



Drinking Water Quality Regulator
for Scotland

Incident Summary

Clatto WTW Loss of Control of Treatment Process 16th February 2023 **Event Category: Significant**

DWQR Inspector:
Andrew Kennedy

Event No. 13254

On 16 February 2023, a repair was made to a leaking flange on the chemical dosing carrier water line during a planned shutdown. A section of the aluminium sulphate (alum) dosing pipework had to be adjusted to allow access to the flange bolts, which required a valve on the dosing skid to be isolated as a precautionary measure to ensure no backfeed of the chemical. Operators were not made aware of this valve operation, and on completion of the repair, the valve was left isolated, resulting in a loss of alum dosing for approximately one hour when the site was restarted, leading to increasing filtered turbidities.

The operators quickly identified the closed valve on the alum dosing skid despite the associated flow switch failing to trigger an alarm. Once alum dosing was restored, filter turbidities initially settled, but then started to rise again due to the dose set-point being too high. As a result of these issues, combined filtered water aluminium was above the emergency action level (EAL) of 140µg/l for 5 hours, flatlining at 200µg/l, whilst combined filtered water turbidity was above the EAL of 0.25NTU for 3 hours (peaking at 0.295NTU). No reactive final water sampling was carried out after the event as the low clear water tank (CWT) level resulted in no flow being available at the regulatory sample tap and a breakdown in communication during escalation of the treatment issues. A *Cryptosporidium* filter was fitted by the operator on 16 February 2023, however it was removed by the sampling team as the rig didn't appear to be working.

It is clear that this incident was caused by sub-optimal coagulant dosing following a planned site shutdown and a brief loss of alum dosing due to a closed valve on the dosing skid following a planned repair to a leaking flange, which was compounded by a breakdown in communication.

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

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