

Site Visit Report

Under the European Union (Drinking Water) Regulations 2014 as amended, the Environmental Protection Agency is the supervisory authority in relation to Irish Water and its role in the provision of public water supplies. This Audit was carried out to assess the performance of Irish Water in providing clean and wholesome water to the visited public supply.

The audit process is a sample on a given date of the facility's operation. Where a finding against a particular issue has been reported this should not be construed to mean that this issue is fully addressed.

Water Supply Zone	
Name of Installation	Doneraile
Organisation	Irish Water
Scheme Code	0500PUB1104
County	Cork
Site Visit Reference No.	SV26157

Report Detail	
Issue Date	05/12/2022
Prepared By	Criona Doyle

Site Visit Detail			
Date Of Inspection	16/11/2022	Announced	Yes
Time In	10:32	Time Out	11:36
EPA Inspector(s)	Criona Doyle		
Additional Visitors			
Company Personnel	Irish Water: Pat Britton; Tommy Roche; Phil Elvins. Cork County Council (acting under service level agreement to Irish Water): Jason O'Donoghue; John McAuliffe; Pauline McAree; Frances Whoriskey.		

> Summary of Key Findings

- (1) The chlorination and fluoridation treatment systems at the Doneraile Water Treatment Plant (WTP) were found to be operating satisfactorily.
- (2) There is no treatment barrier in place at the Doneraile Water Treatment Plant to prevent *Cryptosporidium* entering the public water supply.

> Introduction

The Doneraile Public Water supply serves a population of 2,388 and provides 2,500m³/d of treated water. Treatment at the plant includes disinfection (chlorination) and fluoridation.

The audit was undertaken to assess Irish Water's performance in producing clean and wholesome water.

> Supply Zones Areas Inspected

The auditor examined the treatment processes (chlorination and fluoridation) and the raw water abstraction point (spring). The treated water reservoirs were not visited.



1. Source Protection

	Answer
1.1	Is the abstraction source(s) adequately protected against contamination?
	Yes
Comment	
<p>Raw water is obtained from the Clogher Spring. The spring is located within a fenced compound in a below ground collection chamber accessed via a sealed and locked cover.</p> <p>Landuse in the vicinity of the spring is mainly agricultural. At the audit Cork County Council confirmed that the landowners had last been written to in 2008 in relation to the presence of a drinking water supply in proximity to their lands and their obligations under the <i>European Union (Good Agricultural Practice for the Protection of Waters) Regulations 2022</i>, as amended.</p> <p>There are continuous online turbidity and UVT monitors on the raw water. On the day of the audit the turbidity was 0.242 NTU and UVT was 97.7%. The UVT and turbidity monitors have been in place for the last 4 years but trends have only become accessible on SCADA during the week beginning 14/11/22. The trends cannot be viewed on site on the current HMI but trends can be viewed by operational staff on staff mobile phones.</p> <p>There is a turbidity alarm with automatic plant shutdown linked to the high turbidity shutdown setpoint.</p>	



2. Disinfection

		Answer
2.1	Is the disinfection system verified using monitors and alarms, with trended data recorded and accessible?	No
	Comment	
	<p>The chlorine trend was viewed at the WTP and a stable residual chlorine trend was observed.</p> <p>Alarm setpoints cannot be viewed or changed by Cork County Council operational staff at present. The alarm setpoints can only be amended by the automation and instrumentation contractor. A new HMI is planned for the site. The provision of a new panel will allow access to alter the alarm set points to site operational staff following receipt of approval from Engineering staff.</p> <p>There are satisfactory chlorine warning alarms (high 2.0mg/l and low 0.40mg/l) in operation at the WTP. There is automatic shutdown linked to the low chlorine setpoint of 0.40mg/l but there is no shutdown linked to the high chlorine alarm setpoint.</p>	
		Answer
2.2	Is the chlorine dosed appropriately?	Yes
	Comment	
	<p>Chlorine dosing is flow proportional but is not linked to the residual chlorine monitor. The site has been assessed under the Irish Water Disinfection Programme and upgrade works are scheduled to take place in 2023.</p>	
		Answer
2.3	Is the residual chlorine monitored at a suitable sample location after contact time has been completed?	Yes
	Comment	
	<p>The residual chlorine monitor to validate contact time is located at a kiosk 1.5km from the WTP. A new section of rising main has been installed to bring the treated water back to the WTP for monitoring purposes. The new residual chlorine monitor has been installed and Cork County Council are awaiting the connection and commissioning of the new monitor by the contractor.</p>	



3. Treatment Process Chemicals

		Answer
3.1	Are treatment process chemicals appropriately managed and stored?	No
Comment		
The sodium hypochlorite bulk storage tank has not been in use for 3 to 4 years due to an issue with the condition of the internal lining of the tank. 25 litre sodium hypochlorite drums are being used. A new bulk storage tank has been ordered and delivery is awaited.		



4. Management and Control

		Answer
4.1	Has the protozoal compliance log treatment requirement been identified for the water treatment plant?	No
Comment		
<p>At present the Doneraile WTP is classed as having a protozoal log treatment requirement of Log 4. A sanitary survey has not been completed to finalise the score.</p> <p>Monitoring for <i>Cryptosporidium</i> is being undertaken once per month, since the start of 2022, in accordance with the <i>Irish Water Rationale for Determining the Frequency of Cryptosporidium Monitoring in Public supplies</i>. Prior to 2022 monitoring was taking place 4 times per annum. There have been no detections of <i>Cryptosporidium</i> to date.</p>		

Recommendations

Subject	Doneraile PWS - Audit 16/11/2022	Due Date	05/01/2023
Action Text	<p>Recommendations</p> <ol style="list-style-type: none">1. Irish Water should (i) confirm the protozoal log treatment requirement for the spring source following completion of the sanitary survey; (ii) provide details on how the protozoal log deficit will be addressed and (iii) ensure <i>Cryptosporidium</i> monitoring is undertaken as per the <i>Irish Water Rationale for Determining the Frequency of Cryptosporidium Monitoring in Public supplies</i> until the protozoal log treatment deficit is addressed.2. Irish Water should liaise with Cork County Council to ensure that local landowners have been written to in relation to their obligations under the <i>European Union (Good Agricultural Practice for the Protection of Waters) 2022</i>, as amended.3. Irish Water should (i) install automatic shutdown of the WTP linked to the high residual chlorine alarm setpoint; (ii) confirm that the chlorine alarm setpoints can be accessed via the HMI at the WTP and (iii) confirm that the remedial works on the sodium hypochlorite bulk storage tank have been completed.4. Irish Water should provide a timeframe for completion of the disinfection programme upgrades and provide details of the scope of the works to be undertaken. <p>Follow-Up Actions required by Irish Water</p> <p>During the audit, Irish Water representatives were advised of the audit findings and that action must be taken as a priority by Irish Water to address the issues raised.</p> <p>This report has been reviewed and approved by Regina Campbell, Drinking Water Team Leader.</p> <p>Irish Water should submit a report to the Agency on or before 05/01/23 detailing how it has dealt with the issues of concern identified during this audit.</p> <p>The report should include details on the action taken and planned to address the various recommendations, including time frame for commencement and completion of any planned work.</p> <p>The EPA also advises that the findings and recommendations from this audit report should, where relevant, be addressed at all other treatment plants operated and managed by Irish Water.</p> <p>Please quote the Compliance Plan DW20210154 in any future correspondence in relation to this Report.</p>		