

Incident Summary

Balmore E Water Supply Zone Repeated *Cryptosporidium* detections 12 July 2016

DWQR Inspector:
Matthew Bower

Event No. 7798

Event Category: Significant

A 9" water main burst in Linlithgow on 12 July. In order to sustain supplies to consumers, Scottish Water had to introduce a "backfeed" of water which necessitated opening a valve that was normally closed. This valve had no means of flushing away stagnant water prior to opening. Following the opening of the valve, Scottish Water began to receive complaints from consumers in the area of odour and discoloured water. A total of 16 contacts were received, of which four related to a solvent / fuel taste or odour. Most of the discolouration contacts related to the period before the backfeed was opened and are likely to be due to sediment disturbed by the burst main.

Three samples were taken initially in response to the taste and odour contacts, more than twelve hours after the first contact was received. These showed most parameters to be compliant with the drinking water quality standards, with the exception of polycyclic aromatic hydrocarbons (PAH) which were detected at concentrations more than ten times the regulatory standard. Flushing was undertaken by Scottish Water over a period of about six months to remove traces of PAH from the distribution system.

PAH are derived from coal tar lined mains, which are not now used as a mains material, although some lengths remain in distribution systems from historic use. In this case it appears that water contaminated with PAH had collected against the closed valve used for the backfeed. It would be normal practice to have flushed this water away prior to operating the valve to introduce the backfeed, however this wasn't possible in this case due to a lack of suitable infrastructure. Consumers noticed the PAH as a solvent / fuel smell in the water. It is not possible to determine the concentration of PAH in the water at the time the complaints were received as no samples were taken until the following day.

The event has been categorised as Significant. Scottish Water has identified a number of actions which DWQR accepts are appropriate and will monitor to ensure they are completed prior to signing off the incident. DWQR made two additional recommendations.