EXAM

Course 14239
MOLD PREVENTION & REMEDIATION

6 Hour Continuing Education Course

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Overview on Mold Prevention and Remediation

Glossary of Terms

1. AIR HANDLING UNIT (AHU) - Equipment that includes a blower or fan, heating and/or cooling coils, and related equipment such as controls, condensate drain pans, and air filters. Does not include ductwork, registers or grilles, or boilers and chillers.

a. True
b. False

2. _____ - Diagnosable illness whose symptoms can be identified and whose cause can be directly attributed to airborne building pollutants (e.g., Legionnaire's disease, hypersensitivity pneumonitis). Also: A discrete, identifiable disease or illness that can be traced to a specific pollutant or source within a building. (Contrast with “Sick building syndrome”).

a. Basic Rate interface, or BRI
b. Biomedical Research Instruments, or BRI
c. Building Related Illness, or BRI
d. Brain Response Interface, or BRI

3. BIOLOGICAL CONTAMINANTS - 1) Living organisms, such as viruses, bacteria, or mold (fungi), 2) the remains of living organisms, or 3) debris from or pieces of dead organisms. Biological contaminants _____ enough to be inhaled, and _____ many types of health effects including allergic reactions and respiratory disorders.

a. are small/may cause
b. tend to be small/may cause
c. can be small/may cause
d. can be small/will cause

4. CHEMICAL SENSITIZATION - Evidence suggests that some people may develop health problems characterized by effects such as _____ that appear whenever they are exposed to certain chemicals. People may react to even trace amounts of chemicals to which they have become "sensitized."

a. dizziness , nasal congestion
b. eye and throat irritation
c. chest tightness
d. all of the above

5. HEPA - _____.

a. Health Emergency Physicians Association
b. High efficiency particulate air (filter)
c. Healthy Exhaust Purified Air
d. Home Efficiency Purification Air-system

6. HYPERSENSITIVITY DISEASES - Diseases characterized by allergic responses to pollutants. The hypersensitivity diseases most clearly associated with indoor air quality are _____. Hypersensitivity pneumonitis is a rare but serious disease that involves progressive lung damage as long as there is exposure to the causative agent.

a. asthma
b. rhinitis
c. hypersensitivity pneumonitis
d. All of the above

7. mVOC (microbial volatile organic compound) - A chemical made by mold that is a gas at room temperature and may have a moldy or musty odor.

a. True
b. False

8. SANITIZER - One of three groups of antimicrobials registered by EPA for public health uses. EPA considers an anti-microbial to be a sanitizer when it reduces but does not necessarily eliminate all the microorganisms on a treated surface. To be a registered sanitizer, the test results for a product must show a reduction of at least _____ in the number of each test microorganism over the parallel control.

a. 89.5%
b. 89.9%
c. 99.5%
d. 99.9%

9. _____- Term that refers to a set of symptoms that affect some number of building occupants during the time they spend in the building and diminish or go away during periods when they leave the building. Cannot be traced to specific pollutants or sources within the building. (Contrast with “Building related illness’).

a. SAFE BUILDING SYNDROME, or SBS
b. SICK BUILDING SYNDROME, or SBS
c. SICK BUILDINGS SANITIZER, or SBS
d. SPECIALIZED BUILDING SANITATION (SYSTEMS), or SBS

Introduction to Mold

10. Also called fungi or mildew, _____; they are part of the kingdom Fungi.

a. molds are neither plants nor animals;
b. molds are plants;
c. molds are animals;
d. molds are considered plants and animals

11. Mold spores are ubiquitous; they are found both indoors and outdoors. Mold spores _____ from indoor environments.

a. need to be completely eliminated
b. can be eliminated
c. cannot be eliminated
d. None of the above

12. Molds always multiply by producing microscopic roots (2 - 100 microns [μm] in diameter), similar to the seeds produced by plants.

a. True
b. False

13._____ is the most important factor influencing mold growth indoors. Controlling _____ helps limit mold growth.

a. Moisture/ Indoor moisture
b. Moisture/ Indoor lighting
c. Lighting/ Indoor Moisture
d. Airflow/ Indoor lighting

14. Common sites for indoor mold growth include _____, near leaky water fountains, and around sinks.

a. bathroom tile and grout
b. basement walls
c. areas around windows
d. All of the above

15. Common sources of water or moisture include roof leaks, condensation due to high humidity or cold spots in a building, slow leaks in plumbing fixtures, humidification systems, sprinkler systems, and floods.*

a. True
b. False

16. In all cases, temperature is an issue; molds grow in warm areas, none grow in cool locations such as bread stored in a refrigerator.

a. True
b. False

17. Buildings that have been heavily damaged by flood waters _____ assessed for structural integrity and remediated by experienced professionals.

a. have to be
b. need to be
c. should be
d. shall be

18. _____ cause allergic reactions in some people.

a. Dead mold can
b. Alive, mold can
c. Dead or alive, mold can
d. None of the above

19. Allergic reactions to mold are common and _____.

a. can be immediate
b. can be immediate or delayed
c. can be delayed
d. are always immediate

