



Drinking Water Quality Regulator
for Scotland

Incident Assessment

Afton RSZ
Microbiological Failures
05 July 2011

DWQR Inspector:
William Byers

Summary of Incident

A water sample taken following works to install new line valves in the water supply distribution system in Auchinleck, failed the microbiological standard for coliforms. As a precaution and due to the presence of young children in the house sampled, the householders were advised to boil their water until the problem could be identified and resolved. A sampling programme was established in neighbouring addresses and streets to determine the extent of possible contamination. As a result, a sequence of low level microbiological failures in samples taken at neighbouring properties was experienced over a number of days. The additional sampling carried out showed the problem was limited to two addresses and a combination of mains flushing and hygiene advice to householders enabled closure of the incident. The advice to boil water was withdrawn after 5 days following discussion with the Consultant in Public Health Medicine.

DWQR Assessment of Cause of Incident

DWQR considers the microbiological failures were due to two factors. The connections to the water main for the two failing properties were taken from a main which had low turnover of water supply and the low levels of chlorine at this point in the distribution system offered poor protection against the disturbance caused by the works to install the new line valves. There is always potential for ingress of contamination during such works however and DWQR considers it is likely to be a contributory factor in this instance. DWQR does recognise the condition of the domestic taps from which the samples were taken may also have had a bearing on these sample results.

DWQR Assessment of Actions Taken by Scottish Water

DWQR considers Scottish Water undertook the appropriate steps to deal with the microbiological failures. Scottish Water has also investigated the possibility of transferring the connections to the affected properties onto an alternative water main. The extremities of water distribution systems are however areas where it is important to guard against the conditions where bacteria can develop and DWQR considers it important that a consistent and acceptable level of chlorine residual is maintained in supply. Scottish Water must also ensure there is sufficient disinfection applied during repair works, taking into account local system factors and that there is adequate flushing of the mains to protect the quality of water supplied to consumers.

Scottish Water has 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:

