



PRIVATE WATER SUPPLIES – CASE STUDY (2011/06)

Lead in drinking water, the overlooked health risk in small domestic private supplies?

This case study relates to a private supply that serves 13 dwellings, some of which are rented. Historically, the local authority collected a bacteriological sample every other year. These previous samples were positive for coliform bacteria and treatment of the supply had been recommended, but no action taken. The risk assessment under the new regulations identified that there was no discrete source. Water collected in a series of open troughs situated in pastureland grazed by cattle and sheep. The ground surrounding the first collection trough was waterlogged indicating that the source water is a mixture of surface and sub-surface drainage. From the open troughs, water passed into a sealed chamber from where it was piped to each dwelling. The local authority concluded that the supply arrangements posed a potential danger to human health from faecal matter from livestock and wildlife and put in place a Regulation 18 Notice requiring improvements to protect the source (diversion ditches, sealing the collection troughs, vermin-proofing, and improved and extended stock proof fencing).

At the same time the local authority also assessed the likelihood of chemical hazards and tested for appropriate audit parameters one of which was lead. The result was 64.7µg/l, well above the current standard of 25µg/l and the future standard of 10µg/l. Further samples were taken from each of the 13 properties and values above 25µg/l were recorded in six properties with values above 10µg/l at a further two properties. Water from the collection chamber was free from lead, confirming that the probable cause was old pipes. The occupants of one of the rented properties were a family with two young children who claimed to use only bottled water for drinking, however, the local authority concluded that there was a risk of exposure to lead from other water uses such as cleaning teeth and food preparation. The restrictions in the Regulation 18 Notice therefore required taps to be flushed before use, especially first thing in the morning. The users were required to jointly investigate the nature and condition of the pipes with a view to replacing them. There was no appeal against the Notice which enabled users to examine the full range of options for securing a safe supply in a cost effective way, including a connection to the public mains supply.

This case study illustrates how traditionally owners and users of small domestic supplies have lacked the knowledge they need to fully understand and manage risk. Some owners of small supplies have been hostile to the new regulations, particularly to the cost of audit monitoring for supplies serving rented properties or bed and breakfast accommodation. The Inspectorate commends this case study as an educative tool for evidencing the health-based requirements when faced with a belligerent owner.