INDUSTRIAL HYGIENE SUPPORT SERVICES

CLIN 3 ACTIVITY 6

PERFORMANCE WORK STATEMENT

1.0 REQUEST INFORMATION

1.1 **Type of Activity:** The Industrial Hygiene Program Support Services Activity is a firm fixed-price Activity.
1.2 **Description:** Industrial Hygiene Program Support Services
1.3 **Location:** Albany, OR (ALB); Morgantown, WV (MGN); and Pittsburgh, PA (PGH), U.S. Department of Energy (DOE), National Energy Technology Laboratory (NETL) sites.
1.4 **Travel**: Travel is anticipated, including regular management visits to the ALB, MGN, and PGH sites and staff visits for infrequent support of extensive surveys/assessments. The Contractor will coordinate travel to minimize overall travel costs.
1.5 **Training**: Training is anticipated to maintain certifications required to perform the scope of work requirements based on specific needs or certifications, as approved in advance by the Activity Contracting Officer's Representative (ACOR) and will be provided by NETL at minimal levels to support requirements. Normal operations should use on-line training resources to minimize cost of training and any associated travel. Sound judgement to defer training as cost saving measures shall be implemented as approved by the ACOR.

2.0 GENERAL REQUIREMENTS

2.1 This Activity is covered by the Service Contract Act.

2.2 This Activity does require on-call support based on approval by the ACOR. *The historical annual average of on-call support is 5 for all three NETL sites.*

2.3 A Certified Industrial Hygienist (CIH) shall be part of the on-site Contractor's support staff.

2.4 The historical data included in this PWS is provided to support the typical conditions of the work covered in this PWS. All data is subject to change and should be verified by the contractor.

3.0 DESCRIPTION OF SERVICES

3.1 The Contractor shall provide Industrial Hygiene Program Support Services as defined in this PWS. Industrial Hygiene Program Support Services include:
3.1.1 Industrial Hygiene (IH)
3.1.2 Personal Exposure and Workplace Monitoring
3.1.3 Ventilation Program
3.1.4 Radiation Monitoring and Protection Support
3.1.5 Personal Protective Equipment (PPE)
3.1.6 Hazard Communication (HazCom)
3.1.7 Chemical Hygiene Program
3.1.8 Toxic Gas Alarm Systems

4.0 SCOPE

4.1 **<u>Industrial Hygiene</u>**
The Contractor shall provide support and maintain the industrial hygiene program activities in accordance with DOE, Federal, State, Local, and NETL directive requirements. Responsibilities include:

4.1.1 Performing sampling and monitoring for various hazards

4.1.1.1 Provide sampling for various hazards such as air toxins, mold, radon, lead, and other suspect hazards, to determine potential contaminants in workplace conditions are properly recognized, evaluated, controlled, and that no NETL Personnel is exposed to hazards at unsafe levels. *Historical average for samples collected annually for all three NETL sites are: Mold: 18 samples; Lead: 500 samples; Mercury: 3 samples; Polychlorinated Biphenyls (PCBs): 3 samples; Radio Frequency (RF): 3 surveys (ranging between 10-20 readings); Unique Requested Reports: 10 reports with surveys (e.g., equipment contamination surveys, disposition surveys, etc.).*

4.1.1.2 Provide sampling and monitoring for asbestos to which presumed or suspect asbestos-containing materials (ACM) are properly assessed in the determination of the presence or absence of ACM, to prevent the release of asbestos fibers, and that no NETL Personnel is exposed to ACMs at unsafe levels. *Historical average for samples (bulk and air) collected annually for all three NETL sites is 600.*

4.1.2 Response Actions to Minor Asbestos Fiber Release Episodes (≤ 3ft^2 or 3 linear feet)

4.1.2.1 <u>NETL-Albany:</u>

- Exemption per OAR 340-248-0250(1)(f).
- In-house encasement or encapsulation response efforts are permitted, follow Class III Asbestos Work Activities per 40 CFR 763.92(a).

4.1.2.2 **<u>NETL-Morgantown</u>**:

- Exemption per WV §16-32-11(c) and WV §64-63-10.3.
- In-house encasement or encapsulation response efforts are permitted, follow Class III Asbestos Work Activities per 40 CFR 763.92(a).

4.1.2.3 <u>NETL-Pittsburgh:</u>

- No Exemption per Allegheny County Health Department (ACHD) Article XXI Air Pollution Control (§2105.62(g)).
- Isolate the area of concern and notify the ACOR to initiate procurement of an AA/RC for an Undersized Project. No in-house encasement or encapsulation response efforts are permitted.
- The Contractor shall assist in obtaining cost estimates for asbestos abatement and remediation activities.

4.1.3 Maintaining and calibrating equipment

4.1.3.1 Calibrate and maintain all portable industrial hygiene monitoring equipment used in the execution of work described in this Activity to support the effort of equipment functionality.

4.1.3.2 Maintain the equipment necessary to perform annual respiratory fit testing and tracking records/notifying NETL Personnel of the need for annual fit testing, to support the effort of equipment functionality and the accuracy of maintaining records.

4.1.4 Maintaining industrial hygiene-related programs

4.1.4.1 Provide industrial hygiene-related safety training, as requested, to support the effort of having NETL Personnel receive the proper instruction required to perform their work safety, competently, and in compliance with all regulatory requirements.

4.1.4.2 Provide specialized training/instruction on specific topics such as, showing maintenance crews how to cut lead- based painted metal, to support the effort of having NETL Personnel receive the proper instruction required to perform their work safely, competently, and in compliance with all regulatory requirements.

