

Technical Inspection of Scottish Water's Water Treatment Works

Bradan WTW, West Region

14/03/2019

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Summary of Inspection

Overall Summary

The quality of water leaving Bradan WTW was good and well within monitored regulatory limits at the time of the audit. The Operators were clearly knowledgeable about water treatment and had a good understanding of the operation of their treatment works. General site housekeeping was of a high standard, despite the presence of a significant number of contractors on the site. Staffing levels appeared low, as staff were unable to complete allocated tasks set out in task scheduling. All staff had appropriate Hygiene Training apart from the Team Leader, who had been in post since 1st February; a previous audit in the West also found Operations management staff without valid HCoP/DOMS training. Orthophosphoric acid dosing was not being adequately managed; although the dose had been raised from 0.4mg/l to 1mg/l, lead test rigs in the network had not been operational for significant lengths of time. Polyacrylamide dosing to coagulated water had recently been installed, and staff reported that it was successful in that turbidity and aluminium levels from DAF units had been significantly reduced. Polyacrylamide dosing also takes place at the sludge processing plant, which recirculates supernatant to the head of the works, and it is recommended that maximum acrylamide concentrations are calculated to ensure that the PCV for acrylamide is not breached. The filter backwash of primary filter 2 was observed and was noted to be very poor, with very uneven air scour and flushing - the filter was clearly not being adequately washed, and there was significant sand loss from filters. Refurbishment of the filters was ongoing at the time of the audit, and DWQR would like evidence of improvement to filter backwashing and general filter performance.