Manatee Community College - A Case Study

Problem:

Students and staff had complained of headaches, sinus irritation and respiratory ailments while in the Sara Scott Harlee library on the campus of Manatee Community College in Bradenton, Florida. By early 1989, the problem was so severe that two students could not use the library and one staff member was considering a leave of absence. Their symptoms normally disappeared within a few hours of leaving the library. Since the symptoms were typical of exposure to high levels of airborne microbial contamination, and since mold and mildew odors and growth were evident in the library, the school suspected that the quality of the environment in this 40,000 square foot building had been affected by microbial growth.

Application Requirements:

Confirm or disprove the suspicions about mold and mildew contamination problems and, if confirmed, find a method to effectively control airborne microbial contamination and the sources of that contamination in the facility on a long-term basis. Any procedure or treatment must be cost-effective, odorless and essentially non-toxic to humans. It must be a durable solution which is compatible with normal housekeeping procedures in a library.

Solution:

The ÆGIS Microbe Shield™ Program.

Solutions Method and Results:

Investigators from the Kemper Research Foundation in Milford, Ohio were called in to test the building environment. The investigators found excessive levels of airborne fungus throughout the library. Carpeting, ceiling tiles, and books were heavily contaminated with mold. They reported that exposure to such high levels of fungi had caused similar symptoms among students and teachers in other

schools. A surface-bonding antimicrobial treatment was recommended to safely control the infestation.

School officials chose ÆGIS™ Antimicrobial (formerly SYLGARD® Treatment from Dow Corning Corporation). All carpeting, ceilings, and walls were treated in July 1989. Two weeks later, tests showed that airborne fungal levels had been reduced to 10% of the pre-treatment levels. More importantly, people who had previously experienced serious problems in the library reported that it smelled "fresh" and that their symptoms and discomfort had disappeared.

After treatment, the library was re-tested every six months for three years (see chart below). The results show that fungal exposure was dramatically reduced after the initial treatment and has remained low. In addition to the positive test results, student and staff complaints have not recurred.

Although treatment of the Manatee Community College library predated the formation of ÆGIS Environments as a separate company, the testing work performed by the Kemper Research Foundation, the antimicrobial material utilized and the environmental management techniques applied were the basis of today's ÆGIS Microbe Shield™ Program. For the first time a comprehensive program was available to provide safe, long-term solutions for microbial contamination problems.

ÆGIS™ Antimicrobial is the keystone of the ÆGIS Microbe Shield™ Program. It is a durable broad spectrum antimicrobial which is EPA approved for application to non-food contact interior surfaces. Unlike conventional antimicrobials or biocides which are designed to volatilize and be absorbed by organisms, ÆGIS™ Antimicrobial chemically bonds to and literally becomes part of the application surface. It acts only when microorganisms come into direct contact with it.

Since the antimicrobial is not absorbed by organisms and remains a part of each application surface, it, in effect, transforms conventional construction or decorating materials into active antimicrobial surfaces which will remain effective for extended periods. In most environments, the ÆGIS Microbe Shield™ Program effectively eliminates the microbial growth sources. This program typically results in an initial reduction of airborne microbial contaminants from pre-treatment levels which ranges from seventy-five percent to ninety-five percent. Periodic testing and retreatment can maintain the reduced contaminant levels indefinitely.

The work done by ÆGIS for the Manatee Community College library combined the unique ÆGIS Microbe Shield™ Technology with comprehensive diagnostic, application and building management techniques to virtually eliminate what had been a severe and long-lasting building health problem.

Protected by The ÆGIS Microbe Shield™