

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	Kilkelly PWS
Organisation	Uisce Éireann
Scheme Code	2200PUB1015
County	Mayo
Site Visit Reference No.	SV29679

Report Detail	
Issue Date	26/04/2024
Prepared By	Veronica Boland

Site Visit Detail			
Date Of Inspection	09/04/2024	Announced	Yes
Time In	14:00	Time Out	15:40
EPA Inspector(s)	Veronica Boland Ruth Barrington		
Additional Visitors			
Company Personnel	Uisce Éireann: Brian Conmy, Philip Sheridan. Mayo County Council (working in partnership with Uisce Éireann): Deirdre Beattie, Eddie Munnelly, Declan Shannon		

> Summary of Key Findings

1. The audit found that the Kilkelly PWS WTP alarms and inhibits were in place and the WTP appeared to be operating well in providing clean and wholesome water to the public supply.
2. The access hatch covers of the raw water sump and spring were rusty and in need of replacement.

> Introduction

The Kilkelly public water supply water treatment plant (WTP) abstracts water from a surface spring adjacent to the WTP, produces approximately 600 – 700 m³ /day of treated water and serves a population of approximately 1,600 (EDEN figure is 1056).

The water treatment process consists of UV disinfection and secondary chlorination. The treated water is pumped to a water reservoir providing 700 m³ storage.

The audit was undertaken to assess Uisce Éireann's (UÉ) 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 processes.

> Supply Zones Areas Inspected

The audit included a site visit of the treatment processes at Kilkelly water treatment plant, the surface spring and raw water sump adjacent to the WTP.



1. Source Protection

	Answer	
1.1	Is the abstraction source(s) adequately protected against contamination?	No
Comment		
1. The access hatch covers on the raw water spring and sumps were rusty and unsealed.		



2. Alarms, Inhibits & Oversight Audits 2024

		Answer
2.1	Is suitable continuous monitoring in place to verify treatment performance?	Yes
Comment		
<p>1. UV treatment is the primary form of disinfection for Kilkelly public water supply. The Trojan SWIFTsc B08 duty UV unit is ONORM validated, operates on a UV Intensity Set Point approach where the target dose of 40 mJ/cm² is delivered at a constant lamp intensity of 100% and a rated flow of up to 44 m³/hr at a UVT of 85%. The UV unit has an automated shutdown linked to UVI and validation envelope.</p> <p>2. The supply is secondary disinfected with sodium hypochlorite to maintain at least 0.1 mg/l of residual chlorine in the distribution network at all times. The chlorine residual verification monitoring point (monitor CL002) is located on the outlet of the reservoir.</p>		

		Answer
2.2	Are suitable plant shutdowns/inhibits in place to prevent the entry of inadequately treated water entering the distribution network?	No
Comment		
<p>1. The time delays in place for high and low chlorine plant alarms and shutdowns are set at 600 seconds (10 minutes) and do not meet the 5 minute time delay recommended in the EPA <i>Water Treatment Manual: Disinfection</i>.</p>		

Recommendations

Subject	Kilkelly Audit - AIO - 09 April 2024	Due Date	24/05/2024
Action Text	<p>Uisce Éireann is responsible for ensuring a clean and wholesome supply of drinking water and should implement the following recommendation without delay.</p> <ol style="list-style-type: none">1. Replace the access hatch covers of the raw water sumps and spring. <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 24 May 2024 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>		