

EXHIBIT A

SCOPE OF WORK AND SPECIFICATIONS

The “Project” means the completely operational landfill gas-to-energy system at the Landfill, which shall be operated and maintained by Contractor in accordance with this Agreement. The Scope of Work for the Project consists of all work necessary to operate, maintain, repair and replace the Project, including, but not limited to, meeting the performance specifications outlined in this Agreement and functioning in accordance with applicable Laws and Permits and includes the completion of all record documents.

The “Scope of Work” and Specifications for the Project are as follows.

- A. Contractor shall procure materials, and provide management, supervision, testing, and submittal of documentation for the operation and management of the plant. The plant consists of 2 Caterpillar Model G3520 gas engine generator sets and all related subsystems designed to supply approximately 3,040 Kw of electric power to the utility grid.

The following summarizes the major components and/or systems of the Project

Engine Generator Sets: 2 Caterpillar Model G3520 engine generator sets were installed in 2012. The Cat 3520 is a completely integrated skid mounted package consisting of the engine, generator, and all support systems including start, fuel, lube, and control systems. Each engine is rated at 1,600 Kw (4160 volts) at the generator terminals. The replacement of the current engine generator sets would constitute a Change in Work, if Contractor follows all approved maintenance schedules and the replacement is not due to Contractor’s negligence or damage to the engine generator sets.

Fuel Gas System: The fuel gas system is capable of providing landfill gas from the existing landfill gas collection system. The fuel gas system at the generating plant includes one automatic fail-safe gas valve, one manual gas valve, primary filter separator, one gas compressor, gas cooler, final gas filter, a single gas analyzer, single gas flow meter, auto shut-off valves at each engine, and all piping and fittings to each engine. The system is designed to provide a maximum of 1300 SCFM of filtered gas to the engine generators at a minimum of 1.5 psig.

The fuel gas system includes the following:

- Manual & Automatic Shut-off valves
- Primary coalescing filter tower
- Compressor package, with VFD
- Gas cooler
- Final coalescing filter tower
- Associated piping, valves, fittings, and local temperature & pressure gauges
- Flow measurement device - orifice plate

- Gas Analyzer

Jacket Water and Lube Oil/Aftercooler Cooling Systems: Each engine generator has two cooling systems (jacket water and lube oil/aftercooler) capable of dissipating the heat through a water-to-air radiator. The jacket water cooling system is a closed-loop circulating system, thermostatically controlled mixing loop, that includes a pre-heater and engine-driven pump. Heat is dissipated through a radiator with one single-speed motor-driven fan. The lube oil/aftercooler cooling is accomplished through a second closed-loop circulating system with an on engine thermostatically controlled mixing loop, and engine-driven pump and a second coil in the water-to-air radiator.

Each Caterpillar Model G3520 engine cooling system includes:

- One radiator with two single core round finned tube heat exchangers, one for jacket water and one for lube oil/aftercooler
- One single speed 25 HP fan
- Engine mounted driven jacket water pump
- Engine mounted driven lube oil/aftercooler pump
- Lube oil cooler tube and shell heat exchanger
- Aftercooler tube and shell heat exchanger
- Two three-way engine-mounted mixing valves
- One 9Kw Jacket water heater, thermostatically controlled
- Associated valves, fittings, and local temperature and pressure gauges.

Lube Oil Supply and Make-up System: This system consists of a 3,000-gallon storage tank, an air-operated lube oil transfer pump, piping from the lube oil tank to the engine and to the new oil make-up tank. The make-up oil tank is mounted inside the building on a support structure via a wall mount bracket.

The engines are provided with an automatic lube oil makeup system. The lube oil system includes the following:

- 15-gallon oil makeup tank and REN automatic level control
- Associated piping, valves, and fittings
- Oil transfer system including a pneumatic oil pump
- Bayonet oil heater with controls (10kw)
- All lube oil piping shall be socket welded except at the valves.
- Valves to be threaded with unions, before and after, for future removal and service.

Waste Oil Collection System: The waste oil collection system consists of a 1,500-gallon waste oil tank, air-operated waste oil transfer pump, piping from the waste oil tank to the engine. Waste oil from engine oil changes will be transferred to the 1,500-gallon waste oil storage tank via the waste oil transfer pump and stored until removal. The waste oil system includes the following:

- Oil transfer system including a pneumatic oil pump
- Associated piping, valves, and fittings
- All piping to be socket welded, same as new oil system
- Bayonet oil heater with controls (6kw)
- Crankcase blower drain to waste oil piping inside building and will include isolation valve, and 15-gallon accumulator tank.

Crankcase Ventilation System: The crankcase ventilation system is a forced draft system which uses a small blower to draw out vapors from the crankcase breathers of each engine and discharges them to the outside of the building. The overhead system consists of PVC ducting, valves, and mist eliminator/blower.

Condensate Collecting System: The condensate from the gas system, primary and final gas filters, gas cooler drain trap and main gas header drain is collected and piped to a condensate sump which discharges into the existing condensate handling system at the flare. A 1,000-gallon dual contained storage tank with an air-operated pump is also installed for back-up to the Authority's system.

Engine Exhaust System: This system includes the exhaust piping, supports, silencer and exhaust stacks. All engines include a critical grade silencer. An insulated exhaust stack inside the building (16" dia.) connects to the silencer and rises to a minimum 29 feet above grade. The exhaust system includes access ports for emissions testing, with size and location in accordance with air quality standards.

Plant Compressed Air: This system includes a flooded-screw air compressor, vertical air receiver tank, air dryer/filter desiccant (for instrument air only), engine starting system and service connections with water separators. Service connections are provided for use as required for plant maintenance.

Fire Protection System: The system consists of a fire detection system and dry chemical extinguishers for the entire plant. A central fire alarm panel located in the control room monitors the fire detection system. The fire detection system includes several heat detectors wired directly into a central fire alarm panel for remote monitoring. The fire alarm panel is integrated into the plant control system and is designed for orderly plant shutdown upon fire detection. The building is equipped with a fire detection system in accordance with NFPA standards.

Methane Detection System: The system consists of a methane detection panel and individual sensors located in each room. The methane detection panel is integrated into the engine room ventilation system and incoming plant gas auto shut-off valve for orderly plant shutdown upon methane detection.

