

PROJECT TITLE : HAZARDOUS MATERIALS ABATEMENT OF BUILDING 832 ARMORY, WHEELER AFB, STATE OF HAWAII, DEPARTMENT OF DEFENSE, HAWAII ARMY NATIONAL GUARD, JOB NO. CA-1604

**LOCATION : WHEELER AIR FORCE BASE
1971 SANTOS DUMONT AVENUE
SCHOFIELD BARRACKS, HI 96857**

SCOPE OF WORK / SPECIFICATIONS (GENERAL);

Provide all necessary materials, labor, special tools and equipment necessary to implement the safe removal and disposal of hazardous materials and lead contaminated dust from all areas and surfaces mentioned in the detailed Scope Of Work/Specifications (SOW / Specs), in compliance with all applicable laws and regulations set by EPA, OSHA, HIOSH, HIDOH, and other Federal, State, and Local Agencies. In general, the principal work items shall be but not limited to the following:

- 1. Workers and Facility Occupants' protection;**
- 2. Preparation of work areas;**
- 3. Setting-up of protective covering, decontamination unit, waste haul-out area, and lighting/ventilation/exhaust equipment/system;**
- 4. Removal of lead dust from contaminated surfaces, cleaning, and sanitizing;**
- 5. Removal of ceiling board patches and mastic from slab underside inside Indoor Firing Range (IFR) Room 219;**
- 6. Removal of light fixtures and metal baffles and all accessories inside IFR Room 219;**
- 7. Proper bagging, labeling, recording, storage, transport, and disposal of hazardous waste and contaminated materials;**
- 8. Removal of protective sheeting, cleaning, and close-out of abated areas.**
- 9. Reports**

Preliminary Evaluation:

The preliminary evaluation and wipe samplings were conducted by IHI Environmental (IHIE) a privately owned and independent entity contracted by the National Guard Bureau. Part of IHIE site work were wipe samplings for lead-contaminated dust from various surfaces inside and outside Building 832 Armory.

Laboratory analysis of samples were performed and analytical reports were prepared by FOH Environmental Laboratory. Surface Wipe Samplings Results Summary Forms are attached which form part of this SOW / Specs.

Samples of acoustical board mastic were taken from the underside of concrete slab inside the IFR Room 219. Analytical report from Hawaii Analytical Laboratory confirmed the absence of asbestos (report attached).

Detailed Scope Of Work/Specifications:

I. Workers and Facility Occupants' Protection:

A. Independent Accredited Hygienist:

To ensure health protection to Abatement Workers and Facility Occupants, the Contractor shall hire the services of an Independent Accredited Hygienist (IAH) with working experience in the lead contaminated dust abatement who will be under the supervision of Certified Hygienist, to monitor the air quality inside and outside the confined areas during the abatement work. The IAH shall be given authority to order the Contractor's Project Manager or Superintendent to stop the abatement work at any time he/she determines that the site working conditions are not within the specification requirements and applicable regulations. The work stoppage shall continue until corrective actions have been taken and specified conditions restored to the satisfaction of the air monitoring specialist.

B. OSHA Competent Person:

The Contractor shall hire/assign, as member of the abatement team, an OSHA accredited "Competent Person" who shall have the responsibility to ensure that the compliance program for the project is adhered to by all personnel at the project site.

C. OSHA required Compliance Program:

The Contractor shall prepare the OSHA required written Compliance Program for the purpose of preventing employee exposure above the Permissible Exposure Limit (PEL) and address how that will be done whether that be through the use of engineering controls, respiratory protection, or by use of good work practices.

D. Site security

- 1.) The work areas are to be restricted only to authorized, trained, and protected personnel. These may include the Contractor's employees, the HIARNG/FMO Project Manager (FMO PM) and his assigned Inspector, the Facility Users' Safety Officer, State and local Inspectors, and any other designated individuals. A list of authorized personnel shall be established prior to job start.
- 2.) A Visitor/Worker Entry Log shall be maintained.
- 3.) The Contractor shall have control, subject to the approval of the FMO PM and the HIARNG Facility Commander, of security in the work area and in proximity of Contractor's equipment and materials. The Contractor shall take whatever necessary steps necessary to safeguard his work and also the property of the State and HIARNG.

E. Protective covering

The Contractor shall provide and install protective covering on an "as required" or "as necessary" following OSHA, HIOSH, HIDOH regulations. Protective covering shall be clean plastic sheets with minimum thickness per OSHA regulations.

