Overview

Following notification of impact to a property through the claims notification process, restorers are regularly called upon to make necessary initial decisions regarding water extraction and drying and impacted material removal. Prevailing documentation, including the Institute of Inspection, Cleaning and Restoration Certification (IICRC’s) S500 Standard and Reference Guide for Professional Water Damage Restoration, guides restorers to perform procedures to “safely restore” impacted property. Specifically, S500 indicates that specialized experts should be used to perform damage assessments where “Regulated, Hazardous Materials and Mold” are present. This conforms with prevailing U.S. Environmental Protection Agency (EPA) regulations that indicate that where specific regulated materials may exist and will be disturbed, sampling must be performed.

As a result, a building materials assessment for environmental hazards should be conducted where materials to be restored/repairs or removed are located and should be performed by accredited/licensed environmental professionals. This is the best way to ensure that damages are properly accounted for and to make certain that the restoration specification/protocol captures those environmental hazards that may not be readily apparent to the building consultant or restoration contractor. Assessing these potential environmental hazards through sampling protects against the inadvertent disturbance of these environmental hazards that could result in increased costs for restoration efforts or expose building occupants to materials in their working environment. Knowledge of the presence and location of these materials drives restoration efforts and may result in selecting options to not disturb materials or utilization of drying in place methods, in lieu of removal of substrates.

Some of the most commonly encountered hazardous building materials include asbestos, lead-based paint, PCBs, and mercury.

Asbestos

Asbestos is commonly found in building materials including floor tile and mastics, sheet vinyl flooring, pipe insulation, spray-on fireproofing, drywall joint compound, spray-on acoustic ceiling, plaster, ceiling tiles, roofing, cement boards and pipes, mortars, seam sealants, caulking, and glazing compounds to name just a few. In accordance with 40 CFR Part 61, Subpart M, known as the Asbestos National Emissions Standard for Hazardous Air Pollutants (Asbestos NESHAP), “...prior to the commencement of the demolition or renovation, thoroughly inspect the impacted facility or part
of the facility where the demolition or renovation operation will occur for the presence of asbestos...”
This should be performed by an appropriately accredited/licensed Asbestos Inspector, prior to disturbing these materials. Licensing regulations differ by state, and it is critical to know the provisions of each state’s requirements for asbestos inspection and abatement design.

Many facilities have historical asbestos sampling data and this may be utilized in lieu of performing additional sampling. In the absence of this information being available, sampling of materials to be disturbed for the purpose of water and fire restoration efforts should occur, regardless of the date of construction. Special handling procedures associated with disturbing these materials should be incorporated into the restoration protocols and associated cost of repair estimates. Even with building demolition, the abatement of asbestos containing materials must occur prior to demolition activities. Further clearance testing prior to re-occupancy, even for demolition activities following abatement, must be performed by licensed personnel. Many states require negative declarations regarding the presence of Asbestos Containing Materials (ACM) prior to building demolition being permitted.

Where building materials exist that contain detectable amounts of asbestos, but below the regulatory threshold of asbestos concentration of more than one percent, other regulations are still applicable to restoration workers.


Lead and Lead-Based Paint

Lead-based paints are commonly found in buildings built prior to 1978. Lead-based paints are still applied to bridges and other steel structures for their rust inhibiting properties and ability to resist weathering and are found in both public and private housing.

The assessment of paint condition and potential resultant lead hazards is required in child-occupied facilities and target housing by the Department of Housing and Urban Development (HUD) where materials to be disturbed may contain lead. Specifically, the Lead-based Paint Renovation, Repair, and Painting (RRP) Rule in 40 CFR 745 Subpart E requires that a determination be made by licensed personnel “...that the components affected by the renovation are free of paint or other surface coating that contains lead.” Again, licensing regulations differ by state and it is critical to know the provisions of each state’s requirements for lead inspection and abatement design.

Many facilities have historical lead sampling data and this may be utilized in lieu of performing additional sampling. In the absence of this information being available, sampling of materials that
will be disturbed for the purpose of water and fire restoration efforts should also occur. Special handling procedures associated with disturbing these materials should be incorporated into the restoration protocols and associated cost of repair estimates. Clearance testing or cleaning verification following abatement or renovation is required to be performed by licensed personnel.

Prevailing regulatory requirements regarding sampling materials to be disturbed include OSHA Lead in Construction Rule (29 CFR 1926.62), the Environmental Protection Agency’s (EPA’s) Lead-Based Paint Renovation, Repair, and Painting (RRP) Rule (40 CFR 745, Subpart E), as well as other applicable federal, state, and local regulations. Samples of the demolition waste stream also should be analyzed by the Toxicity Characteristic Leachate Procedure (TCLP) in order to determine if the waste stream is hazardous (greater than 5 milligrams of lead per liter of leachate). This impacts restoration and repair costs, when waste handling and disposal measures differ from normal construction and demolition debris.

Polychlorinated Biphenyls (PCBs)

PCBs are commonly found in building components including caulking, paints, elastic coatings, lighting ballasts, transformers, capacitors, hydraulic oils, cable insulation, and many others. PCBs can become a significant contributor to indoor air pollution, if not properly handled during restoration efforts. Identification of the presence of these materials and quantities that may be disturbed during restoration efforts should occur prior to these restoration or demolition efforts, and this should be performed by experienced environmental consultants. Disposal of PCB bulk product waste (those containing greater than or equal to 50 parts per million (ppm) is regulated by the Toxic Substances Control Act (TSCA) at 40 CFR 761.62. Disposal of PCB remediation waste (materials contaminated by bulk sources) is regulated by TSCA at 40 CFR 761.61. These handling and disposal procedures can impact restoration and repair costs associated with the claims process.

Mercury

Mercury is commonly found in building components including fluorescent, compact fluorescent, and HID light bulbs, thermostats and thermometers, mercury switches in a variety of appliances, gas pressure regulators, boilers (heat regulators), pilot light sensors, certain flooring systems (flexible gym flooring), and mercuric oxide battery systems to name a few. Regulation of the assessment and disposal of mercury containing equipment is covered by the EPA's Universal Waste Rule at 40 CFR Part 273. The identification of the presence of these materials and quantities should be performed by experienced environmental consultants. These handling and disposal procedures can impact restoration and repair costs associated with the claims process. If materials containing mercury are released during restoration or demolition efforts and contact other materials, they also will be considered mercury-impacted for the purpose of handling and disposal, which can absolutely impact restoration and repair costs associated with the claims process.
What to Know and Do:

- Where materials to be restored/repaid or removed are located, comply with prevailing standards and regulations by utilizing a specialized expert to check for the presence of environmental hazards.
- Where sample data does not exist regarding the potential presence of environmental hazards in a property, utilize licensed/accredited personnel to sample for these materials.
- Follow federal, state, and local laws regarding licensing and inspection requirements and sample suspect materials before disturbing them.
- Where environmental hazards exist, incorporate their presence, location and quantities into restoration and repair protocols using licensed/accredited personnel to complete this work.
- Incorporate these restoration and repair protocols and associated costs into the claims process.

If you have questions or would like further information, please contact:
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