

SUPPLEMENTAL GENERAL CONDITIONS (SGC) 2021-2024 Addendum No.1

Stand-By Generator Maintenance and Repair Services

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SGC-1 CONTRACT DURATION

For the purposes of this bid, the duration of the requirement contract with the Northeast Ohio Regional Sewer District, herein referred to as the “District,” shall be **three-years**, or until the funds appropriated to this Contract are exhausted, whichever should occur first from the effective date of this Contract.

SGC-2 BID INQUIRIES

All questions regarding any irregularities and /or requests for information related to these bid documents shall be submitted via e-mail to the Operation and Maintenance Procurement Administrator, Delilah Capeles at capelesd@neorsd.org. Such inquiries will be answered as soon as is practicable. Any substantive information provided by the District in response to such questions will be distributed as an addendum to the bid documents. ***The deadline for submission of questions shall be 12:00 noon on Wednesday, February 24, 2021.*** The District shall not be responsible for any oral instructions and/or opinions.

SGC-3 BID REQUIRED DOCUMENTS

For a bid to be considered for a contractual award, the contractor shall have the capability of performing the work contained in the Detailed Specifications.

Each contractor shall submit the following information with the bid:

- 1) Completed *Invitation and Bid* form with authorized signature and company information.

*By submission of a bid, the contractor acknowledges that all quantities on the Invitation and Bid form are estimates and were prepared for comparing bids and **are not guaranteed.** No quantities may be exceeded without prior written authorization by the District.*

- 2) Any additional documents listed in the Checklist for Required Documents.

Failure to submit ALL items stated above, shall be a basis for rejecting the bid.

The apparent two low bidders shall provide to the District the following documents via email to perrid@neorsd.org within seventy-two hours (72) after bid opening, excluding weekends and District holidays. Failure to submit such documents within the 72-hour timeframe described above shall be a basis for rejection of the bid.

- 1) Non-Collusion Affidavit completed and notarized.
- 2) List of all OSHA violations and/or citations received within the past five (5) years for any activity performed by the company. If bidder has received no OSHA violations and citations in the time period cited, the bidder shall submit the form with “None” written in the first field.
- 3) Completed *References* form.

*This list must include **three** businesses or public agencies with whom the bidder entered successfully into agreements of similar scope (see the Detailed Specifications), within the last **six** years in the Northeast Ohio area. The NEORSD may be used as one (1) reference.*

- 4) Safety policy that specifies the precautions taken and/or training administered to protect workers and the public from hazards related to performing the work, including machinery, equipment, and traffic hazards.
- 5) Contractor's Substance Abuse Policy.

SGC-4 BID SUBMITTAL

Bids will be accepted until 1:00 p.m. on *March 10, 2021*. The official time shall be as stated on the atomic time stamp clock designated as the official clock located at the District's Security desk at the George J. McMonagle Administration Building, 3900 Euclid Ave, Cleveland, Ohio 44115.

Bidders shall include with their bids the completed *Invitation and Bid* form and any additional information or documentation identified within the bid documents as being mandatory to be submitted with the bid. Each bidder shall provide an authorized signature and company information on each page of the *Invitation and Bid* form. The successful bidder's submitted bid shall become a part of the finalized Contract with the District.

SGC-5 SITE VISITS AND SECURITY NOTIFICATIONS

The Contractor shall obtain prior District authorization for all site visits for all reasons, including preventive maintenance, repairs, inspections, and extra visits. In addition, the Contractor shall notify the appropriate site contact listed in Section DS-2, or prearranged designated District representative, upon arrival at each facility. Arrangements for deliveries shall be made in advance with the facility to expedite receiving and handling.

All Contractor employees shall be required to show valid photo ID and check in with Security upon both arriving and exiting District facilities and to enter their Employee name, Contractor name, and their arrival and departure times in the log. Contractor employees shall comply with all District Safety and Security policies and procedures. Failure to do so may result in delays or non-payment of service time.

SGC-6 IDENTIFICATION BADGES

The Contractor shall provide every employee with an identification badge. The badges shall clearly show the Contractor company name, employee name, and photo. All Contractor employees shall display their ID's during duty hours with the photo and name facing away from the employee to allow easy identification. District Security Officers shall have the right to require Contractor employees whom do not wear the ID badges in accordance with this provision to display their ID badges prominently.

SGC-7 BACKGROUND CHECKS

The District reserves the right to perform, at its own expense, a background check on any employee of the Contractor for the purposes of safety and security to the District employees and facilities.

SGC-8 VEHICLE/EQUIPMENT IDENTIFICATIONS

The Contractor shall mark both sides, and the rear of each vehicle entering the facilities to perform the work under this Contract with clearly identifiable letters displaying the company name. The letters shall be mounted to be readily visible and identified by the Security personnel at each facility. In addition, as deemed necessary, Contractor vehicles may be subject to search upon entry or exiting the facilities by District Security Officers.

SGC-9 AUTHORIZED WORK AREAS

Contractor employees shall remain within the previously authorized areas of the locations as detailed in these documents. Unauthorized entry to other areas will not be tolerated.

SGC-10 EMERGENCY EVACUATION PLANS

All District facilities have Emergency Response Plans (ERPs). The ERPs include the evacuation of persons at the facility to designated staging areas. In the event of an evacuation, Contractor employees are required to participate in the emergency evacuations and follow the instructions of the District's Security Officers.

SGC-11 SAFETY NOTIFICATIONS

Any injuries that occur to the Contractor employees, or accidents that occur to Contractor-owned or leased vehicles shall be reported immediately to a District Security Officer and/or the District's on-site Health and Safety Specialist. A copy of all Injury and/or Accident Reports written shall be sent to the District immediately. The safety of the Contractor's personnel is solely the responsibility of the Contractor.

SGC-12 COMPLIANCE WITH CODES AND REGULATIONS

Contractor shall comply with all applicable federal, state of Ohio, and local laws while on District property and/or while performing work under the contract. In the case of conflict between codes, standards, laws, orders, and regulations, the most stringent requirements shall apply. Contractor must be aware of hazards related to the work being performed. All Contractor employees shall be trained and follow all applicable safety regulations including the following:

- A. PERSONAL PROTECTIVE EQUIPMENT – Shall comply with OSHA 29 CFR 1910 Subpart 1.
- B. PERSONAL PROTECTIVE AND LIFESAVING EQUIPMENT – Shall comply with OSHA 29 CFR 1926 Subpart E.
- C. GENERAL CONFINED SPACE REQUIREMENT – Shall comply with OSHA 29 CFR

1910.146.

D. LOCKOUT/TAGOUT – Shall comply with OSHA 29 CFR 1910.147.

The minimum PPE required in all operating areas shall include head protection, eye protection and foot protection.

