

THE PORT AUTHORITY OF NY & NJ

**PROCUREMENT DEPARTMENT
4 WORLD TRADE CENTER
150 GREENWICH STREET, 21ST FLOOR
NEW YORK, NY 10007**

10/04/2018

ADDENDUM # 4

To prospective Bidder(s) on Bid # **54257**

**TITLE: MAINTENANCE AND REPAIR SERVICES CONTRACT FOR DIESEL
GENERATORS AT PORT AUTHORITY TRANS-HUDSON (PATH) FACILITIES,
JERSEY CITY, NEW JERSEY**

NEW BID DUE DATE: 10/16/2018, no later than 11:00 AM
Originally Due back on 9/6/2018, no later than 11:00 AM

I. CHANGES / MODIFICATIONS.

1. PART II, "CONTRACT SPECIFIC INFORMATION FOR BIDDERS"

Section 1, entitled "Service(s) Required:"

Delete: "Annual and periodic inspections and maintenance and repair services of Port Authority Trans-Hudson Corporation Emergency Diesel Generators."

Insert: "Annual and periodic inspections and maintenance and repair services of Port Authority Trans-Hudson Corporation (PATH) Emergency Diesel and Natural Gas Generators."

2. PART IV, "SIGNATURE SHEET, NAME AND RESIDENCE OF PRINCIPALS SHEET AND PRICING SHEET(S)"

EXHIBIT A and EXHIBIT B, under the column entitled "System Description:"

Delete: "Emergency Diesel Generators"

Insert: "Emergency Diesel and/or Natural Gas Generators"

3. Part V, "Specifications:"

Delete: Part V, in its entirety.

Insert: Revised Part V, attached.

II. BIDDER'S QUESTIONS AND ANSWERS

The following information is available in response to questions submitted by prospective Bidders. The responses should not be deemed to answer all questions, which have been submitted by Bidders to the Port Authority. It addresses only those questions, which the Port Authority has deemed to require additional information and/or clarification. The fact that information has not been supplied with respect to any questions asked by Bidders does not mean or imply, nor should it be deemed to mean or imply, any meaning, construction, or implication with respect to the terms.

The Port Authority makes no representations, warranties or guarantees that the information contained herein is accurate, complete or timely or that such information accurately represents the conditions that would be encountered during the performance of the Contract. The furnishing of such information by the Port Authority shall not create or be deemed to create any obligation or liability upon it for any reason whatsoever and each Bidder, by submitting its Bid, expressly agrees that it has not relied upon the foregoing information, and that it shall not hold the Port Authority liable or responsible therefore in any manner whatsoever. Accordingly, nothing contained herein and no representation, statement or promise, of the Port Authority, its Commissioners, officers, agents, representatives, or employees, oral or in writing, shall impair or limit the effect of the warranties of the Bidder required by this Bid or Contract and the Bidder agrees that it shall not hold the Port Authority liable or responsible therefore in any manner whatsoever.

The Questions and Answers numbering sequence will be continued sequentially in any forthcoming Addenda that may be issued.

Question #3	The 1850kva Cummins unit at the PATH Train Control Center (PTCC) is designated as Maintenance Procedure 3 & 4 which relates to natural gas units. Will PATH provide the correct maintenance procedures that correlates to a modern diesel unit?
Answer #3	Refer to the attached revised Part V (Specifications), Appendix A, "MP 3 – PTCC" and "MP 4 – PTCC."
Question #4	Maintenance Procedures 3 & 4 are missing the inspection of the remote radiators and related components including fan motor and controller connections, grease bearings if applicable, and check all piping and mounts. (for the Cummins units located on 11th floor). Will PATH please provide this information?
Answer #4	Refer to the attached revised Part V (Specifications), Appendix A, "MP 5 – JSTC 11th FL" and "MP 6 – JSTC 11th FL."
Question #5	Is PATH and Port Authority bound by EPA restrictions concerning air quality? Will the Contractor be bound by the Clean Air Act and be only allowed to run the units on acceptable air quality days? If yes, how will this affect scheduling of work if it occurs on a day that the generator cannot be operated?
Answer #5	Yes. Refer to the attached revised Part V (Specifications), Section 5, "Maintenance of Equipment."
Question #6	The Contract term is three years. It is generally recommended by manufacturers and NFPA 110 that a unit be load banked for 4 hours every 36 months if not exercised monthly at a minimum of 30% load for 30 minutes. Is this a consideration for this Contract?

