AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT

1. CONTRACT ID CODE	PAGE	OF	PAGES
	1		1

2. AMENDMENT/MODIFICATION NO.	3. EFFECTIVE DATE	4. REQUISITION/PURCHASE REQ. NO.	5. PROJECT NO. (If applicble)
0002	03/25/09		

6. ISSUED BY	CODE	7. ADMINISTERED BY (If other than Item 6)	CODE
	N00173		

CONTRACTING OFFICER
NAVAL RESEARCH LABORATORY, CODE 3230.LS
4555 OVERLOOK AVE., SW
WASHINGTON DC 20375-5326

8. NAME AND ADDRESS OF CONTRACTOR (No., street, county, State and ZIP Code)

TO ALL OFFERORS

CODE | FACILITY CODE

(X) ✘

9A. AMENDMENT OF SOLICIATION NO. N00173-09-R-LS01

9B. DATED (SEE ITEM 11) 02/12/09

10A. MODIFICATION OF CONTRACT/ORDER NO.

10B. DATED (SEE ITEM 11)

11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS

☒ The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offers ☒ is extended, ☐ is not extended.

Offers must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended, by one of the following methods:

(a)By completing items 8 and 15, and returning 2 copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment your desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.

12. ACCOUNTING AND APPROPIRATION DATA (If required)

13. THIS ITEM ONLY APPLIES TO MODIFICATION OF CONTRACTS/ORDERS. IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.

CHECK ONE	
	A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.
	B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation date, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(b).
	C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF:
	D. OTHER (Specify type of modification and authority)

E. IMPORTANT: Contractor ☐ is not, ☐ is required to sign this document and return ——— copies to the issuing office.

14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible.)

The purpose of this amendment is to provide an updated Performance Work Statement, attached hereto. The changes are in blue.

The closing date is extended to 4 PM EST, March 30, 2009.

Except as provided herein, all terms and conditions of the document referenced in Item 9A or 10A, as heretofore changed, remains unchanged and in full force and effect.

15A. NAME AND TITLE OF SIGNER (Type or print)		16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print)	
15B. CONTRACTOR/OFFEROR	15C. DATE SIGNED	16B. UNITED STATES OF AMERICA	16C. DATE SIGNED
(Signature of person authorized to sign)		(Signature of Contracting Officer)	

PERFORMANCE WORK STATEMENT

FOR

STATION AIR COMPRESSORS

MAINTENANCE CONTRACT

BUILDING 149

NAVAL RESEARCH LABORATORY

WASHINGTON, D.C.

1. DESCRIPTION OF SERVICES

The Contractor shall provide all labor, materials, and equipment necessary to service, perform preventative maintenance and repairs on two (2) station air compressors, two (2) compressed air filters, one (1) heatless regenerative compressed air dryer and one (1) cooling tower. This preventative maintenance work shall include additional components associated with the compressed air generating equipment that includes a water treatment system, cooling water system, compressed air system and electrical systems. The Contractor shall perform a weekly site visit to the Building 149, Compressed Air Generating Facility for observation, service, maintenance, inspection, testing, adjustment, recording, and validation of all equipment while in the operating mode. The Contractor shall also perform monthly, quarterly, semi-annual and annual preventative maintenance and perform unscheduled repairs.

1.1 ***WEEKLY PREVENTATIVE MAINTENANCE:*** The Contractor shall perform observations, services, maintenance, inspections, testing, validations and recordings of all compressed air generating and associated equipment defined in this contract. The weekly recordings shall be entered in the provided weekly log sheet (Enclosure 1). The Contractor shall provide a weekly service visit ticket that reflects the operational status of the equipment and any deficiencies identified during the visit. If deficiencies are discovered, the Contractor shall record the information on the submitted weekly service visit ticket and perform the Preventive Maintenance repairs. All replacement parts shall comply with the manufacturer's specifications. The weekly service visit ticket shall be validated and signed by the Contracting Officer's Representative (COR) prior to leaving the facility in hard copy. The Contractor shall make every possible effort to dispatch the same Compressor Technician for each weekly visit for the purpose of familiarization of the compressed air generating equipment while in the operational mode.

1.1.1 **AIR COMPRESSORS (2)**

1.1.1.1 AIR INTAKE FILTER SERVICE INDICATOR: The Contractor shall inspect air intake filter indicator and replace if necessary.

1.1.1.2 OIL LEVEL: The Contractor shall inspect the oil level gauge and add oil if necessary.

1.1.1.3 OIL TEMPERATURE: The Contractor shall verify the oil temperature to read 180 degrees Fahrenheit. If the oil temperature readings are higher than normal to warrant concern of the air compressor(s) shutting down, immediately submit findings to the COR and perform the necessary Preventive Maintenance work to correct the high oil outlet temperature.

