

APPENDIX D-4
Beneficiary Eligible Mitigation Action Certification

BENEFICIARY ELIGIBLE MITIGATION ACTION CERTIFICATION

Beneficiary Maryland

Lead Agency Authorized to Act on Behalf of the Beneficiary Maryland Department of the Environment
(Any authorized person with delegation of such authority to direct the Trustee delivered to the Trustee pursuant to a Delegation of Authority and Certificate of Incumbency)

Action Title:	DERA Dray Truck Replacement Program
Beneficiary's Project ID:	MES Drayage 2020-01
Funding Request No.	<i>(sequential)</i> 1
Request Type: (select one or more)	<input checked="" type="checkbox"/> Reimbursement <input type="checkbox"/> Advance <input type="checkbox"/> Other (specify): _____
Payment to be made to: (select one or more)	<input type="checkbox"/> Beneficiary <input checked="" type="checkbox"/> Other (specify): <u>Maryland Environmental Services</u>
Funding Request & Direction (Attachment A)	<input type="checkbox"/> Attached to this Certification <input checked="" type="checkbox"/> To be Provided Separately

SUMMARY

Eligible Mitigation Action	<input checked="" type="checkbox"/> Appendix D-2 item (specify): <u>10. DERA</u>
Action Type	<input checked="" type="checkbox"/> Item 10 - DERA Option (5.2.12) (specify and attach DERA Proposal) <u>Drayage</u>
Explanation of how funding request fits into Beneficiary's Mitigation Plan (5.2.1): See Attached	
Detailed Description of Mitigation Action Item Including Community and Air Quality Benefits (5.2.2): See Attached	
Estimate of Anticipated NOx Reductions (5.2.3): See Attached	
Identification of Governmental Entity Responsible for Reviewing and Auditing Expenditures of Eligible Mitigation Action Funds to Ensure Compliance with Applicable Law (5.2.7.1): See Attached	
Describe how the Beneficiary will make documentation publicly available (5.2.7.2). See Attached	
Describe any cost share requirement to be placed on each NOx source proposed to be mitigated (5.2.8). See Attached	
Describe how the Beneficiary complied with subparagraph 4.2.8, related to notice to U.S. Government Agencies (5.2.9). See Attached	

**If applicable, describe how the mitigation action will mitigate the impacts of NOx emissions on communities that have historically borne a disproportionate share of the adverse impacts of such emissions (5.2.10).
See Attached**

ATTACHMENTS
(CHECK BOX IF ATTACHED)

- Attachment A** **Funding Request and Direction.**
- Attachment B** **Eligible Mitigation Action Management Plan Including Detailed Budget and Implementation and Expenditures Timeline (5.2.4).**
- Attachment C** **Detailed Plan for Reporting on Eligible Mitigation Action Implementation (5.2.11).**
- Attachment D** **Detailed cost estimates from selected or potential vendors for each proposed expenditure exceeding \$25,000 (5.2.6). [Attach only if project involves vendor expenditures exceeding \$25,000.]**
- Attachment E** **DERA Option (5.2.12). [Attach only if using DERA option.]**
- Attachment F** **Attachment specifying amount of requested funding to be debited against each beneficiary's allocation (5.2.13). [Attach only if this is a joint application involving multiple beneficiaries.]**

CERTIFICATIONS

By submitting this application, the Lead Agency makes the following certifications:

- 1. This application is submitted on behalf of Beneficiary Maryland, and the person executing this certification has authority to make this certification on behalf of the Lead Agency and Beneficiary, pursuant to the Certification for Beneficiary Status filed with the Court.**
- 2. Beneficiary requests and directs that the Trustee make the payments described in this application and Attachment A to this Form.**
- 3. This application contains all information and certifications required by Paragraph 5.2 of the Trust Agreement, and the Trustee may rely on this application, Attachment A, and related certifications in making disbursements of trust funds for the aforementioned Project ID.**
- 4. Any vendors were or will be selected in accordance with a jurisdiction's public contracting law as applicable. (5.2.5)**
- 5. Beneficiary will maintain and make publicly available all documentation submitted in**

support of this funding request and all records supporting all expenditures of eligible mitigation action funds subject to applicable laws governing the publication of confidential business information and personally identifiable information. (5.2.7.2)

DATED: March 5, 2020

[Handwritten Signature] - Director

[NAME]

[TITLE]

MDE

[LEAD AGENCY]

for

Maryland

[BENEFICIARY]

**Appendix D-4 – Supplemental Information
Beneficiary Eligible Mitigation Action Certification**

**Beneficiary: Maryland
Lead Agency: Maryland Department of the Environment**

**In support of funding request no. 1
DERA Dray Truck Replacement Program**

Appendix D4 – Summary

Explanation of how funding request fits into Beneficiary’s Mitigation Plan (5.2.1):

This program is highlighted on page 14 of Maryland’s Mitigation Plan and included under the Private Sector programs. This program continues a successful drayage truck replacement program that MDE has funded through various funds for years. This program aims to replace aged port drayage trucks with MY 2013 and later trucks that have newer, cleaner emission certifications.