HVAC System: The building is segregated into two rooms: engine room and control/switchgear room. The engine room ventilation air is drawn in through two grade level intake fans (with temperature switches for high and low speed) and exhausted through two roof-mounted exhaust vents. The control/switchgear room is provided with

a separate HVAC system for control room heating and cooling. Combustion air is supplied to each engine by the intake fans and drawn into a filter box and ducting for each engine. The facility is equipped with a fully automatic HVAC system.

Electrical Systems: The electric systems are separated into sub-systems (1) low voltage supply, (2) medium voltage power, and (3) distribution voltage to Utility. The low voltage (120/220 & 480 volts) supply system includes a house transformer (4160/480V), 480V Motor Control Center, lighting transformer (480/120V), 120V breaker panel and all lighting and receptacle outlets. The medium voltage power system includes the engine generators, switchgear with load-break switch (for house power), and all generator and Utility protection relays. The distribution voltage to Utility consists of a primary step-up transformer (4160V/13.2KV), outdoor 15KV circuit breaker, metering/relaying CT's and PT's, and Utility interconnect (as provided by BG&E).

Design Conditions: The following presents the design conditions associated with the electrical generating plant. These specifications provide a detailed description of the equipment and components selected for the project.

CATEGORY	CRITERIA
<u>Prime Power Generator (per engine)</u>	
Model	CAT G 3520
Speed	1200 RPM
Power (Gross, ISO)	1600 Kw
Generator Voltage	4160V
 <u>Plant Parasitic Load</u>	
Landfill Gas Compressor	70 kw each
Gas Cooler	7 kw
Engine Radiators (2)	18 kw each
Plant Lighting, Controls, HVAC	20 Kw Intermit
Crankcase Blower	7 Kw
Ventilation Fans (2)	11 kw each
Total (Kw)	162 kw
 <u>Air-to-Water Radiator Cooler</u>	
Maximum Ambient Temperature	110 ⁰ F
 <u>Fuel Gas System</u>	
Maximum Gas Flow	1,300 Dry SCFM
Gas Supply Temperature	
Maximum	120 ⁰ F
Minimum	50 ⁰ F
Maximum Negative Pressure on Field	3.0 PSI

Minimum Pressure to Engine	1.5 PSI
Final Gas Filter Effy. (>.3 micron)	99.9%

Plant Ventilation Supply

Outside Air Temperature	100°F
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Existing Project Site Conditions are native
earth free of all waste

Minimum Soil Bearing Pressure	2,500 psf
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- B. The point of interconnection is set forth in the Interconnection and Operating Agreements for the Project. Contractor shall provide preventative maintenance for the electrical substation, which includes an annual inspection and cleaning and repair of the equipment (including but not limited to the repair or replacement of the fuses, the PT fuse cabinet, and the outdoor switchgear). The outdoor switchgear includes three outdoor enclosures. First enclosure contains the 15 KV main disconnect switch for BGE. The second enclosure contains the CT, PT's and fuse drawer/box. The third enclosure contains the 15 KV breaker assemble for the owner power feed. The Contractor will be responsible for all aspects of the current Interconnection between the Facility, the local utility (BGE) and transmission provider (PJM Interconnection, LLC) including all costs related to the operation and maintenance of the existing interconnection equipment and services. The Contractor will maintain all equipment and facilities necessary for the Project to have fully functional operational electrical systems, including all necessary electrical switchgear to permit and continue the electrical connections between the Project and Baltimore Gas & Electric Company. Contractor shall provide and pay the costs for all utility (e.g., electrical usage and standby BGE charges) and telecommunication (e.g., Verizon telephone accounts) services including but not limited to the service entrance substation and communication lines of the Project including the direct transfer trip and associated equipment. The Facility currently is using Verizon leased legacy circuits and copper telephone lines for Facility communications including the transfer trip circuit. The Contractor will provide an appropriate solution for the replacement or upgrade of the existing Verizon communications lines used for the local Utility (BGE) transfer trip if requested by the Authority. Contractor shall coordinate with all parties (Authority, County, BGE, PJM, etc.), develop an appropriate replacement design, secure applicable approvals and permits, and construct the replacement system. All equipment design, permitting and construction costs related to transfer trip upgrades will be reimbursed by the Authority and constitute a Change in Work and/or a pass through cost.
- C. The Project is currently in compliance with applicable noise ordinances at adjacent residential property lines. Contractor may be required to assist with the implementation of additional noise reduction measures, if the Project noise level increases. Currently there is (1) a noise curtain wall installed between the oil tanks and radiators (2) sound attenuation blankets around the compressor area and (3) a silencer on the crankcase ventilation/discharge. Replacement of the noise attenuation wall would constitute a Change in Work.

- D. Contractor will be responsible for the management of condensate generated by the Project. Condensate is currently tendered to the County at the Millersville Landfill for pre-treatment and discharge in accordance with the County's existing wastewater discharge permit. Condensate may be discharged to the County at no cost to the Contractor. The County reserves the right to require the Contractor to transport and dispose of condensate at a permitted off-site facility. Direct costs for off-site disposal will be reimbursed by the County.
- E. Contractor must continue to meet all air emissions and other permit requirements and may be required to assist with the implementation of additional emissions reduction measures, as a result of any new permit requirements. In the event there is a change in law that requires new air emission control at the Facility, that new requirement would constitute a Change in Work.
- F. Subject to **Section 11.3.2**, Contractor shall perform the Work on the Millersville Project in accordance with the terms and conditions of the Power Purchase Agreement(s), if applicable, and the terms and conditions of the Interconnection and Operating Agreements (including, without limitation, performing the Authority's obligations related to the operations of the Millersville Project).
- G. Contractor will work to achieve maximum output from the Project as conditions change. Contractor will establish procedures for daily monitoring of the facility output, the gas quantity, and the gas quality, including methane content and vacuum pressure. Contractor will have procedures for calculating and performing adjustments necessary to promptly restore maximum output in the event the monitoring shows that the Project output has dropped.
- H. Contractor shall provide all PJM reporting in accordance with Exhibit M and Section 11.9. In addition, the Contractor will be responsible for maintaining communications with the PJM energy management system including system integration services for the PJM Jetstream OATI encryption key renewals.

EXHIBIT B

LANDFILL AND PROJECT SITE

Brief History and Description of the Millersville Landfill and Resource Recovery Facility (MLRRF) near Severn, Maryland.