- 1) Head protection shall be worn by all persons in areas where there is a potential danger of head injury from impact, from falling or flying objects or from electrical shock and burns. This includes, but is not limited to, all posted HARD HAT areas, plants, pump stations, construction sites, public rights-of-way, confined spaces and outside facilities. All head protection must comply with ANSI Z89.1-1986 as referenced in 29 CFR 1910.135 and 1926.100.
- 2) Eye and/or face protection shall be required when exposed or potentially exposed to hazards from flying particles (e.g., dust, metal, wood), molten metal, liquids, sludge, acids/caustics, gases or vapors and potentially injurious light radiation. This includes, but is not limited to, all posted EYE PROTECTION REQUIRED areas, plants, pump stations, laboratories, construction sites, public rights-of-way, confined spaces and outside facilities. Fixed side protectors (i.e., side shields) shall be worn and attached to all safety glasses at all times. All protective devices for the eyes/face shall comply with ANSI Z87.1 – 2010.
- 3) Protective footwear must be worn when working in areas where there is a danger of foot injuries due to falling or rolling objects or objects piercing the sole and where employee's feet are exposed to electrical hazards. These areas include but are not limited to all posted FOOT PROTECTION REQUIRED areas, plants, pump stations, construction sites, within a zone-of-danger in relation to a construction site, public rights-of-way, confined spaces and outside facilities. All protective footwear, as required by this section, shall have a protective toe and must meet the requirements as identified in ANSI Z41-1999 or ASTM F-2412/2413 (2005).

Additional PPE may be required based upon potential hazard exposures, including, but not limited to, protective gloves, hearing protection, and respiratory protection. In addition, all Contractor employees working in or near the public right-of-way (including tree lawns and sidewalks), construction sites and other areas where exposure to vehicular traffic exists (e.g., parking lots, heavy equipment areas, etc.) shall wear a retro-reflective vest, shirt and/or jacket meeting the requirements set forth in the "Millennium Edition" of the Manual of Uniform Traffic Control Devices (MUTCD).

In addition to OSHA requirements, Contractor employees shall comply with the District's Confined Space and Control of Hazardous Energy Programs, which includes the development of a written plan of execution and a pre-work briefing (which must be documented) prior to beginning any work. Failures to follow safety rules will be immediately reported. Continued violations may be reason to terminate the Contract and disallow future District contracting opportunities.

SGC-13 SITE UTILITIES

The District shall provide the Contractor with the locations of water and electrical service. The Contractor shall be responsible for providing all connections, wiring and hoses needed to perform connections to the service. NOTE: Some water is non-potable water.

SGC-14 FACILITY CLEANLINESS AND SAFETY

The Contractor shall remove and replace equipment, as needed. The Contractor shall be responsible to leave the work site in a clean and safe condition, free of slipping, tripping and other safety hazards at all times.

SGC-15 PREVENTION OF NUISANCES AND CLEANUP OF SPILLS

The Contractor shall be responsible for preventing the creation of any nuisances including, but not limited to, noises, odors, spills of lubricants, chemicals, or other equipment fluids. Unless approved by the District, no liquid will be permitted to drain or be washed down into floor drains or storm sewer catch basins. The cost to clean up spills occurring as result of Contractor negligence and/or poorly maintained Contractor equipment, as well as any environmental fines or costs associated with other violations occurring because of such negligence, shall be paid by the Contractor, or deducted by the District from invoice(s) submitted by the Contractor.

SGC-16 DAMAGE TO DISTRICT PROPERTY

The Contractor shall be responsible to immediately repair any buildings, roadways, pieces of equipment, or other District property damaged during the execution of the work specified herein. Failure by the Contractor to make repairs in a reasonable time shall be a basis for the District making the necessary repairs and deducting the repair costs (materials and labor) from invoice(s) submitted by the Contractor.

SGC-17 SUBSTANCE ABUSE POLICY

The District has in place a Substance Abuse Policy for the protection of its employees and customers. All Contractors shall have a company Substance Abuse Policy. The company policy shall include employee training and methods to monitor for substance abuse.

DETAILED SPECIFICATIONS (DS) 2021-2024 – Addendum no.1
Stand-By Generator Maintenance and Repair Services

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DS-1 CONTRACT SCOPE

The purpose of this bid, and the requirement contract awarded following an evaluation of the bids received is to provide stand-by power system equipment preventive maintenance, inspection, and repair services. Contractor shall perform preventive maintenance, inspections, testing services, certifications, and as needed repairs, including mechanical and electrical components; and software and hardware for six (6) stand-by power systems owned and operated by the Northeast Ohio Regional Sewer District.

Contractor shall be responsible for all permits, fees, tests, inspections, certifications, and applicable requirements relative to the execution of the Scope of Work specified herein. Contractor shall provide all labor, transportation, fuel, parts, materials, tools, equipment, supervision, incidentals, Codes and Standards, personal protective/safety equipment and devices, manuals, procedures, and services necessary for the safe, injury free completion of all services performed under the scope of this Contract. All inspections and reporting shall be performed in compliance with the current applicable federal, state of Ohio, and local codes, standards, laws, and regulations.

Contractor shall be aware that stand-by power systems and associated equipment may be contaminated with sewage that may or may not have received some type of treatment.

DS-2 FACILITY INFORMATION AND CONTACTS

Location, addresses, and the number of assets for each facility. Contact is Ryan Exum, Manager of Fleet Services at exumr@neorsd.org or 216-641-6000.

Facility Locations/Contact Persons	Number of Assets
<u>SOUTHERLY WWTC:</u> 6000 Canal Road Cuyahoga Heights, OH 44125	1
<u>ENVIRONMENTAL & MAINTENANCE SERVICES CENTER (EMSC)</u> 4747 East 49 th Street Cuyahoga Heights, OH 44125	2
<u>BROADWAY AVENUE PUMP STATION</u> 12703 Broadway Avenue Garfield Heights, OH 44125	1
<u>GRINDER PUMPS AT:</u> Broadway and Forestdale Avenues & Broadway and Osborn Avenues Garfield Heights, OH 44125	2
<u>TOTAL</u>	6

DS-3 ASSET LIST

Site	Generator Manufacturer	Model	Serial Number	Fuel	Size	District Asset ID	Switchgear/ Transfer Switch
Southerly WWTC	Kohler	250REOZJE	SMG325LB7	Diesel 555 gal.	250kW	1*GRT*GEN	ASCO (5 Qty) Model 700
EMSC	Generac	QT15068	8515691	Natural Gas	150kW	EMSC-15691	Generac EMSC-00007
EMSC	Generac	0047260	3948263	Natural Gas	25kW	EMSC-48263	Generac EMSC-0006
Broadway Ave Pump Station	Nissan	23300	M001T60381	Natural Gas	20KW	P15-41226	N/A
Broadway & Forestdale	Kohler	20RZ	2051714	Natural Gas	20kW	P15-51714	Kohler GBF-ATS-1
Broadway & Osborn	Kohler	20RZ	2049979	Natural Gas	20kW	P15-49979	Kohler GBO-ATS-1

DS-4 INCREASE/DECREASE OF ASSETS

The District shall have the right to add generator or transfer switch system equipment to the Preventive Maintenance Program at any time and shall have preventive maintenance performed. The District can decommission assets included in the Preventive Maintenance Program at any time. Once an asset is decommissioned, the District will notify Contractor to stop performing inspections and the Contractor can no longer invoice the District for those assets.

If a new asset is to be added during the Contract, the Contractor will be notified of the asset and the required service and frequency. A rate will be determined and agreed upon for preventive maintenance based on the current rate for a stand-by power system of comparable function, size, and capacity. Any as-needed repairs will follow the same procedure as all other current assets.

