

**COMHAIRLE CHONTAE LIATROMA**

**Leitrim County Council**



**Annual Environmental Report 2016**

**Mohill Landfill WL0065-1**

<b><u>Document Title</u></b>	Annual Environmental Report 2016 Mohill Landfill WL0065-1		
<b><u>Document ID</u></b>	CCC-1713-02-04-03-03-rev 0		
<b><u>Revision</u></b>	<b><u>Status</u></b>	<b><u>Author</u></b>	<b><u>Issue Date</u></b>
0	Draft	BK	11/05/17
0	Final Issue	BK	12/05/17

Boylan Engineering (Eng. & Environmental Consultancy) was commissioned by Leitrim County Council to prepare the following Annual Environmental Report. The contents of the following report were compiled by Bróna Keating, Environmental Engineer.

<b><u>Contents</u></b>	<b><u>Page</u></b>
<b>1.0 INTRODUCTION</b>	<b>5</b>
<b>2.0 REPORTING PERIOD</b>	<b>6</b>
<b>3.0 WASTE ACTIVITIES CARRIED OUT AT THE FACILITY</b>	<b>6</b>
<b>4.0 QUANTITY AND COMPOSITION OF THE WASTE</b>	<b>6</b>
<b>5.0 SUMMARY REPORT ON EMISSIONS</b>	<b>6</b>
<b>5.1 Surface Water</b>	<b>7</b>
<b>5.2 Ground Water</b>	<b>11</b>
<b>5.3 Leachate</b>	<b>13</b>
<b>5.4 Gas</b>	<b>15</b>
<b>6.0 RESULTS SUMMARY &amp; INTERPRETATION OF MONITORING</b>	<b>15</b>
<b>7.0 RESOURCE &amp; ENERGY CONSUMPTION SUMMARY</b>	<b>15</b>
<b>8.0 VOLUMES OF LEACHATE PRODUCED &amp; DISCHARGED</b>	<b>15</b>
<b>9.0 RESTORATION REPORT</b>	<b>15</b>
<b>10.0 ESTIMATED QUANTITIES OF LANDFILL GAS EMITTED</b>	<b>16</b>
<b>11.0 PROCEDURES DEVELOPED BY LICENSEE</b>	<b>16</b>
<b>12.0 TANK, PIPELINE AND BUND TESTING INSPECTION REPORT</b>	<b>16</b>
<b>13.0 REPORTED INCIDENTS AND COMPLAINTS SUMMARY</b>	<b>16</b>
<b>14.0 REVIEW OF NUISANCE CONTROLS</b>	<b>16</b>
<b>15.0 STAFF TRAINING</b>	<b>17</b>
<b>16.0 ANY OTHER ITEMS SPECIFIED BY THE EPA</b>	<b>18</b>

**List of Tables**

Table 5.1	Surface Water Summary Results	7
Table 5.2	Groundwater Summary Results	11
Table 5.3	Leachate Summary Results	14
Table 13.1	Management Structure 2016	17

### **List of Graphs**

Graph 5.1	Surface water- Ammonia	8
Graph 5.2	Surface water- Chloride	8
Graph 5.3	Groundwater –Conductivity	12
Graph 5.4	Groundwater –Ammonia	15

### **List of Appendices**

Appendix A PRTR Emissions Report, Gas Survey

Appendix B Monitoring locations map

Appendix C Quarter 4 Monitoring Report

## 1.0 INTRODUCTION

Mohill Landfill was been operated as an unlined waste disposal facility by Leitrim County Council between 1965 and 2005. It was used for the disposal of domestic, commercial and industrial waste in addition to sewerage sludge. As there was no weighbridge on the site, it is not possible to accurately quantify the volumes of waste which were disposed of however a figure of 55,000 tonnes has been estimated.

A waste licence was granted by the EPA in 2002 which prevented the disposal of any further biodegradable waste but it did allow for the importation of inert waste for capping purposes. The landfill ceased operations in 2005 with final capping works being completed in 2006.

The landfill is situated to the East of Mohill on the outskirts of the town and covers an area of c2.2 hectares. The site is accessed via the R202 and is surrounded by scrubland, agricultural land and forestry.

Condition 11.4 of Waste Licence Ref. 65-1 requires the submission of an Annual Environmental Report (AER) for Mohill Landfill facility. This document is produced in order to comply with requirements of Condition 11.4.

The requirements for reporting of Annual Environmental Information arise under individual EPA licences issued under the EPA Acts 1992 – 2008, the Waste Management Acts 1996 – 2008 and other legislation.

