



# Drinking Water Audit Report

<b>Local Authority:</b>	Laois County Council	<b>Date of Audit:</b>	29/11/2013
<b>Plant(s) visited:</b>	The Camross 1600PUB 0082	<b>Date of issue of Audit Report:</b>	19/12/2013
		<b>File Reference:</b>	DW2013/134
		<b>Auditors:</b>	Mr Niall Dunne
<b>Audit Criteria:</b>	<ul style="list-style-type: none"> <li>• The <i>European Communities (Drinking Water) (No. 2) Regulations, 2007</i>.</li> <li>• 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></li> <li>• The recommendations specified in the EPA Report on <i>The Provision and Quality of Drinking Water in Ireland</i>.</li> <li>• The recommendations in any previous audit reports.</li> </ul>		

## MAIN FINDINGS

- i. **The disinfection system on this supply does not meet the requirements of the EPA Advice Note No 3. There is no standby chlorine dosing pump in place. The Water Services Authority must, as a priority, ensure that the disinfection system is upgraded to meet the requirements of the EPA's Advice Note 3.**
- ii. **Laois County Council issued a precautionary boil water notice on this supply in October 2013. The EPA was not informed of the issue of this notice. It is required under Section 9 of the Drinking Water Regulations that the EPA is promptly informed of any restrictions placed on the supply. Procedures must be put in place to ensure that the EPA is promptly informed of restrictions placed or removed from a public water supply.**
- iii. **At the time of the audit, there was inadequate chlorine contact time on this supply. However, LCC in subsequent correspondence confirmed that the works to resolve this issue are now complete.**

## 1. INTRODUCTION

Under the *European Communities (Drinking Water) (No. 2) Regulations 2007* the Environmental Protection Agency is the supervisory authority in relation to the local authorities and their role in the provision of public water supplies. This audit was carried out to assess the performance of the local authority in providing clean and wholesome drinking water.

This supply is served by a bored well. There are approx. 12 houses on this supply with an average daily demand of 7.5 m<sup>3</sup>/day. The treatment consists of chlorination.

Photographs taken by Niall Dunne during the audit are attached to this report and are referred to in the text where relevant.

The opening meeting commenced at 11.00 am at the 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 audits observations and recommendations are listed in Section 2 and 4 of this report. The following were in attendance during the audit.

Representing the Local Authority: (\* indicates that person was also present for the closing meeting)  
 Jack Creegan – Senior Executive Engineer\*; John Gavin – Senior Executive Engineer\*; Declan Carroll – Caretaker\*.  
 Representing the Environmental Protection Agency: Niall Dunne- 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.*

<b>1.</b>	<p><b>Source Protection</b></p> <ul style="list-style-type: none"> <li>a. The source for this supply is a bored well. LCC stated that they do not have borehole records.</li> <li>b. The well head is located below ground level in a chamber that is not secure against surface water ingress (see photograph 1). LCC stated that the well head is to be upgraded in January 2014.</li> <li>c. LCC stated that no Crypto risk assessment has been carried out and that farmers within the vicinity of the source have not yet been written to with regard to the GAP regulations.</li> </ul>
<b>2.</b>	<p><b>Chlorination and Disinfection</b></p> <ul style="list-style-type: none"> <li>a. LCC stated that there is inadequate contact time on this supply. On the day of the audit LCC did not have the chlorine contact time calculations. LCC stated that due to the inadequate contact time a precautionary boil water notice was issued to consumers on this supply on the 08/10/2013. The EPA was not informed of this precautionary BWN when it was originally issued.</li> <li>b. At the time of the audit LCC stated that works to resolve the contact time issue on this supply were scheduled for completion by the end of January 2014. However, in subsequence correspondence LCC stated that these work are now complete.</li> <li>c. There is only duty chlorination in place (see photograph 2). LCC stated that a standby chlorination pump is to be installed in January 2014.</li> <li>d. There is a chlorine monitor in place, which was reading 0.33 mg/l. LCC stated that this was connected to a SCADA system.</li> <li>e. LCC stated that there are dial out alarms in place.</li> </ul>
<b>3.</b>	<p><b>Management and Control</b></p> <ul style="list-style-type: none"> <li>a. There is no turbidity monitor in place.</li> <li>b. The chlorine day tank was not banded (see photograph 2).</li> <li>c. Some empty boxes and chemical containers were observed in the chlorination building.</li> <li>d. The chlorine monitor had a calibration sticker with a calibration due date of Dec 2013.</li> </ul>

## 3. AUDITORS COMMENTS

According to Laois County Council the works to ensure adequate contact time are now complete and, following consultation with the HSE, the BWN was lifted on the 18<sup>th</sup> December 2013.

As there is no duty stand chlorine dosing pump in place the disinfection system is inadequate and does not meet the guidelines set out in EPA Advice Note No.3. This leaves the supply vulnerable to contamination and the consumers exposed to unacceptable risk.

On 08/10/2013, LCC issued a precautionary boil water notice on this supply due to inadequate contact time. The EPA was not informed of this at the time. The Water Services Authority must ensure that procedures are in place to ensure that the EPA is promptly informed when water restrictions and/or boil water notices are put in place in any supply under their responsibility. Failure to do so is an offence under Section 9 the 2007 Drinking Water Regulations.

#### **4. RECOMMENDATIONS**

##### **Source Protection**

1. The Water Services Authority should submit the revised *Cryptosporidium* risk assessment for this supply.
2. The Water Services Authority should write to farmers with in the vicinity of the well to inform them of their responsibilities under the requirements of the *European Communities (Good Agricultural Practice for the Protection of Waters) Regulations 2010 (SI No.610 of 2010)*.
3. The Water Services Authority should ensure that the well head is upgraded to the standard set out in the EPA Advice Note No 14: Borehole Construction and Wellhead Protection.
4. The Water Services Authority should ensure that borehole construction logs are maintained on site.

##### **Disinfection**

5. The Water Services Authority should as a matter of priority ensure that duty standby chlorine dosing is put in place and that there is automatic switch over between the pumps. Dosing should be linked to the residual chlorine monitor such that any changes in the chlorine demand of the treated water can be responded to automatically by the dosing pumps.
6. The Water Services Authority should submit to the EPA a copy of the precautionary boil water notice issued to consumers of this supply. The Water Services should also ensure that there are procedures in place to ensure that the EPA is promptly informed of all water restrictions and boil water notices placed on supplies.

##### **Management**

1. The Water Services Authority should install a continuous turbidity monitor on the final water to alert plant operators of any changes in raw water quality.
2. The Water services Authority should review chemical storage arrangements at the plant. All chemicals must be stored in bunded areas capable of containing at least 110% of the volume of the chemical stored therein.
3. The Water Service Authority should ensure that all waste and empty containers are removed from site.

#### **FOLLOW-UP ACTIONS REQUIRED BY THE LOCAL AUTHORITY**

During the audit the Water Services Authority representatives were advised of the audit findings and that action must be taken as a priority by the Water Services Authority to address the issues raised. This report has been reviewed and approved by Ms Yvonne Doris, Drinking Water Team Leader.

The Water Services Authority 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 the Water Services Authority.

Please quote the File Reference Number 2013/134 in any future correspondence in relation to this Report.

Report prepared by:



Date:



Niall Dunne

Inspector

**Photograph 1: Well Head and chamber.**



**Photograph 2: Chlorination system. Duty chlorination only and day tank not banded.**

