

Incident Summary

Clatto WTW
Burst raw water main
20 September 2019

DWQR Inspector:
Bill Byers

Event No. 10569

Event Category: Significant

During routine inspections on 20 September, the site Operator encountered an ingress of water into the Motor Control room. Investigation found that a substantial leak had occurred at a chemical dosing connection point on the raw water inlet pipe supplying the works. This developed into a significant flow of water flooding chambers and the basement areas. After escalating the issue to the team leader, the raw water inlet valves were closed down to prevent further leakage. By this stage, emergency pumps could not be operated and power tripped out at 16:30. Power technicians attended the treatment works site and isolated the high voltage supply allowing the site generator to be brought online. This restored power to the station but was only able to run part of the works. Engineers had carried out a patch repair to the burst pipe to allow the inlet to be opened and treatment resumed at 7:00 the next morning. The works had been operating with only half the clear water tank capacity due to inspection and repairs being carried out on one of the two tanks. Due to the limited amount of storage available, changes were made within the water supply distribution system to conserve storage within service reservoirs and to switch supply areas where consumer demand could be more readily maintained. A fleet of tankers was arranged to transport water in to maintain tank levels and bottled water distribution points set up to ensure alternative supplies were available to consumers, although ultimately, no consumers were without water. Some 195 consumer contacts were received over the course of the event with the large majority being concerned with discoloured water. Sampling of water supplies in the area was also initiated, during which 23 samples were taken. There was one failure of microbiological standards and four samples identified a breach of iron, manganese or aluminium standards.

It is clear that this incident was caused by flooding from the burst raw water main affecting the power supply and control instrumentation within the treatment works. The cause of discoloured water supplies and the failure of water quality standards can be attributed to the change of direction and velocity of flows within the distribution system mobilising pipeline deposits.

The event has been categorised as Significant. Scottish Water has identified six actions which DWQR accepts are appropriate and will monitor to ensure they are completed prior to signing off the incident. DWQR made one additional recommendation.