F. Personal Protective Equipment (PPE)

The Contractor must provide the minimum regulation requirement for Personal Protective Equipment (protective cover-all, respirators, etc.) to all Workers, FMO PM and Inspector, HIARNG Safety Officer, State and local Inspectors, and other authorized personnel when entry to the work areas is necessary.

II. Site preparation:

- A. Establish the lead contaminated dust abatement areas by demarcating boundaries around the work area in accordance with the Contractor's lead dust abatement plan. The lead containing dust abatement control area shall be isolated by physical boundaries (plastic sheets). Thickness and other material specifications shall be per OSHA regulations.
- B. On barrier enclosures; lock all doors as approved by the HIARNG Facility Safety Officer or HIARNG Facility Commander, to isolate the work areas from surrounding areas and to prevent entry by non-authorized personnel.
- C. Seal all openings including but not limited to corridors, electrical outlets, and any other penetrations of the work areas.
- D. Install directional signs, warning signs, safety tapes, cones, and other work and safety notices which shall be posted on the main entrances and on areas where abatement work are in progress and has not been closed out;
- E. Install temporary lighting fixtures/equipment wherever necessary for work safety purposes. Power outlets that will be tapped for temporary lighting shall be properly sealed and wires shall be properly raised from the ground following OSHA regulations.
- F. Set/position temporary exterior bins/dumpster/s with cover for temporary storage of bagged hazardous wastes before transport and disposal. Location of the bins/dumpsters shall be discussed and agreed on during the pre-construction meeting.

III. Containment/protective sheeting and decontamination chambers:

- A. Install protective covering (plastic sheets with minimum OSHA thickness requirement and, with appropriate framing if necessary) along established boundaries around works areas. Sheeting shall be properly lapped and taped following OSHA regulations.
- B. Set up of decontamination unit (transferable) clean room, shower room, equipment room, and air locks.
- C. Establish a waste load-out area.
- D. Set up of ventilation equipment (HEPA-filtered negative air machine), air exhaust conduits and other OSHA, HIOSH, and HIDOH mandatory standard health and safety protective measures for Workers and Facility Occupants.

The phasing and sequencing of protective coverings, decontamination unit, waste load-out area, and ventilation/exhaust equipment installation shall be based on the approved Lead Containing Dust Abatement Procedural Work Schedule and on the approved OSHA required Compliance Program which will be part of the required "Submittals" by the Contractor. The work phasing and sequencing shall be coordinated with the building Users for areas where move out of Users will be necessary.

IV. Removal of existing fixed-in-place building components and hauling-out/disposal:

- A. Remove and haul-out all light gauge steel light fixture ceiling baffles, hinges, hooks, chain-supports, and other metal attachments inside Indoor Firing Range (IFR), Room 219.
- B. Remove and haul-out all ceiling mounted light fixtures inside IFR, Room 219. All wire terminations shall be capped with wire nuts appropriate for the existing wire sizes. Note: Light fixtures' component are known to contain Poly Chlorinated Biphenyl (PCB).
- C. Scrape-off and haul-out remaining acoustical ceiling board patches and mastic inside IFR, Room 219. Ceiling surfaces must be cleared of acoustical board patches and mastic and ready for paint application after lead-contaminated dust removal and cleaning. (Note: Painting work is not part of this SOW/Specs).

V. Removal of lead contaminated dust:

The removal work must be performed in the way that will most effectively remove lead-contaminated dust. This will involve vacuuming work with the use of vacuum cleaners equipped with HEPA filters that remove 99.97% dust, 0.3 microns or larger, damp/wet wiping, and wet mopping, or a combination of all of these. Do not use methods that will cause airborne dusts, such as dry sweeping or vacuuming with equipment not equipped with HEPA filters. Final wipe sampling and laboratory analysis must show results of less than the set criterion of 40 micrograms per square foot.

Dirt/lead contaminated dusts removal and cleaning shall cover the following areas:

V.A) Building Roof:

All surfaces of lower and upper roof with a total estimated flat surface area of approximately twenty thousand (20,000 SF) square feet (see attached Roof Plan).

Note : Work shall include removal and disposal of (loose) wood blocks and planks, and other leftover construction materials.

