Performance Work Statement Cover Sheet

Service Site State: **Mississippi**

Solicitation #: W9127Q-26-R-A002

Type of Facility: Maintenance Facilities (19 total)

To include the following locations: Industrial Hygiene Survey at 19 MS ARNG Maintenance Facilities: AASF #2 Tupelo, FMS #1 Tupelo, CSMS #2 Camp McCain, UTES Camp McCain, FMS #5 Senatobia, FMS #6 Greenville, AASF #1 Jackson, AASF #3 Meridian, FMS #2 Louisville, FMS #3 Brookhaven, FMS #7 Decatur, FMS #9 Brandon, ASP Camp Shelby, CSMS #1 Camp Shelby, FMS # 10 Camp Shelby, MATES Camp Shelby, USPFO Camp Shelby, FMS #4 Gulfport and AVCRAD Gulfport

Schedule Site Survey: After Contract award date

Complete Report Submission: Not to exceed the period of performance.

Period of Performance: One (1) 1-year Base Period and four (4) 1-year option periods

Designated Laboratories: **WOHL** Wisconsin Occupational Health Laboratory*

*SE Regional Industrial Hygiene office pays for all sample analysis. Contractor is responsible for shipping cost samples to the laboratory.

PERFORMANCE WORK STATEMENT (PWS)
FOR
Industrial Hygiene Services for Mississippi Army National Guard
Air and Ground Maintenance Facilities

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PERFORMANCE WORK STATEMENT (PWS)
FOR
Industrial Hygiene Services for Mississippi Army National Guard
Air and Ground Maintenance Facilities

1.0 General: This is a non-personal services requirement that will anticipate, recognize, and evaluate potential health hazards associated with processes performed at Army National Guard (ARNG) facilities. Contractor shall be required to provide sound recommendations for hazard control. The surveys shall serve as a baseline of workplace conditions or provide an update for a previously conducted survey. The purpose of a survey is to document a worker's history of exposures for both civilian and military employees.

1.1 Scope: The contractor shall provide all personnel, equipment, tools, materials, supervision, and quality control necessary to perform **industrial hygiene surveys,** as defined in this PWS. The exception is specified in Paragraph 3.0 as Government Furnished.

1.1.1 Objectives **The contractor shall conduct a comprehensive industrial hygiene survey and prepare a comprehensive report for the specified facilities as defined in this PWS.**

1.2 Background: The RIHS has a requirement to anticipate, recognize, and evaluate potential health hazards associated with processes performed at National Guard (NG) working facilities and to provide sound recommendations for hazard control. The surveys will serve to establish a baseline of workplace conditions or update a previous baseline so that a worker's history of exposures is provided for both civilian and military employees (Army Regulation (AR) 385-10 The Army Safety Program).

1.3 Description of Facilities.

1.3.1 Army Aviation Support Facility (AASF), Army Aviation Support Facility Limited (LAASF), Army Aviation Operating Facility (AAOF), Army Aviation Flight Activity (AAFA), and Hangar: Performs backup Aviation unit maintenance and limited Aviation intermediate maintenance, which includes direct support maintenance.

1.3.2 Combined Support Maintenance Shop (CSMS). The CSMS provides field and sustainment level maintenance of all vehicles and equipment, except those that receive this level of maintenance at a Maneuver and Training Equipment Sites (MATES) with a sustainment maintenance mission or at another CSMS authorized to the State.

1.3.3 Maneuver Area Training Equipment Site (MATES). The MATES provides field and sustainment level maintenance (specializes in national level) to repair heavy vehicles and equipment.

1.3.4 Unit Training Equipment Site (UTES). The UTES performs field level maintenance and repair on heavy vehicles and equipment.

1.3.5 Field Maintenance Shop (FMS). The FMS performs field level maintenance on all vehicles and equipment required for the supported units.

1.3.6 Aviation Classification Repair Activity Depot (AVCRAD). The AVCRAD sustains Army aviation across the entire spectrum of operations. It assists in deployment and redeployment, provides technical assistance, and supports increased operational tempo. It provides repairs to aircraft engines, airframes, armament, composite materials, electrical systems, avionics, and hydraulics.

1.3.7 Ammunition Supply Point (ASP). Receives, stores, and issues ammunition for ARNG units. Additionally, collects/sorts, deforms, and recycles spent shell casings.

1.3.8 Sustainment Training Center (STC) and Regional Training Site Maintenance (RTSM). These ground equipment training centers provide technical and tactical training using the latest generation of equipment. Additionally, they provide maintenance instruction to ARNG technicians.

1.3.9 Tactical Unmanned Aircraft System (TUAS). Provides maintenance and operation of unmanned aircraft systems primarily used for aerial reconnaissance.

1.3.10 Army Aviation Training Sites (includes Eastern (EAATS), Western (WAATS), High Altitude (HAATS), and Fixed Wing (FWAATS)). These aircraft equipment training centers provide technical and tactical training using the latest generation of equipment. Additionally, they provide maintenance instruction to ARNG technicians.

1.4 Period of Performance (PoP):

1.4.1 The Period of Performance shall be a 1-year base period and four (4) 1-year option periods. The contractor will have no more than **ninety (90) calendar days** from award of Contract to begin scheduling the appointment to the site visit through the Point of Contact (POC) at the survey site. The contractor will have no more than **two hundred and ten (210) calendar days** from scheduled survey date to complete all survey requirements including submission of report to RIHS office and survey samples to appropriate laboratories.

1.5 General Information:

1.5.1 Place and Performance of Services: The contractor shall provide services between the hours of each facility; maintenance facilities are open during the week **0730-1730 Monday through Friday,** except on recognized US holidays or when the Government facility/installation is closed due to local or national emergencies, administrative closings, or similar Government- directed facility/installation closings. The contractor shall always maintain an adequate work force for the uninterrupted performance of all tasks defined within this PWS when the Government facility/installation is not closed for the above reasons.

1.5.1.1 Telework: The Government does not permit the contractor to telework in support of this requirement.

1.5.1.2 Unscheduled gate closures by the Security Police may occur at any time causing all personnel entering or exiting a closed installation to experience a delay. This cannot be predicted or prevented. Contractors are not compensated for unexpected closures or delays. Vehicles operated by contractor personnel are subject to search pursuant to applicable regulations. Any moving violation of any applicable motor vehicle regulation may result in the termination of the contractor employee's installation driving privileges.

1.5.1.3 The contractor's employees shall become familiar with and obey the regulations of the installation, including fire, traffic, safety and security regulations while on the installation. Contractor employees should only enter restricted areas when required to do so and only upon prior approval. All contractor employees shall always carry proper identification with them and shall be subject to such checks as may be deemed necessary. The contractor shall ensure compliance with all regulations and orders of the installation, which may affect performance. The Government reserves the right to direct the removal of an employee from Government property or revoke access to Government systems for misconduct, security reasons, or any overt evidence of communicable disease. Removal of contractor employees for reasons stated above does not relieve the Contractor from responsibility for total performance of this contract.

1.5.1.4 Recognized Holidays: The following are recognized United States (US) holidays. The contractor shall not perform services on these days:

1.5.1.4.1 New Year's Day: January 1st
1.5.1.4.2 Martin Luther King, Jr.'s Birthday
1.5.1.4.3 President's Day
1.5.1.4.4 Memorial Day
1.5.1.4.5 Juneteenth National Independence Day: June 19th
1.5.1.4.6 Independence Day: July 4th
1.5.1.4.7 Labor Day
1.5.1.4.8 Indigenous Peoples Day
1.5.1.4.9 Veteran's Day: November 11th
1.5.1.4.10 Thanksgiving Day
1.5.1.4.11 Christmas Day: December 25th

1.5.2 Quality Control (QC): The contractor shall develop and maintain an effective QC Plan (QCP) to ensure services are performed in accordance with this PWS. The contractor shall develop and implement procedures to identify, prevent, and ensure non- recurrence of defective services. The contractor's QCP is the means by which it assures itself that its work complies with the requirements of the contract. As a minimum, the contractor shall develop QC procedures that address the areas identified in Technical Exhibit 1, Performance Requirements Summary (PRS). A final QCP shall be submitted to the Contracting Officer Representative (COR) NLT 10 days after contract award. After acceptance of the QCP, the contractor shall obtain the Contracting Officer's (KO's) acceptance in writing of any proposed changes to its QCP.

1.5.3 Quality Assurance (QA): The Government will evaluate the contractor's performance under this contract in accordance with the Quality Assurance Surveillance Plan (QASP). This plan is primarily focused on what the Government will do to ensure that the contractor has performed in accordance with the performance standards. It defines how the performance standards will be applied, the frequency of surveillance, and acceptable quality level(s) or defect rate(s).

1.5.4 Installation Access and Security Requirements. The contractor shall comply with all applicable installation/facility access and local security policies and procedures, which may be obtained from the COR. The contractor and all associated subcontractor employees shall provide all information required for background checks to meet installation access requirements to be accomplished by installation Provost Marshal Office, Director of Emergency Services, or Security Office. The contractor shall ensure compliance with all personal identity verification requirements as directed by Department of Defense (DoD), Headquarters Department of Army (HQDA) and/or local policy (see PWS 6.0). Should the Force Protection Condition (FPCON) change, the Government may require changes in contractor security matters or processes.

