

Site Visit Report

Under the *European Union (Drinking Water) Regulations 2023*, the Environmental Protection Agency (EPA) is the supervisory authority in relation to Uisce Éireann and its role in the provision of public drinking water supplies. This audit was carried out to assess the performance of Uisce Éireann in providing clean and wholesome water to the public water supply named below.

The audit process is a sample of the performance of a water treatment plant and public water supply on a given date.

| Water Supply Zone | |
|---------------------------------|---------------|
| Name of Installation | Rathangan |
| Organisation | Uisce Éireann |
| Scheme Code | 1400PUB1041 |
| County | Kildare |
| Site Visit Reference No. | SV27990 |

| Report Detail | |
|--------------------|----------------|
| Issue Date | 22/08/2023 |
| Prepared By | Joanne Creedon |

| Site Visit Detail | | | |
|----------------------------|---|------------------|-------|
| Date Of Inspection | 01/08/2023 | Announced | Yes |
| Time In | 11:10 | Time Out | 11:31 |
| EPA Inspector(s) | Joanne Creedon | | |
| Additional Visitors | | | |
| Company Personnel | Uisce Eireann: Jessica Evans Veolia (working in partnership with Uisce Éireann): Mark Robinson, Charlotte O'Hare, Keith McEvoy | | |

> Summary of Key Findings

- (1) Disinfection consists of chlorination. The audit found that the disinfection system was operating satisfactorily during the inspection.
- (2) Manual switchover between duty and standby chlorine pumps is currently in place at the plant. Automatic switchover does not occur.
- (3) The frequency of monitoring and concentration of residual chlorine in the network should be recorded.

> Introduction

The Rathangan Water Treatment Plant (WTP) serves a population of 6410 (EDEN figures). The audit focused on the disinfection system at the Rathangan WTP.

> Supply Zones Areas Inspected

This audit assessed the chlorination disinfection system at Rathangan WTP.



1. Disinfection Audits 2023

| | | |
|-----|---|---------------|
| | | Answer |
| 1.1 | Is chlorination used for primary disinfection? | Yes |
| | | Answer |
| 1.2 | Did Uisce Éireann confirm the type of chlorine disinfectant in use? | Yes |
| | | Answer |
| 1.3 | Are there duty and standby chlorine dosing pumps in place? | Yes |
| | | Answer |
| 1.4 | Is there automatic switchover in the event of failure of one of the chlorine dosing pumps? | No |
| | Comment | |
| | Manual switchover is currently in place at the WTP. | |
| | | Answer |
| 1.5 | Is the chlorine dosing rate flow proportional? | Yes |
| | | Answer |
| 1.6 | Is there a continuous residual chlorine monitor, with alarm, to verify chlorine dosing is taking place at the target level? | Yes |
| | | Answer |
| 1.7 | Is there a continuous residual chlorine monitor, with alarm, at a suitable sample location after contact time has been completed? | Yes |
| | | Answer |
| 1.8 | Can data trends from the online residual monitor be viewed on site? | Yes |
| | | Answer |
| 1.9 | Are there low and high chlorine alarm settings on each chlorine monitor? | Yes |

| | | |
|------|---|---------------|
| | | Answer |
| 1.10 | Is there a documented alarm response procedure for responding to chlorine alarms? | Yes |
| | | Answer |
| 1.11 | Have staff been trained on the chlorine alarm response procedure? | Yes |
| | | Answer |
| 1.12 | Are chlorine alarms dialled out via a cascade system to allow a timely response by plant operators? | Yes |
| | | Answer |
| 1.13 | Is there automatic shutdown of the supply in the event of the chlorine level dropping below the low level or rising above the high chlorine alarm setting? | Yes |
| | | Answer |
| 1.14 | Are service due / monitoring instrument calibration dates for the chlorine monitors within date? | Yes |
| | | Answer |
| 1.15 | Is the site specific target contact time being achieved? | Yes |
| | | Answer |
| 1.16 | Is the residual chlorine level \geq 0.1 mg/l at the extremity of the distribution network? | No |
| | Comment | |
| | This information was not available at the time of the audit. Kildare County Council to provide network chlorine residual monitoring results to Uisce Éireann. | |
| | | Answer |
| 1.17 | Is monitoring of network residual chlorine undertaken several times per week? | No |
| | Comment | |

This information was not available at the time of the audit. Kildare County Council to provide network chlorine residual monitoring results to Uisce Éireann.

Recommendations

| | | | |
|--------------------|--|-----------------|------------|
| Subject | Rathangan WTP - Disinfection Audit | Due Date | 22/09/2023 |
| Action Text | <p>Uisce Éireann is responsible for ensuring a clean and wholesome supply of drinking water and should implement the following recommendations without delay.</p> <ol style="list-style-type: none">1. Uisce Éireann should install duty and standby chlorine dosing pumps with automatic switch in the event of the failure of one of the pumps.2. Uisce Éireann should ensure that residual free chlorine concentrations in the network extremities are at least 0.1 mg/l to maintain adequate secondary disinfection.3. Uisce Éireann should ensure monitoring of residual chlorine is undertaken several times a week at different points of the network to include the network extremities. <p>Actions required by Uisce Éireann</p> <p>During the audit, Uisce Éireann representatives were advised of the audit findings and that action must be taken by Uisce Éireann to address the issues raised.</p> <p>Uisce Éireann should submit a report to the EPA on or before 22/09/2023 detailing the actions taken and planned, with timescales, to close out the above recommendations.</p> <p>The EPA advises that the findings and recommendations from this audit report should, where relevant, be addressed at other public water supplies.</p> | | |