20. Molds _____ asthma attacks in people with asthma who are allergic to mold.

a. can cause
b. cause
c. only cause
d. None of the above

21. When mold grows indoors, the occupants of a building _____ report odors _____ a variety of symptoms including headaches, difficulty breathing, skin irritation, allergic reactions, and aggravated asthma symptoms.

a. always / and
b. never / or
c. may begin to/ and
d. seldom / or

22. But all of these symptoms _____ caused by other exposures or conditions unrelated to mold growth. Therefore, it is important _____ assume that, whenever any of these symptoms occurs, mold is the cause.

a. may be / not to
b. are / not to
c. may be / to
d. are / to

23. Potential contaminants in damp or wet buildings include _____emitted by damp building materials and furnishings.

a. bacteria and dust mites
b. cockroaches and other pests
c. bacteria, dust mites, cockroaches and other pests, as well as chemicals
d. a. and b. only

24. As molds grow, _____ may produce potentially toxic byproducts called mycotoxins under some conditions.

a. some (but not all) of them
b. all of them
c. none of them
d. only outdoor types

25. Exposure to mycotoxins can occur from _____.

a. inhalation
b. ingestion
c. skin contact
d. All of the above

26. "Black mold" is not a species or specific kind of mold, and neither is "toxic mold." Sometimes the news media use the terms "toxic mold" and "black mold" to refer to molds that may produce mycotoxins or for a specific mold, Stachybotrys chartarum .

a. True
b. False

27. Some compounds produced by molds have strong smells and are volatile and quickly released into the air. These compounds are known as _____ (mVOCs).

a. microbial violent organic compounds
b. microbial volatile organic compounds
c. miniscule volatile organic compounds
d. microbial volatile outdoor compounds

28. The use of a biocide or a chemical that kills organisms such as mold (chlorine bleach, for example) _____ practice during mold cleanup.

a. is recommended as a routine
b. is needed as a routine
c. is not recommended as a routine
d. is not needed as a routine

29. Never mix chlorine bleach with other cleaning solutions or with detergents that contain ammonia because toxic fumes could be produced.

a. True
b. False

Where and Why Mold Grows

30. Mold can grow on virtually any organic material as long as _____ are present.

a. moisture
b. oxygen
c. moisture and oxygen
d. None of the above

31. _____ all mold and mold spores indoors is virtually impossible, but _____ indoor moisture will _____ the growth of indoor mold.

a. Controlling/ controlling / control
b. Eliminating / controlling / control
c. Controlling / eliminating / control
d. Eliminating / eliminating / control

32. Some moisture problems have been linked to changes in building construction practices since the _____. These practices led to buildings that are tightly sealed but, in some cases, lack adequate ventilation.

a. 1960s
b. 1970s
c. 1980s
d. 1990s

33. A building must be properly designed for _____ and its design must be accurately followed during construction or the building may have moisture control problems.

a. climate
b. site location
c. use
d. All of the above

34. Undiscovered or ignored moisture problems will create an environment in which mold will not grow.

a. True
b. False

35. Common moisture problems include:

a. Leaking roofs.
b. Leaking fire-protection sprinkler systems.
c. High humidity (> 40% relative humidity).
d. a. and b. only

36. Mold is frequently found on walls in cold corners behind furniture where condensation forms.

a. True
b. False

37. Building Design and Vapor Barriers: Many buildings incorporate vapor barriers in the design of their walls and floors. Vapor barriers _____ located and installed properly or the building _____ moisture problems.

a. must be / may have
b. must be / must have
c. may be / may have
d. may be / must have

38. Indoor relative humidity (RH) should be kept below _____.

a. 60 percent
b. 65 percent
c. 70 percent
d. 75 percent

39. Low humidity may also discourage _____.

a. cross contamination
b. static electricity
c. pests (such as cockroaches) and dust mites
d. None of the above

40. Humidity levels _____ in a building as a result of the use of humidifiers, steam radiators, moisture-generating appliances such as dryers, and combustion appliances such as stoves. Cooking and showering also can add to indoor humidity.

a. are not affected
b. can rise
c. will rise
d. remain the same

41. If the HVAC system is turned off during or shortly after major cleaning efforts that involve a lot of water, such as mopping and carpet shampooing or cleaning, the humidity may rise greatly, and _____.

a. moisture problems may develop
b. moisture problems will develop
c. moisture or mold problems will develop
d. moisture or mold problems may develop

42. Condensation _____ a sign of high humidity. When warm, humid air contacts a cold surface, condensation _____.

a. can be / may form
b. is always / will form
c. can be / will form
d. is always / may form

43. Mold growing near the intake to an HVAC system indicates potential ventilation humidity problems. An HVAC system that is part of an identified moisture problem may also be a site of mold growth.

a. True
b. False

44. Known or suspected mold growth in HVAC ducts or other system components should be _____. If substantial amounts of mold can be seen growing on the inside of hard surface ducts (e.g., ducts made of sheet metal), consider cleaning the ducts.

