State of New Jersey
Department of Environmental Protection

PHILIP D. MURPHY
Governor

SHEILA Y. OLIVER
Lt. Governor

CATHERINE R. McCABE
Commissioner

PROJECT PROPOSAL

OVERALL GOAL

The State of New Jersey, as a beneficiary of the Trust established pursuant to the national Volkswagen settlement, intends to use its allocation from the mitigation trust to efficiently implement projects that reduce oxides of nitrogen (NOx) emissions in a cost effective and technically feasible manner. The implemented projects must meet the criteria of the Consent Decree. New Jersey is issuing this solicitation for project ideas to ensure a broad range of project ideas are considered.

NJDEP anticipates primarily funding pilot electrification projects, including the replacement of heavy-duty vehicles/engines such as buses, trucks, and non-road equipment in urban areas disproportionately impacted by diesel emissions, as well as electric vehicle charging/fueling infrastructure installation in strategic locations across the state.

Submissions must contain all the information outlined in the "Project Proposals" section of this document.

ELIGIBLE PROJECTS

A general summary is below. Click here for comprehensive list and associated definitions.

Source Category	Emission Reduction Strategy	Allowed Expenditure Amount
1. Class 8 local freight trucks & port drayage trucks	Repower and replacement	Up to 40% for repower with diesel or alternative fuel or up to 75% (up to 100% if government owned) for repower with electric. Electric charging infrastructure costs are an eligible expense. Up to 25% for replacement with diesel or alternative fuel or up to 75% (up to 100% if government owned) for electric replacement. Electric charging infrastructure costs are an eligible expense.
2. Class 4-8 school bus, shuttle bus or transit bus	Repower and replacement	Same as row 1
3. Freight switching locomotives	Repower and replacement	Same as row 1
4. Ferries/Tugs	Repower	Same as row 1
5. Oceangoing vessels	Shorepower	Up to 25% for shore side infrastructure if non-government owned (up to 100% if government owned)

Source Category	Emission Reduction Strategy	Allowed Expenditure Amount
6. Class 4-7 local freight trucks	Repower and replacement	Same as row 1.
7. Airport ground support equipment	Repower and replacement	Up to 75% to repower or replace with electric (100% if government owned). Electric charging infrastructure costs are an eligible expense.
8. Forklifts and Port Cargo Handling Equipment	Repower and replacement	Up to 75% to repower or replace with electric (100% if government owned). Electric charging infrastructure costs are an eligible expense.
9. Electric vehicle charging stations or hydrogen fueling stations for light duty vehicles only		Up to 100% to purchase, install and maintain infrastructure if available to public at *government owned* property. Up to 80% to purchase, install and maintain infrastructure if available to public at *non-government owned* property. Up to 60% to purchase, install and maintain infrastructure at a workplace or multi-unit dwelling that is not available to the general public. Up to 33% to purchase, install and maintain infrastructure for publicly available hydrogen dispensing that is high volume or 25% for lower volume.

PROJECT PROPOSALS (Open with Adobe Reader)

Electronic submittals are preferred and should be sent to VWComments@dep.nj.gov, however paper submittals will also be accepted and should be sent to:

NJDEP
Division of Air Quality
Mail code 401-02E
Trenton, NJ 08625-0420
Attn: VW Settlement

All proposals must contain the following information; incomplete applications will not be considered. If your project is selected, you may be contacted for additional detailed information. Send questions to VWComments@dep.nj.gov

To enter information electronically, use Adobe Reader

CONTACT INFORMATION

Applicant Name	Lemcor Solid Waste Transfer Station
Applicant Address	170 Frelinghuysen Ave.
City, State, Zip Code	Newark, NJ 07114
Contact Person	Robert Donno
Title/Position	Vice-President
Phone	516-707-8473
E-mail	golman@msn.com and to A.Lembo@lemcortransfer.com and to jsherman@ccmtdg.com
Owner Name	same
Owner Address	
City, State, Zip Code	
Contact Person	
Title/Position	
Phone	
E-mail	

PROJECT NAME	Lemcor Zero Emission Waste Transfer Facility Project - Phase 1

PROJECT CATEGORY OR CATEGORIES (choose from 1-9 in "Eligible Projects" section above)

1	2	3	4	5	6	7	8	9
							X	

PROJECT PRIORITY Priority # of proposals
If submitting more than one proposal, what is the sponsor's priority of this proposal?