Answer #6	This is not a consideration to be made under this Contract.
Question #7	In Part V, "Specifications," Section 12, "Appendix A - Maintenance Procedure," "Maintenance Procedure 1," Description "e" states: "Minor parts of the emergency generator, which for any reason become unsuitable for use shall be repaired or replaced as necessary. Such minor parts shall include electrical contacts, nuts & bolts." Will PATH please clarify this statement?
Answer #7	Refer to the attached revised Part V (Specifications), Appendix A and Section 5, "Maintenance of Equipment."
Question #8	In Part V, "Specifications," Section 12, "Appendix A – Maintenance Procedures," "Maintenance Procedure 1," Description "e" states: "Minor parts of the emergency generator, which for any reason become unsuitable for use shall be repaired or replaced as necessary. Such minor parts shall include electrical contacts, nuts & bolts." Is this at no additional charge?
Answer #8	No. Refer to the attached revised Part V (Specifications), Appendix A and Section 5, "Maintenance of Equipment."
Question #9	<p>In Part V, "Specifications, Maintenance Procedure 1," Frequency every January, April, & July, "Maintenance Procedure 1," Description "f" states: "All ignition equipment and fuel injectors shall be inspected."</p> <p>Could you please clarify this statement by answering the following:</p> <p>(a) On a diesel engine there is no "ignition equipment" to inspect. Are you asking for us to go through the start sequence of the generator?</p> <p>(b)The statement "fuel injectors shall be inspected". Are you asking for us to remove the injector and perform just a visual inspection or are you wanting us to perform an "injector pop test" along with the visual inspection?</p> <p>(c) Regarding the "Frequency," of Maintenance Procedure 1," is PATH asking for the injectors to be inspected every January, April, July & October? (October is the annual pm inspection). Is this correct? (Normally this is performed every 8,000 to 10,000 hours or around the 10-year mark on standby engines).</p>
Answer #9	Refer to the attached revised Part V (Specifications), Appendix A, "MP 1 – JSTC Boiler Room."
Question #10	In Part V, "Specifications," Section 12, "Appendix A - Maintenance Procedures," "Maintenance Procedure 3," Description "o" states: "Clean cooling system internally and externally." Does PATH want the Contractor to replace the coolant every year or save the coolant and just flush the system?

Answer #10	Refer to the attached revised Part V (Specifications), Appendix A, “MP 3 – PTCC.”
Question #11	In Part V, there is no maintenance procedure for the 2 Cummins gas units; Maintenance Procedure 1 & 2 are for the Waukesha generators, and 3 & 4 are for the Cummins Diesel unit. Can PATH provide Maintenance Procedures for the gas units?
Answer #11	Refer to the attached revised Part V (Specifications), Appendix A, “MP 5 – JSTC 11th FL” and “MP 6 – JSTC 11th FL.”
Question #12	Should the Contractor use the Maintenance Procedure 3 & 4 for the Cummins gas units?
Answer #13	No. Refer to the attached revised Part V (Specifications), Appendix A.”
Question #14	Who supplies and who is responsible to install air filters?
Answer #14	The Contractor. Refer to the attached revised Part V (Specifications), Section 5, “Maintenance of Equipment.”

THE PORT AUTHORITY OF NY & NJ
SELENE ORTEGA, MANAGER
COMMODITIES AND SERVICES DIVISION

BIDDER'S FIRM NAME: _____

INITIALED: _____

DATE: _____

QUESTIONS CONCERNING THIS ADDENDUM MAY BE ADDRESSED TO LARRY WAXMAN, WHO CAN BE REACHED AT (212) 435-4639 OR AT LWAXMAN@PANYNJ.GOV BID #54257

