

Invercannie & Kinlochewe WTWs Laboratory sample handling Failure 2 December 2011

DWQR Inspector:
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Summary of Incident

A final water *Cryptosporidium* sample attributed to having been taken on 2 December at Invercannie failed with a count of 4 oocysts giving a result of 0.043/10 Litres. DWQR checks carried out during an audit of the works in March 2012 exposed an inconsistency in sampling records which required examination.

Investigation of the issue revealed that the recorded *Cryptosporidium* result was not related to a sample from Invercannie but was attributable to a sample taken from Kinlochewe WTW. The error occurred during sample handling within the laboratory. Samples from both works were analysed during the same period with the two samples being incorrectly assigned to analyst worksheets. The correct result for the Invercannie sample was zero detection of *Cryptosporidium*.

DWQR Assessment of Cause of Incident

DWQR declared this an incident due to the potentially serious failure of processes which could have resulted in unnecessary emergency measures being taken to protect consumers in Aberdeen and causing unwarranted concerns and inconvenience to consumers but more importantly, it had the potential for health officials being unaware of risks at Kinlochewe. It is fortunate that in this case, Health Officials were already aware of a *Cryptosporidium* issue at Kinlochewe due to an ongoing monitoring of the supply there.

DWQR Assessment of Actions Taken by Scottish Water

DWQR is concerned that the investigation of the apparent failure of the membrane filters to remove *Cryptosporidium* at Invercannie was not more vigorously pursued. The detection of *Cryptosporidium* in final water at this works is unusual and a more thorough analysis of records would have exposed the error. It is disappointing that the issue was only revealed through a DWQR audit.

Scottish Water undertook a review of all laboratory worksheets for the previous 12 months during which one further instance of mixed up records and samples was identified. These related to two samples taken from Strollamus WTW on consecutive days during a wider period of monitoring within an ongoing *Crpto* event. The consequences here therefore were of less impact. As a result of these findings, Scottish Water has modified laboratory sample handling procedures and adopted additional checking processes within the laboratory and within investigation teams.

The laboratory has undergone an audit by UKAS as part of its regular quality inspections and particular attention was given to the issues revealed in this incident. No further concerns were identified in this audit. DWQR is satisfied that the necessary measures have been put in place to ensure confidence in the analysis of samples and investigation of sample failures.

Scottish Water identified a number of actions from this incident. DWQR accepts that these are appropriate and will be monitoring to ensure they are completed prior to signing off the incident.