NOTE FOR CATEGORY 9 PROPOSALS

If your proposal is for Category 9 (Light Duty Zero Emission Vehicle Supply Equipment), follow these instructions:

Electric Vehicle stations: Do not complete this form. Instead, go to *It Pay$ to Plug In* – NJDEP's Electric Vehicle Charging Grants Program, and apply for a Charging Grant. Volkswagen funds for charging stations will be administered through *It Pay$ to Plug In*.

Hydrogen fuel cell vehicle supply equipment: Complete all of the questions on this form.

PROJECT BUDGET

Provide total estimated project budget, include source, amount of cost share, and administrative costs if applicable:

Total project budget is estimated at $599,093 which consists of 1 Sennebogen Model No. 818 Electric "E" materials handling machine along with administrative costs for electrical design, installation, commissioning, and project management. Since this is a private project, Lemcor's 25% share is $149,773 and the VW Consent Order share would be $449,319.

PROJECT DESCRIPTION (Briefly describe the project by completing the following questions)

The project is Phase 2 of Lemcor's intent to become the first zero carbon waste transfer station in New Jersey. This application is for a Sonnebogen 818 Electric E materials handling equipment that will be operated at the Lemcor facility in Newark.

Geographic area where emissions reductions will occur? City of Newark

Estimated size of population benefitting from the emission reductions? 282,090

Estimated useful life of the project? 15

Number of engines/vehicles/vessels/equipment included in the project? 1

DEP will be modeling emission benefits for all projects. Please provide the necessary information below:

Model Year 2012 Catepillar 336

Horsepower 323

Annual hours of use 4,680

Annual amount of fuel used 40,560 gallons

Will the project benefit one or more communities that are disproportionately impacted by air pollution? If so, please describe?

Yes, this project will directly benefit the City of Newark, a NJDEP EJAC Tier 1 environmental justice community. This vehicle will operate within the city limits 24/7/365.

Only shovel ready projects will be considered. Please list project partners.

Project partners are Sonnebogen, Climate Change Mitigation Technologies LLC, and RSM Construction Group.

Estimated timeframe for implementation? Include a project timeline that identifies start and end dates, as well as the timeline for key milestones.

The estimated timeline for implementation of this project is 8 to 10 months after receipt of a signed sales order and downpayment. The necessary electrical infrastructure and equipment will be installed during the intervening time so the vehicle will be operational upon delivery.

Demonstrated success in implementing similar projects?

Climate Change Mitigation Technologies LLC is an experienced project developer and manager based in New Jersey that is now in the process of standing up some of the first VW Consent Order heavy-duty battery electric truck projects in New Jersey. RSM Construction Group is expert in the design and installation of AC and DC charging systems.

If your proposed project involves alternative fuels, provide a demonstration of current or future plans to provide adequate refueling infrastructure.

This project involves the alternative fuel of electricity. A pre-project inspection has been made and the Lemcor facility has 480V, 3 phase power on-site already so adequate electric power is already available on-site.

Has your organization been approved to receive and expend any other grant funds related to this project? If so, please provide details.

No

Please provide any additional information that supports this project.

The Lemcor Inc. solid waste transfer station in Newark accepts Type 10, 13, 13c, 27, and 72 (non-hazardous liquid) waste streams at the facility and operates 24/7/365. Lemcor has been committed to environmental stewardship for a very long time.
In 2008, the NJDEP awarded Lemcor a Certificate of Environmental Stewardship in recognition of its voluntary and proactive measures to improve the quality of Newark's environment. In 2009, the Newark City Council passed a resolution recognizing Lemcor's voluntary and proactive actions to improve the neighborhood around its facility. In 2016, the Passaic Valley Sewerage Commission (PVSC) awarded Lemcor its Award of Excellence for compliance with PVSC's industrial pre-treatment standards for POTWs.

