

Mold Cleanup Guidelines

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Appendix A: Summary of Cleanup Methods for Contamination Levels

Do you have questions or concerns regarding mold cleanup or other indoor environmental quality issues?

Contact Environmental Health and Safety <u>ehs@stolaf.edu</u>

1 Introduction

Mold contamination and remediation in the indoor environment is a complex issue. Remediation of mold refers to the process of removing contamination coupled with steps to modify the indoor environment to prevent the recurrence of growth. There are no state or federal laws (as of October 2022) that mandate how mold must be remediated, and there are no consensus standards about how much or what kind of mold is acceptable in a school or work place. Nevertheless, the Minnesota Department of Health (MDH) considers mold to be a significant public health issue, and has adopted a health-protective precautionary view that "no amount of visible mold growth is acceptable in occupied spaces."

St. Olaf College takes a proactive approach to reduce and eliminate mold growth on campus, and follows the guidelines found in the MDH's "<u>Recommended Best Practices for Mold Remediation in Minnesota</u> <u>Schools</u>¹" and the Environmental Protection Agency's "<u>Mold Remediation in Schools and Commercial</u> <u>Buildings Guide</u>²." Much of the wording in this policy is taken from these publications.

Sections 6 - 12 contain instructions for authorized personnel for cleaning areas that have been damaged by clean water or have been determined to have a "Minimal" or "Moderate" level of mold contamination. Areas that contain minimum contamination are, by definition, relatively easy to clean. It must be noted that areas with moderate contamination may require outside contractors, and nearby occupants may need to be relocated during the remediation work. Areas with major contamination require outside contractors to complete the work; such work would be coordinated through collaboration between the St. Olaf College departments of Facilities and Environmental Health and Safety.

2 Statement of Policy

2.1 Contact Information.

- (a) Issuing Authority: Vice President and Chief Financial Officer
- (b) Contact: Elisabeth Haase; Department of Environmental Health and Safety; <u>haase2@stolaf.edu;</u> 507-786-2292
- (c) Last Updated: 03/29/2023
- 2.2 St. Olaf College considers reports of mold a health and safety issue and takes seriously all reports of suspected mold. While it is best to address the moisture problem during or soon after mold removal, this may not be possible. In cases where solving the moisture problem must be delayed, the college will still work to remove the mold and keep its growth in check until the moisture problem can be corrected.

2.3 Mold Cleanup Guidelines. These written guidelines are intended to:

- (a) Effectively and safely remove contaminated material, including the contaminants in settled dust.
- (b) Control contaminants during remediation.
- (c) Correct the underlying moisture problem.
- (d) Repair property damage and prevent future loss to building materials and contents.

3 Scope and Application

3.1 Limits of Mold Testing.

- (a) Currently there is no widely accepted testing protocol for mold, and MDH strongly recommends that mold testing only be done if the results can adequately answer a question with acceptable certainty.
- (b) As of June 2014, based upon the available science and lack of consensus standards, it is MDH's view that mold testing cannot answer questions such as "is there a safe level of mold" or "is the kind of mold present more harmful than others."
- (c) Since there is no widely agreed upon criteria for acceptable mold levels, it is not advisable to compare mold testing results to any type of published "screening guidelines" to determine if levels of mold found in a school or workplace are "safe."

3.2 Levels of Mold Contamination.

The following table is modified from Table 1 of the MDH "Best Practices" publication, and presents subjective criteria to help characterize the extent of mold contamination, and basic remediation guidelines.