V.B) Heating, Ventilating, and Air Conditioning (HVAC) Equipment:

Note: If necessary, based on the Lead Containing Dust Abatement Procedural

Work Schedule, lockout/tagout procedures (Engineering Control) shall be implemented before performing lead containing dust abatement on ventilation and air conditioning units.

- 1.) Exhaust Fans EF-4 and EF-7 (power roof ventilators) inside Indoor Firing Range's (IFR), Room 219:
All exterior/interior surfaces, including exhaust ducts and crevices.
- 2.) Gravity intakes (air supply ventilators) inside IFR, Room 219
All exterior/interior surfaces, including screen mesh, supply ducts, and crevices.
- 3.) Exhaust Fans EF-1,EF-2, EF-3A, EF-3B, EF-5, EF-6, and EF-8's vertical ducts including all surfaces and crevices of exhaust fan equipment, and exterior/interior surfaces of kitchen hood and roof jacks.
- 4.) Supply Fans SF-1 and SF-2's vertical ducts including all surfaces and crevices of supply fan equipment, and exterior/interior surfaces and crevices of roof mounted equipment compartments.
- 5.) Ducted Split Type Air Conditioner Unit inside Bldg. A Mechanical Room:
All exterior surfaces and interior reachable surfaces and crevices including filter compartments (intake and discharge sides).
- 6.) Package Type Air Conditioner Unit mounted on Bldg. B roof:
All exterior surfaces and interior reachable surfaces and crevices including filter compartments (intake and discharge sides).
- 7.) Air Cooled Condenser Fan mounted on Bldg. A roof above Mechanical Room:
All exterior surfaces and interior reachable surfaces and crevices including filter compartments.
- 8.) Dehumidifiers:
All external surfaces of two (2) dehumidifiers inside Vaults of Bldg. A and B.
- 9.) Interior evaporator/blower of mini-split air conditioner:
All exterior surfaces and interior reachable surfaces and crevices including filter compartments of seven (7) mini-split A/C units' interior evaporator/blower.

V.C) A/C Supply and Return Ducts:

Note: If necessary, based on the Lead Containing Dust Abatement Procedural Work Schedule, lockout/tagout procedures (Engineering Control) or move-out/transfer of Facility Users/Occupants (Administrative Controls) shall be implemented before performing lead containing dust abatement on ventilation and air conditioning return and supply ducts.

- 1.) All air supply and return duct diffusers/grills (remove and reinstall).
- 2.) All interior surfaces of supply and return ducts (branches and main).
Cleaning of duct branches' interior surfaces can be accessed through

openings after removal of diffusers/grills. Cleaning of main supply duct interior surfaces can be accessed through by cutting holes 12" x 12" size on the underside or sides of the main ducts. Estimated number of holes to be cut shall be eighteen (18) holes for the supply ducts and twenty (20) holes for the return ducts. After dust removal and cleaning, cover the cut holes with the same thickness of new metal sheets and fix to the main duct with the use of aluminum blind rivets.

Cost of labor and materials for duct hole cutting and covering shall be included in the bid cost. Hole cutting locations shall be shown on the Work and Health/Safety Program which are "Submittals" requirements.

- 3.) All exterior surfaces of A/C supply and return ducts to include vertical ducts.

V.D) Ceiling Surfaces:

- 1.) All surfaces of interior metal deck underside inside Rooms 117, 120, 121, 123, 125, 125A, 127, 127A, Mechanical and Electrical Room, Rooms 304, 307, 308, 309, 310, 311, 313, 314, 315, 318, and 319.
- 2.) All surfaces of interior concrete slab and plastered ceiling inside Rooms 113, 122 (Arms Vault), 131 (Kitchen), 219 (IFR), and 312(Vault).
- 3.) All surfaces of gypsum board ceiling inside Rooms 110/110B, 213, and 317.
- 4.) All surfaces (**top and underside**) of all acoustical ceiling boards suspended on runners of:
 - 4.a) Building A Ground Floor (all corridors, Rooms 103, 104, 105, 106, 107, 108, 109, 114, 115, 118, 128, and 129).
 - 4.b) Building A Second Floor (all corridors, Rooms 203, 204, 206, 208, 209, 216, 217, and 218).
 - 4.c) Building B Ground Floor (all corridors, Rooms 303, 305, 306, 307, 308).

