

Dervaig WTW Serious or recurring quality issue 22nd July 2024

Event No. 14719

Event Category: Significant

In June 2024, routine microbiological samples taken from the 'Combined Permeate' (CP) water at Dervaig WTW failed for coliform bacteria and *E. coli*, triggering on-site investigations and additional sampling for microbiology and *Cryptosporidium*. Membrane investigations identified a number of faulty modules which were isolated and replaced whilst increased sampling continued. All samples had been clear until the final *Cryptosporidium* sample that was due to be taken on 22 July 2024 detected a single oocyst, followed by a second sample taken on 30 July which also failed for *Cryptosporidium*.

Further investigations were undertaken by Scottish Water's Operations, Process Science and Membrane teams, with further faulty modules identified and isolated on 1 August before being replaced on 8 August. Third and fourth *Cryptosporidium* sample failures occurred on 12 August and 19 August respectively, before an external contractor attended site to undertake a full membrane replacement of both stack 1 and stack 2 on 21 and 22 August respectively. Additional monitoring following the full membrane replacement identified further issues with 3 of the new modules, which were isolated the following day and replaced after the weekend. Cell 1 and Cell 2 of the clear water tank (CWT) were cleaned between 3 and 5 September, with the permeate balance tank being washed down on 10 September. Between

the membrane replacement work and the CWT clean, a further 4 samples failed for *Cryptosporidium*.

Between 22 July 2024 and 2 September 2024, a total of eight *Cryptosporidium* detections occurred in samples from the final water from Dervaig WTW.

The root cause of this incident was repeated loss of membrane integrity.

The event has been categorised as significant. Scottish Water has identified eleven actions which DWQR accepts are appropriate and will monitor to ensure they are completed prior to signing off the incident. DWQR made eight additional recommendations.

