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	Liskealty
Organisation	Uisce Éireann
Scheme Code	3100PUB1135
County	Waterford
Site Visit Reference No.	SV32158

Report Detail

Issue Date	02/05/2025
Prepared By	Anna Doyle

Site Visit Detail

Date Of Inspection	10/04/2025	**Announced**	No
Time In	11:30	**Time Out**	12:00
EPA Inspector(s) **Additional Visitors**	Anna Doyle Chris Fennell		
Company Personnel	Uisce Éireann: Melissa Devane Waterford County Council (working in partnership with Uisce Éireann): David Hourigan		

Summary of Key Findings

1. There is no 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.

2. No data trends from the online residual monitor were available on site.

3. The site specific target contact time is not being achieved.

Introduction

The Liskealty water treatment plant (WTP) produces approximately 6 m3/d of water serving a population 6 (EDEN figures). The audit focused on the disinfection system at Liskealty WTP.

Supply Zones Areas Inspected

This audit assessed the chlorination disinfection system at Liskealty WTP.

1. Disinfection Audits 2025

		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
	Comment	
	1. 10% Sodium Hypochlorite	

		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?	Yes

		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?	No

		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?	No
	Comment	

1. No data trends from the online residual monitor were available on site.

		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?	No

Comment

1. There are no high/low plant automatic shutdown setpoints in place to prevent inadequately treated water entering supply in the event of a chlorination system failure.

		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?	No

Comment

1. The site specific target contact time could not be verified as a copy of the contact time calculation sheet was not available.

		Answer
1.16	Is the minimum effective contact time of 15 mg. min/l being achieved?	No

Comment

1. The minimum effective contact time of 15 mg. min/l could not be verified as a copy of the contact time calculation sheet was not available.

		Answer
1.17	Is the residual chlorine level ≥ 0.1 mg/l at the extremity of the distribution network?	Yes

		Answer
1.18	Is monitoring of network residual chlorine undertaken several times per week?	Yes

Recommendations

Subject	Audit Recommendation	Due Date	02/06/2025
Action Text	**Uisce Éireann is responsible for ensuring a clean and wholesome supply of drinking water and should implement the following recommendations without delay.** 1. a) Ensure that the target contact time is being achieved, and b) ensure that the effective contact time achieved is 15mg.min/l and that the first connections are receiving appropriately disinfected water. Uisce Eireann should submit a calculation of the effective contact time to the EPA. 2. Install automatic shutdown of the plant linked to the low and high residual chlorine alarm settings. 3. Ensure that residual chlorine trends are available and accessible on site to plant operators via SCADA / HMI. **Actions required by Uisce Éireann** 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. Uisce Éireann should submit a report to the EPA on or before 02/06/2025 detailing the actions taken and planned, with timescales, to close out the above recommendations. The EPA advises that the findings and recommendations from this audit report should, where relevant, be addressed at other public water supplies.		