Drinking Water Quality Regulator for Scotland

# Incident Summary

## Inverness WTW
## Extended failure of WTW Process
## 2nd August 2024

Event No. 14771

### Event Category: Serious

On 2 August 2024, a fault occurred with the raw water colour duty monitor at Inverness WTW at approximately 19:00 hrs, with the reading gradually dropping to zero over a 9 hour period. This in turn reduced the Poly Aluminium Chloride (PACL) coagulant dose to zero and the loss of coagulant dose resulted in Combined Permeate (CP) colour increasing from >3 Hazen to between 6 Hazen and 8 Hazen (which is above the Hi Hi Alam level of 6 Hazen). An alarm was received by Scottish Water's Intelligent Control Centre (ICC) and called out to the standby operator at 22:16 pm on 2 August 2024. The operator misunderstood the name of the alarm and believed that the alarm was referring to the raw water colour monitor which had been faulty earlier in the week, so the ICC were asked to suppress the alarm and it would be addressed the following morning.

The following morning, however, the standby operator was called out to an issue at a different WTW and so no site assessment was made. The CP colour alarm came back into the ICC at 8:40 am on 3 August and the standby operator was again called out. A miscommunication occurred between the ICC and the standby operator who was driving to Inverness at the time, with the ICC believing the operator was heading to the treatment works rather than to another location in Inverness. On 5 August, the dayshift operator arrived at Inverness WTW and noticed the high CP colour and changed the raw colour duty. PACL dosing was restored by 8:15 am, with CP colour quickly returning to normal.

Between 4 August and 8 August, 52 customer contacts were received about the quality of the water, with 46 contacts reporting discoloured water, 4 reporting illness, 1 reporting taste / odour issues and 1 reporting particles in the water. Between the start of the event and 8 August, 9 final water, 4 service reservoir and 6 customer tap samples were taken, with no failures of regulatory standards.

The root cause of this incident was a faulty raw water colour monitor, which resulted in a loss of PACL coagulant dosing.

The site was, however, equipped with relevant on-line instrumentation to alert the company to such faults and minimise impact to consumers. Despite failure of the raw water colour monitor this incident was avoidable had an appropriate response to alarms been made.

The event has been categorised as serious.  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 eight additional recommendations.