

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	Inishowen West
Organisation	Uisce Éireann
Scheme Code	0600PUB1005
County	Donegal
Site Visit Reference No.	SV34848

Report Detail	
Issue Date	07/05/2026
Prepared By	Veronica Boland

Site Visit Detail			
Date Of Inspection	16/04/2026	Announced	Yes
Time In	10:30	Time Out	12:40
EPA Inspector(s)	Veronica Boland		
Additional Visitors			
Company Personnel	Uisce Éireann: Anthony Harkin, Stephen McGlynn, Geraldine Friel, Fionnuala Bonner. Donegal County Council (working in partnership with Uisce Éireann): Brian McCallian, Colomba Heena.		

> Summary of Key Findings

1. There was an issue with actuator valves in two of the three rapid gravity filters which compromised the effectiveness of the primary protozoal barrier at the water treatment plant (WTP).
2. There was no combined filtered water turbidity monitor with appropriate alarms and inhibits installed at the WTP.
3. There was no automatic shutdown of the WTP for high and low chlorine residual post contact time.

Uisce Éireann should submit a report to the EPA on or before 08/06/2026 detailing the actions taken and planned, with timescales, to close out the 10 recommendations in this audit report.

> Introduction

The Inishowen West public water supply (PWS) is supplied from the Meendoran water treatment plant (WTP) and produces approximately 2,846m³/day of treated water, serving a population of 3,337. The raw water source is Lough Fad West. Treatment at the WTP consists of pre-treatment pH correction, coagulation, flocculation, clarification, rapid gravity filtration, chlorination and post treatment pH correction and orthophosphoric acid dosing.

The audit was undertaken to assess Uisce Éireann's performance in producing clean and wholesome water with a focus on operations.

> Supply Zones Areas Inspected

Treatment processes and chemical storage areas.



1.1

	Answer
Are the filters designed and managed in accordance with EPA guidance?	No
Comment	
<ol style="list-style-type: none"> 1. There were 3 no. rapid gravity filters (RGF) at Meendoran WTP which were acting as the primary protozoal barrier at the water treatment plant (WTP). The filter media was replaced the week prior to the audit with all filter sand media depths at 800 mm. Uisce Éireann noted that, while below the EPA recommended media depth of 1000 mm, an increase in media depth is constrained by the height of the filter weir and would require structural modification to the weir height to facilitate increasing the depth of the media to greater than 800mm. 2. Each RGF had a turbidity shutdown setpoint of 0.3 NTU with a 15 minute time delay. 3. There was no combined filtered water turbidity monitor at the WTP. 4. Backwashing of each filter was carried out manually on a time basis only (every 24 hours), and not linked to turbidity or headloss. 5. Turbidity trend data reviewed for the individual RGFs indicated that there were turbidity spikes above 1 NTU on a number of occasions. In this regard, staff advised that there were issues with the closure of actuator valves on two of the RGFs. This issue with the RGFs compromised the effectiveness of the primary protozoal barrier at the water treatment plant (WTP) and needs to be addressed as a matter of urgency. 6. Turbidity readings on the day of audit were: RGF 1 = 0.104 NTU; RGF 2= 0.153 NTU; RGF 3= 0.119 NTU. 	
Recommendations:	
<ol style="list-style-type: none"> 1. Notify the HSE in relation to the issue with the actuator valves and potential compromise of the protozoal barrier at the WTP. 2. Undertake an investigation of the RGF valves, and implement all necessary remedial works to protect the protozoal barrier at the WTP. 3. Install a continuous turbidity monitor with appropriate alarms and inhibits on the combined filtered water to verify that the plant operates in accordance with the log credit approach as set out in the <i>EPA Water Treatment Manual: Filtration</i>. 4. Install automatic filter backwash on all filters at the WTP linked to turbidity, headloss and time as per <i>EPA Water Treatment Manual: Filtration</i>. 	



	Answer	
2.1	Is there a suitable monitoring frequency for residual chlorine in the network with records available?	No
Comment		
1. Records reviewed of monitoring for residual chlorine in the network indicated compliant results, however monitoring is only carried out once a week.		
Recommendation:		
5. Carry out monitoring of residual chlorine several times a week at different points of the network, including extremities, to ensure a minimum residual chlorine of 0.1 mg/l is maintained.		

	Answer	
2.2	Are suitable plant shutdowns/inhibits in place to prevent the entry of inadequately treated water entering the distribution network?	No
Comment		
1. There were no plant shutdowns linked to the chlorine verification monitor post contact time (CL002) in accordance with the <i>EPA Water Treatment Manual: Disinfection</i> .		
2. The final water pH monitor had a linked 'High' shutdown of pH 9, however there was no shutdown linked to 'Low' pH.		
Recommendations:		
6. Install appropriate high and low plant alarm and shutdown setpoints based on residual chlorine levels post-contact time at the treatment plant to prevent inadequately treated water entering supply. Refer to <i>EPA Water Treatment Manual: Disinfection</i> .		
7. Install a shutdown linked to final water low pH.		

	Answer	
2.3	Are suitable alarm settings in place to alert operators to deteriorating water quality and/or the failure of a critical treatment process?	No
Comment		
1. While there were some plant shutdown setpoints in place at the WTP, there was an absence of warning alarm setpoints on treatment processes to alert operators to deteriorating water quality or the failure of critical treatment processes before a plant shutdown occurs.		
Recommendation:		
8. In addition to shutdown alarms, consider installing appropriate warning alarms at the treatment plant to alert operators of deteriorating water quality or problems with a critical treatment process. Refer to <i>EPA Water Treatment Manuals: Filtration and Disinfection</i> .		

2.4

	Answer
Are online monitors operational?	No
Comment	
<ol style="list-style-type: none">1. The raw water ammonia monitor was not operational on the day of the audit.2. The raw water UVT monitor was not operating correctly. While the monitor calibration/servicing was up to date, the monitor was displaying 'Fault: Humidity'.3. The streaming current monitor (SCM/'PI system') for controlling automatic coagulant dosing was not operational. Staff advised that there were ongoing issues with the SCM that they were trying to resolve, and that further jar testing would be undertaken as part of this. A contractor was also scheduled to visit the site to implement software changes to the SCM system. <p>Recommendations:</p> <ol style="list-style-type: none">9. Repair or replace the raw water UVT monitor and ensure that all monitors are maintained in proper working order.10. Restore the Streaming Current Monitor to operation so that coagulation-flocculation-clarification processes at the WTP are optimized to respond to changes in raw water quality.	

Recommendations

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 is responsible for ensuring a clean and wholesome supply of drinking water and should implement the recommendations raised in this report without delay.

Response to Audit Report

Uisce Éireann should submit a report to the EPA on or before the date specified in the Summary of Key Findings detailing the actions taken and planned, with timescales, to close out the recommendations in this audit report.

The EPA advises that the findings and recommendations from this report should, where relevant, be addressed at other public water supplies.

Publication of Reports

Audit reports are published to the EPA's website, www.epa.ie, typically 1 month after the audit report is issued to Uisce Éireann.