Mold Remediation Facilitator's Guide

Objectives:

Know the definition of mold remediation.
Know recommendations for the prevention of mold growth.
List two levels of remediation.

On completion of this session participants will be able to pick the right level of remediation through the use of a scenario and using a deck of cards place in order from start to finish the remediation process.

Introduction: (20 minutes)

Ask what is Mold Remediation?

This is the information that you want to try and get from the participants.

The purpose of mold remediation is to correct the moisture problem and to remove moldy and contaminated materials to prevent human exposure and further damage to building materials and furnishings. Porous materials that are wet and have mold growing on them may have to be discarded because molds can infiltrate porous substances and grow on or fill in empty spaces or crevices. This mold can be difficult or impossible to remove completely.

To get participants to bring up moisture instead of just telling them you might want to ask: What does mold need to grow and when you get moisture then explain why it is important to fix any moisture issues that you find in remediation.

As a general rule, simply killing the mold, for example, with **biocide** is not enough. Mold must be removed, since the chemicals and proteins, which can cause a reaction in humans, are present even in dead mold.

Ask: How Do You Remediate Mold?

As you get the participants to give you ways to remediate write those answers on the flip chart.

Ask: What Kind of Equipment is Needed for Remediation?

List on a flip chart the different equipment that is given by the participants. Use the list below to add any equipment that they miss.

- **Moisture Meters:** Moisture meters measure/monitor levels in building materials, and may be helpful for measuring the moisture content in a variety of building materials following water damage. They also can be used to monitor the progress of drying damaged materials. These direct reading monitors have a thin probe that is inserted into the material to be tested or pressed directly against the surface of the material. Moisture meters can be used on materials such as carpet, wallboard, wood, brick, and concrete.
- **Humidity Gauges or Meters:** Humidity meters can be used to monitor indoor humidity. Their models that monitor both temperature and humidity.
- **Humidistat:** A humidistat is a control device that can be connected to an HVAC system and adjusted so that if the humidity level rises above a set point, the HVAC system will automatically turn on and reduce the humidity below the established point.
- **Boroscope:** A boroscope is a hand held tool that allows users to see potential mold problems inside walls, ceiling plenums, crawl spaces, and other tight areas. It consists of a video camera on the end of a flexible "snake". No major drilling or cutting or dry wall is required.
- **HAVC System Filter:** High-Quality Filter must be used in a HAVC system during remediation because conventional HAVC filters are typically not effective in filtering particles the size of mold spores.
- **Wet dry shop vacuum with HEPA filter (maybe cordless)**
- **Tools for removing and replacing material and wet leaks**
- **Negative air machine**
- **PPE**
- **Cordless power tools (drill, shop vacuum)**

How do you Prevent Mold?

Moisture control is the key to mold control. When water leaks or spills occur indoors, act promptly. Any initial water infiltrations should be stopped and cleaned promptly. A prompt response (within 24-48 hours) and thorough clean-up, drying, and/ or removal of water damaged materials will prevent or limit mold growth.

Mold Prevention Tips:

Write these prevention tips down one at a time on a flip chart:

- Repairing Pluming leaks and leaks in the building structure as soon as possible.
- Looking for condensation and wet spots. Fix sources of moisture problems as soon as possible.
- Keeping HVCA drip pans clean, flowing properly, and unobstructed.
- Performing regularly scheduled inspections and maintenances, including filter changes.
- Maintaining indoor relative humidity below 70% (25-60% if possible).

Ask if they have questions about anything that has been covered to this point.

Show the slide show (10 minutes)

Slide 1: introduction slide

Slide 2: New York Guide lines for Remediation.

Slide 3: Level 1

Slide 4: Picture of level 1

Slide 5: Level 2

Slide 6: Picture of level 2

Slide 7: Level 3

Slide 8: Picture of level 3

Slide 9: Level 4

Slide 10: Picture of 4

Slide 11: Level 5 HVAC: (HVAC STANDS FOR: HEATING, VENTILATION, AIR CONDITIONING).

Slide 12: Remediation site set up negative air machine or scrubber cost between 1000.00 and 5000.00 dollars. The containment area if you buy one cost around 1500.00 to 3000.00 dollars. A HEPA wet dry that holds 5 gallons cost about 750.00 dollars.

