

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	Dunmanway
Organisation	Uisce Éireann
Scheme Code	0500PUB4404
County	Cork
Site Visit Reference No.	SV29545

Report Detail	
Issue Date	06/11/2024
Prepared By	Paul Buckley

Site Visit Detail			
Date Of Inspection	08/10/2024	Announced	Yes
Time In	10:30	Time Out	11:45
EPA Inspector(s)	Paul Buckley		
Additional Visitors			
Company Personnel	Uisce Éireann: Sharon O'Dwyer, Kieran McCarthy Cork County Council (working partnership with Uisce Éireann): Séamus Sutton, Michael Russell, Ray Coakley.		

> Summary of Key Findings

1. The Dunmanway water treatment plant was operating satisfactorily on the day of the audit.
2. There are no automatic backwashing facilities in place for the 2 no. filters based on time, turbidity, and headloss. Currently the 2 no. filters are manually backwashed once every 48 hours. Shutdowns are in place should the turbidity exceed 0.3 NTU.
3. The source and sanitary survey has not been completed for the Dunmanway Public Water Supply and the protozoal log treatment requirement has not been determined. Monitoring for *Cryptosporidium* is being conducted as per the Uisce Éireann monitoring rationale and there have been no detections to date.

> Introduction

The Dunmanway Public Water Supply (PWS) supplies an average of 717 m³/day of water, serving a population of 2,019 people.

The supply is sourced from Coolkellure Lake, which is approximately 6 kms away from the plant. Treatment consists of coagulation, flocculation, rapid gravity filtration, pH correction, chlorination and fluoridation.

The audit was undertaken to assess Uisce Éireann's performance in producing clean and wholesome water with a focus on the protozoal barriers in place at the water treatment plant.

> Supply Zones Areas Inspected

The raw water intake, PAC dosing point, static mixer, contact tank, 2 no. settling tanks, 2 no. filters, fluorosilic acid dosing point, chlorine dosing point, soda ash dosing point and the chemical fill points at the water treatment plant were inspected.



1. Protozoal Barriers Audits 2024

	Answer	
1.1	Did staff confirm they have received training on the site specific incident response and incident escalation process?	No
Comment		
Up to the day of the audit, new staff onsite had not received training on the site-specific incident response and incident escalation process.		

	Answer	
1.2	Has UÉ identified the protozoal compliance log treatment requirement for the water treatment plant?	No
Comment		
The protozoal compliance log treatment requirement has not been identified for the water treatment plant. The source and sanitary survey has not been completed. Uisce Éireann stated that the survey is due to be completed by the end of Q4 2024. <i>Cryptosporidium</i> monitoring is underway for the supply and there have been no detections to date.		

	Answer	
1.3	Are the filters designed and managed in accordance with EPA guidance?	No
Comment		
There are 2 no. rapid gravity filters at the water treatment plant. The filter media used for both filters is sand with a gravel support layer. The depth of the sand layer was confirmed to be 800 mm which is below the recommended minimum depth of 1000 mm as per the <i>EPA Water Treatment Manual; Filtration</i> . Filter backwashing is conducted manually every 48 hours. There are no facilities in place for automatic backwashing based on turbidity, time, or headloss. There is an automatic shutdown in place based on high turbidity, set at 0.3 NTU.		

	Answer	
1.4	Are there suitable plant controls to prevent inadequately treated water entering the distribution network?	No
Comment		
Filter backwashing is conducted manually every 48 hours. There are no facilities in place for automatic backwashing based on turbidity, time, or headloss. There is an automatic shutdown in place based on high turbidity, set at 0.3 NTU.		

Recommendations

Subject	Dunmanway PWS Audit Recommendations 08102024	Due Date	06/12/2024
Action Text	<p>Uisce Éireann is responsible for ensuring a clean and wholesome supply of drinking water and should implement the following recommendation(s) without delay.</p> <ol style="list-style-type: none">i) Complete the source and sanitary survey and confirm the protozoal log treatment requirement for the supply; (ii) confirm how any protozoal log deficit, if identified, will be addressed and (iii) continue monitoring for <i>Cryptosporidium</i> as per the Uisce Éireann Rationale for Determining the Frequency of <i>Cryptosporidium</i> in Public Water Supplies.i) Assess the feasibility of increasing the filter media depth in the filters to meet the recommended minimum of 1m operating depth, and ii) assess the feasibility of installing automatic backwashing of the 2 no. individual filters based on turbidity, headloss, and time.Ensure that all new staff have received training on the site-specific incident response and incident escalation process. <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 06/12/2024 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>		