

# 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     | Camphire      |
| Organisation             | Uisce Éireann |
| Scheme Code              | 3100PUB1024   |
| County                   | Waterford     |
| Site Visit Reference No. | SV32179       |

| Report Detail |                 |
|---------------|-----------------|
| Issue Date    | 10/04/2025      |
| Prepared By   | Pauline Gillard |

| Site Visit Detail   |  |           |       |
|---------------------|--|-----------|-------|
| Date Of Inspection  | 05/03/2025   | Announced | No    |
| Time In             | 12:03  | Time Out  | 12:42 |
| EPA Inspector(s)    | Pauline Gillard<br>Noel Cosgrove                   |           |       |
| Additional Visitors | Pat Kenny  |           |       |
| Company Personnel   | Uisce Eireann: Siobhan Clifford and Patrick Kirwan |           |       |

## > Summary of Key Findings

1. Disinfection consists of UV treatment and chlorination. The audit found that the disinfection system was operating satisfactorily during the inspection.

## > Introduction

Camphire WTP produces approximately 27 m<sup>3</sup>/day of water serving a population of 37 (EDEN figures). The audit focused on the disinfection system at Camphire WTP.

## > Supply Zones Areas Inspected

This audit assessed the chlorination and UV disinfection systems at Camphire WTP.



|     |   | Answer |
|-----|---|--------|
| 1.1 | Did Uisce Éireann confirm the type of chlorine disinfectant in use?   | Yes    |
|     | <b>Comment</b>  |        |
|     | 1. 5% Sodium Hypochlorite confirmed.  |        |
|     |   |        |
|     |   | Answer |
| 1.2 | Are there duty and standby chlorine dosing pumps in place?  | Yes    |
|     |   | Answer |
| 1.3 | Is there automatic switchover in the event of failure of one of the chlorine dosing pumps?                                  | Yes    |
|     |   | Answer |
| 1.4 | Is the chlorine dosing rate flow proportional?  | Yes    |
|     |   | Answer |
| 1.5 | Is there a continuous residual chlorine monitor, with alarm, to verify chlorine dosing is taking place at the target level? | Yes    |
|     |   | Answer |
| 1.6 | Can data trends from the online residual monitor be viewed on site?   | Yes    |
|     |   | Answer |
| 1.7 | Are there low and high chlorine alarm settings on each chlorine monitor?  | Yes    |
|     |   | Answer |
| 1.8 | Is there a documented alarm response procedure for responding to chlorine alarms?   | Yes    |
|     |   | Answer |
| 1.9 | Have staff been trained on the chlorine alarm response procedure?   | Yes    |

|      |  |               |
|------|--|---------------|
|      |  | <b>Answer</b> |
| 1.10 | Are chlorine alarms dialled out via a cascade system to allow a timely response by plant operators?  | Yes           |
|      |  | <b>Answer</b> |
| 1.11 | Is there automatic shutdown of the supply in the event of the chlorine level dropping below the low level or rising above the high chlorine alarm setting? | Yes           |
|      |  | <b>Answer</b> |
| 1.12 | Are service due / monitoring instrument calibration dates for the chlorine monitors within date?   | Yes           |
|      |  | <b>Answer</b> |
| 1.13 | Is the residual chlorine level $\geq 0.1$ mg/l at the extremity of the distribution network?   | Yes           |
|      |  | <b>Answer</b> |
| 1.14 | Is monitoring of network residual chlorine undertaken several times per week?  | No            |
|      | <b>Comment</b>   |               |
|      | 1. Network monitoring is undertaken once a week.   |               |
|      |  | <b>Answer</b> |
| 1.15 | Is UV treatment used for primary disinfection?   | Yes           |
|      |  | <b>Answer</b> |
| 1.16 | Are there duty and standby UV units in operation?  | Yes           |
|      |  | <b>Answer</b> |
| 1.17 | Is there automatic changeover between the duty and standby UV units?   | Yes           |
|      |  | <b>Answer</b> |

|      |   |        |
|------|---|--------|
| 1.18 | Is there automatic shut-off of the supply in the event of UV units failing or operating outside of their validated range?             | Yes    |
|      |   | Answer |
| 1.19 | Is there continuous monitoring of the UV units to verify operation within validation range at all times?                              | Yes    |
|      |   | Answer |
| 1.20 | Can data trends from the online UV monitor(s) be viewed on-site?  | Yes    |
|      |   | Answer |
| 1.21 | Is there a documented alarm response procedure for responding to UV alarms?   | Yes    |
|      |   | Answer |
| 1.22 | Have staff been trained on the UV alarm response procedure?   | Yes    |
|      |   | Answer |
| 1.23 | Are UV alarms dialled out via a cascade system to allow a timely response by plant operators?   | Yes    |
|      |   | Answer |
| 1.24 | Are service due / monitoring instrument calibration dates for the UV units within date?   | No     |
|      | <b>Comment</b><br><br>1. Calibration dates for the UV units were out of date, with calibration stickers showing due date as May 2024. |        |
|      |   | Answer |
| 1.25 | Is the UV disinfection system validated to an appropriate international standard ?  | Yes    |
|      |   | Answer |

|      |   |     |
|------|---|-----|
| 1.26 | Did UÉ confirm that the UV disinfection system is operating within the validated range? | Yes |
|------|---|-----|

## Recommendations

| Subject     | Audit Recommendations   | Due Date | 10/05/2025 |
|-------------|---|----------|------------|
| Action Text | <p><b>Uisce Éireann is responsible for ensuring a clean and wholesome supply of drinking water and should implement the following recommendations without delay.</b></p> <ol style="list-style-type: none"><li>1. Ensure that the UV units are regularly serviced and calibrated in accordance with the manufacturer's instructions.</li><li>2. Ensure monitoring of residual chlorine is undertaken several times a week at different points of the network to include the network extremities.</li></ol> <p><b>Actions required by Uisce Éireann</b></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 10/05/25 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> |          |            |