

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 | Woodford PWS |
| Organisation | Uisce Éireann |
| Scheme Code | 1200PUB1050 |
| County | Galway |
| Site Visit Reference No. | SV31993 |

| Report Detail | |
|---------------|-----------------|
| Issue Date | 13/03/2025 |
| Prepared By | Maria O'Connell |

| Site Visit Detail | | | |
|---------------------|---|-----------|-------|
| Date Of Inspection | 12/02/2025 | Announced | Yes |
| Time In | 11:00 | Time Out | 12:55 |
| EPA Inspector(s) | Maria O'Connell | | |
| Additional Visitors | | | |
| Company Personnel | Uisce Éireann: Vinny McGrath, Adrian Rafferty Galway County Council (working in partnership with Uisce Éireann): John Conroy, Joe Kenny. | | |

> Summary of Key Findings

1. A residual chlorine alarm and inhibit is in place at the water treatment plant however confirmation that the sample point is at the point of validation as per the chlorine contact time calculation is required. The time delays for the residual chlorine alarm and inhibits were not aligned to the *EPA Water Treatment Manual: Disinfection*.
2. An appropriate validation certificate detailing the validation criteria to enable the required UV Dose of 40mj/cm² was not available.
3. An appropriate cascade system and associated procedures are not in place for responding to alarms generated at the plant, alarms are dialed out to the duty caretaker only.
4. Access to critical plant process information and trended performance data via SCADA is not available to the caretakers via remote application or at the plant.

> Introduction

Woodford Public Water Supply (PWS) serves a population of 363. The water treatment plant produces on average 120-150m³ of treated water per day and has design capacity of 200m³. The raw water source for the plant is a spring (located approximately 400m from the plant). A source and sanitary survey was completed in 2021 and the plant was assigned a 3 log protozoal requirement. Treatment consists of pressure filtration followed by UV and chlorination. This plant also has the necessary electrical connections required in the event a generator is needed on the site.

This audit was undertaken to assess Uisce Éireann's performance in producing clean and wholesome water focusing on alarms, inhibits and management oversight.

> Supply Zones Areas Inspected

The audit included a tour of the abstraction area and treatment processes at Woodford WTP.



1. Source Protection

1.1

Is the abstraction source(s) adequately protected against contamination?

Answer

Yes

Comment

1. The concrete chamber at the spring abstraction point is secured by wired fencing. A number of cracks were observed on the walls of the chamber at the time of the audit which should be investigated to ensure the effective integrity of the structure and protection of the abstraction point from contamination.



2. Filtration

2.1

Are the filters designed and managed in accordance with EPA guidance?

Answer

No

Comment

1. Details on filter media type and effective size were not available at the time of the audit and details on the programme of assessment for the pressure filter unit were not available.

2. A filter maintenance log is not maintained onsite.



3. Alarms, Inhibits & Oversight Audits 2025

3.1

Is there a chlorine residual monitor located after contact time for verification of primary disinfection?

Answer

No

Comment

1. The chlorine contact calculation submitted by Uisce Éireann outlined that both a contact tank on site and a pipeline to the reservoir offsite are used to achieve contact time. It could not be confirmed at the time of the audit that the residual chlorine monitor is located at the point of contact time validation as per the contact time calculation.

3.2

Is there a documented site specific incident response and incident escalation process?

Answer

No

Comment

1. The Uisce Éireann Water Incident Communications Response Form (document reference: IW-AO-GL-032-FM-01) was displayed on site but did not contain site specific details on trigger values for alarm and inhibits, time delays and relevant contact details. Uisce Éireann have developed an updated revision of this form which should be used.

3.3

Are suitable alarm settings in place to alert operators to deteriorating water quality or the failure of a critical treatment process?

Answer

No

Comment

1. The alarm and inhibit time delays for the residual chlorine were enabled at 15 minutes. This is not in alignment with the *"EPA Water Treatment Manual: Disinfection"* which recommends 300 seconds (5 minutes).

2. The alarm and inhibit was not enabled on UV Dose and it was not possible to view the validation criteria on the manufacturers plate on the UV unit.

3.4

Are plant performance trends accessible by operational staff at the water treatment plant?

Answer

No

Comment

1. Performance trends at Woodford WTP are not available to operational personnel at the plant or remotely via phone application at this time.

| | | |
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| | | Answer |
| 3.5 | Is there appropriate oversight of plant performance trends? | No |

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| | | Answer |
| 3.6 | Is there appropriate oversight of alarm responses? | No |

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| | | Answer |
| 3.7 | Is there a documented procedure for responding to specific alarms? | No |

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| | | Answer |
| 3.8 | Are there appropriate procedures covering verification of alarms and inhibits status following maintenance or other work on site? | No |
| Comment | | |
| 1. Although the site operator confirmed that checks are completed on alarm and inhibits following maintenance works there are no written procedures or records on this action. | | |

| Subject | Woodford Audit 2025 | Due Date | 14/04/2025 |
|-------------|---|----------|------------|
| 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"> UV: (i) submit a validation certificate for the UV unit at the water treatment plant detailing the validation criteria required to enable the delivery of the required dose, (ii) submit a copy of the manufacturers plate on the UV unit, (iii) confirm that appropriate alarm and inhibit setpoints and time delays are installed and commissioned for this unit. Chlorine: (i) ensure that the sample point for the validation of chlorine contact time is located appropriately and in accordance with the chlorine contact time calculation for the site, (ii) ensure that the setpoints and time delays assigned to the residual chlorine alarms and inhibits are in alignment with the <i>EPA Water Treatment Manual: Disinfection</i>. Alarm Response: Ensure that (i) there is an appropriate cascade system for responding to alarms generated at the plant which allows for verification that an alarm has been responded to, (ii) maintain a record of verification on critical alarm and inhibit responses for the water treatment plant, (iii) that the latest revision of the Uisce Éireann Incident Response Form with site specific information including contacts for escalation, relevant trigger levels and associated time delays is in place and displayed at the Woodford water treatment plant and staff are trained on its use, (iv) there are appropriate procedures covering verification of alarms and inhibits status following maintenance of other work at the plant and (v) training is provided to all relevant staff on the procedures. Ensure that there is appropriate oversight of alarm responses and a robust system of reviews on water treatment plant performance data by supervisory staff and that such reviews can be verified. Examine the feasibility of upgrading the current SCADA permissions/accessibility to ensure critical plant process information and trended performance data is remotely accessible for operational staff. Source: conduct an assessment on the integrity of the chamber at the abstraction point and submit results to the EPA. Filtration: (i) submit details on the filter media type, specifications and depth, (ii) submit details on a programme of assessment for the pressure filter unit and (ii) develop and maintain a filter maintenance record system as per the "<i>EPA Water Treatment Manual: Filtration</i>". <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 14th April 2025 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> | | |