PART V – SPECIFICATIONS, TABLE OF CONTENTS

1. Specific Definitions..... 2

2. Work Required by the Specifications..... 2

3. Personnel Assurance Program..... 3

4. Prevailing Wages..... 3

5. Maintenance of Equipment 4

6. Personnel Requirements 4

7. Scheduling of Work 5

8. Approval of Equipment, Materials and Supplies 5

9. Employee Uniforms and Appearance..... 6

10. Service Maintenance Form..... 6

11. Emergency Repair Service 6

12. APPENDIX A - MAINTENANCE PROCEDURES..... 8

ROSTER OF ROUTINES 0001 – 0010

PART V – SPECIFICATIONS

1. Specific Definitions

To avoid undue repetition, the following terms, as used in this Contract, shall be construed as follows:

“Facility” means The Journal Square Transportation Center (JSTC) located at One PATH Plaza, Jersey City, NJ 07306 and The PATH Train Control Center (PTCC) located in C-Yard, 96 Academy Street, Jersey City, NJ 07302.

“Non-routine Work” means Work required by the Superintendent or his/her designee that is unscheduled emergency repair service or repairs.

“Regular Hours” means the hours between 5:00 a.m. and 1:30 p.m., Monday through Friday, exclusive of Holidays.

“Overtime Hours” means the hours other than Regular Hours or Premium Overtime Hours and shall include the first eight (8) hours worked on Saturday.

“Premium Overtime Hours” means the hours other than Regular Hours or Overtime Hours and shall mean all hours in excess of eight (8) hours on Saturday and all day Sunday and Holidays.

“WOTS” means Work Order Tracking System, PATH’s current WOTS is Building, Station & Tenant Services Division’s LAN Network based PARADOX program.

“Roster of Routines” means the procedures, frequencies and methods of planning and coordinating all maintenance for the equipment specified herein.

“Frequencies of Routine” or “Maintenance Visit” mean the times a task or routine is performed and/or repeated.

2. Work Required by the Specifications

These Specifications relate generally to the performance of periodic and annual inspections, maintenance and repairs of the emergency diesel and natural gas generators under this Contract. The emergency generators that require periodic annual inspections, maintenance, and repairs include, but are not limited to:

- Two (2) Waukesha Emergency Diesel Generators (Located at JSTC 1st Fl Boiler Room):
 - Model – L5790DU
 - Serial #'s – 231516 & 231517
 - KW-600, RPM-1200 Voltage-480/277
- Two (2) Cummins Gensets – Packaged Units
 - Cummins Natural Gas Prime Mover
 - One (1) Model – GTA1710 Engine Model 41500017(Located at JSTC 11th Fl)

- 600 HP 1800 RPM
- Marathon Electric Magna One
- Synchronous AC Generator
- One (1) Model 502 FDR8052GGM000W (Located at JSTC 11th Fl)
 - Frame-502 PH-3 RPM-1800
 - KW 415 KVA-519 Voltage 277/480
 - Amperage – 624
- One (1) Diesel Cummins Genset – Packaged Unit (Located at PTCC)
 - One (1) Model - DQGAB7682604
 - Serial #D090239576
 - 1850 KVA 277/480 Voltage 3PH

Documents such as service manuals, drawings, etc., are maintained at the Facility.

3. Personnel Assurance Program

As directed by the Manager, the Contractor is required to have certain individuals of its staff, and any subcontractor's staff, materialmen, visitors or others over whom the Contractor/subcontractor has control, who have access to certain areas, systems or information, authorize the Authority and/or PATH or its designee to perform background checks and a personal identity verification check. Such background checks shall be performed through the Authority's personnel assurance program provider. The Secure Worker Access Consortium (S.W.A.C.) is the only Port Authority approved provider to be used to conduct background screening and personal identity verification, except as otherwise required by federal law and/or regulation (such as the Transportation Worker Identification Credential for personnel performing in secure areas at Maritime facilities). Information about S.W.A.C., instructions, corporate enrollment, online applications, and location of processing centers can be found at <http://www.secureworker.com>, or S.W.A.C. may be contacted directly at (877) 522-7922 for more information and the latest pricing. The cost for said background checks for staff that pass and are granted a credential may be reimbursable to the Contractor and its subcontractors, if approved in advance by the Manager in writing. Staff that are rejected for a credential for any reason are never reimbursable.

4. Prevailing Wages

The Contractor shall provide (and shall cause all subcontractors to pay or provide) to its workmen, laborer, technicians or mechanic (who are employed by it to work on an hourly or daily basis at any trade or occupation at or about the Facility) at least the prevailing rate of wage and supplements for others engaged in the same trade or occupation in the locality in which the Services are being performed at the time the Work is being performed and notwithstanding that such rate may be higher than the rate in effect on the date of the opening of the Bids/ receipt of Proposals.