1.1.1.4 CONDENSATE TRAP: The Contractor shall inspect and manually check the condensate trap located at the compressed air discharge piping outlet to maintain full automatic operation.

1.1.1.5 COOLING WATER: The Contractor shall check the control panel readout to obtain the discharge temperature of the air compressor cooling water. The closed loop air compressor cooling water system should have an operating discharge temperature between 80/105 degrees Fahrenheit. NOTE: The temperature readings are subject to change based on seasonal ambient temperatures. If temperature readings are higher than normal to warrant concern of the air compressor shutting down, immediately submit findings to the COR and perform the necessary Preventive Maintenance work to correct the high water outlet temperature.

1.1.1.6 COMPRESSED AIR DISCHARGE PRESSURE: The Contractor shall check, and adjust if required, the control panel for the compressed air discharge pressure, which should range between 95 PSI and 100 PSI.

1.1.1.7 SAFETY RELIEF VALVE: The Contractor shall inspect, and perform Preventive Maintenance on the pressure relief valve to insure that it is free of damage, accumulated dirt, oil and/or corrosion which could impede its ability to operate.

1.1.1.8 OIL/AIR SEPARATOR: The Contractor shall obtain a reading from the control panel to measure the pressure drop across the oil/air separator. If the reading exceeds the manufacturer's recommended acceptable pressure drop during loaded operation, the Contractor shall replace the oil/air separator.

1.1.1.9 ELECTRIC MOTOR: The Contractor shall inspect the air compressor's drive motor for unusual noise, excessive heat and/or vibration. The Contractor shall also inspect the drive coupling for unusual wear and deterioration and inject the manufacturer's recommended lubrication into the bearings.

1.1.1.10 CONTROL PANEL: The Contractor shall check the control panel for messages and readings and test the control panel to verify that all function keys, scroll keys, tabulator keys, display panel, general alarm, light emitting diode (LED), voltage on LED, and automatic operation LED are operational and functioning. The Contractor shall test the automatic monitoring system to insure that the continuous monitoring of the element oil temperature, oil filters, air/oil separator, air filter, water outlet temperature and compressed air outlet pressure are operational and are able to provide a warning if their programmed pre-shutdown limits are reached.

1.1.1.11 OPERATIONAL INSPECTION: The Contractor shall inspect the overall automatic operation of the air compressor while in the operational mode for excessive noises, vibrations, air, water and oil leaks. If operational vibrations, noises and/or leaks that cannot be corrected with Preventive Maintenance and/or adjustments, the Contractor shall secure the air compressor and/or component.. The Contractor shall notify the COR of the unscheduled repairs required along with the necessary shutdown time to accomplish the work.

1.1.1.12 ELECTRICAL INSPECTION: The Contractor shall inspect all wiring for fraying, corrosion, damage and loose connections. The Contractor shall inspect wiring insulation for cracking, burnt areas and missing insulation and inspect the line contactor, start contactor and delta contactors for pitting, arcing and chattering.

1.1.1.13 COMPRESSOR ROTATION: The Contractor shall attempt to balance the total operating hours between both compressors.

1.1.1.14 COMPRESSOR COOLING WATER SYSTEM: The Contractor shall inspect the on line cooling water pump for proper flow, pressure and operation. The Contractor shall inspect the pump for leaks, excessive noise and vibration. The Contractor shall also inspect the pump motor for excessive vibration, noise and heat and inspect all cooling piping, valves and flexible connectors for proper support, leaks and corrosion. Every thirty days, the Contractor shall rotate the pump's operating time by switching the "stand-by" pump to the "in service" mode and place the "in service" pump in the "stand-by" mode.

1.1.2 **AUTOMATIC HEATLESS REGENERATIVE COMPRESSED AIR DRYER**

1.1.2.1 OPERATIONAL INSPECTION: The Contractor shall inspect and verify that the compressed air dryer is continuously and automatically drying compressed air. The Contractor shall inspect the dryer and compressed air piping for leaks, loose components and vibration and perform Preventive Maintenance repair, adjust or tighten as needed. The Contractor shall inspect the dryer to insure that the compressed air is flowing through one of the drying towers (bypass line should be closed) and ensure that one tower is in the "on line" cycle drying compressed air while the other tower is in the "regenerating" cycle and/or "tower pressurizing" cycle.