The Authority is not guaranteeing any maximum or minimum quality or quantity now or in the future of Landfill Gas at the MLFRRF.

The MLFRRF is located on a 565-acre parcel at 389 Burns Crossing Road, approximately 1 mile northwest of Millersville and 1 mile east of Odenton in Anne Arundel County, Maryland. The landfill is owned and operated by Anne Arundel County and is the only active municipal solid waste (MSW) landfill in the county. The MLFRRF is transected by both a stream and a 120-foot-wide Baltimore Gas and Electric right-of-way running west to east. The MLFRRF is equipped with extensive leachate collection, storage and treatment systems, a landfill gas collection and recovery system, stormwater management facilities, groundwater monitoring wells, cardboard recovery building, citizen drop-off center, scale house and equipment maintenance building.

As of January 2021, the landfill has received approximately 15 million cubic yards of municipal solid waste. The entire facility has a capacity for approximately 23 million cubic yards. The landfill handles about 120,000 - 140,000 tons per year of MSW.

The landfill consists of nine disposal cells totaling approximately 260 acres. Cell 9 is currently the active disposal area. Cells 1 through 8 have been closed and received a final cover system consisting of a geomembrane cap and landfill gas collection and recovery system (GCRS).

The County operates an active landfill GCRS on all closed and capped disposal areas and is expanding the system for the active Cell 9 disposal area (overall 85 acres).

Cell 9 landfilling operations began in January 2017, within the 15-acre Subcell 9.1 disposal area. In March 2021, the 15-acre Subcell 9.2 disposal area became active, the second of five subcells within Cell 9. The combined capacity of Subcells 9.1 and 9.2 is 2.6 million cubic yards, of which approximately 1.5 million cubic yards remain as of March 2021.

All closed cells of the landfill are capped using a geomembrane system. A NSPS-compliant GCRS was activated in May 1996. The GCRS consists of a series of vertical and horizontal extraction wells interconnected by a network of lateral and header piping. LFG is extracted from the wells by a series of LFG blowers and conveyed to either the landfill gas to electricity project or to a utility flare or an enclosed ground flare for combustion.

The County is currently and will continue to maintain and operate the landfill GCRS, which includes over 80 vertical extraction wells and 6 horizontal collectors on the closed and capped cells. The following presents a summary of the existing LFG system components and start-up date on each cell of the landfill:

- Cell 1: 4 active horizontal collector trenches - startup occurred in June 1996
- Cell 2: 12 active vertical extraction wells - startup occurred in November 1996 - three Cell 2 wells were decommissioned in June 2008
- Cell 4: 2 active horizontal collector trenches and 7 active vertical extraction wells – startup occurred in August 1996
- Cell 567: 68 active vertical extraction wells - startup occurred in May 1996 for 61 wells and August 2015 for 7 wells - 28 wells were decommissioned between 1997 through 2020
- Cell 8: 39 active vertical extraction wells - startup occurred between August 2004 and May 2018 - 9 horizontal collectors were decommissioned in 2018
- Cell 9: 5 active horizontal collector trenches - startup occurred in April 2021

The Landfill Gas to Electricity Facility is equipped with a continuous flow meter that records gas flow into the facility. The blower/flare station control panel contains a data recorder that provides continuous readouts and storage of flare temperature and LFG flow rates. Site personnel also perform daily monitoring of the blower/flare station, including continuous flow and temperature measurements.

The most recent LFG data from the 2020 Emissions Certification Report and Air Toxics Certification indicates a total of 525.316 MMscf of LFG collected at the MLFRRF. Typical flows of LFG to the Landfill Gas to Energy Facility range between 1,100 - 1,300 scfm at 40%-50% CH₄. It is estimated the quantity of LFG will increase as the Cell 9 disposal area is developed.

Since 1995 to present, a majority of county waste has been diverted to a transfer station in an agreement that expires in 2023. After 2023, the waste may continue to be diverted; however, it is possible the waste will be disposed in the Cell 9 disposal area. The Authority/County make no guarantees of past, present or future quantity nor quality of municipal waste disposed at the MLFRRF. Over the past 10 years, approximately 60% of tons landfilled at the MLFRRF were construction and demolition debris and bulky waste.

EXHIBIT C

PROJECT PERMITS

It shall be Contractor's responsibility to provide all Project Permits necessary for Contractor to perform the Work in accordance with applicable Laws, including, without limitation, the Project Permit listed in Section 1 of this **Exhibit C**. Contractor shall prepare and process applications for the Project Permits listed in Section 2 of this **Exhibit C** **including all reporting requirements of the Project Permits.**

Section 1 – Contractor Permits and Reporting Requirements

1. Electrical Permits for the Project, if applicable. Applications will be filed with Anne Arundel County Department of Permitting Services.
2. Building Permit for the Project, if applicable
3. Annual Emissions Stack Testing and Annual Emissions Reporting, and any other emissions testing and reporting, as per Permit at the intervals specified in the Permit, including but not limited to, emission certification reports, compliance reports, Title V Semi-annual monitoring reports, Compliance reports for National Emissions Standard for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines
4. Certificate of Registration and Inspection Renewals as required of the Maryland Department of Labor, Licensing, and Registration

Section 2 – Authority Permits

1. Maryland Department of the Environment Air Permits to Construct, to be issued in the name of the Authority and the County, for the Millersville Project.
2. Maryland Department of the Environment Air Permits to Operate, to be issued in the name of the Authority and the County, for the Project
3. Verify applicability of Hazardous Waste Use Permit (County permit) for Oil, Coolant, etc.
4. Verify applicability of Spill Prevention, Control and Counter Measures Plan (SPCC).

EXHIBIT D
O&M STAFFING PLAN

Project Staffing

The Operator/Mechanic will be responsible for the day-to-day operation, maintenance and repair of the power generation facilities in accordance with the operations, safety, maintenance manuals, and procedures developed and approved for the Project Site. The Operator/Mechanic's duties will include performing and documenting daily, weekly, monthly, quarterly, semi-annual, and annual checks on all Contractor-supplied equipment as per manufacturers' recommendations and maintaining meters, gauges and recording instrument charts to verify specified temperature, pressure, and flow of gas/liquids throughout the system. All of the system components including, but not limited to: generators, engines, compressors, pumps, electric motors, vessels, valves, transformers, and piping will be checked daily and instrument readings and operational changes will be recorded in daily operation logs. A daily verifiable check list, approved by the Authority, will be maintained and made available to the Authority or the County upon request. Other Operator/Mechanic duties will include: collecting samples of materials (as needed) for laboratory analysis; troubleshooting and repairing equipment; and, assisting approved Contractor technicians and subcontractors in connection with larger maintenance tasks, including replacing the heads or a Major Overhaul.

