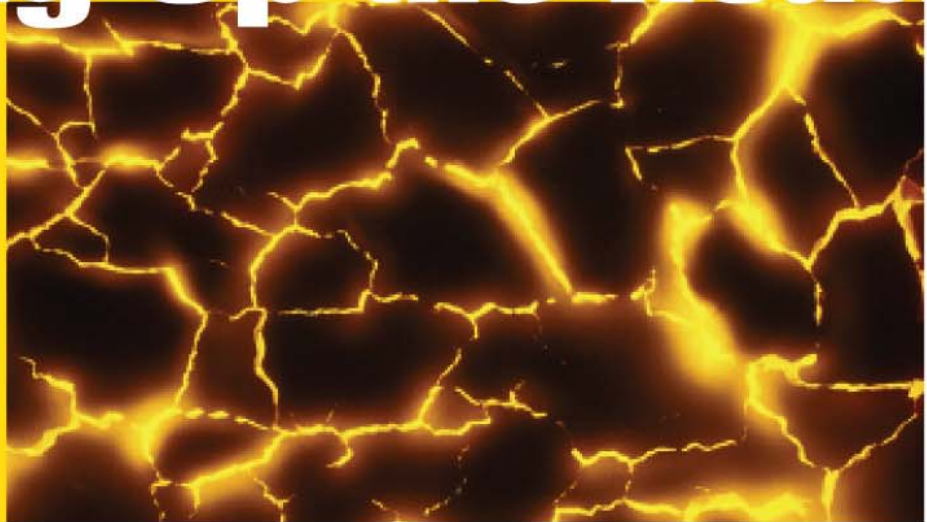


# Turning Up the Heat

## *New Remediation Process for Water Damage Could Save Insurers 'Billions'*



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Insurers are facing losses greater than any other natural disasters in U.S. history as a result of the extraordinary exposures brought about by Hurricanes Katrina and Rita. Unfortunately, the bad news continues. Serious mold contamination is now threatening water-damaged homes and commercial properties throughout the region. Losses are estimated to rise beyond US\$90 billion in flooded New Orleans and the Gulf Coast. An estimated 15,000 adjusters have been dispatched to the area, but that may not be enough to handle the region's estimated two million claims.

With all of this bad news piling up, the insurance and real estate industries could use some good news. A revolutionary new heat treatment process, established in California, could be a silver lining to this very cloudy period.

ThermaPureHeat has proven to be an effective alternative to traditional demolition-based remediation and building dry-out methods, potentially saving insurers billions of dollars over the next several years.

E-Therm, an environmental remediation innovator based in Ventura, CA, developed the ThermaPureHeat process. It uses superheated, dehumidified air to disinfect, decontaminate, and dry out buildings – much in the same way heat is used to pasteurize milk and kill bacteria in wine.

In the ThermaPureHeat process, technicians use propane-powered portable heaters and air blowers to inject superheated air into the affected space, raising

the temperature of a single room or entire structure to as much as 160° F for several hours.

Heat has shown to be effective in destroying active mold growth sites; it kills viable mold spores, bacteria, viruses, insects, and other heat-sensitive pests and organisms. Heat also accelerates the off-gassing of odors and toxins, even in inaccessible areas, without the use of chemicals. One of the main benefits of heat is that the proper application can dry out wet buildings much more quickly than traditional methods of simple air movement and dehumidification – methods typically employed by flood restoration contractors.

### **TRADITIONAL REMEDIATION**

Traditional mold remediation typically includes limited or extensive demolition of impacted building materials. Additional cleaning techniques include wire-brushing, sanding, HEPA vacuuming and microbial wipe down. These standard mold remedies are costly and time-consuming.

“Cost escalates when suspected mold requires tearing down and rebuilding structures that may be salvageable,” Joe McLean, CEO of Alliance, says. Alliance is a California-based environmental contractor that deals extensively in mold and asbestos remediation.

“If a consultant specifies removal of a four-foot perimeter on four walls because moisture has [been detected in] one, tearing down and rebuilding showers, cabinets, countertops and such can signifi-

cantly increase costs.”

Insurers often cover building structures, their contents, as well as loss of use. Long remediation projects that force occupants to vacate the premises for weeks or months can rack up high secondary costs. At times, the cost of replacement housing and meals – or, more significantly, the cost of insuring lost business – can exceed remediation costs.

Inaccessible areas such as wall cavities, crawlspaces, headers, doorjambs, and vapor barriers present another dilemma. Insurers face a choice of spending a significant amount of money to reach, remove, and replace building structures in these inaccessible areas – or leave the areas alone and risk the chance that live mold or mold spores could pose a re-infestation hazard.

Some feel the sky-high cost of mold liability can be brought back down to earth by refocusing on the basics.

“To properly handle mold, you have to handle the moisture problem,” Michael Geyer, president of California-based Kerntec Industries, says. “Applying heat through a process like ThermaPure’s is not only lethal to mold and other biohazards like bacteria and insects, but it also dries out the substrate, structure, and architectural elements. This helps prevent future recurrences since the substrate is no longer hospitable to growth.”