a. investigated promptly
b. left undisturbed
c. investigated and resolved promptly
d. None of the above

45. If the HVAC system has insulation on the inside of the air ducts, and the insulation gets wet or moldy, it should be cleaned extensively by a professional.

a. True
b. False

46. _____ is the most effective way of keeping mold from growing in air ducts.

a. Controlling temperature
b. Controlling air flow
c. Controlling moisture
d. Controlling light

47. Steps to control moisture in ductwork include:

- Making sure ducts are properly _____ in all non-air-conditioned spaces so moisture due to condensation does not enter the system and the system works as intended. To prevent condensation, the heating and cooling system _____ properly insulated.

    a. sealed and insulated / can be
    b. sealed and insulated / must be
    c. installed / can be
    d. installed / must be

48. Steps to control moisture in ductwork include:

- _____ any in-duct humidification equipment strictly according to the manufacturer's recommendations.

    a. Installing
    b. Cleaning
    c. Inspect
    d. Operating and maintaining

49. Molds _____whatever they grow on, so preventing mold growth also prevents damage to building materials and furnishings.

    a. manipulate
    b. gradually destroy
    c. shape
    d. enhance

50. When mold is suspected of causing damage to the structural integrity of a building, a structural engineer or other professional with relevant expertise should be consulted.

    a. True
    b. False

51. Crawl spaces where _____ are common sites of hidden mold growth, particularly if the crawl space has a bare earth floor.

    a. air flow is marginal
    b. no exhaust is installed
    c. no entry/ access is provided
    d. relative humidity (RH) is high

52. Moisture can pass from a crawl space into a building through _____ .

    a. cracks in walls
    b. cracks in floors
    c. cracks in ceilings
    d. All of the above

53. Buildings and building furnishings will often get wet. They must be dried or "allowed to dry" quickly _____ in order to avoid mold growth.

a. within 12 – 24 hours
b. within 18 – 32 hours
c. within 24 – 48 hours
d. within 36 – 60 hours

54. In general, _____air circulation and temperature will _____ the speed of drying.

a. increase / increase
b. decrease / increase
c. increase / decrease
d. decrease / decrease

55. If the building or furnishings are dried completely and quickly, mold will not grow, and a mold remediation will not be needed.

a. True
b. False

56. During a flood cleanup, the indoor air quality in your home or office may appear to be the least of your problems. However, failure to remove _____ can present serious long-term health risks.

a. contaminated materials
b. reduce moisture and humidity
c. both a. and b.
d. none of the above

57. Standing water and wet materials are a breeding ground for microorganisms, such as viruses, bacteria, and mold. They can cause disease, trigger allergic reactions, _____ .

a. and influence the integrity of the building materials until they are dry.
b. and continue to damage materials long after the flood.
c. and continue to influence materials throughout the clean-up.
d. and have a negative effect on the persons performing the clean-up.

58. It is nonessential to look for indoor areas where moisture is a concern.

a. True
b. False

59. If there has been a leaking pipe in the basement, for example, items such as carpets, paneling, and drywall there _____ checked for water damage or mold growth.

a. shall be
b. should be
c. have to be
d. are required to be

60. Carpet backing or padding _____ dried in addition to the carpet or mold _____ result.

a. must be / will likely
b. shall be / will likely
c. must be / is the
d. shall be / is the

61. Mold needs light to grow: it cannot grow in dark areas and on hidden surfaces.

a. True
b. False

62. Specialized equipment such as _____, and in some cases special sampling techniques, may be helpful in locating and identifying hidden mold areas.

a. sporescopes
b. moisture meters
c. sporescopes and moisture meters
d. borescopes and moisture meters

63. Possible locations of hidden mold also include damp areas behind walls and in crawlspaces, inside pipe chases and utility tunnels (areas in walls where water and other pipes are run), on acoustic liners in ventilation ducts, and on roof materials above ceiling tiles.

a. True
b. False

64. Investigating hidden mold requires caution since disturbing moldy areas _____ mold throughout the building.

a. spreads
b. increases
c. may spread
d. moves

65. Personal protective equipment (PPE) is always needed when looking for mold, and needs to be always be available.

a. True
b. False

66. Areas that are always or often damp, such as _____ are common locations for mold growth in homes.

a. bathrooms
b. laundry/utility rooms
c. basements
d. All of the above

67. If you hire _____ to locate a water or mold problem, make sure the professional has experience identifying and locating mold and water problems.

a. a home inspector
b. building inspector
c. other professional
d. All of the above

68. A key step when looking for mold in a building is to _____ whether there has been a water leak.

a. determine
b. conclude
c. synthesize
d. overlook

69. If possible, crawl spaces should be included when examining the building. (A white, soluble fibrous material on the soil of the crawl space may be _____, not mold, indicating moisture has been a problem and suggesting that the area should be more extensively inspected.)