4.1.5 Updating industrial hygiene-related inventories

4.1.5.1 Maintain and update an inventory spreadsheet of testing results for asbestos-containing materials (ACM), in order to provide the accuracy of maintaining re-assessment condition checks of known ACM. Updates include quarterly responses to the Active Facility Data Collection System (AFDCS).

4.1.5.2 Maintain and update an inventory of testing results for lead-contaminated materials in order to provide the accuracy of maintaining records.

4.2 <u>Personal Exposure and Workplace Monitoring</u>

The Contractor shall provide support and maintain the personal exposure and workplace monitoring program activities that are compliant with DOE, Federal, State, Local, and NETL directive requirements. Responsibilities include:

4.2.1 Performing personal exposure and workplace environment monitoring

4.2.1.1 Provide indoor air quality monitoring and consulting services to determine whether potential contaminants in workplace conditions are properly recognized, evaluated, controlled, and that no NETL Personnel is exposed to hazards at unsafe levels. The Contractor shall monitor indoor air quality and interpret results in response to complaints or concerns and provide recommendations for corrective actions. *Historical average of indoor air quality samples collected annually for all three NETL sites is 20, or 2-3 surveys per site.*

4.2.1.2 Conduct noise monitoring to determine whether NETL Personnel are properly entered into the hearing conservation program, and that no NETL Personnel is exposed to noise levels above the OSHA permissible exposure limits (PELs). *Historical average for samples collected annually for all three NETL sites is 25.*

4.2.1.3 Conduct chemical monitoring, including nanomaterials, lead, and asbestos, to determine whether NETL Personnel are properly entered into NETL's medical surveillance monitoring program, and that no NETL Personnel is exposed to unsafe levels of chemicals, asbestos, or other potentially hazardous materials per DOE, Occupational Safety & Health Administration (OSHA) regulations, American Conference of Industrial Hygienists (ACGIH) guidelines, National Institute for Occupational Safety and Health (NIOSH) recommendations, or other consensus standards.

4.2.1.4 Conduct carcinogen and reproductive hazard monitoring to determine whether NETL Personnel are properly entered into the medical surveillance monitoring program and to ensure that no NETL Personnel is exposed to carcinogens or reproductive hazards at unsafe levels.

4.2.1.5 Conduct light surveys to determine whether adequate, effective, and well-balanced levels of illumination are established in workplace conditions. *Historical average for surveys annually conducted for all three sites is 6.*

4.2.1.6 Provide sampling and analysis of potentially hazardous materials/exposures related to construction/renovation/project activities to determine whether potential contaminants in workplace conditions are properly recognized, evaluated, controlled, and that no NETL Personnel is exposed to hazards at unsafe levels.

4.2.2 Maintaining and calibrating monitoring equipment

4.2.2.1 Personal monitoring equipment will be supplied to personnel working in environments with potential exposures to noise, radiation, chemicals, and other personal safety hazards. Negative exposure assessments can be utilized (if practical) to minimize exposure monitoring costs.

4.2.3 Maintaining industrial hygiene-related programs

4.2.3.1 Maintain the hearing conservation programs with assistance from the Occupational Health Program Support Services CLIN 4 Activity 2 to determine the appropriate surveillance of work area conditions are properly assessed and controlled.

4.2.4 Updating industrial hygiene-related inventories

4.2.4.1 Maintain and track the carcinogenic and reproductive hazards at NETL. The tracking list will be made available to the ACOR upon inquiry.

4.3 Ventilation Program

The Contractor shall provide support and maintain ventilation program activities that are compliant with DOE, Federal, State, Local, and NETL directive requirements. Responsibilities include:

4.3.1 Performing ventilation and performance assessments

4.3.1.1 Provide exhaust ventilation surveys, evaluating ventilation, and providing recommendations for improvements to determine the functionality of engineering controls.

4.3.1.2 Provide face velocity or other measurements on existing and new hoods before their use and at least annually to coincide with the Safety Analysis Review System (SARS) assessment date to support the effort of compliance with NETL policy and to determine the functionality of engineering controls. The Contractor will alert the responsible DOE representative and project personnel of deficiencies in hood performance and tag out noncompliant hoods. An approximate break-down of in-service exhaust ventilation at all three NETL sites are:

Exhaust Ventilation Systems	ALB Site	MGN Site	PGH Site
In Service	94	115	221
Not Required/Out-of-Service	88	14	12

Note: A list of existing exhaust ventilation systems currently evaluated in performance of this Activity are provided in Attachment 1 of this PWS. Out-of-service systems that are brought back into operation and/or new exhaust ventilation systems that are to be installed, shall be included in Attachment 1 of this PWS for inspection and evaluation.

4.3.1.3 Assess performance of ventilation flow alarm systems in each fume hood and hazard control ventilation systems to determine the functionality of engineering controls.

4.3.1.4 Assess performance of local ventilation systems and devices for compliance with DOE determinations for proper performance level and alerting the designated DOE representative to any deficiencies to determine the functionality of engineering controls. The Contractor will provide expert consultation and assistance to correct deficiencies.

4.3.1.5 Support the design of new or modified ventilation systems to determine the effectiveness of identified engineering controls.

4.4 Radiation Monitoring and Protection Support

The Contractor shall provide support and maintain radiation program support activities that are compliant with DOE, Federal, State, Local, and NETL directive requirements. Responsibilities include:

4.4.1 Performing radiation monitoring (ionizing and non-ionizing)

4.4.1.1 Conduct annual leak testing of radiation sources (that meet the criteria outlined in 10 CFR 31.5), shielding, and control areas to determine the accountability of operating with radioactive sources as well as to prevent unplanned exposures and loss of sources.

