

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	DCC Zone 6
Organisation	Uisce Éireann
Scheme Code	0700PUB1007
County	Dublin
Site Visit Reference No.	SV29657

Report Detail	
Issue Date	08/10/2024
Prepared By	Michelle Roche

Site Visit Detail			
Date Of Inspection	17/09/2024	Announced	No
Time In	10:35	Time Out	12:30
EPA Inspector(s)	Michelle Roche		
Additional Visitors			
Company Personnel	Uisce Éireann: Edward Haythornthwaite, Joseph Moran, Agnes Wojdowska and Trevor Smullen. Veoila working in partnership with Uisce Éireann: Charlotte O'Hare James Connolly		

> Summary of Key Findings

1. Vartry Water Treatment Plant was operating satisfactorily on the day of the audit.
2. The chlorine contact time calculation did not reflect the maximum flow allowable through the water treatment plant. The chlorine contact time calculation should be updated to reflect the maximum flow allowable through the water treatment plant and in the interim Uisce Éireann should ensure that the first connections are receiving adequately disinfected drinking water at all times in accordance with the WHO specified contact time of 15mg.min/l.

> Introduction

Vartry Water Treatment Plant is the fourth largest water treatment plant in Ireland and provides drinking water to over 200,000 people in North Wicklow and South Dublin. Treatment at the plant comprises the following

- Raw water conditioning to maintain the optimum coagulation pH;
- Coagulation, flocculation and clarification across 4 Dissolved Air Flotation (DAF) units;
- Rapid gravity filters across 8 dual media (sand & anthracite) rapid gravity filters;
- UV disinfection for protozoal inactivation;
- Chlorine disinfection to provide primary disinfection using sodium hypochlorite;
- Treated water pH correction.

The audit was conducted as a full audit of the water treatment plant with a focus on the protozoal barriers in place at the water treatment plant.

> Supply Zones Areas Inspected

The audit inspected all aspects of the treatment process. Continuous online turbidity trends, UV trends and chlorine residual trends were assessed.



1. Protozoal Barriers Audits 2024

1.1

Was the chlorine contact time calculation correct?

Answer

No

Comment

1. The chlorine contact time calculation contained a maximum flow through the treatment plant of 3,150m³/hour. A review of water treatment plant trends found a maximum of flow of 3,758m³/hour through the treatment plant on 11/09/2024.

2. The chlorine contact time calculation should be amended to reflect the maximum flow allowable through the water treatment plant.

Recommendations

Subject	Vartry Audit Recommendations	Due Date	08/11/2024
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> <p>1. Update the chlorine contact time calculation to reflect the maximum flow allowable through the water treatment plant and submit a copy of the contact time calculation to the EPA. In the interim, ensure that the first connections are receiving adequately disinfected drinking water at all times in accordance with the WHO specified contact time of 15mg.min/l.</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 08/11/2024 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>		