This AER will provide information as outlined in Schedule F of the Licence “Content of the Annual Environmental Report”.

## **2.0 REPORTING PERIOD**

The reporting period for the purpose of this AER is 01<sup>st</sup> January 2016 - 31<sup>st</sup> December 2016.

## **3.0 WASTE ACTIVITIES CARRIED OUT AT THE FACILITY**

There were no waste activities carried out at the facility in 2016 as this facility is closed and capped.

## **4.0 QUANTITY AND COMPOSITION OF THE WASTE**

There is no longer any waste being accepted at the site. The quantity of waste accepted is zero tonnes during 2016. Condition 5.1 of the waste licence referenced herein states that no waste shall be disposed of at the facility.

## **5.0 SUMMARY REPORT ON EMISSIONS**

The PRTR Regulations are the European Communities (European Pollutant Release and Transfer Register) Regulation 2007, [S.I. No. 123 of 2007](#)), which signed into Irish Law on 22 March 2007 the [E-PRTR Regulation, \(EC\) No 166/2006](#), concerning the establishment of a European Pollutant Release and Transfer Register. The summary of emissions is detailed in the (PRTR) Report which appears in Appendix A of this report. The PRTR has been uploaded onto the EPA website in accordance with our responsibility as Licensee.

## 5.1 Surface Water

All monitoring locations are detailed in the site map which is presented in Appendix B. As table 5.1 reveals, there were elevated levels of Ammonia, recorded in the samples taken at the SW4 and SW6 when compared to the limits specified by the Environmental Quality Standards (EQS). There are no limits specified in the EPA waste licence in terms of surface water quality.

Sampling location SW4 is located up gradient of the landfill while SW6 is located downgradient. The results reveal there is an elevated background level of Ammonia in this area possibly due to agricultural activities. The ammonia encountered in the downgradient is not sufficiently higher to assume that the landfill is impacting the surface water quality. In addition to this, indicator parameters such as Conductivity and Chloride are both below the EQS.

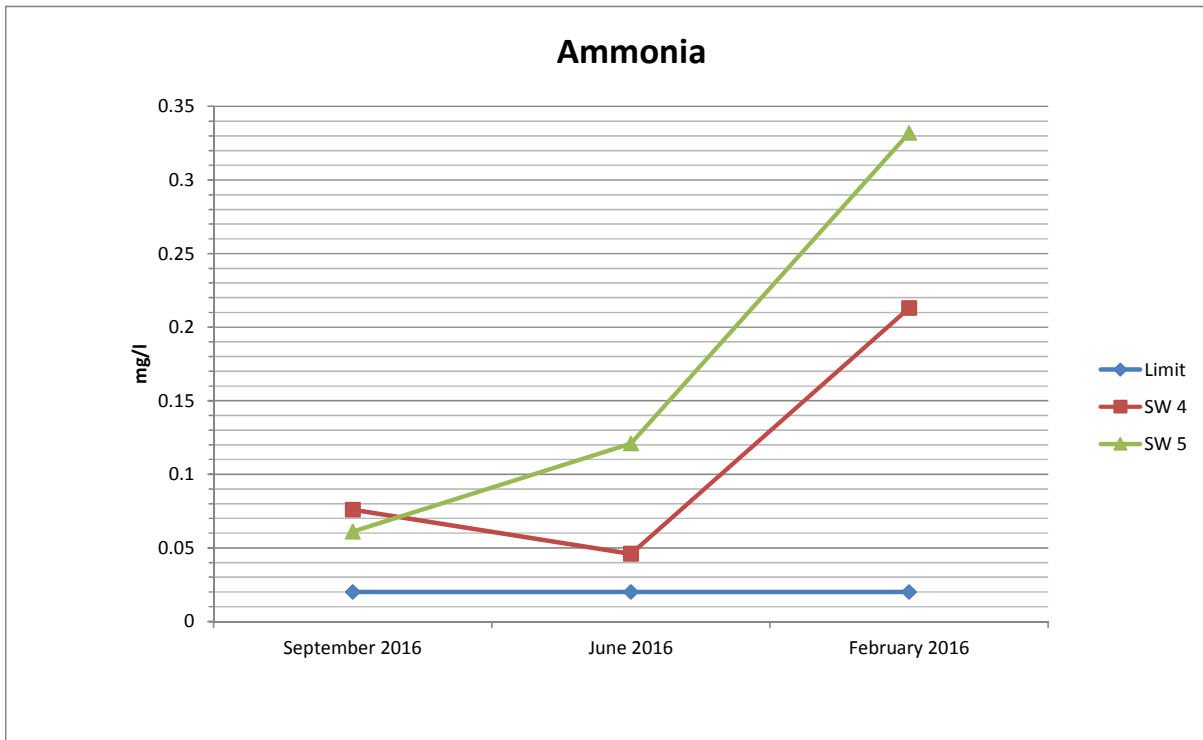
The surface water monitoring data indicates that the landfill is not having a significant impact on water quality in the Rinn River at present.