4.4.1.2 Conduct accountability and leak checking of any equipment operating with radioactive sources to

ensure source integrity, as well as to prevent unplanned exposures and loss of sources.

4.4.1.3 Conduct radiation surveys and inspections to determine the integrity and adequacy level of radiological safety and compliance with 10 CFR 835.

4.4.1.4 Conduct microwave leak/field strength monitoring (periodically and annually) of research microwaves (industrial scientific medical equipment (ISME)) to ensure leakage rates are below U.S. Food and Drug Administration (FDA) or manufacturer recommendations. *Historical estimated surveys collected annually for all three NETL sites is 9.* A list of existing microwaves currently evaluated for leak/field strength monitoring in performance of this Activity are provided in Attachment 2 of this PWS.

4.4.1.5 Conduct visual condition inspections (annually) of DOE-Owned microwaves that are suspected of leaking. If a DOE-Owned microwave is not in compliance with 21 CFR 1030 performance standards and is repaired, ensure leakage rates are below U.S. FDA or manufacturer recommendations prior to being returned to service, as requested. *Historical estimated DOE-Owned microwaves for all three NETL sites is 145.*

4.4.2 Maintaining radiation protection-related programs

4.4.2.1 Provide radiation safety training, as requested, to support the effort of having NETL Personnel receive the proper instruction required to perform their work safety, competently, and in compliance with all regulatory requirements.

4.4.3 Assessing the risks/impacts to human health based on exposure monitoring/dosimetry results

4.4.3.1 Provide dosimetry review and calculations to determine whether detected and confirmed intakes are adequately evaluated and that the occupational dose will not exceed limitations.

4.4.3.2 Conduct quarterly exposure monitoring and record keeping in determining the integrity and adequacy of radiological safety are in compliance with 10 CFR 835.

4.4.3.3 Administer the dosimeter/radiation film badge program, as requested, to determine whether the maximum occupational dose will not exceed limitations. Negative exposure assessments can be utilized (if practical) to minimize exposure monitoring costs. *Historical average for samples collected quarterly for all three NETL sites for radiation dosimetry (rings/badges) is 175.*

4.4.3.4 Provide an annual radiation dose report to each individual monitored for the year in compliance with 10 CFR 835. Radiation dose reports shall be approved by the Radiation Safety Officer prior to notifying the individual NETL Personnel. *Historical estimated radiation dose reports for all three NETL sites is 175.*

4.4.4 Maintaining and updating radiation protection-related inventories

4.4.4.1 Maintain an inventory of source radioactive materials (e.g., x-ray generating devices, sealed sources, and microwaves) and known naturally radioactive materials/technologically enhanced naturally occurring radioactive materials (NORM/TE-NORM).

4.4.4.2 Provide annual updates to site radiation source inventory information to determine the physical location of each source; verify the presence and adequacy of associated postings and labels; and to establish the adequacy of storage locations, containers, and devices.

4.4.4.3 Maintain and update an inventory spreadsheet of Occupational Radiation Exposure Monitoring Data, to provide the accuracy of occupational radiation exposures for all

monitored individuals. Updates include annual responses to the Radiation Exposure Monitoring System (REMS) Repository.

4.4.4.4 Request a basic inventory of all microwaves with assistance from the Property Management Support Services CLIN 3 Activity 6 to ensure microwaves can be located during applicable inspections and monitoring. Recommended basic inventory information should include but is not limited to: DOE-property tag number, model, serial number, manufacturer, year of manufacture, wattage, and location.

4.5 Personal Protective Equipment (PPE)

The Contractor shall provide support and maintain the personal protective equipment program activities that are compliant with DOE, Federal, State, Local, and NETL directive requirements. Responsibilities include:

4.5.1 Maintaining PPE-related programs

4.5.1.1 Identify hazards, processes, or tasks that require PPE and provide specifications for PPE that is compliant with OSHA regulations or consensus standards for use, materials, and construction to determine the adequate level of protection.

4.5.1.2 Evaluate and propose PPE use as part of the SARS processes or as requested by the ACOR.

4.5.1.3 Maintain PPE via distribution pools to minimize overall cost of the PPE program. High-cost PPE (greater than $100) will be managed via training to ensure costs are reasonable, with supervisory review and ACOR review (e.g., safety footwear should last a minimum of a year with proper maintenance and should be allocated accordingly, unless approved by an individual's supervisor with ACOR review).

4.5.1.4 Provide consultation services related to chemical hygiene and the use of PPE to determine whether the implementation of protection is adequately selected for identified safety and health hazards (e.g., physical, chemical, environmental, and electrical).

4.5.1.5 Provide PPE training, as needed, for:

4.5.1.5.1 NETL Personnel before they start new work activities with potential risks for exposure to hazards.

4.5.1.5.2 New hires when they begin work at NETL.

4.5.1.5.3 Provide annual respiratory protection awareness training for Wildfire Smoke safety to NETL-Albany Personnel <u>prior</u> to the Wildfire season (June). For contractor and subcontractor employees who are not under the control of NETL, awareness training presentation documentation will be made available when the Air Quality Index (AQI) is greater than or equal to 101.

4.5.1.6 Maintain the respiratory protection programs with assistance from the Occupational Health Program Support Services CLIN 4 Activity 2 to determine appropriate surveillance of work area conditions are properly assessed and controlled.

