

Amlaird WTW Instrumentation Failure 08 June 2011

DWQR Inspector:
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Summary of Incident

An incident was declared by DWQR following a failure of the Iron standard in a final sample of the water produced at Amlaird WTW. Investigation into the cause of the failure found that the iron monitors at points in the treatment process were not working and were awaiting repair. A pH monitor was also in need of repair and calibration. In the preceding days the works had suffered two power dips which caused dosing pumps to trip-out for short periods and there was also increased turbidity in the incoming raw water. However, due to a lack of information on the iron levels and other sample information, it was not possible to pinpoint any single plant failure. Following the initial sample failure, the resamples taken from the final water and samples taken within the distribution system demonstrated that compliant water had been restored.

DWQR Assessment of Cause of Incident

The elevated iron level may have been due to a number of small events influencing the raw and treated waters but DWQR considers the cause of the iron failure in the final water to be due to an inability to optimise key processes because of a failure to maintain instrumentation and monitors in an effective operational condition.

DWQR Assessment of Actions Taken by Scottish Water

DWQR has concerns over the operation of the Water Treatment works without effective instrumentation. The vulnerability of this works to variability in the raw water requires fully optimised processes and a high degree of attention to equipment failures and calibration of instrumentation to ensure the highest possible quality of water is produced at all times. Whilst these deficiencies were addressed following the failure of the iron standard, DWQR considers the priority given to repair of faulty control instrumentation and equipment at this works to be inappropriate leading to an unacceptable level of operating risk.

Scottish Water has identified a number of actions from this incident and DWQR accepts these are appropriate. DWQR has also made an additional recommendation and will be monitoring to ensure all are completed prior to signing off the incident.