Detailed Description of Mitigation Action Item Including Community and Air Quality Benefits (5.2.2):

MDE will fund a program that replaces Class 8 port drayage trucks with newer Class 8 diesel trucks. These vehicles will be replaced through a DERA program and are eligible for 50% of the cost, with a cap of \$35,000, to be offset through VW funds. The program will provide up to \$35,000 to help cover some of the costs to replace these vehicles.

Port drayage trucks operate in and around the Port of Baltimore and are often the oldest and dirtiest vehicles that operate on Maryland’s streets. Removing these vehicles and replacing them with newer, cleaner vehicles will help clean the air around the Port that suffers from overburdened air pollution due to traffic and industrial activities.

This program will be run by Maryland Environmental Services (MES). MES has managed this program in the past using various funds and they have been responsible for the replacement of over 200 port drayage trucks through the targeted outreach to dray truck operators using past funds. It is anticipated that this program will result in removing 15 older diesel dray trucks from the fleet.

MDE expects this project to result in the following reductions in air pollutants:

Pollutant	NOx	PM 2.5	GHG
Pollution Reduction (Lifetime Tons)	192.51	8.765	101.25

Estimate of Anticipated NOx Reductions (5.2.3):

Annual NOx reductions are estimated to be 19.25 Tons. Lifetime NOx reductions are estimated to be 192.51 Tons.

Identification of Governmental Entity Responsible for Reviewing and Auditing Expenditures of Eligible Mitigation Action Funds to Ensure Compliance with Applicable Law (5.2.7.1):

The Maryland Department of the Environment is responsible for all Volkswagen Mitigation Plan projects in Maryland.

Describe how the Beneficiary will make documentation publically available (5.2.7.2):

All documentation will be made publicly available on the Maryland Department of the Environment's Maryland Volkswagen Mitigation Plan website. This site can be found at:

<https://mde.maryland.gov/programs/Air/MobileSources/Pages/MarylandVolkswagenMitigationPlan.aspx>

Describe any cost share requirements to be placed on each NOx Source proposed to be mitigated (5.2.8):

This program will cover up to 50% of the replacement cost of a newer vehicle, with a cap of \$35,000. The Drayage Truck owners will be responsible for covering the remaining cost of purchasing a newer dray truck.

Describe how the Beneficiary complied with subparagraph 4.2.8, related to U.S. Government Agencies (5.2.9):

The Maryland Department of the Environment sent the required notifications to the specified U.S. Government Agencies on February 27th, 2018.

If applicable, describe how the mitigation action will mitigate the impacts of NOx emissions on communities that have historically borne a disproportionate share of the adverse impacts of such emissions (5.2.10):

Diesel emissions from many local sources including activities associated with the Port of Baltimore affect the entire Baltimore metropolitan area. With Baltimore's population density of 8,054 people per square mile, the equipment and vehicles to be replaced in this application program operate in an area with high population densities that have affected air quality. However, the most direct impacts would be expected to occur in the communities adjacent to the POB in Anne Arundel County, Baltimore City, and Baltimore County. These communities are located within the range of emissions from diesel fleets, including Port terminals and access roadways. These communities have a total population of over 211,000 and range in geographic distribution from the Sparrows

Point zip code in Baltimore County, waterfront and adjacent communities in Baltimore City, to the Pasadena zip code in Anne Arundel County. Neighborhood specific socioeconomic data is available for the neighborhoods directly surrounding the port facilities. In these adjacent communities, the median income ranges from \$22,403 to \$47,500 with an average median of \$35,580. Several of these areas have significant minority populations and many have high percentages in the poverty level income. (Sources: www.census.gov, <http://www.ubalt.edu/bnia>)

ATTACHMENT B

PROJECT MANAGEMENT PLAN
PROJECT SCHEDULE AND MILESTONES

Milestone	Date
Execute an agreement and issue a PO to MES to administer Project	October 2018
Start Program Outreach	October 2018
Begin receiving and reviewing applications and issuing truck replacement grants	November 2018
Submittal and approval of MD's VW Plan	February 2019
Develop MDE/MES Agreement to utilize VW Trust Funds	June to Sept 2019
Submit funding request to VW Trustee	March 2020
Baltimore Port Clean Diesel Initiative Program Application period ends	May 2020
Truck replacements are completed	June 2020
Invoicing and payments completed	July 2020
Attachment A Funding Request Submitted	July 2020
Draft EPA final report	July 2020
Complete final report and wrap-up grant	August 2020