4.5.1.6.1 Provide respirator fit testing at NETL-Albany, NETL-Pittsburgh, and NETL-Morgantown for NETL Personnel whose job duties require the use of respiratory protection equipment to determine respirator functionality. Exclusions for providing respirator fit testing include:

- Asbestos Abatement/Renovation Contractors (AA/RC)
- Lead Renovation or Abatement Contractors
- Mold Remediation Contractors
- Off-site Construction Contractors and Subcontractors
- On-site Contractors and Subcontractors who are not under the control of NETL such as NETL-Albany Support Services for Janitorial, and Grounds & Maintenance.

4.5.1.6.2 Provide respirator fit testing during Wildfire Season (June – October) at NETL-Albany when the AQI is greater than or equal to 501 for NETL Personnel whose job duties are deemed essential and involve working in the following conditions:

- Exterior (outdoor) work activities. Exemptions for intermittent exposure include those activities which are less than 15 minutes in an hour –OR—less than two hours (2hrs) in a single 24-hour period.

- Reside or operate in a non-ventilated work environment (i.e., an enclosed building without a mechanical ventilation system).

- Operate vehicles without an air filtration system.

4.5.1.7 Maintain, inspect, and clean PPE equipment to support the effort of maintaining the condition and functionality of equipment.

4.5.2 Maintaining and updating PPE-related inventories.

4.6 <u>Hazards Communication (HazCom)</u>

The Contractor shall provide support and maintain the hazardous communication program activities that are compliant with DOE, Federal, State, Local, and NETL directive requirements. Responsibilities include:

4.6.1 Maintaining Hazard Communication-related programs

4.6.1.1 Estimate exposure risk and recommend and implement mitigation actions based on exposure risk to determine whether NETL Personnel who are working with hazardous materials or are under hazardous conditions have received proper communication of such hazards.

4.6.1.2 Implement ES&H-related signs, labels, and identifier requirements to support the effort of appropriate issuance and postings at NETL for specific hazards that have the potential to lead to NETL Personnel injury and/or create damage should NETL Personnel be unaware of those hazards. *Historical average of ES&H-related signs/labels/identifiers is 1,800 items (including adhesive pockets, laminated sheets, and special-order signs) annually for all three NETL sites (with pooled inventories to manage costs).*

4.6.1.3 ES&H-related signs, labels, and identifiers include, but are not limited to:

- Notice Signs
- No Smoking Signs
- Hearing Protection Signs
- Laser Safety Signs
- Fire Extinguisher Signs
- Emergency Eyewash & Safety Shower Signs
- Exit Signs (e.g., 'EXIT' and 'NO EXIT')
- Satellite Accumulation Area Labels
- Hot Surface Labels
- Radiation Labels
- Chemical Labels (e.g., diesel tank, gasoline tank, carcinogen, etc.)
- Asbestos-Containing Material Warning Labels
- "For Food Only" Stickers

4.7 <u>Chemical Hygiene Program</u>

The Contractor shall provide support and maintain the chemical hygiene program activities that are compliant with DOE, Federal, State, Local, and NETL directive requirements. Responsibilities include:

4.7.1 Maintaining Chemical Hygiene-related programs

4.7.1.1 Provide expertise, assessment services, and consultation for safe chemical use, handling, and

storage to support the effort of proper mitigation controls (e.g., engineering, administrative, and PPE) are implemented in the workplace.

4.7.1.2 Provide consultation for materials covered by the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), OSHA, Toxic Substance Control Act (TSCA), Resource Conservation and Recovery Act (RCRA), and Emergency Planning and Community Right-to-Know Act (EPCRA) to support the effort of NETL Personnel awareness in such that NETL Personnel are informed of recognized chemical hazards and necessary control measures in order to protect workplace conditions at an acceptable level.

4.7.1.3 Provide chemical hygiene-related safety training, as requested, to support the effort of having NETL Personnel receive the proper instruction required to perform their work safety, competently, and in compliance with all regulatory requirements.

4.8 <u>Toxic Gas Alarm Systems</u>

The Contractor shall provide oversight and management of the calibration of the toxic gas alarm system program activities to help ensure compliance with DOE, Federal, State, Local, and NETL directive requirements. Responsibilities include:

4.8.1 Maintaining Toxic Gas Alarm System-related programs

4.8.1.1 Determine whether proper mitigation controls are implemented in the workplace relating to the fixed toxic gas sensors, and to help ensure no NETL Personnel is exposed to hazards at unsafe levels.

4.8.2 Maintaining and calibrating equipment

4.8.2.1 Maintain and calibrate portable toxic gas alarm equipment, in accordance with manufacturer's recommendations, such as the MSA Altair and PortaSens II monitors.

4.8.3 Maintaining and updating Toxic Gas Alarm System-related inventories

4.8.3.1 Review the instrumentation maintenance inventory in the Site Operation Support Services CLIN 3 Activity 2 and review new project requirements generated from Research & Development (R&D) Support Services CLIN 1 to determine the accuracy of records.

5.0 SUPPORTING FUNCTIONS:

5.1 <u>Directives Support</u>

5.1.1 The Contractor shall assist with reviewing and revising NETL directives to ensure that they reflect the current site practices, new or changed responsibilities of individuals, DOE orders and regulatory requirements, and quality assurance measures.

5.2 <u>Training</u>

5.2.1 Delivery of lecture-based industrial hygiene-related training, per NETL directives.

5.3 <u>Corrective Action</u>

5.3.1 The Contractor shall support on-site corrective/preventive actions, per NETL directives, associated with action plans previously developed, self-assessments, and other types of internal and external reviews.

