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be part of the building fabric and which are susceptible to colonisation by Legionella. Such equipment would contain water which is held or recirculated at a temperature between 0 – 45 °C, and would not be maintained by Facilities Management Directorate (FMD). In this context, the term “departmental” applies equally to Schools, Departments or Units.

The control of Legionella in Water Systems Policy and Procedures document (Ref. 1), which has been produced by the Maintenance Services department of FMD. This policy applies to the water systems which are considered to be part of the fabric

items of equipment. Sampling for *Legionella* is not normally required or recommended, unless the need is identified by the risk assessment.

Anyone who is allocated duties under this requirement must be given suitable information, instruction and training to enable them to understand the nature of the risks, and to undertake their duties in a safe manner.

Following the risk assessment, appropriate control measures must be put in place. In most cases, this would be by the establishment of a suitable cleaning and/or maintenance schedule, which may also involve the use of suitable biocides. The equipment manufacturer should be consulted regarding "suitability" of any biocide being considered for use

Case study:

Laboratory water baths operating in the critical temperature zone are liable to support a thriving population of *Legionella*, and even baths operating at a lower temperature ($<20^{\circ}\text{C}$) may become contaminated, but the growth rate of the organisms is reduced. Baths regularly operated at temperatures $> 55^{\circ}\text{C}$ are normally free of *Legionella*.

Normally, the risk of dissemination of contaminated water droplets is low, but if a stirrer or recirculation pump is fitted to the waterbath and the water level is allowed to drop to expose the top of the stirrer paddles, then there is an increased risk of splashing and aerosol generation. Older-style shaking waterbaths also present a risk of aerosol generation.

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ion la. Disposal of the waste water must be effected without splashing or

d by the equipment manufacturer

u t not be plumbed into the building water supply

of any quality checks

must be recorded and returned to the FMD Legione

Normally, the ultra-pure or High Quality (HQ) water produced by the unit is not liable to be contaminated: it is the “feed” side of the unit which may become contaminated by the growth of a biofilm, especially if the water velocity through the unit is low. In a cartridge unit for example, development of a biofilm would be evident from the reduction in flow and increase in pressure required to generate a given volume of ultra-pure water. The manufacturer’s instructions should be followed for cartridge / membrane regeneration, but operators must be made aware of the probability of *Legionella* contamination in the flush water. Splashing and aerosol generation must be avoided when disposing of the effluent.

4. Items of susceptible equipment in University-owned buildings

There may be several types of equipment to which this description applies, and where the equipment is the property of the building occupant (tenant). Unless the tenant has an arrangement with FMD to undertake maintenance of the equipment, the responsibility for ensuring that the equipment remains free from risk of colonisation by or dissemination of *Legionella* remains with the building tenant.

5. Items of susceptible equipment that are the responsibility of FMD Maintenance and the Water Quality Measured Term Contractors [WQ-MTC]

Equipment such as emergency drench showers and emergency spray heads in laboratories are the responsibility of FMD Maintenance, who will arrange for risk assessment and any associated control measures such as regular flushing (normally undertaken by FMD Maintenance or by the WQ-MTC). If Departmental staff are involved in flushing of emergency showers/spray heads, the flushing operation must be undertaken in such a way that creation of aerosols is avoided, and any potentially contaminated water discharged to drain without splashing. A suitable system of work should be identified by the risk assessment.

References

- 1 *Control of Legionella Bacteria Within Water Systems* – Policy and procedures document issued by FMD (available for download from the “Policies, Procedures and Guidance” section of the FMD website http://www.fmd.reading.ac.uk/For_University_staff/Policies_and_procedures/)
- 2 *Legionnaires’ disease: The control of Legionella bacteria in water systems*. Approved Code of Practice and Guidance. Health and Safety Commission, ref. L8. HSE Books, 2000, ISBN 0-7176-1772-6