For the purposes of this Contract, for Work being performed in the State of New Jersey,

Contractors and Subcontractors are directed to utilize the State of New Jersey, Department of Labor and Workforce Development prevailing wage levels established pursuant to the New Jersey Prevailing Wage Act (N.J.S.A. 34:11-56.25 et seq.) for workers engaged in public works projects in the County of Hudson. The applicable prevailing wage rates shall be those, which are in effect for the locality and for the period of time in which the Work is to be performed. Current prevailing wage rates may be downloaded at: http://lwd.state.nj.us/labor/wagehour/wagerate/prevailing_wage_determinations.html.

5. Maintenance of Equipment

Appendix A of the Specifications describes the minimum inspection, repair and maintenance requirements for the emergency diesel and natural gas generators at the Facility to be fulfilled by the Contractor to keep such in reliable condition at all times, twenty-four (24) hours per day, seven (7) days per week, including holidays. The Contractor shall perform the service routines as specified in Appendix A. All Work shall be performed between the hours of 5:00 A.M. and 1:30 P.M., unless requested otherwise by PATH. The Work is subject to a schedule determined in advance by the Superintendent.

The Contractor shall perform the maintenance procedures as outlined in Appendix A and shall supply, at the Contractor's expense, all factory new filters, fluids, lubricants, and belts during each scheduled inspection and maintenance visit.

The Contractor shall also replace other worn or doubtful materials, parts and/or components requiring replacement under this Contract with new materials, parts and/or components of the same type and/or manufacture and of current design, or equal, unless otherwise agreed to or delineated by the Superintendent. All new parts and/or components shall be compatible with existing parts and/or components and shall be of equal quality and identical capabilities as the original equipment. Compensation for materials, parts and components will be in accordance with Exhibit D of Part IV, the Pricing Sheets.

6. Personnel Requirements

The Contractor (and any subcontractor) shall furnish competent and adequately trained personnel to perform the Work required hereunder. Maintenance, inspection and repair services shall be performed by technicians and mechanics, competently supervised, who shall be qualified to keep the emergency diesel and natural gas generators, as described herein, in a proper state of repair. If, in the opinion of the Superintendent, any personnel so assigned is performing his/her functions unsatisfactorily, the Contractor shall take all steps necessary to assure that defective performance is remedied and that all services required are satisfactorily provided.

All Contractor's personnel performing Work required hereunder shall have the ability to communicate in the English language to the extent necessary to comprehend directions given by either the Contractor's supervisory staff or by the Superintendent's staff.

Five (5) calendar days after Contract award, the successful Contractor shall submit to PATH the names of employees who will perform Work under this Contract. All Contractor's personnel require prior approval from PATH prior to performing Work under this Contract.

7. Scheduling of Work

The Contractor shall follow the schedule of maintenance for the next Contract year as indicated herein Appendix A, unless modified by the Superintendent's staff on the month and day stipulated by the Superintendent. This schedule will be submitted to the Contractor a minimum of thirty (30) days in advance of the scheduled maintenance dates.

The Contractor shall be responsible for maintaining the generators in proper working condition. The Superintendent or his or her designee may notify the Contractor that repairs are required. The Contractor shall have qualified personnel respond to the Facility to perform such non-emergency repairs within seventy-two (72) hours of notification, unless otherwise directed by the Superintendent or his or her designee. The Contractor will be compensated for these non-emergency repairs in accordance with the applicable rate in Part IV, Pricing Sheets. Unless otherwise directed by the Superintendent or his or her designee, non-emergency repairs shall be performed during Regular Hours.

The Automated Work Order Tracking System (WOTS) and Maintenance Procedures (MP) are a system of task assignment, reporting, and control, the purpose of which is to instruct and then codify and report to PATH management the general and specific conditions encountered, the actions taken, and recommendations for subsequent activities. The schedule of task assignment will reflect the schedule of Maintenance Visits required to be submitted under the Maintenance Procedures (MPs).