1.5.4.1 Failure to comply with these requirements may result in withholding of final payment.

1.5.4.2 Awareness Training (AT) Level 1: This standard language is for contractor employees with an area of performance within an Army controlled installation, facility or area. All contractor employees, to include subcontractor employees, requiring access Army installations, facilities and controlled access areas shall complete AT Level I Awareness training within calendar 30 days after contract start date or effective date of incorporation of this requirement into the contract, whichever is applicable. The contractor shall submit certificates of completion for each affected contractor employee and subcontractor employee, to the COR or to the contracting officer, if a COR is not assigned, within 5 calendar days after completion of training by all employees and subcontractor personnel. AT level I Awareness training is available at the following website: https://jko.jten.mil/courses/atl1/launch.html.

1.5.4.3 For contractors that do not require CAC but require access to a DoD facility or installation: Contractor and all associated sub-contractors employees shall comply with adjudication standards and procedures using the National Crime Information Center Interstate Identification Index (NCIC-III) and Terrorist Screening Database (TSDB) (Army Directive 2014-05/AR 190-13), applicable installation, facility and area commander installation/facility access and local security policies and procedures (provided by government representative), or, at OCONUS locations, in accordance with status of forces agreements and other theater regulations.

1.5.4.4 iWATCH Training: This standard language is for contractor employees with an area of performance within an Army controlled installation, facility or area. The contractor and all associated sub-contractors shall brief all employees on the local iWATCH Army program (training standards provided by the requiring activity Antiterrorism Officer). This local developed training will be used to inform employees of the types of behavior to watch for and instruct employees to report suspicious activity to the COR. This training shall be completed

within 30 calendar days of contract award and within 5 calendar days of new employees commencing performance with the results reported to the COR NLT 30 calendar days after contract award.

1.5.4.5 Communications Security/Information Technology (COMSEC/IT) Security. All communications with DoD organizations are subject to COMSEC review. All telephone communications networks are continually subject to intercept by unfriendly intelligence organizations. DoD has authorized the military departments to conduct COMSEC monitoring and recording of telephone calls originating from, or terminating at, DoD organizations. Therefore, the contractor is advised that any time contractor personnel place or receive a call they are subject to COMSEC procedures. The contractor shall ensure wide and frequent dissemination of the above information to all employees dealing with DoD information. The contractor shall abide by all Government regulations concerning the authorized use of the Government's computer network, including the restriction against using the network to recruit Government personnel or advertise job openings.

1.5.4.6 OPSEC Training: In accordance with AR 530-1, Operations Security, new contractor employees shall complete Level I OPSEC training within 30 calendar days of their reporting for duty and annually thereafter. The contractor shall submit certificates of completion for each contractor employee to the COR within 5 calendar days after completion of training. Level 1 OPSEC training is available at https://securityawareness.usalearning.gov/opsec/index.htm.

1.5.5 Physical Security. The contractor shall safeguard all Government property provided for contractor use. At the close of each work period, Government facilities, equipment and materials shall be secured.

1.5.6 Post Award Conference/Periodic Progress Meetings: The contractor agrees to attend any post award conference convened by the KO in accordance with FAR 42.5. The KO, COR and other Government personnel, as appropriate, may meet periodically with the contractor to review the contactor's performance. At these meetings, the KO will apprise the contractor of how the Government views the contractor's performance and the contractor shall apprise the Government of problems, if any, being experienced. The contractor shall resolve outstanding issues raised by the Government. Contractor attendance at these meetings shall be at no additional cost to the Government.

1.5.7 Contract Manager (CM): The contactor shall designate a CM who shall ensure performance under this contract. The name of this person, and an alternate who shall act for the contractor when the CM is absent, shall be designated in writing to the KO. The CM or alternate shall have full authority to act for the contractor on all contract matters relating to daily operation of this contract. The CM shall work through the COR, to resolve issues, receive technical instructions, and ensure adequate performance of services. The CM shall ensure that contractor employees do not perform any services outside the scope of the contract without an official modification issued by the KO. The CM shall ensure contractor employees understand that services performed outside the scope of the contract are performed wholly at the expense of the contractor.

1.5.8 Identification of Contractor Employees: **Contractor personnel** shall wear identification badges distinguishing themselves as such. The badges shall have the company name, employee name and the word “contractor” displayed.

1.5.9 The contractor shall retrieve all identification media (including vehicle passes) from its employees who depart employment for any reason. The contractor shall return all identification media (i.e., badges and vehicles pass) to the KO within 14 days of an employee’s departure.

1.5.10 Combating Trafficking in Persons: The United States Government has adopted a zero-tolerance policy regarding trafficking in persons. Contractors and contractor employees shall not engage in severe forms of trafficking in persons during the period of performance of the contract; procure commercial sex acts during the period of performance of the contract; or use forced labor in the performance of the contract. The Contractor shall notify its employees of the United States Government’s zero tolerance policy, the actions that will be taken against employees for violations of this policy. The contractor shall take appropriate action, up to and including termination, against employees or subcontractors that violate the US Government policy as described at FAR 22.17.

1.5.11 **Contractor Travel**: No travel expenses will be reimbursed.

1.5.12 Data Rights: The Government has unlimited rights to all documents/materials produced under this contract. All documents and materials, to include the source codes of any software, produced under this contract shall be Government owned and are the property of the Government with all rights and privileges of ownership/copyright belonging exclusively to the Government. These documents and materials may not be used or sold by the contractor without written permission from the KO. All materials supplied to the Government shall be the sole property of the Government and may not be used for any other purpose. This right does not abrogate any other Government rights.

1.5.13 **The Contractor** shall provide the industrial hygiene survey personnel with their necessary personal protective equipment (PPE), survey equipment, and materials required to conduct industrial hygiene surveys in aviation and ground vehicle maintenance facilities and to prepare a comprehensive report for the specified facilities.

2.0 Definitions and Acronyms:

2.1 Definitions:

2.1.1 Contractor: A supplier or vendor awarded a contract to provide specific supplies or service to the Government. The term used in this contract refers to the prime.

2.1.2 Defective Service: A service output that does not meet the standard of performance associated with the PWS.

2.1.3 Deliverable: Anything that can be physically delivered and includes non-manufactured things such as meeting minutes or reports.

2.1.4 Key Personnel: Contractor personnel that are evaluated in a source selection process and that may be required to be used in the performance of a contract by the PWS. When key personnel are used as an evaluation factor in best value procurement, an offer can be rejected if it does not have a firm commitment from the persons that are listed in the proposal.

2.1.5 Physical Security: Actions that prevent the loss or damage of Government property.

2.1.6 Quality Assurance: The Government procedures to verify that services being performed by the Contractor are performed according to acceptable standards.

2.1.7 Quality Assurance Surveillance Plan (QASP): An organized written document specifying the surveillance methodology to be used for surveillance of contractor performance.

2.1.8 Quality Control: All necessary measures taken by the Contractor to ensure that the quality of a product or service shall meet contract requirements.

2.1.9 Subcontractor: One that enters a contract with a prime contractor. The Government does not have privity of contract with the subcontractor.

2.2 Acronyms:

AAFA	Army Aviation Flight Activity
AASF	Army Aviation Support Facility
ACOR	Alternate Contracting Officer's Representative
AEI	Army Enterprise Infrastructure
AFARS	Army Federal Acquisition Regulation Supplement
AIHA	American Industrial Hygiene Association
ANG	Air National Guard
AQL	Acceptable Quality Levels
AR	Army Regulation
ARNG	Army National Guard

AT	Antiterrorism
AT/OPSEC	Antiterrorism/Operational Security
AUP	Acceptable Use Policy
AVCRAD	Aviation Classification Repair Activity Depot
BBP	Best Businesses Practice
CA	Contract Administrator
CFR	Code of Federal Regulations
CMF	Combined Maintenance Facility
COMSEC	Communications Security
CONUS	Continental United States (excludes Alaska and Hawaii)
COR	Contracting Officer Representative
COTS	Commercial-Off-the-Shelf
CS	Contract Specialist
CSMS	Combined Support Maintenance Shop
CST	Civil Support Team
CUI	Controlled Unclassified Information
DA	Department of the Army
DD250	Department of Defense Form Receiving Report
DD254	Department of Defense Contract Security Requirement List
DFARS	Defense Federal Acquisition Regulation Supplement
DMDC	Defense Manpower Data Center
DOD	Department of Defense
DODD	Department of Defense Directive
FAR	Federal Acquisition Regulation
FMS	Field Maintenance Shop
FPCON	Force Protection Condition
MS ARNG	MISSISSIPI Army National Guard
MS DOD	MISSISSIPI Department of Defense / MISSISSIPI National Guard
MS NG	MISSISSIPI National Guard
GFP/M/E/S	Government Furnished Property/Material/Equipment/Services
HHIM	Health Hazard Information Forms
HHSC	Health Hazard Severability Code
HIPAA	Health Insurance Portability and Accountability Act of 1996
HQDA	Headquarters, Department of the Army
IA	Information Assurance
IH	Industrial Hygiene
IS	Information System(s)
IT	Information Technology
KO	Contracting Officer
MATES	Maneuver Area Training Equipment Site
NG	National Guard
NGB	National Guard Bureau
NLT	No Later Than
OCI	Organizational Conflict of Interest
OCONUS	Outside Continental United States (including Virgin Islands…)
ODC	Other Direct Costs

OEL	Occupational Exposure Limit
OPSEC	Operational Security
OSHA	Occupational Safety and Health Administration
P&C	Purchasing and Contracting
PII	Personally Identifiable Information
PIPO	Phase In / Phase Out
POC	Point of Contact
PoP	Period of Performance
PRS	Performance Requirements Summary
PWS	Performance Work Statement
QA	Quality Assurance
QAP	Quality Assurance Program
QASP	Quality Assurance Surveillance Plan
QC	Quality Control
QCP	Quality Control Plan
RC	Readiness Center
RIHS	Regional Industrial Hygiene Office Southeast
SEG	Similar Exposure Group
SF	Standard Form
SOH POC	Safety Occupational Health Point of Contact
STEL	Short Term Exposure Limit
TE	Technical Exhibit
TWA	Time Weighted Average
UAS	Unmanned Aerial Surveillance
USPFO	United States Property and Fiscal Office
UTES	Unit Training Equipment Site

3.0 Government Furnished Property, Material, Equipment and Services (GFP/M/E/S): The Government will provide the property, material, equipment, and/or services listed below solely for the purpose of performance under this contract:

3.1 Property: The Government will furnish the necessary workspace for the contractor to perform services outlined in this PWS to include desk space.