5.4 <u>International Organization for Standardization (ISO) 14001 /ISO 45001 Certification Initiatives and Internal Audits</u>

5.4.1 The Contractor shall support NETL's efforts to maintain ISO 14001 and ISO 45001 certifications as part of the ES&H Management System and shall participate in NETL's internal audits and assessments. Support activities include:

5.4.1.1 Participating in planning and closeout meetings of internal audits; and

5.4.1.2 Assisting in identifying and implementing aspects, targets, objectives, and ES&H Management Plans.

5.5 Weekly or Monthly Update Reports

5.5.1 Reports shall include, at minimum, a summary of the activities performed under the Industrial Hygiene Program Support Services Activity for the week or month for the following work:

- 5.5.1.1 Asbestos Containing Material Sampling.
- 5.5.1.2 Excess Equipment Inspections.
- 5.5.1.3 Hazard Communication Training.
- 5.5.1.4 IH Equipment Sent for Calibration.
- 5.5.1.5 Indoor Air Quality Complaints.
- 5.5.1.6 Laboratory Hood Flow Verification.
- 5.5.1.7 Lead Paint Sampling.
- 5.5.1.8 Offsite Contractor Construction/Renovation/Project Activity Sampling.
- 5.5.1.9 Radiation Protection and Training.
- 5.5.1.10 Toxic Gas Alarm Systems (e.g., Portable Gas Detector) Maintenance.

6.0 CONTRACTOR FURNISHED ITEMS AND SERVICES:

The Contractor shall provide all consumable supplies and materials necessary to satisfactorily perform work in the areas identified in this PWS. All equipment being provided by the Government for performance of this Activity is identified under the government-furnished property section of the contract.

6.1 Industrial Hygiene

6.1.1 The Contractor shall purchase consumable supplies and materials necessary to satisfactorily perform industrial hygiene-related sampling and monitoring for the ALB, MGN and PGH sites. Industrial hygiene consumable supplies and materials, which are currently being used in performance of this Activity, are listed in Attachment 3 of this PWS. Requests for any new items not on the approved list must be submitted to the ACOR for approval prior to purchase. The Contractor shall be responsible for providing all consumable industrial hygiene supplies and materials once the current remaining inventory is depleted.

6.1.2 The Contractor shall implement preventive maintenance and calibrate DOE-owned industrial hygiene equipment, in accordance with manufacturer's recommendations.

6.1.3 The Contractor shall rent industrial hygiene-related equipment if needed. If IH equipment rental is necessary to complete a survey, contact the ACOR for disposition/planning. *Historical basis is 6 rentals per year for all three NETL sites.*

6.1.4 The Contractor shall assist in obtaining cost estimates for asbestos and/or lead abatement and remediation activities.

6.1.5 The Contractor shall procure the services of a qualified persons or laboratories, with proficiency demonstrated by current successful participation in a nationally recognized testing program or an equivalent nationally recognized round robin testing program, for analysis of industrial hygiene samples required in the performance of this PWS (in accordance with applicable controlling regulations).

6.1.6 For any additional sampling in quantities exceeding the historical information, it is recommended that the Contractor provide unit costs.

6.2 Personal Exposure and Workplace Monitoring

6.2.1 The Contractor shall purchase consumable supplies and materials necessary to satisfactorily perform personal exposure and workplace-related monitoring for the ALB, MGN, and PGH sites. Requests for any new items not on Attachment 3 must be submitted to the ACOR for approval prior to purchase. The Contractor shall be responsible for providing all consumable personal exposure and workplace monitoring supplies and materials once the current remaining inventory is depleted.

6.2.2 The Contractor shall purchase and maintain the annual preventive maintenance agreement for DOE-

owned personal exposure and workplace monitoring equipment.

6.2.3 For any additional sampling in quantities exceeding the historical information, it is recommended that the Contractor provide unit costs.

6.3 Ventilation Program

6.3.1 The Contractor shall purchase consumable supplies and materials necessary to satisfactorily perform ventilation program activities for the ALB, MGN, and PGH sites. Requests for any new items not on Attachment 2 must be submitted to the ACOR for approval prior to purchase. The Contractor shall be responsible for providing all consumable ventilation program supplies and materials once the current remaining inventory is depleted.

6.3.2 The Contractor shall maintain and calibrate ventilation program equipment, in accordance with manufacturer's recommendations, such as, Alnor instruments for hood capture velocities.

6.3.3 The Contractor shall purchase and maintain the annual preventive maintenance agreement for DOE-owned ventilation program equipment.

6.3.4 For any additional sampling in quantities exceeding the historical information, it is recommended that the Contractor provide unit costs.

6.4 Radiation Monitoring and Protection Support

6.4.1 The Contractor shall purchase consumable supplies and materials necessary to satisfactorily perform radiation program activities for the ALB, MGN, and PGH sites. Requests for any new items not on Attachment 3 must be submitted to the ACOR for approval prior to purchase. The Contractor shall be responsible for providing all consumable radiation program supplies and materials once the current remaining inventory is depleted.

6.4.2 The Contractor shall maintain and calibrate radiation equipment, in accordance with manufacturer's recommendations, such as, microwave leakage testers, dosimeters and dosimeter badges, and Geiger counters.

6.4.3 The Contractor shall purchase and maintain the annual preventive maintenance agreement for DOE-owned radiation equipment.

6.4.4. For any additional sampling in quantities exceeding the historical information, it is recommended that the Contractor provide unit costs.

