
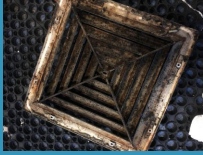






Tips for Dealing with Mold Remediation

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Presenters







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Disclaimer




This presentation is not intended to be a comprehensive program covering all aspects of this topic. All technicians are encouraged to read and follow all applicable standards, codes and regulations related to this topic.

- ✓ It is the responsibility of each individual contractor to follow local building codes and licensing requirements and to work safely in accordance with OSHA guidelines.
- ✓ It is the contractor's responsibility to take proper precautions on each project to prevent cross contamination. Always take the health and safety of the building occupants into consideration before you conduct any cleaning procedures.
- ✓ All of the following tips are only general tips. They do not cover every situation and it is your responsibility to adapt these tips to the individual system you are working on.
- ✓ The Instructor is not responsible in any way for the work you perform after viewing this slide show. You are responsible for your own work.
- ✓ The views and opinions following are the instructors opinions and not necessarily the official position of the National Air Duct Cleaners Association.

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What We'll Learn

The decision making process required when you encounter mold.



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Tips for Dealing with Mold Remediation

Three Areas of Focus

- Accepting the Job
- Job Communication
- Operating Under Proper Authorities

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Tips for Dealing with Mold Remediation

Accepting the Job

What should be done first?

Investigation

- How/why did it happen?
- How do we fix the situation?




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Accepting the Job

Have a plan in place

- Do you have the correct equipment to complete the job?
- Take plenty of photos while investigating




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Accepting the Job

Have the correct insurance/certifications to complete the job

- Depending on where you are located as a company there could be different certs and requirements




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Accepting the Job

Understand the factors that contribute to degree of difficulty and expertise needed for the job:

- Commercial or residential?
- Where is mold located?
- How much mold is suspected?
- What is the building environment?




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Job Communication

Work actively to set expectations of duct cleaning amongst the parties:

- Under what expectations will you be working?
 - How can you expect your work to be acceptable to others if this question has not been answered.




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Job Communication

Work actively to set expectations of duct cleaning amongst the parties:

- Bring to the table what others can expect from your work.
 - Even in the presence of high-level professionals you are the expert in what services you can provide and what they can accomplish.
 - Don't be pressured into agreeing to expectations that you are not sure you can meet.



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Job Communication

Work actively to set expectations of duct cleaning amongst the parties:

- In the absence of a consensus of expectations work to move the parties involved toward a consensus of expectations.
- Keep in mind that other parties may use terms that should have fixed meanings very loosely.
 - From an insurance adjuster, "ensure the ducts are free and clear of mold."
 - *What does that mean?*
- If a consensus can't be developed, you need to evaluate how you will deal with a disagreement at the end of the project.



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Job Communication

Communicate how many internal/external stakeholders will need to be involved:

- Who is the customer?
 - At what level of understanding is the customer operating regarding mold contamination and remediation?
 - Bring basic educational information forward.
 - Mold Spores+Dirt+Moisture= Mold Growth
- Who is judging the finished duct remediation work?
 - By what criteria will it be judged?
 - The myth of 500 CFU/M₃ as a threshold limit value in mold remediation.



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Job Communication

Communicate how many internal/external stakeholders will need to be involved:

- Who are the others with whom I will be working, or around, on this project?
 - Do I need other professionals to assist me with the work I am doing?
 - What is the choreography of all the trades involved in the work?
 - Who is the "bus driver of the project?"




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Job Communication

Having the right relationships with people with whom air duct cleaners can consult (IH, mold remediator, etc.):


- Have someone you can turn to as a consultant if you find yourself in circumstances that you don't fully understand.
- Have professionals that can fill in your blanks.
 - eg: Our company doesn't set up our own containments when we are required to do our air duct remediation. We have a mold restoration company with whom we are associated that we can bring in to erect containment for us.



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Job Communication

- Importance of communicating the scope/workflow and expected outcome:
 - Meetings (virtual or in person) with all stakeholders so that any problems with process, misunderstandings, or disagreements can be flushed out prior to the commencement of work.



