

Marchbank WTW Loss of Coagulation; 15th December 2025

Event No. 16606

Event Category: Serious

At 22:45pm on 12 December 2025, clarified turbidity at Marchbank Water Treatment Works (WTW) began to rise and breached the emergency action level (EAL) of 1.5NTU for approximately nine hours, peaking at around 2NTU.

The turbidity from individual filters started to increase from 4:00am on 13 December 2025, with six of the seven filters that were in service at the time of the event breaching the EAL of 0.4NTU at various points for approximately nine hours. The highest individual filtered turbidity recorded during this period was 1.28NTU. All filters were within EALs for approximately three hours, before a further rise in individual filtered turbidity saw one filter breach EAL for a further three hours, and two filters breached EAL at various points for a further fifteen hours. Filtered aluminium breached EAL, peaking at 0.16mg/l.

Pre-disinfection free chlorine, post-disinfection free chlorine, treated total chlorine and final total chlorine residuals remained within EALs, as did final water aluminium and turbidity. Three final water samples and six consumer tap samples taken on 13 and 14 December all complied with standards for microbiology, metals and turbidity. A single *Cryptosporidium* oocyst was detected in a Filtamax sample in place from 14 - 15 December 2025.

This incident was caused by the polyelectrolyte (poly) mixing hopper running out of poly powder, which resulted in a poor batch of poly being dosed and suboptimal coagulation.

The incident was exacerbated by poor monitoring of the poly batching and dosing system, poor filter media condition, the standby operator running out of working hours, ineffective escalation and poor management oversight.

The event has been categorised as serious. Scottish Water has an action plan to drive improvements across Marchbank WTW which is ongoing and shall be subject to further audit by DWQR. DWQR made two additional recommendations.