3.2 Laboratory Analysis: To ensure all mandatory and potential hazards samples are collected, regardless of the cost, the Regional Industrial Hygiene Southeast (RIHSE) office has service agreements with **SGS Galson** or **WOHL (**Wisconsin Occupational Health Laboratory) laboratories. The RIHSE office will pay for all laboratory analysis sent to **SGS Galson** or **WOHL (**Wisconsin Occupational Health Laboratory). The Contractor is responsible for the cost of shipping samples to the laboratory.

3.3 Utilities: All utilities in the facility will be available for the contactor's use in the performance of this contract. The contractor shall instruct employees in utilities conservation practices. The contractor shall operate under conditions that preclude the waste of utilities, which include turning off the water faucets or valves after using the required amount.

4.0 Contractor Furnished Property, Materials, and Equipment (CFP/M/E): Contractor is required to have the equipment listed in attachment 3 on every survey. All equipment requiring calibration must have a current, valid calibration as of the date of any survey where the equipment is used. Copies of calibration certificates will be included in each industrial hygiene survey report. The contractor shall furnish everything required to perform these services as indicated in section 5.

4.1 Quotes:

4.1.1 Price will be for survey planning and coordination: travel, field work, sample shipping cost and report writing.

5.0 Requirements:

5.1 Personnel Qualifications.

Field work must be performed by individuals who each have at **least 3 years of industrial hygiene** survey experience in ARNG maintenance facilities, or possess a baccalaureate, master's, or doctoral degree from a regionally accredited college or university in chemistry; physics; a medical, biological, or physical science; or a related engineering OR are a Board for Global EHS Credentialing Certified Industrial Hygienist.

Industrial hygiene survey personnel must be proficient in the anticipation, recognition, evaluation, and control of environmental factors or stresses from the workplace, which may cause sickness, impaired health, well-being or significant discomfort among workers.

A **Board for Global EHS Credentialing Certified Industrial Hygienist (CIH) must approve all field work and reports by the industrial hygienists**.

If requested by the contracting officer's representative, the contractor will submit resumes for all personnel to the contracting officer's representative for review and approval of personnel prior to beginning survey work or at any time during the contract.

The contracting officer's representative reserves the right to request a change in industrial hygienist if there is a conflict with facility personnel, improper/unethical actions on site, or due to a lack of experience.

The contractor shall: Unless otherwise stated in this PWS, the contractor shall furnish all labor, materials and IH equipment to perform IH baseline surveys, follow-up IH surveys and special studies in the following facilities:

CLIN	Facility Name / CLIN Description	Facility Address	City	State
	North Region			
0001	IHS, AASF #2 Tupelo	305 West Jackson Street	Tupelo	MS
0002	IHS, FMS #1 Tupelo	1955 South Veterans Boulevard	Tupelo	MS
0003	IHS, CSMS #2 Camp McCain	3152 James H. Biddy Road	Grenada	MS
0004	IHS, UTES Camp McCain	BLDG 302 1st Street	Grenada	MS
0005	IHS, FMS #5 Senatobia	318 Scott Street	Senatobia	MS
0006	IHS, FMS #6 Greenville	1146 South Beauchamp Street	Greenville	MS
	Mid Region			
0007	IHS, AASF #1 Jackson	365 Shop Street	Jackson	MS
0008	IHS, AASF #3 Meridian	1553 65th Avenue South	Meridian	MS
0009	IHS, FMS #2 Louisville	2312 Highway 15 S	Louisville	MS
0010	IHS, FMS #3 Brookhaven	170 Highway 84 East	Brookhaven	MS
0011	IHS, FMS #7 Decatur	14271 Highway 15 South	Decatur	MS
0012	IHS, FMS #9 Brandon	122 Metropolitan Ln	Brandon	MS

	South Region			
0013	IHS, ASP Camp Shelby	Building 5101 Grapevine Road	Camp Shelby	MS
0014	IHS, CSMS #1 Camp Shelby	Building 85 Warehouse Avenue	Camp Shelby	MS
0015	IHS, FMS # 10 Camp Shelby	Building 3504 35th Street	Camp Shelby	MS
0016	IHS, MATES Camp Shelby	Building 6800 15th Street	Camp Shelby	MS
0017	IHS, USPFO Camp Shelby	Building 6568 C Avenue	Camp Shelby	MS
0018	IHS, FMS #4 Gulfport	4221 Hewes Avenue	Gulfport	MS
0019	IHS, AVCRAD Gulfport	4715 Hewes Avenue	Gulfport	MS

Tiers for bidding. For bidding purposes, facilities are categorized into two distinct “tiers” based on facility size and the complexity of the operations usually present at that facility type.

Tier 1 are sustainment and high-level maintenance facilities (MATES, AVCRAD, CSMS, WAATS, and AASF) and require three full calendar days for each facility’s survey (regardless of how many contractor personnel are present). See section 1.3 for facility description.

Tier 2 are field level and some sustainment maintenance facilities (FMS, LAASF, AAOF, AAFA, Hangar, EAATS, HAATS, FWAATS, CST, RTSM, STC, UTES, TUAS and ASP) and require two full days for each facility’s survey. See section 1.3 for facility description.

Regardless of location (e.g., two facilities adjacent to each other), all facilities will receive a survey for the full two or three calendar days (based on tier). No facility can be combined with another, and the survey consolidated to less day without the approval of the contracting officer’s representative.

Evaluation of Processes. Each process evaluation must include a description of the process, evaluation of all local exhaust ventilation systems (if present), noise dosimetry, description of PPE, any additional information, interpretation of results, and recommendations for corrective action. ***Contractor must provide this information whether or not the process is performed during the survey.***

5.1.1 Process Description.

5.1.1.1 Describe the process, the basic tasks, and the area in which it’s located.

5.1.1.2 Describe any equipment being used in the process (i.e. grinder, welder, sander, etc.).

5.1.1.3 Describe the hazards associated with the process.

5.1.1.4 Report the number of personnel performing each process (on survey date and the total who perform the work), the process duration, and frequency (i.e. times per week/month/year).

5.1.1.5 List and evaluate any engineering controls associated with the process (described further in para 5.2).

5.1.1.6 List and describe any administrative controls (if in place).

5.2. Requirements: The contractor shall:

5.2.1. MUST develop a sample strategy plan that **WILL** include every process/service conducted within the facility. The sample strategy plan will include but is not limited to, air sampling; painting, welding, blasting operations. Ventilation evaluations, and all other processes and services performed in the facility. The plan **WILL** be coordinated with the Facility Supervisor and/or Production control. The Vendor **WILL** send the strategy plan to the facility representative, SOH/SIHT, and Regional Industrial Hygienist for approval prior to finalizing the schedule. Failure to follow these requirements or missing sample data the Vendor **WILL** have to return to that facility to conduct all necessary sampling at the Vendor's expense. At the end of the survey and prior to the Vendor leaving the facility, the Vendor **WILL** obtain verification from the Facility Supervisor and SOH/SIHT, and Regional Industrial Hygienist that all required samples were taken.

5.2.2. Scheduling and Coordination. The contractor shall contact the contracting officer's representative to obtain the State Safety and Occupational Health (SOH) point of contact (POC) information for each state.

5.2.2.1. The contractor will then contact the SOH POC in each state to:

5.2.2.2. Coordinate tentative survey dates,

5.2.2.3. Determine if the SOH POC will be present during the survey,

5.2.2.4. Identify whether the SOH POC wants in- and out-briefs, and

5.2.2.5. Determine if the contractor or the SOH POC will contact the individual facilities to schedule the surveys.

5.2.2.6. Acknowledgement and agreement from the State POC is required prior to contractor personnel arriving at any ARNG facility.

5.2.2.7. Once the contractor has received acknowledgement and approval from the SOH POC, the contractor will either coordinate survey dates with the POC for each facility or work with the SOH POC to coordinate the surveys (based on SOH POC preference).

5.2.2.8. As surveys are scheduled, the contractor shall ensure the SOH POC has all survey dates for the facilities in their state and will provide weekly schedule updates to the contracting officer's representative.

5.2.2.9. The contractor will contact the contracting officer's representative immediately if a facility was closed or combined with another one after the contract was awarded.

5.2.3 Conduct a thorough IH investigation to determine the potential for any IH and/or occupational health and safety hazards in the facility where NG employees work as defined by AR 385-10 Army Safety Program. Using professional judgement, the contractor shall list all potentially hazardous processes in the facility whether they are planned soon, currently operational, or previously occurred. Report the number of personnel performing the process, as well as the duration and frequency of each process. Describe all equipment (grinders, saws, pneumatic tools, sanders, etc.) used in each process. Ensure engineering controls are evaluated.

