
**QUALITY ASSURANCE SURVEILLANCE PLAN (QASP)
FOR
Bldg 153 Caterpillar Diesel Generator maintenance**

1. PURPOSE

This Quality Assurance Surveillance Plan (QASP) is a Government developed and applied document used to make sure that systematic quality assurance methods are used in the administration of the Performance Based Service Contract (PBSC) standards included in this contract and in subsequent task orders issued there under. The intent is to ensure that the Contractor performs in accordance with performance metrics set forth in the contract documents, that the Government receives the quality of services called for in the contract and that the Government only pays for the acceptable level of services received.

The QASP has been developed by the requiring activity. It is designed to provide direction to personnel performing contract surveillance activities. Personnel surveying the contract terms and conditions and SOW requirements will periodically review the QASP throughout the life of the contract.

The Contracting Officer's Representative (COR) will monitor the performance of the Caterpillar Diesel Generator technician in performing operation, maintenance, and testing.

2. SCOPE

The QASP is put in place to provide Government surveillance oversight of the Contractor's quality control efforts to ensure the products/results specified in the PR&C or task order are delivered on time and meet the requirements of the PR&C or task order. The QASP is not intended to duplicate the Contractor's Management Plan.

3. GOVERNMENT RESOURCES

The following definitions for Government resources are applicable to this plan:

Contracting Officer - A person duly appointed with the authority to enter into, administer, or terminate contracts and make related determinations and findings on behalf of the Government.

Contracting Officer's Representative (COR) - An individual designated in writing by the Contracting Officer to act as his authorized representative to assist in administering a contract. The source and authority for a COR is the Contracting Officer. COR limitations are contained in the written letter of appointment.

4. RESPONSIBILITIES:

The Government resources shall have responsibilities for the implementation of this QASP as follows:

Contracting Officer – The Contracting Officer ensures performance of all necessary actions for effective contracting, ensures compliance with the terms of the contract and safeguards the interests of the United States in the contractual relationship. It is the Contracting Officer that ensures the Contractor receives impartial, fair, and equitable treatment under the contract. The Contracting Officer is ultimately responsible for the final determination of the adequacy of the Contractor’s performance.

Contracting Officer’s Representative (COR) - The COR is responsible for technical administration of the project and ensures proper Government surveillance of the Contractor’s performance. The COR is not empowered to make any contractual commitments or to authorize any contractual changes on the Government’s behalf. Any changes that the Contractor deems may affect contract, price, terms, or conditions shall be referred to the Contracting Officer for action.

5. METHODS OF QA SURVEILLANCE

The below listed methods of surveillance shall be used in the administration of this QASP.

Customer Feedback – Customer feedback may be obtained from Utility Plant USDA personnel. Customer complaints, to be considered valid, must set forth clearly and in writing the detailed nature of the complaint, must be signed and must be forwarded to the COR. The COR shall maintain a summary log of all formally received customer complaints as well as a copy of each complaint in a documentation file.

Periodic Inspection – The COR shall monitor the performance of the Caterpillar Diesel Generator Technician as needed. during the standby and recovery period of the contracted period of performance. If there are not issues, then little monitoring is required.

100% Inspection –If issues occur during the period of performance, the COR will monitor the performance of the Caterpillar Diesel Generator technician in the operation, maintenance, and repair of the generators.

6. LEVELS AND STANDARDS OF SERVICE

The standards of services are held to and comply with the standards specified in the PR&C, commercial/industry, and military/government standards.

Location	Make	Serial Number
Large generators		
Bldg 153, Gen #1	Caterpillar	0FDN01781
Bldg 153, Gen #2	Caterpillar	OZAP00574
Bldg 153, Gen #4	Caterpillar	0FDN01780
Bldg 153, Gen #5	Caterpillar	OZAP000576
Bldg 153, Gen #6	Caterpillar	G3Z00332

Location	Make	Serial Number
Small generators		
Bldg 22	Caterpillar	09EP02880
Bldg 401MB	Cummins	K040710038
Bldg 402	Cummins	46549234
Bldg 417 C-3	Cummins	46562837
Location	Make	Serial Number
Automatic Transfer Switches		
Bldg 154 ATS #1	Caterpillar	CTSCT 0TSE01025
Bldg 154 ATS #2	Caterpillar	CTSCT 0TSE01056
Bldg 154 ATS #3	Caterpillar	CTSCT 0TSE01055
Bldg 154 ATS #4	Caterpillar	CTSCT 0TSE01026
Bldg 21 ATS #1	ASCO 7000	238630FP
Bldg 21 ATS #2	ASCO 7000	238629FP
Bldg 401MB	OTPCF	5692526 K040710143
Bldg 402	OTPCF	5743004 J050841110
Bldg 417	OTPCF	5746017 L050865964

7. IDENTIFIED QA SURVEILLANCE ITEMS

Performance Requirements		
Performance Requirements		
Required Services	Performance Objective	Performance Requirement
Level 1: Comprehensive 64-Point Inspection		
Inspect and test engine, generator, transfer switches, radiator, day tank, battery charger, engine block heater, gauges and meters.	Scheduled service and maintenance.	Every 12 months.

