Drinking Water Quality Regulator for Scotland

Incident Assessment

Camisky (Fort William) WTW Ammonium Failure 20 May 2016

DWQR Inspector:
Moira Malcolm

Event No. 7672

Event Category: Significant

Summary of Incident

On Friday 20th May 2016, following a routine calibration procedure the post chlorine contact tank (PCCT) chlorine monitor at Camisky WTW began to read very high and an alarm was raised at the Intelligent Control Centre (ICC). The ICC noted the alarm, but as all other chlorine monitors were reading at normal levels, they assumed there was a fault with the monitor and deferred the alarm. Due to this deferral, operational staff did not find out about the high reading monitor until they attended site on the Monday morning, when the probe to the monitor was replaced.

Unknown to the ICC, the PCCT monitor controlled ammonium dosing to the WTW. The high reading from the monitor meant that ammonium sulphate was overdosed throughout the weekend, with a recorded level on the Monday of 0.73mg/l (the PCV is 0.5mg/l). Ammonium dosing returned to normal when the operator replaced the probe on the faulty chlorine monitor. During the event the ammonium monitor was offline due to an issue with the sensor head.

Over the next few days the ammonium levels were monitored at the clear water tank and throughout distribution, with some flushing taking place to speed up the removal of the affected water. The ammonium returned to satisfactory levels by 28th May.

No customer contacts were received during the incident.

DWQR Assessment of Cause of Incident

The cause of the incident was a faulty chlorine monitor and subsequent deferral of the PCCT alarm by the ICC. This elevated a simple event into a week-long incident due to the delay in isolating and replacing the faulty probe.

DWQR Assessment of Actions Taken by Scottish Water

Scottish Water operational staff reacted quickly and appropriately when they realised there was an issue. However it is disappointing that ICC staff were unaware that the PCCT monitor controlled ammonium dosing. It is also noted that this risk is not identified in the drinking water safety plan. DWQR is also concerned that the chlorine monitor trend had not stabilised post calibration before operational staff left site for the weekend.

The event has been categorised as Significant. Scottish Water has identified a number of actions and DWQR accepts that these are appropriate. In addition, DWQR has made a number of recommendations and will be monitoring to ensure both these and the actions are completed prior to signing off the incident.