5.2.4 Evaluate each facility for applicable Army and OSHA specific programs (see Exhibit 1). The evaluation shall include determination that program documents exist and are readily available.

5.2.5 Workplace control evaluation. The selected contractor shall properly document the existing engineering, administrative and personal protective equipment used in each process (see Exhibit 2). Annotate noise reduction ratings for all hearing protection devices as well as the specific type of protective gloves used.

5.2.6 Ventilation system evaluation.

5.2.6.1 All existing and operational ventilation systems shall be evaluated for compliance with OSHA, NGB or applicable standards/guidance (Vehicle exhaust ventilations are provided in Exhibit 3).

5.2.6.2 Provide evaluation details including type of ventilation (local exhaust or dilution), process/operations (i.e. spray-painting booths, vehicle exhaust systems, welding, wood working, paint mixing room, pol storage, battery charging rooms, etc.), recorded measurements used to determine compliance (face or capture velocity) and other observations made during the evaluation. ***Evaluate even if the ventilation system is not being used regularly.*** Note damaged or inoperable systems.

5.2.6.3 For linked exhaust systems: Ensure system is on, open all drops, and measure the airflow at each drop (with all drops open).

5.2.6.4 Use smoke candles or smoke tubes to evaluate airflow in paint and abrasive blasting booths and describe pattern of flow in report.

5.2.6.5 Identify any potential for contamination of clean air sources by contaminated air.

5.2.7 PPE Description

5.2.7.1 Contractor must list PPE used by the ARNG Employee and/or available:

5.2.7.2 Types of gloves (nitrile, butyl, latex, etc.)

5.2.7.3 Types of respirators (half-face, full-face, supplied-air, etc.)

5.2.7.4 Respirator cartridges (HEPA, OV, combo, etc.)

5.2.7.5 Glasses/goggles (safety, chemical, dust, etc.)

5.2.7.6 And any other PPE used.

5.2.7.7 Include any recommended PPE changes (i.e. different type of gloves, cartridge, goggles, etc.) as a finding with a recommendation and a RAC. See attachment 5 for determination of the safety RAC.

5.2.8 **Air Sampling**:

Vendor Must develop an air sampling plan and coordinate with facility Supervisor and/or Production control to obtain air samples for all painting, grinding, and welding operations prior to going to the facility. Air sampling plan must be approved by Regional IH, or COR prior to arriving at the facility. Sample media may be obtained from the designated laboratory after the sample strategy has been approved by the COR/Regional Industrial Hygienist. Failure to do so will result in vendor returning to that facility to conduct air sampling at the **vendor's expense**.

5.2.8.1 Conduct Indoor Air Quality (IAQ) investigations upon identification of mold/water intrusion problems within an administrative facility or if IAQ issues are reported by building occupants (administrative areas only). If there are no visual indications of potential IAQ issues or reported IAQ issues, measurement of IAQ parameters is not required.

5.2.8.2 To determine occupational exposure levels for Federal employees, conduct air breathing zone sampling to represent full-shift sampling when determining compliance with an 8-hour TWA. Full-shift sampling is defined as a minimum of the total time of the work shift less one hour. Every effort should be made to sample the segments of the work shift when the highest exposure is anticipated. Ensure that sufficient air sampling volume is achieved so that the laboratory limit of detection is less than the hazard occupational exposure limit (OEL). The exposure results shall be used to determine the work shift time weighted average (TWA) or short-term exposure limit (STEL) for each targeted hazard. If the sample results exceed the applicable hazard OEL (use ACGIH TLV when more conservative than OSHA PEL) contact the RIHS office immediately via the office mailbox at ng.ga.gaarng.mbx.rihse@army.mil. If the work shift is greater than 8 hours, adjust the OEL accordingly.

5.2.8.3 If respiratory hazards exist that require a respiratory and a shop specific Respiratory Protection Program, identify what those respiratory hazards are and specify what type of respirators are required to protect employees from that hazard. If there are no respiratory hazards in a facility but respirators are present that would require the use of respiratory protection program by employees, write that up as a finding in the final report.

5.2.8.4 Personal air sampling for hexavalent chromium shall be conducted using an Institute of Medicine (IOM) sampler with polyvinyl chloride (PVC) filter. The IOM cassettes (reusable or disposable) should be ordered from the laboratory identified in the PWS along

with a calibrator adapter.

5.2.9 Noise

5.2.9.1 Conduct noise survey measuring sound levels using calibrated sound level meters and properly completing DD Form 2214 (listing and testing ALL noise producing equipment used to fix, strip, or adjusted vehicles being repaired at each facility – Noise Survey (see Exhibit 4).

5.2.9.2 Perform noise dosimetry on 50% of personnel in each work area within the facility. If the facility has 20 employees or less the Vendor WILL perform dosimetry on ALL employees assigned to the facility. Exceptions can be made only with approval from the COR.

5.2.9.3 Dosimeters must be worn and collecting data for a minimum of 75% of the worker's normally scheduled workday to accurately obtain an 8-hour time weighted average (TWA_8).

5.2.9.4 When noise dosimetry is performed on Federal employee personnel shall be separated into similar exposure groups (SEGs) based on the process(es) performed (vehicle maintenance, sanding/grinding, spray painting, etc.) and/or position description/job duties.

5.2.9.5 Do NOT select State or Contractor Employees for Noise Dosimetry. Noise dosimetry SHALL NOT be performed on State Employees or Contractor Employees.

5.2.9.6 Dosimeters must be set to Army/ACGIH standards (**3 dB exchange rate and 85 dBA TWA_8**) IAW DA PAM 40-501. If dosimetry results do not have these setting, vendors will have to re-due dosimetry at the vendors' expense.

5.2.9.7 Present results for individuals as the TWA_8.

5.2.9.8 If there are six or more dosimetry results for a similar exposure group (SEG) calculate the occupational exposure group (OEG) upper tolerance limit (UTL).

5.2.9.9 Calculate risk assessment codes (RACs) for noise separately from all others. See attachment 6 for determination of the noise RAC.

5.2.9.10 Personal noise dosimetry results will be placed onto a DA form 4700 following the example in attachment 7.

5.2.10 Obtain a shop layout plan and clearly depict the location of operations identified during the survey.

5.2.11 Conduct an illumination investigation to determine if lighting is adequate in each area in the facility where personnel perform job duties.

5.2.12 Take photographs of the exterior and interior of each facility. Photograph all potential

hazards or items of concern noted during survey. Catalog and describe each photograph by location and concern.

5.2.13 Prepare and provide a signed report in PDF format to the RIHS Office mailbox at ng.ga.gaarng.mbx.rihse@army.mil.

5.2.14 Address report to the Shop Supervisor of each facility. Provide the Supervisor's full **name, rank**, and **email address**.

5.2.15 Notify RIHS immediately of any Immediately Dangerous to Life and Health (IDLH) concerns identified during the survey.

5.2.16 **Interpretation of Results and Further Recommendations.**

5.2.16.1 Interpret results of measurements, noise sampling, and observations. Include an explanation if a process evaluation could not be performed. Recommend repeat or additional evaluation, if applicable. Include a recommendation for every finding noted.

5.2.16.2 After completing a worksite visit, the contractor records identified workplace deficiencies (issues evaluated and non-compliant with Federal standards, Service specific regulations, authoritative standards, and recommended practices) using the spreadsheet attached as Exhibit 5.

5.2.16.3 Risk assessment codes (RAC) shall be applied to each recommendation (attachment 5). Each identified deficiency is assigned a RAC based on the type of risk: health, noise, safety or ergonomic. Once a RAC is assigned for each deficiency, recommendations are made for corrective actions and included in the installation hazard abatement plan or its equivalent.

5.2.17 **Additional information.** Include any other information pertinent to the process.

5.2.17.1 Prepare and provide a signed report in PDF format to the RIHS Office mailbox at ng.ga.gaarng.mbx.rihse@army.mil. Address report to the Shop Supervisor of each facility. Provide all sample results along with a detailed narrative indicating that sample results exceed or are below applicable standards. Include all elements of paragraph 5 of the PWS to include all laboratory reports as appendices, recommendations for engineering controls, administrative controls, and/or PPE, to include RACs for health hazards, noise, safety, and ergonomics and specific referenced citations. Every finding must have a corresponding recommendation (Exhibit 7). Include an employee notification letter for each employee who wore a noise dosimeter or air sampling pump/passive badge. The notification letter will provide the sample results as an 8-hour TWA or STEL.

6.0 Reporting Requirements.

6.1 Post-Award Meeting. Upon contract award, a representative from **PFO office** will schedule a post-award meeting and with management personnel from the selected contractor, personnel from the ARNG Regional Industrial Hygiene office including the contracting officer's representative for the contract, and personnel from PFO Office.

6.2 Schedule Updates. As surveys are scheduled, the contractor shall ensure the SOH POC has all survey dates for the facilities in their state and will provide weekly schedule updates to the contracting officer's representative.