a. soil fungi
b. Stachybotrys
c. alkaline salts
d. Aspergillus

70. The building's air-handling system _____ inspected to determine whether it is moldy. Moisture _____ in the ventilation system due to poor condensate pan drainage, poor roof drainage, or high humidity in the ventilation ducts.

a. shall be / may collect
b. should be / may collect
c. should be / will collect
d. shall be / will collect

71. Ventilation system mold contamination should be mitigated as soon as possible in a manner that does not expose building occupants to dust and mold spores.

a. True
b. False

72. In general, the most important equipment is _____, although a good flashlight may help.

a. a borescope
b. a moisture meter
c. your own eyes and nose
d. a humidity gauge

73. High humidity in a building _____, so humidity gauges may be useful for checking or monitoring humidity throughout the building.

a. can lead to mold growth
b. will lead to mold growth
c. always leads to mold growth
d. None of the above

74. Many investigators use _____ to find wet areas where mold may be growing. These meters measure the moisture in many types of building materials.

a. borescopes
b. moisture meters
c. humidity gauges
d. sporescopes

75. _____ can be used on carpet, wallboard, wood, brick, and concrete. Because mold often grows where moisture is high, a _____ can help an investigator locate hidden areas of mold growth.

a. Borescopes / moisture meter
b. Moisture meters / humidity gauge
c. Moisture meters / borescope
d. Moisture meters/ moisture meter

76. The primary function of PPE is to avoid inhaling mold and mold spores and to avoid mold contact with the skin and eyes.

a. True
b. False

77. The use of PPE is _____when mold is disturbed and likely to become airborne during an investigation.

a. manifested
b. indicated
c. evidenced
d. registered

78. Anyone using respirators and other PPE in the workplace _____ be trained, _____ have a medical clearance, and _____ be fit-tested by a trained professional.

a. must/ can/ must
b. can/ must/ must
c. must/ must/ must
d. must/ must/ can

79. The most important sign of a mold problem is _____.

a. a moldy smell
b. visible mold
c. humidity in the house
d. moisture

80. Information on the water or moisture problems that allowed the mold to grow should be evaluated, in part because areas of _____ may surround the areas of _____.

a. visible mold / hidden mold
b. hidden mold / visible mold
c. visible mold / visible mold
d. hidden mold / hidden mold

81. _____, if the mold can be seen, sampling is unnecessary.

a. Routinely
b. Rarely
c. Seldom
d. Usually

82. Keep in mind that the goal of mold remediation is to find the source of the water problem _____ and clean up the mold.

a. fix it
b. tell the home owner
c. call the EPA
d. None of the above

83. After remediation, the types and concentrations of mold in indoor air samples _____ similar to those in the local outdoor air.

a. need to be
b. have to be
c. should be
d. are required to be

84. There are no EPA or other federal standards for airborne mold or mold spores, however, so sampling cannot be used to check a building's compliance with federal mold standards because there are none.

a. True
b. False

85. Sampling for mold should be conducted by professionals who have specific experience in _____ .

a. sampling methods
b. interpreting results
c. designing mold sampling protocols
d. All of the above (a, b and c)

86. Inadequate sample plans may generate misleading, confusing, and useless results. Samples should be analyzed according to the analytical methods recommended by the _____ (AIHA), the American Conference of Governmental Industrial Hygienists (ACGIH), or other professional guidelines.

a. American International Health Alliance
b. American Industrial Hygiene Association
c. Alliance of Industrial Hypoallergy Association
d. American International Hygiene Association

87. Types of samples include _____ from condensate drain pans or cooling towers.

a. air samples and water samples
b. surface samples and bulk samples
c. both a. and b.
d. None of the above

88. Alkaline crystals on soil or concrete walls may look like mold, but, unlike mold, they _____ .

a. are usually water-soluble
b. require a different type of remediation
c. need to be treated as toxic waste
d. None of the above

89. Most microbiology laboratories need only a little of the suspected mold _____ to determine, using a microscope, whether it is actually mold or something that looks like mold.

a. in an air tight container
b. on a piece of paper
c. on a clear strip of sticky tape
d. All of the above

General Remediation Issues

90. To dry carpet and backing within _____, remove water with a wet vacuum, pull the carpet and pad off the floor, and dry them using a fan to blow air over them.

a. 24 hours
b. 32 hours
c. 40 hours
d. 48 hours

91. Water _____ from concrete or cinder block surfaces with a water-extraction vacuum. The drying also can be accelerated by using dehumidifiers, fans, and heaters.

a. can be removed
b. cannot be removed
c. should not be removed
d. is impossible to remove

92. Hard surface flooring (such as linoleum, ceramic tile, and vinyl) _____ vacuumed or damp wiped with a mild detergent and allowed to dry. They _____ scrubbed clean, if necessary.

a. should be / should be
b. shall be / should be
c. shall be / will be
d. should be / shall be

93. Non-porous, hard surfaces such as plastics and metals can only be damp wiped with water and mild detergent, then allowed to dry. Scrubbing is always necessary to thoroughly clean the surfaces.