6.5 Personal Protective Equipment (PPE)

6.5.1 With the exception of CLIN 1 and CLIN 2 support personnel, the Contractor shall purchase PPE (managed via pooled inventories) for all SOS-5 contractor employees, whose job functions require PPE, including:

6.5.1.1 Foot Protection
6.5.1.2 Eye Protection
6.5.1.3 Head Protection
6.5.1.4 Hand Protection
6.5.1.5 Hearing Protection
6.5.1.6 Respiratory Protection
6.5.1.7 Body Protection
6.5.1.8 Specialty Protection pertaining to electrical and welding activities
6.5.1.9 Fall Protection Equipment

6.5.2 Inclement weather and uniforms considered non-PPE garments are excluded. Requests for such items should be referred to the individual's employing organization or supervisor for purchase.

6.5.3 The Contractor shall ensure that:

6.5.3.1 All PPE meets requirements of applicable OSHA, ANSI, and ASTM standards identified in NETL directives.

6.5.3.2 All job hazards, processes, and activities that require PPE are identified.

6.5.3.3 A record of all PPE purchased is maintained. The documentation shall include: brand, item/model number, description, vendor, cost, and date purchased.

6.6 Hazards Communication (HazCom)

6.6.1 The Contractor shall purchase consumable supplies and materials necessary to satisfactorily perform hazard communication program activities for the ALB, MGN, and PGH sites. Requests for any new items not on Attachment 3 must be submitted to the ACOR for approval prior to purchase. The Contractor shall be responsible for providing all consumable hazard communication program supplies and materials once the current remaining inventory is depleted.

6.6.2 For any additional signage, labels, and identifiers in quantities exceeding the historical information, it is recommended that the Contractor provide unit costs.

6.7 Chemical Hygiene Program

6.7.1 The Contractor shall purchase consumable supplies and materials necessary to satisfactorily perform chemical hygiene program activities for the ALB, MGN, and PGH sites. Requests for any new items not on Attachment 3 must be submitted to the ACOR for approval prior to purchase. The Contractor shall be responsible for providing all consumable chemical hygiene program supplies and materials once the current remaining inventory is depleted

6.8 Toxic Gas Alarm Systems

6.8.1 The Contractor shall purchase consumable supplies and materials related to portable calibration equipment to satisfactorily perform toxic gas alarm system program activities for the ALB, MGN, and PGH sites. Requests for any new items not on Attachment 3 must be submitted to the ACOR for approval prior to purchase. The Contractor shall be responsible for providing all consumable toxic gas alarm system program supplies and materials once the current remaining inventory is depleted.

6.8.2 The Contractor shall maintain and calibrate Toxic Gas Alarm System equipment, in accordance with manufacturer's recommendations, such as, hazardous and toxic gas monitors (e.g., Gas Monitors, MSA Altair Gas Monitors, and PortaSens II).

7.0 GOVERNMENT FURNISHED PROPERTY, EQUIPMENT, AND SERVICES:

The Government will provide the following equipment and services as follows:

7.1 Equipment:

7.1.1 The Government shall furnish the following industrial hygiene program support service equipment and associated accessories (equipment costs are provided for reference only):

7.1.1.1 Industrial Hygiene Equipment listed in Attachment 4 of this PWS.

7.1.1.2 Personal Exposure and Workplace Monitoring Equipment listed in Attachment 5 of this PWS.

7.1.1.3 Ventilation Program Equipment listed in Attachment 6 of this PWS.

7.1.1.4 Radiation Equipment listed in Attachment 7 of this PWS.

7.1.1.5 Toxic Gas Alarm System Equipment listed in Attachment 8 of this PWS.

7.1.2 The Government shall replace required equipment that breaks, or which cannot be repaired, or of which cannot be calibrated to manufacturer specifications. Requests for any new equipment must be submitted to the ACOR for approval.

7.2 Services:

7.2.1 The Government shall procure DOE-owned equipment repairs.

7.2.2 The Government shall procure asbestos and/or lead abatement and remediation activities.

7.2.3 The Government shall provide a review of technical content and approval of industrial hygiene-related training, with the appropriate subject matter expert(s), to provide to the Contractor, per NETL directives.

7.2.4 The Government shall provide a review on draft deliverables generated in performance of this PWS. Comments on draft deliverables will be made:

- 7.2.4.1 Within 3 business days for weekly/bi-weekly deliverables
- 7.2.4.2 Within 10 business days for monthly deliverables
- 7.2.4.3 Within 15 business days for quarterly deliverables
- 7.2.4.4 Within 30 business days for annually or on-time deliverables

7.3 Shipping:

7.3.1 The Government shall provide funding for shipping samples/equipment to other NETL sites or vendors as necessary. Examples include, shipping industrial hygiene samples for analysis and shipping of industrial hygiene equipment.

7.4 Facilities:

7.4.1 The Government shall furnish the necessary workspace for the Contractor staff to provide the support outlined in this PWS.

8.0 DELIVERABLES

8.1 The following table contains the deliverables associated with the Industrial Hygiene Program Support Service Activity. The list is not all inclusive and additional deliverables may be necessary as requirements change. A copy of each deliverable shall be provided to the ACOR and applicable subject matter experts (SMEs).