DS-5 NEW ASSETS

Contractor **shall not** begin work on any new assets that are commissioned during the course of the Contract until verbal and written confirmation is received from the District, as such assets may be covered under warranty or the responsibility of a different contractor.

DS-6 EQUIPMENT AND SYSTEMS (GENERAL)

The equipment and systems to be operated, maintained, and repaired under this contract includes all equipment and components associated with the stand-by generator power systems identified in the DS-3. Equipment and services may include, but are not limited to:

- Generators
- Relays
- Switchgear
- Diesel and NG Engines
- Control Panels
- Auto Transfer Switches
- Touchscreens/PLCs
- Enclosure Inspections
- Safety and Security System Inspections

The scope of work includes full service maintenance coverage for Preventive Maintenance (PM) and repairs required due to normal wear and tear, with additional repair, training or standard operating procedures development to be performed on a time and material (T&M) or lump sum basis. Full service maintenance coverage shall be provided for all Stand-By Power System equipment. All PM and repairs performed under the full service maintenance coverage shall comply with NEORSD specifications, and the Contractor's checklists should match accordingly. Repairs performed outside the full service maintenance coverage shall be performed only with prior authorization by the NEORSD's Manager of Fleet Services or authorized designee.

Technicians assigned to perform maintenance and/or repairs are required to prepare and submit a "Method of Procedure" (MOP) Form, to the NEORSD's Manager of Fleet Services and be approved prior to each maintenance and/or repair activity. See Appendix B for MOP Form example.

Technicians assigned to perform maintenance and/or repairs are required to complete a NEORSD-Critical Environment Work Authorization Form, and obtain required signatures prior to each maintenance and/or repair activity. See Appendix B for Form template to be used.

Technicians assigned to perform inspections and/or repairs on a time and materials basis shall work solo unless additional personnel are pre-approved by the NEORSD Manager of Fleet Services. The NEORSD Manager of Fleet Services must be notified in advance before any work is scheduled and additional personnel are authorized. Invoice line items indicating additional personnel who have not been pre-approved will not be paid.

When a Contractor is called for on-site service, the technician must arrive at the designated site within four (4) hours after receiving the request for service. If transfer switch technicians are required to troubleshoot, program or repair the transfer switch or controls, such technicians must arrive at the designated site within twenty-four (24) hours after receiving the request for service. Contractor will provide a twenty-four (24) hour emergency telephone number for calls after normal business hours on the Invitation and Bid Form. It is a mandatory requirement of this contract that the Contractor be available for service requests twenty-four (24) hours a day, three hundred sixty-five (365) days a year, regardless of Contractor's workload.

In the event of an area-wide catastrophic event, the Contractor shall only be responsible to provide one qualified technician. The Contractor shall provide a qualified technician to respond to service requests within four (4) hours, at all times during the catastrophic event, at no additional charge. Contractors shall be responsible to provide the service in a timely manner with their own staff or with a qualified subcontractor to meet the required service response time. Should subcontracting be necessary, all work performed will be bound by the contract terms, conditions, and pricing specified.

The Contractor shall arrange with local distributors to procure all parts, controls or miscellaneous items not in their stock from other local distributors the same day or within a reasonable period depending on the availability of the items.

DS-7 PREVENTIVE MAINTENANCE GENERAL REQUIREMENTS

For all equipment covered by this contract, the Contractor shall keep an accurate written maintenance log for all sites, and shall submit a hard copy and electronic version on a monthly basis to the Manager of Fleet Services. All repairs, maintenance and materials shall be described and recorded in a logbook by the Contractor or his representatives per Appendix A, Detailed Description of Maintenance Activities. The inspection records are to be in the format shown in Appendix B. Written Maintenance logs shall commence immediately, once contract commences.

Scheduled Preventive Maintenance

- A. The Contractor shall perform normal Preventive Maintenance according to a schedule prepared by the Contractor and submitted to the Manager of Fleet Services, which shall be according to NEORSD specifications. The Contractor shall perform all preventive maintenance procedures recommended by the manufacturer as well as current industry standard procedures for maintenance related to safety and reliability.
- B. Each time the Technician comes onto a NEORSD site, configuration updates must be forwarded to the NEORSD Manager of Fleet Services within 24 hours of the site visit. Furthermore, the Technician shall provide written communication to the Fleet Manager and to other Technicians regarding the specific nature of work completed and observations.
- C. The Contractor shall check the designated systems for safety and effective operations of each piece of equipment, logging it upon examination. Any defective parts found are to be repaired according to time and material rates upon approval.

Annual Services

Contractor shall provide the following services on an annual basis and shall submit a checklist that includes the date of completion and all test results to the NEORSD Manager of Fleet Services.

- A. The Contractor shall be responsible for all costs of normal wear-and-tear maintenance and repairs under the Preventive Maintenance. The Contractor shall complete such repairs expeditiously. The Contractor shall notify the Manager of Fleet Services in advance of any work that is to be performed that may be disruptive to building occupants or interfere with normal building operations. Before proceeding with annual maintenance services at each of the six (6) primary standby generator locations, the Contractor will meet with the Plant/Building Manager (or designee); operating and maintenance supervisors, technicians, electricians or other staff identified by the Manager of Fleet Services. The purpose of the meeting will be to identify and troubleshoot any recurring or unusual operating failures or glitches over the past year; the scope and schedule of maintenance activities to be performed; and the protocols for keeping operators informed of maintenance, repairs or load tests to be undertaken during the annual maintenance. Such work may be required to be performed after normal building hours of operation at the NEORSD Manager of Fleet Services' discretion.

- B. For equipment covered under warranty, the Contractor will not be financially responsible for the repair (unless the Contractor is the supplier of the equipment), but will be responsible for notifying the NEORSD's Manager of Fleet Services of the need for repair and any coordination necessary. If the Manager of Fleet Services determines that repair under warranty should be performed immediately by the Contractor, then the Contractor shall be required to perform the repairs at the established applicable hourly rate for labor and materials. Should repairs be requested during other than normal contractor business hours, the NEORSD shall be responsible for the difference of overtime verses normal hourly rate not covered by warranty.
- C. The Contractor shall utilize NEORSD furnished parts when made available, or the Contractor shall seek and pass through the best obtainable market price for materials and parts. The Contractor shall provide documentation of cost pricing breakdown by components to the NEORSD for such repairs. The NEORSD reserves the right to furnish any or all parts/materials required for a repair to the Contractor as NEORSD-furnished property.
- D. The Contractor shall be responsible to provide an electronic version of documentation on a current basis of all software, components, relays, modules, and adjustable controls including currently installed versions and current settings. Each time there is a replacement, adjustment or programming change the revised documentation is to be immediately provided to NEORSD. Notice and identification is to be immediately provided of any/all maintenance required on all critical components for all proprietary software and documentation of such per manufacturer's guidelines.
- E. *Included in the Annual Preventive Maintenance for the stand-by power system Southerly WWTC Asset 1*GRT*GEN only is the requirement that the Contractor shall supply the proper load bank of optimum size that meets the approval of NEORSD.**

Repairs

All maintenance and repairs required due to normal wear and tear shall be included in the PM coverage for the specified equipment. Maintenance and repairs required for reasons other than normal wear and tear on equipment covered by PM shall be performed on a time and materials basis. All repairs shall be warranted at no additional cost to the NEORSD for a period not less than one year for both labor and materials required to perform a given repair. All time and materials work requires prior authorization from the Manager of Fleet Services or authorized designee. Any invoices submitted by the Contractor (for time and materials work) without the appropriate pre-approval will NOT be paid.