| | Levels of Mold Contamination | | |
|--|---|---|---|
| | 1 - Minimal | 2 - Moderate | 3 - Major |
| Amount of Mold Growth* | • Visible contamination is less than 10 ft ² | Visible contamination is approx. 10 - 100 ft ² | Visible contamination is more than 100 ft ² |
| Degree of Contamination** | Visible growth is scattered; small colonies Growth is generally on non-porous surfaces; easy to access Porous materials have no evidence of internal mold | Non-porous materials are perhaps 50% covered Visible growth on porous or semi-porous materials is light & spotty Hidden contamination is possible | Heavy coverage of mold on any type of surface Contamination may be well established (long term moisture problem) Hidden contamination is likely |
| Potential for Release of Contaminants*** | Surfaces can be easily cleaned in place Small contaminated items can be easily removed and bagged | Cleaning requires average force (i.e., scrubbing) Larger items need to be removed before cleaning can begin | • Aggressive force needed to clean or remove contaminated surfaces and items |
| Who Can Clean the Contaminated Site? | Facilities personnel Residence Life personnel (if properly trained) | Contact your Supervisor Depending on the nature and extent of the problem, EHS may recommend using a mold remediation contractor | Contact your Supervisor EHS will likely recommend using a mold remediation contractor |
| Personal Protective Equipment | Goggles (chemical splash-resistant) Gloves (impervious to any cleaning products used) | Goggles Gloves (puncture-resistant) N95 respirator, or half-mask respirator with HEPA filtration cartridges Disposable clothing; hair and shoe coverings | Goggles Gloves (puncture-resistant) Half-mask or full-mask respirator with HEPA filtration cartridges Disposable clothing; hair and shoe coverings |
| Containment | None required | Locally contain with plastic sheeting Consider potential for remediator and occupant exposure | Seal off to prevent exposure to other areas and occupants Requires professional contractors |

* "Amount of mold growth" refers to the surface area of the contaminated materials.

- ** **"Degree of Contamination"** takes into account the density of the mold growth and the type of materials (porous, non-porous, semi-porous) supporting the growth.
 - The potential for hidden mold growth should also be considered.
 - It is crucial to realize that if the moisture problem has impacted closed spaces and cavities then the extent of mold growth might be greater than what is visible from within occupied spaces. In such cases, destructive techniques may be needed to access and inspect inside surfaces of floor, wall, and ceiling cavities.
- *** **"Potential for Release of Contaminants"** refers to the amount of disturbance necessary to clean or remove the contaminated material. High amounts of disturbance or force can lead to the release of large numbers of mold spores.
 - Porous building materials (i.e., drywall, ceiling tiles, insulation) that are visibly moldy as a result of water damage cannot be satisfactorily cleaned and therefore must be removed and discarded.
 - Such extensive contamination requires the use of special techniques and procedures including full containment and upgraded respiratory protection. In most cases, such work requires the services of a mold remediation contractor. Such work would be coordinated through collaboration between Facilities Management and EHS.

4 **Definitions**

Hard-surfaced semi-porous materials. Examples include solid wood furniture, engineered wood or composite products, brick, cement, resilient (e.g., vinyl) floor coverings, painted drywall, construction lumber.

Multisurface Materials. Some items may contain both porous and non-porous materials, or may have intricate surfaces that may prove difficult to clean. An example is air conditioners.

Non-Porous Materials. Examples include metal, porcelain, glass, hard plastic, ceramic tile, sealed wood, sealed concrete, sealed drywall.

Porous Materials. Examples include unpainted drywall, ceiling tiles, insulation, upholstery, carpet, paper, cardboard, air filters.

5 Responsibilities

5.1 Human Resources (HR)

- (a) Ensure that the employee contacts the employee's or a College-designated provider to discuss proper health tests if an employee is exposed to or is concerned about mold exposure.
- (b) Coordinate with Facilities to inform building occupants where and when cleaning will take place, and, if necessary, will help them relocate to another space during the cleaning period.

5.2 Environmental Health and Safety (EHS)

- (a) Investigate all reports and concerns of mold.
- (b) Assist Facilities with the initial mold assessment (Section 7) including checking for asbestos, developing a remediation plan, and determining if items will be cleaned or disposed (with consultation of the affected department).
- (c) Maintain the database of mold remediation records.
- (d) Ensure that College employees who assist in the mold remediation work are properly trained.

5.3 Supervisors

- (a) Ensure that all reports or concerns of mold are responded to promptly.
- (b) Contact EHS so that an investigation can begin promptly.
- (c) Contact HR so that HR ensures that the employee contacts the health care provider.

5.4 Employees

(a) Contact their supervisor if they suspect that mold is present.