6.3 Progress Meeting. The contracting officer's representative and the management personnel from the selected vendor will establish a meeting schedule (usually monthly) to provide a forum to address questions and resolve issues. As the contract progresses, this meeting schedule can be adjusted or turned into a digital submission at the discretion of the contracting officer's representative. The contractor's weekly update to the contracting officer's representative will include the following:

6.3.1 # and % of facilities scheduled,

6.3.2 # and % of surveys completed,

6.3.3 # and % of draft reports submitted,

6.3.4 # and % of final reports submitted, and

6.3.5 Any issues or problems the contractor has encountered (i.e. personnel, schedules, surveys, reports, etc.).

6.4 **Urgent Situation During the Survey.**

6.4.1 If there is an urgent situation during the survey (such as suspected overexposures or improper PPE during high hazard operations, etc.) that will be classified as a RAC 1 or 2:

6.4.2 Immediately alert an onsite safety representative / facility supervisor.

6.4.3 Call or email the contracting officer's representative and SOH POC as soon as possible.

6.4.4 Within one week of the discovery, provide a summary of the situation with findings, recommendations, and any corrective actions already taken (if any).

6.5 Written Reports.

6.5.1 The industrial hygienist who performs the field survey will write the report for that survey.

6.5.2 **Do not wait until all surveys are completed before sending drafts or final reports**.

6.5.3 Draft Reports.

6.5.3.1 Send an electronic draft report (with field notes) for each facility to the Regional Industrial Hygiene POC established by the contracting officer's representative,

6.5.3.2 **Within FOUR WEEKS** of each facility survey date.

6.5.3.3 Final Reports.

6.5.3.3.1 Final reports are due **TWO WEEKS** after receipt of comments from the ARNG Regional Industrial Hygiene POC.

6.5.3.3.2 All final reports are due no more than **90 days** from the survey date (unless delays are discussed and approved in writing by the ARNG regional office prior to the deadline).

6.5.3.3.3 All comments that were made on the draft report must be implemented. If there are any issues or questions regarding the comments, contact the contracting officer's representative.

6.5.4 FORMAT of reports. The following should be included for the final report:

6.5.4.1 The date of the survey, address, and the POC of the facility.

6.5.4.2 Do not collect or include social security numbers or birth dates on any documents or reports. The full name of the employee, facility name, and job title is sufficient to identify the employees and their exposure records will be updated with additional information by the occupational health nurse.

6.5.4.3 A table of contents for the report.

6.5.4.4 The survey specifications outlined in paragraph 2 of this PWS.

6.5.4.5 A conclusion. Maximum of 1-2 paragraphs.

6.5.4.6 The following information shall be included in the appendices along with the information identified in paragraph 2. When applicable, appendices shall be referenced in the report. For example, "refer to Appendix A for noise dosimetry results."

6.5.4.7 Noise dosimetry printouts for each record.

6.5.4.8 Lab sampling results for all contaminants sampled.

6.5.4.9 8-hour TWA calculation for all air sampling results.

6.5.4.10 References. The list provided is only an example. Only the references used in writing the report should be included in the reference section. Since publication dates may change, verify that the last published reference date is used.

6.5.4.11 Recommendations for engineering controls, administrative controls, and/or PPE, to include RACs for health hazards, noise, safety, and ergonomics and specific referenced citations. **Every finding must have a corresponding recommendation.**

6.5.5 Additional documentation to include with report. The following information shall be provided as separate documentation from the report. At a minimum, it shall include:

6.5.5.1 Copy of field notes so that the reviewer can compare notes to the report and verify calculations.

6.5.5.2 One copy of the DA 4700 noise exposure forms for each employee who wore a noise dosimeter. Calculate the UTL if there are at least six dosimetry results for an OEG. (See attachments 6 and 7 for an example of the form and to calculate the noise RAC. *The information on the form must be adapted depending on the results.*)

6.5.5.3 The entire report and supporting documents in electronic format as PDF files. Send draft/final reports and supporting documents to the Regional Industrial Hygiene POC assigned by the contracting officer's representative.

6.5.5.4 **Sixty-Seven percent (67%) of final reports required for this contract should be submitted no later than 60 days from the end of the performance period.** Failure to meet this requirement may result in not exercising the multiyear contract option (if applicable).

7.0 Applicable Publications

7.1 Publications applicable to this PWS are listed below:

Publication (Chapter/Page)	Date of Publication	Mandatory or Advisory	Website
Title 29, Code of Federal Regulations (CFR), Part 1910, Occupational Safety and Health Administration	Current Ed	M	https://www.osha.gov/laws-regs/regulations/standardnumber/1910
Department of Defense Instruction (DODI) 6055.01, Department of Defense Occupational Safety and Health (OSH) Program	14JUL2020	M	https://www.esd.whs.mil/Portals/54/Documents/DD/issuances/dodi/605501p.pdf
AR 40-5, Medical Services, Preventive Medicine.	12MAY2020	M	https://armypubs.army.mil/epubs/DR_pubs/DR_a/pdf/web/r40_5.pdf
AR 385-10, the Army Safety Program,	24JAN2017	M	https://armypubs.army.mil/epubs/DR_pubs/DR_a/pdf/web/ARN16777_ARN16343_AR385_10_FINAL.pdf
Department of the Army Pamphlet (DA PAM) 40-501, Medical Services, Army Hearing Program	8JAN2015	M	https://armypubs.army.mil/epubs/DR_pubs/DR_a/pdf/web/p40_501.pdf
DA PAM 40-11, Preventive Medicine	18MAY2020	M	https://armypubs.army.mil/epubs/DR_pubs/DR_a/pdf/web/p40_11.pdf
DA PAM 40-503, Medical Services, The Army Industrial Hygiene Program	2APR2013	M	https://armypubs.army.mil/epubs/DR_pubs/DR_a/pdf/web/p40_503.pdf
UFC 3-410-01FA, Heating, Ventilating, and Air Conditioning Systems	1NOV2019.	A	https://www.wbdg.org/FFC/DOD/UFC/ufc_3_410_01_2013_c5.pdf
Threshold Limit Values (TLVs) and Biological Exposure Indices (BEIs), American Conference of Governmental Industrial Hygienists (ACGIH)	Current Ed.	A	https://www.acgih.org/forms/store/ProductFormPublic/documentation-of-the-threshold-limit-values-and-biological-exposure-indices-7th-ed
Industrial Ventilation – A Manual of Recommended Practice for Design, ACGIH	Current Ed.	A	https://www.acgih.org/forms/store/ProductFormPublic/industrial-ventilation-a-manual-of-

			recommended-practice- for-design-30th-edition
American National Standards Institute (ANSI)/International Safety Equipment Association (ISEA) Z358.1-2014, Emergency Eyewash and Shower Equipment.	2014	A	https://www.gesafety.com/downloads/ANSIGuide.pdf
ANSI/American Society of Heating, Refrigerating and Air-Conditioning Engineers, Inc. (ASHRAE) 55-2020, Thermal Environmental Conditions for Human Occupancy.	2020	A	https://www.ashrae.org/File%20Library/Technical%20Resources/Standards%20and%20Guidelines/Standards%20Addenda/55_2013_b_20141209.pdf
ANSI/ASHRAE 62.1-2019, Ventilation for Acceptable Indoor Air Quality.	2019	A	https://www.ashrae.org/technical-resources/bookstore/standards-62-1- 62-2
Army Directive 2014-05 Policy and Implementation Procedures for Common Access Card Credentialing and Installation Access for Uncleared Contractors	7MAR2014	M	https://armypubs.army.mil/ProductMaps/PubForm/ArmyDir.aspx
AR 25-2 Army Cybersecurity	4APR2019	M	http://armypubs.army.mil/ProductMaps/PubForm/AR.aspx
AR 530-1 Operations Security	26SEP2014	M	http://armypubs.army.mil/ProductMaps/PubForm/AR.aspx
AR 525-13 Antiterrorism	9DEC2019	M	http://armypubs.army.mil/ProductMaps/PubForm/AR.aspx
AR 381-12 Threat Awareness and Reporting Program (TARP) (Section II, 2-4.b)	1JUN2016	M	http://armypubs.army.mil/ProductMaps/PubForm/AR.aspx

7.2 Applicable Forms: Forms applicable to the PWS are listed below:

Form	Date	Website
DD 441 Department of Defense Security Agreement	FEB2020	http://www.dtic.mil/whs/directives/forms/dd/ddforms0001-0499.htm

DD 250 Material Inspection and Receiving Report	AUG2000	https://www.esd.whs.mil/Directives/forms/dd0001_0499/ Via WAWF

TECHNICAL EXHIBIT 1

Performance Requirements Summary (PRS)

This PRS includes performance objectives the Government will use to determine contractor performance and will compare contractor performance to the Acceptable Quality Level (AQL).

Performance Objective	Performance Standard	Acceptable Quality Levels (AQL)	Surveillance Method / By Whom
The contractor shall contact On-site Point of Contact: State OHN Ms. Vernocia Boyd at (601) 918-3251 and IHT Mr. Ervin Troy at (601) 313-4718 within 30 days of contract award date to schedule site visit	The contractor shall perform this step 100% of the time.	.5% failure to perform this task.	Periodic Inspection – RIHS office will review monthly.
The contractor shall contact RIHS office before starting site survey with EXACT dates and time that each facility is surveyed	The contractor shall perform this step 100% of the time.	3% failure to perform this task.	Periodic Inspection – RIHS office will review monthly.
The selected contractor shall properly document the existing engineering, administrative and personal protective equipment used in each process.	The contractor shall perform this step 100% of the time.	3% failure to perform this task.	Periodic Inspection – RIHS office will review monthly.
The selected contractor shall evaluate all operational ventilation systems for compliance with applicable standards and notated inoperable systems with cause.	The contractor shall perform this step 100% of the time.	3% failure to perform this task.	Each submitted report – RIHS office will review monthly.
The selected contractor will conduct breathing zone sampling for all airborne hazards present due to the presents of maintenance activities.	The contractor shall perform this step 100% of the time.	3% failure to perform this task.	Each submitted report – RIHS office will review monthly.

