



Drinking Water Quality Regulator
for Scotland

Incident Summary

Turret WTW
Coagulation failure
26 December 2016

DWQR Inspector:
Colette Robertson-Kellie

Event No. 8220

Event Category: Significant

The Intelligent Control Centre (ICC) received a turbidity alarm from the flocculators at Turret WTW at 02:44 on the 26th December 2016. Two and a half hours later, the ICC informed Operations of the alarm and an Operator attended the site. A blockage in a flow control valve had stopped flow to the pH monitor which controls sodium hydroxide dosing for pH adjustment of the coagulation process. The Operator cleared the blockage, and on-line turbidity trends show that the works was quickly brought back under control. Steps were taken to raise chlorine levels at the works and to accelerate the turnover of inadequately treated water in the system, and samples for chlorine and *Cryptosporidium* were taken at the works.

Treated and final water turbidity levels increased significantly, but did not breach standards, but final water aluminium levels exceeded the regulatory standard for around two and a half hours. No samples were taken in the distribution system, so the quality of the water at consumers' taps was unknown.

The root cause of the incident was a blockage in a flow control valve which stopped flow to the pH monitor controlling sodium hydroxide dosing to the coagulation process. However, a two and a half hour delay between the flocculator turbidity alarm being received by the ICC and Operations being notified of the alarm significantly affected the severity and duration of the incident.

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

