

Bay Pines VAMC

MOLD REMEDIATION PLAN **Building T-203** **Rooms A 17 & 18**

Submitted to:

Bay Pines VAMC

Prepared by:



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1.0 PROJECT SUMMARY

Project Name:	Mold Remediation- T-203
Project Location:	T-203 Rooms A 17 & 18
Project Dates:	TBD
Owner:	Bay Pines VAMC
Prime Contractor:	TBD
On-Site Contact:	Ms. Claudia Boutot
Industrial Hygiene Consultant:	OHC Environmental Engineering, Inc.
Competent Person of Record:	James F. Rizk, MS, CIH
Company:	OHC Environmental Engineering Inc. 5420 Bay Center Drive Tampa, Florida 33609 813.626.8156

2.0 GENERAL INFORMATION

This plan is designed to protect building occupants, contractor employees, their subcontractors, OHC employees, other contractors on site, and the environment during the mold remediation activity.

2.1 Scope of Work

- Remove the drywall in Rooms A 17 (A/H room) & Room 18 up to 5 feet high all around the mechanical room. The extent of damaged wallboard has not been clearly identified due to inaccessibility behind the A/H unit. Remove any wood discoloration on the flooring,
- Remove the floor tile in room A 17,
- Remove the carpet tile in the hallway adjacent to room A 17,
- An Asbestos and Lead survey has been performed in this area and none exist.

2.2 Submittals:

Submit the following documents prior to start of work:

- Florida Mold Remediation Contractor License
- Name and certification of the contractor competent person on site
- Worker mold training certification
- Respirator clearance
- Fungicides and Biocides: Submit applicable Safety Data Sheets for any Fungicides and Biocides contractor plans to use on site.
- Safety Data Sheets for any chemicals proposed to be used on site.

3.0 STATUTORY REQUIREMENTS

All employees and contractors must have current and detailed knowledge of Federal, State and local regulations applicable to the removal of biological agents. The regulations listed below form a part of this plan to the extent referenced. They are referred to in the text by the basic designation only.

3.1 Code of Federal Regulation (CFR) Publications

29 CFR 1910.134	Respiratory Protection
29 CFR 1926.200	Specifications for Accident Prevention Signs and Tags
29 CFR 1910.1200	Hazardous Communication
40 CFR 262.11	Hazardous Waste Determinations

3.2 Florida Statutes

Chapter 468, Part XVI of the Florida Statutes and Rule 61-31 of the Florida Administrative Code. Licensing of Mold Remediation Contractors

3.3 American National Standard institute (ANSI)

Z9.2-79 Fundamentals governing the design and operation of local exhaust systems.

Z88.2-80 Practices for Respiratory Protection

4.0 DEFINITIONS

Remediation: Operations to remove biological agents.

Airlock: An enclosure permitting entrance and exit to or from a contaminated area and a clean area. Airflow is always from the clean area into the contaminated area.

Mold Control Area: An area where mold removal operations are being performed which is isolated by physical boundaries to prevent the spread of biological agents, or debris.

Competent Person: Person who is capable of identifying existing mold hazards in the workplace and has the authority to take prompt corrective measures to eliminate them. The duties include at least the following: establishing the negative pressure enclosure, ensuring its integrity, controlling entry to and exit from the enclosure, supervising any employee exposure monitoring required by the standard, ensuring that all employees working in such an enclosure wear the appropriate personal protection, are trained in the appropriate methods of exposure control, and use the hygiene facilities and decontamination procedures specified in the standard; and ensuring that engineering controls in use are in the proper operating conditions and are functioning properly.

Decontamination (decon) Unit: A decontamination system for personnel, equipment and materials; a series of connected rooms with airlocks/curtained doorways between any two adjacent rooms, for the decontamination of workers or of materials and equipment. Contaminated area is separated from clean area by showers for personnel; a washroom for equipment.

Enclosure: Permanent barriers erected around the removal area to isolate the removal area in an airtight, impermeable containment/environment.

Equipment Room: A space provided for the storage of contaminated clothing and equipment; part of the personnel decontamination unit.

HEPA Filter Equipment: High Efficiency Particulate Absolute (HEPA) filtered vacuuming equipment with a filter system capable of collecting and retaining mold spores. Filters will be of 99.97 percent efficiency for retaining fibers of 0.3 microns or greater.

Negative Pressure System: A system in which static pressure in an enclosed control area is lower than that of the environmental outside the control area, as specified.

Plasticize: To cover floors, walls and fixed objects with plastic sheeting.

Wet Cleaning: Removing the residue of mold spores from building surfaces and installed objects by using a combination of HEPA vacuuming and wet wiping.

Disinfectants or Biocide Sanitizing Solutions: One of three groups of antimicrobials registered by the EPA for public health uses. The EPA considers an antimicrobial to be a disinfectant when it destroys or irreversibly inactivates infectious or other undesirable organisms, but not necessarily their spores.

