SUNY OSWEGO FACILITY SERVICES
ENVIRONMENTAL HEALTH AND SAFETY

MOLD REMEDIATION

Procedure Number	Revision Number	Effective Date
EHS-Mold	01	10/01/2018
Approval Signature J. Mitchell Fields AVP- Facilities Services		Approval Date Oct. 1, 2018

1. Purpose and Requirements

Mold is everywhere. When mold growth occurs indoors, adverse health problems may be reported by some building occupants, particularly those with allergies or respiratory problems. All types of mold have the potential to cause health effects. Potential health concerns are an important reason to prevent mold growth and to remediate/clean up any existing indoor mold growth.

The presence of excessive moisture in buildings has been linked with occupant illnesses and the deterioration of building material. When mold spores land on wet or damp areas they may begin to grow. Excess moisture on almost all indoor materials leads to growth of microbes, such as mold, fungi, and bacteria. It is impossible to eliminate all mold and mold spores in the indoor environment. However, mold growth can be controlled indoors by controlling moisture indoors. If building materials have become wet due to water leaks, floods, or high humidity, it is essential that the water/moisture be controlled as soon as possible to minimize mold growth. If the source of water is elevated humidity, relative humidity should be maintained at levels below 50% to inhibit mold growth. In all situations, the underlying cause of water accumulation must be rectified or fungal growth will recur.

Currently there are no federal standards (e.g. OSHA, NIOSH, EPA) for airborne concentrations of mold spores. However, epidemiological studies suggests that the occupants of damp or moldy buildings are at increases risk of respiratory symptoms, respiratory infections and exacerbation of asthma. Strategies for mold prevention and remediation are based on best practices as determined in the field.

2. Scope

The purpose of this document is to establish procedures for in-house clean-up of building materials that contain mold and outlines methods to prevent mold growth. These procedures

closely reflect the guidelines set forth by the NYS article 32 Environmental Protection Agency (EPA), OSHA-CFR-1910,1926.
These procedures apply to facilities maintained by Oswego University personnel.

3. General Responsibilities

3.1 Environmental Health and Safety

- Upon request will walk through areas impacted by water intrusion and meter materials affected.
- Provide technical assistance and recommendations to Facility Managers, Project Managers for drying and moisture remediation.
- Evaluate areas suspected to be contaminated by mold growth and provide recommendations to Facility Managers and Project Managers for remediation.
- Assist in identifying the underlying causes of water intrusion and mold growth.The Certified Mold Inspector will develop appropriate mold assessment plan as to cleaning and to prevent recurrence for areas greater than10 square feet.
- Assess conditions for occupancy after water restoration or mold remediation activities.

3.2 Facilities Maintenance and Operations (FMO)

- Identify and fix the source of water leak(s) or intrusion.
- Perform or arrange for services for water removal and restorative drying of affected area/structure.
- Clean all mold contamination areas.

4. Procedure Instruction

4.1 Notifications -

EH&S notification is mandatory when:

- Areas of mold contamination that are less than 10 square feet, can be cleaned without assessment.
- Areas of mold contamination that are greater than 10 square feet require a mold assessment plan provided by EHS.
- If you know or suspect that the water source is contaminated with sewage, chemical or biological pollutants
- If the mold contamination is on any component of an air handling system

4.2 Training – Facilities Maintenance and Operation (FMO) custodial personnel may conduct mold remediation projects covering less than 100 contiguous square feet after completing Hazard Communication training and reviewing this procedure with their supervisor. Authorized employees shall be provided with appropriate cleaning supplies, personal protective equipment, and disposal containers.

FMO custodial personnel may conduct mold remediation projects **greater** than 100 square feet after completing Hazard Communication training, Respiratory Protection Training, receiving the mold remediation plan from EHS and reviewing this

procedure with their supervisor. Authorized employees shall be provided with appropriate cleaning supplies, personal protective equipment, and disposal containers.

Employees who are highly sensitive to environmental allergens should consult with their physician and supervisor before participating in remediation activities.

4.3 **Area Containment** - Building occupants directly adjacent to mold contamination shall be temporarily relocated while the remediation is being performed if the area exceeds 100 square foot.

Area containment is not required for remediation projects 100 square feet or

less. Area containment is required for remediation projects 100 square feet or

more.
Containment includes:
Use of polyethylene sheeting ceiling to floor around the affected area with a slit entry and covering flap. Maintain area under negative pressure with HEPA filtered fan exhausted outside of building. Block supply and return air vents within containment area.