6 Rapid Response (24 – 48 hours) to Mitigate Damage from Clean Water to Prevent Mold Growth

- 6.1 The following actions (adopted from Table 1 of the EPA's "Mold Remediation in Schools") are to help prevent mold growth on items damaged by clean water.
 - (a) Do not use fans before determining that the water is clean or sanitary.
 - (b) If mold growth has occurred or materials have been wet for more than 48 hours, consult Appendix A.
 - (c) Even if porous materials are dried within 48 hours, mold growth may have occurred so it is best to monitor the material for a week.
 - (d) If you know or suspect that the water source is contaminated with sewage, chemical, or biological pollutants, then personal protective equipment and a containment barrier are required. An experienced professional should be consulted before any cleanup work begins.
 - (e) Use a moisture meter to confirm "dryness."
 - (f) Use the table below and follow the instructions for handling water-damaged materials.

| Water-Damaged Material | Actions | | |
|--|---|--|--|
| Non-Porous Materials: Metal, porcelain, glass, hard plastic, ceramic tile, sealed concrete, solid wood with urethane coating, etc. | • Use HEPA vacuum, or damp wipe with water and EnvirOx Heavy Duty Cleaner and allow to dry; scrub if necessary. | | |
| Semi-Porous Materials: Brick, cinder block, linoleum/vinyl flooring, wood furniture. | Remove water with water extraction vacuum. Accelerate drying process with dehumidifiers, fans, and heaters. For flooring: check to make sure underflooring is dry; ounderflooring if necessary. | | |
| Porous Materials: | | | |
| Books and papers | For non-valuable items, discard. Photocopy valuable/important items; attempt to dry with fans. Freeze (in frost-free freezer) or freeze-dry. Follow guidelines approved by Rolvaag Library. | | |
| Carpet and backing | Remove water with water extraction vacuum. Reduce ambient humidity levels with dehumidifier. Accelerate drying process with fans. Use moisture meter to confirm "dryness." | | |
| Ceiling tiles Cellulose insulation Fiberglass insulation | • Remove, dispose, and replace. | | |
| Upholstered furniture | Remove water with water extraction vacuum. Accelerate drying process with dehumidifiers, fans, and/or heaters. May be difficult to completely dry within 48 hours. If the piece is valuable, you may wish to consult a restoration/water damage | | |

| | professional who specializes in furniture. | |
|---|---|--|
| Wallboard | • May be dried in place if there is no obvious swelling and the | |
| Composite wood flooring | seams are intact. If not, remove, discard, and replace. | |
| • Ventilate the wall cavity, if possible | | |
| • Paneling should be pried away from walls. | | |
| Window drapes | • Follow laundering or cleaning instructions recommended by the | |
| window drapes | manufacturer. | |

7 Employee Initial Steps if Mold is Found

- 7.1 Notify your supervisor about the mold issues, and do not attempt to clean up the mold until you receive authorization.
- 7.2 Turn off any Fans until after mold remediation work has been completed (fans will move active mold spores throughout the building).
- **7.3** If Residence Life staff or other non-Facilities personnel are the first to discover the mold, they must fill out an online <u>Work Request Form</u>.
- **7.4** Check for Asbestos. Be aware that the removal of moldy material may impact asbestoscontaining materials, particularly if carpet, cove base, sheetrock, or plaster is involved. Check with your supervisor to verify whether a remediation project might impact an asbestos containing material. If so, asbestos abatement contractors will be necessary.

7.5 Develop a Remediation Plan.

- (a) Determine if this is a Level 1 or Level 2 Contamination (see Section 3.2).
- (b) Organize the cleaning procedures and containment area to minimize and contain the release of mold particles. Common ways contaminants are spread from worksites include foot traffic, the movement of contaminated materials or equipment, and through air movement.
- (c) Find and fix the source of moisture. The source of moisture that led to the mold growth needs to be corrected. Common causes include water leaks, plumbing and HVAC system problems, high humidity and condensation, and even lingering piles of damp clothes.
- (d) **Remediation Goal.** The goal is to restore the building to normal operations, reflected by: a lack of visible mold growth; a lack of mold odors; and appropriate control of moisture.
- (e) **Record** where the problem areas are located. Note the time of remediation, and update the Work Order system.

7.6 Determine if Contaminated Materials can be Cleaned or Need to be Disposed

- (a) See Appendix A for summary of cleanup methods for a particular contaminated material given its contamination level.
- (b) Non-porous materials can usually be thoroughly cleaned to remove any visible mold growth and smell.
- (c) Hard-surfaced semi-porous materials can often be left in place and cleaned if they are only minimally to moderately contaminated on the surface (Level 1 or 2) and can be successfully cleaned, are structurally sound, and would be very difficult to replace.
- (d) Porous construction materials that are visibly moldy usually cannot be satisfactorily cleaned and therefore must be removed and disposed. This should include all materials and furnishings that have or had: visible mold; strong mold odors; or remained wet for longer than 48 hours and are not easily cleaned.

- (e) **Porous fabrics and carpets** might be salvageable if the contamination is minimal, but it is probably more cost effective to replace older materials. The older the materials (or, for carpets, the closer to an entrance) the more foreign organic matter that has likely accumulated over time, and it is this difficult-to-remove organic matter that will be supporting microbial growth.
- (f) Carpeted subflooring may need to be examined. If the subfloor is wood then there's an elevated risk of amplified microbial growth on the subfloor, and carpet removal would be required to adequately inspect and remove any growth on the subfloor.
- (g) Air conditioning units may need to be removed for cleaning or replaced.
- 7.7 Inform Building Occupants. Work areas/living areas should be unoccupied during mold cleanup activities.
 - (a) Facilities & HR will inform building occupants where and when cleaning will take place, and if necessary will help them relocate to another space during the cleaning.
 - (b) Do not proceed with the mold cleanup activities until authorized by your supervisor.

8 Authorized Cleaning Personnel

- **8.1** Cleanup work should not be assigned to persons recovering from recent surgery, immunesuppressed people, or people with chronic lung diseases (e.g., asthma, hypersensitivity pneumonitis, and severe allergies). Supervisors will confirm personnel availability with HR prior to making assignments.
- **8.2** Employees must be trained in the proper use of the personal protective equipment and cleaning supplies to be used for the work they are assigned.

9 Personal Protective Equipment (PPE) and Cleaning Supplies

9.1 PPE. The minimum personal protective equipment required:

(a) Level 1 Contamination:

- (1) Goggles that are chemical splash-resistant.
- (2) Gloves that are impervious to the cleaning chemicals.
- (b) Level 2 Contamination:
 - (1) Goggles that are chemical splash-resistant.
 - (2) Gloves that are impervious to the cleaning products used, and protective against sharp objects (if applicable).
 - (3) Protective outerwear including long sleeved tops and long pants (disposable or washable), and head and shoe coverings.
 - (4) Respirator, either N95 face piece or half-mask respirator with HEPA filtration cartridges, or a Powered Air Purifying Respirator with HEPA filtration cartridge.
- **9.2** Cleaning Supplies: HEPA vacuum, carpet extractor, EnvirOx Critical Care disinfectant, sponge/rags, microfiber towels, soft-bristled brush, and plastic sealable garbage bags; 4-6 mm polyethylene sheeting (or comparable, non-permeable materials), and tape to create containment barriers for Level 2 contaminated areas.

10 Cleaning of Remediation Equipment; Waste Disposal

10.1 Cleaning Remediation Equipment After Use.

(a) Clean reusable PPE and remediation equipment (including the tanks, hoses, and attachments of the HEPA vacuum) with EnvirOx Critical Care disinfectant; rinse PPE with clean water; dry thoroughly.

10.2 Waste Disposal.

- (a) Place contaminated material (including scrubbing pads, wipe cloths, etc.) into plastic garbage bags, or (if too large) wrap in 4-6 mm polyethylene sheets. This will help prevent spreading mold to non-affected areas of a building.
- (b) Fill the bags only ³/₄ full; do not over fill bags such that they cannot be easily and tightly closed without stretching the bags.
- (c) To close the bag, use either an overhand knot or gooseneck knot (see diagrams below).

