Drinking Water Quality Regulator for Scotland

Incident Assessment

Glendale WTW
Tankering Sample Failures
11 June 2013

DWQR Inspector:
Matt Bower

Event Category: Significant

Event No. 5368

Summary of Incident

High demand for water due to good weather on Skye meant that Glendale WTW was in danger of losing supplies. The decision was made to augment the clear water tank by tankering in water from another supply. This happened on 7 June and again on 11 June, with 3 loads being delivered on this day. The water sample initially taken from the tanker on 11 June subsequently failed, containing *E.coli* and coliforms. This result was reported the following day, as is normal for microbiological results. By this time a further three tanker loads had been delivered using the same tanker. The initial sample taken on this day also contained *E.coli* and coliforms. None of samples taken from the water treatment works used to fill the tanker, nor the service reservoirs or supply zone receiving the water failed. Scottish Water has attributed the failures to a number of areas where the procedure for tankering was not being followed.

DWQR Assessment of Cause of Incident

Scottish Water highlights several areas that could have contributed to the failures. DWQR is of the opinion that incorrect storage of hoses and couplings in particular could have caused the issues encountered. As chlorine residuals in both samples appear normal it is unlikely that any gross contamination of the supply was present and public health is unlikely to have been put at risk on this occasion.

The incident highlights the potential risk associated with all operations where water is tankered from one water supply to another. In Scottish Water's Distribution Operations and Maintenance Strategy, the company correctly states that tankering should not be allowed to become a routine operation. The procedures that Scottish Water has in place for this activity are, in the main, comprehensive and compliant with DWQR Information Letter 2011/1 on the Emergency Augmentation of Drinking Water Supplies by Tanker. Although procedures were followed in part on this occasion, they were not followed to the letter, and this may have been one cause of the failing samples. From the areas where compliance with the procedure was not absolute, there is the suggestion that in some areas tankering has indeed become a routine activity and a degree of complacency has set in. It is vital that a rigorous approach to this operation is restored. The taking of microbiological samples is no substitute for robust hygienic procedures, as results of these samples will only become known after the water has been transferred into the receiving supply, as in this case. This makes the measurement and recording of chlorine residuals on filling and discharging a tanker vital in providing an immediate warning of any serious contamination. In this instance, although some record keeping took place it could have been improved in terms of consistency.

DWQR Assessment of Actions Taken by Scottish Water

Once Scottish Water became aware that the first sample had failed for microbiological compliance, the tanker was removed from service. Six tanker loads had been transferred since the first failing sample was taken (three on 11 June and three on 12 June). The tanker was thoroughly cleaned and disinfected, before being returned to service following receipt of clear samples.

Scottish Water has highlighted a number of actions that it intends to take to prevent a recurrence of this incident. DWQR welcomes these as being appropriate, however is of the opinion that more needs to be done to tackle the extent to which tankering is being relied upon to maintain supplies across Scotland, especially in the North. It is important that the need for tankering is seen as a situation where the existing asset has failed to provide an adequate service, and the occurrence is recorded with a view to ensuring that provision is made to upgrade the supply. DWQR has added this as a further recommendation as a means of ensuring that the need to tanker water is significantly reduced in future. DWQR will be watching Scottish Water's use of tankering closely in the future, and this may become the subject of future inspection activities.

Scottish Water has identified 10 actions following this incident, including a full review of procedures and training of staff.

Additionally, DWQR has made a number of recommendations following this incident:

Recommendation Number	Recommendation	Completion Date
DWQR 1	Scottish Water should ensure that all instances of tankering water to augment supplies are recorded centrally and taken into account in the investment planning process.	