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	Old Leighlin
Organisation	Uisce Éireann
Scheme Code	0100PUB1103
County	Carlow
Site Visit Reference No.	SV33298

Report Detail

Issue Date	11/12/2025
Prepared By	Sean O'Leary

Site Visit Detail

Date Of Inspection	13/11/2025	**Announced**	Yes
Time In	13:00	**Time Out**	14:00
EPA Inspector(s) **Additional Visitors**	Sean O'Leary		
Company Personnel	Uisce Éireann: Denis McGrath and Larry Bolger. Carlow County Council (working in partnership with Uisce Éireann): Michael Cullen		

Summary of Key Findings

1. A UV disinfection system was installed at the Old Leighlin Water Treatment Plant in Quarter 1 2019 and prior to its commissioning it was disabled and taken out of use due to power issues causing the UV bulbs to blow.

2. The setpoint for the “Low Low” residual chlorine shutdown is set at 0.2 mg/l. This is less than the minimum residual chlorine level required by the contact time calculation.

3. There is no documented site specific alarm response procedure in place at the treatment plant.

Introduction

The Old Leighlin Public Water Supply (PWS) supplies an average of 14 m3/day of water, serving a population of 70 (EDEN).

The source for the supply is one onsite borehole. Treatment consists of primary chlorination and secondary UV disinfection (the latter currently not operational).

The audit was undertaken to assess Uisce Éireann’s performance in producing clean and wholesome water with a focus on the alarms and inhibits in place at the water treatment plant (WTP).

Supply Zones Areas Inspected

The onsite borehole, ultraviolet disinfection system, chlorination dosing system and pumps at the water treatment plant were inspected.

1. Source Protection

		Answer
1.1	Is the abstraction source(s) adequately protected against contamination?	No

Comment

1. The onsite borehole is inadequately capped and sealed in line with EPA guidance.

2. Alarms, Inhibits & Oversight Audits 2025

		Answer
2.1	Are suitable plant shutdowns/inhibits in place to prevent inadequately treated water entering the distribution network?	No

Comment

1. The low low chlorine shutdown (0.20 mg/l) setpoint on the CL002 chlorine monitor on the final water is lower than the minimum free chlorine concentration of 0.40 mg/l as detailed in the site specific chlorine contact time calculation sheet.

		Answer
2.2	Is there a documented procedure for responding to specific alarms?	No

Comment

1. There is no documented alarm response procedure for responding to specific alarms at the WTP.

3. Site Specific Issues

		Answer
3.1	Has the protozoal compliance log treatment requirement been identified for the water treatment plant?	No

Comment

1. Uisce Éireann indicated that the Old Leighlin WTP has a 3 log treatment requirement subject to completion of a source and sanitary survey.

		Answer
3.2	Is the UV disinfection system in operation?	No

Comment

1. A UV disinfection system was installed in 2019 under the County Carlow Disinfection Programme to provide secondary disinfection including 3 log inactivation of *Cryptosporidium* at the Old Leighlin WTP.

2. Uisce Éireann confirmed the UV disinfection system was turned off before commissioning in Q1 2019 due to power faults that blew the UV bulbs shortly after installation.

3. Uisce Éireann confirmed that monitoring of the onsite borehole as per the Uisce Éireann Rationale for Determining the Frequency of *Cryptosporidium* in Public Water Supplies is ongoing.

Recommendations

Subject	Audit Recommendations	**Due Date**	11/01/2026
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. Investigate the feasibility of reinstating the UV disinfection system and if reinstated ensure it operates within its validated range at all times. 2. Ensure the borehole is adequately capped. Uisce Éireann should have regard to EPA Advice Note No. 14: Borehole Construction and Wellhead Protection when carrying out these works. 3. Ensure that: (i) a formal site specific alarm response procedure is in place at the treatment plant, and (ii) provide training to relevant staff (including relief and temporary staff) on the requirements of the alarm response procedure. 4. Complete (i) a Source and Sanitary Survey to confirm the log treatment requirement for the the Old Leighlin WTP, and (ii) provide a timeframe to address any treatment log deficit that exists, and (iii) Continue to monitor the supply in accordance with UE's Rationale for determining the Frequency of Crypto sporidium Monitoring in Public Water Supplies. 5. Review the low and low low chlorine alarm settings for chlorine monitor CL002 to ensure that the settings reflect the minimum free chlorine concentration required at the contact time validation point as per the site specific contact time calculation sheet. **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 11/01/2026 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.		