V.E) Structural Steel Trusses:

- 1.) All surfaces of exposed structural steel trusses' top and bottom chords and all its web members (vertical and diagonal) inside Rooms 117, 120, 121, 123, 125, 125A, 127, 127A, Mechanical and Electrical Room, Rooms 304, 307, 308, 309, 310, 311, 313, 314, 315, 318, and 319.

V.F) Building Components/Equipment:

- 1.) All surface areas of all ceiling mounted light fixtures inside the building.
- 2.) All surfaces of electrical panel boards, electrical boxes, exposed electrical or water lines, fire alarm system panels and devices, fixed-in-place televisions, kitchen equipment and appliances, fire extinguishers, and other building appurtenances.
- 3.) All surfaces of window sills, doors and door jambs' horizontal surfaces.
- 4.) All horizontal surfaces of books shelves, movable lockers, fixed-in-place storage cages and shelves.

V.G) Building Floors:

- 1.) All interior surfaces of Building A ground level and second level floors to include stairs and landings.
- 2.) All interior surfaces of Building B ground level floors.

VI. Proper bagging, labeling, recording, storage, transport, and disposal of hazardous waste and contaminated materials:

- A. Lead contaminated and dirt dusts accumulated inside vacuum pouches, used vacuum filters, cloth and mops used for wet wiping/mopping, plastic sheets, and other contaminated materials to be disposed as hazardous wastes must be properly bagged, knotted, and labeled. Label must show name of waste generator and the location where waste was generated.
- B. If drums will be used as containers for hazardous wastes, once filled, the lid or rim must be locked into place. All drums must be properly labeled. Wet wipe all drums before it leave the load-out area.
- C. If bagged hazardous wastes are to be temporarily stored inside bins/containers located outside Building 832, the bins/containers' cover must always be shut close.
- D. Waste load-out procedure shall be composed of two (2) teams: the Inside Team and the Outside Team. Members of both teams shall be protected by the appropriate regulation PPE.
- E. Hazardous waste materials must be transported to the pre-arranged and authorized disposal location before exceeding the available storage capacity of the bins/containers.
- F. Permits must be secured before transport and disposal work be started. All permit fees shall be factored in the Contractor's bid price.
- G. The Contractor must always maintain documents (permits, landfill authorization, etc.) and record (Waste Shipment, other HIARNG Environmental Record/Forms), and to be submitted to the Government Project Manager or included in the Close-out Report (see item **VII**).

VII. Reports:

The Contractor shall, after the completion of abatement work, submit a Lead Contaminated Dust Abatement Close-Out report which shall contain Entry Logs, Air Monitoring Records, Final Ghost-Wipe Sampling Laboratory Test Reports, Employee Certifications, Waste Disposal Manifesto, and applicable HIARNG Environmental Office required reports (see attachments).

SUBMITTALS:

1. Submit Certificates or Licenses as proofs that the General Contractor, Sub-Contractors, assigned Competent Person, and the Independent Accredited Hygienist are certified or

2. licensed to perform lead contaminated dust abatement work as detailed in the SOW / Specs.
3. Submit a Lead Containing Dust Abatement Procedural Work Schedule and the OSHA required written Compliance Program which outlines emphasis on the Contractor employees and Facility Occupants' health protection.
4. Submit Material Data Sheets for all chemicals and other cleaning/sanitizing agents for review by the Government Project Manager and approval by the HIARNG Environmental Office.
5. After the "Intent Of Award" notice had been sent to the winning Bidder, the following shall be procured and submitted to the FMO PM:
 - a. Contractor General Liability Insurance with minimum amounts of \$ One Million per occurrence and \$ 2 Million in aggregate;
 - b. Workers Compensation and Employer's Liability with minimum amounts complying with Hawaii Workers Compensation Law, HRS 386.

SAFETY MEASURES IMPLEMENTATION, INSTRUCTIONS TO BIDDERS:

1. The Contractor must implement all safety and health measures in accordance with the present OSHA, HIOSH, HIDOH, EPA, and other Federal, State or Local Agencies Rules and Regulations. This will include proper and safe use of OSHA standard ladders, scaffolds, and other equipment. Life lines shall be securely attached to the fixed safety line brackets of the building. Personnel harness shall be securely attached to the lifeline/s. (To be included in the Safety Program).
2. The Contractor's Workers shall at all times, within the project site, wear the required Personnel Protective Equipment such as eye protector, ear plugs, work gloves, safety shoes, safety vests, respirator, head guard/helmet, and others, which are appropriate for the work activities being performed.
3. The Contractor, if necessary, shall provide their power generation equipment.
4. The Contractor shall provide portable toilets for field workers and be responsible for its cleaning and maintenance.
5. The Contractor shall provide dumpster/s for the construction activities generated trash/debris.
6. The Contractor shall provide portable storage for materials and equipment that will be kept at site during the progress of construction work. The Government shall not be held liable for any loss of the Contractor's materials or equipment.
7. The Contractor, before start of the project, shall read and submit response to the questions and requirements mentioned on the attached "HIARNG Environmental Contractor Requirements".
8. The Contractor shall also fill in and submit the HIARNG Environmental Reports (forms attached).

