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17/11/2011

Re: Drinking Water Audit – LONGFORD CENTRAL (PAE2008/25)


Dear Mr. Murphy,

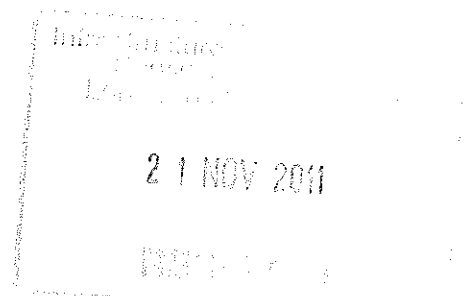
The Environmental Protection Agency carried out an audit of the Lough Forbes Water Treatment Plant on the 20/10/2011. The audit was carried out as part of the role assigned to the EPA under the *European Communities (Drinking Water)(No 2) Regulations 2007*.

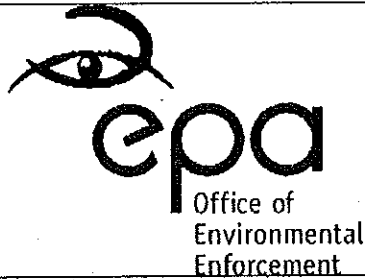
A copy of the audit report from the visit is attached for your attention. The audit report includes a number of important recommendations in relation to the treatment plant and water supply. The EPA advises that the local authority as a matter of priority should address these recommendations.

Please furnish a report your inspector, Ms. Ruth Barrington within one month of the date of this letter with details on the action taken or planned (with timeframes) to address the recommendations in the attached audit report.

Yours sincerely,


Darragh Page
Inspector
Office of Environmental Enforcement





Drinking Water Audit Report

Local Authority:	Longford County Council	Date of Audit:	20 th October 2011
Plant(s) visited:	Lough Forbes Water Treatment Plant, Newtownforbes, Co. Longford (Supply Code 2000PUB1010)	Date of issue of Audit Report:	17/11/2011
		File Reference:	PAE2008/25
		Auditors:	Ms Derval Devaney Mr Darragh Page Ms Ruth Barrington
Audit Criteria:	<ul style="list-style-type: none"> • The <i>European Communities (Drinking Water) (No. 2) Regulations, 2007</i>. • The <i>EPA Handbook on the Implementation of the Regulations for Water Services Authorities for Public Water Supplies</i> (ISBN: 978-1-84095-349-7). • The recommendations specified in the EPA Report on <i>The Provision and Quality of Drinking Water in Ireland 2008 to 2009</i>. • The recommendations in the previous audit report dated 13th March 2008. 		

MAIN FINDINGS

- i. The audit team considered that good progress had been made at the plant since the previous EPA audit of 10th March 2008, however aluminium exceedances continue to be notified to the EPA. The cause of these exceedances was stated to be due to the distribution network.
- ii. The WSA should prioritise the completion of the plant upgrade and implementation of a programme of unidirectional flushing in the network.

1. INTRODUCTION

Under the *European Communities (Drinking Water) (No. 2) Regulations 2007* the Environmental Protection Agency (EPA) 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.

The Lough Forbes Water Treatment Plant treats raw water from Lough Forbes and supplies the Longford Central Water Supply (Supply Code 2000PUB1010). A previous EPA audit carried out on 10th March 2008 highlighted the fact that the plant was then operating substantially beyond its design capacity, and that operational improvements were unlikely to be adequate to allow compliance with the aluminium standard. The plant capacity is now approximately 7,200 m³/day, increased from 4,800 m³/day by the recent plant upgrade. This upgrade included the addition of a further DAF unit, filter overhaul and media replacement, re-configuring of coagulant dosing pipework, instrumentation upgrades with turbidity monitors on the filters and improved sludge handling. The abstraction point for the Lough Forbes Water Treatment Plant is located in a small bay of Lough Forbes on the River Shannon. Neighbouring land use is agricultural (including the Castle Forbes Estate and other small farms) and forestry.

The audit commenced at 1.20 p.m. at Lough Forbes 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.

<p>Representing Longford County Council: (* indicates that person was also present for the closing meeting)</p> <p>Mr Padraig Farrell – Executive Engineer*</p> <p>Mr Des Reynolds – Technician*</p> <p>Mr Joe Gorman – Environmental Technician*</p> <p>Mr John Murtagh - Senior Engineer*</p> <p>Representing the Environmental Protection Agency:</p> <p>Ms Derval Devaney – Inspector*</p> <p>Mr Darragh Page – Inspector*</p> <p>Ms Ruth Barrington – Inspector*</p>

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.

