1.0 PROGRAM OBJECTIVE

The purpose of this procedure is to define the responsibilities, methods, procedures and training required to safely and effectively remove or clean mold-contaminated building materials and contents.

2.0 SCOPE

This program covers buildings owned or operated by the University of Pennsylvania.

3.0 DEFINITIONS

3.1 Approved Contractor – A contractor who has been approved by EHRS & Facilities Services to perform mold remediation work.

3.2 Flame Resistant Polyethylene Sheeting – Six mil flame resistant polyethylene sheeting meeting NFPA 701.

3.3 Level I Mold Remediation Project – Projects requiring the remediation of less than ten square feet of mold-contaminated materials. Typically completed by trained Facilities Services personnel. EHRS notification is optional.

3.4 Level II Mold Remediation Project – Projects involving remediation of greater than ten feet of mold-contaminated materials. Shall be completed by an approved contractor. EHRS notification is required.

3.5 Mold-Contaminated Materials - Materials determined to be mold-contaminated through visual and/or olfactory inspection or other sampling methods.

3.6 Post-Remediation Verification – A post-remediation inspection performed by EHRS industrial hygienists or by industrial hygiene consultants selected by EHRS. The inspection may include visual inspection, olfactory detection or sampling as deemed appropriate. The purpose of the inspection is to verify that the remediation has been properly executed and that the area has been restored to what would be considered a normal indoor environment fungal ecology.

3.7 Trained Individual – An individual who has completed EHRS mold remediation training.

4.0 RESPONSIBILITIES

4.1 Environmental Health and Radiation Safety (EHRS)

4.1.1 Shall evaluate suspected areas of mold contamination and assess appropriate University response.
4.1.2 Shall in conjunction with Facilities Services identify the underlying causes of mold contamination and identify responses to prevent recurrence.

4.1.3 Shall perform or coordinate mold remediation project oversight for level II projects.

4.1.4 Shall provide or coordinate appropriate training to Facilities Services staff that perform mold remediation.

4.1.5 Shall perform periodic reviews of the overall effectiveness of the Mold Remediation Procedures and update as required.

4.1.6 Shall maintain all sampling, training and post-remediation verification documentation.

4.4 Facilities Services

4.4.1 Shall notify EHRS of mold growth in excess of ten square feet and other non-routine water releases.

4.4.2 Shall perform mold remediation as outlined in this procedure.

4.4.3 Shall work in conjunction with EHRS to pre-qualify remediation contractors for level II projects.

4.4.4 Shall attend appropriate training and follow remediation work practices as outlined in the training and this procedure.

5.0 GENERAL INFORMATION

5.1 General Rules

5.1.1 Only non-porous (e.g., metals, glass, and hard plastics) and semi-porous (e.g., wood, and concrete) materials that are structurally sound can be cleaned and reused. Cleaning should be completed using an appropriate cleaning agent. All materials that will be reused should be dry and visibly free from mold.

5.1.2 Porous materials such as ceiling tiles, insulation, and gypsum board may not be cleaned and should be removed and discarded as described in this procedure.

5.1.3 The use of gaseous, vapor-phase or aerosolized biocides or odor suppressants for remedial purposes is not permitted without specific approval from EHRS.

6.0 PROCEDURE
6.1 **Level I: Limited Areas of Mold Contamination (10 square feet or less of mold-contaminated materials)**

6.1.1 EHRS notification is optional.

6.1.2 Trained Facilities Services personnel may conduct remediation.

6.1.3 Personal protective equipment including at minimum, gloves and eye protection shall be worn.

6.1.4 Building occupants should be temporarily relocated during the remediation project.

6.1.5 Containment of the remediation area is not required. A polyethylene drop cloth should be installed in the immediate area of the remediation activity.

6.1.6 Contaminated materials that cannot be cleaned should be removed from the building in a sealed plastic bag or wrapped and sealed in polyethylene sheeting and disposed of. There are no special requirements for the disposal of moldy materials.

6.1.7 Hidden mold – If additional mold contamination is discovered during the remediation project, contact EHRS to have the project reevaluated.

6.1.8 At the completion of the remediation project, all surfaces, including carpeting, in the vicinity of the remediation area shall be HEPA vacuumed. Additionally, non-porous surfaces shall be damp wiped and the floors mopped with the appropriate cleaning agent.

6.1.9 All areas should be left dry and visibly free from contamination and dust/debris.

6.2 **Level II: Mid to Large Areas (greater than 10 square feet of mold-contaminated materials)**

6.2.1 EHRS must be notified of the intent to remediate as soon as possible.

6.2.2 Remediation shall be completed by an approved contractor selected by Facilities Services/EHRS. Remediation work practices shall be consistent with nationally accepted standards such as IICRC S500-Standard and Reference Guide for Professional Water Damage Restoration and IICRC S520-Standard and Reference Guide for Professional Mold Remediation.

6.2.3 Contractor is required to submit a work plan detailing methods and procedures used to complete the remediation project to EHRS for approval at least two working days in advance of the project.
6.2.4 EHRS shall review the work plan, request changes if necessary, and give the contractor permission to proceed.

6.2.5 EHRS shall perform project oversight to include periodic inspections to ensure that the project is completed in compliance with the work plan and complete post-remediation verification.

6.2.6 EHRS shall provide a written post-remediation verification report to Facilities Services and the occupants of the remediation area.

7.0 TRAINING

7.1 All personnel involved with mold remediation shall receive training consistent with their duties. Employees will receive training in order to acquire the understanding, knowledge and skills necessary for the safe performance of the duties assigned under this program.

7.2 Training shall be provided to each affected employee:

7.2.1 Before the employee is first assigned duties.

7.2.2 Whenever the employer has reason to believe that there are deviations from the mold remediation procedures or that there are inadequacies in the employee's knowledge or use of these procedures.

7.2.3 The training shall establish employee proficiency in the duties required and shall introduce new or revised procedures, as necessary, for compliance.

7.3 Training content shall include:


7.3.2 Methods & Procedures for mold remediation to include:

7.3.2.1 Isolation of HVAC systems.
7.3.2.2 Installation of isolation barriers and protection of non-contaminated materials within the remediation area.
7.3.2.3 Remediation, cleaning and disposal of mold-contaminated materials.
7.3.2.4 Final cleaning of remediation area.

7.3.3 Personal protective equipment including OSHA Respiratory Protection Standard (29 CFR 1910.134).

8.0 DOCUMENTATION

8.1 Training documentation shall be kept for all affected employees. Training rosters shall indicate the employee’s name, date, and the instructor who performed the training.
EHRS shall maintain all training rosters and a copy of the training outline. The most current training record shall be kept for each affected employee.

8.2 EHRS shall maintain copies of all work plans.
8.3 EHRS shall maintain all sampling data.
8.4 EHRS shall maintain all post-remediation sampling reports.

9.0 REFERENCES


9.3 Centers for Disease Control and Prevention – Facts About Mold and Dampness http://www.cdc.gov/mold/dampness_facts.htm

9.4 US Environmental Protection Agency – Mold and Dampness http://www.epa.gov/mold/