Technical Inspection of Scottish Water Distribution System

Invercannie Regulation Zone, East Region

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Summary of Inspection

Overall Summary

An audit on aspects of the operation and maintenance of the Invercannie water supply distribution system in the Torphins area, taking in Torphin Cockardie Service Reservoir. There have been occasional low level microbiological failures of samples taken from this Service Reservoir with the asset condition attributed as being the root cause in all cases. There are however very few water quality consumer contacts arising from within the supply area. SW's contractor had possession of the site to carry out remedial works on the tank although this had only just taken place and it remains in service until bypass arrangements could be finalised. It is reassuring however to see concerns over ingress to the Service Reservoir being addressed. The audit showed that controls over access to the distribution system to carry out maintenance work are largely met although it is disappointing that the key hygiene requirement to take a sample following repair of a water main was not carried out. This is unacceptable and the failure must be addressed.

Number of Findings: 1

Quality of Water

There have been occasional low level microbiological failures at the Torphins Cockardie Service Reservoir, with the asset condition attributed as being the root cause. There are very few water quality consumer contacts arising from within the supply area.

Asset Robustness

At the time of audit, SW's Contractor had possession of the site to carry out remedial works on the Service Reservoir. Some minor works had been undertaken to establish site huts and to start exposing the external roof/wall head joint of the tank.
The site in general, appears well maintained with good access, a good stockproof post and wire fence all round and padlocked gateway. The tank remains in service and due to the very severe weather, no covers were opened to check on their internal condition. It is clear from the condition of the concrete, felt membrane and ponding of surface water on the roof, that there are conditions for ingress to occur.

Operational Practices

Appropriate controls were shown to be applied to planning, access and shut down for maintenance work on the distribution system although the requirement to take a water sample following repair of a water main burst was not met. Weekly visits are made by Ops to check the SR site. Both cells of the SR were last cleaned in September/October 2016.

Management of Risk

The requirements for management of boundary valves between distinct supply areas was shown to be effective. Examination of Telemetry communications log for the Service Reservoir demonstrates an effective service - Alarms relating to changing tank levels most recently associated with management of summer dry spell.

Recording Information

Information on the water supply system is maintained in the Geofield GIS on field laptops. All NSO's etc. have access to the up to date information on layout and valve status. The sytem was demonstrated and utilised to inform SR valve locations and audit of Boundary valve.

Water Safety Plan

Elements of the safety plan relevant to the audit appeared to be reflective of the issues. The integrity of the SR was specifically identified as being a risk to water quality.