Now Lemcor's owners are committed to making the facility in Newark the first zero carbon waste transfer station in New Jersey and set the standard for all other solid waste transfer stations. Lemcor plans to install a solar PV system that will supply/offset the power consumption of Sennebogen Electric E. Lemcor also plans to investigate a solar + storage system that will allow the facility to store the solar PV generation on-site and provide it to the Sennebogen Electric E (as well as the battery electric yard tractor that is the subject of Lemcor's other VW grant application), completing the "green energy loop" and making Lemcor the first zero carbon solid waste transfer station in New Jersey.

On the next several pages are copies of:
1. Lemcor's environmental awards;
2. the proposal/specifications for the Sennebogen Electric E;
3. Emissions reduction calculations; and
4. a letter Lemcor's President Armand Lembo Jr. in support of this application.

Award of Excellence

awarded to

Lemcor, Inc

For Exceptional Compliance with
Reporting and Pretreatment Requirements
for the year

2016

presented by the

Passaic Valley Sewerage Commission

Thomas Tucci, Jr. Chairman	Kenneth J. Lucianin Vice Chairman	Gregory A. Tramontozzi Executive Director

Environmental Stewardship

The New Jersey Department of Environmental Protection's
Environmental Stewardship Initiative recognizes

LEMCOR INC

for its voluntary and proactive measures taken to go beyond compliance
in an effort to improve the environment and ensure a sustainable future.

* Participation Category

Environmental Policy	Hazardous Materials Reduction
Environmental Management System	Water Use Reduction
Annual Environmental Report	Waste Exchange Program
Greenhouse Gas Emissions Calculations	Employee Trip Reduction
Environmental Purchasing Policy	Process/Operations Energy Use Reduction
Vendor/Supply Chain Requirements	Transportation Energy Use Reduction
Mentoring To Other Businesses	Renewable Energy Use
Community Outreach Program	Environmental Enhancement Project
Green Building Certification	* Innovative Program
Green Building Implementation	EPA Voluntary Programs
Life Cycle Assessments	

Date of Inspection: February 13, 2008

Wolfgang Skacel
Assistant Commissioner
Compliance & Enforcement

DEPARTMENT OF ENVIRONMENTAL PROTECTION NEW JERSEY

City of Newark, N.J.

The Newark Municipal Council hereby issues this Resolution

Commending

LEMCOR, Inc.

In recognition of the voluntary and proactive measures implemented in order to improve the quality of the environment, the Newark Municipal Council commends LEMCOR,Inc., and acknowledges the receipt from the State of New Jersey's DEP of the Certificate of Environmental Stewardship.

Mildred C. Crump
PRESIDENT, MUNICIPAL COUNCIL

Augusto Amador
COUNCIL MEMBER

Charles A. Bell
COUNCIL MEMBER

Carlos M. Gonzalez
COUNCIL MEMBER

Oscar S. James, II
COUNCIL MEMBER

Donald M. Payne, Jr.
COUNCIL MEMBER

Luis A. Quintana
VICE - PRESIDENT

Anibal Ramos, Jr.
COUNCIL MEMBER

Ronald C. Rice
COUNCIL MEMBER

Attest: Robert P. Marasco Date: May 6, 2009

Robert P. Marasco
City Clerk

Model: SENNEBOGEN 818 R “E”
Customer: Lemcor, USA
Date: Thursday, July 02, 2020
Dealer: Komatsu, USA

Komatsu | Lemcor

SENNEBOGEN 818 Electric "E"

green line Material Handling Machine

(Picture may show similar model, different series and/or optional equipment)

Model: SENNEBOGEN 818 R "E"
Customer: Lemcor, USA
Date: Thursday, July 02, 2020
Dealer: Komatsu, USA

Electric Motor

- Electric Motor
  Motor Rating:99 kW
- Voltage: 480 V
  Frequency: 60 Hz
- Longitudinally mounted electric motor provides excellent and safe access from platform. Electric control panel / electric switch cabinet on the rear, left side of the upper carriage with easy access via platform.
- During the start of the electric motor a temporary high demand of the nominal current is required from the electricity network. Power feed and electric network has to be provided by the customer for this demand. SENNEBOGEN will not be responsible for electrical supply towards to the machine.
- Power pack in Counterweight (Pony motor)

Hydraulic System

- Computer free, state-of-the-art load-sensing with flow-on-demand control
- Hydraulic cooler hydraulically driven, reversible
- Hydro-Clean filtration system with water absorption and contamination indicator
- Hydraulic tank pre-heater