PROJECT BUDGET

Period of Performance: Oct 2018 – Dec 2020				
Budget Category	Total Approved Budge	Share of Total Budget to be Funded by the Trust	Cost-Share, paid by Drayage Truck Owner	Cost-Share, if applicable (Entity #2)
1. Equipment Expenditure	\$1,043,352	\$521,676	\$521,676	\$
2. Contractor Support	\$0	\$0	\$0	\$
3. Subrecipient Support	\$	\$	\$	\$
4. Administrative	\$50,000	\$50,000	\$	\$
Project Totals	\$1,093,352	\$571,676	\$521,676	\$
Percentage	100%	52.3	47.7%	%

PROJECTED TRUST ALLOCATIONS:

	2020
1. Anticipated Annual Project Funding Request to be paid through the Trust	\$571,676
2. Anticipated Annual Cost Share	\$521,676
3. Anticipated Total Project Funding by Year (line 1 plus line 2)	\$1,093,352
4. Cumulative Trustee Payments Made to Date Against Cumulative Approved Beneficiary Allocation	\$0
5. Current Beneficiary Project Funding to be paid through the Trust (line 1)	\$571,676
6. Total Funding Allocated to for Beneficiary, inclusive of Current Action by Year (line 4 plus line 5)	\$571,676
7. Beneficiary Share of Estimated Funds Remaining in Trust	\$78,033,000
8. Net Beneficiary Funds Remaining in Trust, net of cumulative Beneficiary Funding Actions (line 7 minus line 6)	\$77,461,324

**ATTACHMENT C
DETAILED PLAN FOR REPORTING ON ELIGIBLE MITIGATION ACTION IMPLEMENTATION**

The Maryland Department of the Environment (MDE) will provide detailed reporting on this Environmental Mitigation Trust projects in two ways:

1. Updates to MDE's Volkswagen Mitigation Trust webpage
(<https://mde.maryland.gov/programs/Air/MobileSources/Pages/MarylandVolkswagenMitigationPlan.aspx>)
2. Maryland's semiannual reporting obligation to Wilmington Trust.

MDE maintains a VW Mitigation Trust webpage to provide information and updates to the public in a timely manner. MDE will utilize the webpage to inform the public of project awards and make all documents received publicly available by posting them on that page.

Subparagraph 5.3 of the Environmental Mitigation Trust Agreement for State Beneficiaries details Maryland's Reporting Obligations: "For each Eligible Mitigation Action, no later than six months after receiving its first disbursement of Trust Assets, and thereafter no later than January 30 (for the preceding six-month period of July 1 to December 31) and July 30 (for the preceding six-month period of January 1 to June 30) of each year, each Beneficiary shall submit to the Trustee a semiannual report describing the progress implementing each Eligible Mitigation Action during the six-month period leading up to the reporting date (including a summary of all costs expended on the Eligible Mitigation Action through the reporting date). Such reports shall include a complete description of the status (including actual or projected termination date), development, implementation, and any modification of each approved Eligible Mitigation Action. Beneficiaries may group multiple Eligible Mitigation Actions and multiple sub-beneficiaries into a single report. These reports shall be signed by an official with the authority to submit the report for the Beneficiary and must contain an attestation that the information is true and correct and that the submission is made under penalty of perjury. To the extent a Beneficiary avails itself of the DERA Option described in Appendix D-2, that Beneficiary may submit its DERA Quarterly Programmatic Reports in satisfaction of its obligations under this Paragraph as to those Eligible Mitigation Actions funded through the DERA Option. The Trustee shall post each semiannual report on the State Trust's public-facing website upon receipt."

In MDE's semiannual report following the Trustee's approval of this project, MDE will describe the progress of implementing this Eligible Mitigation Action and include a summary of all costs expended on the Eligible Mitigation Action through the reporting date. The report will also include a complete description of the status, development, implementation (including project schedule and milestone updates), and any modification to this Eligible Mitigation Action.

**ATTACHMENT D
DETAILED COST ESTIMATES FROM SELECTED OR POTENTIAL VENDORS FOR EACH PROPOSED
EXPENDITURE EXCEEDING \$25,000**

Drayage Truck applicants were asked to submit the total cost for each replacement vehicle in their grant application. Replacement vehicles are reimbursable based on the final invoice with a 50% grant maximum not to exceed \$35,000.