The selected contractor shall measure noise levels on all operation equipment and record each measurement on a DD Form 2214.	The contractor shall perform this step 100% of the time.	3% failure to perform this task.	Each submitted report – RIHS office will review monthly.
The selected contractor shall perform noise dosimetry on as many maintenance personnel as possible. Personnel should be separated into SEGs, with description of job duties.	The contractor shall perform this step 100% of the time.	3% failure to perform this task.	Each submitted report – RIHS office will review monthly.

TECHNICAL EXHIBIT 2

Deliverables Schedule

PWS Reference / Deliverable Title	Frequency	Number of Copies	Medium/Format	Submit To
IH Survey Report	Provide within 90 calendar days from contract award date	1	Electronic Submission to RIHS mailbox	COR
1.4.5.2 AT Level 1 Awareness Training Certificates	Provide within 5 calendar days after employee completes training.	1	Electronic Submission	COR
1.4.5.4 iWATCH Training Certificates	Provide within 30 calendar days after employee completes training.	1	Electronic Submission	COR
1.4.5.6 OPSEC Training Certificates	Provide within 5 calendar days after employee completes training.	1	Electronic Submission	COR
1.4.10 Identification Media	Return within 14 days of employee's departure from contract performance.	Original(s)	Hard Copy	KO
Facility Information Table	Provide within 90 calendar days from contract award date	1 per facility	Attachment within IH Survey report	COR
Hearing Conservation Letter	Provide within 90 calendar days from contract award date.	1 per employee	Attachment within IH Survey report	COR
DD 2214 NGB version 1	Provide within completed reports	1	Original(s) Hard Copy	COR
Laboratory Analysis	Provide within completed reports	1	Original(s) Hard Copy	COR

Exhibit 1: Regulatory Programs Review

Program	Standard/Guidance	Applies	Program Documents Reviewed
OSHA Standard Chemicals	29 CFR 1910.1001 29 CFR 1910.1025 29 CFR 1910.1026 29 CFR 1910.1027 29 CFR 1910.1028 29 CFR 1910.1052	If Yes, specify	
Hazard Communication (HAZCOM)	29 CFR 1910.1200		
Electro-Magnetic Frequency (EMF)	29 CFR 1910.97		
Respiratory Protection	29 CFR 1910.134 AR 11-34		
Compressed Breathing Air (Supplied Air Respirators)	29 CFR 1910.134(i)(1)(ii) Grade D Air Testing		
Noise	29 CFR 1910.95 DA PAM 40-501		
Lasers	29 CFR 1910.1096 DA PAM 40-506		
Ionizing Radiation	29 CFR 1910.1096		
Permit-Required Confined Space	29 CFR 1910.146		
Bloodborne Pathogens	29 CFR 1910.1030		
Add other Programs			

Exhibit 2: Process Personal Protective Equipment Inventory

Type of PPE	PPE Codes	Comments (MFG, Model, NRR, etc.)	Process(es)
Eye			
Hearing			
Hand			
Clothing			
Respirator			
Additional PPE			
Example			
Type of PPE		**Comments**	**Process(es)**
Eye	a		1, 4 and 8
Hearing	g	E.A.R. NRR=31	1, 4, 5, 6 and 8
Clothing/Hand	a,g	Tyvek=QC, Gloves = Best Viton	3, 5, and 9
Respirator	a,2	Manufacturer-3M Model 6122 w/ 6100 cartridge/P100	

Eye and Hearing	Clothing and Hand Protection	Respiratory Protection	Protection	Process Number
a. Safety glasses or safety goggles	a. Tyvek suit	a. 1/2 faced	1. OV	1. Vehicle Maintenance
b. Chemical splash goggles	b. Long-sleeved shirt	b. Full face	2. OV w/ prefilter	2. Welding Operations
c. Non-ventilated goggles	c. Tyvek hood	c. Hood	3. Pesticide	3. Parts Cleaning
d. Face shield	d. Cloth hood	d. Helmet	4. N95	4. Sanding/Grinding
e. Welding goggles	e. Leather jacket or vest	e. Powered air PR	5. P100	5. Spray Painting
f. Welding helmet	f. Chemical resistant apron	f. Supplied air	6. Cont. Flow	6. Abrasive Blasting
g. Single hearing Protection	g. Chemical resistant gloves	g. SCBA	7. Press Demand	7. Soldering
h. Double hearing protection	h. Barrier creams	h. Other	8. Escape bottle	8. Woodworking
	i. Heat resistant gloves		9. Other	9. Battery Maintenance
	j. Cryogenic gloves			
	k. Other			

Exhibit 3: ARNG Shop Local Exhaust Ventilation Memorandum

NATIONAL GUARD BUREAU
111 SOUTH GEORGE MASON DRIVE
ARLINGTON VA 22204

ARNG-CSG-P

03 April 2014

MEMORANDUM FOR RECORD

SUBJECT: ARNG Maintenance Shop Local Exhaust Ventilation Measurements

1. Recent changes to Industrial Ventilation, A Manual of Recommended Practice for Design, 28th Edition, American Conference of Governmental Industrial Hygienists (ACGIH), 2013, have resulted in confusion when measuring our vehicle local exhaust ventilation (LEV) systems against the requirements.

2. Figure VS-85-02 in the manual specifies that minimum vehicle LEV system exhaust volumes are determined by the engine displacement, the engine revolutions per minute (RPM), the tailpipe exhaust temperature, and a 20% safety factor.

3. Industrial Hygienists from the Midwest Region Industrial Hygiene office and the US Army Public Health Command Region North completed a study where these measurements were collected from a wide assortment of vehicles currently in use in the Army National Guard.

4. The table below lists four example vehicles commonly serviced in our maintenance shops and the calculated engine idling exhaust flow requirements for each in cubic feet per minute (CFM).

Vehicle	Avg Tailpipe Temp (T_{exp})	Engine Displacement (D_{exp})	Engine Revolutions Per Minute (N)	Required Exhaust (Q_e)
LMTV	185 F	0.256 ft^3	850 RPM	**329 CFM**
M939 5-Ton	179 F	0.293 ft^3	650 RPM	**293 CFM**
HMMWV	297 F	0.219 ft^3	725 RPM	**222 CFM**
HEMTT	215 F	0.426 ft^3	725 RPM	**500 CFM**

5. Based on these calculations, projected size increases in vehicles, and system deterioration over time, the recommended value for system upgrades and future MILCON is **800 CFM per exhaust drop**. Current systems are measured against the values in the tables above.

6. ADDITIONAL ASSISTANCE. I am point of contact for this information and can be reached by phone at (410) 942-0273 x104 or email at kenneth.a.forsythe.civ@mail.mil.

FORSYTHE.KENNETH.AUST
IN.III.1244948533

KENNETH A. FORSYTHE, III
Chief, ARNG Industrial Hygiene

Exhibit 4: Example of Operation Description Format for Reports

Sample Process Description

CSMS Spray Painting Operation. The Paint Shop contained a large downdraft booth and was located adjacent to the vehicle maintenance bays in the "E" Wing of the CSMS. The dimensions of the booth were approximately 17.5 feet wide (17.5' W), 40 feet long (40' L), and 12.5 foot height (12.5' H). Vehicle sized swing hinge doors were installed at each end of the booth and four human entry/exit doors were approximately 3'W X 7'H. Two full time painters were assigned and reported that at the current workload they were required to paint for a duration of approximately four hours, two to three days per week.

Exhaust Ventilation. See Exhibit 5 for the recommended average for cross sectional air velocity in large paint booths by per minute (fpm). The paint booth at the CSMS had an average cross-sectional velocity of 64 fpm which did not meet the standard and one side of the booth performed much better than the other. Smoke testing demonstrated that the ventilation system was somewhat effective for removing air from the booth. The system should be serviced and balanced. Regular servicing and lubrication of belts, moving parts, and filtering systems will extend the life of the equipment and ensure effective performance.

Booth Pressure. The booth relative to the adjacent workspace was under the desired slight negative pressure. The ACGIH Ventilation Manual, Paragraph 13.75, explains that maintaining the paint booth under slight negative pressure will reduce the potential of toxic paint vapors escaping the booth into adjacent work areas.

Pressure Gauge (Manometer). Manometers were installed on the booth supply and exhaust filter banks to show the pressure drop as required by the OSHA 29 CFR 1910.94(c)(7)(iii)[b]. The manometers needed fluid, to be zeroed, and to be marked correctly.

Hazards and Assessments.

Air Sampling. The chemical agent resistant coating (CARC) applied during this survey contained isocyanates, acetone, and iron oxide pigmentation. Air sampling was performed on two personnel. Air sampling location, duration, and results are provided in Appendix X, Tables X-1 and X-2. All sampling results calculated as an 8-hour time weighted average concentration (TWA_8) met published standards.

Sound Pressure Levels. A sound level meter was used to measure the pressure levels in the booth during spray painting and all levels were found below the Army criterion threshold level of 85 dBA and are presented in Appendix X.

Personal Protective Equipment (PPE). Personnel donned disposable coveralls (Tyvek), gloves, and supplied airline respirators.

Emergency Equipment. An emergency eyewash and shower unit were provided next to the paint mixing area. The unit was documented as inspected weekly and provided tepid flushing fluid as recommended by ANSI/ISEA Z358.2014, Emergency Eyewash and Shower Equipment.