DS-8 PREVENTIVE MAINTENANCE DETAILED REQUIREMENTS

Appendix A (attached) contains listed descriptions of the minimum Preventive Maintenance activities to be performed by the Contractor under the scope of this contract for Monthly, Quarterly, Semi-Annual, and Annual scheduled site visits.

DS-9 PREVENTIVE MAINTENANCE REPORTS

In 2021, the District will be changing to a new computerized maintenance management system (CMMS) called NexGen. Contractor may be required to complete PM Work Orders (WO) as generated by the District's CMMS system. The District shall provide the Contractor with a username and password for the NexGen Asset Management Mobile application. Contractor technician shall meet with the Facility Representative or designee upon arrival at the facility to collect the printed WOs. In addition to completing the WOs, Contractor technician is to review the content and make any necessary recommendations for revisions. Completed documents shall be returned to the Facility Representative or designee at the end of each workday.

Information captured on the PM WOs shall include at a minimum:

- *Major Components and Condition.* Description of the condition, operability, and maintainability.
- *Work Performed.* Detailed description of the work performed, status of the generator and transfer switch/system following the repair(s), the repair costs, and time the generator and transfer switch/system was not available for operation. A generalized description such as "routine maintenance" is not acceptable.
- *Identified Service Needs and Estimated Cost.* Recommendations for needed repairs along with an estimated cost for each repair. The break down shall include the number of technician hours (normal business hours) and the estimated cost of any parts and materials.

DS-10 CONTRACTOR QUALIFICATION REQUIREMENTS

Contractor must be able to maintain the stand-by power systems to the highest degree of reliability. The generator and transfer switch systems operate 24/7, 365 days per year. Personnel must be/become familiar the unique systems of operation at the NEORS D for the facilities within the scope of this contract.

DS-11 STAND-BY POWER SYSTEM TECHNICIANS QUALIFICATIONS

All technicians engaged in the contract activities specified herein must: be of Serviceman status as recognized by the industry; and be licensed by the federal, state, local authority, and/or the city local authority in those trades, crafts or professions, which require licensing by such jurisdictions. The license must be of a grade or other level consistent with the requirement of the work being performed and/or as established by the referenced jurisdictions.

DS-12 SUBCONTRACTING

The NEORS D reserves the right to approve or disapprove any subcontractor selected. Therefore, the Contractor shall obtain the Manager of Fleet Services' approval of all subcontractors prior to

such subcontractors performing any work under this contract. The Contractor is responsible for providing the same reporting details for subcontract work as for direct work.

DS-13 MATERIALS

All materials, parts and supplies are to be of the original manufacturer's brand except as the NEORSD specifically approves substitution.

DS-14 INSPECTION AND ACCEPTANCE

Following the performance of all maintenance and repairs, the NEORSD Manager of Fleet Services shall have the right to inspect all work for conformance with contract specifications and industry standards. All completed work shall be required to bring the equipment to the original manufacturer's design specifications. Warranty repairs conducted as a result of Preventive Maintenance inspection shall be to correct the defect only as per the manufacturer's warranty statement.

Failure to Perform

- A. If any of the services do not conform to contract requirements, the NEORSD may require the Contractor to perform the services again in conformity with contract requirements at no additional cost and no increase in the contract amount. If the work remains deficient, the NEORSD Manager of Fleet Services may have the work accomplished by other means and deduct the cost thereof from the monthly payment due to the Contractor. When the defects in services cannot be corrected by re-performance, the NEORSD may:
 - 1. Require the Contractor to take necessary action to ensure that future performance conforms to contract requirements; and
 - 2. Reduce the contract price to reflect the reduced value of the services performed.

- B. If the Contractor fails to promptly perform the services in conformity with the contract requirements or to take the necessary action to ensure future performance in conformity with contract requirements, the NEORSD may:
 - 1. By contract or otherwise, perform the services and charge to the Contractor any cost incurred by the NEORSD that is directly related to the performance of such service; or
 - 2. Terminate the contract for lack of performance of said contract.

DS-15 AS-NEEDED REPAIRS

As-needed repairs" are repairs discovered during the term of the Contract not already covered as maintenance and inspection services. As-needed repairs shall be reported in writing or through the CMMS as instructed (See DS-9) to the Manager of Fleet Services, properly identifying the equipment involved, location, work to be performed, parts and materials required, number of

technicians to be on site, technician hours (normal business hours), completion schedule, and total cost of completed repair.

As-needed repairs are optional at the sole discretion of the District and are not guaranteed Contractor work under the terms and conditions of the Contract. If District requests Contractor to perform the repairs, work shall not start prior to Contractor's submission of proposal for repairs, approval from the Facility Representative, and a Purchase Order issued.

DS-16 ALLOWANCE WORK

An allowance is included on the *Invitation and Bid* form to be used for as-needed repairs not covered under the Inspections or Preventive Maintenance Program, addition of new assets, and non-scheduled inspections. These repairs will be paid on a time and materials basis for assets currently on line as well as new assets that may be identified or added (not a replacement) during the Contract term. No allowance work shall be paid unless an accurate, detailed proposal is provided and the Manager of Fleet Services has approved the work in advance of the work being started. The District reserves the right to request additional proposals from outside Contractors if the proposal provided is deemed to not be fair and reasonable.

Contractor will be paid per the hourly rates provided on the *Invitation and Bid* form. Contractor will not be paid travel time to and from the District facilities. Any overtime must be pre-authorized by the Manager of Fleet Services or designee. Invoices shall reflect time rounded to the nearest one half hour. Service tickets showing dates, time, and work performed shall be signed by the Facility Representative or designee and submitted with the invoice for prompt payment to occur.

DS-17 SERVICE TICKETS

Contractor shall complete and provide a Service Ticket to the District Representative or designee at the end of each workday and obtain their signature. The service technician shall sign the Service Ticket, detail the time on site, the unit serviced model number, serial number, and District ID with a detailed description of the reason for the visit and actions taken during the visit. A copy of the Service Ticket shall be left with the Manager of Fleet Services or designee and a copy attached to the invoice.

DS-18 REPLACEMENT PARTS

Contractor shall maintain a local inventory (off-site from the District facilities) of or purchase as required replacement parts and components from the original equipment manufacturer. Contractor shall complete all repairs reported by the District requiring in stock wear items and return the asset to operation the same day malfunctions are reported. Contractor shall diligently obtain and replace

faulty parts not normally stocked at Contractor's facility within three (3) calendar days of malfunctions reported by the District. If not possible due to delays procuring the parts from the original equipment manufacturer, Contractor shall fully communicate and document the repair delay to the District Facility Representative. **Ten (10%) percent mark-ups on the price of the replacement parts are allowed. Delivery charges are allowed. Contractor shall document mark-up and delivery charges with purchase and freight receipts to be submitted with invoices.** The cost of replacement parts and delivery charges will be paid out of the Contract Allowance upon completion of repairs and the asset returned to satisfactory operation.