Project	Maximum Grant Amount	Project Total Funding	Estimated Vehicles Replaced
Dray Truck Replacement	\$35,000	\$1,093,352	15



National Clean Diesel Campaign

**Fiscal Year 2018
STATE CLEAN DIESEL GRANT PROGRAM
MARYLAND WORK PLAN NARRATIVE AND BUDGET NARRATIVE**

SUMMARY PAGE

Project Title:	Baltimore Port Clean Diesel Initiative
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Project Manager and Contact Information

Organization Name:	Maryland Department of the Environment
Project Manager:	Marcia Ways
Mailing Address:	1800 Washington Boulevard, Suite 705 Baltimore, MD 21230
Phone:	410-537-3286
Fax:	410-537-4435
Email:	marcia.ways@maryland.gov

Project Budget

	FY 2017*	FY 2018
EPA Base Allocation	\$245,359	\$276,317
State or Territory Matching Funds (if applicable)	\$245,359	\$276,317
EPA Match Incentive (if applicable)	\$122,680	\$138,159
Mandatory Cost Share*	\$613,398	\$690,793
Additional Leveraged Resources	\$0	\$0
TOTAL Project	\$1,226,796	\$1,381,586

*These figures reflect modifications to the FY2017 work plan

Project Period

The project period is October 1, 2018 through June 30, 2020. This project period will allow the Maryland Department of the Environment (MDE) and its partners to have appropriate lead-time to advertise, evaluate applications, and issue grants to replace older drayage trucks with 2012 model year or newer trucks. An extension past September 30, 2019 to June 30, 2020 was requested due to the time needed to finalize MDE's VW Mitigation Trust Plan and develop the agreements necessary to utilize MD's matching VW funds.

Summary Statement

The Baltimore Port Clean Diesel Initiative provides financial assistance for the replacement of older drayage trucks operating at the Port of Baltimore with 2012 model year or newer trucks. Grants are issued for up to \$35,000 per truck participant support costs toward the purchase price, with the vehicle owner providing at least half of the total cost.

The Maryland Port Authority web page for the previous DERA State Clean Diesel Program dray truck grants is: <http://portofbaltimoredraytruckreplacementprogram.info/>.

The web page listing MDE previous grant projects is:
<http://www.mde.state.md.us/programs/Air/MobileSources/DieselVehicleInformation/DieselRetrofitProjects/Pages/index.aspx>

SCOPE OF WORK

Project Description

MDE plans to use the State Clean Diesel FY2018 funds to continue its successful Baltimore Port Clean Diesel Initiative begun in 2009.

This proposal was developed to address emissions reduction and air quality goals for the Port of Baltimore and surrounding region. Specifically this project will address emissions from diesel engines used for key service areas of the Port and its tenants. By targeting Port-specific equipment such as drayage trucks, this proposal stays true to one of the RFP's focus areas, Port emissions. The equipment type not only addresses emissions on the yard such as dray truck movement, but also addresses emissions from drayage trucks that are of concern to communities proximate to the Port facilities.

The targeted equipment list was designed to support the Voluntary Agreement between the Maryland Department of the Environment, the Maryland Port Administration, and the Maryland Department of Transportation signed in December, 2015 to continue to reduce emissions from cargo handling equipment, drayage trucks, locomotives and marine vessels.

Drayage Truck Program

The Maryland Port Administration has had a successful drayage truck replacement program in place since 2009. The grant program proposes to continue using mechanisms in place to receive and review applications, issue certificates, replace and scrap trucks and reimburse certificates.

This ongoing program has a waiting list of owner/operators, due to the success of the program, who are interested in replacing their older, higher polluting trucks. Many dray truck owners own single vehicles and would not be able to afford replacement without grant assistance.

Application and review

The current program requires the applicant to submit detailed information about their current trucks, operating characteristics and area of operations. The application is reviewed to assure all information is complete and that the vehicle meets program requirements for engine model year, area of operation, that the vehicle is currently in operation, etc.

Certificate issued

Once the applicants are accepted into the program they are issued a rebate certificate. This certificate shows program vendors that this applicant has been accepted into the program and that funds have been reserved for their replacement vehicle. The program participant will then find a new truck through the list of participating truck vendors. They are free to choose a truck of their choice as long as it has a 2012 model year or newer emissions compliant engine. The program will only fund up to half the cost of the replacement truck or a maximum amount of \$35,000, with the vehicle owner paying at a minimum half of the total cost.

