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	Roscommon Central Water Supply Scheme
Organisation	Uisce Éireann
Scheme Code	2600PUB1002
County	Roscommon
Site Visit Reference No.	SV30545

Report Detail

Issue Date	15/11/2024
Prepared By	David O'Malley

Site Visit Detail

Date Of Inspection	16/10/2024	**Announced**	Yes
Time In	12:30	**Time Out**	13:45
EPA Inspector(s)	David O'Malley Jennifer Brady		
Additional Visitors	Elaine Greenan		
Company Personnel	Uisce Éireann: Vinny McGrath and Marie Finneran. Glanua (working in partnership with Uisce Éireann): John Finn, Noel Feeney, Shane O'Donnell and Aisling Callaghan.		

Summary of Key Findings

1. Disinfection consists of chlorination and UV.

2. There was no standby UV disinfection unit at water treatment plant.

Introduction

The Roscommon Regional Water Supply Scheme - Ballinagard Public Water Supply (PWS) produces approximately 2,818 m3/d of water serving a population of 7,364 (EDEN 2024). The audit focused on the disinfection system at Ballinagard PWS.

Supply Zones Areas Inspected

This audit assessed the chlorination and UV disinfection system at Ballinagard PWS.

1. Disinfection Audits 2024

		Answer
1.1	Is chlorination used for primary disinfection?	Yes

		Answer
1.2	Did Uisce Éireann confirm the type of chlorine disinfectant in use?	Yes
	Comment	
	Sodium hypochlorite 10-14%	

		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?	Yes

		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

		Answer
1.10	Is there a documented alarm response procedure for responding to chlorine alarms?	Yes

Comment

A documented alarm response procedure is posted it at water treatment plant, but the low chlorine shutdowns were set below the effective contact time.

		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

Comment

Low and high chlorine automatic shutdowns are in place. The low chlorine alarms shutdowns were set below the effective contact time.

		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 residual chlorine level ≥ 0.1 mg/l at the extremity of the distribution network?	Yes

		Answer

1.17	Is monitoring of network residual chlorine undertaken several times per week?	Yes

		Answer
1.18	Is UV treatment used for primary disinfection?	No
	Comment	
	Secondary disinfection.	

		Answer
1.19	Are there duty and standby UV units in operation?	No
	Comment	
	Only duty UV in operation.	

		Answer
1.20	Is there automatic shut-off of the supply in the event of UV units failing or operating outside of their validated range?	Yes

		Answer
1.21	Is there continuous monitoring of the UV units to verify operation within validation range at all times?	Yes

		Answer
1.22	Can data trends from the online UV monitor(s) be viewed on-site?	Yes

		Answer
1.23	Is there a documented alarm response procedure for responding to UV alarms?	Yes

		Answer
1.24	Have staff been trained on the UV alarm response procedure?	Yes

		Answer
1.25	Are UV alarms dialled out via a cascade system to allow a timely response by plant operators?	Yes

		Answer
1.26	Are service due / monitoring instrument calibration dates for the UV units within date?	Yes

		Answer
1.27	Is the UV disinfection system validated to an appropriate international standard ?	Yes

		Answer
1.28	Did UÉ confirm that the UV disinfection system is operating within the validated range?	Yes

Recommendations

Subject	Audit recommendations	**Due Date**	13/12/2024
Action Text	**Uisce Éireann is responsible for ensuring a clean and wholesome supply of drinking water and should implement the following recommendation without delay.** 1. Ensure that there are duty and standby UV disinfection units with automatic changeover or plant shutdown in the event of failure of one of the UV disinfection units. 2. Ensure that the alarms and shutdowns in the documented alarm response procedure for responding to chlorine alarms are set at an appropriate level. **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 13/12/2024 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.		