

# Incident Summary

Boardhouse WTW  
Loss of disinfection  
12 December 2018

DWQR Inspector:  
William Byers

Event No. 9007

## Event Category: Significant

On 12 December, a failure of disinfection occurred when a full service of the chlorine analyser on the inlet to the chlorine contact tank was being carried out. This instrument controls the chlorine dose and the service was required to address erratic readings from the analyser. Whilst the service took place, a standby system was brought on stream to maintain disinfection. The standby system was unable to maintain the required chlorine setpoint because the chlorine concentration in the dosing tank was depleted, no information about when this system was last used was available. The operator was unable to increase the strength of chlorine in the standby system so the pump suction line was placed directly into a drum of fresh sodium hypochlorite solution. It was also necessary to disable the automatic shutdown controls in place for low chlorine levels to allow the treatment works to continue operating.

The servicing was completed without issue but on carrying out the final calibration of the instrument, it was discovered there was no chlorine residual in the water. The dosing drum was found to have emptied and a new drum was quickly put in place. A measured quantity of the hypochlorite solution was also added to the contact tank to compensate for the cessation of dosing. The operator escalated the problem to the Team Leader and to the Public Health team and monitored the recovery through bench tests of samples. Samples taken after the event and over the following days of the final water at the works, within the distribution system and at consumer taps were shown to meet water quality standards.

This event was clearly caused by the draining down of the sodium hypochlorite drum substituting for the established chemical tanks in the standby disinfection process.

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