Staffing Qualifications

Contractor shall ensure that only qualified persons as referenced herein shall be authorized to perform service on, or operate and monitor the Project and that no person or persons shall be permitted to perform any activities that they are not qualified or do not possess technical ability to perform.

The Operator/Mechanic minimum qualifications are as follows:

- Two to five years mechanical plant operation and maintenance;
- Advanced technical skills related to mechanical and electrical equipment operation and maintenance;
- Ability to read and understand mechanical plans and specifications; and
- Ability to meet physical requirements for driving (pickup truck), walking inspection of improved and unimproved property, lifting and carrying equipment/mechanical components (up to 50 pounds unassisted), carrying and climbing ladders, operating electrical tools (drills, saws, etc.), using hand tools (screwdrivers, wrenches, hammers, etc.) and providing services under varying weather conditions.

EXHIBIT E

PERFORMANCE GUARANTEES

Part I – Performance Guarantees

Contractor guarantees that the Project shall meet the power generation guarantees, emission guarantees, and heat rate guarantees set forth below (collectively, the “Performance Guarantees”) based upon the Landfill Gas specifications set forth below.

Power Generation Guarantees

Engine/Generator Set	Caterpillar 3520
Gross Power Output	1600 kW

Emission Guarantees

Contractor guarantees that the engine/generator sets provided under this Agreement will meet the emissions standards set forth below, when operating at 100% capacity

Caterpillar 3520	
Pollutant	Emission Level
NO _x	0.6 g/bhp-hr
CO	3.3 g/bhp-hr
VOC	0.3 g/bhp-hr

Heat Rate Guarantee

Contractor guarantees that the gross heat rate for the engine/generator sets will be equal to or better than the following when the engine/generator set is operated at one hundred percent (100%) output capacity on Landfill Gas at 50% methane

Engine # 1

9978 Btu/kW-hr (LHV) at 50% methane

Engine # 2

9978 Btu/kW-hr (LHV) at 50% methane

Landfill Gas Specification

The Performance Guarantees listed above shall apply if the methane content of the Landfill Gas is within the acceptable range limits of forty-two percent to fifty percent (42%-50%), and if a sufficient quantity of Landfill Gas is available.

In the event that the quantity of the Landfill Gas is not sufficient, and/or if the methane content of the Landfill Gas falls below operable ranges specified above, then Authority and the Contractor will mutually agree to modifications to the Performance Guarantees to adjust for the lower quality and/or quantity of Landfill Gas.

Minimum Performance Guarantees

The “Minimum Performance Guarantees” shall be (a) ninety percent (90%) of the Power Generation Guarantees set forth above, (b) one hundred percent (100%) of the Emission Guarantees set forth above, and (c) one hundred ten percent (110%) of the Heat Rate Guarantee. This Minimum Performance Guarantee is subject to the Landfill Gas Fuel Specification set forth above.

Part II – Availability Bonus/Penalty

Contractor is guaranteeing a 95% Availability Percentage. If Contractor achieves an Availability Percentage greater than 95%, then Contractor will receive a bonus payment equal to the ratio of the actual on-line availability divided by 95% multiplied by the monthly Service Fee. If Contractor fails to achieve 95% Availability Percentage during a month, then the Authority will receive a credit, to be applied against the monthly Service Fee, equal to the ratio of the actual on-line availability divided by 95% multiplied by the monthly Service Fee. Both the bonus and penalty adjustments shall be limited to a maximum of 5% of the monthly Service Fee. The Availability Percentage shall be calculated in accordance with **Section 14.1**.

EXHIBIT F
FORM OF PERFORMANCE BOND

PERFORMANCE BOND

Principal:

_____ Address: _____

Principal is a _____ of the State of _____ and authorized to do business in the State of Maryland.

Surety:

_____ Address: _____

Surety is a _____ of the State of _____ and authorized to do business in the State of Maryland.

Obligees: Northeast Maryland Waste Disposal Authority
and Anne Arundel County, Maryland

This Performance Bond is issued in connection with the Operation and Maintenance Agreement, dated as of _____, 2022 (the "Agreement"), between Principal and Oblige for the design, engineering, procurement, construction, start-up and testing of a landfill gas electric generating facility located in Anne Arundel County, Maryland.

Authority Contract Number: _____

Maximum Amount of Bond : _____ Dollars (\$_____)

Date of Bond: _____, _____

Bond Number: _____

KNOW ALL MEN BY THESE PRESENTS, that we, Principal named above and Surety named above, are held and firmly bound unto the Oblige named above in the maximum amount of this Performance Bond stated above (the "Maximum Amount"), for the payment of which Maximum Amount we bind ourselves, our heirs, executors, administrators, personal representatives, successors, and assigns, jointly and severally, firmly by these presents. Where Surety is composed of entities acting as cosureties, we, the cosureties, bind ourselves, our successors and assigns, in such Maximum Amount jointly and severally as well as severally only for the purpose of allowing a joint action or actions against any or all of us, and for all other purposes each cosurety binds itself, jointly and severally with Principal, for the payment of the Maximum Amount.

WHEREAS, Principal has entered the Agreement with the Obligees. The Agreement and all items incorporated into the Agreement, together with any and all changes, extensions of time, amendments, modifications or additions to the Agreement or to Principal's obligations to be performed thereunder are hereby incorporated herein by reference.

NOW, THEREFORE, during the term of the Agreement and any extensions thereto that may be granted pursuant to the Agreement, this Performance Bond shall remain in full force and effect unless and until the following terms and conditions are met:

1. Principal shall fully perform all of its obligations under the Agreement, including, but not limited to, performing all of the Work (as such term is defined in the Agreement and hereinafter referred to as the "Work") and Warranties (as such term is defined in the Agreement) and paying any amounts owed to the Obligees under the Agreement; and
2. Principal and Surety shall comply with the terms and conditions in this Performance Bond.