**Table 5.1 Surface water summary results**

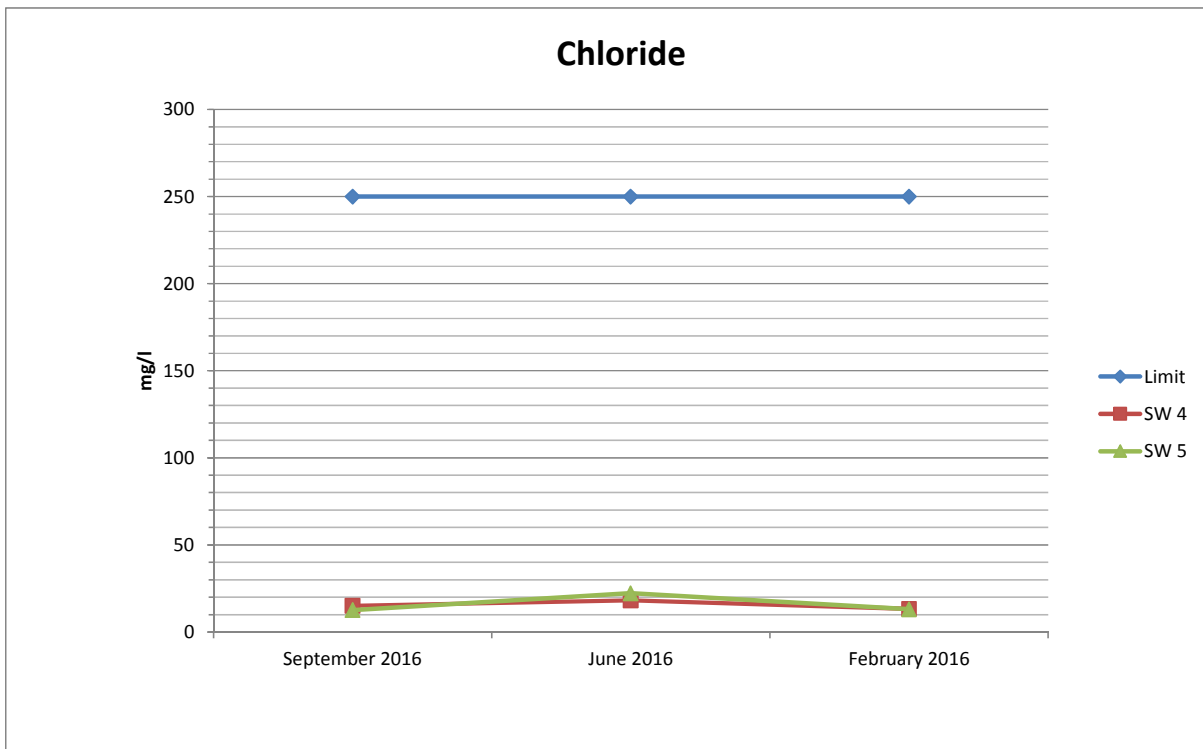
	Parameters	Temperature Onsite	pH Lab	Conductivity @ 20°C	Dissolved Oxygen Onsite	Dissolved Oxygen Onsite	Ammonia as N	Chloride	CBOD5	COD
	Units	°C	pH Unit	uS/cm @20°C	%	mg/l O2	mg/l	mg/l O2	mg/l O2	mg/l O2
SW4	September	16.4	7.68	203	6.3	0.59	<b>0.1</b>	15.1	3	97
	June	17.5	8.25	440	20	1.86	0.0	18.2	2	60
	February	6.4	7.69	185	28.8	3.55	<b>0.2</b>	13.3	3	50
SW6	September	15.9	7.93	210	8	0.79	<b>0.1</b>	12.7	2	92
	June	16.3	8.03	497	16.7	1.62	<b>0.1</b>	22.2	2	59
	February	5.3	7.71	176	28.3	3.65	<b>0.3</b>	13.0	2	50
	<b>EQS</b>	<b>25</b>	<b>6.5-9.5</b>	<b>1000</b>	<b>NAC</b>	<b>NAC</b>	<b>0.02</b>	<b>250</b>	<b>NAC</b>	<b>NAC</b>



**Graph 5.1**



**Graph 5.2**



## 5.2 Groundwater

The following table details all historical results obtained at groundwater wells in 2016. As there are no emission limits for ground water specified by the waste licence, the parameters are compared to the Interim Guide Values (IGV). Results in bold Italics indicate where the Interim Guide Value (IGV) has been exceeded.

