

A GROWING EPIDEMIC

Part VI: “Sick Building Syndrome” (SBS) — Microbial Mitigation and Prevention Strategies

Control of the microbial pollutants in the air and on building surfaces both for today and tomorrow, is essential to the health of the building and its occupants. Unfortunately, there is not a simple, one-step solution.

This last article in our series will focus on the mitigation and prevention strategies deemed necessary in order to effectively control the most potent of all pollutants—Microorganisms. Their diversity, persistence, and prevalence allow them to live, adapt, and reproduce under a wide variety of conditions on all interior surfaces within modern buildings.

As we have pointed out in these articles, microorganisms are the most important part of the many pollutants that cause problems in the indoor environment today. Unfortunately, controlling these pollutants with traditional thinking and methods is not an easy task.

The most effective procedure for controlling and preventing microbes in your indoor environment is (1) the identification of the pollutants, (2) the determination of the sources, (3) the removal, and (4) the prevention of the pollutants. This procedure may sound simple to carry out. Unfortunately, depending on the situation and the pollutant or pollutants, remediation can become very costly and time consuming.

The identification of the problems caused and the places where the microbes exist is where controlling of these pollutants begins. AEGIS Environmental often finds that the strategies to counter these problems revolve around the control of environmental conditions such as moisture, nutrients, and/or the surfaces that these versatile organisms need for survival and reproduction. Regrettably this does not remedy all of the problems. Only controlling the moisture or the relative humidity of the building is usually ineffective. This is due to the fact that it is inevitable that water events (e.g. flooding), broken windows, leaking pipes, human activity, or other unplanned events will occur. These unforeseen events provide the excess moisture microorganisms need to bloom to population levels that are unhealthy.

One often cited strategy that must be rejected for microbial control is the “solution to pollution is dilution.” This strategy of increasing the intake of outdoor air may have merit for some pollutants, but not ones that reproduce. Re-engineering the environment through moisture control, temperature control, air intake and circulation rates, new materials of construction, or new operating parameters for the HVAC system is not a reasonable alternative by itself.

Other tools must be used and these include a simple list of techniques, all of which are filled with common sense, and include: source removal or total isolation, cleaning, disinfection, and surface modification with the AEGIS Microbe Shield Technology.

Each of these methods is filled with different risks and costs in terms of money and time. As we have stated, the use of only one method to control your microbial problem is usually ineffective on its own. The proper use of **ALL** the techniques and technologies together is absolutely essential for successfully removing and minimizing of any re-growth of organisms. It is also critical that the techniques used are appropriate with the building being treated. For example, techniques used in the treatment of a cancer hospital may be different then the techniques used in an office building. Also, techniques that you might use for a small isolated problem may not be at all appropriate for a large, wide-spread problem.

Remember, the first and best defense is a good offense. The importance of having a microbial pollutant control and prevention component as part of your contingency plan and having a baseline of knowledge about the microbial habitats in your building is essential. The usefulness of a proven long-lasting, effective antimicrobial treatment which offers protection from the re-growth of microorganisms is also essential.

We hope that this series of articles has provided you with some useful insights into the causes, effects, and solutions of indoor pollutant problems.

Series by Kim Strong

AEGIS Environmental (Canada) Limited