

Castle Moffat WTW Loss of the treatment process 22nd December 2024

Event No. 15285

Event Category: Significant

Control of the clarification process was lost for more than 18 hours, and a sample of final water contained 366 µg/l aluminium (regulatory standard at consumers' taps is 200 µg/l). There were no sample failures at consumers' taps and no consumer contacts.

The flow to one of the three clarifiers increased significantly because of an electrical failure of the flow control signal. This caused the inlet valve to open fully and not signal that there were higher than normal flows. The coagulant aid dosing was at a fixed dose rate and so did not increase in proportion to this increased flow, leading to the loss of the clarifier blanket and subsequent high turbidity and aluminium levels. Despite a rapid and well-considered response from Operators, a number of site issues led to this becoming a prolonged issue and an incident.

These were:

1. A lack of telemetry and SCADA alarms for flow signalling.
2. Issues with the signalling and alarming of clarifier flows, valve positions and turbidity.
3. The absence of a run to waste facility at the site.

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.