Check emergency engine safety shutdown systems.	Scheduled service and maintenance.	Every 12 months.
Test oil and coolant quality and verify that they meet the manufacturer's specifications.	Scheduled service and maintenance.	Every 12 months.
Provide a written analysis of the inspection and identify any possible areas that need service within ten working days of completion of the work.	Scheduled service and maintenance.	Every 12 months.
Provide a price list of recommended replacement parts and labor cost for installation of the same within ten working days of the written report.	Scheduled service and maintenance.	Every 12 months.
COOLING SYSTEM		
1.1 Radiator/Heat Exchanger/Cooling System- Visual inspection for leaks and damage.	Scheduled service and maintenance.	Every 12 months.
1.2 Fan Drive Pulley - Check for loose or worn pulleys and lube fan drive when needed.	Scheduled service and maintenance.	Every 12 months.
1.3 Fan Guard - Inspect for missing or broken parts.	Scheduled service and maintenance.	Every 12 months.
1.4 Fan Belts - Inspect for frayed or worn belts. Check tension and adjust.	Scheduled service and maintenance.	Every 12 months.
1.5 Coolant -Take Coolant Sample, indicate type of coolant (DEAC, ELC or Conventional) on coolant sample tag.	Scheduled service and maintenance.	Every 12 months.
1.6 Hoses - Visual inspection of all hoses for condition. Check connections.	Scheduled service and maintenance.	Every 12 months.
1.7 Filler Cap - Inspect filler cap gaskets and sealing surfaces.	Scheduled service and maintenance.	Every 12 months.
1.8 Inspect Jacket Water Heater - Check for proper operation and thermostat settings. Record water jacket temperature.	Scheduled service and maintenance.	Every 12 months.
1.9 Water Pump - Visual inspection for leaks	Scheduled service and maintenance.	Every 12 months.
LUBRICATION SYSTEM		
2.1 Oil Level - Inspect for proper level inspect for leaks. Record level.	Scheduled service and maintenance.	Every 12 months.
2.3 Crankcase Breather System - Inspect hose and connections. Note excessive blowby. Inspect for proper operation.	Scheduled service and maintenance.	Every 12 months.
AIR SYSTEM		
3.1 Air Filter - Inspect filter element and seals.	Scheduled service and maintenance.	Every 12 months.

3.2 Air Inlet System - Inspect piping for damage or loose connections.	Scheduled service and maintenance.	Every 12 months.
FUEL SYSTEM/GOVERNOR		
4.1 Fuel Tank - Visually inspect for leaks and level. Record level.	Scheduled service and maintenance.	Every 12 months.
4.2 Day Tank Pump - Check for proper operation. Check panel alarm lights.	Scheduled service and maintenance.	Every 12 months.
4.3 Fuel Priming Pump - Inspect for proper operation.	Scheduled service and maintenance.	Every 12 months.
4.4 Fuel Filters - Primary/Secondary. Visual inspect for damage or leaks.	Scheduled service and maintenance.	Every 12 months.
4.5 Water/Trap Separator - Drain water from tank or separator.	Scheduled service and maintenance.	Every 12 months.
4.6 Fuel Lines - Check fuel line for leaks and tight connections. Check line brackets.	Scheduled service and maintenance.	Every 12 months.
EXHAUST SYSTEM		
5.1 Silencer and Piping - Visually inspect for damage or leakage. Visually check straps and rain cap.	Scheduled service and maintenance.	Every 12 months.
5.2 Exhaust Manifold/Turbo - Inspect for damage, missing parts, or oil slobbering.	Scheduled service and maintenance.	Every 12 months.
GENERATOR		
6.1 Coupling and Guards - Inspect for vibration and loose or missing parts.	Scheduled service and maintenance.	Every 12 months.
6.2 Wiring - Visually inspect for condition and loose connections.	Scheduled service and maintenance.	Every 12 months.
6.3 Rotating Rectifier - Visually inspect rotating rectifier wiring for loose connections.	Scheduled service and maintenance.	Every 12 months.
6.4 Stator and Rotor - Visually inspect for damage and overall condition.	Scheduled service and maintenance.	Every 12 months.
6.5 Visually inspect generator bearing.	Scheduled service and maintenance.	Every 12 months.
6.6 Generator Barrel Heater- If equipped check generator barrel heater for proper operation.	Scheduled service and maintenance.	Every 12 months.
STARTING SYSTEM		
7.1 Starting Motor - Inspect connections and wiring.	Scheduled service and maintenance.	Every 12 months.
7.2 Battery Charger - Measure and record battery charger float voltage.	Scheduled service and maintenance.	Every 12 months.

