Addressing and Detecting Hazards from Mold Transcript

Topic 5: Remediation

Slide 1: Title Slide - Remediation

Slide 2: Topic 5: Remediation

Welcome to Topic 5 of the training on Detecting and Addressing Hazards from Mold. In this segment, we will discuss mold remediation.

The activities covered in this part of the training are specialized and will typically be performed by a third party, not PHA staff. However, it is useful to know a little bit about what is involved in remediation and what services your third party will bring to the agency.

Slide 3: Topic 5 Objectives

Under this topic, we will cover the levels of containment and personal protective equipment needed to conduct mold remediation safely. Please see Topic 5 of the Course Handbook for more information.

Slide 4: Before starting mold remediation

The EPA has specific guidelines to ensure the safety of those removing mold and for controlling the spread of mold during the removal process. Before removing any mold, the contractor needs to identify and assess the contamination areas and the severity level. They need to determine whether limited or full containment is required. Typically, the size of the area affected determines the level of containment, but the contractor will also consider the severity of the infestation.

Slide 5: Levels of containment

Areas smaller than 100 sq. ft. usually require only limited containment before removal of the mold can begin. Limited containment means that all vents and outside airways must be sealed.

Larger areas will require full containment, which means taking steps such as: using double layer polyethylene sheeting; creating an airlock space between the mold removal area and the clean area; and using exhaust fans to create negative pressure. Negative pressure helps prevent mold and other dust from spreading beyond the work area.

Slide 6: Four Levels of Protection

There are four levels of protection when removing mold. The protection levels relate to the size of the area of mold infestation and level of risk associated with mold removal.

Level I protections are used when removing the smallest or least dangerous levels of mold, while Level IV protections are needed for the largest or most serious types of mold infestation.

I will come back to the requirements for each level after reviewing some of the types of equipment that are common in mold remediation.

Slide 7: Recommended Levels of PPE

The type of personal protective equipment (or PPE) you need also relates to the size and severity of the contamination. EPA has identified three levels of PPE – minimum, limited, and full – that roughly correspond to the four levels of protection.

Minimum protection involves an N95 respirator, goggles, and gloves. Full protection requires a full-face respirator with a HEPA filter, goggles or eye protection, and full body coverings.

Slide 8: PPE for Minimum Protection

This slide shows PPE for small areas affected by mold, less than 10 square feet. Keep some gloves in your pocket and the mask around your neck. You should have this type of equipment on hand in case you do find something that may warrant this level of protection.

Slide 9: Disposable N-95 respirator

This slide shows a couple of versions of disposable N-95 respirators for “minimum” protection. The N-95 respirator is a very common type of respirator. It filters at least 95% of airborne particles.

Slide 10: Half face respirator with HEPA filters

As the space gets larger, you’ll need more protection. This slide shows a half-face respirator with HEPA filters. This type of respirator is required for “limited” protection.

Slide 11: Full face respirator with HEPA filters

This slide shows a full-face respirator with HEPA filters, which is part of “full” protection.

Slide 12: Full body clothing

Full body clothing is another part of full protection.

Slide 13: Level I protection

Let’s come back to the details of each level of protection. Level I protection is for small areas, usually less than 10 square feet.

Level I remediation can be done by anyone trained in mold removal using OSHA standards. The infected area should be unoccupied except for those performing the remediation and workers should use temporary respirators, gloves, and eye protection. The equipment used for the remediation needs to be cleaned or removed from the area in sealed containers once the job is

finished. Misting the area to deter dust is recommended and the area should be fully cleaned using an antimicrobial product. Cleaning means removing all debris on floors and flat surfaces and then wiping them down.

Slide 14: Level II protection

Level II protections are for slightly larger areas than Level I, usually up to 30 square feet. A Level II situation is often when you find mold on a wall or ceiling area, but it has not spread to the rest of the room.

Level II protections include everything recommended for Level I. An additional recommendation is to use polyethylene sheeting to contain the area and protect other areas nearby. In addition, the area should be HEPA vacuumed before wiping or mopping.

Slide 15: Level II containment with full PPE

Here is an image of Level II containment with full PPE, though in this image we do not see the HEPA filters on the face respirator.

It is important for maintenance staff to have appropriate PPE on the hand for the work that they do, which will usually be at Level I or below. Likewise, these guidelines are helpful when thinking of disposal of building materials that may have mold contamination. Improper disposal of contaminated materials risks spreading mold to other unaffected areas. Rather than arbitrarily throw away the sheetrock or contaminated building material, bag it up and dispose of it safely and securely.

Slide 16: Level III Protection

Level III protections are for mold infested areas between 30 and100 square feet. Remediation should be done by a professionally trained mold remediation specialist. The full area should be sealed off from the rest of the building and it is recommended that no one occupy the adjacent areas while the work is being performed. All precautions used for Levels I and II should also be followed.

Slide 17: Level III Containment

Here is an image of a work site with Level III containment.

Slide 18: Level IV Protection

Level IV protections are for heavy mold infestations or areas larger than 100 square feet. As with Level III, Level IV mold remediation should only be performed by a trained professional. The workers should be wearing protective gear, including full HEPA respirators. Also, the area will need full containment, with an airlock and the use of negative pressure using exhaust fans.

Workers will need a decontamination area to remove protective gear and equipment. Any contaminated gear or equipment that cannot be cleaned in this area will need to be removed in sealed bags or containers.

Slide 19: Level IV Containment

This is a picture of a negative air machine used in Level IV containment. This level also requires an anti-chamber.

So, where is the tenant family during this time? Somewhere else. It's safer and cheaper to relocate the resident and family than to find out that a child inhaled mold while it was being removed. You want the tenant to be safe.

Although there are different levels of protection and containment required, to some extent, each remediation protocol is different and unique. The plans and protocols reflect the causes of mold contamination and the locations of the affected areas, as well as the required methods of containment and remediation. Chapter 5 of the course handbook contains an example of a remediation protocol.

When hiring a professional mold testing and remediation service, don't make assumptions about their capacity. Research their capabilities and write a detailed statement of work.

We pay great attention to lead and asbestos issues. We should give the same level of attention to large scale mold remediation. But stick with your agency rules and guidelines. Know your state and local regulations. Research and understand the capabilities of mold remediation specialists. Know what you are buying. You will benefit from paying someone to tell you exactly what your situation is and what your remediation needs are.

Slide 20: Topic 5 Key takeaways

The key takeaways from this overview of mold remediation are as follows.

First, the level of containment required is determined by the size of the largest affected area. There are four protection levels for mold removal related to the size and severity of the mold infestation.

Second, the EPA has established specific guidelines to ensure safety of those removing mold and to control the spread of mold during the process. In practice, mold remediation protocols vary greatly from case to case.

Finally, the use of personal protective equipment is critical to ensure safety of those performing the remediation.

Slide 21

That completes training Topic 5, Remediation. Please continue to the next video for Topic 6.