

Incident Summary

Ballygrant WTW *Cryptosporidium* detections June 2023

DWQR Inspector:
Moira Malcolm

Event No. 13470

Event Category: Significant

On 21st June 2023 a regulatory final water sample for *Cryptosporidium* returned a result of 54 oocysts. A Boil Water notice was issued to affected consumers and bottled water distributed and continued until the notice was lifted on 25th June. During this time a number of interventions were made including dropping the limestone contact tank and cleaning the clear water tank and service reservoir. Membrane module 63 was identified as faulty and isolated. A noticeable drop in cell counts was noted following the removal of this module. Two rounds of clear samples were recorded before the restriction was lifted in agreement with NHS Highland.

During the investigation an interstage *Cryptosporidium* sampling rig was fitted. This gave a positive *Cryptosporidium* detection reported on 26th June – the day after the Boil Water notice was lifted. Combined permeate (CP) samples also gave positive coliform identifications on 27th, 28th and 29th June. Further investigation was carried out on 28th and 30th June and a second membrane failure (from module 64) was identified, isolated on 30th June and subsequently replaced. During this second period the response was discussed with NHS Highland but it was decided not to reimpose the Boil Water notice.

The *Cryptosporidium* failures were due to faults in two membrane modules. The membranes at Ballygrant WTW cannot be isolated individually, and the island location of Ballygrant meant that investigation of the incident took longer than anticipated due to logistical difficulties. Prior to the *Cryptosporidium* detections, the site had experienced CP coliform failures on 13th and 20th June. Initial investigations into these failures did not reveal an



obvious cause, and investigations were still ongoing when the first *Cryptosporidium* detection was reported.

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