Scrappage of old trucks

Once a new truck has been selected the participant must then scrap the old truck and provide documentation of the scrappage to the Maryland Environmental Service (MES). Scrappage must take place with a scrap dealer who is participating in the program. Proper documentation includes photos and or videos clearly showing the truck is operational before scrappage and that the engine and chassis have been properly disabled, including the EPA Certificate of Engine/Chassis Destruction. Properly disabling the engine includes drilling a hole into the engine block and manifold and cutting the chassis in half.

Request for payment

In order to receive the funds from the certificate the owner/operator must provide proof of purchase of the truck and document scrappage of the old truck. Truck owners apply any income generated from truck scrappage toward their share of the replacement truck purchase price.

State/Territory Goals and Priorities

Maximize Public Health Benefits

Diesel emissions from many local sources including activities associated with the Port of Baltimore affect the entire Baltimore metropolitan area. With Baltimore's population density of 8,054 people per square mile, the equipment and vehicles to be replaced in this application program operate in an area with high population densities that have affected air quality. However, the most direct impacts would be expected to occur in the communities adjacent to the POB in Anne Arundel County, Baltimore City, and Baltimore County. These communities are located within the range of emissions from diesel fleets, including Port terminals and access roadways. These communities have a total population of over 211,000 and range in geographic distribution from the Sparrows Point zip code in Baltimore County, waterfront and adjacent communities in Baltimore City, to the Pasadena zip code in Anne Arundel County.

Neighborhood specific socioeconomic data is available for the fourteen neighborhoods directly surrounding the port facilities. In these adjacent communities, the median income ranges from \$11,162 to \$61,452 with an average median of \$33,334. Several of these areas have significant minority populations and many have high percentages in the poverty level income. (Sources: http://www.ubalt.edu/bnia/indicators/statistical_profiles.html, www.census.gov).

Cost effectiveness

While retrofitting with a diesel particulate filter is technically an option for meeting the 2012 model year emissions compliant engine standards for some vehicles, the duty cycles associated with drayage trucks often do not successfully support this option.

The existing drayage replacement program has shown that owner/operators are willing to replace their trucks with a \$35,000 contribution in federal funds, while they match that amount or contribute more, depending on the total price. DPFs will often be in a similar price range and while this has been an option in past programs it was not well received. Engine replacement is another option. However with the higher mileage on many of these drayage trucks it often does not make financial sense to invest in an engine replacement when funds could be used to replace the entire truck.

The newer engines of the replacement vehicles should provide greater fuel efficiency due to the improved technology over older vehicles. MDE has used the EPA DEQ model and other cost spreadsheets to determine that this is the most cost effective methodology to achieve this level of emission benefits. These calculations were done by looking at fleet age, type, emission reductions, and technology costs.

Environmental Justice Areas

The project will also improve air quality in two Environmental Justice Areas adjacent to the Port of in Baltimore, now referred to as Environmental Benefits Districts (EBD). The first is the East Baltimore EBD, which comprises zip codes 21205, 21231, 21224 and consists of over 30 residential and industrial Baltimore neighborhoods. The second is

the Southwest Baltimore EBD, which comprises zip codes 21230, 21223, 21227 and consists of 12 Baltimore neighborhoods.

The Energy Policy Act of 2005 outlines certain programmatic priorities in Subtitle G, that should be met has part of this funding proposal. MDE believes that this plan successfully meets these priorities. Additionally, we believe that the grant will meet the following Region 3 Significance Factors: provides emissions benefits to urban areas, promotes diesel criteria pollutant reductions (particulate matter and/or nitrogen oxide reductions) and reduces emissions along interstate goods movement corridors.

Disproportionate Air Pollution

This geographic region was considered for project implementation due to its poor air quality. As mentioned above, this area is in nonattainment for ozone. MDE has worked to implement projects along major highways and in high population areas such as cities and town centers where pedestrian traffic is high. In addition, high emission areas such as the port, which include distribution centers, rail yards, and terminals, are targeted.

Available data describing air quality for the neighborhood areas surrounding the Port has been generalized instead of subdivided by neighborhood. But even in generalized form, the information is compelling. In 2017 there were 9 days when ground level ozone exceeded the 2015 EPA health based standard of 70 ppb and 12 and 6 days respectively in 2016 and 2015. As the heart of the urban area, many of these areas have high population densities as well as significant minority populations, and significant poverty levels. All will benefit from reduced emissions and improved air quality as this program will provide substantial reductions in many pollutants including NO_x, PM, HC and CO.

Certified Engine Configuration

While other technology options exist for bringing drayage trucks up to a 2010 emissions compliant engine, replacement is the most efficient way to reduce emissions from drayage trucks. The drayage truck component of the program will replace older drayage trucks with 2010 EPA emission compliant engines.