Fungicidal Agents: A coating material that contains an EPA registered fungicide that inhibits the spread and growth of mold with the ability to withstand moist and humid conditions.

Non-Porous Material: A material that does not absorb nor is easily penetrated by liquids, especially water. Generally, non-porous materials have a permeable factor of less than 1. Some examples are metal, glass, plastic, ceramic tile, etc.

Categories of Water: (IICRC S500)

- **Category 1 Water:** Water originating from a source that does not pose substantial harm to humans. Also referred to as "clean water."
- **Category 2 Water:** Water containing a significant degree of chemical, biological and/or physical contamination and having the potential to cause discomfort or sickness if consumed by or exposed to humans. Also referred to as "gray water."
- **Category 3 Water:** Grossly unsanitary water, containing pathogenic agents, arising from sewage or other contaminated water sources and having the likelihood of causing discomfort or sickness if consumed by or exposed to humans. This category includes all forms of seawater, ground surface water and rising water from rivers or streams. Also referred to as "black water."

5.0 PRIOR TO COMMENCEMENT OF WORK

Submit documentation to the CIH indicating that each employee has successfully completed the required training course(s) for mold work activities. In addition, submit verification that all employees have received medical examinations as required by OSHA regulations. Upon approval of the submittal by the CIH, a copy will be forwarded to the contracting officer.

6.0 OSHA STANDARDS

At this time there are no OSHA standards applicable to mold abatement other than the 5(a)1 general duty clause.

7.0 WORK PROCEDURES

7.1 Control Area

- A. Demarcation of the work area: Establish a mold control area by roping off at least 10 feet around the work areas and placing signs around the work area;
- B. Critical barriers: Shut off the A/H unit and seal all HVAC vents within the work area with two layers of 6 mil Plastic sheeting. Seal all openings into the work area with one layer of 6 mil plastic sheeting. HEPA vacuum and wet wipe all non-movable items within the work area and cover with two layers of fire retardant 6 mil poly.
- C. HEPA vacuum and wet wipe all removable items within the work area then remove to a remote area.
- D. Decontamination facilities: construct a two stage dry decontamination facility adjacent to the work area.
- E. Full Containment: construct a full containment in room 18 surrounding the work area. The containment shall extent to the hallway surrounding room A 17 to include the hallway. Containment shall consist of two layers of 6 mil fire retardant poly.
- F. Diminished Pressure: Establish diminished pressure of 0.02 inches of water in the containment. Negative air machines will exhaust to the exterior of the building. The contractor shall provide a detailed plan showing the exact configuration of the containment and decontamination facility.
- G. Protection of Existing Work to Remain: Perform mold removal work without damage or contamination of adjacent areas. Where existing work is damaged or contaminated, restore work to its original condition.
- H. Mechanical Ventilation System:
 - 1. Use adequate ventilation to control personnel exposure to mold during the remediation activity.
 - 2. To the extent feasible, use fixed local exhaust ventilation connected to HEPA filters or other collection systems, approved by the industrial hygienist. Local exhaust ventilation systems shall be designed, constructed, installed, and

maintained in accordance with ANSI Z9.2. Local exhaust ventilation shall exhaust to the exterior of the building.

- I. Personnel Protection: Personnel shall wear and use protective clothing, gloves and equipment as specified herein. Eating, smoking, or drinking is not permitted in the mold control area. No one will be permitted in the mold control area without prior approval. As a minimum contractor will start work in a half face respiratory protection.
- J. Warning Signs: Provide warning signs at approaches to mold control areas. Locate signs at such a distance that personnel may read the sign and take the necessary precautions before entering the area.

7.2 Work Procedures

- A. Decontamination of Existing items: HEPA vacuum and wet wipe all existing items within the workarea with soap and water. Remove all furnishing within the work area to a remote location until all work is complete. Any items that cannot be removed must be cleaned then covered and sealed with two layers of 6 mil. fire retardant poly.
- B. Remove the drywall, and associated insulation, up to 5 feet high and examine the remaining drywall and associated insulation and check for any water damage on remaining drywall. Clean the studs and flooring with an EPA registered fungicide. Coat all cleaned surfaces with an EPA registered mold inhibitor.
- C. Remove the floor tile in the Air handler room and wipe the floor with EPA registered Fungicide. Remove any remaining carpet tile in the hallway adjacent to the A/H room and wipe the floor with an EPA registered Funficide.
- D. Personnel Exiting Procedures:
 - 1. Whenever personnel exit the mold-controlled area, they shall perform the following procedures and shall not leave the work place wearing any clothing or equipment worn during the work day:
 - a. Vacuum any excess dust from coveralls.
 - b. Remove protective clothing in the first decontamination chamber, and place them in an approved impermeable disposal bag.
 - c. Change to clean clothes in the second chamber prior to leaving the physical boundary designated around the mold-contaminated job site.
 - d. Personnel shall immediately proceed to a designated remote decontamination facility to wash off their hands and face.
 - e. Waste Disposal: Place all waste generated from this process into two layers of 6 mil polyethylene waste bags and properly seal the bags. Wipe the exterior of each bag prior to removing from the work area. The waste may be disposed of as regular construction debris.