7.2.1 Battery Charger - Measure and record battery charger float voltage	Scheduled service and maintenance.	Every 12 months.
7.3 Battery Charger & Cables - Visually check for proper operation and loose terminals. Clean, lube and tighten all battery cable connections if needed.	Scheduled service and maintenance.	Every 12 months.
CONTROL PANEL/CABINETS		
8.1 Visual Inspection - Check for loose or broken wires and dirt accumulation.	Scheduled service and maintenance.	Every 12 months.
Take picture of the EMCP Panel. Please note if panel is older than EMCP 3.	Scheduled service and maintenance.	Every 12 months.
8.2 Panel Lights - Operational check of illumination and safety lamps.	Scheduled service and maintenance.	Every 12 months.
MAIN TRANSFER SWITCH & SWITCHGEAR		
9.1 Exterior visual inspection of Transfer Switch - Inspect overall condition and verify if control panel is operational.	Scheduled service and maintenance.	Every 12 months.
9.2 Does this unit have Switchgear onsite? If Yes, Take photos.	Scheduled service and maintenance.	Every 12 months.
9.3 Does this unit have stationary UPS batteries? If Yes, Take photos of the string.	Scheduled service and maintenance.	Every 12 months.
START UP & RUNNING CHECKS		
10.1 Battery Voltage Drop - Check voltage drop, and amp draw during cranking.	Scheduled service and maintenance.	Every 12 months.
10.2 Start Controls - Manual/Auto check for proper operation and general start ability.	Scheduled service and maintenance.	Every 12 months.
10.3 Record Water Temp	Scheduled service and maintenance.	Every 12 months.
10.4 Record Oil Pressure	Scheduled service and maintenance.	Every 12 months.
10.6 Record Fuel Pressure	Scheduled service and maintenance.	Every 12 months.
10.7 Record AC Voltage on all three phases.	Scheduled service and maintenance.	Every 12 months.
10.3.1 Record Water Temperature	Scheduled service and maintenance.	Every 12 months.
10.4.1 Record Oil Pressure	Scheduled service and maintenance.	Every 12 months.
10.6.1 Record Fuel Pressure	Scheduled service and maintenance.	Every 12 months.
10.7.1 Record Phase 1 Line to Line	Scheduled service and maintenance.	Every 12 months.

10.7.2 Record Phase 2 Line to Line	Scheduled service and maintenance.	Every 12 months.
10.7.3 Record Phase 3 Line to Line	Scheduled service and maintenance.	Every 12 months.
10.8 Frequency Meter - Record Hz	Scheduled service and maintenance.	Every 12 months.
10.9 Record AC Amps on three phases. Amperage will only be present if generator set is under load. If customer declines transfer, please note the customer representatives name that declined transfer.	Scheduled service and maintenance.	Every 12 months.
10.10 Alternator - Check for proper operation.	Scheduled service and maintenance.	Every 12 months.
10.11 Remote Annunciators and Alarms - Test all panel and system alarms for proper operation.	Scheduled service and maintenance.	Every 12 months.
10.12 Safety Controls - Test Low Oil Pressure Shutdown, High Water Temp Shutdown, Low Water Temp Shutdown, Low Water Level Shutdown for proper operation, with customer approval.	Scheduled service and maintenance.	Every 12 months.
COOLING SYSTEM		
11.1 Water Pump - Check for leaks and unusual noise or vibration during running and after shutdown.	Scheduled service and maintenance.	Every 12 months.
GENERATOR - INSTALLATION/ENCLOSURE		
12.1 Enclosure Condition	Scheduled service and maintenance.	Every 12 months.
12.2 Vibration Isolators - Inspect for broken springs or damaged cases.	Scheduled service and maintenance.	Every 12 months.
12.3 Louvers - Visually inspect louver operation. If all louvers are not visible, please note.	Scheduled service and maintenance.	Every 12 months.
AFTER SHUTDOWN		
13.1 Take oil sample	Scheduled service and maintenance.	Every 12 months.
13.2 Change Engine Oil, CCV Elements, Oil Filters and Fuel Filters.	Scheduled service and maintenance.	Every 12 months.
13.3 After oil is changed start engine and check for leaks. Take a picture of any leaks and note this on the report.	Scheduled service and maintenance.	Every 12 months.
10.7.4 Phase 1 Line to Neutral	Scheduled service and maintenance.	Every 12 months.

10.7.5 Phase 2 Line to Neutral	Scheduled service and maintenance.	Every 12 months.
10.7.6 Phase 3 Line to Neutral	Scheduled service and maintenance.	Every 12 months.
10.8.1 Record Hertz Reading	Scheduled service and maintenance.	Every 12 months.
10.9.1 Record Phase 1 AC Amperage	Scheduled service and maintenance.	Every 12 months.
10.9.2 Record Phase 2 AC Amperage	Scheduled service and maintenance.	Every 12 months.
10.9.3 Record Phase 3 AC Amperage	Scheduled service and maintenance.	Every 12 months.
10.10 Alternator - Check for proper operation.	Scheduled service and maintenance.	Every 12 months.
10.11 Remote Annunciators and Alarms - Test all panel and system alarms for proper operation.	Scheduled service and maintenance.	Every 12 months.
10.12 Safety Controls - Test Low Oil Pressure Shutdown, High Water Temp Shutdown, Low Water Temp Shutdown, Low Water Level Shutdown for proper operation, with customer approval.	Scheduled service and maintenance.	Every 12 months.
COOLING SYSTEM		
11.1 Water Pump - Check for leaks and unusual noise or vibration during running and after shutdown.	Scheduled service and maintenance.	Every 12 months.
GENERATOR - INSTALLATION/ENCLOSURE		
12.1 Enclosure Condition	Scheduled service and maintenance.	Every 12 months.
12.2 Vibration Isolators - Inspect for broken springs or damaged cases.	Scheduled service and maintenance.	Every 12 months.
12.3 Louvers - Visually inspect louver operation. If all louvers are not visible, please note.	Scheduled service and maintenance.	Every 12 months.
AFTER SHUTDOWN		
13.1 Take oil sample	Scheduled service and maintenance.	Every 12 months.
13.4 Verify engine oil is at the proper level and record level.	Scheduled service and maintenance.	Every 12 months.
13.6 Visually inspect generator bearing.	Scheduled service and maintenance.	Every 12 months.
13.8 RESET ALL CONTROLS TO AUTOMATIC AND CLOSE GENERATOR BREAKER.	Scheduled service and maintenance.	Every 12 months.