Maximizing Useful Life

Drayage trucks operate upwards of a million miles and/or over 10 years. It is also not uncommon to see drayage trucks operating well beyond such parameters as well, so this project will put into early service vehicles with significant useful life left.

Maximizing the useful life of any certified engine configuration or verified technology is critical to the participation of the Port of Baltimore community as the operators have demonstrated well-established practices of using engines and equipment over very long life-cycles; much longer than typically found in other commercial service. Where available, duty cycle and lifetime data provided by the participants have been used in the emissions reductions and cost-effectiveness analysis.

Fuel Conservation

All vehicles funded by this project replace much older and less fuel efficient vehicles.

Vehicles and Technologies

Vehicle Selection

Under the continuing program the applicant submits detailed information about their current trucks, operating characteristics and area of operations. The application is reviewed to assure all information is complete and that the vehicle meets program requirements for engine model year, annual usage, area of operation where the vehicle operates, and so on.

The program participant then finds a newer Class 8b truck on the list of participating truck vendors and is free to pick a truck of their choice as long as it is MY 2012 or newer and has a 2010 emissions compliant engine. The program will only fund up to half the cost of the replacement truck or a maximum amount of \$35,000, with the vehicle owner paying at a minimum half of the total cost.

Technology Option Selection

While other technology options exist for bringing drayage trucks up to a 2010 emissions compliant engine, replacement is the most efficient way to reduce emissions from drayage trucks. While retrofitting with a diesel particulate filter is technically an option for meeting the 2010 emissions compliant engine standards for some vehicles, the duty cycles associated with drayage trucks often do not successfully support this option.

The existing drayage replacement program has shown that owner/operators are willing to replace their trucks with a \$35,000 contribution in federal funds. DPFs will often be in a similar price range and while this has been an option in past programs it was not well received. Engine replacement is another option. However with the higher mileage on many of these drayage trucks it often does not make financial sense to invest in an engine replacement when funds could be used to replace the entire truck.

Table 1: Proposed Diesel Equipment Replacements

Equipment Type	Owner	FY2017	FY2018
Drayage Truck	Individual Owners	35	39

For detailed fleet information please see Appendix A: Applicant Fleet Description.

Calculated emission reductions (tons) using the EPA Diesel Emissions Quantifier (DEQ) are as follow:

Table 2: Emissions Reduction (DEQ)

Fleet	Quantity	Lifetime Reductions				
		NOx	PM2.5	HC	CO	CO₂
FY2017	35	115.8	5.5	4.7	26.1	0
FY2018	39	129.1	6.2	5.2	29.0	0

Table 3: Previous MDE/MES Diesel Equipment Replacements Using DERA Grants

Equipment Type	Owner	FY2014	FY2015	FY2016
Drayage Truck	Individual Owners	3	5	7

Roles and Responsibilities

The MDE is partnering with MPA and its administering partner MES for implementation of these projects. The MDE is responsible for grant administrative activities and technical support. The administrative activities involve partner agreements or Memorandum of Agreements (MOA), financial accounting and reporting on the physical and financial progress of the project to the EPA Region 3. Technical support includes providing technical oversight, reviewing and approving technology applications and calculating emission reductions and fuel savings.

MDE is Maryland's principal regulatory agency in the areas of environmental protection and pollution prevention, and will provide oversight and expertise for the projects. MDE has extensive experience working with diesel retrofit technology (ultra low sulfur diesel fuel, diesel oxidation catalysts, diesel particulate filters, closed crankcase ventilation filtration systems, chip reflashing, idle reduction technology and engine repowers); having developed and implemented numerous diesel retrofit projects within the state.

The Maryland Port Administration (MPA) is the public administration in Maryland formed to manage public ports, dredging of channels related to shipping, and transportation infrastructure for the public marine terminals. MPA plays a significant role in setting air quality goals at its marine terminals. This proposal was developed to address emissions reduction and air quality goals of the MPA. Specifically this project will address emissions from diesel engines used for key service areas of MPA and its tenants. By targeting Port specific equipment such as drayage trucks, this proposal stays true to the RFP's focus on Port emissions. The equipment type not only addresses emissions on the yard such as dray truck movement, but also addresses emissions from drayage trucks that are of concern to communities close to the Port facilities.

