

Incident Summary

Glenlatterach WTW Disinfection Failure 11 March 2019

DWQR Inspector:
William Byers

Event No. 10051

Event Category: Significant

On the evening of the 11th of March, a low chlorine alarm from the works was received at the Control Centre and the standby treatment operator was despatched to investigate. The operator found the chlorinated (dosed) free chlorine analyser to be reading zero and validated the position with a bench test. Investigation of the disinfection process found that neither the duty or standby banks of chlorine gas cylinders had gas available to dose and the situation was escalated to the team leader. A second treatment operator had been alerted to the chlorination failure at the works and upon arrival at the site, they replaced the emptied cylinders in the standby bank and switched those to duty, restoring the flow of gas to the dosing pumps. There had been a loss of disinfection for a period of some 75 minutes. A deeper inspection of the failed duty bank established that only one of the outlet valves on each of the three cylinders had been opened. The other two were closed, resulting in the expected life of the duty bank being reduced by two-thirds. The operators corrected the outlet valve positions to open, replaced the empty cylinder and placed the bank in standby mode. A sample was taken of the final water and the operator confirmed the process had restored to normal on monitors before he left the site. The sample confirmed that there was no failure of microbiological standards and that there was no issue with the level of chlorine residual in the supply.

The cause of the disinfection failure was a failure by operators to follow the procedure for changing chlorine cylinders and ensuring all outlet valves were in an open position. I consider this to be a serious failure of operating procedures. Glenlatterach Water Treatment Works provides the sole supply to 1,297 consumers but contributes to a further 47,000 consumer's water supplies in the Elgin area. Whilst ultimately there was no failure of water quality standards in the water supplied from the works, this event put these consumers at risk, as disinfection of drinking water is a key public health safeguard.

The event has been categorised as significant. Scottish Water has identified one action which DWQR accepts as appropriate and will monitor to ensure it is completed prior to signing off the incident. DWQR made one additional recommendation.