1.1.2.2 INSTRUMENT PANEL: The Contractor shall inspect the instrument panel to insure all panel lights are operating properly and illuminate accordingly. Instrument panel lights include left and right tower generating, left and right tower drying, tower pressurizing, power on and failure to switch alarm. The Contractor shall inspect the programmable digital display dew point indicator for proper operation and dew point setting at 32 degrees Fahrenheit.

1.1.2.3 TOWER SAFETY RELIEF VALVES: The Contractor shall inspect, and perform Preventive Maintenance repair or replace if required, the safety relief valves to insure that they are free of damage, accumulated dirt and oil which could impede its ability to operate. The Contractor shall also engage the relief valve by pulling the lift lever handle to insure its operation.

1.1.2.4 TOWER PRESSURE GAUGES: The Contractor shall inspect, and replace if required, the pressure gauge on each compressed air dryer tower for damage and proper operation and replace damaged and/or non operating pressure gauge(s).

1.1.2.5 DRYER MUFFLERS: The Contractor shall inspect the dryer mufflers for deterioration, vibration and excessive noise and replace if necessary, as required under unscheduled repairs

1.1.2.6 ELECTRICAL INSPECTION: The Contractor shall inspect all compressed air dryer wiring for fraying, corrosion, damage and loose connections and shall inspect wiring insulation for cracking, burnt areas, and missing insulation.

1.1.2.7 COMPRESSED AIR PIPING: The Contractor shall inspect the compressed air distribution piping system for proper support, excessive vibration and leaks including all piping from each air compressor, through the coalescing filters, heatless regenerative dryer, compressed air receiver and all remaining piping until it exits the basement area. The Contractor shall inspect all pressure gauges and thermometers associated with the compressed air piping for proper operation and inspect the pressure relief valves to insure they are free of damage, accumulated dirt, oil and corrosion.

1.1.2.8 COMPRESSED AIR FILTERS: The Contractor shall inspect the pre and post compressed air coalescing filters for accumulated moisture in the vessel and manually blow down. The Contractor shall inspect the differential pressure gauge on each filter to determine if the filters require replacement and shall check and adjust the automatic timers on the electric blow down valves to discharge a minimum of once per hour. The Contractor shall also increase the frequency if climate and operating conditions warrant the need to do so.

1.1.2.9 COMPRESSED AIR RECEIVER: The Contractor shall inspect the compressed air receiver for compressed air leaks and manually blow down the receiver tank of possible accumulated moisture. The Contractor shall check and adjust the automatic timer on the electric blow down valve to discharge a minimum of once per hour and increase the frequency if climate and operating conditions warrant the need to do so. The Contractor shall inspect the pressure relief valve to insure that it's free of damage, accumulated dirt, oil and corrosion which could impede its ability to operate. The Contractor shall also inspect the pressure gauge for proper operation and replace if necessary.

1.1.3 **COOLING TOWER**

1.1.3.1 TOWER OPERATION/CONDITION: The Contractor shall inspect the cooling tower's overall condition for corrosion, scale build up and general deterioration. The Contractor shall inspect the cooling tower's operation for leaks, excessive noise, vibration and proper operation and adjust or tighten the unit as necessary. The Contractor shall scrape, clean and flush any debris and/or scale from the screen, fans, heat transfer sections and cold water basin of cooling tower. The Contractor shall inspect spray nozzles for proper spray pattern and scale build-up and scrape or clean as necessary. The Contractor shall also remove and clean sump strainer.

1.1.3.2 BELT DRIVE SYSTEM: The Contractor shall inspect the drive belts for wear, deterioration, and proper alignment and replace as necessary. The Contractor shall check the locking collars on each fans bearing assembly for looseness and tighten as required. The Contractor shall check the fan for the correct rotation as indicated by the arrow located on the unit.

1.1.3.3 MOTOR/FAN BEARINGS: The Contractor shall inspect the fan shaft and motor bearing for excessive heat, noise and vibration and adjust or tighten as necessary.

1.1.3.4 AUTOMATIC FILL: The Contractor shall inspect the float assembly for accumulated debris, scale build up and proper operation and clean and adjust as necessary. The Contractor shall adjust the float to maintain a water level of 13 ½ inches measured from the bottom of the pan.

1.1.3.5 TOWER PIPING: The Contractor shall inspect the cooling tower piping for corrosion, vibration and leaks and adjust or tighten as necessary.

