



Case Study

North Queensland Medical Facility

17th Jan, 2023



Case Study

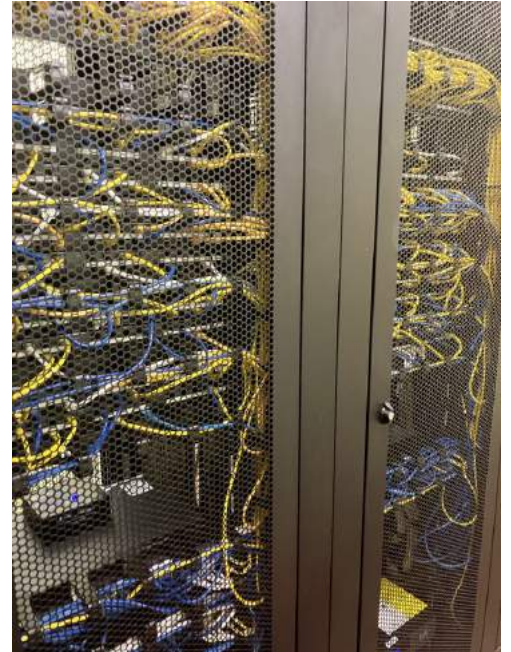
Executive Summary

Aeris Environmental were engaged by a North Queensland Medical facility to provide assessment and potential remediation of a data and comms room in a live building situation.

Microbial contamination was assessed and graded by the Aeris Environmental IAQ division. Remediation to ANSI IICRC S520-2015 Standard for Professional Mould Remediation was conducted by an Aeris Platinum Partner and quality assurance provided by Aeris project management team.

This case study demonstrates the effectiveness of the remediation. Post Remediation Verification (PRV) was conducted one month after completion and sample data confirmed 100% successful results using a combination of AerisGuard products applied to Surfaces, Air, and HVAC.

Aeris Environmental partnered with a leading North Queensland HVAC&R company to perform deep cycle hygiene maintenance of the cassette units to complete the project.



Remediation following ANSI IICRC S520 Standard for Professional Mould Remediation



Surface Cleaner Sanitiser

AerisGuard Surface Cleaner and Sanitiser is designed to provide a simple one step clean and sanitising solution for all hard surfaces. Best used on walls, floors, ceilings, HVAC & R units, cool rooms, refrigerated transport or other large-scale surfaces.



Aeris Environmental is IICRC Certified Firm. All products used in this case study are applied by qualified and trained professionals.

AerisGuard Products Applied - Additional



Indoor Coil Treatment



Indoor Coil Cleaner



Bioactive Filter Treatment



Bioactive Surface Treatment

Surface Microbial Contamination

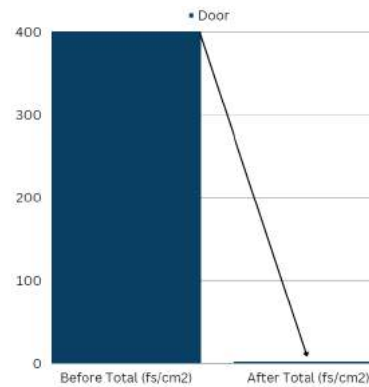
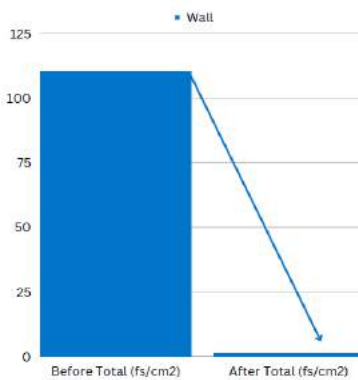
BioTape Before

Client Sample ID Sample Matrix Eurofins Sample No. Date Sampled	Wall Bio-Tape 22-No0003186 Not Provided	Door Bio-Tape 22-No0003187 Not Provided
% Analysed	50	50
LOR	1	1
Background Debris	3	1
	Raw Counts	Raw Counts
Hyphal Structure		>200
Acremonium-like		>100
Cladosporium-like	>100	16
Tritirachium		>100
Aureobasidium*	>100	
Fusarium		>300
Total (fs/cm2)	>110	>400
Active Fungal Hyphae		Yes

BioTape After

Client Sample ID Sample Matrix Eurofins Sample No. Date Sampled	Door Bio-Tape 23-Ja0016752 Jan 13, 2023	Wall Bio-Tape 23-Ja0016753 Jan 13, 2023
% Analysed	50	50
LOR	1	1
Background Debris	1	1
	Raw Counts	Raw Counts
Hyphal Structure		
Acremonium-like		
Cladosporium-like		
Tritirachium		
Aureobasidium*		
Fusarium		
Total (fs/cm2)	<1	<1
Active Fungal Hyphae		

All sampling processed and analysed through Eurofins Australia NATA laboratory. Data compressed for display purposes.