Exhibit 5: Deficiency Log

NGB Southeast Region IH Office Facility Hazard Abatement Log

Enter Facility Name Deficiency Report - Enter Survey Date					
Reported Deficiency	**Description/Comments**	**Regulatory or Applicable Guidance**	**Assigned RAC**	**Recommendation**	**Status**

Exhibit 6: Facility Information

Facility Name	
Facility Type	
Old Facility name	
Facility Status	
Facility Size (Approx.)	
Facility Personnel #	
Unit	
Facility Address	
Work days	
Work Hours	
Maintenance Bays #	
# Admin Personnel	
# Maintenance Personnel	
Battery Charging	YES or NO
Paint/Spray Booth	YES or NO
Brakes replacement	YES or NO
Sheet metal work	YES or NO
Welding	YES or NO
Soldering	YES or NO
Other	

Exhibit 7: Health Risk Assessment Codes

Assigning risk assessment codes

a. During completion of the worksite survey, identify shop deficiencies evaluated in terms of compliance with Federal standards, Service specific regulations, authoritative standards and recommended practices. Each deficiency shall be assigned a risk assessment code (RAC) based on the type of risk: health, noise, safety or ergonomic. Once a RAC is assigned for each deficiency, recommendations are made for corrective actions and included in the spreadsheet provided for placement into the shop hazard abatement plan or its equivalent.

(1) *Health risk assessment code.* In calculating a health RAC, four criteria are used: exposure conditions, medical conditions, exposure duration, and number of personnel exposed (or specified similar exposure group (SEG)).

(2) *Noise risk assessment code.* A noise RAC can be determined for either steady-state or impulse noise exposures. The exposure level, long-term frequency (consistency), and number of personnel exposed (or specified SEG) are the criteria used to calculate the RAC.

DERIVING RACs FOR CHRONIC HAZARDS
Department of Defense Instruction 6055.01, Appendix to Enclosure 3
Department of Defense Safety and Occupational Health Program, 14 July 2020.

DETERMINING RACs

1. DETERMINING RACs FOR SAFETY AND FIRE HAZARDS. Use the matrix in Table 1 to determine the RACs for safety and fire hazards.

Table 1. RAC Matrix

Hazard Severity		Mishap Probability			
Description	Code	A Likely to occur immediately	B Probably will occur in time	C Possible to occur in time	D Unlikely to occur
Death, permanent total disability, or loss of facility or asset	I	1 Critical	1 Critical	2 Serious	4 Minor
Permanent partial disability or major property damage	II	1 Critical	2 Serious	3 Moderate	4 Minor
Lost workday injury or compensable injury, or minor property damage	III	2 Serious	3 Moderate	4 Minor	5 Negligible

Injury involving first aid or minor supportive medical treatment, a minimal threat to personnel or property, or a violation of a standard	IV	4 Minor	4 Minor	5 Negligible	5 Negligible

2. DETERMINING RACs FOR CHRONIC HAZARDS. Use the Table 1 matrix and descriptions in Tables 2 through 8 to determine the RAC for chronic hazards.

a. Determining the HHSC. The HHSC reflects the magnitude of exposure to a single physical, chemical, or biological agent and the effects of chronic exposure.

(1) Use the procedures in Tables 2 and 3 to assess exposure points.

(2) Total the exposure points assessed in Tables 2 and 3.

(3) Use Table 4 to determine the HHSC based on the total points assessed.

Table 2. Exposure Points Assessed

Alternate Exposure Route?	Exposure Condition			
	95th percentile < 0.1 occupational exposure limit (OEL)	95th percentile between 0.1 OEL and 0.5 OEL	95th percentile between 0.5 OEL and OEL	95th percentile > OEL
No	0	3	5	7
Yes	1 – 2	4	6	9

Table 3. Medical Effects Points Assessed

Condition	Points
No medical effect, such as nuisance noise and nuisance odor	0
Temporary reversible illness requiring supportive treatment, such as eye irritation and sore throat	1 – 2
Temporary reversible illness with a variable but limited period of disability, such as metal fume fever	3 – 4
Permanent, non-severe illness or loss of capacity, such as permanent hearing loss	5 – 6
Permanent, severe, disabling, irreversible illness, such as asbestosis, lung cancer, or death	7 – 8

Table 4. Determining the HHSC

Total Points (sum of exposure and medical effects points)	HHSC
13 – 17	I
9 – 12	II
5 – 8	III
0 – 4	IV

b. Determining the Effect Probability Category (EPC). The EPC is a function of the duration and frequency of exposure and the number of exposed personnel.

(1) Use the guides in Tables 5 and 6 to assess the frequency and duration of exposure points assessed.

(2) Sum the points in Table 5 for exposure duration and exposure frequency, divide by 2, then round up. Add those points with the exposed personnel points assessed in Table 6.

(3) Use Table 7 to determine the EPC for chronic hazards based on the points totaled from Tables 5 and 6.

Table 5. Duration and Frequency of Exposure Points Assessed

Points	Exposure Duration							
	> 8 hrs/day	6-8 hrs/day	4-6 hrs/day	2-4 hrs/day	1-2 hrs/day	30-60 min/ day	15-30 min/ day	0-15 min/ day
	8	8	6	5	4	3	2	1
Points	Exposure Frequency							
	Daily	2-3 times/ week	Weekly	2-3 times/mo n	Monthly	Quarterly or 2-3 times/year	Annual	Less Than Annual
	8	7	6	5	4	3	2	1

Table 6. Number of Exposed Personnel Points Assessed

Number of Exposed Workers	Points
< 5	1 - 2
5 - 9	3 - 4
10 - 49	5 - 6
> 49	7 - 8

Table 7. Determining the EPC

Total Points from Tables 5 and 6	EPC
14 - 16	A
10 - 13	B
5 - 9	C
< 5	D

(1) Determining the RAC for Health Hazards. Determine the RAC for chronic hazards by using the matrix in Table 8 to account for HHSC and EPC.

Table 8. Determining the RAC for Health Hazards

HHSC	EPC			
I	1	1	2	3
II	1	2	3	4
III	2	3	4	5
IV	3	4	5	5

Exhibit 8: Noise Risk Assessment Code (RAC)

To determine the Noise Risk Assessment Code (RAC) for inclusion on the DA Form 4700.

1. Determine the number of personnel in a similar exposure group (SEG)/occupational exposure group (OEG).

Example: 20 personnel at the aviation facility (AASF) wear noise dosimeters. 10 are aircraft mechanics, 5 are ground support personnel, and 5 are machinists. There are three SEGs/OEGs, they are 'aircraft mechanics', 'ground support', and 'machinists'.

2. Calculate the Upper Tolerance Limit (UTL) for groups of 6 or more in a SEG/OEG

Example: The 10 aircraft mechanic results are used to calculate a UTL of 91 dBA. The ground support and machinist personnel have individual noise TWA_8s because there are not at least 6 in their SEG/OEG.

3. Compare each to the simplified noise RAC table.

	# of people in SEG/OEL	
Results for individual or group UTL	< 10	10 or more
< 82 dBA	**4**	**3**
82 dBA and over	**3**	**2**

Example: The aircraft mechanics UTL of 91 dBA results in a noise RAC 2 (10 or more people + 82 dBA or greater). Two sample results for the machinists were 78 TWA_8 dBA and 83 TWA_8 dBA. The 78 TWA_8 dBA results in a noise RAC 4 and the 83 TWA_8 dBA results in a noise RAC 3 using the simplified noise RAC table

Exhibit 9: Noise Survey - DD Form 2214

NOISE SURVEY
(Sound Level Meter Survey)

1. DATE *(YYYYMMDD)*	2. TYPE SURVEY *(Enter code)* 1 - INITIAL SURVEY 2 - RE-SURVEY 3 - OTHER

3. SOUND LEVEL METER		4. MICROPHONE		5. CALIBRATOR	
a. MANUFACTURER		a. MANUFACTURER		a. MANUFACTURER	
b. MODEL	c. SERIAL NO.	b. MODEL	c. SERIAL NO.	b. MODEL	c. SERIAL NO.
d. LAST ELECTROACOUSTIC CALIB DATE *(YYYYMMDD)*		d. LAST ELECTROACOUSTIC CALIB DATE *(YYYYMMDD)*		d. LAST ELECTROACOUSTIC CALIB DATE *(YYYYMMDD)*	

6. WIND SCREEN *(X one)*		7. MEASUREMENTS OBTAINED *(X one)*	
USED	NOT USED	INDOORS	OUTDOORS

8. DESCRIPTION OF AREAS/DUTIES WHERE NOISE SURVEY CONDUCTED *(Illustrate on additional sheet and attach to form)*	9. PRIMARY SOURCE OF NOISE
	10. SECONDARY SOURCE OF NOISE

11. SOUND LEVEL DATA					12. PROTECTION REQUIRED *(In: dBA - Level)*			
a. LOCATION	b. METER ACTION	c. dBC	d. dBA	e. RISK ASSESSMENT CODE	a. NONE *(Less than 85)*	b. PLUG OR MUFF *(85-102)*	c. PLUG AND MUFF *(103-108)*	d. PLUG + MUFF + TIME LIMIT *(Above 108)*

NOTES: Range of levels noted by /; i.e., 102/109. At operator stations, measure at ear level.
METER ACTION: Enter F for fast meter action and S for slow meter action.