8.2 The historical average for the following deliverables associated with this Activity are:

- 8.2.1 **Asbestos Inspection/Re-Inspection Forms:** An average of 12 unique and changed conditions, 240 annual inspections for all three NETL sites, and 1 annual deliverable with all inspections/re-inspections attached.
- 8.2.2 **Chemical Hygiene Reports:** An average of 3 annually for all three NETL sites.
- 8.2.3 **Directives Review and Generation:** An average of 6 annually for all three NETL sites.
- 8.2.4 **Equipment Calibrations:** 74 annually for all three NETL sites.
- 8.2.5 **Exposure Monitoring Reports:** An average of 6 unique requested reports, and 30 annually for all three NETL sites.
- 8.2.6 **IH Analyses/Surveys:** An average of 60 annually for all three NETL sites, including 12 unique requested reports.
- 8.2.7 **Other Inspection and Assessment Results:** 150 annually for all three NETL sites.
- 8.2.8 **Personal Protective Equipment (PPE) Hazard Assessments:** 11 annually for all three NETL sites.
- 8.2.9 **Radiation Monitoring:** 74 leak tests for radiation generating devices (RGDs) annually for all three NETL sites, and 1 annual deliverable report.
- 8.2.10 **Radiation Surveys:** An average of 36 annually for all three NETL sites.
- 8.2.11 **Radiological Work Permits:** 3 annually for all three NETL sites.

DELIVERABLE	FORMAT	FREQUENCY
Industrial Hygiene		
IH Analyses/Surveys	As determined by the ACOR	Per analysis, as needed **Normal Turnaround** is considered as 1-week verbal, 2-week official deliverable +/- a day. **Rush Turnaround** is considered 2-day verbal, 3-day official deliverable.
Asbestos Inspection/ Re- inspection Form	NETL Form	Per finding of previously unknown ACM, and per finding of change of condition of maintained-in-place ACM
Asbestos inventory	As determined by the ACOR	Annually
Asbestos AFDCS Spreadsheet	As determined by the ACOR	Quarterly • JAN-MAR due by March 31st • APR-JUNE due by June 30th • JULY-SEPT due by Sept. 30th • OCT-DEC due by Dec 31st
Asbestos Building Inspector Certifications & Licenses	E-mail response to ACOR	Annually
Lead-Based Paint inventory	As determined by the ACOR	Annually
Equipment calibrations	As determined by the ACOR	As needed or requested. Send equipment for calibration as required per manufacturer recommendations. Exceptions for out-of-service equipment.
Other inspection and assessment results	Information/audit reports	As requested.
Conduct reviews and provide input to industrial hygiene-related NETL directives	E-mail response to ACOR	Annually for each directive as requested by ACOR
Conduct lecture-based industrial hygiene-related training (including asbestos awareness, nanomaterial safety and health, etc.)	Attendance Lists	As required by the ES&H training database
Personal Exposure and Workplace Monitoring		
Exposure monitoring reports	As determined by the ACOR	Per exposure, as requested per category (e.g., noise, indoor air, ~~dosimetry~~, lead, asbestos, radon, mold, lighting, etc.) After receival of complaint notification, respond within 24-48hours, during working calendar days to initiate further evaluations, inspections as necessary.

DELIVERABLE	FORMAT	FREQUENCY
Ventilation Program		
Exhaust Ventilation Surveys	As determined by the ACOR	Per analysis, as needed
Radiation Monitoring and Protection Support		
Radiation inventory (including survey equipment, microwaves, RGD, Sealed Sources, NORM, and TE-NORM)	As determined by the ACOR	As needed or requested.
Radiation monitoring (Leak tests for microwaves, RGD, Sealed Source (source integrity tests))	As determined by the ACOR	Leak testing results, semi-annual (every six (6) months) for RGD, and Sealed Sources. Leak testing results, annually for research microwaves (industrial scientific medical equipment (ISME)). Leak testing results for DOE-Owned microwaves, as requested. Annual visual inspection.
Individual monitoring/ dosimetry reports (including providing data for the REMS report)	As determined by the ACOR	Quarterly and annually reporting as follows: Quarterly monitoring (change out personnel dosimetry badges and area badges). Annually, provide NETL Personnel with employee notification letter of their exposure for the year. Also include the lifetime exposure should they be departing the organization. These letters are to be included in the applicable' s NETL Personnel medical file. Annually, provide the RSO with data for REMS report by March 1st. Annually, maintain and update an inventory spreadsheet of all monitored individuals who have received dosimetry.
Radiation Surveys	As determined by the ACOR	As requested.
Radiological Work Permits	As determined by the ACOR	As requested.
Naturally-Occurring Radioactive Material (NORM) or Technically Enhanced Naturally Occurring Radioactive Material (TE-NORM) inventory (with R&D SARS packages)	As determined by the ACOR	Annually (During SARS assessments)
Conduct reviews and provide input to radiation related NETL directives	E-mail response to ACOR	Annually for each directive as requested by ACOR
Conduct lecture-based radiation-related training (including General Radiological and Radiological Worker I and II)	Attendance Lists	As required by the ES&H training database

DELIVERABLE	FORMAT	FREQUENCY
Personal Protective Equipment (PPE)		
Personal protective equipment (PPE) hazards assessment	NETL Form or similar format	As required by SARS assessments
Conduct reviews and provide input to personal protective equipment related NETL directives	E-mail response to ACOR	Annually for each directive as requested by ACOR
Conduct lecture-based personal protective equipment-related training	Attendance Lists	As required by the ES&H training database
Hazard Communication (HazCom)		
Conduct reviews and provide input to HazCom-related NETL directives	E-mail response to ACOR	Annually for each directive as requested by ACOR
Conduct reviews and provide input to HazCom-related online-learning center (OLC) training (including Detailed HazCom and NETL Globally Harmonized System)	E-mail response to ACOR	As required by the ES&H training database
Chemical Hygiene Program		
Chemical Hygiene reports	As determined by the ACOR	As requested.
Conduct reviews and provide input to chemical hygiene- related NETL directives	E-mail response to ACOR	Annually for each directive as requested by ACOR
Conduct reviews and provide input to chemical hygiene- related training (including Cryogenics)	E-mail response to ACOR	As required by the ES&H training database
Toxic Gas Alarm Systems		
Conduct reviews and provide input to gas monitoring and gas alarm system-related NETL directives.	E-mail response to ACOR	Annually for each directive as requested by ACOR.
Other Deliverables		
Weekly **–OR--** monthly update reports	As determined by the ACOR. Information will include activities, results, and effects on NETL.	Weekly reports by close of business each Friday. Monthly reports by the end of the first week of the month for prior month's activities.