DS-19 REFERENCE MATERIALS

Contractor shall be responsible for obtaining all wiring diagrams, drawings and plans needed to perform the preventive maintenance and repair services required. All reference materials, manuals, diagrams, drawings, and plans furnished by the District and/or obtained by Contractor shall be turned over to the District (hard copy and PDF or AutoCAD electronic format) at the end of the Contract.

DS-20 CONCURRENT WORK AT DIFFERENT SITES

Concurrent work may be required at any or all of the District facilities. Contractor must have enough experienced personnel and Contractor-owned equipment required to perform the work.

DS-21 REQUEST FOR SERVICE

Bidders shall provide the District with a list of telephone numbers and contact names for the District management staff to be able to call 24-hours per day, 7-days per week. The Contact Names and telephone numbers shall be placed on the last page of the *Invitation and Bid form*. More than one number may be provided for normal weekday hours (8:00 a.m. to 5:00 p.m.) or other than normal business hours (weekdays after 5:00 p.m., weekend days and District holidays). A list of recognized District holidays is provided below. Contractor shall respond to requests for service within 2-hours as explained in Section DS-22 regardless of weather conditions or Contractor workload. Any additional costs with this requirement shall be included in the Bid Prices on the *Invitation and Bid form*.

Recognized District Holidays

New Year's Day	Labor Day
Martin Luther King Day	Veteran's Day
Memorial Day	Thanksgiving Day
Independence Day	Christmas Day

Should a holiday fall on a weekend, the day designated by the District shall be recognized as the official holiday.

DS-22 RESPONSE TIME FOR SERVICES

Upon initial notification from the District, Contractor shall respond to requests for service within 2-hours and report to the requesting facility following notification of the need for service within the time frames below.

Non-Emergency Conditions

Upon a request for non-emergency service, Contractor shall report to the requesting facility within 4-request time hours, 24-hours per day, and 7-days per week. The Facility Representative or designee must approve exceptions to this requirement on a case-by-case basis.

Emergency Conditions

Upon a request for emergency service, Contractor shall report to the requesting facility within 2-request hours during normal business hours or 4-request hours after normal business hours, 24-hours per day, and 7-days per week. The Facility Representative or designee must approve exceptions to this requirement on a case-by-case basis.

DS-23 MANDATORY PRE-BID MEETING AND INSPECTION

Attendance of a mandatory pre-bid meeting and site inspections shall be required of all bidders. Bidders shall be familiar with the sites, specifications and existing site conditions. Bids shall be considered nonresponsive if required contractors fail to attend the pre-bid meeting and site inspections.

The mandatory pre-bid meeting will be provided via an online meeting scheduled for Tuesday, February 23, 2020 at 9:00 a.m.

Attendees can access the meeting at the following link:

<https://global.gotomeeting.com/join/877420877>

Directly after the meeting presentation, **Contractors who are bidding shall be required to:**

- 1) Attend an inspection of the EMSC and Southerly WWTC facilities at 10:30 a.m.
- 2) Attend an inspection of the outlying facilities at 11:30 a.m.

Bidders are limited to one representative in attendance for the pre-bid inspection.

Contractors must e-mail the District's O&M Procurement Administrator, Delilah Capeles, at capelesd@neorsd.org with the company and individuals who plan to attend the meeting and the one individual who will attend the inspection. Email addresses are required for each attendee.

Contractors will need to provide transportation to each facility.

Prospective bidders must sign the mandatory inspection sign-in sheets at each facility. The minimum Personal Protective Equipment (PPE) to be worn during the site inspections includes hard hat, safety glasses with side shields, and steel-toed boots. In addition, contractors are to wear face masks in compliance with current COVID-19 safety requirements.

No other opportunity will be provided to visit any facilities with a District representative after the day of the pre-bid meeting.

Prospective contractors shall acquaint themselves with the equipment and scope of services to be performed under the Contract by attending a mandatory pre-bid meeting. Bids shall be considered nonresponsive if contractor fails to attend the pre-bid inspection and meeting.

Failure by Contractor awarded the Contract to become acquainted with the equipment and the scope of the tasks which results in Contractor's subsequent inability to execute the Contract shall not relieve Contractor of their obligations under the Contract. No pleas of ignorance of existing conditions or encountered difficulties after commencement of the work under this Contract will be accepted if determined that complications resulted from Contractor's failure to make reasonably prudent examinations and investigations. The District reserves the right to cancel the Contract awarded at any time it is determined that service is inadequate.

DS-24 BID SUBMITTAL

Bidders must complete and return all the contents of the bid package distributed by the Bid Opening date/time.

Each Bidder must provide an authorized signature and company information on each page of the *Invitation and Bid form*. These documents will become a part of the finalized contract with the successful bidder.

Bidders shall submit with their bid the additional information discussed in Sections DS-25 and DS-26. These documents will become a part of the finalized contract with the successful bidder.

DS-25 INVITATION AND BID FORM

Bidders are required to quote prices for all bid items. Failure to submit prices for all bid items may be sufficient reason to declare the Bidder non-responsive. Bid prices must be exclusive of any federal, state, local sales, or use taxes.

Bidders shall provide the following information on the *Invitation and Bid* form.

- Unit prices to perform frequent and periodic maintenance inspections, associated Preventive Maintenance (PM), and any minor repairs or adjustments per stand-by generator power system listed at each facility.
- Extended Bid Summary prices for the Annual, Monthly, Quarterly, and Semi-annual PM inspections at each facility (No. of stand-by generator power systems multiplied by No. of Inspections multiplied by Unit Price/asset = Extended Bid Summary). **Note: The I & B form is an excel spreadsheet format and all multiplication and additions will be calculated for you. Just insert your Unit Prices.**
- Bid Summary Totals for each Item (Sum of the Extended Bid Summaries for the Annual, Monthly, Quarterly, and Semi-annual inspection plus the District's Discretion Allowance listed). **(Pre-filled in Allowance amounts must be included in your Bid Grand Total and will be added automatically if you use the spreadsheet)**
- The Grand Total Submitted Bid **will be calculated for you, if you use the excel spreadsheet formatting.**
- The hourly rate for *scheduled* repair service during normal business hours 8:00 a.m. to 5:00 p.m. (Monday through Friday) for **all** facilities. These values will not be tabulated in the bid cost and will be paid out of Allowance dollars should the need arise.
- The hourly rate for *scheduled* repair service after normal business hours, 5:00 p.m. to 7:59 a.m. (Monday through Friday) weekends and holidays for **all** facilities. These values will not be tabulated in the bid cost and will be paid out of Allowance dollars should the need arise.
- The hourly rate for *non-scheduled inspection services* during normal business hours and after normal business hours. For this bid, it is estimated there will be a total of 36 non-hours.

**DS-26 TECHNICIANS QUALIFICATIONS, COMPANY REFERENCE AND
NOTICE OF CANCELED CONTRACT OR CLAIM ON PERFORMANCE
BOND REPORT.**

Bidders must be able to provide all the work specified. All three attached forms must be completed and submitted, if your company is one of the two apparent low bidders.

