

## 14979 Crianlarich WTW and RSZ Breach of Turbidity and Manganese September 2024- January 2025

Event No. 14979

### Event Category: Significant

Between the 24 and 27 September 2024, final water turbidity from Crianlarich WTW was elevated following a burst between the Water Treatment Works (WTW) and the Clear Water Tank (CWT). The burst resulted in a drop in CWT level which had to be restored using tankered supplies. Spikes in online monitor turbidity in excess of 1 NTU appeared to coincide with tanker discharges into the CWT rather than any deficiencies with the upstream treatment process. On the 28 September 2024, a second burst occurred, this time in the distribution zone, causing CWT levels to drop to low level and online monitor turbidity to rise again above 1 NTU.

Turbidity of the final water was above 1 NTU for approximately 22 hours based on the online monitor readings and two scheduled samples taken from the WTW final sample point and Crianlarich Top-Up-Tap (TUT) in distribution failed for manganese, prompting events 14979 and 14982 to be raised respectively. Final water *Cryptosporidium* filters were fitted by the operations team from 21 September – 30 September with all of these being clear of oocysts.

Scottish Water did not receive any water quality contacts associated with this incident. Reactive sampling was not adequately carried out in response to this incident because Emergency Action Level breaches were not properly escalated to the Public Health Team. The PHT were therefore not made aware of the issue until the failing scheduled samples

came through and therefore the extent of impact to consumer supplies was not fully understood.

Following on from this incident, Scottish Water then raised three further events:

- 15284 – Supply of water in excess of 1 NTU for 21 hours 20 minutes on 22 December 2024 caused by tankering due to the ongoing burst between the WTW and CWT.
- 15303 – Supply of water in excess of 1 NTU for 12.5 hours on 28 – 29 December 2024. No clear reason for the increase in final turbidity. The most likely cause is reported as a result of flow re-establishment following WTW restart.
- 15327 – Supply of water in excess of 1 NTU for 8 hours 20 minutes on 13 – 14 January 2025 caused by tankering due to ongoing burst between the WTW and CWT and one cell out of service for cleaning.

Between the 22 December 2024 and 15 January 2025, 12 samples were taken from the WTW (9 failed for manganese, 2 failed for turbidity) and 21 samples from distribution (11 samples failed for manganese). The highest recorded manganese from the WTW was 444.8ug/l on 13 January 2025. The highest recorded manganese from distribution was 173.3ug/l on 23 December 2024.

It is clear from Scottish Water's event outcome reports that this incident and subsequent events (except for 15303) were caused by network bursts and the associated tankering to maintain CWT levels which disturbed manganese sediment.

The event has been categorised as significant. Scottish Water has identified four 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.

