

RAF DISHFORTH DEACTIVATION OF CRYPTOSPORIDIUM USING UV RAYS

C2C Services conducted risk assessments to ensure that potable supplies were protected from the potential outbreak of cryptosporidia oocysts at MoD sites that supply water to more than 25 people. C2C Services have installed CV02 Lamp Closed Vessel UV systems at multiple sites, prioritised depending on where the cryptosporidium risk assessments came up as 'High'. One such site is RAF Dishforth, where this system has been successfully installed at the Water Treatment Works in order to treat the potable water source and 100% of the flow.

Project Background

C2C Services act as a statutory undertaker for clauses of the Water Supply (Water Quality) Regulations 2000. These clauses refer to the assessment and wholesomeness of the water supply and subsequent treatment and monitoring of this water supply for 26 people or more. C2C Services have a duty to conduct risk assessments of water treatment works and water supply systems and take appropriate action to deal with any potential danger to human health identified.

UV Process

Crypto are little oocysts, which can cause gastro problems if ingested - the limit is 1 oocyst per 10 litres of water. The CV02 UV units treat the cryptosporidium oocysts in the water with ultra violet rays designed to 'deactivate' them by destroying their ability to reproduce, and rendering them harmless to health. It is not possible to carry out a simple test to prove that the oocysts have been deactivated, so instead these UV systems have been validated to perform under certain conditions of flow, water quality and lamp output. Log 4 deactivation has been achieved based on the flows and turbidity's at the sources.

Work Completed

Work has involved the manufacture and the delivery of these UV units to ten sites, with the installation of concrete slabs, pipe-work and electrical connections and telemetry to provide 24-7 monitoring of the operation of the UV treatment.



Outside the UV Kiosks at RAF Dishforth



Inside the UV Kiosks at RAF Dishforth

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