

Black Esk Supply Zone Contamination Event 26 August 2015

DWQR Inspector:
William Byers

Event No. 7135

Event Category: Serious

Summary of Incident

On 26 August, during the investigation of consumer complaints of discoloured water in the rural area near Amisfield, North of Dumfries, Scottish Water identified a cross connection between a private, farm water supply and the public supply. Recognising this to be a potential for introducing contamination back into the public supply, the connection to the mains was immediately isolated and flushing was carried out in the surrounding area. A notice of restrictions on water use – a don't drink, cook or wash notice, was delivered to properties in the area and water sampling was carried out from the mains supply. Further sampling over a wider area was also arranged. When the initial indications from the first samples became available the next day, they showed there to be significant microbiological contamination in the water, one of which ultimately confirmed as 1400 Coliforms, 900 *E.Coli* and 210 Enterococci per 100ml. Measures to apply direct disinfection of the water mains were taken together with a further programme of targeted flushing. The later samples taken on 27th and all those taken following the additional disinfection measures, showed the supply to be clear of any contamination. With confirmation of all samples being clear, the restrictions on use were removed in the afternoon of 29 August. Overall, Scottish Water received 23 contacts from consumers reporting discoloration or having other concerns linked to the investigation and remedial measures.

An initial visit by the Scottish Water Byelaws team and discussion with the Farmer on 28 August resulted in a request from the Farmer for the connection to the public water mains to be permanently removed and this was achieved on 4 September. A full Byelaws inspection of the premises identified a number of contraventions of the Byelaws.

DWQR Assessment of Cause of Incident

DWQR is satisfied that the likely cause of the contamination of the public water supply was the cross connection with the pumped private water supply. Samples from two properties connected to the mains in the immediate area showed a significant level of contamination in their supply and in consideration of source, pump and pipework arrangements of the private supply, these were such that it could readily permit this type of event to occur. Once the connection to the main was isolated and remedial actions taken, there were no further indications of any other contamination in the mains supply. In addition, as no further complaints arose from consumers, this provided confidence that the backflow conditions were the likely cause of the discoloration of the public supply.

Where properties are connected to the public water mains, responsibility for compliance with the Scottish Water Byelaws lies firmly with property owners. Where there are dual supplies from both the public water mains and private sources, these owners must ensure their apparatus and pipework arrangements are such that there is no possibility of backflow into the mains. DWQR considers compliance with the Byelaws to be essential to minimising the risk of contamination of drinking water and supports the measures taken by Scottish Water to resolve this event and their consideration of a case for prosecution.

DWQR Assessment of Actions Taken by Scottish Water

Scottish Water took actions appropriate to the discovery of an illegal cross connection and further, once contamination of the public supply was confirmed, took the necessary and swift actions to protect the health of consumers connected to the public water mains.

DWQR is satisfied that Scottish Water carried out appropriate investigation and sampling of the supply in the distribution system to establish the extent of the problem and to confirm its resolution. They also ensured appropriate notifications within reasonable timescale were made to health and regulatory stakeholders.

The event has been categorised as serious. Scottish Water has identified two actions from the event that DWQR accepts are appropriate and will be monitoring to ensure are completed prior to signing off the incident.

