

Rosebery WTW Power and treatment failure 25 July 2019

DWQR Inspector:
Moira Malcolm

Event No. 10336

Event Category: Significant

On 25 July, Rosebery WTW was being run on its standby generator as a precaution due to forecast bad weather in the area. At 16:45, the generator failed but no alarms were produced – a lack of Uninterrupted Power Supply protection (UPS) meant that the raw water inlet valves could not close, so water kept flowing through the works with no chemical dosing and no outbound telemetry signals to alert the control centre. Following some “No water” calls from some pumped direct-fed properties, a Scottish Water operator was called out and attended site at 20:23. Mains power was restored and the raw water inlet valves closed but by this time water had been flowing untreated from the works for 3 hours and 40 minutes. The operator added sodium hypochlorite to the tank and returned the filters to service at 01:25 the following day, although at this point chlorine concentrations leaving the final water tanks were less than half what they should have been.

The root cause of this incident was the failure of the standby generator, which had been running the works as a precaution, as well as an absence of back-up power supplies to enable the treatment process to fail safe and shut down forward flow. Without power, no chemical dosing could operate, but there was also no means of shutting down the works safely.

Although the control centre undertake regular checks on site telemetry signals, these are every four hours and one had just taken place prior to the power failure, resulting in untreated, undisinfected water being supplied for a period in excess of three hours. An intermittently faulty phone line may also have played a part.

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 two additional recommendations.

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