The WOTS is used to direct, audit and control the maintenance of the generators at the site of Work. The principal components of the WOTS include the Roster of Routines for periodic and annual maintenance work orders and work orders for Non-routine Work, maintenance and repair records and Maintenance Procedures (MPs). MPs are used as the minimum work required and as a guide in the Contractor's performance of its obligations contained herein.

The Contractor shall follow all federal, state, and local laws, regulations, and ordinances in performing Work under this Contract, including, but not limited to, the United States Department of Environmental Protection ("EPA") Clean Air Act, which the Contractor may find daily air quality guidance at www.airnow.gov.

NOTE: PATH is currently transitioning to an alternate work order management system which will eventually replace the WOTS system

8. Approval of Equipment, Materials and Supplies

When it becomes necessary for the Contractor to replace any equipment, material, parts

and/or components during the performance of any services under this Contract, the Contractor shall first submit to PATH for its approval the name of the item, the identifying number thereof, if any, the quantity needed, the name of the proposed supplier and the proposed purchase price or if supplied by the Contractor the price that PATH would be billed therefore. PATH shall have the option of either a) approving same; or b) supplying said equipment, material, parts and/or components to the Contractor itself provided it is of higher quality to that proposed by the Contractor. Compensation for materials, parts and components will be compensated in accordance with Exhibit D of the Pricing Sheets.

9. Employee Uniforms and Appearance

The Contractor shall provide for his/her personnel all necessary distinctive uniforms with woven identification insignia of a type and style which shall be subject to the prior and continuing approval of the Superintendent, and the Contractor's personnel shall wear these uniforms or insignia at all times when performing the operations hereunder. Contractor's personnel without proper uniforms shall not be permitted to work. The Contractor shall be responsible to ensure that its personnel are wearing proper shoes for the task being performed. The Superintendent shall have the right to require removal of any personnel who shall fail to wear the proper uniform and shoes and the exercise of this right shall not limit the obligations of the Contractor to perform the Work.

10. Service Maintenance Form

The Contractor's personnel shall report to the Superintendent or his/her designated representative at the start and completion of each Maintenance Visit and said Contractor's personnel shall keep the Superintendent informed of the Work performed by furnishing the Superintendent with a completed Contractor's Service Maintenance Form supplied by the Contractor. The format of the form shall be approved by the Superintendent and shall include, in addition to any other pertinent data, the specific parts and/or components which were inspected and/or repaired and the employee names. In addition, the Contractor's personnel shall report the general description and condition of the equipment.

A completed copy of the Contractor's Service Maintenance Form shall be attached to and submitted with each of the Contractor's invoices.

11. Emergency Repair Service

The Contractor shall furnish all labor, equipment and materials for emergency repair service, approved by the Superintendent. Compensation for labor and/or material, parts and components necessary to perform the emergency repair service required herein shall be in accordance to Exhibits C, at the Premium Overtime Hourly Rate and D of the Pricing Sheets. The Hourly Rate for emergency repair service includes but is not limited to labor, overhead, including tolls, travel time and cost of vehicle use, and profit. The Contractor shall provide emergency repair service and have service personnel at the Facility after being contacted by the Superintendent within four (4) hours' notice. Contractor shall be available to provide

emergency repair service, and qualified technician(s), twenty-four (24) hours per day, seven (7) days a week, three hundred and sixty-five (365) days per year.

12. APPENDIX A - MAINTENANCE PROCEDURES**MAINTENANCE PROCEDURE 1 (MP 1 – JSTC BOILER ROOM)****Periodic Inspection and Maintenance of the Waukesha Emergency Diesel Generators**

Work to be done in strict coordination with the Superintendent: Maintenance of the Waukesha generators shall include at a minimum the manufacturers recommended schedules of maintenance for the generators and their components.