Upper Carriage & Swing System

- Torsion free, precisely machined upper carriage frame
- High torque axial piston swing motor
- Large dimensioned, internal teeth swing bearing
- Automatic central lubrication system for upper carriage and swing bearing
- Handrail on top of upper carriage
- Fire extinguisher set (1x cab, 1x storage compartment)
- Light Package consisting of: 2x halogen in cab roof, 2x in frame

Operator's Cab "maXCab"

- Hydraulic elevating cab system "E270" (elevation: 8'8")
- Catwalk with handrail beside cab
- "maXCab" with sliding door and door window as sliding window, sunshade, floor mat
- Automatic climate control with AC, heater and defroster
- Radio with USB and SD port, MP3 and Bluetooth
- SENCON visual and acoustic diagnostic system for monitoring all essential machine functions
- Air suspended and adjustable operator's seat incl. armrests, seat heater, headrest, seat belt
- Camera system with display in cab
- Additional Light Package consisting of: 1x at cab backwards
- Operator's & Maintenance manual incl. hydraulic & electric schematics (1x print / 1x digital)
- Spare Parts catalogue (1x print / 1x digital)

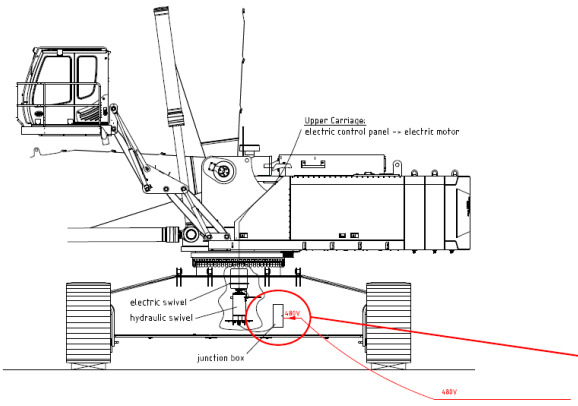
Model: SENNEBOGEN 818 R "E"
Customer: Lemcor, USA
Date: Thursday, July 02, 2020
Dealer: Komatsu, USA

Working Equipment

- K10 ULM Special purpose built material handling working equipment
- Straight material handling boom 6.2m
- Straight material handling stick, 3.8m ULM cylinder including hydraulics, and linkage (ball valves)
- Boom & Stick cylinders equipped with safety check valves and end position dumping
- Attachment open/close and rotate hydraulic circuits and lines installed up to the end of the stick
- Additional Light Package consisting of: 1x at boom, 2x at stick
- Contractors Grapple 2/3

Undercarriage

- Crawler undercarriage R25/240 for electric machines with crawler B4HD (54 track shoes), track gaug 2400mm, one-stage track motors.
- Joystick-steering instead of drive pedals for crawler machines
- Intermitted horn for driving (travel alarm)
- SENNEBOGEN will deliver the machine including junction box in the under carriage



(electrical supply drawing may show similar model, different series and/or optional equipment

Model: SENNEBOGEN 818 R "E"
Customer: Lemcor, USA
Date: Thursday, July 02, 2020
Dealer: Komatsu, USA

Installation

On Site Requirements for Installation (customer's responsibility)

- The customer is responsible for the layout and installation of the hook up to the electric junction box as well as the electrical network
- The customer is responsible to have all wiring available upon assembly of machine. The machine cannot be assembled completely until the unit is operational
- The customer is responsible for a level surface (+/- 0.25% degree)
- SENNEBOGEN will provide further technical information once the order is placed
- The customer is responsible for all design, static calculation, reinforcement of existing structure if required to hold upcoming forces (see technical specs), safe accessibility to machine catwalks / platform to access operators cab, work and additional accessories required for the installation
- The customer is responsible for the tie down arrangement including tie down parts of the machine

Pricing

1x (one) unit 818 R K10ULM "E" electric (Plus any applicable taxes) **FOB Newark, NJ…..US$ 459,900.00**

Delivery time

SENNEBOGEN LLC will supply the machine according to the scope of supply within 8-10 months provided that all technical questions are clarified prior to receipt of the written purchase order and receive of the down payment. This delivery time is subject to prior sale.