Overhand knot:



Step 1 Overhand Knot: Gather, Twist End 8"-10"

Gooseneck knot:



Step 2 Overhand Knot: Overhand Knot: Make Loop With the Twisted End



Step 3 Overhand Knot: Loop the End Through to Create a Knot



Gooseneck Step 1: Gather, Twist End 8"-10"



Gooseneck Step 2: Make Loop With the Twisted End



Gooseneck Step 3: Seal Tightly With Either Duck Tape or Plastic Tie

- (d) To seal the wrapped sheet of polyethylene, tape over (seal) the outer edges of the sheet.
- (e) Mold-contaminated material is not classified as hazardous waste. Place the sealed garbage bags into the building's trash dumpster.
- (f) The MDH recommends wearing a respirator while changing HEPA filters.

11 Procedures for Level 1 (Minimal Contamination)

11.1 Personal Protective Equipment:

- (a) Goggles that are chemical splash-resistant.
- (b) Gloves that are impervious to any cleaning products used.

11.2 Porous Materials.

- (a) Books and papers might be salvaged by allowing to dry completely and then removing the surface mold with a HEPA vacuum. Consult with Rolvaag Library Collections & Archives personnel.
- (b) Cardboard will most likely need to be disposed (follow steps in 10.2(b) 10.2(e)).
- (c) Some porous materials (such as unpainted drywall) can be cleaned only if it can be determined that the mold is limited to the exterior surface.
 - (1) If cleaning is allowed, follow the procedures in Section 11.5.
 - (2) Otherwise, follow disposal steps 10.2(b) 10.2(e).
- (d) For other materials that will be disposed:
 - (1) Lightly mist materials with EnvirOx Critical Care disinfectant prior to removal/handling to reduce the threat of spore and dust dispersal.
 - (2) Carefully remove materials and place items into plastic bags or (if too large) wrap in 4-6 mm polyethylene sheets.
 - (3) Follow disposal steps 10.2(b) 10.2(e).
- (e) Clean surrounding non-porous materials three feet beyond visible growth (follow the procedures in Section 11.5).

11.3 Carpets.

- (a) First Treatment: Use HEPA vacuum cleaner to remove any dry/loose mold.
- (b) Second Treatment: Use carpet extractor to perform a deep cleaning of the carpet. Remove as much liquid from carpet as possible (i.e., get carpet as dry as possible).
- (c) Place floor fan and dehumidifier in location after treatment is complete.
- (d) Monitor the area for a week to see if positive outcome was achieved.
- (e) If mold returns then carpet will need to be removed and disposed (an assessment might determine that it should be replaced with a non- or semi- porous flooring). Follow procedures for Level 2/Moderate Contamination (Section 11).
- **11.4 Upholstery.** Furniture, drapes, etc., that are minimally contaminated might be successfully cleaned by steam cleaning or (if removable) laundering.

11.5 Non-porous Materials (also Hard-surfaced Semi-porous).

(a) First Treatment:

- (1) Include the area three feet beyond visible mold.
- (2) Clean using a repeatable pattern of motions, moving downward/away from the cleanest areas to the dirtiest (not random washing or only visually-based), to ensure that all surfaces have been thoroughly cleaned.
- (3) If mold is dry/loose, you can first use a HEPA vacuum to slowly and carefully vacuum up this mold.
- (4) Treat the (remaining) mold with EnvirOx Critical Care disinfectant. Keep area wet for 10 minutes to kill the mold.
- (5) After 10 minutes begin removing mold with pop-ups or microfiber towel.
- (6) The wipes should be damp, not wet or soaked, in order to minimize the amount of water added to the materials being cleaned.
- (7) Replace wipes frequently to enhance cleaning effectiveness and prevent redistribution of mold.
- (b) Second Treatment:
 - (1) Retreat with EnvirOx Critical Care disinfectant a second time.
- (c) Manage liquid runoff.

