

Picketlaw WTW Significant loss of control of treatment processes

Event Category: Significant

DWQR Inspector:
Robert Brooks

Event No. 13853

On the 30 September 2023, Picketlaw WTW automatically shutdown on a low treated water chlorine due to a fault with the chlorine gas changeover valve. The plant was returned to service at 13:45 but later shutdown automatically again at 16:30, this time due to a loss of air saturation in the dissolved air flotation (DAF) process. Once this was restored, the plant was returned to service at 18:45. At 12:30 on 01 October 2023, Picketlaw WTW shutdown automatically for a third time, this time for high coagulation pH following further DAF plant saturation issues. The plant was returned to service at 18:15 but later shutdown once again, this time for high filtered water aluminium following another DAF plant saturation issue. It was during this shutdown that operations found that there had still been forward flow of inadequately treated water to supply as pumps to Bairdsknowe Service Reservoir (SR) had still been operating during the plant shutdowns. The plant was returned to service at 02:20.

Scottish Water's Public Health Team were alerted to the issues and additional sampling was arranged. 35 samples were taken between 30 September 2023 and 05 October 2023 from Picketlaw WTW, Picketlaw Water Supply Zone and the SRs fed by Picketlaw WTW. Of these, two final water samples breached the Prescribed Concentration Value (PCV) for aluminium and one zonal sample breached PCV for manganese although it is not thought to be related to this incident. All other parameters were shown to be satisfactory including one sample taken for *Cryptosporidium*.

It is clear from the Scottish Water's event outcome report that this incident was caused by several process interruptions at Picketlaw WTW that resulted in a loss of control of optimal treatment and the forward flow of inadequately treated water to supply.

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