The Maryland Environmental Service (MES) will be administering the program for MPA, and has been administering this program since its inception. MES is a self-supporting, independent State agency, combining the public sector's commitment to environmental protection of Maryland's air, land and water resources with the private sector's flexibility and responsiveness. MES provides services at competitive rates to government and private sector clients and works on projects including water and wastewater treatment, solid waste management, composting, recycling, dredged material management, hazardous materials cleanup, storm water services and renewable energy. MES provides expert engineering, monitoring and inspection services.

MES will maintain a Program website, process all applications, make reimbursements, and provide periodic reporting to MDE and invoice MDE for program costs. MDE will

provide program oversight and technical support, and prepare quarterly and final EPA reports.

Timeline and Milestones

MPA will continue its existing drayage truck replacement program funded by this grant. Drayage truck owners will submit a rebate application to MPA's administrative partner Maryland Environmental Service (MES) and if approved will receive a rebate certificate to purchase a MY2012 or newer EPA-2010 certified engine truck of their choice from a dealer that is on the approved drayage truck replacement program list. MES will issue the rebate to the truck owner or truck dealer if needed after it verifies the new truck that has been purchased meets the engine and model year requirements and that scrappage of the old truck is complete and can be documented.

The Drayage Truck Program project will proceed according to the following schedule:

October 2018	Execute an agreement and issue a PO to MES to administer the project.
October 2018	Start Program. Post program on website and initiate outreach with truck owners/motor carriers.
November 2018	Begin receiving and reviewing applications and issuing truck replacement grants.
February 2019	Submittal and approval of MD's VW Mitigation Plan, the source of DERA matching funds.
May 2019	Meeting with MES to review Trust funding guidelines and options.
June to Sept 2019	Develop MDE/MES Agreement to utilize VW Trust funds.
October 2019	Submit funding request to VW Trustee to receive funds.
May 2020	Baltimore Port Clean Diesel Initiative Program application period ends.
June 2020	Truck replacements are completed.
July 2020	Invoicing and payments completed.
July 2020	EPA draw downs completed.
July 2020	Draft EPA final report
August 2020	Complete final report and wrap-up grant

DERA Programmatic Priorities

The Port of Baltimore includes distribution centers, rail yards, and terminals, all high in diesel emissions from concentrated traffic. MDE specifically targeted these areas due to their air quality status. In addition to their nonattainment status, where possible, the project will be implemented in areas of high population densities such as cities. The Baltimore area is in attainment for fine particulates and has implemented a maintenance plan for ozone due to nonattainment of the maximum EPA 70 ppb ozone standard. These two areas comprise approximately eleven of the twenty-four counties in the state. In 2017 the 8-hour ozone maximum level measured was 77 parts per billion (ppb), in 2016 it was 79 ppb and in 2015 it was 78 ppb.

EPA's Strategic Plan Linkage and Anticipated Outcomes/Outputs

EPA Strategic Plan Linkage

MDE's proposal supports Goal 1 of the EPA's 2014-2018 Strategic Plan. Specifically, MDE's proposal will reduce diesel emissions that contribute to ozone non-attainment, PM non-attainment and air toxics within Maryland as well as the associated transport issues. Replacing older heavy duty diesel trucks with newer trucks having updated EPA certified 2010 engine technology will reduce their emission of oxides of nitrogen (NOx), particulate matter (PM2.5), hydrocarbons (HC), and carbon monoxide (CO).

Outputs

Over the FY2018 grant period, MDE plans to replace 19 heavy duty diesel drayage trucks with 2010 EPA compliant engines. MES will report to MDE as the replacements occur and submit ongoing and final reports.

The outputs will be tracked via the quarterly grant reports to EPA. Progress will be monitored on a monthly basis to track numbers of trucks replaced. The results of the program will be evaluated against the anticipated outputs and outcomes. The pre-award DEQ numbers will be compared with post project DEQ numbers to determine final environmental effectiveness.

Outcomes

Short term: In the short term, MDE expects an increased awareness and acceptance by fleets that have not been utilizing grants to upgrade their vehicles by engine replacement. MDE and MPA have had good success in motivating these fleets to submit applications. As a result of fleet awareness and acceptability of engine upgrades, many fleets are ready, willing and able, but lack the funds to advance their own retrofit program. Accordingly, widespread adoption in the medium-term is merely a function of available funding.

Medium Term: This proposal builds on previous programs to reduce emissions from diesel engines serving the Port of Baltimore, as well as the recently signed support the Voluntary Agreement between the Maryland Department of the Environment, the Maryland Port Administration, and the Maryland Department of Transportation. In addition this program fits with the MPA's GreenPort program to improve the quality of

the air, water, habitat, waste/recycling and educational/outreach affected by its operations. Under the air quality component, MPA is using a combination of internal funds and federal grants to reduce emissions from a variety of Port related activities, such as cranes, top loaders and drayage trucks, further promoting best practices.