Payment terms

Twenty-five (25%) down payment with the purchase order and seventy-five (75%) with invoice of the machine (release for shipping) Note: all down payments are nonrefundable

Warranty:

SENNEBOGEN LLC warrants all machines for a period of twelve (12) months or 2,000 hours of operation whichever occurs first according to the latest edition of the SENNEBOGEN LLC warranty manual. Extended warranty is available on request.

Validity

The commercial conditions and technical specifications are valid for 60 days after date of quote

Further terms

The commercial conditions are according to the SENNEBOGEN LLC general terms and conditions of sale. All applicable federal, state and local taxes are not included. Prices and delivery are subject to prior sale.

Lemcor, Inc.
Emissions Reduction Grant Application
Estimates of Existing Annual Emissions
July 2020

					Estimated Annual Emissions (tons/year)				
Existing Equipment Planned for Replacement	**Engine Output (kW)**	**Emissions Control Tier**	**Operating Hours (Annually)**	**Duty Cycle (% of Operating Hours at Full Power Output)**	**Non-Methane Hydrocarbons (NMHC)**	**Non-Methane Hydrocarbons + Nitrogen Oxides (NMHC + NOx)**	**Nitrogen Oxides (NOx)**	**Particulate Matter (PM)**	**Carbon Monoxide (CO)**
CAT 330D (2006)	200	3	4472	50%	--	1.97	--	0.10	1.73
	200	3	4472	100%	--	3.94	--	0.20	3.45
CAT 336E (2012)	224	4	4472	50%	--	2.21	--	0.01	1.93
	224	4	4472	100%	--	4.42	--	0.02	3.86

Reference: EPA Nonroad Compression-Ignition Engines: Exhaust Emission Standards (March 2016)

		g/kW-hr				
	Tier	Non-Methane Hydrocarbons	Non-Methane Hydrocarbons + Nitrogen Oxides (NMHC + NOx)	Nitrogen Oxides (NOx)	Particulate Matter (PM)	Carbon Monoxide (CO)
130<kW<225	3	--	4.0	--	0.20	3.5
	4	--	4.0	--	0.02	3.5

Nonroad Compression-Ignition Engines: Exhaust Emission Standards

	Rated Power (kW)	Tier	Model Year	NMHC (g/kW-hr)	NMHC + NOx (g/kW-hr)	NOx (g/kW-hr)	PM (g/kW-hr)	CO (g/kW-hr)	Smoke [a] (Percentage)	Useful Life (hours /years) [b]	Warranty Period (hours /years) [b]
Federal	kW < 8	1	2000-2004	-	10.5	-	1.0	8.0	20/15/50	3,000/5	1,500/2
		2	2005-2007	-	7.5	-	0.80	8.0			
		4	2008+	-	7.5	-	0.40 [c]	8.0			
	8 ≤ kW < 19	1	2000-2004	-	9.5	-	0.80	6.6		3,000/5	1,500/2
		2	2005-2007	-	7.5	-	0.80	6.6			
		4	2008+	-	7.5	-	0.40	6.6			
	19 ≤ kW < 37	1	1999-2003	-	9.5	-	0.80	5.5		5,000/7 [d]	3,000/5 [e]
		2	2004-2007	-	7.5	-	0.60	5.5			
		4	2008-2012	-	7.5	-	0.30	5.5			
			2013+	-	4.7	-	0.03	5.5			
	37 ≤ kW < 56	1	1998-2003	-	-	9.2	-	-		8,000/10	3,000/5
		2	2004-2007	-	7.5	-	0.40	5.0			
		3 [f]	2008-2011	-	4.7	-	0.40	5.0			
		4 (Option 1) [g]	2008-2012	-	4.7	-	0.30	5.0			
		4 (Option 2) [g]	2012	-	4.7	-	0.03	5.0			
		4	2013+	-	4.7	-	0.03	5.0			
	56 ≤ kW < 75	1	1998-2003	-	-	9.2	-	-			
		2	2004-2007	-	7.5	-	0.40	5.0			
		3	2008-2011	-	4.7	-	0.40	5.0			
		4	2012-2013 [h]	-	4.7	-	0.02	5.0			
			2014+ [i]	0.19	-	0.40	0.02	5.0			
	75 ≤ kW < 130	1	1997-2002	-	-	9.2	-	-			
		2	2003-2006	-	6.6	-	0.30	5.0			
		3	2007-2011	-	4.0	-	0.30	5.0			
		4	2012-2013 [h]	-	4.0	-	0.02	5.0			
			2014+	0.19	-	0.40	0.02	5.0			

