



MOLD

and the Re-use of Demolition Materials



By Kimberly Hicks

The presence of mold during construction, occupancy, or demolition of a building can have significant effects on a project's cost, timing, and public perception. Mold is a type of fungus and is included in the same family as yeasts and mushrooms. Molds are naturally occurring microscopic organisms that are most often associated with damp, musty spaces like bathrooms, basements, and attics. Mold travels through the air as tiny spores and, if they happen to land in the appropriate (wet) environment, they can grow very quickly.

ABATEMENT OF MOLD

While mold plays an important role in the ecosystem, exposure to too much or the wrong type of mold can have serious health effects. "Black mold" or *Stachybotrys chartarum* is a greenish-black mold which has been linked to respiratory problems, severe allergic reactions, and even neurological impairment. Accordingly, identification and abatement of mold in existing buildings and the prevention of reoccurrence during construction and demolition is necessary to prevent adverse health consequences, maintain property values, and decrease construction defect claims.

The U.S. Environmental Protection Agency (EPA) and the majority of states have developed guidelines for remediation of mold in commercial buildings and schools. In many instances, mold inspections have become common components of most private party real estate transactions as banks and insurance companies have learned the hard financial lessons associated with not checking for its presence. Mold also has been linked to Sick Building Syndrome and building occupants have sued for damages related to mold growth that allegedly caused hair loss, dizziness, vertigo, abdominal pain, respiratory distress, tinnitus (ringing in the ear), facial swelling, and severe rashes.

ABOUT the AUTHOR

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DECONSTRUCTION MATERIALS

Improper reuse of deconstructed material such as wallboard, brick, concrete block, or wood can lead to the spread and reoccurrence of mold in new and green building construction. The amount of deconstruction material that may be available for reuse is based largely upon the type of buildings (high rise multifamily, low rise multifamily, single family, etc.), age, and condition of the materials, and the skill of the salvage company. To avoid potential mold problems only non-porous deconstruction materials should be considered for reuse. These include those that have a non-porous surface such as (non-food) appliances, light fixtures, etc. It is much less likely that mold will attach and grow to these types of inorganic materials as the water and nutrients they need to thrive are not often present on them. However, mold can grow on the dust/dirt present on these surfaces and reuse of these items should be conducted on a case by case basis. More porous surfaces and materials (dry wall, ceiling tile, etc.) not only absorb water more readily, but also contain organic material in the form of carbon that can serve as a nutrient source for mold.

MOLD FORMATION PREVENTION

There are many techniques for preventing the formation of mold and abating it if it occurs. EPA discusses mold remediation techniques in their "Guidelines for



Remediating Building Materials with Mold Growth Caused by Clean Water" and lists cleanup methods for removing mold from deconstruction materials (<http://www.epa.gov/mold/table2.html>). Methods range from damp wiping

with a disinfectant (bleach) to the use of more sophisticated (and expensive) chemical agents. If significant amounts of mold are present, an experienced professional needs to be retained to ensure it is removed properly; although that quickly becomes cost prohibitive in most deconstruction projects. Once reclaimed, it is vitally important that the area be kept dry so mold growth does not reoccur.

GREEN VALUE

One of the major benefits of deconstruction, besides often saving important and unique architectural treatments, is the diversion of demolition debris from landfills. Non-porous materials that have been properly recovered, evaluated, cleaned (when necessary), and reused can be counted as an important part of a project's sustainable contribution to a redevelopment effort. In the final analysis, the usage of non-porous, inorganic deconstructed items presents a minimal risk to developers or contractors, especially when considered in light of the inherent aesthetic and "green" value such materials bring to a building. ■



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