TAKE PICTURES OF GENERATOR SET		
14.1 Take pictures of Engine, Generator, Enclosure, Batteries, and Package Data tags.	Scheduled service and maintenance.	Every 12 months.
LUBRICATION SYSTEM		
2.2 Oil Heater/Prelube Pump - Inspect for proper operation.	Scheduled service and maintenance.	Every 12 months.
STARTING SYSTEM		
7.4 Batteries - Check electrolyte level and specific gravity record readings.	Scheduled service and maintenance.	Every 12 months.
7.4.1 Specific Gravity	Scheduled service and maintenance.	Every 12 months.
START UP & RUNNING CHECKS		
10.5 Record Oil Temp	Scheduled service and maintenance.	Every 12 months.
10.5.1 Record Oil Temperature	Scheduled service and maintenance.	Every 12 months.
TEST OIL QUALITY		
WEAR/CONTAMINATION- ADDITIVES/FORMULATION	Scheduled service and maintenance.	Every 12 months.
Date, hour meter, hours on oil, fluid change, filter change, Cu, Fe, Cr, Al, Pb, Sn, Si, Na, K, Mo, Ni, Ag, Ti, V, Mn, Cd, Ca, P, Zn, Mg, Ba, B.	Scheduled service and maintenance.	Every 12 months.
OIL FORMULATION- OIL CONDITION- OIL CONTAMINATION	Scheduled service and maintenance.	Every 12 months.
Date, Brand, Type, weight, fluid change, filter change, V100 ST OXI SUL NIT W A F Pfc PQI	Scheduled service and maintenance.	Every 12 months.
TEST RADIATOR COOLANT QUALITY		
CORROSION ELEMENTS - COOLANT FORMULATION	Scheduled service and maintenance.	Every 12 months.
Date, fluid brand, type, Cu Fe Pb Sn Al Zn NO2 Na K Mo MoO4 BO3 SiO3	Scheduled service and maintenance.	Every 12 months.
FREEZE/BOIL PROTECTION – CONTAMINATION	Scheduled service and maintenance.	Every 12 months.
Date, meter, hours on fluid, fluid brand, type, fluid change, GL FP BP pH CON PO4 TH Oil Foam	Scheduled service and maintenance.	Every 12 months.

		Every 12 months.
COOLANT PHYSICALS	Scheduled service and maintenance.	Every 12 months.
Sample date, meter hours, meter on fluid, fluid brand, type, color, app, odor, PAmt, Papp, PCol, PProp	Scheduled service and maintenance.	Every 12 months.
TEST AFTERCOOLER COOLANT QUALITY		
CORROSION ELEMENTS - COOLANT FORMULATION	Scheduled service and maintenance.	Every 12 months.
Date, fluid brand, type, Cu Fe Pb Sn Al Zn NO2 Na K Mo MoO4 BO3 SiO3	Scheduled service and maintenance.	Every 12 months.
FREEZE/BOIL PROTECTION – CONTAMINATION	Scheduled service and maintenance.	Every 12 months.
Date, meter, hours on fluid, fluid brand, type, fluid change, GL FP BP pH CON PO4 TH Oil Foam	Scheduled service and maintenance.	Every 12 months.
COOLANT PHYSICALS	Scheduled service and maintenance.	Every 12 months.
Sample date, meter hours, meter on fluid, fluid brand, type, color, app, odor, PAmt, Papp, PCol, PProp	Scheduled service and maintenance.	Every 12 months.
Level 2: Comprehensive 67-Point Inspection and maintenance		
Inspect and test engine, generator, transfer switch, radiator, day tank, battery charger, engine block heater, gauges and meters.	Scheduled service and maintenance.	Every 12 months.
Check emergency engine safety shutdown systems.	Scheduled service and maintenance.	Every 12 months.
Test oil and coolant quality and verify that they meet the manufacturer’s specifications.	Scheduled service and maintenance.	Every 12 months.
Provide a written analysis of the inspection and identify any possible areas that need service within ten working days of completion of the work.	Scheduled service and maintenance.	Every 12 months.
Provide a price list of recommended replacement parts and labor cost for installation of the same within ten working days of the written report.	Scheduled service and maintenance.	Every 12 months.
Change engine oil and replace with specified oil.	Scheduled service and maintenance.	Every 12 months.

