Statement of Work (SOW)
For
Inspection, Repairs, & Preventative Maintenance (PM) Services of NSWC Baghouses

Requirement #:

June 27, 2023

Distribution Statement A:	**Approved for public release: Distribution Unlimited.**

Statement of Work
For
Inspection, Repairs, & Preventative Maintenance (PM) Services of NSWC Baghouses

1.0 Scope

This Statement of Work (SOW) sets the requirements to perform inspections, repairs, and preventative maintenance (PM) services for building 366, 365, and 2869 baghouses. The inspections, PM services, and repairs are required to allow proper baghouse operations that will comply with all State and Federal guidelines and safety regulations. There are three bag houses on NSWC Crane. Two of the bag houses will require preventive maintenance. Building 366 will require preventive maintenance. Building 2869 will require preventive maintenance until the bag house at building 365 is up and running. When 365 is up and running, then preventive maintenance is no longer be needed at 2869 and will be needed at 365. The systems airflow max capacity is 35k CFM.

Bldg	Manufacturer	Model#	Serial#
366	Mikropul Nederman	500S-12 TRH C	870183
365	Camfil Gold Series X FLO	GS84	unknown

2.0 Applicable Documents

The following documents of the revision or issue in effect at the date of award, form a part of this SOW for reference. In the event of conflict between the documents referenced herein and the contents of this SOW, the contents of this SOW shall prevail.

2.1 Specification – Mandatory Compliance

	NAVAL SUPPORT ACTIVITY CRANE Defense Biometrics Identification System Standard Operating Procedures	10 May 2017

2.2 Standards – Mandatory Compliance

MIL-STD-46855A	Human Engineering Requirements for Military Systems, Equipment, and Facilities	24 May 2011

2.3 Secretary of the Navy (SECNAV) and Office of the Chief of Naval Operations (OPNAV) Instructions

OPNAVINST 5100.23G CH-1	NAVY SAFETY AND OCCUPATIONAL HEALTH (SOH) PROGRAM MANUAL	21 July 2011

3.0 General Requirements

3.1 **Mechanical**

The contractor shall provide a descriptive and comprehensive inspection checklist and maintenance schedule for the listed pieces of equipment to the NSWC 1023 branch to ensure schedule maintenance is being performed. The inspection criteria will be based on the manufacturer's recommendations and including listed recommendations in paragraphs 3.8 through 3.10 for prescribed inspections based on the aforementioned frequency schedules. The

contractor shall follow procedures that are more stringent. Any deficiencies found during inspections by this agency will be handled on a case-by-case basis and dependent on the severity of said deficiencies in accordance with contractor recommendations. All work requirements called out below shall be in compliance with Indiana Department of Environmental Management (IDEM) Title V regulations.

3.2 The contractor shall supply all the necessary consumable parts required to perform maintenance. Additionally, labor is incorporated into the preventative maintenance schedule for the above equipment. Labor is incorporated in this SOW as “service calls”. After all service calls are utilized IAW this SOW, a written quote with parts and labor is required from the contractor.

3.3 Contractor preventive maintenance shall be performed on a quarterly and annual basis as described in this SOW.

3.4 The contractor shall supply NSWC Crane with all the necessary non-consumable parts required for maintenance of equipment and at additional cost. The contractor shall provide GSA pricing of items to the government of approved manufacturer’s specific parts and items. Also, suitable substitute parts that do not meet original manufacturer specifications shall be approved prior to purchase and installation by the NSWC COR. A written cost estimate for parts and labor shall be delivered to the NSWC COR no later than 24 hours after discovery of the required item or part.

3.5 For the purpose of this SOW, “preventative maintenance” is defined as those tasks stated and / or recommended by the specific equipment manufacturer to keep the machines/equipment in safe and working order. In the absence of a manufacturer preventive maintenance directive, the contractor shall use the best practices for standard commercial preventive maintenance including the recommended checklists in paragraphs 3.11 through 3.15.

3.6 The contractor shall provide, at no expense to the government, the repair or replacement of components and equipment due to abuse, misuse, and mishandling, deferred or neglected maintenance by anyone employed by the contractor.

3.7 A Written Inspection Report will follow the filter assessments with detailed review on equipment condition, functionality, and recommendations for parts and services to achieve improved equipment performance (ie. reduced differential pressure, improved air flow, filter life, energy savings, optimized controls, etc.) CDRL A001. The contractor shall provide a completed checklist to NSWC 1023 branch following completion of preventive maintenance each quarter.

