Background: Malaysian Sultan Ismail was shut down because of fungal outbreak. Aegis Asia was appointed to bio decontaminate, followed by a treatment of AEGIS Microbe Shield to prevent new infestation.

Based on the size and floor area of the hospital, this is the largest bio decontamination and anti microbial treatment done in the world.

Sun February 12 2006,

Busting the microbes

Theresa Manavalan
KUALA LUMPUR, Sat.

Ten million square feet — that was the surface area decontaminated at the Sultan Ismail Specialist Hospital.

That included floors, walls, ceilings, ducts, vents and numerous other unseen surfaces in the building.

The decontamination work was executed over four months, starting in April.

It began with killing the fungi that had infested the building followed by treatments to prevent new infestation.

The fungi originated from gardens and earthworks in the vicinity of the hospital and its spread were aided by the hot, humid conditions inside the building.

"This was followed by further assessments and measurements of microbial presence," said Kailash Sheth, executive director of Germguard Technologies Sdn Bhd, the company assigned to decontaminate the hospital last year.

"We continue to monitor and measure the air quality and microbial presence with various tests."

Germguard Technologies specialises in the relatively new field known as building diagnostics and remediation. It addresses the biological contamination of indoor spaces and other issues that contribute to "sick building syndrome".

For the Sultan Ismail Hospital, the company used the Aegis Microbe Shield which is a clear polymer layer applied to building surfaces such as walls that contained biocide.

The shield holds up the biocide for long periods and allows no leaching. The shield attracts microbes and ruptures cell membranes.

This causes a physical death of the microbes, giving it no chance to evolve or resist.

The treatment carries a two-year warranty. Ten staffers will remain on site at the hospital until the end of the warranty period to continue monitoring, making observations and assisting the building technicians.

The sole intention of improving indoor air quality was to reduce infections or even deaths, said Satish Bakhda, principal consultant of Aegis Asia Pte Ltd, the indoor environmental specialist firm based in Singapore.

"Lower productivity and increased mild illnesses such as flus and colds are now well-studied phenomenon in sick buildings," said Satish.

"In some countries, workers are reporting serious ailments, especially asthma.

"Building owners who have addressed the microbial infestation are reporting improvement in their workers' health."

Indoor air quality has spurned a billion-dollar business in air filters, ozone machines, UV light busters and various mechanical filters that claim to clean the air.

"Not all work, some are actually harmful," Satish said.

Buildings can be vectors of disease, according to Curtis White, a co-inventor of the Aegis Microbe Shield.

"We don't usually think of structures that way. These are not just casual patterns of infections.

"In a building's life, its use and occupation needs to be reviewed every five years or so"

Sick’ hospital ready to serve

Annie Freeda Cruez

KUALA LUMPUR, Sat.

After a long wait and a RM11.5 million bill for decontamination work, the Sultan Ismail Specialist Hospital in Pandan, Johor, is ready to re-open.

The 740-bed hospital, built at a cost of RM557.8 million, began operations in July 2004 with the opening of the outpatient department and the haemodialysis centre.

Two months later, it was closed because of fungal infection.

Works Minister Datuk Seri S. Samy Vellu said the hospital was now safe.

"The hospital’s indoor environment microbial activities are under control," he told the New Sunday Times.

Only three floors of the hospital would initially be opened.

SAFE TO USE: Microbial activities under control.

Members of the Public Audit Committee visited the hospital in December last year and were satisfied with the decontamination work done by Germguard Technologies (M) Sdn Bhd.

Samy Vellu said the treated surfaces would not have microbial growth, mould and mildew odours provided they were maintained in a reasonably clean condition.

The work by Germguard Technologies, carried out between April 15 and July 30 last year, comes with a two-year warranty.

Samy Vellu said the company handed the hospital to the Public Works Department on Aug 14 last year.

The Health Ministry took possession of the hospital on Jan 15.

Although there are indications that the hospital would re-open soon, the date has yet to be announced.

Samy Vellu said a maintenance programme, which started on Aug 15 last year, would continue until Aug 14 next year.

He said the relative humidity and temperature in air-conditioned spaces in the hospital would be monitored 24 hours a day and monthly reports would be submitted to the PWD.

The Sultan Ismail Specialist Hospital is the second largest hospital in Johor after the Sultanah Aminah Hospital.