

case in point



UVC approach stops mold, enhances IAQ for medical firm

Though mold problems in buildings are often associated with humid, tropical climates, mold can occur virtually anywhere — even in our most northern states. At Medicine Lake Properties, a commercial building in Plymouth, MN, mold-related IAQ issues were causing problems in one of the office suites. The 3,500-sq-ft suite is leased to a medical company that uses the space for administrative and light laboratory work, so good air quality is of paramount importance. After an extensive search for answers, management firm JGM Properties, Inc. (Bloomington, MN) found that UVC Emitters™ from Steril-Aire, Inc. provided a highly effective solution.

“We started by tearing out sections of walls to expose the concrete block underneath, but we did not find any evidence of mold,” explained Randy Remer, construction supervisor at JGM. “We also cleaned the carpeting, but that did nothing to eliminate the mildew odors. The tenant tried using ionizing-type air cleaners and dehumidifiers in the space, but the portable air cleaning units generated a smell of static electricity,” he continued.

MOLDY PLENUMS = MAJOR PROBLEMS

Remer called in their mechanical contracting firm, Egan Companies, to evaluate the situation. “After further investigation, we determined that the mold was growing in the interior plenums and circulating through the ventilation system,” says Remer. “There was also a flashing problem in one area that we sealed up to prevent any further water intrusion. But we still needed to do something about the circulating mold. Our project manager, Bruce Strandberg, suggested that we use ‘UVC’ lamps in the air-handling units to eliminate both surface mold and airborne mold spores.”

“Egan Companies has had previous experience with Steril-Aire UVC Emitters in a variety of buildings, where the lights are used to control mold at its source,” Strandberg said. “Installed opposite the cooling coil, the high output UVC lamps kill existing mold in the system and — equally important — prevent mold from growing back. They also stop mold-related allergens, bacteria, and viruses from spreading through the occupied space via the air-handling system, further improving IAQ,” he noted.

In mid-2004, Egan installed Steril-Aire’s multi-patented UVC Emitters in the two air handlers serving the medical office suite. Prior to installation, Strandberg took microbial Petri dish samples from the coil surfaces to measure the level of mold contamination. Approximately a month later, follow-up samples showed a dramatic decline in mold levels.

NO MORE SPRING CLEANING

“Within just a few weeks, we found that the UVC lamps got rid of the mold and the associated mildew odors,” said Remer. “We have had no recurrence of the problem, even in the most humid weather.”

As an added benefit, Remer has eliminated the annual spring clean-



Bruce Strandberg (left) and Randy Remer prepare for annual changeout of the replaceable UVC Emitter™ tubes in the rooftop air handling units.



UVC Emitters™ in the air handling units have successfully eliminated both surface mold and airborne mold spores at Medicine Lake Properties.

ing of the building’s air conditioning coils. “The continuous germicidal action of the lamps keeps contaminants from building up on coil surfaces, so chemical cleaning has become unnecessary. We hope to incorporate UVC into new air handlers as we replace them, so that we can enjoy further maintenance savings. We anticipate that the UVC will save energy and possibly increase air handler life as well, since the units won’t have to work as hard,” he noted. The Steril-Aire lamps will require no maintenance other than an annual changeout of the tubes.

Last but not least, the use of UVC has helped to achieve tenant satisfaction and peace of mind. Remer said that over a two-week period, the Plymouth area received an enormous amount of rainfall. “It rained constantly. Before UVC, the occupants would have noticed a damp, musty odor. But now the air smells clean and fresh, and the former problems are virtually forgotten.” **ES**

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