

Bradán WTW

25 January 2012

DWQR Staff Present

Matt Bower, Bill Byers, Sue Petch

Scottish Water Staff Present (& Titles)

Derek Cooke, Andy Kean, Jim Hassan, Lesley Crawford, Chris McIntyre, Ejaz Rasool, Peter Ross

Summary of Inspection

Overall Summary

Bradán is a medium sized water treatment works supplying a large part of Ayrshire including Ayr, Irvine, and parts of Kilmarnock. The works is reasonably well maintained but in need of some structural repairs due to adverse weather experienced at the beginning of the year. DWQR has concerns over the performance of the primary filters, these are not as robust as we expect and recommend a full process review including backwash capability.

Number of Recommendations: 12

Score (out of 6)

Quality of Water Produced

3

Adequate

Bradán generally produces satisfactory water quality. There have been instances over the previous two years where levels of trihalomethanes, iron and manganese have exceeded regulatory standards, indicating that further optimisation of the process is required.

Robustness of Treatment Asset

3

Adequate

The treatment processes are appropriate for the raw water to be treated but exceedances of regulatory standards in the supply areas indicate that the processes are not fully optimised. The performance of the primary filters is not satisfactory and does not meet the good operational performance criteria defined by UKWIR in support of the Badenoch Expert group recommendations.

Operational Practices

3

Adequate

The staff have a good understanding of the treatment processes. The necessary scheduled tasks were being carried out though there were gaps in the instrument calibration records and filter log books.

Maintenance of Asset

3

Adequate

Key process related maintenance tasks appeared to be being undertaken, however, no documented evidence of completion of scheduled maintenance has been presented to DWQR. Building maintenance could be better.

Safeguards and Procedures

3

Adequate

The treatment process had appropriate alarmed monitors though no on-line monitoring for raw water quality. Power and process failure procedures need to be formalised.

Water Safety Plan Development and Implementation

3

Adequate

The water safety plan was reviewed and generally found to be thorough in the risks assessed, though DWQR believes that there are some risks to be added to the WSP and these are highlighted in this report.

Recommendations		Type	Included in updated DWSP?	% Complete & Date
2.1	Repair external roofs which have suffered wind damage, in particular chlorine store			
2.2	Formalise procedure for process and power interruptions and include in the works operating manual			
3.1	Consider the inclusion of recording air saturation levels on the task schedule			
3.2	Issue DWQR with a copy of the Bradan action group report and provide six monthly updates on progress with implementation.			
5.1	Carry out a process review of primary filters to determine the interventions necessary to significantly improve performance, including assessment of backwash water system			
5.2	Sand replacement for set of filters 9 - 13 to be progressed as a matter of urgency			
5.3	Include filter performance and back wash system limitations as a risk in WSP			
5.4	Include THM formation potential as a risk in WSP			
6.1	Consideration should be given to the installation of turbidity and manganese monitors on the filtered water outlet			
10.1	Ensure service labelling is maintained up to date.			
11.1	Provide evidence of aluminium monitor calibration			
11.2	Ensure calibration records and filter logbooks are completed comprehensively.			