

Incident Summary

Iona Service Reservoir Microbiology failure July 2018

DWQR Inspector:
Moirra Malcolm

Event No. 9459

Event Category: Significant

Following a presumptive microbiological sample failure of >100 coliforms and 17 E. coli taken from Iona Service Reservoir (SR), a 'Boil Water' restriction was placed on the island of Iona on 18th July 2018. Due to ferry times no Scottish Water staff could attend the island until the following day and the restriction was relayed by telephone, media and social media. The chlorine set point at Bunnessan Water Treatment Works (WTW) was increased from 0.2mg/l to 1.2mg/l.

On 19th July 'Boil Water' notices were delivered to the island along with bottled water and resamples were taken on this and the following day.

Meanwhile the laboratory examined the original sample at a 1/10 dilution which was satisfactory. A second examination from the original sample bottle, plus all subsequent resamples were all found to be satisfactory. As a result the 'Boil Water' restriction was lifted on 21st July, with notices distributed the following day (again due to access problems).

Scottish Water carried out a root cause analysis for this incident, but did not find any definitive cause. The original laboratory result was subject to a detailed review because no further colonies could be cultured from the same sample bottle, however the laboratory review found nothing untoward with sample handling, examination procedure, equipment or personnel.

Iona SR is fed from Fionnphort SR by a new subsea pipeline but it shares no physical connections with the redundant pipeline and conductivity monitoring of the water supplied from it was found to be satisfactory, giving no cause for concern regarding ingress.

The sample point for Iona SR was upgraded in November 2017 but the plastic pipework was not replaced with copper, there is no waste collection cup and the sample point was not enclosed within a stock-proof fence, all of which could allow contamination to occur. The SR roof is covered in grass and may allow pooling of surface water or ingress – although it was last cleaned in 2017 and no signs of ingress were found at that time. Chlorine trends for Bunnissan WTW and all associated service reservoirs were stable prior to and during the incident.

The event has been categorised as Significant. Scottish Water has identified nine actions which DWQR accepts are appropriate and will monitor to ensure they are completed prior to signing off the incident. DWQR made no additional recommendations.