

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	Abbeyleix 2 PWS
Organisation	Uisce Éireann
Scheme Code	1600PUB1102
County	Laois
Site Visit Reference No.	SV32003

Report Detail	
Issue Date	22/07/2025
Prepared By	Derval Devaney

Site Visit Detail			
Date Of Inspection	03/07/2025	Announced	No
Time In	11:10	Time Out	13:00
EPA Inspector(s)	Derval Devaney		
Additional Visitors			
Company Personnel	Uisce Éireann (UÉ): Linda Doran, Maria Lloyd. Laois County Council (working in partnership with UÉ): Larry Gittens, Francis Hegarty.		

> Summary of Key Findings

1. The chlorine monitor is not located after the Ct point to confirm that adequate disinfection is being achieved.
2. There was no standard operating procedure (SOP) for verifying alarms and inhibits following maintenance activities.

> Introduction

The Abbeyleix 2 Public Water Supply (PWS) serves on average 273 m³/d of treated water to approximately 661 people (EDEN figures) in Co Laois. The raw water is abstracted from spring sources (named "Five Wells") located in a field approximately 200 m from the water treatment plant (WTP). The spring source is gravity fed by pipe to the WTP. Treatment consists of disinfection by sodium hypochlorite (primary disinfection) before being gravity fed to the network.

The plant has undergone various upgrades within the last number of years; including source protection works at the spring sources, installation of four contact tanks at the water treatment plant and a unit which houses a UV treatment system.

It is planned that the UV disinfection system will provide primary disinfection, but it is not yet operational due to delays associated with enhancing the power supply to the WTP.

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 submitted as part of the pre-audit information. Procedures relating to the management and oversight of the water treatment process were also inspected, in addition to the disinfection process. The spring sources off site were not visited.



1. Alarms, Inhibits & Oversight Audits 2025

1.1

Does the calculation sheet show adequate chlorine contact time?

Answer

Yes

Comment

1. The contact time (Ct) calculation sheet for primary disinfection shows adequate chlorine contact time. However, the required contact time is achieved within the distribution network, specifically in a pipeline extending approximately 800 metres from the WTP to the first customer.
2. It was clarified after the audit that the four additional chlorine contact tanks at the WTP, installed as part of an upgrade in the last number of years, were included in the Ct calculation. The first tank in the Ct calculation sheet represents these four Ct tanks (equivalent to 1 tank divided into 4 with baffles) and the second tank (8 x 2 m unbaffled) represents the reservoir below ground, also located at the WTP.

1.2

Is there a chlorine residual monitor located after contact time for verification of primary disinfection?

Answer

No

Comment

1. The chlorine monitor is located in the below ground reservoir at the WTP, and not at the end of the 800m pipeline in the distribution network after Ct has elapsed.
2. See Q 1.1 for more detail.

1.3

Are there appropriate procedures covering verification of alarms and inhibits status following maintenance or other work on site?

Answer

No

Comment

1. While UÉ has a sign-in and sign-out policy for contractors attending the WTP, there is no standard operating procedure (SOP) in place to verify alarms and plant inhibits following on-site work.

Recommendations

Subject	Abbeyleix 2 PWS Audit 2025 Recommendations	Due Date	03/09/2025
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> <p>Disinfection:</p> <ol style="list-style-type: none">1. Ensure the continuous chlorine monitor is located after Ct has elapsed to verify disinfection is adequate.2. Ensure the installation of UV treatment is advanced in a timely manner to enhance protection of human health. <p>Procedures:</p> <ol style="list-style-type: none">3. Establish a standard operating procedure (SOP) for verifying alarms and inhibits following maintenance or any other on-site work. <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>		