The apparent two low bidders shall provide to the District the following documents via email to perrid@neorsd.org within seventy-two hours (72) after bid opening, excluding weekends and District holidays.

1. **TECHNICIANS QUALIFICATIONS FORM** - The names, qualifications, and experience of the Technicians to be assigned to work on the District stand-by generator power systems.

2. COMPANY REFERENCE FORM - A list of a minimum of three businesses with whom the Bidder has entered agreements for stand-by generator power systems preventive maintenance and repair and the year each of the agreements was entered. The Bidder must demonstrate through such information that it has at least six years of generator preventive maintenance and repair experience. The list shall include contact names and telephone numbers. The list of companies may include the District. The information obtained from contacting the companies on the lists will be used to check customer service history and may be used as a factor in awarding the Contract.

3. NOTICE OF CANCELED CONTRACT OR CLAIM ON PERFORMANCE BOND REPORT- Complete this form with written explanation of the circumstances if a contract has been canceled or a claim made on a performance bond issue. If no canceled contracts or no claims on performance bond indicate “NONE” on the form and provide with all the other documentation required.

DS-27 INVOICE PREPARATION AND PAYMENTS

Contractor shall submit to the District by the 15th of each month, a separate invoice for services performed in the previous month at each facility covered under this Contract. Invoices shall fully detail the services rendered per the specifications herein. Additional services performed using the Contract Allowance shall be invoiced separately upon completion of the work and in accordance with the approved submitted proposal. All charges shall be fully detailed and where applicable, list the asset(s) with the asset number(s) for which service was performed. Invoices shall include the Purchase Order number previously provided by the District along with any supporting documentation (e.g., signed Daily Service Tickets, receipts, reports). Items invoiced shall also include the PO line number to be charged.

Invoices shall be emailed to the District’s Accounts Payable Department at accountspayable@neorsd.org and copies sent to ContractsTSG@neorsd.org and Ryan Exum, Manager of Fleet Services at exumr@neorsd.org. Payments will be based on the prices bid. Invoices will be processed for payment after the District has substantiated and verified the charges. Unless otherwise agreed, payment terms shall be net 30 days. Care in the preparation of the detailed information on the invoices and the timing of the submittal of invoices by Contractor will expedite payments.

DS-28 PREVAILING WAGE RATES

Each laborer, worker or mechanic employed by Contractor for the work herein specified by the other persons upon such work, shall be paid the prevailing rates of wages as determined by the

Department of Industrial Relations, Facility of Building and Factory Inspection, of the State of Ohio, the published and approved schedule of which is contained in the bid documents.

In the event the wage scale for any labor classification is changed between the time the schedule was approved and the time the work required by this Contract is performed, or in the event any class of labor employed under this Contract, is not included in the published schedule of prevailing wages, then the rate prevailing at the time the work is actually performed as ascertained and determined by Department of Industrial Relations of the State of Ohio shall govern the work done under this Contract.

Every Contractor who is subject to Chapter 4115 of the Revised Code shall, as soon as he/she begins performance under his/her contract with any contracting public authority, supply to the prevailing wage coordinator of the contracting public authority a schedule of the dates during the life of his/her contract with the authority on which he/she is required to pay wages to employees. He/She shall also deliver to the Prevailing Wage Coordinator a certified copy of his/her payroll, within two weeks after the initial pay date, and supplemental report for each month thereafter which shall exhibit for each employee paid any wages, his/her name, current address, periods covered and the total for each week, his/her hourly rate of pay and wages, his/her job classification, fringe payments, and deductions from his/her wages. At the beginning of performance by Contractor, such supplemental reports shall be filed each week after the initial report. The certification of each payroll shall be executed by Contractor, or duly appointed agent therefore and shall recite that the payroll is correct and complete and that the wage rates shown are not less than those required by the Contract.

Each Contractor shall file with the contracting public authority upon completion of the Contract, or portion thereof, and prior to final payment thereof an affidavit stating that he/she has fully complied with Chapter 4115 of the Revised Code. Said affidavit is to be filed with the District's Office of Contract Compliance.

Prevailing wage rates are required only for labor hours performed for repairs and do not apply to preventive maintenance services. Preventive maintenance services are non-repairs and, therefore, do not require payment of prevailing wage rates.

APPENDIX A – DETAILED DESCRIPTION OF MAINTENANCE ACTIVITIES

(All of Appendix A must be filled out completely and submitted with Quote.)

A. SCOPE

1. Contractor shall provide a three-year Preventive Maintenance program for the Stand-By Power System specified in this section. The program shall include periodic visits as described below (Section B, Site Visits and Evaluation) and performance testing/evaluations required to maintain the system in a fully operable and reliable condition. The Contractor shall provide competent staff and latest technology equipment to perform this service. Preventive Maintenance activities shall be planned using a six (6) month projected maintenance schedule supplied to the Manager of Operations and Maintenance. The schedule may be amended only with the approval of the Manager of Operations and Maintenance or the Manager of Fleet Services with 30 days' prior notice.
2. Personnel shall perform all required Preventive Maintenance activities defined in this Service Agreement and document activities performed and observations of the system on the required Preventive Maintenance Checklist. Documentation of actions performed and related corrective actions shall be submitted in hard copy and electronic copy to the Manager of Fleet Services each week.

B. SITE VISITS AND EVALUATION

1. **Monthly Preventive Maintenance** shall include the following maintenance activities:
 - a. Perform Engine-Generator required exercise (unloaded condition)
 - b. Cooling System
 - Check for coolant leaks.
 - Visual inspection of radiator/heat exchanger for leaks, damage and obstruction.
 - Visual inspection of coolant level site glass. Replace if dirty internally.
 - Remove radiator cap, check coolant level, and inspect radiator for signs of corrosion. If signs of corrosion, pull a sample and notify Fleet Services. Add coolant as required to bring the coolant to correct level.
 - Inspect condition of radiator cap spring, gasket and sealing surface.
 - Visual inspection of cooling system gaskets for leaks.
 - Visual inspection of water pump seals for leaks. Visually inspect weep hole during operation for signs of coolant leakage.
 - Visual inspection of water pump for worn bearings.
 - Remove jacket water heater cover and inspect jacket water heater(s) and thermostat. Check jacket water heater(s) for proper operation and adjust thermostat setting as needed (September through May only).
 - Check belts for cracking or fraying.
 - Check belt tension and adjust tension if play exceeds 1”.
 - Inspect pulleys/sheaves for excessive wear.
 - Inspect flexible water connections for cracking, leaks and pliability.

- c. Lubrication System
 - Check crankcase oil and maintain proper level.
 - Check for excessive crankcase blow-by with engine running.
 - Check for oil leaks.
 - Visual inspection of front and rear crankshaft seals and lubrication system gaskets for leaks.
 - Inspect oil heater for proper operation and check thermostat seals.

- d. Fuel System
 - Inspect flexible fuel lines for cracking, wearing, leaks and pliability. Notify Fleet Services once signs of chaffing or cracking occur.
 - Operate fuel pump and check for proper operation and leaks.
 - Check the water separator filter site glass for contaminants.
 - Check for water in fuel system.
 - Drain water from water separator.
 - Inspect condition of fuel in tank, verify that there is no presence of bacteria growth or moisture.
 - Check fuel system for leaks.
 - Check governor oil level and add oil as needed (if applicable).
 - Record fuel level in main fuel tank.

