

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	Lanesboro
Organisation	Irish Water
Scheme Code	2000PUB1009
County	Longford
Site Visit Reference No.	SV20157

Report Detail	
Issue Date	17/03/2020
Prepared By	Michelle Roche

Site Visit Detail			
Date Of Inspection	24/02/2020	Announced	Yes
Time In	14:00	Time Out	15:30
EPA Inspector(s)	Michelle Roche Daryl Gunning		
Additional Visitors			
Company Personnel	Irish Water: Aodhnait Ni Chathasaigh. Michael Cuniffe. Longford County Council: Barry Lennon, Karina O'Grady, Eugene Kelly		

> Summary of Key Findings

- 1) Both water treatment plants serving the Lanesboro public water supply were operating well on the day of the audit and disinfection controls and alarms in place were both adequate and being adhered to.
- 2) The ESB are considering plans to redevelop some land adjacent to one of the Lanesboro public water supply boreholes. There is a low risk that land development may impact on the future security of the Lanesboro supply, however; Irish Water is engaging with the ESB to ensure that protection of the public drinking water source is a priority consideration in any redevelopment plans.

> Introduction

The Lanesboro public water supply is sourced from three groundwater sources, the 'ESB borehole' and two boreholes at Lisrevagh (borehole 2 and borehole 3). The ESB borehole is owned by Irish Water but named due to its historic association to ESB lands, adjacent to the borehole location. The ESB borehole is pumped continuously and the two Lisrevagh boreholes supplement the ESB borehole at alternate times throughout the day. The supply produces approximately 2,500m³/day and currently 1000m³/day of that is supplied to the neighbouring Longford Central supply. All three boreholes have UV disinfection and chlorination in place.

The audit was carried out as a routine audit to assess the performance of Irish Water in providing clean and wholesome drinking water in the Lanesboro public water supply.

> Supply Zones Areas Inspected

The opening meeting commenced at 2.00 p.m. at the ESB borehole and continued on to the Lisrevagh boreholes. All borehole locations were inspected alongside the UV disinfection and chlorination processes.



1. Source Protection

		Answer
1.1	Is the abstraction source(s) adequately protected against contamination?	Yes
Comment		
All three borehole sources are adequately capped with casing heights above ground level. The ESB borehole is housed within an open topped chamber and borehole 2 and borehole 3 are enclosed within locked and labelled borehole chambers.		



2. Disinfection

2.1

Is the disinfection system verified using monitors and alarms, with trended data recorded and accessible?

Answer

Yes

Comment

UV is the primary disinfection in place on the Lanesboro public water supply. Each borehole has a single validated UV unit in place and a separate chlorination system to provide a chlorine residual in the network. The UV unit on the ESB borehole has a 300 second warm-up time and the UV units on borehole 2 and borehole 3 have a 180 second warm-up time. No water is put into supply until the warm-up cycle is complete.

The UV validation set-points on the ESB borehole are UVT of 85% and UV dose of 12mJ/cm². At the time of the audit the UVT was 93% and the UV dose was 20mJ/cm², meaning that the UV system was operating correctly within it's validated range.

The UV validation set-points on Borehole 2 (which was operating at the time of the audit) are UVT of 85% and UV dose of 20mJ/cm² and flow rate of 72m³/hr. At the time of the audit the UVT was 94.4% and the UV dose was 41.32mJ/cm² and flow rate was 35.8m³/hr.

2.2

Is the chlorine dosed appropriately?

Answer

Yes

Comment

Sodium hypochlorite is dosed after the UV on the ESB borehole but before the UV at borehole 2 and borehole 3. The sodium hypochlorite is dosed using duty/standby dosing pumps and a fixed dose rate based on the fixed pumping rate of each borehole.

The chlorine residual target leaving the ESB borehole treatment plant is 1.3mg/l and the chlorine residual reading was 1.5mg/l at the time of the audit.

The chlorine residual target leaving the Lisrevagh treatment plant is 1.4mg/l and the chlorine residual reading on borehole 2 was 1.52mg/l at the time of the audit. Dosing chlorine before the UV unit at Lisrevagh does not appear to have an adverse affect on the available chlorine residuals leaving the plant.

Chlorine residuals are checked daily in the network and all documentation reviewed on the day of the audit show chlorine residuals above 0.1mg/l.

Recommendations

Subject	Lanesboro Audit Report Recommendations	Due Date	06/03/2020
Action Text	<p>Recommendation</p> <p>1. Irish Water should continue to engage with the ESB in relation to the ESB's plans to redevelop the land adjacent to the ESB borehole source. Irish Water should ensure that any ESB redevelopment plans prioritise the source protection requirements of the adjacent public drinking water source (ESB borehole).</p> <p>Follow-Up Actions required by Irish Water</p> <p>During the audit, Irish Water representatives were advised of the audit findings. Irish Water are not required to submit a report to the Agency in relation to the Lanesboro audit.</p> <p>This report has been reviewed and approved by Aoife Loughnane, Drinking Water Team Leader.</p> <p>Please quote the Action Reference Number in any future correspondence in relation to this Report.</p>		