By creating awareness among inexperienced fleets and fostering continued support amongst experienced fleets, MDE will help create a strong group of eligible truck owners/motor carriers. This group will understand the environmental and health benefits of reducing diesel emissions and the economic benefits of reduced fuel consumption and reduced engine maintenance costs. It is anticipated that with funding support from MDE, this group can amass enough retrofits and momentum to reach the critical mass of retrofits and support for the program.

Long term: This geographic area has historically been in nonattainment for ozone. MDE has worked to implement projects along major highways and in high population areas such as cities and town centers where pedestrian traffic is high. As the heart of the urban area, many of these areas have high population densities as well as significant minority populations, and significant poverty levels. All will benefit from reduced emissions and improved air quality as this program will provide substantial reductions in many pollutants including NOx, PM, HC and CO.

Table 4: Emission reductions (tons) from EPA Diesel Emissions Quantifier (DEQ):

Fleet	Quantity	Lifetime Reductions				
		NOx	PM2.5	HC	CO	CO ₂
FY2017	35	115.8	5.5	4.7	26.1	0
FY2018	39	129.1	6.2	5.2	29.0	0

Sustainability of the Program

MDE will enter into a Memorandum of Agreement (MOA) with MES (Grantee). The MOA is a legal document that delineates both MDE and Grantee obligations. Specific project sustainability paragraphs in the MOA that obligates the Grantee include:

- To comply with all the requirements of the EPA Conditions of Financial Assistance Award.
- The Sub-grantees agree to work with the MDE to identify the vehicles suitable for the project and to develop a timeline for the project implementation, including vehicle replacement and scrappage.
- The Sub-grantees agree to maintain the Technologies provided under this Agreement in order to keep them in service throughout their useful lives.
- The Sub-grantees agrees to keep the Technologies under this agreement in service throughout their useful life.

As in past projects, MDE will work with its partners to coordinate press events-press releases to showcase the retrofit project. Events will include elected officials, MDE, EPA, health organizations, members of the media, etc., and will detail the project, the partners, and the environmental benefits. MDE will also continue to meet with public and private partners to discuss retrofit projects and their benefits. A press release and notification on MDE's website will list the number and dollar amount of the grant and technology being funded.

A website was established for the Program:

<http://portofbaltimoreddraytruckreplacementprogram.info>

BUDGET NARRATIVE

Project Budget

MDE is requesting a total of \$276,317 base + \$138,159 EPA matching, for a total of \$414,476 for FY2018 to fund the Baltimore Port Clean Diesel Initiative. The Baltimore Port Clean Diesel Initiative provides financial assistance for the replacement of older drayage trucks operating at the port of Baltimore with 2012 model year or newer trucks. Grants are issued for up to \$35,000 per truck as participant support costs toward the purchase price. Truck owners will contribute at least 50% of the purchase price of the newer truck and contribute any scrappage fees toward that amount.

MDE will utilize existing staff to provide technical and administrative support and does not anticipate using EPA funds for salaries and associated overheads. As a result, 100% of the funds will be spent for drayage truck replacement.

A summary is shown in the following Budget Detail table:

Itemized Project Budget

Budget Category	FY 2017			FY 2018			TOTAL
	EPA Allocation	Voluntary Match (if applicable)	Mandatory Cost-Share (if applicable)	EPA Allocation	Voluntary Match (if applicable)	Mandatory Cost-Share (if applicable)	
1. Personnel	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2. Fringe Benefits	\$0	\$0	\$0	\$0	\$0	\$0	\$0
3. Travel	\$0	\$0	\$0	\$0	\$0	\$0	\$0
4. Supplies	\$0	\$0	\$0	\$0	\$0	\$0	\$0
5. Equipment	\$0	\$0	\$0	\$0	\$0	\$0	\$0
6. Contractual	\$0	\$0	\$0	\$0	\$0	\$0	\$0
7. Program Income	\$0	\$0	\$0	\$0	\$0	\$0	\$0
8. Other (participant support costs)	\$245,359 +122,680 \$368,039	\$245,359	\$613,398	\$276,317 +138,159 \$414,476	\$276,317	\$690,793	\$2,608,382
9. Total Direct Charges	\$368,039	\$245,359	\$613,398	\$414,476	\$276,317	\$690,793	\$2,608,382
10. Indirect Charges	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Grand Total	\$368,039	\$245,359	\$613,398	\$414,476	\$276,317	\$690,793	\$2,608,382

 Thomas J. French
 Director, Office of Operational Services
 Maryland Department of the Environment

 Date

