, EPA and VW so that specific investments and mitigation projects are intelligently developed and accountable to the taxpayers.

Recommendations for the $2.7 Billion Environmental Mitigation Trust Fund for NOx Remediation

Recommendation #3: The final settlement should give equal treatment to all alternative fuels and all purchasers of cleaner vehicles in order to maximize emissions reductions.

The proposed settlement calls for different levels of reimbursement from the Mitigation Trust for different fuels and different purchasers. Specifically, it offers greater reimbursements for electric vehicles and for all vehicles purchased by governments.

Based on the experience of many Clean Cities coalitions administering clean vehicle conversion projects, the proposed reimbursement rates will be inadequate to incentivize the participation of many private sector fleets. This is especially the case for small and independent truckers who typically do not have the capital to invest in new vehicles. While we understand its purpose, the proposed settlement's requirement for "Scrappage" of old vehicles adds to the disincentives to convert to cleaner technologies. It makes it even more difficult for small and independent truckers to purchase new vehicles when they can only recover minimal value from their initial investment.

These same small fleets and independent truckers tend to drive older, dirtier trucks, which should be the primary focus of the investment of the settlement funds. The private sector long haul trucks also generally drive significantly more miles than government-owned heavy duty trucks, thereby producing much greater emissions. Because the draft settlement provides greater incentives for government purchasers, it could result in disproportionate investments in government vehicles, thereby leading to less emission reductions.

Therefore, we recommend that the final settlement allow the Mitigation Trust to contribute ***"up to 80 percent"*** of the cost of all low and no NOx replacement engines and vehicles regardless of the purchaser or fuel. This is the same cost share formula used by the Department of Transportation's CMAQ program, which is widely viewed as the most effective federal investment program in terms of reducing air emissions through promoting cleaner transportation fuels and vehicles. Permitting a contribution of up to 80 percent from the settlement funds will also help to overcome the serious barrier that the scrappage requirement imposes to the purchase of cleaner vehicles.

Recommendation #4: The final settlement should ensure fair and equal assessments of alternative fuel projects: The current version of the settlement may penalize alternative fuel vehicle replacements, such as compressed natural gas (CNG), liquefied natural gas (LNG), and liquid petroleum gas (LPG) compared with diesel-to-diesel replacements. This is because the U.S. Environmental Protection Agency's (EPA) primary assessment tool, the Diesel Emission Quantifier (DEQ), uses default values that under represent the emissions reductions from CNG, LNG and propane compared to diesel replacements. As the attached exhibit prepared by Clean Fuels Ohio shows, the effect of this bias could be to discourage alternative fuel projects that actually achieve greater reductions in NOx and other emissions based on currently available engines. The unintended consequence would be less NOx and other emissions reductions resulting from the Mitigation Trust investments. Therefore, TEP endorses the Clean Fuels Ohio recommendation for the U.S. EPA to either work to correct and update these data

gaps, or provide a recommended manual emission reduction calculation process based on the existing engine certification data available for diesel and alternative fuel engines.

Recommendation #5: The final settlement should provide greater flexibility for the States and Tribes to develop their mitigation plans.

We believe that the proposed settlement does not provide sufficient flexibility for the States and Tribes to develop mitigation plans that maximize emissions reductions. Several states have many years of experience running their own programs to promote cleaner transportation solutions. These include competitive grant programs, green banks, and rebate programs, to name a few. Based on their experience, they know what incentives are necessary to induce conversions to cleaner technologies. They also know how to structure programs that will achieve the greatest leverage of other funding sources and the greatest emission reductions. Therefore, we recommend that the final settlement provide greater flexibility for the states and tribes to develop mitigation plans that leverage the effectiveness of their existing alternative fuel and vehicle programs.

Recommendation #6: The final settlement should specifically list Truck Stop Electrification (TSE) as one of the enumerated eligible mitigation actions in Appendix D-2.

TEP recommends that the final settlement provide maximum flexibility for States and Native American tribes to allocate funds to truck stop electrification (TSE). Specifically, we request that the settlement expressly list truck stop electrification as an eligible mitigation activity within Appendix D-2, along with the nine other activities that already include various forms of diesel retrofits and the marine equivalent of TSE.

Most truck drivers idle their engines during overnight stays in order to maintain a safe and comfortable interior environment. According to estimates by the Argonne National Laboratory, rest-period idling wastes about 1 billion gallons of diesel fuel and results in about 55,000 tons of NOx emissions annually in the U.S. The practice takes place on a large scale and has a disproportionate impact on disadvantaged communities where truck stops and fleet terminals tend to be located. In fact, the EPA DERA program guidelines flag the communities surrounding truck stops for programmatic priority.

TSE is an EPA SmartWay verified technology, which provides long-haul truck drivers with an alternative to overnight idling. Studies conducted by the EPA and Federal Highway Administration rate TSE as the single most cost effective activity to mitigate mobile sources of NOx emissions (less than one third of the cost per ton achieved through diesel retrofits). Significant NOx mitigation can be achieved through: (1) installation of new TSE locations; and (2) TSE vouchers for truck drivers to encourage more truckers to use existing TSE facilities. These TSE activities should be explicitly listed in Appendix D-2 as "Eligible Mitigation Actions."