4.4 **Personal Protective Equipment (PPE)** – Mold remediation projects less than 100 square feet requires PPE including nitrile gloves and goggles. It is recommended workers wear an N-95 dust mask.

PPE required for all mold remediation projects greater than 100 square feet includes:

Nitrile gloves, disposable full body clothing (tyvek or similar product), goggles and a half face respirator with HEPA filter. All Oswego State University Staff that participate in large scale mold remediation are required to be members of the Respiratory Protection Program.

4.5 **Cleanup Methods (See Table, Page 4 & 5)**

Method 1: Wet vacuum (in the case of porous materials, some mold spores/fragments will remain in the material but will not grow if the material is completely dried). Steam cleaning may be an alternative for carpets and some upholstered furniture.

Method 2: Damp-wipe surfaces with plain water or with water and detergent solution (except wood —use wood floor cleaner); scrub as needed.

Method 3: High-efficiency particulate air (HEPA) vacuum after the material has been thoroughly dried. Dispose of the contents of the HEPA vacuum in well-sealed plastic bags.

Method 4: Discard - Mold contaminated materials that cannot be cleaned shall be sealed in plastic bags and disposed of as normal waste. HEPA vacuum area after it is dried. Dispose of the contents of the HEPA vacuum in well-sealed plastic bags.

4.6 **Completion** – Mold contaminated materials that cannot be cleaned shall be sealed in plastic bags and disposed of as normal waste. 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 plain water or with water and detergent solution. All areas should be left dry and visibly free from contamination and dust/debris.

5. References

EPA Mold Remediation in Schools and Commercial Buildings - http://www.epa.gov/mold/mold_remediation.html
NYC Department of Health - http://www.nyc.gov/html/doh/html/epi/mold.shtml
Occupational Health & Safety Administration - http://www.osha.gov/SLTC/molds/

This table presents remediation guidelines for building materials that have or are likely to have mold growth. The guidelines in this table are designed to protect the health of occupants and cleanup personnel during remediation. These guidelines are based on the area and type of material affected by water damage and/or mold growth. Please note that these are guidelines; please consult with EH&S if questions or concerns arise.

Guidelines for Remediating Building Materials with Mold Growth Caused by Clean Water*
SMALL/MEDIUM - Total Surface Area Affected Less Than 100 square feet (ft^2)

Material or Furnishing Affected	Cleanup Methods†	Personal Protective Equipment	Containment
Books and papers	3, 4	Nitrile gloves and goggles. Recommended use of N-95 respirator.	None required. Building occupants directly adjacent to mold contamination shall be temporarily relocated while the remediation is being performed.
Carpet and backing	1, 3, 4		
Concrete or cinder block	1, 3		
Hard surface, porous flooring (linoleum, ceramic tile, vinyl)	1, 2, 3		
Non-porous, hard surfaces (plastics, metals)	1, 2, 3		
Upholstered furniture & drapes	1, 3, 4		
Wallboard (drywall and gypsum board)	3, 4		
Wood surfaces	1, 2, 3, 4		

Cleanup Methods

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† Select method most appropriate to situation. Since molds gradually destroy the things they grow on, if mold growth is not addressed promptly, some items may be damaged such that cleaning will not restore their original appearance. If mold growth is heavy and items are valuable or important, you may wish to consult a restoration/water damage/remediation expert.

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Guidelines for Remediating Building Materials with Mold Growth Caused by Clean Water*
Large - Total Surface Area Affected Greater Than 100 square feet (ft^2)

Material or Furnishing Affected	Cleanup Methods†	Personal Protective Equipment	Containment
Books and papers	3, 4	Nitrile gloves, disposable full body clothing (tyvek or similar product), goggles and a half face respirator with HEPA filter.	Building occupants directly adjacent to mold contamination shall be temporarily relocated while the remediation is being performed. Use of polyethylene sheeting ceiling to floor around the affected area with a slit entry and covering flap. Maintain area under negative pressure with HEPA filtered fan exhausted outside of building. Block supply and return air vents within containment area.
Carpet and backing	1, 3, 4		
Concrete or cinder block	1, 3		
Hard surface, porous flooring (linoleum, ceramic tile, vinyl)	1, 2, 3		
Non-porous, hard surfaces (plastics, metals)	1, 2, 3		
Upholstered furniture & drapes	1, 3, 4		
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