

## Craighead WTW Manganese 12 June 2019

DWQR Inspector:  
Bill Byers

Event No. 10222

### **Event Category: Significant**

An Operator review of bench test results on 12 June identified a failure of the standard for manganese in the final water samples recorded for the preceding two days reaching a level of 130µg/l. The situation was reported to the Team Leader and Public Health Team and since there is no online monitoring for manganese in the works, samples from the works and within the supply zone were arranged. It was discovered that the air blowers in place to inject oxygen into the raw water reservoir to control algae and level of soluble manganese had failed at some point over the preceding weekend and arrangements were made to have the system repaired. This was carried out by 14:30, the same day. In consideration of the lapsed time where the air blowers may have been out of operation, a decision was taken to shut down the works and to commence hourly bench tests of the raw water. Tankering of water from another supply system into the clear water tank was arranged to maintain supplies to consumers. The plant was restarted at 13:35 on 13 June at low flows and run to waste. As confidence rose on the quality of water being produced, the works was brought fully on line at 19:50 with production restored to the clear water tank. Sampling at the works showed that the level of manganese had been brought back to within compliance level in the final water by 15 June.

The effect on water quality at consumer's taps however was evident until 20 June, within which time a maximum level of 191.3µg/l of manganese was recorded in a sample.

DWQR consider the failure of the raw water reservoir aeration system to have enabled the prevalence of soluble manganese to rise in the raw water entering the works. The clear reduction in manganese levels in the treated water once the equipment had been repaired supports this view.

The event has been categorised as Significant. Scottish Water has identified nine actions which DWQR accepts are appropriate and will monitor to ensure they are completed prior to signing off the incident. DWQR made no additional recommendations.