a. True
b. False

94. Water _____ from upholstered furniture with a water-extraction vacuum. Fans, dehumidifiers, and heaters may be used to accelerate the drying process. Completely drying upholstered furniture within 48 hours may be difficult, so if the piece is valuable, you may consider consulting a restoration or water-damage professional who specializes in furniture.

a. has to be removed
b. should be removed
c. can only be removed
d. needs to be removed

95. Drywall, also known as gypsum board or gypsum wallboard, may be dried in place if there is no obvious swelling and the seams are intact. Otherwise, removal is necessary.

a. True
b. False

96. Treated or finished wood surfaces can be cleaned with mild detergent and clean water, then allowed to dry. Wet paneling _____.

a. needs to remain in place for drying, so that mold spores are not disturbed
b. must be pried from the wall for drying
c. should be pried from the wall for drying
d. needs to be discarded immediately

97. Some water-damaged items, including _____, and books and papers, may have to be discarded.

a. ceiling tiles
b. cellulose and fiberglass insulation
c. drywall and gypsum board
d. All of the above

98. If you know or suspect that the water is contaminated with sewage, or with chemical or biological pollutants, then PPE and containment are required by _____.

a. EPA
b. DSPS
c. OSHA
d. All of the above

99. Do not use fans until you have _____ that the water is clean or sanitary.

a. consulted with FEMA
b. determined
c. a written report from the local Water & Sewer Dept.
d. None of the above

100. Before planning a remediation effort, the size and extent of the mold problem and any continuing moisture problems _____.

a. shall be assessed
b. should be assessed
c. need to be assessed
d. have to be assessed

101. A remediation manager should be selected for _____.

a. all jobs
b. large jobs only
c. medium or large jobs
d. small or medium jobs

102. Questions to consider before starting remediation include:

a. Have building materials been wet more than 48 hours?
b. Are there hidden sources of water, or is the humidity high enough to cause condensation?
c. Are building materials or furnishings visibly damaged?
d. All of the above

103. Consider using PPE if disturbing mold during a building inspection, assessment, or walkthrough, for example. The maximum required PPE is an N-65 respirator (available at most hardware stores). Gloves and goggles are not necessary.

a. True
b. False

104. Remediation workers, especially if they have health concerns, _____ with their doctors before working on a mold investigation or remediation project.

a. are required to check
b. may want to check
c. have to check
d. should check

105. The highest priority in a remediation _____ the building occupants and the remediation workers.

a. is to protect the health and safety of
b. is to get work approval from
c. is to receive written approval from
d. is to receive DHS work clearance to protect

106. The remediation plan _____:

- Whether containment will be required.
- What level of PPE will be used.
- How the water or moisture problem will be fixed so the mold problem does not recur.
- How the moldy building materials will be removed to avoid spreading mold.

a. must include
b. should include
c. will include
d. must be approved by DHS

107. Wet vacuums should be used only when materials are still wet, otherwise they may spread mold spores.

a. True
b. False

108. The tanks, hoses, and attachments of wet vacuums should _____ after use because mold and mold spores may stick to their surfaces.

a. cleaned
b. dried if wet
c. thoroughly cleaned and dried
d. none of the above

109. Surfaces cleaned by damp wiping should _____ to discourage further mold growth.

a. be air dried
b. also be chemically treated
c. be dried in complete darkness
d. dried quickly and thoroughly

110. Because mold will infiltrate porous substances and grow on or fill in empty spaces or crevices, _____.

a. completely removing mold can be difficult, if not impossible
b. special care needs to be taken to completely rid the house of mold
c. mold remediation need to be performed by a licensed mold specialist
d. all materials exposed to mold will need to be discarded

111. High-Efficiency Particulate Air (HEPA) vacuums are _____ for the final clean up of remediation areas after materials have been thoroughly dried and contaminated materials have been removed.

a. required
b. recommended
c. demanded
d. mandatory

112. When changing the vacuum filter, _____ PPE to prevent exposure to mold that has been captured in the vacuum.

a. workers are required to wear
b. workers should wear
c. workers need to wear
d. it is mandatory that workers wear

113. Mold-contaminated building materials that cannot be salvaged _____.

a. can be bagged in any type household bag, as long as it is labeled ‘mold’.
b. can be double-bagged in any household garbage bags.
c. should be bagged in a 6-mil polyethylene bag.
d. should be double-bagged in 6-mil or thicker polyethylene bags.

114. Table 1: Water Damage – Cleanup and Mold Prevention has:

a. Guidelines for Response to Clean Water Damage within 24-48 Hours to Prevent Mold Growth
b. Guidelines for Response to Any Water Damage within 24-48 Hours to Prevent Mold Growth
c. Guidelines for Response to Clean Water Damage to Prevent Mold Growth
d. Guidelines for Response to Clean Water Damage within 48-72 Hours to Prevent Mold Growth

115. Table 1: Water Damage – Cleanup and Mold Prevention for Ceiling tiles requires the removal of water with a water extraction vacuum and an accelerated drying process with dehumidifiers, fans, and/or heaters.

a. True
b. False

116. Table 1: Water Damage – Cleanup and Mold Prevention for Hard Surface porous flooring (linoleum, ceramic tile, vinyl) requires:

a. Vacuum or damp wipe with water and mild detergent and allow to dry; scrub if necessary.
b. Check to make sure underflooring is dry; dry underflooring if necessary.
c. Discard and replace.
d. Both, a. and b.