1.1.3.6 WATER TREATMENT: The Contractor shall inspect, test and adjust (if necessary) the automatic chemical feed system to meet manufacturer's requirements to control tower water scale, corrosion and suspended solids. The Contractor shall insure that the amount of chemicals is available to meet water treatment requirements. The manufacturer's water treatment requirements are as follows:

READING	**OPERATING RANGE**
Ph	7.0 to 9.01
Hardness as Ca CO3	30 to 500 PPM
Alkalinity Dissolved Solids	500 PPM maximum
Total Dissolve Solids	1000 PPM maximum
Chlorides	125 PPM maximum
Sulfates	125 PPM maximum

1.1.3.7 BIOLOGICAL TREATMENT: The Contractor shall inspect, test and adjust (if necessary) the automatic chemical feed system to prevent tower water slime and algae growth. The Contractor shall insure that the amount of chemicals is available to meet biological treatment requirements.

1.1.3.8 WATER/BIOLOGICAL TREATMENT TRANSFER SYSTEM: The Contractor shall inspect the water and biological treatment pumps, tubing and piping for proper support, leaks and proper operation.

1.1.3.9 CONDUCTIVITY CONTROLLER: The Contractor shall check the conductivity reading to determine if the tower water is within the prescribed operating range. If the conductivity readings are not within the prescribed operating range, the Contractor shall perform the

necessary adjustment, maintenance, and/or and perform Preventive Maintenance repairs to return the reading to their prescribed range.

1.1.3.10 ELECTRICAL INSPECTION: The Contractor shall inspect all electrical wiring for fraying, corrosion, damage and loose connections. The Contractor shall inspect the wiring insulation for cracking, burnt areas and missing insulation and inspect the sump heater, thermostat and temperature setting for proper operation and freeze protection.

1.2 ***PREVENTATIVE MAINTENANCE***

1.2.1 PREVENTATIVE MAINTENANCE SCHEDULE: The Contractor shall be responsible for performing the manufacturer's recommended preventative maintenance in accordance with the following schedule:

COMPRESSED AIR SYSTEM

DESCRIPTION	*FREQUENCY*
Replace pressure relief valve on compressed air receiver tank	Annual
Replace pressure relief valve on compressed air piping	Annual

AIR COMPRESSORS (2) EACH

DESCRIPTION	*FREQUENCY*
Remove, dismantle and clean float valve on condensate traps	Quarterly
Change oil and oil filter	Semi Annual
Replace air intake filters	Semi Annual
Replace air/oil separator	Semi Annual
Replace safety relief valves	Annual
Test temperature shutdown functions	Annual
Grease motor drive bearings	Annual
Perform operational test of electrical interlocks and pre-shut down limits	Annual
Remove, clean, inspect, and replace restrictors (each compressor)	Annual

HEATLESS REGENERATIVE COMPRESSED AIR DRYER

DESCRIPTION	*FREQUENCY*
Replace pre/post compressed air filter cartridges	Semi Annual
Evaluate drying media and provide written statement describing drying capability	Annual
Replace safety relief valves	Annual

COOLING TOWER

DESCRIPTION	*FREQUENCY*
Inspect heat transfer section	Monthly
Inspect spray nozzles	Monthly
Lubricate fan and motor bearings	Semi Annual
Perform cleaning of cooling tower (See 1.2.2)	Annual
Replace fan belts	Annual

1.2.2 ANNUAL COOLING TOWER CLEANING DESCRIPTION: The Contractor shall coordinate with the COR to schedule a weekend (Saturday) outage to secure the Compressed Air Generating Facility to perform the annual cleaning of the cooling tower. Prior to performing any cleaning of the cooling tower, the Contractor shall "LOCK OUT AND TAG OUT" the electrical power to the cooling tower. The Contractor shall remove the eliminators and perform a cleaning and inspection. The Contractor shall also inspect, clean and remove all accumulated debris from the interior of the cooling tower and clean and flush the sump and sump strainer. The Contractor shall inspect and clean the spray nozzles and replace any deteriorated rubber grommets as required. The Contractor shall inspect and clean the wet deck and coil as required and shall pressure wash and clean the entire interior of the coiling tower. Finally, the Contractor shall remove any accumulated scale that is present on the interior of the cooling tower. Upon completion of all cooling tower cleaning, the Contractor shall inspect the cooling tower and provide the Government with a written report of the overall condition of the cooling tower. If repairs are required, the Contractor shall provide the Government with a written estimate of labor and materials to perform these repairs.

1.3 ***UNSCHEDULED REPAIR WORK***: If during weekly servicing, maintenance, inspections, testing, adjusting, validations and recordings, operational deficiencies are discovered, the deficiency shall be identified and entered on the Contractor's submitted weekly service visit ticket. In addition to the documented deficiency, the Contractor shall provide a detailed cost estimate of labor and materials necessary to correct the deficiency. The deficiency and the estimate of the repair work shall be reviewed by the COR for validation and authorization.

