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	Davidstown
Organisation	Uisce Éireann
Scheme Code	3300PUB1478
County	Wexford
Site Visit Reference No.	SV32163

Report Detail

Issue Date	23/04/2025
Prepared By	Anna Doyle

Site Visit Detail

Date Of Inspection	19/03/2025	**Announced**	No
Time In	11:05	**Time Out**	11:30
EPA Inspector(s) **Additional Visitors**	Anna Doyle Chris Fennell		
Company Personnel	Uisce Éireann: Denis McGrath, Neville Collier. Wexford County Council (working in partnership with Uisce Éireann): Neville Shaw.		

Summary of Key Findings

1. Disinfection consists of chlorination and UV.

2. Results of chlorine residual monitoring were not available onsite. A residual free chlorine concentration of ≥ 0.1 mg/l at the extremity of the distribution network could not be verified.

3. The UV unit was not within the calibration date in accordance with the manufacturer's instructions.

Introduction

The Davidstown WTP produces approximately 16 m3/d of water serving a population 93 (EDEN figures). The audit focused on the disinfection system at Davidstown WTP.

Supply Zones Areas Inspected

This audit assessed the chlorination and UV disinfection system at Davidstown WTP.

1. Disinfection Audits 2025

		Answer
1.1	Did Uisce Éireann confirm the type of chlorine disinfectant in use?	Yes
	Comment	
	1. 10% Sodium Hypochlorite confirmed.	

		Answer
1.2	Are there duty and standby chlorine dosing pumps in place?	Yes

		Answer
1.3	Is there automatic switchover in the event of failure of one of the chlorine dosing pumps?	Yes

		Answer
1.4	Is the chlorine dosing rate flow proportional?	Yes

		Answer
1.5	Is there a continuous residual chlorine monitor, with alarm, to verify chlorine dosing is taking place at the target level?	Yes

		Answer
1.6	Is there a continuous residual chlorine monitor, with alarm, at a suitable sample location after contact time has been completed?	Yes

		Answer
1.7	Can data trends from the online residual monitor be viewed on site?	Yes

		Answer
1.8	Are there low and high chlorine alarm settings on each chlorine monitor?	Yes

		Answer

1.9	Is there a documented alarm response procedure for responding to chlorine alarms?	Yes

		Answer
1.10	Have staff been trained on the chlorine alarm response procedure?	Yes

		Answer
1.11	Are chlorine alarms dialled out via a cascade system to allow a timely response by plant operators?	Yes

		Answer
1.12	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
1.13	Are service due / monitoring instrument calibration dates for the chlorine monitors within date?	Yes

		Answer
1.14	Is the residual chlorine level ≥ 0.1 mg/l at the extremity of the distribution network?	No

Comment

1. Results of chlorine residual monitoring were not available onsite. A residual free chlorine concentration of ≥ 0.1 mg/l at the extremity of the distribution network could not be verified.

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

		Answer
1.16	Is UV treatment used for primary disinfection?	Yes

		Answer
1.17	Are there duty and standby UV units in operation?	Yes

		Answer
1.18	Is there automatic changeover between the duty and standby UV units?	Yes

		Answer
1.19	Is there automatic shut-off of the supply in the event of UV units failing or operating outside of their validated range?	Yes

		Answer
1.20	Is there continuous monitoring of the UV units to verify operation within validation range at all times?	Yes

		Answer
1.21	Can data trends from the online UV monitor(s) be viewed on-site?	Yes

		Answer
1.22	Is there a documented alarm response procedure for responding to UV alarms?	Yes

		Answer
1.23	Have staff been trained on the UV alarm response procedure?	Yes

		Answer
1.24	Are UV alarms dialled out via a cascade system to allow a timely response by plant operators?	Yes

		Answer
1.25	Are service due / monitoring instrument calibration dates for the UV units within date?	No

Comment
1. UV unit calibration due 09/03/2025.

		Answer
1.26	Is the UV disinfection system validated to an appropriate international standard ?	Yes

		Answer
1.27	Did UÉ confirm that the UV disinfection system is operating within the validated range?	Yes

Recommendations

Subject	Audit Recommendations	**Due Date**	23/05/2025
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. Ensure that residual free chlorine concentrations in the network extremities are at least 0.1 mg/l to maintain adequate secondary disinfection. 2. Ensure that the UV units are regularly serviced and calibrated in accordance with the manufacturer's instructions. **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 23/05/2025 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.		