

Incident Summary

Picketlaw WTW
Coagulation failure
February 2017

DWQR Inspector:
Colette Robertson-Kellie

Event No. 8312

Event Category: Significant

At 20:08 on the 15th February 2017, the Intelligent Control Centre (ICC) received an alarm relating to a comms failure, and when the Operator visited the site to investigate, it was found that the SCADA system was inoperable. The Operator shut down the works manually. When Scottish Water's Electrical and Mechanical section attended the works, it was confirmed that there had been a catastrophic failure of the central processing unit (CPU). A similar CPU was quickly located at another works, and was installed at Picketlaw WTW. A review of the settings on the system was carried out by the Operations team at the site; there were no records available to verify the settings, so the Operator visually checked them. To protect the final water being supplied into the network, the flow from the works was diverted to waste using stop logs, and a number of modifications were made to the network set up to ensure that water continued to be supplied to consumers. Tankers were put on standby but were not required.

By 02:41 on the 16th February, the works was restarted. The Operator monitored the works, and it became apparent that water quality was not improving. Investigations showed that settings for the dissolved air flotation units were incorrect following the replacement of the CPU, and that the stop logs, which had been put in place to divert water to waste, were still allowing water to flow into the network. The software was reset, the stop logs were removed and reinstalled, and water quality began to return to normal.

Sampling of the supply system showed elevated aluminium levels at the treatment works and the service reservoirs sampled, and that the regulatory standard for aluminium was exceeded in samples taken from consumers' properties.

The cause of the incident was the failure of the SCADA Central Processing Unit (CPU).

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 two additional recommendations.