117. Table 1: Water Damage – Cleanup and Mold Prevention for window drapes requires:

a. Follow laundering or cleaning instructions recommended by the manufacturer.
b. May be dried in place with fans or heaters.
c. Discard and replace.
d. Need to be dried by ventilation only.

118. Table 1: Water Damage – Cleanup and Mold Prevention for wallboards requires:

a. Ventilate the wall cavity, if possible.
b. May be dried in place if there is no obvious swelling and the seams are intact. If not, remove, discard, and replace.
c. Discard and replace.
d. Both, a. and b.

119. Table 1: Water Damage – Cleanup and Mold Prevention is only to be used if mold growth has occurred or materials have been wet for more than 48 hours, consult Table 2 guidelines.

a. True
b. False

120. Table 2: Guidelines for Remediating Building Materials with Mold Growth Caused by Clean Water covers guidelines for:

a. SMALL - Total Surface Area Affected Less Than 10 square feet (ft^2)
b. MEDIUM - Total Surface Area Affected Between 10 and 100 (ft^2)
c. LARGE - Total Surface Area Affected Greater Than 100 (ft^2) or Potential for Increased Occupant or Remediator Exposure During Remediation Estimated to be Significant
d. All of the above

121. Table 2: Guidelines for Remediating Building Materials with Mold Growth Caused by Clean Water has 4 cleanup methods. Clean method 3 is:

a. 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.
b. Damp-wipe surfaces with plain water or with water and detergent solution (except wood -use wood floor cleaner); scrub as needed.
c. 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.
d. 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.

122. Minimum personal protective Equipment consists of:

a. Gloves, N-95 respirator, goggles/eye protection
b. Gloves, N-95 respirator or half-face respirator with HEPA filter, disposable overalls, goggles/eye protection
c. Gloves, disposable full body clothing, head gear, foot coverings, full-face respirator with HEPA filter
d. None of the above

123. Full Containment consists of the use of polyethylene sheeting around the affected area with a slit entry and covering flap; maintaining the area under negative pressure with HEPA filtered fan unit and blocking the supply and return air vents within containment area.

a. True
b. False

Large Areas and other Special Concerns

124. Containment _____ designed to prevent the movement of mold spores from one area of the building to another.

a. shall be
b. should be
c. will be
d. needs to be

125. A _____ should be used to separate the clean areas from the contaminated areas during entry into and exit from the remediation area.

a. zip door
b. T-door or Z-door
c. decontamination chamber or airlock
d. sheet of impermeable material

126. Full PPE may also be necessary during these operations and may consist of protective clothing and full-face or _____ (PAPR) with HEPA filters.

a. powered air purifying respirators
b. partially acidulated purifying respirators
c. peak airflow purifying respirators
d. peak-to-average performance respirators

127. Mold remediation involving a heating, ventilation, and air conditioning (HVAC) system _____ only by professionals experienced in working with HVAC systems.

a. shall be done
b. should be done
c. is required to be performed
d. is mandated to be handled

128. An HVAC system found to be contaminated with mold _____ turned off and not used until the system _____; using a mold-contaminated HVAC system _____ mold throughout the building and increase the exposure of building occupants.

a. should be / has been remediated / may spread
b. may be / has been inspected / will spread
c. should be / has been inspected / will spread
d. may need to be / has been remediated / may spread

129. Work area intakes and supply vents have to be sealed with plastic and tape, and negative air pressure needs to be maintained in work areas.

a. True
b. False

130. Contaminated porous materials in the HVAC system _____ bagged and removed. Materials that can be cleaned should be vacuumed with a HEPA vacuum or cleaned with a moist cloth and detergent solution.

a. are required to be
b. need to be chemically treated and
c. should be
d. shall be

131. _____ include pipe chases (areas within and under buildings where steam and utility pipes are run) and valve pits (areas below grade that contain utility shut-off valves).

a. Confined spaces
b. Closed spaces
c. Large open areas
d. None of the above

132. The air in some confined spaces may be contaminated or low in oxygen, posing _____ health risks for workers.

a. negligible
b. significant
c. insignificant
d. meaningless

133. Before remediating mold in a confined space, the area should be evaluated for atmosphere and toxic substances.

a. True
b. False

134. A frequent _____ in crawlspaces and pipe chases of older buildings is _____; other chemicals such as natural gas and solvents can also be found in some of these spaces.

a. contaminant / asbestos
b. hinderance / snakes
c. obstacle / sharp objects, such as nails and scrap metal
d. contaminant / lead

135. Mold levels are likely to be high in a confined space, so PPE should be selected accordingly. Most cases will require _____, including skin and eye protection, and full respiratory protection using a full-face respirator or a powered air purifying respirator (PAPR) with a HEPA filter.