9.0 REFERENCES

Implementation of industrial hygiene program support will be consistent with OSHA/FEOSH regulations and following the most current versions of NETL's Communications Plan, and NETL Directives – Orders, Procedures, and Manuals (or successor documents).

9.1 NETL Directives (use the most updated version, including conversion to manuals)

- 9.1.1 NETL Order 420.1, Safety Analysis and Review System
- 9.1.2 NETL Order 440.1, ES&H Management System
- 9.1.3 NETL Procedure 231.1-00.02, Injury/Illness Investigation and Reporting
- 9.1.4 NETL Procedure 243.1-00.07, Records Management
- 9.1.5 NETL Procedure 436.1-03.16, Calibration and Maintenance of Instruments that Monitor and Measure Key ES&H Characteristics
- 9.1.6 NETL Procedure 440.1-01.13, Hazard Communication Program
- 9.1.7 NETL Procedure 440.1-01.17, Radiation Protection Program
- 9.1.8 NETL Procedure 440.1-01.43, Handling Compressed Gases
- 9.1.9 NETL Procedure 440.1-01.53, Albany Radiological Control Manual
- 9.1.10 NETL Procedure 440.1-02.01, Safety Data Sheets
- 9.1.11 NETL Procedure 440.1-02.03, Installation of Gas Alarms
- 9.1.12 NETL Procedure 440.1-03.16, Confined Space Entry
- 9.1.13 NETL Manual 440.1-01.03, Occupational Medicine Program Implementation
- 9.1.14 NETL Manual 440.1-01.06, Indoor Air Quality and Ventilation
- 9.1.15 NETL Manual 440.1-01.28, Asbestos Control and Abatement
- 9.1.16 NETL Manual 440.1-01.29, Lead Control and Abatement Program
- 9.1.17 NETL Manual 440.1-01.32, Environmental Noise Monitoring
- 9.1.18 NETL Manual 440.1-01.45, Ergonomic Program Manual
- 9.1.19 NETL Manual 440.1-01.52, Respiratory Protection
- 9.1.20 NETL Manual 440.1-01.61, Hearing Conservation Program
- 9.1.21 NETL Manual 440.1-02, Chemical Hygiene Program
- 9.1.22 NETL Manual 440.1-02.02, Chemical Inventory
- 9.1.23 NETL Manual 440.1-02.04, SARA Title III Reporting
- 9.1.24 NETL Manual 440.1-04.44, Signs, Labels, Tags, Identifiers, and Safety Warning Devices
- 9.1.25 NETL Manual 440.1-04.54, Personal Protective Equipment
- 9.1.26 NETL Manual 456.1-00.01, Nanomaterial Safety and Health
- 9.1.27 OSHA Technical Manual

10.0 DEFINITIONS

10.1 AA/RC: Asbestos Abatement/Renovation Contractor

10.2 ACGIH: American Conference of Governmental Industrial Hygienists

10.3 ACHD: Allegheny County Health Department

10.4 ACM: Asbestos-Containing Materials

10.5 AFDCS: Active Facility Data Collection System

10.6 ANSI: American National Standards Institute

10.7 AQI: Air Quality Index

10.8 ASTM: American Society for Testing Materials

10.9 CFR: Code of Federal Regulation

10.10 CIH: Certified Industrial Hygienist

10.11 DOE ACOR: A representative from the requiring Activity assigned by the Contracting Officer to perform surveillance and to act as liaison to the Contractor.

10.12 ES&H: Environmental, Safety, and Health

10.13 EPCRA: Emergency Planning and Community Right-to-Know Act

10.14 FIFRA: Federal Insecticide, Fungicide, and Rodenticide Act

10.15 HazCom: Hazard Communications

10.16 IH: Industrial Hygiene

10.17 ISME: Industrial Scientific Medical Equipment

10.18 ISO: International Organization for Standardization

10.19 NIOSH: National Institute of Occupational Safety and Health

10.20 NETL Personnel: Collectively consists of NETL federal, contractor, and subcontractor employees, as well as ORISE/interns at the Albany, Morgantown, and Pittsburgh sites.

10.21 NORM: Naturally-Occurring Radioactive Material

10.22 OHSAS: Occupational Health and Safety Advisory Services

10.23 OLC: Online-Learning Center

10.24 OSHA: Occupational Safety and Health Association

10.25 PCB: Polychlorinated Biphenyls

10.26 PPE: Personal Protective Equipment

10.27 PWS: Performance Work Statement

10.28 R&D: Research & Development

10.29 RCRA: Resource Conservation and Recovery Act

10.30 REMS: Radiation Exposure Monitoring System

10.31 RGD: Radiation-Generating Device

10.32 RF: Radio Frequency

10.33 RSO: Radiation Safety Officer

10.34 SARS: Safety Analysis Review System

10.35 SME: Subject Matter Expert

10.36 TE-NORM: Technically Enhanced Naturally-Occurring Radioactive Material

10.37 TSCA: Toxic Substance Control Act