Continued

	Rated Power (kW)	Tier	Model Year	NMHC (g/kW-hr)	NMHC + NOx (g/kW-hr	NOx (g/kW-hr	PM (g/kW-hr	CO (g/kW-hr)	Smoke [a] (Percentage)	Useful Life (hours /years) [b]	Warranty Period (hours /years) [b]
		1	1996-2002	1.3 [j]	-	9.2	0.54	11.4			
		2	2003-2005	-	6.6	-	0.20	3.5			
	130 ≤ kW < 225	3	2006-2010	-	4.0	-	0.20	3.5	CAT 330D	(2006) -	200kW
		4	2011-2013 [h]	-	4.0	-	0.02	3.5	CAT 336E	(2012) -	224kW
			2014+ [i]	0.19	-	0.40	0.02	3.5			
		1	1996-2000	1.3 [j]	-	9.2	0.54	11.4			
		2	2001-2005	-	6.4	-	0.20	3.5			
	225 ≤ kW < 450	3	2006-2010	-	4.0	-	0.20	3.5			
		4	2011-2013 [h]	-	4.0	-	0.02	3.5			
			2014+ [i]	0.19	-	0.40	0.02	3.5			
		1	1996-2001	1.3 [j]	-	9.2	0.54	11.4			
		2	2002-2005	-	6.4	-	0.20	3.5			
	450 ≤ kW < 560	3	2006-2010	-	4.0	-	0.20	3.5			
		4	2011-2013 [h]	-	4.0	-	0.02	3.5			
			2014+ [i]	0.19	-	0.40	0.02	3.5			
		1	2000-2005	1.3 [j]	-	9.2	0.54	11.4			
		2	2006-2010	-	6.4	-	0.20	3.5			
	560 ≤ kW < 900	4	2011-2014	0.40	-	3.5	0.10	3.5			
			2015+ [i]	0.19	-	3.5 [k]	0.04 [l]	3.5			
		1	2000-2005	1.3 [j]	-	9.2	0.54	11.4			
		2	2006-2010	-	6.4	-	0.20	3.5			
	kW > 900	4	2011-2014	0.40	-	3.5 [k]	0.10	3.5			
			2015+ [i]	0.19	-	3.5 [k]	0.04 [l]	3.5			
Federal									20/15/50	8,000/10	3,000/5

Notes on following page.

Notes:

- For Tier 1, 2, and 3 standards, exhaust emissions of nitrogen oxides (NOx), carbon monoxide (CO), hydrocarbons (HC), and non-methane hydrocarbons (NMHC) are measured using the procedures in 40 Code of Federal Regulations (CFR) Part 89 Subpart E. For Tier 1, 2, and 3 standards, particulate matter (PM) exhaust emissions are measured using the California Regulations for New 1996 and Later Heavy-Duty Off-Road Diesel Cycle Engines.
- For Tier 4 standards, engines are tested for transient and steady-state exhaust emissions using the procedures in 40 CFR Part 1039 Subpart F. Transient standards do not apply to engines below 37 kilowatts (kW) before the 2013 model year, constant-speed engines, engines certified to Option 1, and engines above 560 kW.
- Tier 2 and later model naturally aspirated nonroad engines shall not discharge crankcase emissions into the atmosphere unless these emissions are permanently routed into the exhaust. This prohibition does not apply to engines using turbochargers, pumps, blowers, or superchargers.
- In lieu of the Tier 1, 2, and 3 standards for NOX, NMHC + NOX, and PM, manufacturers may elect to participate in the averaging, banking, and trading (ABT) program described in 40 CFR Part 89 Subpart C.