Frequency: Every January, April and July

MP 1 Description:

- a. Report to Superintendent or designee upon arrival.
- b. Observe water temperature and oil pressure before shutting down.
- c. Measure the oil level and quality in both the main and starting engine.
- d. Examine the condition and adequacy of coolant supply. Determine whether or not cleaning the system is required.
- e. Measure the fuel supply in the main tank and starting engine. Drain sump traps and strainers.
- f. Inspect any/all air-cleaners, filters, breathers or elements for cleanliness. Replace or clean when needed.
- g. Visually examine all water, fuel and lubricant lines for an indication of leaks, damaged tubing or bad joints.
- h. Inspect the air shut off valves, be sure they are positioned properly. Check for damage.
- i. Service all accessories in accordance with the manufacturers recommendations.
- j. Grease cups-turn down; replenish with proper grade of grease if necessary.
- k. Pyrometers-check exhaust temperature of each cylinder. Investigate any anomaly.
- l. Check for irregular noise that may indicate need for repair or service. Trace noise to their source and correct.
- m. Thoroughly clean the engine exterior.
- n. Adjust the starting engine clutch if needed. Grease Bendix bearings.
- o. Inspect all mating surfaces to ensure there are no leaking gaskets; test for loose cap screws, nuts and engine hold down bolts. Torque nuts, in areas where leaks are detected to specified values. Replace gaskets and re-torque if leakage continues.
- p. Grease the clutch pilot bearing and other shaft bearings with proper grade of grease. Do not over grease.
- q. Inspect all belts and other drives for proper tension, incipient breakage, fraying or other damage. Replace where necessary.

- r. Examine the water pump for proper operation.
- s. Clean and lubricate all control linkages. Check for looseness, binding, lost motion and sticking fuel pump racks.
- t. The room shall be swept or vacuumed clean of loose debris including oil spills.
- u. Batteries and battery chargers shall be checked.
- v. Run standby equipment and conduct testing, under load, where possible.
- w. Report to the Superintendent in writing, advice of repairs/improvements and obtain signature.

All the above Work has been checked off as completed or noted as to why the Work was not done.

Signature of Contractor

Date

MAINTENANCE PROCEDURE 2 (MP 2 – JSTC BOILER ROOM)

Annual Inspection and Maintenance of the Waukesha Emergency Diesel Generators

Work to be done in strict coordination with the Superintendent: Maintenance of the Waukesha generators shall include at a minimum the manufacturers recommended schedules of maintenance for the generators and their components.

Frequency: Every October

MP 2 Description:

- a. Report to Superintendent upon arrival.
- b. Perform all items in MP 1.
- c. Grease water pump idler pulley fitting and auxiliary water pump fittings with ball bearing grease. Add water pump grease to the auxiliary water pump stuffing box fitting.
- d. Top water manifold, thermostat housing-remove from both main engine and starting engine and clean away any scale or deposit in thermostat area.
- e. Check the injection nozzles for proper spray characteristics and pressures.
- f. Check the compression of each cylinder. Ensure Amot control or stop control is in stop position. If evidence of uneven compression or pressures lower than those given under fit and clearances investigate further. Provide results in service report.
- g. Oil coolers, check temperature if increase is noted check operation of oil temperature control valve and if necessary, remove and clean cooler units.
- h. Grease water pump fitting with ball bearing grease.
- i. Clean, inspect and lubricate the synchronous generator in accordance with the manufacturers recommended maintenance schedule.
- j. Clean and inspect the exciter armature and stator, and the rotating rectifier assembly in accordance with the manufacturers maintenance schedule.
- k. Inspect the voltage regulator the wire harness and all components in accordance with the manufacturers recommended maintenance schedule.
- l. Inspect the governor in accordance with the manufacturers recommended maintenance schedule.
- m. Test and inspect all automatic transfer switches.
- n. Take lubricating oil samples for analysis and submit analysis report to PATH.
- o. All oil and oil filters shall be changed.
- p. Report to Superintendent in writing, advice of repairs/improvements and obtain signature.

All the above Work has been checked off as completed or noted as to why the Work was not done.

Signature of Contractor

Date

MAINTENANCE PROCEDURE 3 (MP 3 – PTCC)

Periodic Inspection and Maintenance of the Cummins Emergency Diesel Generator

Work to be done in strict coordination with the Superintendent: Maintenance of the Cummins generator shall include at a minimum the manufacturers recommended schedules of maintenance for the generators and their components.