1.	<p>Source Protection</p> <p>a. The land use in the immediate vicinity of the abstraction point is in low intensity agricultural usage. There is also forestry adjacent to Lough Forbes.</p> <p>b. Lough Forbes is downstream of Mohill wastewater treatment system; however there is significant dilution in the Shannon between the discharge and the abstraction point. According to the WSA staff, there is a notification procedure in place with Leitrim County Council in case of an incident at the Mohill WWTP.</p>
2.	<p>Treated Water Storage</p> <p>a. One of the clearwater tank hatches was of an old design with no seal provided where the hatch joins the tank cover. The auditors considered that this posed a risk of ingress of surface water into the treated water.</p>
3.	<p>Exceedances of the Parametric Values</p> <p>a. An exceedance on 12th September 2011 of the aluminium and iron parametric values was notified to the EPA. The WSA believed that the exceedances were due to network levels of aluminium and iron levels in the network following a period of time without flushing. Prior to the plant upgrade, water shortages had meant that network flushing was not viable. During the audit, the WSA staff said that a programme of unidirectional flushing was to be implemented.</p>
	<p>Chemical storage and bunds</p> <p>a. The seals and lining of the fluorosilicic acid bund was observed by the auditors to be</p>

4.	damaged in places and the level of liquid in the tank was not visible. The Water Services Authority have requested funding to upgrade the bund and install ultrasonic level sensors on the tank.
5.	<p>Management and Control</p> <p>a. An unused soda ash dosing line was still in place on the intake to the filters.</p> <p>b. The upgrade of the plant has been progressed, with the new DAF plant being operated by EPS until January 2012. However there remain several elements of the upgrade to be completed, including optimisation of the new DAF and commissioning of automatic filter backwashes based on factors such as turbidity and headloss.</p>
6.	<p>Monitoring and Sampling Programmes for Treated Water</p> <p>a. Results of analysis of aluminium levels in treated water leaving the plant were examined during the audit. It was noted that on occasion results of 0 µg/l were recorded. A limit of detection for the method of analysis was not available. The WSA staff said that there is no correction carried out on analysis results for fluoride content.</p> <p>b. Chlorine levels in treated water are recorded at the plant following the manual test each day. The corresponding reading from the chlorine monitor is not recorded.</p>

3. AUDITORS' COMMENTS

The audit team considered that good progress has been made by the WSA since the previous EPA audit on 10th March 2008. The supply remains on the Remedial Action List currently, and in order to remove it, the WSA would need to supply to the EPA verification of three consecutive compliant aluminium results at the plant and in the network.

The recommendations in the previous EPA audit report have been addressed; however the supply remains on the RAL pending completion of and verification to the EPA of the success of the upgrade in achieving compliance with the aluminium parametric value.

4. RECOMMENDATIONS

In view of the observations noted during the audit and listed in Section 2 of this report, Longford County Council should address the following recommendations.

Treated Water Storage

- a. The Water Services Authority should ensure that sealed and lockable hatches are installed on all inspection points and valve access points where there is access to treated water (after filtration and before the final treated water is distributed), such as that observed during the audit at the clearwater tank.

Distribution System

- a. The Water Services Authority should instigate a regular programme of unidirectional flushing.

Chemical Storage and Bunds

- a. The Water Services Authority should repair the lining, seals and tank level indicator in the fluorosilicic acid storage bund at the treatment plant. Chemicals must be stored in banded areas capable of containing at least 110% of the volume of chemicals stored therein. Fill points for storage tanks inside the bunds should be within the banded area. Refer to EPA guidance document –“*IPC Guidance Note on Storage and Transfer of Materials for Scheduled Activities*”.

Management and Control

- a. The WSA should inform the EPA when the plant upgrade is complete. In order for the supply to be removed from the RAL, the WSA should provide a report to the EPA detailing the completion of the upgrade, the programme for unidirectional flushing and three consecutive compliant aluminium results taken from network sampling. In addition, clarification should be provided on the method of aluminium analysis undertaken at the plant, including the limit of detection and the need for correction for fluoride.
- b. The WSA should identify the location and purpose of dosing points throughout the plant. Any unused dosing points such as the soda ash line identified above should be decommissioned.
- c. The WSA should ensure that records are kept in writing at the plant of the results of both manual chlorine tests and the corresponding reading from the chlorine monitor. This should enable the WSA to take appropriate action in the event of any discrepancy between the two results, and to track any trends in such events.

FOLLOW-UP ACTIONS REQUIRED BY THE LOCAL AUTHORITY

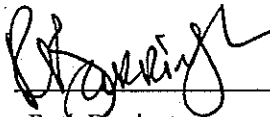
During the audit the Water Services Authority representatives were advised of the audit findings and that action must be taken as a priority by the Water Services Authority to address the issues raised.

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 Longford County Council.

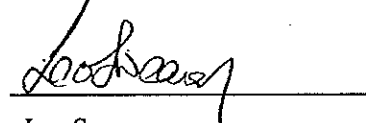
Please quote the File Reference Number in any future correspondence in relation to this Report.

Report prepared by:


Ruth Barrington

Inspector

Reviewed by:


Leo Sweeney

Manager

Environmental Enforcement

Date:

11 / 11 / 2011

Date:

11 / 11 / 2011