7.3 Demarcation of the Regulated Area

Contractor shall post warning signs demarcating all regulated areas. The signs shall have black characters on a yellow background with the following legend:

**WARNING
DO NOT ENTER
MICROBIAL REMEDIATION WORK IN PROGRESS**

7.4 Interface of Trades

Other contractors will not be allowed in the mold remediation work area until it has been cleared for reentry.

8.0 TRAINING

Each worker will receive training on: the hazards of mold, the written compliance program, engineering controls, containment practices, respiratory protection and symptoms of mold exposure.

9.0 MEDICAL SURVEILLANCE

9.1 Regulatory Compliance

Contractor shall comply with the provision of 29 CFR 1910.134 for each and every employee assigned to wear respiratory protective equipment.

10.0 HAZARD COMMUNICATION

Contractor will post a copy of 29 CFR 1926.62. "Health Hazard Data" in a prominent place in the office area. Contractor will also comply with the hazard communication provisions in 29 CFR 1910 1200.

Safety Data Sheets for any chemicals used on site shall be added to the plan and a copy shall be submitted to the prime contractor for review.

11.0 PROTECTIVE CLOTHING

Personnel who are potentially exposed to airborne biological agents shall be provided with disposable protective whole body clothing, head coverings, foot coverings, and gloves. Hard hats and eye protection shall be provided as needed.

12.0 RESPIRATORY PROTECTION

12.1 Regulatory Compliance

Contractor, or its subcontractor, will comply with the provisions of 29 CFR 1910.134 (b), (d), (e) and (f) in establishing a respiratory protection program.

12.2 Respirator Approval

The respirators must be approved by National Institute for Occupational Safety and Health (NIOSH). The type of respirator will be appropriate to the airborne mold concentration in the enclosed area at the time of entry. Refer to Appendix II for respiratory protection values. All needle gun removal will be performed using as a minimum, half face respiratory protection equipped with N 100 filters.

12.3 Contractor Respirator Program

Contractor, or its subcontractor responsible for removing the paint, will provide a copy of the respiratory protection program as part of their submittal.

13.0 HYGIENE

Protective work clothing and equipment for workers

13.1 Provision and Use

Employees exposed to biological agents, without regard to the use of respirators, or where the possibility of skin or eye irritation exists, the employer shall provide, at no cost to the employee, and assure that the employee uses appropriate protective work clothing and equipment such as, but not limited to:

- Coveralls or similar full-body work clothing;
- Gloves, hats, and shoes or disposable shoe coverlets; and
- Face shields, vented goggles, or other appropriate protective equipment which complies with CFR 29 Section 1910.133 of Part 1910.

13.2 Cleaning and Replacement.

Provide Disposable Protective Clothing as Needed.

- The employer shall provide for the disposal of required protective clothing and equipment.
- The employer shall repair or replace required protective clothing and equipment as needed to maintain their effectiveness.
- The employer shall prohibit the removal of mold from protective clothing or equipment by blowing, shaking, or any other means, which disperses mold spores into the air.

14.0 GENERAL SAFETY REQUIREMENTS

The Contractor is responsible for maintaining safe working conditions in accordance with all applicable safety instructions in 29 CFR 1926.62 and all other applicable safety procedures in 29 CFR 1926.20 (General safety and health provisions) will be adhered to. The Owner, the Designer, and the Owner's representative assume *no responsibility* for the safety of the Contractor's employees. That is a responsibility the Contractor will not delegate. Nevertheless, the Owner and/or his or her representative are authorized to stop operations upon their discovery of a potential or existing safety hazard, notifying the Contractor of the condition for his corrective action.

15.0 DISPOSAL

All waste generated during the mold remediation activity shall be double bagged and properly sealed. The waste may be disposed of as regular construction waste.

16.0 DECONTAMINATION

Upon completion of all work activities that disturb biological agents the work area shall be cleaned by HEPA vacuumed then wet wiped using an EPA registered disinfectant or biocide solution. All walls and floors in the kitchen and dishwasher area must be wet wiped.

17.0 FINAL CLEANING AND CLEARENCE OF EACH WORK AREA

Upon completion of the cleaning activity the on-site Industrial Hygienist shall conduct a visual inspection of the work area to verify that it is clean. Final clearance shall be by visual inspection only.