Frequency: Every January, April and July

MP 3 Description:

- a. Report to the Superintendent upon arrival.
- b. Perform general genset inspection as referenced in Cummins engine owner’s manual for maintenance interval and/or procedure.
- c. Check for oil, fuel, cooling and exhaust system leaks. Check exhaust system audibly and visually with set running and repair any leaks immediately.
- d. Check coolant heater.
- e. Check oil level.
- f. Check coolant level of radiators check fuel level.
- g. Check any/all air-cleaners, filters, breathers or elements for cleanliness. Replace or clean when needed.
- h. Check battery charging system.
- i. Drain water and sediment from fuel tank, drain one cup or more of fuel to remove water and sediment.
- j. Drain exhaust condensate trap.
- k. Check starting batteries.
- l. Visually check fan belt for evidence of wear or slippage. Replace if hard or brittle, cracked or edges frayed.
- m. Check radiator hoses for wear and cracks replace where necessary.
- n. Drain fuel filters.
- o. Check antifreeze and DCA concentration.
- p. Maintain the emergency generators in proper adjustment for smooth, quiet operation. Use approved lubricants and cleaning materials in accordance with the manufacture’s specification or equivalent.
- q. The room shall be swept or vacuumed clean of loose debris including oil spills.
- r. Report to the Superintendent in writing, advice of repairs and obtain signature.

All the above Work has been checked off as completed or noted as to why the Work was not done

Signature of Contractor

Date

MAINTENANCE PROCEDURE 4 (MP 4 – PTCC)

Annual Inspection and Maintenance of the Cummins Emergency Diesel Generators

Work to be done in strict coordination with the Superintendent: Maintenance of the Cummins generator shall include at a minimum the manufacturers recommended schedules of maintenance for the generators and their components.

Frequency: Every October

MP 4 Description:

- a. Report to the Superintendent upon arrival.
- b. Perform all items in MP 3.
- c. Change air cleaner element.
- d. Perform polarization index test.
- e. Cooling system maintenance.
- f. Change fan belt.
- g. Lubricate fan bearings.
- h. Check generator output lug torques.
- i. Change engine oil and filter.
- j. Change coolant filter.
- k. Clean crankcase breather.
- l. Change Fuel filters.
- m. Clean cooling system.
- n. Visually check and clean radiator.
- o. The room shall be swept or vacuumed clean of loose debris including oil spills.
- p. Clean generator and regulator with clean dry air and brush vacuum clean exterior to remove all dirt and debris.
- q. Inspect all generator air intakes and exhaust openings to ensure they are clean and unobstructed.
- r. Check all electrical connections for tightness and replace any defective or oil soaked wiring as required.
- s. Check batteries and battery charges for proper operation.
- t. Check all instruments for proper operation.
- u. Run standby equipment and conduct testing, under load, where possible.
- v. Report to the Superintendent in writing, advice of repairs/improvements and obtain signature.

All the above Work has been checked off as completed or noted as to why the Work was not done.

Signature of Contractor

Date

MAINTENANCE PROCEDURE 5 (MP 5 – JSTC 11TH FL)

Periodic Inspection and Maintenance of Cummins Emergency Natural Gas Generators

Work to be done in strict coordination with the Superintendent: Maintenance of the Cummins generators shall include at a minimum the manufacturers recommended schedules of maintenance for the generators and their components.

Frequency: Every January, April and July

MP 5 Description:

- a. Report to the Superintendent upon arrival.
- b. Check with watch engineer for operator’s report.
- c. Perform general genset inspection as referenced in Cummins engine owner’s manual for maintenance interval and/or procedure.
- d. Check for oil, fuel, cooling and exhaust system leaks. Check exhaust system audibly and visually with set running and repair any leaks immediately.
- e. Check coolant heater.
- f. Check oil level.
- g. Check coolant level of radiators.
- h. Check any/all air-cleaners, filters, breathers or elements for cleanliness. Replace or clean when needed.
- i. Check battery charging system.
- j. Check engine oil level add where necessary.
- k. Check engine coolant level add where necessary.
- l. Check for gas leaks and correct.
- m. Check governor sump oil level.
- n. Visually inspect engine for damage, leaks, loose or frayed belts, loose hoses and clamps and correct.
- o. Visually inspect radiator core externally for contamination and clean if required.
- p. Maintain the emergency generators in proper adjustment for smooth, quiet operation. Use approved lubricants and cleaning materials in accordance with the manufacture’s specification or equivalent.
- q. The room shall be swept or vacuumed clean of loose debris including oil spills.
- r. Report to the Superintendent in writing, advice of repairs and obtain signature.

