

Daer Camps A Zone Polyaromatic Hydrocarbon Failure 26 June 2014

DWQR Inspector:
Colette Robertson-Kellie

Event No. 6056

Event Category: Significant

Summary of Incident

Scottish Water's Customer Service Centre (CSC) received a call on the 26th June 2014 at 17:24 from a consumer in Harthill reporting a taste and odour of diesel in their drinking water. The duty Network Service Operator (NSO) visited the property, and noted that there was an odour from the hot water but not the cold. The NSO also visited the nearby property of a relative of the consumer, and found a similar issue.

The following morning at 11:55, samples were taken from these two properties. The results of analysis were available later that day, and showed the presence of a number of polyaromatic hydrocarbons (PAH) and failures of the regulatory standards for benzo(a)pyrene and total PAH. A further nine samples were taken from a wider range of properties in the supply zone on the 28th June; eight failed the benzo(a)pyrene standard and three failed the total PAH standard.

Flushing of the distribution system commenced on the 28th June and continued intermittently in conjunction with sampling of the supply until the 14th July. Samples failing the benzo(a)pyrene standard dropped considerably after the 4th July, although two out of seven samples failed the benzo(a)pyrene on the 11th July, after which no further failures were detected.

Scottish Water contacted the area NHS office on the 29th June at 11:16, discussed the situation with the Consultant in Public Health Medicine (CPHM) and then met with the CPHM the following morning.

Scottish Water had started a programme of planned mains rehabilitation in Harthill on the 18th November 2013 and there was only one customer contact in relation to this incident. The contractor was told by Scottish Water to halt all networks operations in the area on the 30th June, although it should be noted that work on the pipework itself had been finished on the 26th June and only backfilling and reinstatement work was ongoing.

DWQR Assessment of Cause of Incident

The source of PAH in drinking water is usually coal tar lining, which was historically used to line pipes to protect them from corrosion. None of the pipes that Scottish Water was working on were lined with coal tar, but it is likely that increased flows in the backfeed main during flushing and swabbing operations during mains rehabilitation works in the area disturbed sediments in the lower parts of the network.

DWQR Assessment of Actions Taken by Scottish Water

Scottish Water responded rapidly to consumer concern. The NSO sent to the property of the consumer who had contacted the CSC quickly identified that there was an issue with the supply by examining the hot water supply as well as the cold water, and local NSO's understanding of the distribution system allowed a rapid diagnosis of the issue. Extensive flushing and sampling of the system over a period of two and a half weeks was carried out to restore water quality. The strategic installation of valves and hydrants in the area allowed the removal of any remaining sediments to be flushed out, and gave reassurance that mains rehabilitation could restart without risk of the issue recurring.

Fast tracking of samples by the laboratory provided analytical results in a timeous manner. All Scottish Water employees and contractors working on the network had appropriate Distribution Operation Maintenance Strategy (DOMS) training. It is noted that Scottish Water spent a considerable effort keeping the consumer who had contacted the CSC updated on progress throughout the duration of the incident.

However, DWQR has concerns about sampling at the start of the incident. Despite a diesel type odour being reported and then confirmed by the NSO in the hot water supply of two properties in different streets on the 26th June, no samples were taken that evening, and it was not until 11:55 on the 27th June, over 18 hours after the concerned consumer had contacted the CSC, that samples were taken for analysis. Furthermore, DWQR is critical of the fact that samples were only taken from these two properties; more widespread sampling to determine the cause and extent of the issue was not carried out until the 28th June.

The event has been categorised as Significant. Scottish Water identified the need for the installation of additional valves and hydrants to allow targeted flushing of the network in order to complete the mains rehabilitation work and DWQR accepts that this is appropriate.

Additionally, DWQR has made one recommendation following this incident.

