HEADQUARTERS
UNITED STATES ARMY TRAINING CENTER
AND
FORT JACKSON
FORT JACKSON, SOUTH CAROLINA 29207

STANDARD OPERATING PROCEDURES FOR MOLD REMEDIATION

Summary: This SOP outlines the requirements for prevention and the remediation of mold at Fort Jackson, South Carolina.

References: AR 420-1, Army Facilities Management, 24 August 2012; TG 277, Army Facilities Management Information Document on Mold Remediation Issues, February 2002; and TG 278, Industrial Hygiene/Preventive Medicine Mold Assessment Guide, February 2002

Applicability: This SOP applies to all organizations on Fort Jackson.

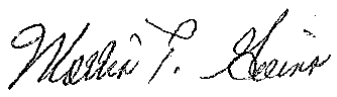
Proponent: The Safety Director, US Army Training Center and Fort Jackson, is the proponent for this SOP.

Suggested Improvements: Send comments and suggested improvements on DA Form 2028 (Recommended Changes to Publications and Blank Forms) through channels to Director, Safety & Occupational Health, Fort Jackson, South Carolina 29207.

FOR THE COMMANDER:

ROGER L. CLOUTIER
Major General, U.S. Army
Commanding

OFFICIAL:



MORRIS T. GOINS
Colonel, GS
Chief of Staff

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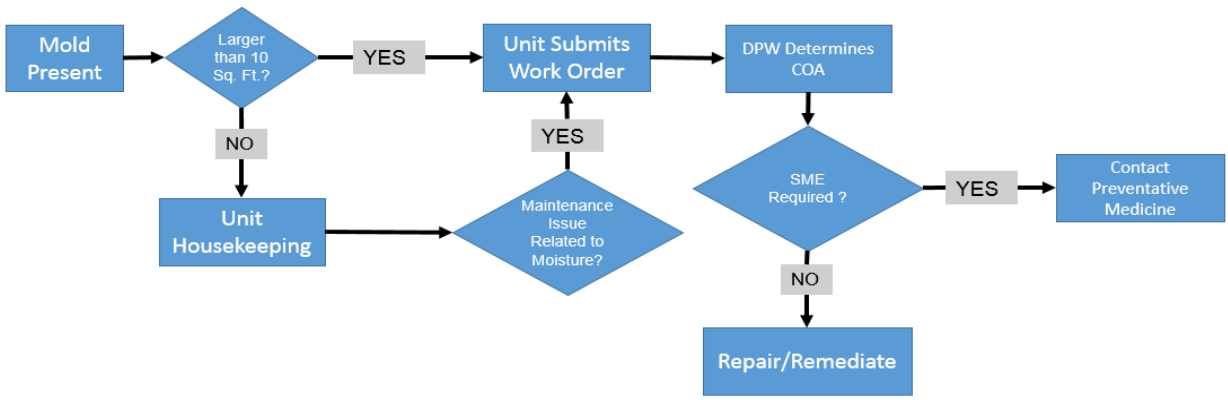
1. Introduction.

a. Concern about indoor exposure to mold has been increasing as the public becomes more aware that exposure to mold can cause a variety of health effects and symptoms, related to allergic reactions.

b. Prompt remediation must be the primary response to mold contamination in buildings. The simplest and most expedient remediation that properly and safely removes mold growth from buildings should be used by the occupants during daily housekeeping. Widespread contamination poses much larger problems that must be addressed on a case-by-case basis in consultation with Engineering (DPW) and Preventive Medicine representatives. Effective communication with building occupants is an essential component of all remedial efforts. Occupational Health can assist/document in the Civilian Employee Medical Record when a federal employee on post has health concerns they believe are related to mold. However, both federal employees and other individuals on post (i.e., someone living in post housing, Soldiers living in the barracks, etc. should be evaluated and treated, if necessary, by their primary care manager (PCM).

c. Units are responsible for housekeeping, although when the problem is bigger than the unit can cleanup a work order will be generated. DPW will identify how to repair the issue.

Mold Remediation Flow Chart



2. Mold Prevention Tips.

a. Fix leaky plumbing and leaks in the building envelope as soon as possible. Mold problems are inexplicably linked to sources of water/moisture. Mold cannot survive w/o it. If we want to eliminate it and prevent it, water sources must be controlled.

b. Watch for condensation and wet spots. Eliminate source(s) of moisture problem(s) as soon as possible.

c. Prevent moisture due to condensation by increasing surface temperature or reducing the moisture level in air (humidity). To increase surface temperature, insulate or increase air circulation. To reduce the moisture level in air, repair leaks, increase ventilation (if outside air is cold and dry), or dehumidify (if outdoor air is warm and humid).

d. Keep heating, ventilating, and air-conditioning (HVAC) drip pans clean, flowing properly, and unobstructed.

e. Vent moisture-generating appliances, such as dryers, to the outside.

f. Maintain low indoor humidity, below 60% relative humidity (RH), ideally 30-50%, if possible.

g. Perform regular building/HVAC inspections and maintenance as scheduled.

h. Clean and dry wet or damp spots within 48 hours.

i. Don't let foundations stay wet. Provide adequate drainage and slope the ground away from the foundation.

3. Purpose. To provide guidelines for the prevention and remediation of mold in buildings on Fort Jackson.

4. Scope.

a. If the quantity of surface area affected by the mold contamination is:

(1) Less than 10 sq. ft. and in a location under 7 feet from the walking surface: Remediation is performed by organization as part of the housekeeping function. Work must be performed in accordance with this SOP.