- e. Starting System
 - Top off electrolyte level of batteries.
 - Check and record battery charger amperage.
 - Check battery charger and adjust float rate for optimum battery performance and life. Record the equalization and float rate.
 - Monitor battery voltage during cranking of engine, must not drop below 18 Volts on a 24 Volt system.
 - Check and record alternator for proper charge rate with engine running.
 - Check for proper cranking termination upon starting.
 - Check for proper operation of remote fan motors, thermostats, circulating pumps and solenoid valves (if applicable).
 - Inspect all battery cables and terminal connections.

- f. Exhaust System
 - Inspect flexible exhaust coupling for cracks and excessive leakage.
 - Check for abnormal exhaust characteristics with engine running (signs of wet stacking).
 - Inspect exterior of exhaust manifolds for oil/fuel slobbering (signs of wet stacking).
 - Inspect exhaust rain protection and exhaust outlet screening.
 - Inspect engine turbo charger oil supply lines for leaks or deterioration.

- g. Air Intake System
 - Inspect air filters for plugging and deterioration.
 - Check air cleaner indicator/filters.

- h. Installation
 - Make walk around inspection of complete installation.
 - Inspect generator set vibration isolators and adjust as needed.
 - Check for unit on-line capability in less than ten seconds.
 - Check for abnormal noise or vibration.
 - Re-check for leaks with engine running.
 - Re-check oil level with engine running.
 - Check inlet and discharge louvers are clear of obstructions and for proper operation with engine running and stopped.

- i. Control Panel on Generator
 - Operational check of illumination and safety lamps.
 - Check proper operation of engine and generator instruments w/ generator running.
 - Check operation of remote governor control.
 - Adjust governor control for optimum performance and frequency.
 - Adjust voltage regulator for proper voltage.

- j. Generator Switchgear (if applicable)
 - Check proper operation of touchscreen.
 - Check GE Multilin relays for alarms.
 - During load or no load test, turn off switchgear battery charger(s) and verify 125VDC batteries are working.
 - If feasible, turn off 24VDC station battery charger and verify 24VDC batteries are working.

- k. Perform a load test of the generators and operational test of the switchgear switching and/or Demand Response controls utilizing plant load. Generators shall be operated until they reach full operating temperature or as requested by NEORS site managers 30-60 minutes.
 - Note that load testing must be coordinated in advance with the utility ahead of time and site contact. Operations will perform load test by initiating a Demand Response where applicable.
 - Due to circumstances of the utility or plant operations, the test may need to be re-scheduled.
 - Load tests may be required to be performed after hours.

- l. Upon Completion of Service
 - Reset all controls to automatic.
 - Set circuit breaker to correct position (if applicable).
 - Check fuel valves for correct position.
 - Check voltage regulator is "ON" and NOT tripped.
 - Check generator battery charger is "ON".
 - Check switchgear battery charger(s) are "ON".
 - Check day tank controls are "ON".
 - Check louver controls are "ON".

- Check jacket water heater(s) are "ON".
 - Check remote radiator fan controls are "ON" (if applicable).
 - Check auxiliary water pump controls are "ON".
- m. Inspect Walk-in Enclosure
- Check for leaks and repair as recommended by the manufacturer.
 - Check for proper operation of the auxiliary equipment (lights, fans, heaters, etc.) and repair as required.
2. **Quarterly Preventive Maintenance** includes all activities required by the Monthly Preventive Maintenance and the following:
- a. Fuel System
- Inspection of steel fuel lines for cracks, leaks and proper line bracket support.
 - Check the main tank for water.
- b. Starting System
- Clean and apply corrosion inhibitor to the terminals of lead acid batteries as needed.
 - Tighten battery cable connections as needed.
 - Inspect and tighten starter motor(s), connections and wiring.
- c. Exhaust System
- Drain water in exhaust moisture traps.
 - Inspect exhaust manifold(s) for broken or missing hardware.
- d. Air Intake System
- Test air cleaner indicator.
 - Check all air intake piping for damage and loose connections.
3. **Semi-Annual Preventive Maintenance** activities include all actions required during the Monthly and Quarterly Preventive Maintenance and the following:
- a. The services of a certified independent testing lab to perform the testing specified below
- b. Cooling System
- Analyze coolant for proper antifreeze percentage and PH level.
 - Analyze coolant conditioner level and add additional supplemental coolant additive (SCA) as needed (up to two quarts).
 - Tighten hose clamps as needed.
 - Take coolant sample and send for analysis.
- c. Lubrication System
- Clean crankcase breather, inspect hose and connections.
 - Take oil sample (after operational checks) for Scheduled Oil Sampling Program (SOS) analysis to be reviewed with Fleet Services Manager.
- d. Fuel System
- Clean primary fuel filter (if screen type).

- Drain water and sediment from day tank (if accessible).
 - Clean inlet filters for day tank.
 - Test day tank alarms.
 - Take fuel sample and send for analysis.
- e. Starting System
- Test and record battery cells' electrolyte specific gravity.
- f. Air Intake System
- Inspection of air cleaner seal for pliability and sealing.
 - Inspection of Turbocharger for excessive endplay clearance (if accessible) and seal leakage.
- g. Generator and Voltage Regulator
- Check rotor air gap for correct clearance.
 - Inspection of rotor and stator for damage and excessive oil or dirt build-up.
 - Inspection of coupling and guards for loose or missing parts.
 - Check tightness of generator leads and voltage regulator control wiring.
 - Strap and tape any wiring or generator leads that have rubbing and/or worn insulation.
 - Inspect brushes and slip rings or rotating rectifier.
 - Clean and adjust voltage droop potentiometer.
 - Record field voltage during no-load generator run for baseline (if applicable).
- h. Control Panel Generator
- Check for and tighten loose terminals on the generator set and the generator control panel.
 - Check tightness of relays in the generator control panel.
 - Inspect for excessive dirt accumulation and clean as needed.
 - Test auto-start system.
 - Test safeties and pre-alarms on control and annunciator panels (for generator systems 480V and below).
 - Test safeties and pre-alarms on control panel and SCADA system (for medium voltage generators).
4. **Annual Preventive Maintenance** activities include all activities required for Monthly, Quarterly and Semi-Annual Preventive Maintenance and include the following:
- a. Inspect crankshaft vibration damper.
 - b. Inspect engine mounts.
 - c. **Change engine oil and oil filters.**
 - d. Change primary and secondary fuel filters.
 - e. Change water separator fuel filter.
 - f. Legally and professionally dispose of waste oil and filters.
 - g. Lubricate fan drive with bearing lubricant for high-speed applications and temperatures: -30°F to 325°F.