All the above Work has been checked off as completed or noted as to why the Work was not done.

Signature of Contractor

Date

MAINTENANCE PROCEDURE 6 (MP 6 - JSTC 11TH FL)

Annual Inspection and Maintenance of Cummins Emergency Natural Gas Generators

Work to be done in strict coordination with the Superintendent: Maintenance of the Cummins generators shall include at a minimum the manufacturers recommended schedules of maintenance for the generators and their components.

Frequency: Every October

MP 6 Description:

- a. Report to the Superintendent upon arrival.
- b. Perform all items in MP 5.
- c. Replace lubricating oil and filters.
- d. Replace coolant filter.
- e. Check engine coolant DCA4 concentration level. Add make up DCA4 if required.
- f. Check air intake system for wear points or damage to piping, loose clamps and leaks.
- g. Check air cleaner restriction, element and change if required.
- h. Check spark plugs.
- i. Adjust valves and crossheads.
- j. Check ignition timing.
- k. Check compression.
- l. Clean crankcase breather.
- m. Check gas fuel filter replace where necessary.
- n. Check gas pressure to carburetor.
- o. Check carburetor adjustment for excess oxygen analyzer or oxygen meter.
- p. Check torque on engine mounting belts.
- q. Steam clean engine.
- r. Replace hoses as required.
- s. Clean cooling system, change coolant every 2 years (beginning with year 1).
- t. Maintain the emergency generators in proper adjustment for smooth, quiet operation. Use approved lubricants and cleaning materials in accordance with the manufacture's specification or equivalent.
- u. The room shall be swept or vacuumed clean of loose debris including oil spills.
- v. Report to the Superintendent in writing, advice of repairs and obtain signature.

All the above Work has been checked off as completed or noted as to why the Work was not done.

Signature of Contractor

Date

ROSTER OF ROUTINES					
WORK ORDER NUMBER	EQUIP RECORD NUMBER	MP DESCRIPTION	AREA & LOCATION	MONTH (S)	NOTES
0001	GEN-001	PERIODIC INSPECTION AND MAINTENANCE OF EMERGENCY GENERATOR #1 - (WAUKESHA)	BOILER ROOM	JANUARY, APRIL & JULY	MP 1
0002	GEN-002	PERIODIC INSPECTION AND MAINTENANCE OF EMERGENCY GENERATOR #2 - (WAUKESHA)	BOILER ROOM	JANUARY, APRIL & JULY	MP 1
0003	GEN-001	ANNUAL INSPECTION AND MAINTENANCE OF EMERGENCY GENERATOR #1 - (WAUKESHA)	BOILER ROOM	OCTOBER	MP 2
0004	GEN-002	ANNUAL INSPECTION AND MAINTENANCE OF EMERGENCY GENERATOR #2 - (WAUKESHA)	BOILER ROOM	OCTOBER	MP 2
0005	GEN-003	PERIODIC INSPECTION AND MAINTENANCE OF EMERGENCY NATURAL GAS GENERATOR #1 - (CUMMINS)	11 TH FLOOR	JANUARY, APRIL & JULY	MP 5

0006	GEN-004	PERIODIC INSPECTION AND MAINTENANCE OF EMERGENCY NATURAL GAS GENERATOR #2 - (CUMMINS)	11 TH FLOOR	JANUARY, APRIL & JULY	MP 5
0007	GEN-003	ANNUAL INSPECTION AND MAINTENANCE OF EMERGENCY NATURAL GAS GENERATOR #1 - (CUMMINS)	11 TH FLOOR	OCTOBER	MP 6
0008	GEN-004	ANNUAL INSPECTION AND MAINTENANCE OF EMERGENCY NATURAL GAS GENERATOR #2 - (CUMMINS)	11 TH FLOOR	OCTOBER	MP 6
0009	GEN-005	PERIODIC INSPECTION AND MAINTENANCE OF EMERGENCY GENERATOR - (CUMMINS)	PTCC	JANUARY, APRIL & JULY	MP 3
0010	GEN-005	ANNUAL INSPECTION AND MAINTENANCE OF EMERGENCY GENERATOR - (CUMMINS)	PTCC	OCTOBER	MP 4

