

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	Coolanaugh PWS
Organisation	Uisce Éireann
Scheme Code	1600PUB0009
County	Laois
Site Visit Reference No.	SV32005

Report Detail	
Issue Date	13/06/2025
Prepared By	Derval Devaney

Site Visit Detail			
Date Of Inspection	29/05/2025	Announced	No
Time In	11:05	Time Out	12:20
EPA Inspector(s)	Derval Devaney		
Additional Visitors			
Company Personnel	Uisce Éireann (UÉ): Edward Haythornthwaite, Maria Lloyd. Laois County Council (working in partnership with UÉ): Tom O'Carroll, Brendan Garry, PJ Fitzpatrick.		

> Summary of Key Findings

1. The audit found that the water treatment plant serving Coolanaugh Public Water Supply was operating satisfactorily on the day with good management systems and record-keeping in place.
2. The site specific alarm response procedure needs to be updated to include UV treatment infrastructure controls.

> Introduction

The Coolanaugh Public Water Supply (PWS) serves on average 12 m³/d of treated water to approximately 31 people (13 houses) in Coolanaugh, Co Laois. The raw water is abstracted from a borehole next to the water treatment plant (WTP) and undergoes disinfection with UV treatment and sodium hypochlorite.

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 WTP and the procedures in place to ensure appropriate oversight of treatment process.

> Supply Zones Areas Inspected

The audit assessed alarm and automatic shutdown set-points for the treatment process and process verification data and trends from continuous online monitors. Procedures relating to the management and oversight of the water treatment process were also inspected, in addition to the borehole and disinfection process.



1. Alarms, Inhibits & Oversight Audits 2025

1.1

		Answer
Were online monitors within their calibration dates?		Yes
Comment		
<ol style="list-style-type: none">1. The Coolanaugh Water Treatment Plant underwent a disinfection upgrade within the past two years. This included the installation of ultraviolet (UV) treatment (duty / standby UV units; 2. No. Visades T80F sized for 2.83 m3/hour) for primary disinfection.2. Sodium hypochlorite, dosed post UV treatment, provides secondary disinfection.3. The UV treatment was commissioned around September 2024. As a result, the UV units have not yet been calibrated and therefore do not display calibration service stickers.4. The UV units (UV No. 1 and UV No. 2) were not labelled.5. The UV validation certificate shows for a maximum flow of 2.83 m3/hour; UVT must be 74.11 % or greater, and UVI 32.8W/m2 (3.28 mW/cm2) or greater for adequate disinfection.6. The UV intensity and UVT trends were reviewed during the audit and noted to be adequate. It was however noted that from 6 April - 6th May 2025 the UVI output from UV Unit No. 1 was consistently higher (at 9 mW/cm2) than that from UV Unit No. 2 (at 5.5 mW/cm2). UÉ stated it would investigate the difference in UVI output at the next service due.7. On the day of the audit adequate disinfection was being achieved with a UVT of 99.34%, UVI of 88.8 W/m2 (8.88 mW/cm2), a flow of 0.17 m3/hour and turbidity of 0.1 NTU.8. While UV lamp hours were displayed on-site, (UV 1 lamp: 6,538 hours and UV 2 lamp: 6,484 hours); the recommended lamp lifespan hours for each UV unit was not available during the audit.		

1.2

		Answer
Is there a documented procedure for responding to specific alarms?		Yes
Comment		
<ol style="list-style-type: none">1. While there was a procedure in place and displayed at the plant on how to respond to specific alarms, it needed to be updated to include how to respond to alarms arising from UV treatment.		

Recommendations

Subject	Coolanaugh PWS - 2025 Audit Recommendations	Due Date	30/07/2025
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"><ol style="list-style-type: none">Affix labels to the UV units (UV 1 and UV 2) on-site;Service and calibrate the UV units in accordance with the manufacturers recommendations and investigate the UVI output difference between UV Unit 1 and UV Unit 2;Once servicing is complete, affix a service sticker to the UV units indicating date of service and when the next service is due;Ensure UV lamp run hours remaining are tracked, and lamps are replaced in accordance with manufacturers recommendations.Update the site-specific alarm response procedure to include actions to take when an alarm or plant shutdown is activated relating to UV treatment. <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 the above due date 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>		