a Smoke emissions may not exceed 20 percent during the acceleration mode, 15 percent during the lugging mode, and 50 percent during the peaks in either mode. Smoke emission standards do not apply to single-cylinder engines, constant-speed engines, or engines certified to a PM emission standard of 0.07 grams per kilowatt-hour (g/kW-hr) or lower. Smoke emissions are measured using procedures in 40 CFR Part 86 Subpart I.

b Useful life and warranty period are expressed hours and years, whichever comes first.

c Hand-startable air-cooled direct injection engines may optionally meet a PM standard of 0.60 g/kW-hr. These engines may optionally meet Tier 2 standards through the 2009 model years. In 2010 these engines are required to meet a PM standard of 0.60 g/kW-hr.

d Useful life for constant speed engines with rated speed 3,000 revolutions per minute (rpm) or higher is 5 years or 3,000 hours, whichever comes first.

e Warranty period for constant speed engines with rated speed 3,000 rpm or higher is 2 years or 1,500 hours, whichever comes first.

f These Tier 3 standards apply only to manufacturers selecting Tier 4 Option 2. Manufacturers selecting Tier 4 Option 1 will be meeting those standards in lieu of Tier 3 standards.

g A manufacturer may certify all their engines to either Option 1 or Option 2 sets of standards starting in the indicated model year. Manufacturers selecting Option 2 must meet Tier 3 standards in the 2008-2011 model years.

h These standards are phase-out standards. Not more than 50 percent of a manufacturer's engine production is allowed to meet these standards in each model year of the phase out period. Engines not meeting these standards must meet the final Tier 4 standards.

i These standards are phased in during the indicated years. At least 50 percent of a manufacturer's engine production must meet these standards during each year of the phase in. Engines not meeting these standards must meet the applicable phase-out standards.

j For Tier 1 engines the standard is for total hydrocarbons.

k The NOx standard for generator sets is 0.67 g/kW-hr.

l The PM standard for generator sets is 0.03 g/kW-hr.

Citations: Code of Federal Regulations (CFR) citations:

- 40 CFR 89.112 = Exhaust emission standards
- 40 CFR 1039.101 = Exhaust emission standards for after 2014 model year
- 40 CFR 1039.102 = Exhaust emission standards for model year 2014 and earlier
- 40 CFR 1039 Subpart F = Exhaust emissions transient and steady state test procedures
- 40 CFR 86 Subpart I = Smoke emission test procedures
- 40 CFR 1065 = Test equipment and emissions measurement procedures

LEMCOR
SOLID WASTE TRANSFER STATION & MATERIALS RECOVERY FACILITY

170 Frelinghuysen Ave.
Newark, NJ 07114

July 20th 2020

Ms. Peg Hanna, Assistant Director
NJDEP, Air Monitoring & Mobile Sources
PO Box 420
Mail Code 401-02G
401 East State Street, 2nd floor
Trenton, NJ 08625-0420

Dear Ms. Hanna;

Our firm operates a Solid Waste Transfer Station in Newark, NJ. To reduce emissions at our facility and within our community we are seeking to purchase an electric excavator. An excavator is one of the essential pieces of heavy equipment in an operation such as ours as it is used continuously (up to 16 hours daily) to load waste into outbound vehicles. NJDEP Regulations require waste facilities to transfer material within 24 hours of receiving it.

To my knowledge, we would be the first waste facility in NJ to utilize such a machine, the cost of which is significant. While it is my understanding that this type of equipment is not specifically covered under this grant program, I would request that consideration be given to this application due to the significant emissions reductions that can be realized by replacing a traditional diesel excavator with the zero emissions electric version.

As supported by the attached information prepared by our consultants, our existing excavators operating at a 50% duty cycle are estimated to produce total emissions (non-methane hydrocarbons, nitrogen oxides, particulate matter, and carbon monoxide) between approximately 3.8 and 4.15 tons per year (3.5 million to 3.8 million grams), which would be directly eliminated through the use of the proposed electric excavator. Based on typical heavy-duty diesel transportation vehicle emissions, these calculations show that the emissions reductions for replacing this type of equipment are as beneficial if not greater than those achieved by replacing a "rolling" or transportation unit(s).

Should you have any questions please feel free to contact me at (201) 321-0501.

Sincerely,

Armand E. Lembo Jr.
President

Cc: Ms. Melissa Evanego, NJDEP, Chief Bureau of Mobile Resources