(2) Greater than 10 sq. ft. or above 7 feet above the walking surface: Contact DPW for a work order for the affected area. Organization will submit a work order to DPW for remediation.

(3) DPW will contact preventive medicine prior to any mold remediation work greater than 100 square feet, that is located directly within an HVAC system, or if any materials are suspect asbestos containing building materials.

b. Remediation Levels; (Adapted from TG 277, Army Facilities Management Information Document on Mold Remediation Issues. February 2002.)

(1) Level I: Small Isolated Areas: Total surface area affected less than 10 sq. ft. - e.g., ceiling tiles, small areas on walls. Unit personnel will conduct this level of remediation. Such persons should receive training on proper cleanup methods, personal protection, and potential health hazards from their unit additional duty safety staff (ADSO). This training can be performed as part of a program to comply with the requirements of the OSHA Hazard Communication Standard (29 CFR 1910.1200). (Unit level)

(2) Level II: Medium: Total Surface Area affected between 10 and 100 sq. ft. - e.g., several wallboard panels. (Unit submits a work order)

(3) Level III: Large Area: Total Surface Area affected greater than 100 sq. ft. or potential for increased occupant or remediate exposure during remediation is estimated to be significant. (Unit submits a work order) Completely isolate the work area from occupied spaces using double layers of polyethylene plastic sheeting sealed with duct tape (including ventilation ducts/grills, fixtures, and any other openings).

(4) Level IV: Remediation of HVAC Systems, for a small area (<10 sq. ft.) follow Level I guidance for PPE and containment and for areas (>I 0 sq. ft.) follow Medium (Level II) or when greater than 100 sq. ft. follow Large (Level III) guidance for PPE and containment; A Small Isolated Area of Contamination (total surface area affected <10 sq. ft.) in the HVAC System. The HVAC system should be shut down prior to any remedial activities.

5. Roles/Responsibilities.

a. Commanders/directors:

(1) Ensure housekeeping schedules are established and executed to standard in order to prevent conditions that enable mold growth.

(2) Identify and fix the source(s) of water leak(s) or intrusion.

(3) Notify DPW immediately when an area of suspected mold growth is discovered, in excess of 10 square feet, or is located within HVAC equipment or any contaminated materials are suspected to be asbestos containing.

b. DPW/Facility Maintenance:

(1) Promptly fix the source(s) of water leak(s) or intrusion reported by organizations as a priority work order.

(2) Arrange and manage contract services for water removal and restorative drying of affected structure.

(3) Include the roles/responsibilities identified in c. below in the Statement of Work or Performance Work Statement for all contracted services.

(4) Contact the preventative medicine section when subject matter expertise (SME) is required.

c. Preventive Medicine:

(1) Provide services as the SME for areas suspected to be contaminated by mold growth over level II criteria, and provide recommendations to DPW/Facilities Management for remediation.

(2) Assist DPW/facilities Management in identifying the underlying causes of water intrusion and mold growth and develop the appropriate response(s) to prevent recurrence.

(3) Assess conditions for occupancy after water restoration or mold remediation activities.

6. Procedure for Mold Remediation.

a. Mold growth within an occupied building is indicative of a water problem. The cause of the water problem must be investigated and resolved to prevent remediating the same site multiple times. Likewise, when water is introduced into the indoor environment the affected area must be dried as soon as possible (within 24-48 hours) to avoid the promotion of mold growth.

b. Once the source of water problem is identified and eliminated, several methods for remediating visible mold growth are possible. Each situation will dictate which method is most appropriate.

c. Units will only clean visible surface areas and shall not remove or disturb any building materials or components that could likely contain Asbestos.

7. Methods.

a. Method 1: Wet vacuum- steam cleaning may be an alternative for carpets and upholstery. Wet vacuum- use vacuum designed to collect water/moisture. This method not intended for porous surfaces.

b. Method 2: Damp wipe with plain water/bleach solution (3 to 1), scrub as necessary. Works well on non-porous surfaces only. Never mix bleach and ammonia. Toxic fumes may be produced.

c. Method 3: HEPA vacuum on thoroughly dry surfaces. Dispose of HEPA contents in a well-sealed plastic bag.

d. Method 4: Remove and discard contaminated material in a sealed plastic bag. HEPA vacuum area after material has been removed and then dispose of HEPA contents in a well-sealed plastic bag.

8. Personal Protective Equipment (PPE). Personnel engaging in the abatement of mold shall have the following PPE available for their use: Safety glasses/goggles, N95 Respirator, Disposable Coveralls, and Gloves.

9. Disposal.

a. Once mold contaminated materials have been removed and sealed in plastic bags, waste can be disposed of as regular trash.

b. No special labeling or disposal requirements are necessary.

10. References.

a. AR 420-1, Army Facilities Management; 3-47, e. & 3-54, g(3)(b). 24 August 2012.

b. TG 277, Army Facilities Management Information Document on Mold Remediation Issues. February 2002.

c. TG 278, Industrial Hygiene/Preventive Medicine Mold Assessment Guide. February 2002.

d. U.S. Environmental Protection Agency. Mold Remediation in Schools and Commercial Buildings EPA 402-K-01-001. http://www.epa.gov/iedmold1/table2.html