

## **CASE STUDY: WALLPAPER IN RESIDENTIAL BATHROOMS - BAD IDEA**

### **Project Description: Mold Remediation - Wallpaper Removal (Drywall Saved)**

**Scope of Services:** AET was contracted by a homeowner to evaluate the extent of mold growth behind wallpaper in the master bedroom bathroom and to formulate a work plan for mold remediation prior to renovations.

#### **AET's Investigative Approach/Sampling/Tools:**

1. **Visual Inspection:** Sections of the wallpaper were carefully removed. Significant staining/suspect mold growth was observed. Mold appeared to be growing on the wallpaper paste only; the drywall had originally been painted prior to wallpaper installation.
2. **Tape Lift Sampling:** AET's Media, PA laboratory confirmed the staining was *Aspergillus/*Penicillium mold. Samples were found to contain significant hyphae indicative of active mold growth. Mold spores were also found in surface dust in the bathroom.

#### **Decision-Making:**

- **Source of Moisture:** Mold growth originated due to direct contact with water vapors from the shower and tub areas. Water vapors were pulled by the bathroom exhaust in the toilet area and the HVAC return grill in the bedroom and condensed on the wallpaper. The wallpaper is a catch reservoir for water vapors and moisture can be transferred through the wallpaper to the wallpaper paste. No evidence of water impact was observed through the interior wall cavity.
- **Wallpaper Paste:** This adhesive is usually cellulose or wheat flour based and an excellent food source for mold growth.

**Mold Remediation:** A decision was made to save the drywall as mold growth was growing on the wallpaper paste only. Wallpaper was removed followed by removal of the wallpaper paste within a negative pressure enclosure. Visual inspection following drywall paste removal found no evidence of mold growth or staining. The painted drywall surface was carefully disinfected. A minimum of a 10 day wait was recommended to confirm no regrowth of the mold on the walls prior to repainting.

**CONCLUSION:** As detailed in AET's Tip of the Month entitled "Allergy Proof your House". Do not put wallpaper (whether vinyl or otherwise) on your bathroom walls. Wallpaper can become a catch reservoir for water vapor and a damp surface for mold to grow. On this project, limited visible mold growth was observed on the exterior of the wallpaper itself. Mold growth was limited to the wallpaper paste as the drywall was originally painted. Reportedly, the homeowner had experienced mold-related health symptoms such as stuffy nose and itchy and watery eyes prior to mold remediation. No significant mold-like odors were perceived prior to work.

When you need professional industrial hygiene advice email Alan Sutherland, CIH, CHMM at [a.sutherland@aetinc.biz](mailto:a.sutherland@aetinc.biz) or call 610-891-0114. We provide nationwide services; phone consultations are free. Check out the full range of environmental contracting/consulting services on our website [www.aetinc.biz](http://www.aetinc.biz).

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