Whenever Principal shall be declared by the Oblige to be in default under the Agreement, Surety may, within thirty (30) days after notice of such default from the Oblige, notify the Oblige of its election to either promptly proceed to remedy the default or promptly proceed to complete the Agreement in accordance with and subject to its terms and conditions. In the event that Surety does not elect to exercise either of the foregoing options within fifteen (15) days after notice of such default from the Oblige, then the Oblige thereupon may have Principal's obligations under the Agreement performed and Surety shall remain liable hereunder for all costs and expenses of such performance up to but not exceeding the Maximum Amount.

This Performance Bond is for the term beginning the _____ day of _____ and ending the ___ day of _____. Provided, however, that this bond may be continued in force by Continuation Certificate, executed by the Surety. If Surety elects to not renew the bond upon the expiration of any annual term, Surety shall provide written notice to both the Oblige and the Principal of such intention at least 60 days prior to the expiration of any such annual term. Non-renewal or cancellation of the bond shall constitute a default under the bond and be the basis or trigger for a claim. Surety's liability under this Performance Bond and all continuation certificates issued in connection therewith shall not be cumulative and shall in no

event exceed the amount as set forth in this Performance Bond or in any additions, riders, or endorsements properly issued by the Surety as supplements thereto.

Surety hereby stipulates and agrees that no change, extension of time, amendment, modification or addition to the terms of the Agreement, the Work to be performed thereunder or the Specifications (as such term is defined in the Agreement) shall in any way affect its obligations under this Performance Bond, and it does hereby waive notice of any such change, extension of time, amendment, modification or addition.

This Performance Bond shall be governed by and construed in accordance with the laws of the State of Maryland and any reference herein to Principal or Surety in the singular shall include all entities in the plural who or which are signatories under the Principal or the Surety heading below.

IN WITNESS WHEREOF, Principal and Surety have set their hands and seals to this Performance Bond. If any corporation is a signatory under the Principal or the Surety heading below, then each such corporation has caused the following: the corporation's name to be set forth below, a duly authorized representative of the corporation to affix below the corporation's seal and to attach hereto a notarized corporate resolution or power of attorney authorizing such action, and each such duly authorized representative to sign below and to set forth below his or her title as a representative of the corporation. If any partnership or joint venture is a signatory under the Principal heading below, then all members of each such partnership or joint venture have signed below, each member has set forth below his or her title as a general partner, limited partner, or member of joint venture, whichever is applicable. If any individual acts as a witness to any signature below, then each such individual has signed below and has set forth below his or her title as a witness. All of the above has been done as of the Date of this Performance Bond shown above.

In Presence of:

Partnership Principal

_____		_____ (SEAL)
Witness		[Name of Partnership]
_____	as to	_____ (SEAL)
_____	as to	_____ (SEAL)
_____	as to	_____ (SEAL)

Corporate Principal

Attest:

By: _____
Name:
Title:

_____ as to _____
Secretary [Title]

AFFIX
CORPORATE
SEAL



Surety

Attest:

By: _____
Name:
Title:

_____ as to _____
Secretary [Title]

AFFIX
CORPORATE
SEAL

Bonding Agent's name: _____

Agent's Address: _____

Approved as to legal form and sufficiency this ____ day of _____ 2022.

DUAL OBLIGEE RIDER TO PERFORMANCE BOND

To be attached to and form part of Bond No. _____ dated the ____ day of _____, 2022, issued by _____, as Surety on behalf of _____, as Principal, and the Northeast Maryland Waste Disposal Authority (the “Authority”), as Obligee.

WHEREAS, upon the request of the Principal, the attached Performance Bond is hereby amended to add Anne Arundel County, Maryland as an additional obligee (the “Additional Obligee” and together with the Authority, the “Obligees”).

The foregoing, however, is subject to the following further provisions:

The liability of the Surety to the Obligees, or either of them, shall in no event exceed the Maximum Amount of the Performance Bond.

In the event Surety is required to make payment to the Obligees under the Performance Bond, the Authority shall have a right to any payment prior to any payment to the Additional Obligee.

Signed, sealed and dated this ____ day of _____, 2022.

Witness:

Principal:

By: _____

By: _____

Witness:

Surety:

By: _____

By: _____

EXHIBIT G

SPARE PARTS INVENTORY LIST

[see attached]

EXHIBIT H

PROJECT OPERATION AND MAINTENANCE ACTIVITIES

Contractor will be responsible for the day-to-day operation, maintenance, repair and replacement of the Project in accordance with **Section 11.4** and the other provisions of this Agreement. Notwithstanding anything in this Exhibit H to the contrary, Contractor shall perform maintenance, including overhauls, on the engine/generator sets in accordance with manufacturer recommendations. The Contractor may only deviate from the engine/generator set maintenance intervals (a) set forth in this Exhibit H or (b) recommended by the manufacturer, with the prior written consent of the Authority, which consent may be granted in the Authority's sole discretion. Any request for such deviations shall be made by Contractor to the Authority in writing and shall include supporting documentation justifying such request.

Contractor's duties include performing and documenting daily, weekly, monthly, quarterly, semi-annual, and annual checks on all equipment as per the manufacturer's recommendations. The system components, including generators, compressors, pumps, electric motors, vessels, valves, transformers, generators, and piping will be checked daily. Other duties will include troubleshooting and repairing the equipment and assisting Subcontractors in larger maintenance tasks such as a Major Overhaul.

Routine Project Maintenance

The following description of activities is based on maintenance of the Engine. The actual activities for both engine/generators will be based on the requirements delineated in the operation/maintenance manuals supplied by the manufacturer.