Slide 13: How it filters air in a containment zone.

Slide 14: Bathroom in a house

Slide 15: containment area in a room in a house for mold remediation

Slide 16: Cleaning pipes off. What do you see wrong with these?
The mold spores are going all over the place. Would need some way of containing the spores from just spreading around.

Slide 17: Tearing out material to get to the mold and the water problem. Good rule of thumb is to cut about 12 to 18 inches above were the mold or water damage is.

Slide 18: Blower and vent for drying

Slid 19: Smaller tubes are inserted into the wall for drying it out. If you can get to the water before the first 24-48 hours and dry it up you can stop the growth of mold.

Slide 20: If you have a high relative humidity in a room or area (55% or higher), then you should strongly consider a dehumidifier.

Slide 21: Dehumidifier and blower or dryer. Most dryers are about 350.00 dollars

Slide 22: Before picture of the inside of a attic. Point out the amount of mold

Slide 23: After remediation. All the wood was replaced

Slide 24: The inside wall of a house with mold

Slide 25: After remediation

Slide 26: Notice that the wall paper is slowly separating from the wall. A good sign of water damage. Point out vinyl wall paper.

Slide 27: As you pull the wall paper back you can see the mold growing on the wall and the inside of the wall paper.

Slide 28: The problem with vinyl paper is that it grow on the inside and you don't always see it on the outside until it is to late just like in this case here.

Slide 29: After remediation but they replaces the wall paper with vinyl.

Slide 30: Any questions

Explain Deck of Cards and read case study. (The 8 hour class

(20 minutes)

Read the case study:

> As a School maintenance employee working the day shift, you have been asked to come to your supervisor's office for the morning briefing. During your briefing a teacher reported black spots on one of the walls in her classroom. The black spots cover about 61 square feet of the wall. The teacher also reported a musty, moldy odor, and that the children seem to be tired in the afternoon and not as attentive. You are asked to go and investigate and remediate the problem.

Explain to participants, that they should use there resources to come up with a list of what they should do to start the remediation process.

During the report back: have each table give you a card and ask the other groups if they agree or disagree and why. Be careful in the report back that you don't let each card discussion take to long. Keep the groups focused.

Wrap up with letting the participants know that depending on the case that there could be a little different way but this is a good guild to follow.

Deck of Cards order

Remove all occupants from area
Interview people working in or around the area
Isolate the area where the work is going to be done
Get the PPE based on the level
Check area for viable signs of mold and moisture
Check for moisture
Monitor for Carbon Dioxide levels
Check the air flow in the class room
Survey area for other safety hazards
Pick the level exp: 1,2,3,4
Build negative pressure area
Remove material that is contaminated with mold
Fix all moisture issues
Bag up all contaminated materials
Clean area with the mild soap solution
Vacuum area with wet dry vacuum
Dry area thoroughly
Replace material that was removed

Check for moisture
Interview people working in or around the area after a few weeks

Report Back of Hands On:

You should point out anything that went wrong and why. Ask the participants what they think that could have been different during the video report back.

Summarize: (10 minutes)

The best way to stop mold is to stop water and moisture infiltration. In order to accomplish this task a good preventative program should be in place with a check list that identifies problem area and areas that should be check. With a check list you should also have moisture meters because you don't always see water damage because some damage is behind walls and when we see mold growth is when we also find the moisture issue. Just remember the best way is to eliminate the moisture issues and not let water stand and pipes to drip.

Interview people working in or around the area

Remove all occupants from area

Isolate the area where the work is going to be done

Check area for visible signs of mold and moisture

Survey area for other safety hazards

Monitor for Carbon Dioxide levels

Check air flow and air exchange for class room

Pick the level based on the New York guide lines 1,2, ext.

Get the PPE based on the level

Build negative pressure area containment

Remove material that is contaminated with mold

Fix all moisture issues

Clean area with mild soap solution

Dry area thoroughly

Replace material that was removed

Vacuum area with wet dry vacuum

Bag up all material

Check for moisture

Check for moisture

Interview people working in or around the area after a few weeks