

Water system recommissioning following full or partial closure

Any employer planning to welcome staff back to the workplace over the next few weeks cannot ignore the health and safety risks associated with water management. Harmful levels of the bacteria *Legionella* can build-up quickly in water systems that are left unused and unmanaged for even a short period.

Anyone who inhales tiny droplets of water containing the bacteria – often from potable water sources (i.e. taps and showers) could develop Legionnaires' disease, a severe respiratory infection that causes death in 10-15% of cases. As some building occupants return to work from lockdown having recovered from Covid-19, their risk of contracting legionellosis is far greater, and their potential chances of surviving from a case of Legionnaires' disease, significantly affected.

Following a full or partial closure for even just a short period of time, the COSHH regulations require water systems to be safely and adequately recommissioned before occupants can return.

Disinfection

In most cases, a full system disinfection (hot and cold) is the most effective way to remove all microbiological hazards that have accumulated within your systems during the period of closure.

Depending on your system configuration, this can be a highly complex undertaking. Technicians should inject the selected disinfection solution into a specific point at the upstream end of the supply pipe, or downstream if there is double-check valve or backflow protection device protecting the incoming water supply. Testing of sentinel outlets will determine whether the required concentration levels have been achieved, while all other outlets should be subject to fast and simple tests that indicate the presence or absence of the disinfectant.

Those involved in the flushing and disinfection work should have personal protective equipment as well as limited exposure to the potentially dangerous air particles.

Sampling

Water sampling should be utilised to understand either the levels of microbiological contamination within the system or the efficacy of a system disinfection recently undertaken, and should be carried as follows:



01

Sampling for *Legionella* should be undertaken **2-7 days after the disinfection has been completed**, taking samples from the sentinel outlets and showers, as a minimum. In some circumstances it may be acceptable to take samples immediately after the disinfection is completed, i.e. on simpler water systems of a lower complexity.



02

Where a comprehensive flushing regime has been implemented **immediately upon closure, sampling for *Legionella* should be undertaken** from hot and cold sentinel outlets and showers prior to reopening the building.



03

Where water is used for the preparation of food, and/or potable water services are supplied from water storage tanks (and not direct from mains supply) then **consideration should be given to sampling for other microbiological organisms**, such as TVC, E.Coli and Coliforms.



The risks associated with managing water systems are greater than ever. The combination of a Legionnaires' outbreak and Coronavirus in the workplace would be catastrophic. Anyone who has recovered from COVID-19 will be especially susceptible to another respiratory infection.

As a water hygiene specialist, we are starting to see a significant number of Legionella sample failures from samples taken from systems where weekly flushing has been undertaken immediately upon the change in occupancy, as a result of the current lockdown. Therefore, we are urging building and premises managers to take very careful consideration before opening buildings on the assumption that water systems are safe as a result of a weekly flushing regime. One factor that must also be taken into consideration, which may be contributing to the recent increased number of sample failures, is the unusually warm spring weather during lockdown.

The high temperatures combined with the extended period of office closures mean that systems may become colonised with bacteria, so repeat disinfections may be required to guarantee the total removal of Legionella.

Churchill Environmental delivers a full range of environmental compliance services including water treatment and Legionella control. Our expert teams will work with you to recommend and implement the best disinfection and sampling regimes for your water systems to protect the health and safety of your returning building occupants.



Useful guidance

> [Drinking Water Inspectorate](#)

> [Legionella Control Association](#)



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