- h. Lubricate governor linkage (if applicable).
- i. Lubricate generator bearing with bearing lubricant for high-speed applications and temperatures: -30°F to 325°F.
- j. Test generator winding insulation.
- k. Inspect prelube pump.
- l. Clean and inspect Speed Sensor.
- m. Perform a “pull the plug” and “return to utility” test of the stand-by generator system in automatic mode as defined in the Standard Operating Procedure (SOP).
 - The testing must be coordinated in advance with the Power Company and NEORSD.
 - Due to circumstances of the utility or plant operations, the test may need to be re-scheduled.
- n. *** Applicable to Southerly WWTC Asset 1*GRT*GEN only. Perform 4-hour load bank test.**

5. **Automatic Transfer Switch Annual Preventive Maintenance** activities include all of the following:

- a. Interior wiring and components
 - Visual inspection of all wiring and connections for signs of cracking, overheating, and insulation deterioration.
 - Check and tighten, where necessary, all control circuit wiring terminals.
 - Check and tighten, where necessary, all plug-in connectors.
 - Check manual switches and relays for contact continuity.
 - Check all common and ground wires. Measure and record resistance to ground readings.
 - Check lug connections and mounting hardware.
- b. Mechanical Checks (Following inspections to be completed with power removed from ATS)
 - Tighten all bus connections. (normal, emergency & load)
 - Inspect main contacts
 - Inspect arcing contacts
 - Check length of linkage
 - Check motor mounting hardware
 - Check heim joints
 - Check interlock rod
 - Check handle bracket for free movement
 - Lubricate all necessary mechanical parts
- c. Verify operation of all LED indicators
- d. Check and record voltage for normal and emergency sources
- e. Check and record voltage frequency and phase rotation for normal and emergency sources
- f. Check and record engine battery voltage

- g. Verify the following functions:
 - Engine start signal
 - Transfer to emergency
 - Transfer to normal
 - Load test
 - Miscellaneous functions
- h. Perform infrared test check contacts, busswork and cable lugs under load
- i. Check door enclosure mechanism and proper operation clean as needed

C. REPORTS

1. Following each visit, a detailed follow-up report will be developed and submitted to the Manager of Fleet Services or authorized designee.
 - a. The report shall contain verification of all maintenance activities performed.
 - b. The report shall contain a list of items requiring service at the previous maintenance activity and items requiring service at the current maintenance activity.
 - c. The report shall contain a description of maintenance activities NOT performed and justification for their exclusion.
 - d. The report shall contain a summary of corrective action that is required, including a root cause analysis of the nature of the defect commensurate with the magnitude of potential failures.
 - e. When components have been changed or replaced, the report shall list the settings have been verified, component software versions are listed and compatible and a load test has been performed at the discretion of the NEORS.
 - f. When oil or coolant samples have been taken for analysis, this report shall include the results of the analysis.
2. This report shall be submitted within one (1) week of all maintenance activities performed in hard copy and electronic format to the Manager of Fleet Services or authorized designee. Contractor may be required to complete and submit reports via the District's CMMS system.



NEORSD - CRITICAL ENVIRONMENT WORK AUTHORIZATION FORM

Maintenance Event Date: _____

Title of work to be performed: _____

(a detailed Method of Procedure, (MOP) must be attached to this form.)

List all Contractors and subcontractors participating at this event (Company Names and Employees' First & Last Names):

The Following Approval Titles Must Be Signed Off Prior To the Start Of Any Work:

Facility Security Officer will sign only to acknowledge their awareness that you are on property.

NEORSD Security

(print and sign here): _____

Operations Manager and Maintenance Electricians Manager will sign off as indication that they are aware you are on property, have reviewed your Method of Procedure (MOP), and are positioned to coordinate NEORSD Standard Operating Procedures in the event of any equipment failure.

Operations Manager

(print and sign here): _____

Maintenance Electrician Manager

(print and sign here): _____

The lead contractor (responsible) will sign off as indication that all prerequisites are complete including:

- Method of Procedure (MOP), has been documented and reviewed with NEORSD. If the need arises to modify the scope of work/method of procedure, the modified MOP will be reviewed with NEORSD for approval prior to any activity.
- All safety requirements applicable to this work will be strictly adhered to including use of all proper personal protective equipment, use of properly trained and qualified personnel and lock-out tag-out procedures.
- A separate authorization form and current MOP must be submitted each time contractor arrives on NEORSD property prior to the start of any work.

Lead Contractor

(print and sign here): _____

The status of NEORSD systems at end of each service event must be immediately conveyed to NEORSD (before contractor leaves site):

Is normal use of Stand-by Generator system available, yes/no? _____

If other than normal, written detailed special instructions must be provided.

Is any further testing or follow up necessary or recommended as a result of today's maintenance activity, yes/no? _____ If yes, provide description.

(Copy of this form for Contractor and NEORSD)

EXAMPLE: Method of Procedure (MOP)
Customer Radiator Repair – CAT3412 GEN 1

Purpose:

This MOP will support the procedures necessary to remove/replace the corrosion perforated radiator with new CAT Factory remanufactured radiator, radiator hoses, and coolant. Gantry A Frame to be supplied/installed prior to actual service date to assist in the remove/replace procedure.

The service listed will require draining all coolant from engine block, radiator and all attached jacket water heater(s), oil coolers and attached after coolers if applicable.

The unit to be serviced will be required to be locked out from emergency start capability for various time amounts during repair and unit will not be available to support facility during these times.

SAFETY: Requirements for Technicians

- Safety glasses
- Absorbent pads for coolant leak containment
- Gloves as needed for handling hot fluids
- Appropriate containers for fluid disposal and handling

PREREQUISITES:

- Establish schedule with the NEORSD.
- Verify all parts, fluids and containers are at site and available. Include all water needed for job if applicable.
- The NEORSD will review this scope of work with the Contractor’s representative and identify any challenges to completion of work as outlined so as to minimize risk to facility. This will include, but not limited to:
 - Review Safety rules and precautions.
 - Review MOP in its entirety.
 - Review security issues for access to any critical areas.
- Verify all alarms are clear prior to beginning this MOP.

ACTIONS:

1. Switch and lock out GEN3 from Auto start mode.
 - **Site NEORSD:** _____
 - **Vendor Tech:** _____
 - **Date:** _____
 - **Time:** _____
2. Disable power to jacket water heater(s).
3. Drain engine coolant into vendor supplied containers for disposal per EPA standards. Remove and replace radiator at this time. Remove and replace thermostats. Replace upper and lower radiator hoses. Replace upper and lower jacket water heater hoses. Replace V-belts.

4. Refill cooling system with Cat ELC radiator coolant to full system.
5. Verify with NEORS D to start and run engine until operating temperature is achieved and coolant is circulating in complete system. Verify correct fluid levels and check for leaks.
 - **Site NEORS D:** _____
 - **Contractor Tech:** _____
6. Complete Annual service inspection forms and service report.
7. Cool down unit and shutdown.
8. Switch and lock out GEN3 from Auto start mode.
 - **Site NEORS D:** _____
 - **Contractor Tech:** _____
 - **Date:** _____
 - **Time:** _____
9. **Return to script at this time. Ohio CAT can complete 10 & 11 once script allows for cleanup of work areas.**
10. Remove all old fluids offsite for proper disposal at Contractor's facility per EPA standards.
11. Disassemble A Frame and make ready for pickup at later date.

NEORS D RISK TIMELINE:

Drain water, remove/replace radiator thermostats, hoses, and install new coolant (Standard Radiator package) 8.0 Hours
 Unit would be unable to be started during replacement procedures.