Replace oil and fuel filters.	Scheduled service and maintenance.	Every 12 months.
Dispose all parts and fluids per EPA standards.	Scheduled service and maintenance.	Every 12 months.
COOLING SYSTEM		
1.1 Radiator/Heat Exchanger/Cooling System- Visual inspection for leaks and damage.	Scheduled service and maintenance.	Every 12 months.
1.2 Fan Drive Pulley - Check for loose or worn pulleys and lube fan drive when needed.	Scheduled service and maintenance.	Every 12 months.
1.3 Fan Guard - Inspect for missing or broken parts.	Scheduled service and maintenance.	Every 12 months.
1.4 Fan Belts - Inspect for frayed or worn belts. Check tension and adjust.	Scheduled service and maintenance.	Every 12 months.
1.5 Coolant -Take Coolant Sample, indicate type of coolant (DEAC, ELC or Conventional) on coolant sample tag.	Scheduled service and maintenance.	Every 12 months.
1.6 Hoses - Visual inspection of all hoses for condition. Check connections.	Scheduled service and maintenance.	Every 12 months.
1.7 Filler Cap - Inspect filler cap gaskets and sealing surfaces.	Scheduled service and maintenance.	Every 12 months.
1.8 Inspect Jacket Water Heater - Check for proper operation and thermostat settings. Record water jacket temperature.	Scheduled service and maintenance.	Every 12 months.
1.9 Water Pump - Visual inspection for leaks	Scheduled service and maintenance.	Every 12 months.
LUBRICATION SYSTEM		
2.1 Oil Level - Inspect for proper level inspect for leaks. Record level.	Scheduled service and maintenance.	Every 12 months.
2.3 Crankcase Breather System - Inspect hose and connections. Note excessive blowby. Inspect for proper operation.	Scheduled service and maintenance.	Every 12 months.
AIR SYSTEM		
3.1 Air Filter - Inspect filter element and seals.	Scheduled service and maintenance.	Every 12 months.
3.2 Air Inlet System - Inspect piping for damage or loose connections.	Scheduled service and maintenance.	Every 12 months.
FUEL SYSTEM/GOVERNOR		
4.1 Fuel Tank - Visually inspect for leaks and level. Record level.	Scheduled service and maintenance.	Every 12 months.

4.2 Day Tank Pump - Check for proper operation. Check panel alarm lights.	Scheduled service and maintenance.	Every 12 months.
4.3 Fuel Priming Pump - Inspect for proper operation.	Scheduled service and maintenance.	Every 12 months.
4.4 Fuel Filters - Primary/Secondary. Visual inspect for damage or leaks.	Scheduled service and maintenance.	Every 12 months.
4.5 Water/Trap Separator - Drain water from tank or separator.	Scheduled service and maintenance.	Every 12 months.
4.6 Fuel Lines - Check fuel line for leaks and tight connections. Check line brackets.	Scheduled service and maintenance.	Every 12 months.
EXHAUST SYSTEM		
5.1 Silencer and Piping - Visually inspect for damage or leakage. Visually check straps and rain cap.	Scheduled service and maintenance.	Every 12 months.
5.2 Exhaust Manifold/Turbo - Inspect for damage, missing parts, or oil slobbering.	Scheduled service and maintenance.	Every 12 months.
GENERATOR		
6.1 Coupling and Guards - Inspect for vibration and loose or missing parts.	Scheduled service and maintenance.	Every 12 months.
6.2 Wiring - Visually inspect for condition and loose connections.	Scheduled service and maintenance.	Every 12 months.
6.3 Rotating Rectifier - Visually inspect rotating rectifier wiring for loose connections.	Scheduled service and maintenance.	Every 12 months.
6.4 Stator and Rotor - Visually inspect for damage and overall condition.	Scheduled service and maintenance.	Every 12 months.
6.5 Visually inspect generator bearing.	Scheduled service and maintenance.	Every 12 months.
6.6 Generator Barrel Heater- If equipped check generator barrel heater for proper operation.	Scheduled service and maintenance.	Every 12 months.
STARTING SYSTEM		
7.1 Starting Motor - Inspect connections and wiring.	Scheduled service and maintenance.	Every 12 months.
7.2 Battery Charger - Measure and record battery charger float voltage.	Scheduled service and maintenance.	Every 12 months.
7.2.1 Battery Charger - Measure and record battery charger float voltage	Scheduled service and maintenance.	Every 12 months.
7.3 Battery Charger & Cables - Visually check for proper operation and loose terminals. Clean, lube and tighten all battery cable connections if needed.	Scheduled service and maintenance.	Every 12 months.

CONTROL PANEL/CABINETS		
8.1 Visual Inspection - Check for loose or broken wires and dirt accumulation.	Scheduled service and maintenance.	Every 12 months.
Take picture of the EMCP Panel. Please note if panel is older than EMCP 3.	Scheduled service and maintenance.	Every 12 months.
8.2 Panel Lights - Operational check of illumination and safety lamps.	Scheduled service and maintenance.	Every 12 months.
MAIN TRANSFER SWITCH & SWITCHGEAR		
9.1 Exterior visual inspection of Transfer Switch - Inspect overall condition and verify if control panel is operational.	Scheduled service and maintenance.	Every 12 months.
9.2 Does this unit have Switchgear onsite? If Yes, Take photos.	Scheduled service and maintenance.	Every 12 months.
9.3 Does this unit have stationary UPS batteries? If Yes, Take photos of the string.	Scheduled service and maintenance.	Every 12 months.
START UP & RUNNING CHECKS		
10.1 Battery Voltage Drop - Check voltage drop, and amp draw during cranking.	Scheduled service and maintenance.	Every 12 months.
10.2 Start Controls - Manual/Auto check for proper operation and general start ability.	Scheduled service and maintenance.	Every 12 months.
10.3 Record Water Temp	Scheduled service and maintenance.	Every 12 months.
10.4 Record Oil Pressure	Scheduled service and maintenance.	Every 12 months.
10.6 Record Fuel Pressure	Scheduled service and maintenance.	Every 12 months.
10.7 Record AC Voltage on all three phases.	Scheduled service and maintenance.	Every 12 months.
10.3.1 Record Water Temperature	Scheduled service and maintenance.	Every 12 months.
10.4.1 Record Oil Pressure	Scheduled service and maintenance.	Every 12 months.
10.6.1 Record Fuel Pressure	Scheduled service and maintenance.	Every 12 months.
10.7.1 Record Phase 1 Line to Line	Scheduled service and maintenance.	Every 12 months.
10.7.2 Record Phase 2 Line to Line	Scheduled service and maintenance.	Every 12 months.
10.7.3 Record Phase 3 Line to Line	Scheduled service and maintenance.	Every 12 months.
10.8 Frequency Meter - Record Hz	Scheduled service and maintenance.	Every 12 months.