BioTape After

Client Sample ID Sample Matrix Eurofins Sample No. Date Sampled	Cabinet Near Residue Bio-Tape 23-Ja0016754 Jan 13, 2023
% Analysed	50
LOR	1
Background Debris	1
	Raw Counts
Hyphal Structure	
Acremonium-like	
Cladosporium-like	
Tritirachium	
Aureobasidium*	
Fusarium	
Total (fs/cm2)	<1
Active Fungal Hyphae	



Methodology

Achieving clinically clean surfaces in a highly contaminated indoor environment is extremely challenging.

As the Bio Tape data demonstrates, Aeris Surface Cleaner and Sanitiser applied in conjunction with ANSI IICRC S520 Standards for Professional Mould Remediation, all surfaces were remediated and then prepared for treatment (Aeris Mould Pro was not used due to the proximity of copper and hydrogen peroxide in the remediation process).

After surface preparation, the Bioactive Surface Treatment was applied providing up to 12 months of the residual barrier to mould growth.

The AerisGuard product set has been proven many times in extremely challenging and contaminated environment to be 100% successful when applied correctly.

PRV sampling data was taken one month after remediation.

Air Contamination

Products used to improve the air quality



Indoor Coil Cleaner



Indoor Coil Treatment



Bioactive Filter Treatment



Aeris Environmental are experts in live building infection control and the application of this product technology. Correct application provides us the opportunity to deliver previously unobtainable results in the indoor air quality.

The data room is cooled using cassette units. Mechanical services engaged to maintain the units worked with Aeris technical experts to perform deep cycle hygiene maintenance on the units as part of the remediation process.

Air After

Client Sample ID Sample Matrix Eurofins Sample No. Date Sampled	Outside Air Spore Trap 23-Ja0016750 Jan 13, 2023	Server Room Spore Trap 23-Ja0016751 Jan 13, 2023
% Analysed	25	25
Flow Rate (L/min)	15	15
Sampling time (min)	5	5
LOR	53	53
Background Debris	1	1
	Raw Counts	Raw Counts
Hyphal Structure	1	
Ascomycetes (NS)	>100	
Basidiospores (NS)	39	
Cladosporium-like	18	3
Smuts/Myxo/Peri	14	
Aureobasidium*		
Fusarium		
Total (fs/cm2)	>9200	<53
Active Fungal Hyphae		

Advanced Methodology

The outside air on the day of sampling was highly contaminated as demonstrated on table to the left.

Additionally, surface levels of microbial growth were sufficient that bad practice or disturbance could easily aerosolise and cross contaminate.

The treated Air Scrubber was left operational post remediation and turned off half an hour prior to sampling. The air after PRV sample was completed one month after the remediation and demonstrated 100% success.

The AerisGuard Bioactive Filter Treatment is typically applied to an additional 10 mm G4 filter to enhance performance of a traditional two stage scrubber.

As the analysis table demonstrates the effectiveness of the Air Scrubber in combination with Bioactive Filter Treatment and ANSI IICRC S520 Remediation Standards is highly effective in regaining control of this clinical indoor environment.

Bioactive filter treatment is safe and easy to apply and used in this particular case study significantly mitigates the risk and issues with infection control when re mediating in a large building situation, e.g. Clinic.

Assets Treated

1. Wall
2. Door
3. Server Room Air
4. Cabinet
5. Cassette



Results

The combination of the AerisGuard products applied professionally

- 100% clinically clean surfaces
- 100% clinically clean air
- Residual protection

All validated by sampling after one month of remediation

Conclusion

Aeris Environmental have successfully demonstrated in a clinical environment effective remediation of a highly contaminated indoor space with no cross contamination. This project was delivered in a live building situation and was made successful through the correct application of traditional remediation techniques in combination with Bioactive Filter Treatment applied to Air Scrubbers.

Our AerisGuard product range has proven to successfully reduce cost, time, and are environmentally friendly.



Surface Cleaner Sanitiser



Indoor Coil Treatment



Indoor Coil Cleaner



Bioactive Filter Treatment



Bioactive Surface Treatment

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