



## 13 COMMON RESTORATION MISTAKES

1. **Lack of Written Site-Specific (Reviewable) Work Plan:** Each project is unique. The primary focus must include project acceptance by building occupants with heightened contaminant awareness including chemical-sensitivity, symptoms and health considerations. Documentation of planned activities is essential for performance and recordkeeping. Cleaning methods and products must be evaluated by an IAQ professional (such as a CIH).
2. **Hazard Identification/Planning:** A hazardous material inspection for asbestos, lead, mold and other hazardous materials must be performed to facilitate project planning and specify the equipment, tools and specialty training of restoration workers required to perform the work. Hazard identification is an OSHA requirement and essential for project planning and scheduling purposes.
3. **Cleaning vs. Replacement:** Decision-making on items to be cleaned (such as non-porous materials) versus porous items which (must be removed/disposed) as well as cleaning methods must be performed by experienced restoration professionals. Discussion regarding the cost value of cleaning effort must also be considered for insurance coverage (i.e., more expensive to clean than replace).
4. **Source Control vs. Odor Masking:** Source location identification and source removal are the first step in successful restoration. Addition of new chemicals during the cleaning process adds new odors to an already complex VOC chemical mixture in the indoor environment. Use of air cleaning equipment which produce ozone is not recommended.
5. **Failure to Isolate/Compartmentalize/Create Negative Pressure:** Construct temporary barriers to isolate work areas into manageable/controlled sections. Maintain barriers to avoid cross contamination and re-contamination while working. Work your way out of the building. Create negative pressure within the work area by venting with an air filtration device (AFD) outdoors.
6. **Failure to Control Particle Release/Off-gassing:** Restoration activities such as carpet removal, painting, sanding, including cleaning must be performed in controlled work areas. Maintaining continual cleanup and removal/packaging of debris limits continued off-gassing.
7. **Failure to Ventilate:** Air scrubbing within controlled areas is often an essential final step prior to re-occupancy. Free standing AFDs equipped with HEPA filters can be used to capture/control airborne particulates and use of activated charcoal filters can be effective for odors.
8. **Regular Vacuum Use (in Lieu of HEPA Vacuuming):** HEPA filtered vacuums are 99.97% efficient in the collection of 0.3 micron diameter particles (a human hair is 60-80 microns). Non-HEPA vacuuming can release asbestos fibers, mold spores, bacteria and other toxic small particulates in both the vacuum exhaust air and from resuspension of settled dust. Viruses are too small to be collected by HEPA filters.
9. **Failure to Adequately Clean (for Health):** Effective cleaning requires trained/experienced workers, strict supervision and written/proven work practices/regiments. Cleaning must include all areas from high traffic touch points to hard to reach locations. Uncleaned locations are reservoirs for potential allergic or toxic contaminants as well as odors. Areas are frequently re-contaminated by the use of unclean cleaning solutions or supplies (such as sponges, rags, and mops).
10. **HVAC Inspection/Cleaning:** The impact of building-related event(s) on the HVAC equipment and duct work must be based on visual inspection and sampling. Re-occupancy without replacement or effective cleaning can result in work area re-contamination once the HVAC is activated.
11. **Failure to Comprehend the Full Extent of Damage:** Smoke, soot, odors, etc. can be forced into cracks and crevices, propelled into attics, crawl spaces and behind walls/ceilings as well as drawn into HVAC systems. Restoration scope of works must incorporate provisions for extra work discovered during the restoration process.
12. **Occupant Expectations (Physiologically and Psychologically):** The necessity for a perceived change by building occupants cannot be overstated. Building occupants understanding of the restoration plan, phasing/schedule and final completion criteria is critical in meeting their expectations.
13. **Independent Verification of Project Completion:** Confirmation of project completion by a third party (IAQ Professional such as AET) creates a *Win/Win* scenario. Changes and needed restoration improvements can be implemented prior to occupancy without the loss of client confidence. Re-occupancy with unrecognized or unfinished work results in a *Lose/Lose* scenario both in terms of time and dollars spent.

**About our organization:** AET has 29 years of contracting/consulting experience assisting our clients in facility planning, renovations, demolition, redevelopment and site restoration. Make AET your first point of contact for your consulting/contracting needs. Call us now at 610-891-0114 or 1-800-9696-AET.

**When you need professional IAQ advise,** email Alan Sutherland, CIH, CHMM at [a.sutherland@aetinc.biz](mailto:a.sutherland@aetinc.biz). AET's provides nationwide services; phone consultations are free. Check out the full range of environmental contracting/consulting services we provide at our website at [www.aetinc.biz](http://www.aetinc.biz).

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