Daily duties on the engine/generator sets will include:

- Measure and Record Bearing Temperature
- Check Coolant System Level
- Inspect Engine Air Cleaner Service Indicator
- Check Engine Oil Level Check Fuel System Filter Differential Pressure
- Check Fumes Disposal Filter Differential Pressure
- Check Generator Kilowatt Output
- Check Generator Power Factor Output
- Check Generator Voltage Output
- Check Generator Frequency Output
- Complete a Walk-Around Inspection

Every 250 hours, Contractor will perform the following maintenance on the engine/generator sets:

- Check Battery Electrolyte Level
- Obtain Cooling System Coolant Sample Test and Add Cooling System Supplemental Coolant Additive

- Obtain Engine Oil Sample
- Drain the Crankcase Vent Mist Eliminator

Every 1,000 hours, Contractor will perform the following maintenance on the engine/generator sets:

- Drain Aftercooler Condensation
- Inspect Alternator
- Inspect and Adjust or Replace Belts on Driven Equipment
- Measure Crankcase Pressure
- Inspect Crankshaft Vibration Damper
- Clean Engine Exterior
- Clean Engine Crankcase Breather
- Change Engine Oil (Dictated by oil samples. May Vary from 1,000 hours Depending on Actual Conditions)
- Change Engine Oil Filter
- Adjust Engine Valve Lash and Bridge
- Drain Gas Pressure Regulator Condensation
- Inspect and Adjust or Replace Hoses and Clamps
- Check and Adjust Ignition System Timing
- Inspect Air Inlet System
- Clean Radiator
- Inspect Water Pump

Every 2,000 Hours, Contractor will perform the following maintenance on the engine/generator sets:

- Lubricate Actuator Control Linkage
- Clean and Inspect Engine Speed/Timing Sensor
- Inspect Generator
- Inspect and Adjust or Replace Ignition System Spark Plugs
- Obtain Cooling System Coolant Sample (Level 2)
- Test and Add Cooling System Supplemental Coolant Additive
- Check Stator Lead

Every 4,000 Hours, Contractor will perform the following maintenance on the engine/generator sets:

- Measure and Record Crankcase Blowby
- Measure and Record Cylinder Pressure
- Check Engine Mounts
- Check Engine Protective Devices
- Inspect Starting Motor
- Inspect Turbocharger
- Inspect Water Pumps

For the 4160 Volt switchgear, Contractor will perform the following checks monthly:

- Check Metered Kilowatt Output
- Check Metered Power Factor Output
- Check Metered Voltage Output
- Check Metered Frequency Output
- Inspect Insulators and Bushings for Integrity of Insulation
- Check Interior Surfaces for Signs of Water and Dust Entry
- Inspect Gaskets for Integrity
- Inspect Ventilation Openings for Cleanliness

For the 4160 Volt switchgear, Contractor will perform the following maintenance annually:

- Inspect Power Connections and Joints for Overheating
- Inspect Breaker Operating Mechanism for Looseness and Misalignment
- Check and Record Breaker Contact Wear Erosion
- Inspect Switch Operating Mechanism for Looseness and Misalignment
- Inspect Switch Arc Chutes and Fuse Clamps for Evidence of Arcing
- Inspect Voltage Transformers for Integrity and Cleanliness
- Inspect Current Transformers for Integrity and Cleanliness
- Check that all cabinetry is solidly grounded

For transformers, Contractor will perform the following checks monthly:

- Record Ambient Temperature
- Check and Record KiloVoltAmp Reading from Switchgear
- Check and Record All Gauge Readings
- Inspect Tank and Fittings for Leaks
- Inspect Cooling Fans for Vibration and Free Rotation
- Inspect Control Wiring for Integrity of Insulation
- Inspect Control Boxes for Corrosion and Integrity of Gaskets
- Inspect Paint Finish for Scratches or Wear Exposing Bare Metal

Subject to the provisions of **Section 11.3.2**, perform all operation and maintenance activities set forth in or required under the Interconnection and Operating Agreements, in accordance with the terms and conditions thereof.

Major Project Maintenance

Major maintenance on the Project will be performed at the intervals indicated below, unless shorter or longer intervals are appropriate, based on actual equipment condition, as evidenced through use of engine manufacturer approved monitoring procedures, and based on engine manufacturer recommended triggers, indicating that a specific major maintenance activity is required. The work to be performed is detailed as follows:

CAT 3520

Every 8,000 hours

- Replace Crankcase Vent Mist Eliminator Filter Element
- Check Rotating Rectifier
- Test Varistor
- Replace Water Temperature Regulator
- Test Winding
- Top End Overhaul (per manufacturer procedures)

Every 24,000 hours

- In-Frame Overhaul (per manufacturer procedures)
- Change Cooling System Coolant (NGEC) (or every three years)

Every 40,000 Hours

- Major Overhaul of Engine/Generator Sets (per manufacturer procedures)

Annual Electrical Maintenance

4160 Volt Switchgear

- Inspect Power Connections and Joints for Overheating
- Inspect Breaker Operating Mechanism for Looseness and Misalignment
- Check and Record Breaker Contact Wear Erosion
- Inspect Voltage Transformers for Integrity and Cleanliness
- Inspect Current Transformers for Integrity and Cleanliness
- Check That All Cabinetry is Solidly Grounded
- Check Relay Case Interiors for Cleanliness

4160 Volt Switchgear

- Inspect Power Connections and Joints for Overheating
- Inspect Breaker Operating Mechanism for Looseness and Misalignment
- Check and Record Breaker Contact Wear Erosion
- Inspect Switch Operating Mechanism for Looseness and Misalignment
- Inspect Switch Arc Chutes and Fuse Clamps for Evidence of Arcing
- Inspect Voltage Transformers for Integrity and Cleanliness
- Inspect Current Transformers for Integrity and Cleanliness
- Check that all cabinetry is solidly grounded

In-Frame Overhaul

- Inspect Power Connections and Joints for Overheating
- Inspect Breaker Operating Mechanism for Looseness and Misalignment
- Check and Record Breaker Contact Wear Erosion
- Inspect Switch Operating Mechanism for Looseness and Misalignment

- Inspect Switch Arc Chutes and Fuse Clamps for Evidence of Arcing
- Inspect Voltage Transformers for Integrity and Cleanliness
- Inspect Current Transformers for Integrity and Cleanliness
- Check that all cabinetry is solidly grounded

Transformers

- Obtain Dielectric Liquid Sample and Test
- Check and Record Temperature of Terminal Bushings
- Inspect Terminal Bushings and Surge Arrestors for Integrity and Cleanliness

PROJECT MANAGEMENT DURING OPERATIONS

Contractor will provide assistance to the Authority and the County as reasonably required for filings and reporting required by the Interconnection Agreement, the Power Purchase Agreement and to any Government Authority.