a. minimum PPE
b. limited PPE
c. full PPE
d. partial PPE

CONTAINMENT AND PERSONAL PROTECTIVE EQUIPMENT (PPE)

136. The goal of containment is to increase the mold growth throughout the building in order to maximize the exposure of remediators and building occupants to mold.

a. True
b. False

137. _____ mold growth in a small area, for example, could release more mold spores than _____ growth in a relatively large area.

a. Lighter / lighter
b. heavy / heavy
c. Light / heavier
d. Heavy / lighter

138. Limited containment is generally used for areas involving _____ square feet of mold contamination.

a. between 10 and 100
b. between 20 and 125
c. between 20 and 100
d. between 25 and 200

139. A fan exhausted to the outside of the building can be used to maintain _____.

a. positive air pressure
b. airflow
c. negative air pressure
d. fresh air

140. To limit the amount of mold that gets into the air, a remediator may apply sticky-backed paper or covering to a moldy wall component before removing it.

a. True
b. False

141. Limited containment consists of a single layer of _____ polyethylene sheeting enclosing the moldy area.

a. 4-mil
b. 4-mil fire-retardant
c. 6-mil
d. 6-mil fire-retardant

142. All supply and air vents, doors, and pipe chases in the containment area _____ with polyethylene sheeting to minimize the spread of mold and mold spores to other areas of the building.

a. must be sealed
b. may be sealed
c. should be sealed
d. can be sealed

143. Heavy mold growth on ceiling tiles does not affect HVAC systems if the space above the ceiling is used as a return air plenum. In such cases, containment from floor to ceiling deck do not need to be considered.

a. True
b. False

144. Full containment is recommended for the clean up of mold-contaminated surface areas of more than _____ and when intense or long-term exposures are expected.

a. 50 square feet
b. 75 square feet
c. 100 square feet
d. None of the above

145. Full Containment: The (decontamination) chamber should be large enough to hold a waste container and allow a worker to put on and remove Personal Protective Equipment (PPE). All contaminated PPE, _____, should be placed in a sealed bag while in this chamber.

a. except goggles
b. except respirators
c. except gloves
d. All of the above

146. Properly fitted goggles or full-face respirators provide eye protection. Goggles must be designed to keep out dust and small particles. Safety glasses or goggles that have open vent holes _____.

a. are recommended
b. are acceptable
c. are not acceptable
d. None of the above

147. Only respirators approved by the National Institute for Occupational Safety and Health (NIOSH) should be worn during mold remediation.

a. True
b. False

148. Minimum PPE includes _____.

a. gloves
b. goggles/eye protection
c. N-95 respirator
d. All of the above

149. The P100 filters remove vapors or gases, and the half-face APRs protect the wearer's eyes.

a. True
b. False

150. Full PPE includes a full-face, powered air purifying respirator (PAPR). It is recommended when more than _____ of mold is found, when high levels of airborne dust or mold spores are likely, or when intense or long-term exposures are expected.

a. 50 square feet
b. 75 square feet
c. 100 square feet
d. None of the above

151. Disposable Clothing: When limited protection is warranted, disposable paper coveralls can be used. When full protection is required, a body suit of breathable material, such as TYVEK®, and mold-impervious disposable head and foot coverings should be used.

a. True
b. False

EVALUATING THE REMEDIATION

152. How do you know when you have finished remediation? Ultimately, it is a judgment call.

a. True
b. False

153. The most important action, if mold growth is to be _____ in a building, is to _____ the source of moisture that caused the mold problem.

a. eliminated / eliminated
b. controlled / control
c. controlled / eliminate
d. eliminated / control

154. A _____ of the area that has been remediated should show no evidence of present or past mold growth. There should be no moldy or musty odors associated with the building, because these odors suggest that mold continues to grow.

a. air quality test
b. visual inspection
c. mold sampling
d. air quality test and mold sampling

155. Keep in mind that remodeling, cleaning, and construction may have introduced new building materials or chemicals capable of causing upper respiratory irritation that, in some individuals, may _____ caused by exposure to mold.

a. mimic the symptoms
b. enhance the symptoms
c. increase the symptoms
d. None of the above

156. Air sampling for mold provides information on what was in the air only for the moment when the sampling occurred. It is important, therefore, that sampling not replace _____ .

a. visual inspection
b. mold testing
c. cleaning verification
d. none of the above

COMMUNICATING WITH THE BUILDING OCCUPANTS

157. Communication with _____ is essential for successful mold remediation.

a. the remediation workers
b. OSHA
c. building occupants
d. All of the above

158. The status of the building investigation and remediation should be openly communicated, along with information on _____.

a. known health risks
b. suspected health risks
c. both a. and b.
d. none of the above

159. The communication techniques used will depend on the scope of the remediation and the level of occupant concern. Tell the occupants _____ .

a. about the size of the remediation project
b. the activities planned
c. the schedule
d. All of the above

160. Identify a person whom building occupants can contact directly to discuss questions and comments about the remediation activities.

