



Drinking Water Audit Report

County:	Monaghan	Date of Audit:	19/06/2017
Plant visited:	Newbliss Water Treatment Plant (WTP) Scheme Code: 2400PUB1003	Date of issue of Audit Report:	07/07/2017
		File Reference:	DW 2017/62
		Auditors:	Ms Pauline Gillard Ms Ruth Barrington
Audit Criteria:	<ul style="list-style-type: none"> • The <i>European Union (Drinking Water) Regulations 2014 (S.I. 122 of 2014)</i>. • The <i>EPA Handbook on the Implementation of the Regulations for Water Services Authorities for Public Water Supplies (ISBN: 978-1-84095-349-7)</i> • The recommendations specified in the <i>EPA Drinking Water Report</i>. • EPA Drinking Water Advice Notes No.s 1 to 15. 		

MAIN FINDINGS

- i. Chlorine dosing at Newbliss water treatment plant should be flow proportional or preferably linked to the residual chlorine monitor at the reservoir outlet, so that any changes in the chlorine demand of the treated water can be responded to automatically by the dosing pumps.

1. INTRODUCTION

Under the *European Union (Drinking Water) Regulations 2014* 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 drinking water to consumers on Newbliss public water supply.

Newbliss water treatment plant (WTP) is operated by Veolia on behalf of Irish Water. The raw water is sourced from Lough Feagh beside the water treatment plant. Treatment comprises coagulation, clarification, rapid gravity filtration, and chlorination. The treatment plant produces approximately 154 m³/day and serves a total population of 459 people in the Newbliss area.

The opening meeting commenced at 11.00am at Newbliss water treatment plant. The scope and purpose of the audit were outlined at the opening meeting. The audit process consisted of interviews with staff, review of records and observations made during an inspection of the treatment plant. The audit observations and recommendations are listed in Section 2 and 4 of this report. The following were in attendance during the audit.

Representing Irish Water:

Yvonne Mc Monagle – Drinking Water Compliance
Justin Doran – DBO Engineer

Representing Monaghan County Council

Paul Clerkin – Assistant Engineer
Pascal Rooney – Technician
Eugene Hickey – Senior Executive Engineer

Representing Veolia

Mark Rooney – Plant Manager
Aaron Murray – Caretaker
Devyn Hall – Caretaker

Representing the Environmental Protection Agency:

Pauline Gillard – Inspector
Ruth Barrington -Inspector

2. AUDIT OBSERVATIONS

The audit process is a random sample on a particular day of a facility's operation. Where an observation or recommendation against a particular issue has not been reported, this should not be construed to mean that this issue is fully addressed.

<p>1.</p>	<p>Source Protection</p> <ul style="list-style-type: none"> a. The source of the raw water is Feagh Lake. The abstraction point is at the end of the weir beside the water treatment plant. The abstraction point is inspected by divers on a yearly basis. b. The catchment around the plant comprises of agricultural land. The area is not fenced around the lake. c. A Drinking Water Safety Plan is not yet in place for Newbliss public water supply.
<p>2.</p>	<p>Coagulation, Flocculation and Clarification</p> <ul style="list-style-type: none"> a. Ferric Chloride is used as a coagulant. pH adjustment is achieved using Sulphuric Acid with a pH monitor on site. The monitor is alarmed to shut down at 5.8pH. The preferred optimum coagulation pH at this plant is 6.5pH. b. The Dissolved Air Flotation (DAF) unit removes the floc from the water before it goes to filtration. The DAF is cleaned out yearly. All sludge is removed by authorised waste collection permit holders.
<p>3.</p>	<p>Filtration</p> <ul style="list-style-type: none"> a. There is one rapid gravity sand filter at the plant. The filter has a level monitor for the sand media. New sand was added to the filter in the last six months. b. If the filter is blocked the plant automatically shuts down. c. Veolia carry out a safety check and housekeeping check once a week. d. The filter is backwashed once a day. A backwash was observed during the audit. No dead zones were observed and the wash was even across the bed.

4.	<p>Disinfection</p> <ol style="list-style-type: none"> a. Disinfection is achieved using chlorine gas. Chlorine gas cylinders are stored in a secure, marked and ventilated room. b. Prior to chlorination the target turbidity of the water is 0.3 NTU. c. There is a chlorine monitor and alarm in the plant. In the event of a failure there is automatic shutdown of the plant. d. When the chlorine alarm is triggered there is a documented procedure in place for responding to the alarm. e. The caretaker can access the chlorine data from online monitors remotely. f. The chlorine dose is fixed and may be manually changed by the operator. Irish Water should review the fixed chlorine dosing to flow proportional or linked residual monitor to respond to any increase in chlorine demand. g. There is adequate chlorine contact time of 30 minutes at a minimum of 0.5 mg/l free chlorine, in accordance with EPA Advice Note 3.

3. AUDITORS COMMENTS

Overall Newbliss water treatment plant was found to be very well managed. Process documentation was up to date and available at the plant and record keeping was of a very good standard.

4. RECOMMENDATION

Source Protection

1. Irish Water should ensure that hazard mitigation plans, with timeframes, are in place for all hazards identified as high risk in accordance with the Drinking Water Safety Plan approach to managing water supplies. Irish Water should provide information to the EPA on the projects that are highlighted through the statement of needs process for Newbliss PWS, and how these correspond with identified risks.

Disinfection

2. Irish Water should ensure that dosing of chlorine is flow proportional or is linked to the residual chlorine monitor. Where the dosing pump is fixed, as it is at Newbliss WTP, Irish Water should replace the pump with flow proportional pumps or pumps capable of dosing based on the residual chlorine monitor.

FOLLOW-UP ACTIONS REQUIRED BY IRISH WATER

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. This report has been reviewed and approved by Ms Aoife Loughnane, Drinking Water Team Leader.

Irish Water should submit a report to the Agency within one month of the date of this audit report detailing how it has dealt with the issues of concern identified during this audit. The report should include details on the action taken and planned to address the various recommendations, including timeframe for commencement and completion of any planned work.

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.

Please quote the File Reference Number in any future correspondence in relation to this Report.

Report prepared by:



Date:

05/07/17

Pauline Gillard
Inspector

05/07/17