

## Carron Valley B RSZ Recurring Water Quality Issue April 2024

Event No. 14703

### Event Category: Serious

Raw water geosmin concentrations breached Scottish Water's internal trigger level of 5ng/l on the 15 April 2024. Following the Operational Response Plan (ORP), Scottish Water commenced powdered activated carbon (PAC) dosing and daily sampling from raw and final water on the 22 April 2024. Raw geosmin concentrations then dropped below the trigger level from the 26 April 2024 until the 25 June 2024 when they began to rise again up to a peak of 107.63ng/l on 26 July 2024. This is significantly lower than the peak raw geosmin concentrations during the 2017 and 2022 incidents (787ng/l and 770ng/l respectively). PAC dosing was increased in line with the ORP. Final geosmin concentrations breached the trigger level of 3ng/l from the 01 July 2024 reaching a peak concentration of 27.68ng/l on 01 August 2024 which is broadly in line with the peak final geosmin in 2017 and 2022. Raw geosmin concentrations began to fall to around 30ng/l from the 07 August 2024 and final geosmin concentrations began to fall to less than 10ng/l by 09 August 2024.

A fault with the newly commissioned permanent PAC dosing system resulted in an underdose of PAC which is thought to have exacerbated the issue and resulted in poorer geosmin removal than anticipated.

Scottish Water received a total of 263 water quality contacts within the Carron Valley Water Operational Area (WOA) and an additional 46 contacts within other WOA fed by Carron Valley WTW between 01 June 2024 and 18 August 2024 related to earthy/musty taste and odour. The rate of consumer contacts rose significantly from the 28 July 2024 reaching a peak of 30 'earthy/musty' contacts in a single day (31 July 2024).

112 samples were taken, covering the WTW raw and final water, and seven reactive samples from the water supply zone where customer contacts had been received. All the samples taken from these reactive zonal samples were above the taste threshold for geosmin, two samples were above the taste threshold for 2- Methylisoborneol (MIB), and the laboratory detected an earthy odour in one of the samples taken on 18 July 2024 which triggered the initial notice for event 14703 to be raised on 19 July 2024. The incident was declared on the 25 July 2024 on the basis that the initial notice highlighted that a significant rise in consumer complaints had been received in July alongside the sample failure and the repeat nature of the event.

It is clear from Scottish Water's event outcome report that this incident was caused by a seasonal increase in raw water geosmin concentrations from the Carron Valley WTW catchment and inability of the treatment process to adequately remove the compound. A new PAC dosing plant, which was commissioned during the early stages of this incident, was not effective.

The event has been categorised as serious. 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 six additional recommendations.