Although TSE is technically eligible under the draft settlement's so-called DERA Option, the DERA program does not provide adequate incentives to advance the use of TSE. TSE is still a start-up industry. Moreover, with diesel prices so low, the DERA cost share of 25 percent for new TSE infrastructure is insufficient for the development of new facilities. In fact, several DERA grants for TSE projects were recently returned to EPA because the economics did not work for the developers. In contrast, industry leaders have developed several new TSE facilities in recent years using DOT CMAQ funds, which provide a federal cost share of up to 80 percent. In addition, the DERA program does not provide TSE vouchers

for truck drivers. This would be an extremely efficient mechanism to dramatically increase use of existing TSE facilities.

Consequently, we recommend that TSE be listed explicitly in Appendix D-2 as an eligible mitigation action and that the States and Tribes be allowed to provide up to 80 percent of the cost of new TSE infrastructure. In addition, the final settlement should allow the States and Tribes to allocate funds for TSE vouchers for truck drivers.

Recommendations for the $2.0 Billion Zero-Emission Vehicle Investment Commitment

Recommendation #7: The final settlement should ensure transparency and accountability in Volkswagen's ZEV Investment Plan: The zero-emission vehicle (ZEV) markets are at a critical stage of development. Broad, market-oriented investments, especially charging infrastructure but also consumer education and outreach, are critical. As currently drafted, the ZEV Investment Plan in the proposed settlement agreement lacks transparency and contains minimal mechanisms to establish accountability to ensure investments that are effective in achieving the stated objectives. TEP recommends that the settlement provide more detailed guidance and accountability mechanisms for the ZEV program and create a program structure that ensures transparency. Specifically, as mentioned above, the public should have the opportunity to comment on the draft ZEV plan before it receives final approval. There should also be an opportunity for the public to review and comment on updates to the ZEV plan as it is modified from year to year.

Recommendation #8: The final settlement should include balanced investments in PEV infrastructure and other strategies to accelerate ZEV markets: Some have called for most of the $2.0 billion ZEV fund to be used for development of a nationwide DC fast charging network. While public DC fast charging is important, this one-size-fits-all approach would ignore market conditions and ongoing investments unique to different state and local areas across the country. TEP recommends that the ZEV program be designed to direct funds to local projects that overcome specific market barriers that are unique to specific locations. These include investments in workplace, multi-unit residential and public charging, as well as consumer and dealer education and dealer incentives.

In conclusion, TEP urges the Justice Department to work with the other parties to integrate our recommendations into the final Consent Decree. This will maximize NOx emission reductions to the greatest extent possible and do the most to advance markets for clean transportation solutions.

Thank you again for the opportunity to provide these comments. If you have any questions or would like additional information on any of the points discussed in this letter, please do not hesitate to contact TEP's Ken Brown at 202-674-7777 or ken@akbstrategies.com.

Sincerely,

Sam Spofforth, TEP President
Clean Fuels Ohio

On Behalf of the Transportation Energy Partners Board of Directors:

Phillip Wiedmeyer, TEP Vice-President
Alabama Clean Fuels Coalition

Lee Grannis, TEP Treasurer
Greater New Haven Clean Cities Coalition

Robin Erickson
Utah Clean Cities

Richard Battersby
East Bay Clean Cities Coalition

Alleyn Harned
Virginia Clean Cities

Carl Lisek
South Shore Clean Cities (IN)

Tony Bandiero
Eastern Pennsylvania Alliance for Clean Transportation

Colleen Crowninshield
Tucson Clean Cities

Ruth Horton, Technical Advisor
National Association of State Energy Officials

Exhibit 1 – Diesel Emission Quantifier, Regarding Alternative Fuels
Prepared by Clean Fuels Ohio

The Diesel Emission Quantifier (DEQ) has shown itself to be a valuable tool for providing estimated emission reduction for clean diesel and alternative fuel technologies. There remain, however, some calculative mismatches that create discrepancies for how alternative fuels are calculated within the DEQ. The DEQ tool has limitations and data gaps when calculating multiple types of projects and is particularly problematic when calculating gaseous fuel (CNG and Propane) vehicle replacement projects. Specifically, the DEQ tool has data gaps related to the following:

- **Emission Reduction Factors** – While DEQ aims to provide simple, generalized factors for emission reduction, these factors can often be incorrect for specific alternative fuels, such as CNG and Propane. These errors are evident when comparing the proportional emissions outputs from existing diesel engines vs. propane or CNG engines using US EPA (and/or CARB) certification data on these engine platforms (more specific details below).
- **Missing Technology Options** – The DEQ technology options do not currently reflect the full spectrum of commercially available, US EPA approved, conversion options for alternative fuels. One specific example is dual-fuel natural gas and propane engine systems.