HIARNG Environmental Reports preparation/submittals, Permits, and Instructions:

- A. Mandatory Environmental Logs and Report

The Contractor shall read and comply with the instructions shown in the attached HIARNG Environmental Contractor Requirements in the preparation and submission of Hazardous Materials Inventory Log, Monthly Waste Generation Reports, Spill Prevention Control and Countermeasure Plan, and other requirements listed, applicable to the Project.

- B. The Contractor shall be responsible for the assessment, application, payment, and for obtaining the required Environmental Permits for the transport and disposal of hazardous and solid wastes.
- C. The Contractor shall characterize and identify disposal requirements for old leftover construction materials through coordination with HIARNG Environmental Office to ensure compliance with applicable hazardous waste and wastewater regulations and permits.
- D. Disposal of chemicals and dust rinse water into any inlets of rain water drain and sewer lines inside the HIARNG Compound and the nearby outside inlets tied in to the HIARNG drain system shall constitute violations of HIARNG's sanitary sewer and NPDES permits. No chemicals or rinsed water shall be disposed into the inlets of HIARNG's rain water or sewer lines/system or on the open grounds inside and nearby the HIARNG Compound.
- E. If Contractor-owned electric power generator is brought at site, the Contractor must supply sufficient spill response supplies. If spills happen, the Contractor must implement cleanup work immediately.

JOINT INSPECTION AND PUNCHLISTING:

The Contractor and FMO PM shall conduct a joint inspection to determine if there are any work that need to be corrected or completed, and prepare a list. A joint punch list shall be conducted again after the completion of corrective work.

PROJECT POINTS OF CONTACT:

- 1. Ed Mendoza (FMO Project Manager) : Work cell phone : 808-230-7413
Office land line : 808-672-1526
- 2. Sam Souza (FMO Project Manager) : Work cell phone : 808-754-3649
Office land line : 808-672-1501

BILLING ADDRESS:

Department of Defense
3949 Diamond Head Road
Honolulu, Hawaii 96816-4495
Attention: Ed Mendoza
Facilities Management Office (HIARNG)
Building 306A

ATTACHMENTS:

1. Scope Of Work, Specifications, Submittals, Instruction To Bidders, Others (these ten pages)
2. Bldg. A Ground Floor and Reflected Ceiling Plans (one sheet)
3. Bldg. A Second Floor and Reflected Ceiling Plans (one sheet)
4. Bldg. B Ground Floor and Reflected Ceiling Plans (one sheet)
5. Roof Plan (one sheet)
6. Bldg. A Ground and Second Floor AC and Ventilation Plans (one sheet)
7. Bldg. B Ground Floor AC and Ventilation Plan (one sheet)
8. Environmental Forms/Documents (six pages)
9. IFR Room 219 Photo (one page)
10. IFR Room 219 Light Fixtures Baffles and Bare Ceiling Photo (one page)
11. IFR Room 219 Roof Exhaust Ventilator Photo (one page)
12. IFR Room 219 Roof Supply Ventilator Photo (one page)
13. Room 309 Metal Deck Ceiling and Trusses Photo (one page)
14. Room 315 Storage Cages, Metal Deck Ceiling, and Trusses Photo (one page)
15. HVAC Equipment Photos (one page)
16. IFR Room 219 Surface Lead Wipe Sample Results (one page)
17. HVAC Equipment Surface Lead Wipe Sample Results (one page)
18. Above Ceiling Surface Lead Wipe Sample Results (two pages)
19. Supply and Return Ducts Surface Lead Wipe Sample Results (three pages)
20. Exterior Roof Surface Lead Wipe Sample Results (one page)
21. Occupied Spaces Surface Lead Wipe Sample Results (three pages)
22. Analytical Report for asbestos (one page)