3.8 QUARTERLY BAGHOUSE MAINTENANCE: The contractor shall:

- Inspect overall condition of the bag houses
- Inspect filter bags and cages (pull one bag from each module for visual inspection)
- Bag leak detect (Opti-Leak Powder)
- Visually inspect the filter bags for tears, holes, and to ensure they are seated properly
- Spot check bag tensioning on reverse air and shaker bags
- Spot check for bag leaks and holes with leak detection test
- Spot check bag installation condition
- Check filter bag connection and hardware

- Inspect blow tubes alignment and tubesheet condition
- Inspect all door gaskets and seals
- Check door gaskets on plenum, housing and hopper
- Inspect hopper discharge mechanism (mechanical damper, rotary valve, screw auger, etc.)
- Inspect outside condition of hopper insulation
- Replace diaphragm if needed.
- Inspect and replace bag cages if needed
- Inspect fan condition
- Measure fan current
- Check drive assemblies on all fans, discharge valves, and screw conveyors
- Replace belts if needed.
- Check fan for corrosion and blade wear
- Measure differential pressure across filter (compare with digital sensors to confirm accuracy)
- Review existing instrumentation, controls and duct valving for proper operation
- Inspect all mechanical and electrical parts for wear or damage, replace as required.
- Confirm Baghouse inlet temperature is correct
- Inspect and clean the grate in chamber to the baghouse.
- Clean all ductwork.
- Check ducts for dust build-up
- Inspect all ductwork for wear or damage, check for leaks, replace as required. Flange and clamp
- if needed
- Observe damper valves for proper seating (if applicable)
- Calibrate opacity monitor (if required)
- Check compressed air line filters
- Check the compressed air system, including filters and water traps
- Contractor shall check that desiccant air dryer compressed air is within spec and ensure that it is working properly.
- Replace all compressed airlines if needed
- Check damper operation, bypass, and isolation
- Inspect the timer board to ensure proper cleaning sequence
- Monitor the solenoid and pulse diaphragm valves to ensure proper firing. Replace if needed.
- Contractor shall check the grounding path that it is continuous and properly grounded
- Ensure baghouse is tested and functioning correctly after all maintenance services.
- Clean all ash out of hopper after bags are removed.
- The contractor shall clean the worksite and dispose of all trash material upon completion of the work.
- The contractor shall to provide dumpster for disposal of the material. Ash from the operation is collected by our hazardous waste group. Environmental can be contacted for guidance and containers for any major work (replacing duct or filters). Otherwise, ash collected from routine PM can be stored in the containers used to collect ash from normal operation.
- Ash is not considered combustible but is non-regulated waste.
- The Government will provide proper containers for disposal of ash and old bags.
- Inspect internal hoppers for wear
- Repair or replace high-wear parts on cleaning system
- Check all welds and bolts
- Inspect baghouse structure for corrosion
- Inspect the internal baffle plate (if applicable) for wear

- Consider third party bag test

3.9 ANNUAL BAGHOUSE MAINTENANCE: The contractor shall:

- Inspect internal hoppers for wear
- Repair or replace high-wear parts on cleaning system
- Check all welds and bolts
- Inspect baghouse structure for corrosion
- Inspect the internal baffle plate (if applicable) for wear
- Consider third party bag test

3.10 Additional requirements:

- If needed. The contractor shall install a threaded access plug assembly and ensure that it properly seals and can be accessed for future use. It shall be stainless steel, a plastic plug is not allowed. It will be on top of the horizontal portion of duct as an access hole for video camera access for monitoring. The hole shall have a removable plug.

- If needed. The Contractor shall add a dew point transmitter with visual indication.

3.11 Safety & Environmental

The Contractor shall abide by all applicable federal, local, and state occupational safety and health requirements. The Contractor shall ensure all employees have appropriate Personal Protection Equipment (PPE). The Contractor shall ensure employees have all required training and certifications related to Occupational Safety and Health Administration (OSHA) requirements. (A002, A003)

Any Contractor employee exhibiting unsafe behavior may be removed from the NSWC Crane site. Such removal shall not relieve the Contractor from meeting its contractual obligations and shall not be considered an excusable delay as defined in FAR 52.249-14.

3.12 Hazardous Materials

The Contractor shall provide a responsible party for the handling of the hazardous materials and the respective SDS. This responsibility includes proper training in the handling and disposal of the hazardous materials.

4.0 Points of Contact

Chris Anderson, Christopher.s.anderson58.civ@us.navy.mil, 812-854-6197

5.0 Technical Data Deliverables

Preventive maintenance reports and completed checklists

CDRL Number	Title	DID Number	Paragraph
CDRL A001	Production Report	DI-MISC-80508	3.7
CDRL A002	Environmental Health and Safety Plan	DI-ENVR-81375	3.11
CDRL A003	Operating, Support, Health and Safety (OSH&S) Hazard Analysis Report	DI-SAFT-81841	3.11

365 Bag House

366 Bag house