

Incident Summary

Glengap WTW
Coagulation failure
15 December 2018

DWQR Inspector:
Moira Malcolm

Event No. 9925

Event Category: Significant

At 13:57 on 15 December 2018 the ICC received Priority 2 (P2) alarms for both 'recovered water pumps failed' and an unverified security alarm and passed these to the standby operator, who said he would attend site when work at the site he was at (Penwhirn WTW) was complete. The operator then decided that the alarms were not critical so did not attend, but did not inform ICC or the standby team leader of this decision. Further water quality alarms relating to coagulation pH and clarified water colour were received and acknowledged by the Intelligent Control Centre operator, but as they assumed that an operator was on site these were not passed out. A second ICC operator received and acknowledged a high primary filtered colour alarm at 18:22 and after monitoring the site for a period then alerted the standby operator at 19:15. On arrival at site the operator found that the coagulation dosing pumps (for both lime and aluminium) had failed and there had been no coagulant dosing for over 7 hours. The operator restarted all failing pumps, reset all SCADA alarms and escalated the event. Samples taken from the final water and from distribution over the next three days were all within regulatory limits, with the exception of final water pH which peaked at pH 9.60. Turbidity increased but did not breach limits and disinfection remained effective throughout the incident.

The coagulation pump failures were caused by a power brown-out, but there was no dosing pump failure alarm which would have alerted the ICC to the significance of the issue. Poor decision making and lack of communication in responding to the alarms that were received resulted in a prolonged period of time during which the water was inadequately treated. The standby operator did not attend site after informing ICC that he would and did not inform either ICC or the standby team leader of this decision. This led to the ICC operator acknowledging subsequent water quality alarms and not passing them out because he believed the standby operator was on site. It was not until a second ICC operator was on shift and further water quality alarms received that the standby operator was informed of the continuing situation and attended site.

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.