- (d) Dry the area as thoroughly as possible.
- (e) Collect used cleaning materials.
 - (1) Place all used wiping cloths and scrubbing pads into a plastic bag.
 - (2) Seal the bag(s) and place into the building's trash dumpster.
- (f) Place floor fan and dehumidifier in location being treated.
- (g) Monitor the area for a week to see if positive outcome was achieved.
- (h) **Report the results** back to the Work Order system for tracking and to close out the Work Oorder.
- **11.6 Clean reusable PPE and remediation equipment** (including the tanks, hoses, and attachments of the HEPA vacuum) with EnvirOx Critical Care disinfectant; rinse PPE with clean water; dry thoroughly.
- 11.7 Wash hands with soap and water after cleaning your PPE and equipment.

12 Procedures for Level 2 (Moderate Contamination)

12.1 Personal Protective Equipment:

- (a) Goggles that are chemical splash-resistant.
- (b) Gloves that are impervious to any cleaning products used, and protective against sharp objects (if applicable).
- (c) Protective outerwear including long sleeved tops and long pants (disposable or washable), and head and shoe coverings.
- (d) Respirator; either N95 respirator or half-mask respirator with HEPA filtration cartridges.

12.2 Install a Containment Perimeter; Cover Uncontaminated Items.

- (a) Use 4-6 mm polyethylene sheeting (or comparable material) and tape to enclose areas of visible contamination and suspected hidden growth.
- (b) The containment should extend three feet beyond areas of mold growth to ensure areas with heavy spore deposition are contained, and to enable ease of remediation work.
- (c) Containment barriers should block all openings so that mold particles cannot be carried outside the remediation area by air movement or through the mechanical ventilation system.
- (d) Cover uncontaminated items if it is not feasible to remove these items from the remediation area.
- (e) NOTE: Do not proceed if the contamination is sufficiently heavy that best practice would require creating a negative pressure differential in the containment space by using a HEPA-filtered air handling unit (i.e., ensuring that contaminated air does not flow out of the room and into unaffected areas). Such an area is automatically considered a Level 3/Major Contamination. EHS and/or Facilities will contact an outside contractor to perform this remediation.

12.3 Conduct Preliminary Cleaning; Remove Uncontaminated Items.

- (a) You might first need to first conduct preliminary cleaning of the floor using the HEPA vacuum or damp wiping to ensure freedom of movement throughout the area during containment setup.
- (b) Clean the air supply and return grilles so that these items can be covered by the containment barrier.
- (c) Remove uncontaminated items (furniture, etc.) if feasible.

12.4 Porous Materials (including carpet and carpet padding).

- (a) These items will likely need to be disposed.
- (b) Lightly mist these materials with EnvirOx Critical Care disinfectant prior to

removal/handling to reduce the threat of spore and dust dispersal.

- (c) Carefully remove materials and place items into plastic bags or (if too large) wrap in 4-6 mm polyethylene sheets.
- (d) Clean surrounding non-porous materials at least three feet beyond visible growth.
- (e) Seal the bags, tape the sheets closed, and place into the building's trash dumpster.

12.5 Non-porous Materials (also Hard-surfaced, Semi-porous).

(a) First Treatment:

- (1) Include the area three feet beyond visible mold.
- (2) Clean using a repeatable pattern of motions, moving downward/away from the cleanest areas to the dirtiest (not random washing or only visually-based), to ensure that all surfaces have been thoroughly cleaned.
- (3) If mold is dry/loose, you can first use a HEPA vacuum to slowly and carefully vacuum up this mold.
- (4) Treat the (remaining) mold with EnvirOx Critical Care disinfectant. Keep area wet for 10 minutes to kill mold.
- (5) After 10 minutes begin removing mold with pop-ups, microfiber towel, or softbristled brush (for stubborn growth).
- (6) The wipes should be damp, not wet or soaked, in order to minimize the amount of water added to the materials being cleaned.
- (7) Replace wipes frequently to enhance cleaning effectiveness and prevent redistribution of mold.
- (b) Second Treatment:
 - (1) Retreat with EnvirOx Critical Care disinfectant a second time.
- (c) Manage liquid runoff.
- (d) Dry the area as thoroughly as possible.
- (e) Collect used cleaning materials.
 - (1) Place all used wiping cloths and scrubbing pads into a plastic bag.
 - (2) Seal the bag(s) and place into the building's trash dumpster.
- (f) Place floor fan and dehumidifier in location after treatment is complete.
- (g) Monitor the area for a week to see if positive outcome was achieved.