EXHIBIT I

OPERATION AND MAINTENANCE MANUAL REQUIREMENTS

Contractor shall provide the Authority updated copies of the Operation and Maintenance Manual in accordance with Section 3.17 of the Agreement. The updated Operation and Maintenance Manual shall be in English and shall include an index listing all of the documents that comprise the Operation and Maintenance Manual, which shall include (at a minimum) the following sections:

- Complete detailed Facility Description
- County Personnel Training Program
- Important Safety Information
- Authorized Contacts and 24-hour Emergency Contacts
- Notifications to Utility and Authority
- Air Permit and all other required permits
- Detailed step-by-step start-up / shutdown Procedures
- Remote Operations details and step-by-step procedures.
- Emergency Shutdown and Power Disconnect – Step-by-step procedures
- Support Services (detailed)
- Routine Maintenance Requirements complete with details, timetables, check lists, and procedures for the required maintenance
- Material safety data sheets (MSDS)
- Fluids List (type, quantity, purpose, recommended levels, etc.)
- Detailed Manufacturer's operation and maintenance information (as appendices and/or separate volumes – Provided that information reflects the details necessary to perform any/all recommended maintenance functions.)
- Facility As-built Drawings (must be scale drawings and provided in both electronic and printable formats)
- Other sections and information as requested by the County or the Authority.
- All maintenance activities performed on a day-to-day basis
- Records of emission data
- All mechanical errors or problems encountered on day-to-day basis

EXHIBIT J

DETAILED PLANS FOR ANY PROJECT CHANGES

The deliverable documents and drawings listed below (the “Detailed Plans”) form part of the Work and shall be updated and maintained in accordance with **Article 10** of the Agreement. The Authority shall provide electronic versions of the documents in a format suitable for the Contractor to update with changes made during the contract term.

Engineering Documentation

General & Process

- Process flow diagram (PFD)
- Piping and instrumentation diagrams (P&ID’s)
- Facility site plan **
- Equipment layout plan **

Mechanical

- Landfill gas pipe routing plan **
- Condensate pipe routing plan **
- Piping details
- Piping support details
- Instrumentation installation details
- Miscellaneous equipment installation plans and details
- Acoustic Barrier details

Electrical

- Electrical site plan
- Electrical underground conduit routing plan **
- Electrical plant grounding plan
- (included in electrical one-line) Electrical single line and three-line diagram and relay diagram
- Electrical 4160V single line diagram
- Electrical control power schematics
- Electrical ground details and Panel schedules
- Lighting schedules **
- Conduit and cable schedules
- Coordination study **
- Protective Relay Settings

Civil and Structural

- Grading plan **
- Equipment foundation drawings and details
- Erosion and sedimentation control plans and details
- Fence plan and details **

- Anchor bolt plans and details
- Geotechnical reports

Other plans as deemed reasonably necessary by the County or other Government Authority having legal jurisdiction and/or authority.

Detailed plans will also be in accordance with the Anne Arundel County Design Manual and Standard Specifications and Details for Construction.

EXHIBIT K

AUTHORITY RULES

Contractor and its Subcontractors and their respective employees, agents and representatives shall comply with the following rules (the “Authority Rules”) at all times regarding activities on the Project Site (including restrictions to ingress and egress) and shall cooperate with and coordinate their activities with the County and any person performing work or undertaking activities at the Project Site, including, without limitation, contractors or subcontractors performing work for or on behalf of the Authority or the County. In addition:

- 1) Contractor shall be responsible for maintaining a list of all Contractor personnel and Subcontractor personnel that are on-site at any time and upon request shall provide the list to the Authority;
- 2) Contractor shall maintain the Project Site free of waste material and rubbish and shall be responsible for all Contractor and Subcontractor material, equipment and tools.
- 3) Contractor shall have its personnel and its Subcontractor personnel review the Operator’s Level 1 Safety Program. The review shall include the proper procedures for lock out, tag out and confined space entry;
- 4) Contractor shall only access designated areas that are not part of the Project Site with the prior approval of the Authority; and
- 5) The Contractor and its Subcontractors shall minimize any interference with the Landfill or any County activities on the Project Site or the Landfill. The Project Site is located in the center of an active landfill/resource recovery facility operated by the County. The customers and County’s employees shall have right-of-way.
- 6) Access to the site is from 7:30 am to 4:00 pm Monday through Saturday.

EXHIBIT L

CONTRACTOR PROVIDED INSURANCE

1. INSURANCE REQUIREMENTS

Prior to the execution of this Agreement, the Contractor or their subcontractor shall provide and maintain at their own cost and expense, during the life of the Agreement, insurance against claims for injuries to person(s) and/or damages to property which may arise from, or in connection with, the performance of Work hereunder by the Contractor, its agents, representatives, employees, and/or Subcontractors, as outlined below. The insurance must be kept in full force and effect during the term of this Agreement. The insurance must be evidenced by a certificate of insurance, and if requested by the Authority or the County, the Contractor and/or their Subcontractors shall provide a copy of the insurance policies and endorsements. Contractor's insurance shall be primary. In the case of subcontracted work, the Contractor shall require the Subcontractor or anyone directly or indirectly employed by any of them to procure the same coverage and name both the Authority and the County as additional insureds for General Liability, Auto Liability, and Contractors Pollutions Liability.

2. COMMERCIAL GENERAL LIABILITY INSURANCE

A minimum limit of liability of *one million dollars (\$1,000,000)*, *two million dollars (\$2,000,000)* **products and completed operations and two million dollars (\$2,000,000) aggregate per project single limit, for bodily injury and property damage coverage per occurrence** including the following coverages:

- a. Contractual Liability
- b. Premises and operations
- c. Independent Contractors
- d. Products and Completed Operations during and for two years following Completion of the work
- e. Personal Injury
- f. Broad Form Property Damage

There shall be no exclusions pertaining to collapse of or damage to any building or structure, damage to underground property, machinery, or injury or damage arising out of blasting or explosions.

3. PROFESSIONAL LIABILITY (Covering Engineering/Design)

Professional liability insurance covering errors and omissions and negligent acts committed during the period of contractual relationship with the County with a limit of liability of at least *three million dollars (\$3,000,000)* **per claim and aggregate and a maximum deductible of twenty-five thousand dollars (\$25,000)**. Proposer agrees to provide a four-year discovery period under this policy.