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Job Communication

Importance of communicating the scope/workflow and expected outcome:

- Multiparty emails are an effective tool.
 - With these, all stakeholders are reading the same thing together.
 - If there are misunderstandings or disagreements as to process or expectations, they will likely be flushed out before the commencement of work by these communications.
 - No one will be able to plead ignorance of information after the fact.
 - These are easily saved, updated, and attached to database records.

Operating Under Proper Authority

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Operating Under Proper Authority

The following publications have been used for guidance in conducting mold assessment

- IICRC S520: Standard and Reference Guide for Professional Mold Remediation 3rd Edition. Institution of Inspection, Cleaning and Restoration Certification. Vancouver, WA. 2008
- IICRC S520: Standard and Reference Guide for Professional Water Damage Restoration 3rd Edition, Institution of Inspection, Cleaning and Restoration Certification, Vancouver, WA. 2008
- Recognition, Evaluation and Control of Indoor Mold. American Industrial Hygiene Association, Fairfax, VA. 2008
- Fungal Contamination: A Manual for Investigation, Remediation and Control. Wallace S. Bailey, PE, CIADP, CIE, CMR. Building Environment Consultants, Inc. Jupiter, FL. 2005
- Bioaerosols: Assessment and Control. Janet Macher, ScD, M.P.H. American Conference of Governmental Industrial Hygienists, Cincinnati, OH. 1999
- Worldwide Consensus Standards for Mold and Bacteria. 3rd Edition. Robert C. Brandy, PhD, MPH, PE, CH, CSP, CMR and Gail M. Brandy, MS, CSP, CMR, CEC. OEHCS Publications, Hinsdale, IL. 2003
- Post-Remediation Verification and Clearance Testing for Mold and Bacteria - Risk Based Levels of Cleanliness Assurance 4th Edition. Robert C. Brandy, PhD, MPH, PE, CH, CSP, CMR and Gail Brandy, MS, CSP, CMR, CEC. OEHCS Publications. Hinsdale, IL. 2003
- ASTM D2131B: Standard Guide for Assessment of Fungal Growth in Buildings. ASTM International 2014.



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Operating Under Proper Authority

Where can you turn to identify the proper authority?

Working with an Indoor Environmental Professional (IEP)

- The IICRC (2003) states that "The role of an IEP is to perform an assessment of the fungal ecology of property, systems and contents at the job site, create a sampling strategy, sample the indoor environment, interpret laboratory data and determine Condition 1, 2 and 3 status for the purpose of establishing a scope of work (pre-remediation assessment) and/or when necessary to verify the return to normal fungal ecology."

NOT ALL IEP'S Are CREATED Equally





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Operating Under Proper Authority

Who is Considered an IEP?

- Industrial Hygienist (IH)
- Certified Indoor Environmental Consultant (CIEC)
- Varies State-to-State and can even include home inspectors.

You need someone well versed in the general areas that constitute a multi-disciplinary approach to mold remediation include (AIHA, 2004):

1. Exposure Assessment
2. Indoor Environmental Quality
3. Microbial Assessment And Remediation
4. Microbiology/Mycology
5. Heating, Ventilating, And Air Conditioning (HVAC)
6. Building Science
7. Legal/Communication
8. Health Effects



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Operating Under Proper Authority

Question Authority

What to consider before following protocol.

- Experience & Background of the IEP
- What part of the country/world they are from?
- Agenda
- Is the expected outcome realistic?
- Is this 'over my head'?
- Who are the stakeholders involved?
- Does it Make Sense?





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Operating Under Proper Authority

Pitfalls of not working with proper authority.

- Risking the health of the occupants as well as your team.
- Risk Liability and Exposure. If you are following an agreed upon protocol and clearly know *your* role all you need to worry about is the proper execution of the project.
- Another risk is potentially leaving the environment open to cross contamination from improper project order and/or leaving contaminated areas unidentified.
- Lawsuits
- Your Reputation



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Thank you for Participating!