12.6 Remove Containment Perimeter.

- (a) Bag or wrap the plastic that was used as the containment perimeter; dispose in building's trash dumpster.
- **12.7 Clean reusable PPE and remediation equipment** (including the tanks, hoses, and attachments of the HEPA vacuum) with EnvirOx Critical Care disinfectant; rinse PPE with clean water; dry thoroughly.

12.8 Wash hands with soap and water after cleaning your PPE and equipment.

13 Employee Training

13.1 Scope.

- (a) Training will be provided to all employees who potentially may have to clean moldy surfaces or remove moldy items.
- (b) Training will be made available by, and at the cost of, St. Olaf; shall be provided during regular work hours and in a manner that can be reasonably understood by the employees; and will include opportunities for employees to ask questions to ensure that they understand the information presented to them.

14 Record Keeping

14.1 Training Records.

- (a) Training records are kept by HR for at least three years.
- (b) The training records include:
 - (1) The dates of the training sessions.
 - (2) The contents or a summary of the training sessions.
 - (3) The names and qualifications of person(s) conducting the training.
 - (4) The names and job titles of all persons attending the training sessions.

14.2 Medical Records.

(a) HR will maintain any medical records related to personal exposure to mold.

15 Revision Record

| DATE | TYPE | PAGE NUMBERS |
|------------|------------------------------|--------------|
| 03/29/2023 | Document Creation | All |
| | (replaces previous document) | |

16 References

- Minnesota Department of Health. (June 2014). Recommended Best Practices for Mold Remediation in Minnesota Schools. https://www.health.state.mn.us/communities/environment/air/docs/schools/remediation.pdf
- 2. U.S. Environmental Protection Agency. (n.d.). *Mold Remediation in Schools and Commercial Buildings Guide*. <u>https://www.epa.gov/mold/mold-remediation-schools-and-commercial-</u> <u>buildings-guide-chapter-1</u>

Appendix A: Summary of Cleanup Methods for Contamination Levels

The following methods were developed using the MDH and EPA suggested mold cleanup methods.

- See Sections 11 & 12 for detailed instructions for cleaning items with Minimal or Moderate mold contamination.
- See Section 3.2 for descriptions of mold contamination levels.

| | Levels of Mold Contamination | | | |
|--------------------------------------|------------------------------|---------------|------------------|--|
| | 1 – Minimal | 2 – Moderate | 3 – Major | |
| Materials or Furnishings | Cleanup Methods | | | |
| Non-Porous Materials: metal, | 1, 2, 3 | 1, 2, 3 | 1, 2, 3 | |
| porcelain, glass, hard plastic, | | | | |
| ceramic tile, sealed concrete, solid | | | | |
| wood with urethane coating, etc. | | | | |
| Semi-Porous Materials : brick, | 1, 3 | 1, 3 | 1, 3, possibly 4 | |
| cinder block, linoleum/vinyl | | | | |
| flooring, wood furniture, | | | | |
| engineered wood or composite | | | | |
| products, etc. | | | | |
| Porous Materials: carpet and | 1, 3 | 4 | 4 | |
| backing, upholstery, etc. | | | | |
| wallboard, painted/sealed | 2, 3 | 4 | 4 | |
| books and papers | 3 | 3, possibly 4 | 4 | |
| wallboard, bare | 4 | 4 | 4 | |
| ceiling tiles, insulation | 4 | 4 | 4 | |

Cleanup Methods:

- **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 as determined by a moisture meter). Steam cleaning may be an alternative for carpets and some upholstered furniture.
- Method 2: Damp-wipe surfaces with EnvirOx Critical Care 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 remove water-damaged materials and seal in plastic bags while inside of containment, if present. Dispose of as normal waste. HEPA vacuum area after it is dried.