

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	Castletown (Meath County Council)
Organisation	Uisce Éireann
Scheme Code	2300PUB1003
County	Meath
Site Visit Reference No.	SV30460

Report Detail	
Issue Date	07/10/2024
Prepared By	Lisa Noone

Site Visit Detail			
Date Of Inspection	18/09/2024	Announced	Yes
Time In	11:00	Time Out	12:00
EPA Inspector(s)	Lisa Noone		
Additional Visitors			
Company Personnel	Uisce Éireann: Joseph Moran, Jamie Blacoe, Dermot McCormack		

> Summary of Key Findings

1. The audit found that Castletown Water Treatment Plant was operating satisfactorily and providing good quality water.
2. The alarm and inhibit setpoints for turbidity could not be confirmed by Uisce Éireann at the time of the audit.
3. The chlorine monitor was not in operation and requires repair or replacement.

> Introduction

The Castletown Public Water Supply (PWS) produces circa. 9 m³/day of water serving a population of approximately 150 people. Raw water is abstracted from a single borehole located at the Castletown Water Treatment Plant (WTP) and treatment consists of inline filtration, primary disinfection via UV, and secondary disinfection by chlorination.

The audit was undertaken to assess Uisce Éireann's performance in producing clean and wholesome water with a focus on the alarms and inhibits in place at the water treatment plant WTP and the procedures in place to ensure appropriate oversight of treatment processes.

> Supply Zones Areas Inspected

The borehole and treatment processes on-site were inspected as part of the audit.



1. Alarms, Inhibits & Oversight Audits 2024

	Answer	
1.1	Were online monitors operational?	No
Comment		
1. The chlorine monitor was not operational at the time of the audit. Handheld chlorine readings are currently being taken on a daily basis pending repair or replacement of the monitor.		

	Answer	
1.2	Are suitable alarm settings in place to alert operators to deteriorating water quality or the failure of a critical treatment process?	No
Comment		
1. Alarms and inhibits were in place at the WTP for turbidity as follows: <ul style="list-style-type: none">• high (alarm): 0.8 NTU (time delay 6 minutes)• high high (shutdown): 1 NTU (time delay 6 minutes)• high (alarm): 1.5 NTU (time delay 3 minutes)• high high (shutdown): 2 NTU (time delay 3 minutes)		
2. Operational staff could not confirm what turbidity alarms and inhibits were enabled. Appropriate setpoints should be in place to allow a timely and effective response by operational staff to ensure a turbidity of less than 1NTU prior to disinfection.		

	Answer	
1.3	Are dial out arrangements suitable to allow a timely response?	No
Comment		
1. Critical alarms are dialled-out on a group-basis to the site caretakers and operational personnel. Alarms are responded to on a hierarchical basis, depending on who is on-call, however there is no way of verifying that alarms have been responded to.		

	Answer	
1.4	Are there appropriate procedures covering verification of alarms and inhibits status following maintenance or other work on site?	No

Recommendations

Subject	Castletown PWS 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 recommendations without delay.</p> <ol style="list-style-type: none">1. Repair or replace the chlorine monitor and ensure it is appropriately maintained.2. Review and confirm alarm and inhibit set points and time delays in place for turbidity.3. Develop a procedure and deliver appropriate training covering the verification of alarms/shutdowns status following maintenance or other works completed at the treatment plant4. Put in place an appropriate cascade system for responding to alarms generated at the plant which allows for verification that an alarm has been responded to. <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 the above date 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>		