2. **SERVICES SUMMARY**

Item	Performance Objective	PWS Paragraph	Performance Threshold	Method of Surveillance
PO-1	Contractor performs weekly preventative maintenance in accordance with manufacturer's specifications and completes the log sheet.	1.1	Log sheet is completed accurately and given to the COR at the end of each weekly trip.	Inspection
PO-2	Contractor performs scheduled preventative maintenance in accordance with manufacturer's specifications.	1.2	Equipment is fully operational 90% of the time.	Inspection
PO-3	Contractor provides a detailed cost estimate of labor and materials for unscheduled repair work.	1.3	Incomplete estimate will be returned and authorization for repair will be withheld until a complete estimate is received.	Inspection
PO-4	Contractor completes validated and authorized unscheduled repair work in accordance with manufacturer's specifications.	1.3	The contractor shall perform work no later than one week of authorization.	Inspection
PO-5	Contractor ensures compliance with working environmental concerns.	3	The contractor shall comply 100% of the time.	Periodic Inspections and Customer Complaints

3. **WORKING ENVIRONMENTAL CONCERNS**

3.1 ***HOUSEKEEPING***: During the contract period, the Contractor shall be responsible for maintaining a clean environment in, on and around all equipment, their surfaces and systems associated with the compressed air generating facility. All generating equipment,

components and systems shall be maintained in a manner to be free from accumulations of dirt, dust, grease, oil, etc. at all times. Any debris collected during housekeeping may be disposed of utilizing the refuse dumpster located outside of the generating facility (Building 149), as long as this debris does not create an environmental hazard and/or fire hazard. The disposal of metal debris and/or recyclable materials in the dumpster is prohibited.

3.2 ***WASTE MANAGEMENT***: The Contractor shall be responsible for ensuring, to the maximum extent possible, that any waste generated from this contract is diverted from landfills and incinerators and either recycled and/or reused. Waste that can be considered for recycling or reuse includes metals, concrete, gypsum products, paper and cardboard, wood products, masonry, carpet, plastics mechanical and electrical products and equipment. The Contractor shall be permitted to retain any profit from the sale of recycled or reused waste. The Contractor shall be required to submit to the Contracting Officer within 15 days of the end of the contract, all records of waste generated from the contract. This report should include: waste category; total amount of waste (in pounds or tons); amount and type of waste recycled or reused; name of recycling facilities used; amount and type of waste sent to land fills and/or incinerated; name of landfill and/or incinerator used. The Contractor shall be permitted and encouraged to use NRL “Cardboard ONLY” dumpsters for disposal of emptied and flattened cardboard products.

3.3 ***ENVIRONMENTAL MANAGEMENT SYSTEM INFORMATION***: The Contractor shall be aware that the Naval Research Laboratory has implemented an Environmental Management System (EMS) as directed by Executive Order 13423 *Strengthening Federal Environmental, Energy and Transportation Management.* EMS policy requires a reduction in hazardous waste disposal through alternate recycling and reclamation efforts. The Contractor shall be aware that the work activities related to this contract can cause real or potential significant environmental impact; thus, the Contractor shall competently perform all duties and responsibilities with a commitment to EMS policy. Pollution Prevention and Right-to-Know Information shall be observed during the duration of this contract.

4. WORK AND EQUIPMENT INFORMATION

4.1 ***EXECUTION OF WORK***: All weekly checkpoints shall be performed on the first day of each week (Monday) and during normal hours of operation, 7:00 am through 4:30 pm. If in the event that Monday is a Federal Holiday, the scheduled work shall be performed on the next day (Tuesday).

4.2 ***LOCATION OF WORK***:

Naval Research Laboratory
4555 Overlook Avenue, SW
Washington, DC 20375
Building 149, Basement and South Exterior

4.3 ***EQUIPMENT***: The following is the equipment shall be maintained under this contract:

Air Compressors (2)	Atlas-Copco	Model GA75W	50 Horse Power	460 CFM Rated
Compressed Air Dryer	Zeks	Heatless Regenerative	1100 CFM @ 100 PSI	
Compressed Air Filters (2)	Zeks	Coalescing Type	1100 CFM @ 100 PSI	
Cooling Tower Pumps (2)	Bell & Gossett	2 HP, Close Coupled	59 Feet Head	40 GPM
Cooling Tower	Baltimore A/C	Model F1721	Serial Number 97100909	Belts B77
Compressed Air Receiver	John Wood Tank Company	Serial Number 765181	Size 42” X 9’	125 PSI Relief Valve