### **CASE STUDIES: HEATING OFFICES**

At a juvenile hall in Monterey County, CA, the repair of a water-related loss incident – in which an invisible mold was

detected in an office space – was estimated at US\$20,000. This estimate included tearing down one section of the building. Instead, the county opted to manage the mold using the ThermaPure process.

The impacted area was heated to 160°F; other wall cavities and other inaccessible spaces were heated to 145°F in excess of two hours. Mold remediation protocol – including critical barriers, negative air containment, and HEPA vacuuming – were also implemented. Hygeia Labs of Pasadena, CA reviewed post-remediation viable samples; results revealed no viable mold/fungi detected within the impacted wall cavity.

The cost to the county of using ThermaPure instead of gross remediation was US\$17,000.

“As insurance companies learn that many mold incidents can be successfully managed in place, using a combination of heat treatment with limited gross removal, mold liability costs should fall significantly,” McLean says.

### HEATING HOMES

The heat treatment process works just as effectively in small areas as it does in large institutional complexes, McLean notes. Recently, a water pipe broke at a two-year-old home in Cathedral City, CA. The master bathroom suffered water damage.

“Visible mold grew under the sink against the back wall, and traditional abatement called for removal along a four-foot perimeter of all the walls,” McLean says. “That would’ve required removing and replacing a marble shower enclosure, tiled vanity mirror and floor tile, totaling at least \$10,000.”

Instead, following the specifications of Excel Environmental Group, visible mold and drywall was removed in a 3’x3’ space inside the vanity area. Studs were sanded, wet-wiped, and HEPA vacuumed. The impacted area – including the insides of cabinets and the entire interior wall – was ThermaPure-treated at 160°F for two hours.

“Third-party air monitoring showed the airspace met clearance,” McLean says. “Because the cabinets and tile were still in good shape, rebuilding cost just \$500 for drywall repair. The insurance company and property owner saved about \$10,000 in demolition and rebuild costs.”

ThermaPure treating generally takes less than eight hours, so no multiple-day moves are required. This minimizes business disruption and loss, as well as any secondary costs such as for housing or meals.

### HEATING LARGE INSTITUTIONS

ThermaPure is equally effective for larger projects, such as heating large, multi-unit residential complexes.

For example, a large investment group recently purchased a student-housing complex at a major Southern California university. During the due diligence period, building inspections revealed water damage or elevated moisture levels in 109 of 122 residential units – in addition to an extensive termite problem. Complications included an accelerated restoration schedule, budget constraints, and a summer occupancy schedule: the student residences were already booked. The client was faced with a very difficult problem: moisture survey readings indicated significantly elevated levels in building materials within almost every bathroom in the complex.

Traditional remediation efforts would have required destructive openings in every location where moisture readings were significantly above background levels. This would have required complete closure of the facility and several months of demolition and reconstruction, affecting virtually 90% of the units in the complex.

Instead, the consultant recommended heating the area, restricting demolition only to those areas in which physical damage or visible mold growth was present. Of the 109 units needing remediation, only 10 units required extensive demolition – including cabinetry or shower stall removal. ThermaPure effectively killed the mold in inaccessible areas, allowing minimal removal and replacement as part of site remediation. This significantly cut required restoration time and costs.

All units were HEPA-cleaned and sampled as part of traditional post remediation testing; all 122 units passed. By working in selected buildings and moving quickly through the complex, the university was able to house specialty groups and camps throughout the summer, meeting its stated obligations and generating revenue without interruption.

Total savings as a result of using the heating process were estimated at US\$4 million. Traditional remove-and-replace remediation would have closed the facilities to summer use and required extensive tear-down and rebuilding costs. The heat treatment simultaneously eradicated the termite infestation, and the complex owner is repeating the process at another large multi-residential property in Texas.

“Heat treatments like ThermaPure’s are a win-win for the insurance company and property owner,” Geyer says. “Heat is even being used to achieve final clearance on tough traditional remediation projects where typical methods often fail. It can be used to salvage moisture-damaged contents instead of disposal and can help preserve historical properties in lieu of destructive removal.”

### USING HEAT IN NEW ORLEANS

PDG Environmental, a national environmental remediation contractor, used the ThermaPure process in New Orleans after recent hurricane activity. “We used it to polish off any mold or bacteria left after traditional remediation on a commercial site that was flooded with sewage-contaminated water,” John Regan, chairman and CEO of PDG Environmental, says. “It dried out the building extremely quickly and helped us meet clearance levels.”

Geyer adds: “Had the heat treatment been widely used in New Orleans and other hurricane-ravaged areas, buildings with minor to moderate water damage could have been rapidly rehabilitated for far less than typical remove-and-replace remediation.”

### SAVING INSURERS MONEY

ThermaPure can’t eliminate traditional remove-and-replace remediation when mold is visible, but it’s now an option for insurance companies and property owners to consider in an effort to reduce water damage and mold liability costs. If you consider the million-plus residences and businesses in the U.S. that were affected by water damage and mold in the last year alone, applying heat treatments like ThermaPure in place of or in addition to traditional remove-and-replace techniques could save a billion dollars annually. Heat helps salvage existing structures and speeds recovery, thereby minimizing loss of business and secondary expenses. 