10.9 Record AC Amps on three phases. Amperage will only be present if generator set is under load. If customer declines transfer, please note the customer representatives name that declined transfer.	Scheduled service and maintenance.	Every 12 months.
10.10 Alternator - Check for proper operation.	Scheduled service and maintenance.	Every 12 months.
10.11 Remote Annunciators and Alarms - Test all panel and system alarms for proper operation.	Scheduled service and maintenance.	Every 12 months.
10.12 Safety Controls - Test Low Oil Pressure Shutdown, High Water Temp Shutdown, Low Water Temp Shutdown, Low Water Level Shutdown for proper operation, with customer approval.	Scheduled service and maintenance.	Every 12 months.
COOLING SYSTEM		
11.1 Water Pump - Check for leaks and unusual noise or vibration during running and after shutdown.	Scheduled service and maintenance.	Every 12 months.
GENERATOR - INSTALLATION/ENCLOSURE		
12.1 Enclosure Condition	Scheduled service and maintenance.	Every 12 months.
12.2 Vibration Isolators - Inspect for broken springs or damaged cases.	Scheduled service and maintenance.	Every 12 months.
12.3 Louvers - Visually inspect louver operation. If all louvers are not visible, please note.	Scheduled service and maintenance.	Every 12 months.
AFTER SHUTDOWN		
10.7.4 Phase 1 Line to Neutral	Scheduled service and maintenance.	Every 12 months.
10.7.5 Phase 2 Line to Neutral	Scheduled service and maintenance.	Every 12 months.
10.7.6 Phase 3 Line to Neutral	Scheduled service and maintenance.	Every 12 months.
10.8.1 Record Hertz Reading	Scheduled service and maintenance.	Every 12 months.
10.9.1 Record Phase 1 AC Amperage	Scheduled service and maintenance.	Every 12 months.
10.9.2 Record Phase 2 AC Amperage	Scheduled service and maintenance.	Every 12 months.
10.9.3 Record Phase 3 AC Amperage	Scheduled service and maintenance.	Every 12 months.
10.10 Alternator - Check for proper operation.	Scheduled service and maintenance.	Every 12 months.

10.11 Remote Annunciators and Alarms - Test all panel and system alarms for proper operation.	Scheduled service and maintenance.	Every 12 months.
10.12 Safety Controls - Test Low Oil Pressure Shutdown, High Water Temp Shutdown, Low Water Temp Shutdown, Low Water Level Shutdown for proper operation, with customer approval.	Scheduled service and maintenance.	Every 12 months.
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12.3 Louvers - Visually inspect louver operation. If all louvers are not visible, please note.	Scheduled service and maintenance.	Every 12 months.
AFTER SHUTDOWN		
13.1 Take oil sample	Scheduled service and maintenance.	Every 12 months.
13.2 Change Engine Oil, CCV Elements, Oil Filters and Fuel Filters.	Scheduled service and maintenance.	Every 12 months.
13.2.1 Record Gallons of used oil collected	Scheduled service and maintenance.	Every 12 months.
13.2.2 Record Number of used oil filters collected	Scheduled service and maintenance.	Every 12 months.
13.3 After oil is changed start engine and check for leaks. Take a picture of any leaks and note this on the report.	Scheduled service and maintenance.	Every 12 months.
13.4 Verify engine oil is at the proper level and record level.	Scheduled service and maintenance.	Every 12 months.
13.6 Visually inspect generator bearing.	Scheduled service and maintenance.	Every 12 months.
13.8 RESET ALL CONTROLS TO AUTOMATIC AND CLOSE GENERATOR BREAKER.	Scheduled service and maintenance.	Every 12 months.
TAKE PICTURES OF GENERATOR SET		
14.1 Take pictures of Engine, Generator, Enclosure, Batteries, and Package Data tags.	Scheduled service and maintenance.	Every 12 months.

LUBRICATION SYSTEM		
2.2 Oil Heater/Prelube Pump - Inspect for proper operation.	Scheduled service and maintenance.	Every 12 months.
STARTING SYSTEM		
7.4 Batteries - Check electrolyte level and specific gravity record readings.	Scheduled service and maintenance.	Every 12 months.
7.4.1 Specific Gravity	Scheduled service and maintenance.	Every 12 months.
START UP & RUNNING CHECKS		
10.5 Record Oil Temp	Scheduled service and maintenance.	Every 12 months.
10.5.1 Record Oil Temperature	Scheduled service and maintenance.	Every 12 months.
TEST OIL QUALITY		
WEAR/CONTAMINATION- ADDITIVES/FORMULATION		Every 12 months.
Date, hour meter, hours on oil, fluid change, filter change, Cu, Fe, Cr, Al, Pb, Sn, Si, Na, K, Mo, Ni, Ag, Ti, V, Mn, Cd, Ca, P, Zn, Mg, Ba, B.	Scheduled service and maintenance.	Every 12 months.
OIL FORMULATION- OIL CONDITION- OIL CONTAMINATION		Every 12 months.
Date, Brand, Type, weight, fluid change, filter change, V100 ST OXI SUL NIT W A F PFc PQI	Scheduled service and maintenance.	Every 12 months.
TEST RADIATOR COOLANT QUALITY		
CORROSION ELEMENTS - COOLANT FORMULATION		Every 12 months.
Date, fluid brand, type, Cu Fe Pb Sn Al Zn NO2 Na K Mo MoO4 BO3 SiO3	Scheduled service and maintenance.	Every 12 months.
FREEZE/BOIL PROTECTION – CONTAMINATION		Every 12 months.
Date, meter, hours on fluid, fluid brand, type, fluid change, GL FP BP pH CON PO4 TH Oil Foam	Scheduled service and maintenance.	Every 12 months.
		Every 12 months.
COOLANT PHYSICALS		Every 12 months.