a. True
b. False

161. Special communication strategies may be warranted when treating a mold problem in a school. Teachers, parents, and other affected groups should be notified as soon as significant issues are identified.

a. Teachers and parents
b. Parents and other affected groups
c. Teachers, parents and other affected groups
d. None of the above

162. Often, giving parents and teachers access _____ in the investigation and remediation process will reduce their concern during the latter stages of the remediation.

a. to a professional early
b. to mold pamphlets early
c. to the DHS and EPA websites early
d. All of the Above

163. EPA regulates mold or mold spores in the air. EPA also certifies mold remediators or inspectors.

a. True
b. False

164. The key to mold prevention is moisture control. Water entry into buildings or building crawl spaces _____ controlled.

a. shall be
b. should be
c. will be
d. has to be

165. Areas behind _____ are frequently overlooked and not dried carefully.

a. walls and ceilings
b. crawl spaces and attics
c. both a. and b.
d. None of the above

166. Furnace humidifiers _____ to prevent mold and bacterial growth. Ducts in which humidifiers are installed should also be checked to ensure water has not leaked into the furnace or filter areas.

a. must be cleaned regularly
b. need to be cleaned by a professional
c. should be cleaned once a year
d. have to be cleaned bi-annually

167. Carpeted areas around the humidifiers have to be monitored by a professional for wetness.

a. True
b. False

168. Humidifiers should be set to produce less than _____ relative humidity in the building. Relative humidity greater than _____ is likely to result in condensation in the building, which can lead to mold growth.

a. 60 percent / 60 percent
b. 65 percent / 50 percent
c. 70 percent / 60 percent
d. 60 percent / 50 percent

169. Drain or condensate pans should also be checked routinely because they can become reservoirs for _____ if not installed and maintained properly. These pans are designed to remove water produced by cooling hot air from the ventilation system. If the pans do not drain, or are not cleaned frequently, they may allow water to enter the HVAC system and contaminate the ventilation ducts in the building.

a. dirt and debris
b. mold and bacteria
c. dust and residue
d. Both a. and b.

170. Buildings should be located, landscaped, built, and renovated with consideration for _____. A building that is not suited to the climate can have moisture problems.

a.the residents preferences
b. the environment
c. the climate
d. All of the above

171. Selection and location of building materials and furnishings _____ with mold prevention in mind. In frequently damp or wet areas, more mold resistant materials _____; for example, some woods are more resistant to mold than particle board or pressed board.

a. have to be made / can be used
b. can also be made / can be used
c. can also be made / have to be used
d. have to be made / have to be used

172. Prevent moisture due to condensation by reducing surface temperature or increasing the moisture level in air (humidity). To reduce surface temperature, insulate or decrease air circulation. To reduce the moisture level in air, repair leaks and increase ventilation (if outside air is cold and dry), or dehumidify (if outdoor air is warm and humid).

a. True
b. False

173. Vent moisture generating appliances, such as dryers, to the _____ .

a. outside where possible
b. inside where possible
c. attic where possible
d. None of the above

174. Perform regular building and HVAC inspections and maintenance as scheduled.

a. True
b. False

Mold: Information for Mold Contractors and Consultants in Wisconsin

175. To be included on the lists of IAQ Consultants or Mold Remediation Contractors, please provide the following information via email or regular mail to the Indoor Air Program:

a. Specify which list you want to be on: IAQ Consultants or Mold Remediation Contractors; and your Company Name, web address, counties served, Phone Number(s), E-Mail Address, and Mailing Address as you would like them listed on the web;
b. A list of your credentials, including a list of training certificates (please include the name of the training provider); any relationships, financial or otherwise, you have with any other IAQ consultant or mold remediation contractor;
c. An example of the type of reports you generate/work you do; any other item you feel that is important for us to review.
d. All of the above

176. Having your name on this list (either IAQ Consultant or Mold Remediation Contractor) is NOT an endorsement from the Department of Health Services nor is it considered certification with the State of Wisconsin.

a. True
b. False

177. DHS will not include individuals on this list who provide us with fraudulent information or if individuals advertise as being _____ .

a. State Certified
b. State Endorsed
c. Both a. and b.
d. None of the above

Mold: Information for Wisconsin Residents

178. If you still can't find what you're looking for, or you want more (state specific) information, contact the:

a. Wisconsin Division of Public Health
b. Environmental Protection Agency
c. Occupational Safety & Health Administration
d. Dept. of Safety & Professional Services

179. Mold growth is familiar to most people when it is seen as a fuzzy patch or stain spreading across food or damp surfaces. It is known that many molds produce chemicals that can be _____.

a. toxic if eaten
b. dangerous to the touch
c. both a. and b.
d. tested and reproduced in a lab environment

180. Health effects of mold can be a concern where exposures are very high, such as in _____. Where there are people with severely weakened immune systems, such as in hospital transplant units, mold infection can be a serious concern and exposures should be aggressively controlled.

a. sawmills
b. grain elevators
c. agricultural settings
d. All of the above