

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	Lios Cearnaigh PWS 052D
Organisation	Uisce Éireann
Scheme Code	1300PUB1028
County	Kerry
Site Visit Reference No.	SV35376

Report Detail	
Issue Date	27/07/2026
Prepared By	Pauline Gillard

Site Visit Detail			
Date Of Inspection	23/06/2026	Announced	Yes
Time In	11:30	Time Out	11:55
EPA Inspector(s)	Pauline Gillard Anna Doyle		
Additional Visitors			
Company Personnel	Uisce Éireann: Shabila Perveen and Martin Smith. EPS (Contractor working with Uisce Éireann): Brendan Hannafin.		

> Summary of Key Findings

1. Disinfection consists of primary UV disinfection and secondary chlorination.
2. There is no automatic switchover in the event of failure of one of the chlorine dosing pumps.
3. Carry out the required PLC upgrade at the DWTP to ensure that there is automatic plant shutdown in the event the UV units drop outside of the validated range.

Uisce Éireann should submit a report to the EPA on or before 27/08/2026 detailing the actions taken and planned, with timescales, to close out the recommendations in this audit report.

> Introduction

The Lios Cearnaigh Water Treatment Plant (WTP) produces approximately 82 m³/d of water serving a population of 24 (EDEN figures). The audit focused on the disinfection system at Lios Cearnaigh WTP.

> Supply Zones Areas Inspected

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



		Answer
1.1	Is chlorination used for primary disinfection?	No
	Comment	
	1. Primary disinfection is by UV treatment.	
		Answer
1.2	Did Uisce Éireann confirm the type of chlorine disinfectant in use?	Yes
	Comment	
	1. 10-15% Sodium Hypochlorite Solution	
		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	
	1. There is no automatic switchover in the event of failure of one of the chlorine dosing pumps. The pumps are switched over manually once a week.	
	Recommendation:	
	1. Install duty and standby chlorine dosing pumps with automatic switchover in the event of the failure of one of the pumps.	
		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
	Comment	
	1. Low alarm set at 0.40 mg/L 2. High alarm set at 1.5 mg/L	
		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 minimum effective contact time of 15 mg. min/l being achieved?	Yes
		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
		Answer
1.19	Is UV treatment used for primary disinfection?	Yes
		Answer
1.20	Are there duty and standby UV units in operation?	Yes
		Answer
1.21	Is there automatic changeover between the duty and standby UV units?	Yes
		Answer
1.22	Is there automatic shut-off of the supply in the event of UV units failing or operating outside of their validated range?	Yes
	Comment 1. Uisce Éireann confirmed after the audit that automatic shut-off is in place at the DWTP but that the Programme Logic Controller (PLC) requires an upgrade. Recommendation: 2. Carry out the required PLC upgrade at the DWTP to ensure that there is automatic plant shutdown in the event the UV units drop outside of the validated range.	
		Answer
1.23	Is there continuous monitoring of the UV units to verify operation within validation range at all times?	Yes

		Answer
1.24	Can data trends from the online UV monitor(s) be viewed on-site?	No
	Comment 1. The system is too old so data trends from the online UV monitor(s) cannot be viewed on-site. Recommendation: 2. Ensure that the UV system operates within its validated range at all times and that the performance of the UV system can be verified at all times by providing access to trended operational data.	
		Answer
1.25	Is there a documented alarm response procedure for responding to UV alarms?	Yes
		Answer
1.26	Have staff been trained on the UV alarm response procedure?	Yes
		Answer
1.27	Are UV alarms dialled out via a cascade system to allow a timely response by plant operators?	Yes
		Answer
1.28	Are service due / monitoring instrument calibration dates for the UV units within date?	Yes
		Answer
1.29	Is the UV disinfection system validated to an appropriate international standard ?	Yes
		Answer
1.30	Did UÉ confirm that the UV disinfection system is operating within the validated range?	Yes

Recommendations

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 is responsible for ensuring a clean and wholesome supply of drinking water and should implement the recommendations raised in this report without delay.

Response to Audit Report

Uisce Éireann should submit a report to the EPA on or before the date specified in the Summary of Key Findings detailing the actions taken and planned, with timescales, to close out the recommendations in this audit report.

The EPA advises that the findings and recommendations from this report should, where relevant, be addressed at other public water supplies.

Publication of Reports

Audit reports are published to the EPA's website, www.epa.ie, typically 1 month after the audit report is issued to Uisce Éireann.