Sample date, meter hours, meter on fluid, fluid brand, type, color, app, odor, PAmt, Papp, PCol, PProp	Scheduled service and maintenance.	Every 12 months.
TEST AFTERCOOLER COOLANT QUALITY		
CORROSION ELEMENTS - COOLANT FORMULATION		Every 12 months.
Date, fluid brand, type, Cu Fe Pb Sn Al Zn NO2 Na K Mo MoO4 BO3 SiO3	Scheduled service and maintenance.	Every 12 months.
FREEZE/BOIL PROTECTION – CONTAMINATION		Every 12 months.
Date, meter, hours on fluid, fluid brand, type, fluid change, GL FP BP pH CON PO4 TH Oil Foam	Scheduled service and maintenance.	Every 12 months.
COOLANT PHYSICALS		Every 12 months.
Sample date, meter hours, meter on fluid, fluid brand, type, color, app, odor, PAmt, Papp, PCol, PProp	Scheduled service and maintenance.	Every 12 months.
Level 3: Cooling System Fluid Replacement		
Drain and fill the cooling system.	Scheduled service and maintenance.	Every 36 months.
Replace coolant hoses, including engine block heater hoses.	Scheduled service and maintenance.	Every 36 months.
Replace engine thermostats and test for proper operation.	Scheduled service and maintenance.	Every 36 months.
Dispose all parts and fluids per EPA standards.	Scheduled service and maintenance.	Every 36 months.
Provide written report within 10 working days of the completion of the work.	Scheduled service and maintenance.	Every 36 months.
Level 4: Megohmmeter Test		
Perform a megohmmeter test.	Scheduled service and maintenance.	Every 12 months.
Provide a written analysis from the test within ten working days after completion of the test.	Scheduled service and maintenance.	Every 12 months.
	Scheduled service and maintenance.	
Generator Polarization Index (PI) Test (Megohmmeter test)	Scheduled service and maintenance.	Every 12 months.
For each generator, over the 10-minute test period, record:	Scheduled service and maintenance.	Every 12 months.

Raw megohmmeter reading.	Scheduled service and maintenance.	Every 12 months.
Temperature correction factor.	Scheduled service and maintenance.	Every 12 months.
20 degree C corrected reading.	Scheduled service and maintenance.	Every 12 months.
Provide a Polarization Index graph of these readings.	Scheduled service and maintenance.	Every 12 months.
Level 5: Load Bank Test		
Perform a two-hour load bank test.	Scheduled service and maintenance.	Every 12 months.
Provide a written analysis from the test within ten working days after completion of the test.	Scheduled service and maintenance.	Every 12 months.
	Scheduled service and maintenance.	
Over the 2-hour load bank testing period record:	Scheduled service and maintenance.	Every 12 months.
Time, volts of each phase, amps of each phase. KW, percent of load, Hertz, RPM, hour meter, power factor, oil pressure, fuel pressure, ambient temperature, engine water temperature, exhaust temperature (left and right), engine oil temperature, turbo boost psi, coolant temperature at heat exchanger or radiator (in and out), and coolant temperature at the engine (in and out)	Scheduled service and maintenance.	Every 12 months.
Level 6: Engine/Generator Inspection and Adjustment		
Adjust engine valves and set to factory specification where applicable.	Scheduled service and maintenance.	Every 36 months.
Check ignition and injector timing where applicable.	Scheduled service and maintenance.	Every 36 months.
Check rear generator bearings, lubricate as necessary.	Scheduled service and maintenance.	Every 36 months.
Inspect generator wiring.	Scheduled service and maintenance.	Every 36 months.
Inspect space heaters.	Scheduled service and maintenance.	Every 36 months.
Inspect coupling and guards.	Scheduled service and maintenance.	Every 36 months.
Inspect the generator fan drive.	Scheduled service and maintenance.	Every 36 months.
Inspect meters and voltage regulator as required.	Scheduled service and maintenance.	Every 36 months.