13. REMARKS *(i.e., Area and equipment posted, hearing protection in use, etc.)*

INSTRUCTIONS

(Refer to DoD Component Instructions for Additional Guidance)

PURPOSE: This form is intended to record noise survey results for the identification of potentially noise-hazardous environments.

GENERAL: Print all information in ink. Only medical, industrial hygiene, safety, or engineering personnel who meet training requirements specified by the DOD components will make sound level measurements.

1. Date - Enter date noise survey conducted (e.g., if Jan. 14, 1999, enter 19990114).

2. Type, Survey - Enter appropriate numeric code in box (e.g., enter "1" if area or operation not surveyed before or no available records of previous survey; enter "2" if resurvey conducted at regular intervals (such as once each 12 months); or enter "3" if noise being reevaluated to confirm validity of previously obtained measurements or for purposes other than indicated).

3. Sound Level Meter:
   a. Mfgr - Enter name of company that produced sound level meter.
   b. Model - Enter manufacturer's designation.
   c. Serial No. - Enter manufacturer's serial number.
   d. Last Electroacoustic Calib Date - Enter year, month, day (see Item 1) of last comprehensive calibration required by DOD component. Not to include calibration checks made with acoustical calibrator.

4. Microphone (Fill in this section if microphone is detachable from sound level meter)
   a. Manufacturer - Enter name of company that produced microphone.
   b. Model - Enter manufacturer's designation.
   c. Serial No. - Enter manufacturer's serial number.
   d. Last Electroacoustic Calib Date - Enter year, month, and day (see Item 1) of last comprehensive calibration as required by DOD component.

5. Calibrator:
   a. Manufacturer - Enter name of company that produced calibrator.
   b. Model - Enter manufacturer's designation.
   c. Serial Number. Enter manufacturer's serial number.
   d. Last Electroacoustic Calib Date. Enter year, month, and day (see Item 1) of last comprehensive calibration as required by DoD component.

6. Wind Screen - Check appropriate box indicating if manufacturer's device to reduce wind noise is mounted over microphone assembly.

7. Measurements Obtained - Check appropriate box indicating if measurements obtained indoors or outdoors.

8. Description of Areas/Duties Where Noise Survey Conducted - Include building number(s), name of activity and/or operation, identify specific microphone locations, performance conditions and descriptions of machinery (e.g., rpm, load, etc). Where applicable, include noise-hazard contours of area. On additional sheet make simple line drawing of area and identify noise sources and locations of measurement.

9. Primary Source of Noise - If possible, identify the location(s) of the highest dBA value.

10. Secondary Source of Noise - If possible, identify all other noise sources when the primary noise source is off (e.g. background noise sources and other noise sources that may or may not be noise hazardous).

11. Sound Level Data
   a. Location - Position where measurement is obtained should correspond with those identified, or illustrated on form.
   b. Meter Action - See Notes in Sound Level Data Sec. levels measured with weighting switch of meter in "C" position.
   c. dBC - If required by DOD component, enter sound levels measured with weighting switch of meter in "C" position.
   d. dBA - Enter sound levels measured with weighting switch of meter in "A" position. See NOTES in Sound Level Data Section.
   e. Risk Assessment Code - Enter expression of risk that combines elements of hazard severity and mishap probability. Hazard severity categories shall be assigned by roman numeral as follows:
   (1) Category I - Catastrophic: May cause death or loss of a facility (Code I).
   (2) Category II - Critical: May cause severe injury, e.g., severe occupational illness, or major property damage (Code II).
   (3) Category III - Marginal: May cause minor injury, e.g., minor occupational illness, or minor property damage (Code III).
   (4) Category IV - Negligible: Probably would not affect personnel safety or health, but is nevertheless in violation of specific criteria (Code IV). Mishap probability shall be assigned capital letter according to following criteria:
   (a) Subcategory A: Likely to occur immediately or within a short period of time (Code A).
   (b) Subcategory B: Probably will occur in time (Code B).
   (c) Subcategory C: May occur in time (Code C).
   (d) Subcategory D: Unlikely to occur (Code D).
Enter codes as IIB, IIIC, etc. Refer to DOD Instruction 6055.1/DOD component instructions for specific definitions and guidance.

12. Protection Required (re: dBA Level)
   a. None (less than 85: If dBA levels less than 85, check this column. No hearing protectors required.
   b. Plug or Muff (85 - 108): If dBA levels 85 - 108 inclusive, check this column. Earplugs, ear muffs, ear-canal caps, or noise-attenuating helmet required.
   c. Plug and Muff (108 - 118): If dBA levels over 108 to 118 inclusive, check this column. Earplugs worn in combination with ear muffs or noise-attenuating helmet required.
   d. Plug, Muff & Time: If dBA levels over 118, check this column. Earplugs worn in combination with ear muffs or noise-attenuating helmet and time limit (to be determined by DOD component) required.

13. Remarks - Enter type of hearing protection in use, whether area and equipment posted with appropriate caution signs, etc.

14. More Detailed Noise Evaluation Required - Check "yes" box if more detailed noise evaluation is required; check "no" box if not. Specify the type of evaluation needed (e.g., octave band analysis, etc.).

15. Name(s) of Persons Identified for Audiometric Monitoring - List names of individuals routinely exposed to noise in preceding locations.

16. Supervisor of Noise - Hazardous Area or Operation - Enter name (surname, given name, & middle initial) of the first-echelon (immediate) supervisor of the location (and personnel) surveyed.

17. Survey Performed by - Enter name (surname, given name & middle initial) of individual performing survey & signature.

18. Hearing Conservation Monitor - Enter name of individual reviewing survey results & signature. Usually local surgeon or designated representative.

DD FORM 2214 (BACK), JAN 2000

Reset

Exhibit 10: Hearing Notification Letter

NATIONAL GUARD BUREAU REGIONAL INDUSTRIAL HYGIENE SOUTHEAST
OFFICE 510 PLAZA DRIVE, SUITE 1530, COLLEGE PARK, GA 30349

Hearing Conservation Program Notification Letter

Subject: Employee Notification of Noise Surveys Sampling Results

1. Department of the Army (DA) regulations require employees be notified of their exposure results from Industrial Hygiene surveys. The following results are from the noise survey performed at _____.

EMPLOYEE NOISE EXPOSURE 8-HR TWA

2. Statistical calculations (UTL calculations or if less than 6 in SEG, use individuals' exposure level) of the employee's exposure indicate levels below the Department of the Army, Department of Defense Instruction (DODI) 6055.12 noise standard of 85dBA. Therefore, you do not need to be included in the Hearing Conservation Program.

3. As a precaution you should continue to:

a. Wear either earplugs or muffs whenever noise levels are greater than or equal to 85 dBA.

b. Obey warning signs throughout the installation in noise hazardous areas and on equipment which require personnel to wear hearing protection.

c. Have a copy of this notification letter placed in your employee file.

d. If you have any questions regarding this matter, contact the State Occupational Health Office.

Exhibit 11 Typical Processes that occur at ARNG Facilities

This list is not all inclusive. Using professional judgment, list all potentially hazardous processes whether planned in the near future, currently operational, or previously occurred.

Do not limit evaluation to the operations on this list.

CSMS MATES UTES FMS ASP RTSM	Vehicle and Equipment Maintenance, Inspection, and Repair Battery Charging and Maintenance Brake Pad Replacement Solvent Use and Parts Washing Vehicle Idling Welding, Grinding, and Cutting Metals Machining Spray Painting (Aerosol Can and/or Compressed Air Application) Canvas and Vinyl Repair Woodworking and Crate Construction Flammable and Combustible Materials Storage Warehousing, Storage, and materials handling Electronics Repair and Soldering Weapons Storage, Repair, and Test Firing Night Vision Device (NVD) Repair and Nitrogen Purging Spent shell casing sorting, deforming, and recycling.
AVCRAD AASF LAASF AAFA AAOF TUAS Hangars	Rotary Aircraft Maintenance, Inspection, and Repair Confined Space Entry – Fuel Cells, Tail Boom Battery Charging and Maintenance Solvent Use and Parts Washing Welding, Grinding, and Cutting Metals Machining Spray Painting (Aerosol Can and/or Compressed Air Application) Aviation Life Support Equipment (ALSE) Canvas and Vinyl Repair Flammable and Combustible Materials Storage Warehousing and Storage Electronics Repair and Soldering Aircraft Blade Repairs (solvents, epoxy, isocyanates) Engine Test

Attachment 3: Required Industrial Hygiene Equipment and Supplies

All Equipment on this list must be provided by the contractor for the survey and be under current calibration (if applicable).

Equipment	Capability	Purpose	Quantity
Air velocity Meter	Air velocity in feet per minute	Test Ventilation - Assess air velocity and volume for paint booths, welding hoods, slot hoods, vehicle tailpipe exhaust systems, etc.	1 per survey location
Indoor Air Quality Meter	Carbon Monoxide, Carbon Dioxide, Percent Relative Humidity, Temperature	Measure indoor air quality parameters.	1 per survey location
Noise Dosimeters	Data log for both OSHA and Army/ACGIH criteria	Conduct 8-hour time weighted average sampling on maintenance personnel	10 per survey location
Noise Dosimeter Tone Generator	Acceptable for use with dosimeter make/model	For calibration of dosimeters	1 per survey location
Smoke Candles (cool burning)	Flameless, spark free product that emits smoke.	Study airflow patterns in paint booths and media blast booths	1 per booth
Tape Measure	Standard U.S. measurement	Measure diameter of hoods, dimensions of booths, etc.	1 per survey location