4. **BUSINESS AUTOMOBILE LIABILITY INSURANCE**

A minimum limit of liability of *one million dollars (\$1,000,000)*, **combined single limit, for bodily injury and property damage coverage per occurrence** including the following:

- owned automobiles
- hired automobiles
- non-owned automobiles

5. **UMBRELLA EXCESS LIABILITY INSURANCE**

A minimum limit of liability of five million dollars (\$5,000,000) per occurrence and aggregate.

6. **CONTRACTOR'S POLLUTION LIABILITY INSURANCE / ENVIRONMENTAL IMPAIRMENT LIABILITY**

A minimum limit of liability of *ten million dollars (\$10,000,000)*, **combined single limit for bodily injury and property damage coverage per occurrence**. Such insurance shall cover any gradual, sudden and/or accidental release of toxic or hazardous waste or other hazardous substance requiring monitoring, clean-up or other corrective actions under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA). Contractor agrees to provide a three-year discovery period under this policy.

If any pollution events, including hazardous material, are encountered during the performance of this Agreement, the Contractor or its subcontractor shall immediately notify the County.

7. **WORKER'S COMPENSATION**

Meeting all statutory requirements of the State of Maryland Law as well as any similar coverage required for this work by applicable Federal or "Other States" State Law. and with the following minimum Employers' Liability limits:

- *Bodily Injury by Accident - \$1,000,000 each accident*
- *Body Injury by Disease - \$1,000,000 policy limits*
- *Bodily Injury by Disease - \$1,000,000 each employee*

8. **PROPERTY INSURANCE**

Contractor shall provide property insurance coverage for all Authority-owned and County-owned equipment operated and maintained by Operator at the Project Site, the Millersville Landfill site, including coverage for theft, fire, vandalism, water damage (other than flood)and mechanical breakdown. Coverage shall be provided on a replacement cost basis. The County and the Authority shall be added to the policy as loss payees by endorsement.

9. DEDUCTIBLES AND SELF-INSURED RETENTIONS

Any deductibles or self-insured retentions must be declared to, and approved by, the Authority. The deductible and/or self-insured retention of the policies shall be wholly the responsibility of the Contractor and/or its Subcontractors.

10. OTHER INSURANCE PROVISIONS

The insurance policies required in the Agreement are to contain, or be endorsed to contain, the following provisions:

a. General Liability Policies

(1) Policy Cancellation

Sixty (60) days written notice to the Authority of cancellation or material change of any of the policies is required. There will be an exception for non-payment of premium, which is ten days' notice of cancellation.

(2) The policy(ies) will automatically include and cover all phases of work, equipment persons, etc., which are normally covered while performing Work under this Agreement, whether specifically written therein or not.

(3) The insurance company(ies) providing insurance coverage as required herein are prohibited from pleading governmental function in the absence of any specific written authority by the Authority or the County.

11. ACCEPTABILITY OF INSURERS

Unless otherwise approved by the Authority, insurance is to be placed with insurers with Best's rating of no less than A:VIII, or, if not rated with Best's, with minimum surpluses the equivalent of Best's surplus size VIII and must be licensed and approved to do business in the State of Maryland.

If at any time the foregoing policies shall be or become unsatisfactory to the Authority, as to form or substance, or if a company issuing any such policy shall be or become unsatisfactory to the Authority, Contractor shall, upon notice to that effect from the Authority, promptly obtain a new policy and shall submit the same to the Authority, with appropriate certificates and endorsements, for approval.

12. VERIFICATION OF COVERAGE

The Contractor and/or its Subcontractors shall furnish the Authority with verification of insurance and endorsements required by this Agreement. The certificates, policies and endorsements for each insurance policy are to be signed by a person authorized by that insurer to bind coverage on its behalf. The certificates and endorsements for each insurance policy are to be on forms approved by the Authority prior to the commencement of activities associated with this Agreement. The Authority reserves the right to require

complete, certified copies of all required insurance policies at any time, such evidence of insurance shall refer to the Project names and Agreement number.

13. SUBCONTRACTORS

The Contractor shall include all Subcontractors as insureds under its policies or shall furnish separate certificates of insurance and policy endorsements for each Subcontractor. Insurance coverages provided by Subcontractors as evidence of compliance with the insurance requirements of this Agreement shall be subject to all of the requirements stated herein.

EXHIBIT M

PJM REPORTING REQUIREMENTS

Energy Management Services:

The Northeast Maryland Waste Disposal Authority is a PJM Member and participates in the PJM real time and day ahead Energy Markets and Capacity Markets.

Contractor shall complete PJM required training and/or any required certification related to Small Generation Plant Operators. Small Generation Plant Operators are defined as operators who participate in the real time operations of facilities and operate a total of 75 MW or less of generation within the PJM markets.

The Millersville LFG units is a PJM capacity resource. The Authority participates in the RPM (Reliability Pricing Model) auctions on an annual basis. Contractor shall notify the Authority when there is a change in the generation units Installed Capacity (Maximum Generation Capacity) for planning purposes. Generation Owners of Capacity Resources are required to test to their ICAP during the summer and winter months.

PJM Capacity Resources are required to schedule in the Day Ahead Market. The Contractor will submit a three (3) day look ahead generation table for each Project. This three (3) day look ahead will accompany the daily report and must be submitted to the Authority no later than 9:30 a.m. Local Time every day.

In the energy market, generators are paid the Real-time LMPs for any generation that exceeds their day ahead scheduled quantities (and will pay for generation deviation (or imbalancing charges) below their scheduled quantities. The Contractor will coordinate with the Authority and work to limit the imbalancing charges incurred from participating in the Day Ahead Market.

Contractor shall be available 24 hours a day and 7 days a week or as needed to respond appropriately to any PJM day ahead and real time directives and to notify PJM of the generation units planned, maintenance, and unplanned outages through the PJM eDART tool. The Authority will arrange for Contractor access to eDART. Both capacity and energy only resources shall provide generator outage data to support PJM obligations as a Reliability Coordinator to report generator outage information required for reliability analysis.

Capacity Resources are required to submit monthly generation unit data including testing data to eGADs. Contractor shall assist the Authority in preparing the required monthly outage/derating event data, performance data, fuel data, and testing data in the appropriate format for submittal to the eGADs system prior to the 20th of each month. The Authority shall have an account to the eGADs system.

EXHIBIT N

INTERCONNECTION AND OPERATING AGREEMENT

[See attached]