For CNG vehicle replacements, the DEQ offers an option for such technology under the emissions reduction technology scenarios; however, the DEQ indiscriminately applies a 50% NOx Reduction and a 95% reduction of PM2.5. These figures do not reflect the proportional reductions demonstrated by a direct comparison between the emissions certification data of existing diesel engines versus new CNG units, examples of which are provided below:

Existing Diesel Engines[1]	Diesel Engine Model Year	New CNG Engine[2]	New CNG Model Year	% NOx Reduction from CNG System[3]	% PM Reduction from CNG System
MACK MR690s	2000	Cummins ISL G	2015-2016	96.75%	98.00%
MACK LE613	2000	Cummins ISL G	2015-2016	96.75%	98.00%
Volvo VNL42T300	2003	Cummins ISX 12 G	2015-2016	96.25%	97.00%
International 7400	2003	Cummins ISL G	2015-2016	96.8%	99.00%
Volvo VNL42T300	2005	Cummins ISX 12 G	2015-2016	96.25%	97.00%
Freightliner CL120	2006	Cummins ISX 12 G	2015-2016	96.25%	97.00%
Freightliner CL112	2006	Cummins ISX 12 G	2015-2016	96.25%	97.00%

[1] For each existing fleet vehicle, model year specific NOx and PM emissions standard data (in grams/bhp-hr) were assembled using the US EPA's database of Exhaust Emission Standards for Heavy-Duty Highway Compression-Ignition Engines And Urban Buses (view online at: http://www.epa.gov/otaq/standards/heavy-duty/hdci-exhaust.htm).

[2] For each new engine, NOx and PM emissions standard data (in grams/bhp-hr) were assembled using US EPA and CARB certified emissions data for each system and vehicle proposed.

[3] Percent reductions were created by comparing the existing diesel engine certification standards to the specific CNG or propane engine certification standards. The methodology used was as follows: (existing diesel engine certification level – CNG or Propane engine certification level) / existing diesel certification level = % reduced.

Similarly, for propane vehicle replacements, the DEQ offers an option for such technology under the emissions reduction technology scenarios, however, the DEQ under represents the actual emissions reductions and does not reflect the proportional reductions demonstrated by a direct comparison between the emissions certification data of existing diesel engines versus new propane units, examples of which are provided below:

Existing Diesel Engines	Diesel Engine Model Year	New Propane Engine	Propane Model Year	% NOx Reduction from Propane System	% PM Reduction from Propane System
CAT	1998	Roush Propane	2016	98.0%	100.0%
Cummins	2000	Roush Propane	2016	98.0%	100.0%
International 3800	2003	Roush Propane	2016	98.0%	100.0%
Blue Bird TCF	2003	Thomas 311TS	2016	95.0%	90.0%

Due to the DEQ's data gaps and inability to correctly account for emission reductions when using alternative fuels other than diesel, such as compressed natural gas (CNG) or propane, Clean Fuels Ohio recommends the US EPA either work to correct and update these data gaps, or provide a recommended manual emission reduction calculation process based on the existing engine certification data available for diesel and alternative fuel engines. An example of a manual calculation method is detailed below.

Manual Emission Reduction Calculation Process (example):

As described above, there are other avenues for calculating emissions such as those detailed in the California Air Resources Board (CARB) Carl Moyer Program. The Carl Moyer program guidelines provide an example of manual emission reduction calculation methodology, namely the *Estimated Annual Emissions based on hours of Operation* (Formula C-4) formula.[4] Instead of converting hour of operation to miles (using outdated data and diesel specific assumptions), the Carl Moyers Formula C-4 allows for a simpler output by focusing on engine load factor:

$$Emission\ Factor\ \left(\frac{g}{bhp-hr}\right) \times Horsepower\ \times Load\ Factor\ \times$$
$$Annual\ Hours\ of\ Operation\ \left(\frac{hours}{year}\right) \times \frac{1\ ton}{907{,}200\ grams}$$

For this equation, all factors are known, including Load Factor (LF), detailed in Table B-11 of Moyer's Guidelines.[5] While On-Highway Tractors/Trucks are not included, load factor of similar engines are detailed, such as Off-Highway Tractors (LF = 0.65), Off-Highway Trucks (LF = 0.57), or an "Other" catch-all category (LF = 0.43).

Conclusion:

Due to the DEQ's data gaps and inability to correctly account for emission reductions when using alternative fuels other than diesel, such as compressed natural gas (CNG) or propane, Clean Fuels Ohio recommends the US EPA either work to correct and update these data gaps, or provide a recommended

[4] The Carl Moyer Program Guidelines, Page C-3 (Page 37)

[5] The Carl Moyer Program Guidelines, Table B-11, Page B-6 (Page 18)

manual emission reduction calculation process based on the existing engine certification data available for diesel and alternative fuel engines.

For more information on this exhibit, please contact: Sam Spofforth, Executive Director of Clean Fuels Ohio at (614) 884-7336 or Sam@CleanFuelsOhio.org .