Test run engine generator.	Scheduled service and maintenance.	Every 36 months.
Provide written report within ten working days of the completion of the work.	Scheduled service and maintenance.	Every 36 months.
Level 9: Battery Replacement Program		
Check complete electrical system, and make sure the battery charger is properly adjusted.	Scheduled service and maintenance.	Every 36 months.
Check engine starter and amperage under normal operating conditions.	Scheduled service and maintenance.	Every 36 months.
Remove and dispose of old lead acid batteries per EPA standards.	Scheduled service and maintenance.	Every 36 months.
Install new low antimony batteries.	Scheduled service and maintenance.	Every 36 months.
Provide written report within ten working days of the completion of the work.	Scheduled service and maintenance.	Every 36 months.
Battery replacement:		Every 36 months.
Remove and properly dispose of lead acid batteries per EPA standards.	Scheduled service and maintenance.	Every 36 months.
Clean and inspect battery cable ends.	Scheduled service and maintenance.	Every 36 months.
Clean battery box and required.	Scheduled service and maintenance.	Every 36 months.
Install new batteries.	Scheduled service and maintenance.	Every 36 months.
Inspect battery charger and electrical system. Adjust charger as needed.	Scheduled service and maintenance.	Every 36 months.
Check engine starter amperage.	Scheduled service and maintenance.	Every 36 months.
Fuel		
Level 31: Fuel Testing		
Comprehensive. Provide written report within ten working days of the completion of the work.	Scheduled service and maintenance.	Every 12 months.
Fuel sampling and testing:		Every 12 months.
ASTM D287 API Specific Gravity- 30.0 minimum.	Scheduled service and maintenance.	Every 12 months.
ASTM D86 Distillation rates at IBP, 10%, 50% 90% FBP	Scheduled service and maintenance.	Every 12 months.
ASTM D4737 Cetane Index- 40.0 minimum	Scheduled service and maintenance.	Every 12 months.

Biodiesel Content	Scheduled service and maintenance.	Every 12 months.
ASTM D5453 sulfur- 15 ppm max	Scheduled service and maintenance.	Every 12 months.
ASTM D93 Flash- 125 degrees F min	Scheduled service and maintenance.	Every 12 months.
ASTM D6468 Stability- 80% minimum	Scheduled service and maintenance.	Every 12 months.
ASTM D2500 Cloud Point- less than minus 40 degrees F	Scheduled service and maintenance.	Every 12 months.
ASTM D6371 CFPP- less than minus 40 degrees F	Scheduled service and maintenance.	Every 12 months.
Microbial- less than 1,000 RLU	Scheduled service and maintenance.	Every 12 months.
ASTM D6304 Karl-Fisher- less than 100 ppm	Scheduled service and maintenance.	Every 12 months.
Electrical Services		
Level 11: Switches, breakers, relays. Transfer Switch and Switch gear Inspection, Adjustment, and Thermal Imaging.		
Switches, breakers, relays. Clean transfer switch and cabinet, Replace PLC batteries. Check voltage drop across main contacts. Repair/replace incandescent lamps. Test bypass isolation feature. Visual inspection for evidence of arcing and/or hot spots. Lubricate switch. Check operation of timers, remote start contacts and in-phase monitor. Dispose all parts and fluids per EPA standards.	Scheduled service and maintenance.	Every 12 months.
Stationary Batteries for Emergency Switchgear Operation		
Inspection and testing.	Scheduled service and maintenance.	Every 12 months.
Bldg 154 batteries		
Chiller MCC- 8 batteries- MTI Technologies, 6V-4-OPzS-200, 200 Ah	Scheduled service and maintenance.	Every 12 months.
Bldg 153 batteries:		
Generator BUS A- 24 batteries- FIAMM, SD5, 80 Ah	Scheduled service and maintenance.	Every 12 months.
Generator BUS B2- 12 batteries- FIAMM, SD17, 320 Ah	Scheduled service and maintenance.	Every 12 months.
Generator BUS B1- 24 batteries- FIAMM, SD7, 120 Ah	Scheduled service and maintenance.	Every 12 months.

Utility BUS A- 24 batteries- FIAMM, SD7, 120 Ah	Scheduled service and maintenance.	Every 12 months.
Utility BUS B- 24 batteries- FIAMM, SD5, 80 Ah	Scheduled service and maintenance.	Every 12 months.
Battery cell water level. Specific gravity of each battery cell. Visual inspection of batteries. Battery voltage, impedance, and capacity testing. Clean battery terminals and all battery connections as needed.	Scheduled service and maintenance.	Every 12 months.
Battery charger inspection and testing. Visual inspection, operation, voltage, and amperage. Clean all electrical connections as needed.	Scheduled service and maintenance.	Every 12 months.
Provide a written analysis of all testing within ten working days after completion of the test. This service shall be completed every 12 months	Scheduled service and maintenance.	Every 12 months.
Required Services	Performance Objective	Performance Requirement
Price quote	Provide quote	Provide during bidding period
Price quote	Contractors shall supply a Quote on their letterhead.	Provide during bidding period
Price quote	Quoted price MUST INCLUDE all Materials, Labor, Equipment, Freight or Shipping, as well as any applicable Duties, Brokerage, or Custom's fees.	Provide during bidding period
Price quote	It is anticipated that a fixed Price Contract will be awarded.	Consider in quote
Price quote	Award will be made for a 1-year base period with four optional 12 month option periods.	Consider in quote
Work requirements		

Work requirements	Normal scheduled inspections and service work will be performed during regular workdays, 8:00 AM – 4:00 PM, local time. Federal holidays excluded. An extension of time before and after normal working hours will be considered upon a 2-week advance written request from the Contractor.	During the duration of the contract.
Work requirements	All service reports shall provide the required within 10 days of the service work.	During the duration of the contract.
Work requirements	Vendor will include by attachment to the proposal a contact phone number and the cell phone and other contact numbers for each representative assigned to service the account. The vendor must have a representative available for phone calls during normal business hours.	During the duration of the contract.

8. DOCUMENTATION

The COR shall, in addition to providing documentation to the Contracting Officer, maintain a complete Quality Assurance file. All such records will be retained for the life of this contract.