As detailed in the following graphs, there were ground water elevations in the vicinity of this landfill during 2016 for parameters Ammonia and Conductivity.

**Ammonia:** Elevated levels of this parameter were prevalent during 2016 at well MW 5D. Elevations were also encountered at MW 8D. A hydrological risk assessment completed in 2016 concluded that the elevations at well MW5 D may be attributed to commercial development of the lands surrounding the well as opposed to the landfill. Elevated Ammonia at well MW 8 D may indicate some localised impact from the landfill given its downgradient position from the landfill.

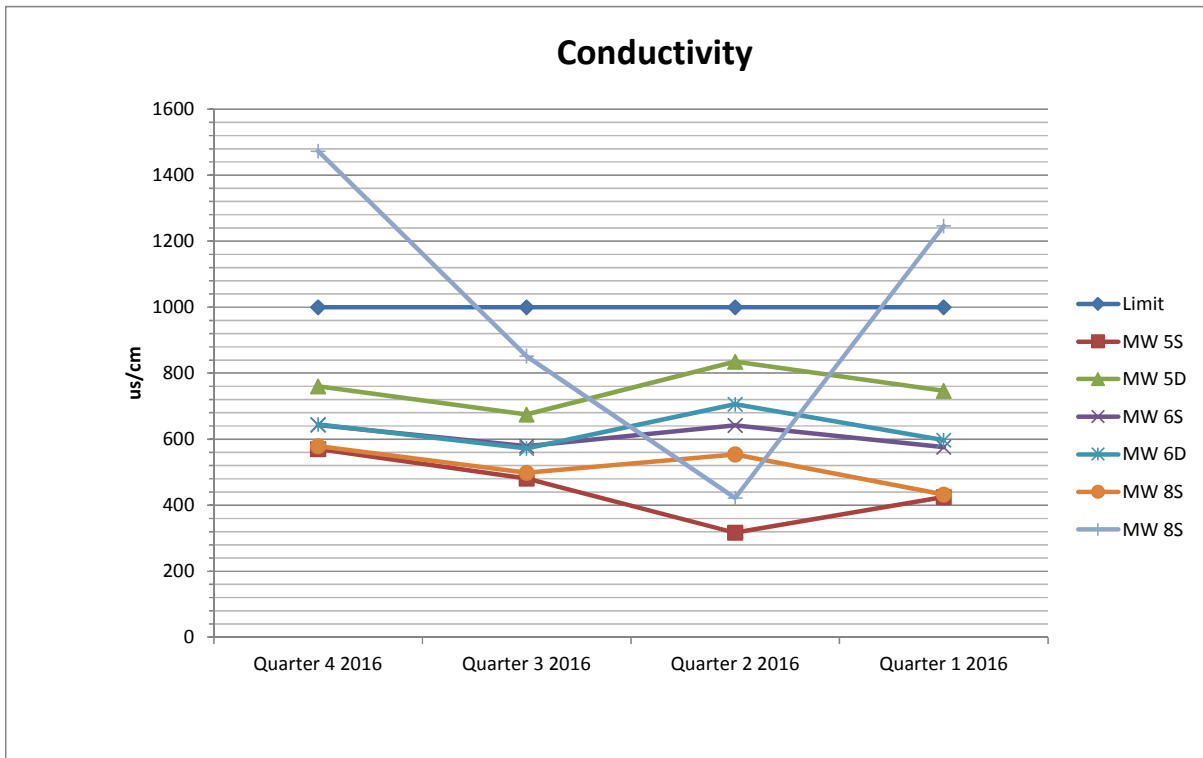
**Conductivity :** Elevated levels of this parameter were encountered at well MW8D. The levels are generally below the IGV at all other monitoring locations. This elevation may be associated with groundwater flows in conduits in karst water systems.

All other parameters measured were within the IGV's meaning that this landfill is showing limited signs of impact on the surrounding groundwater quality.

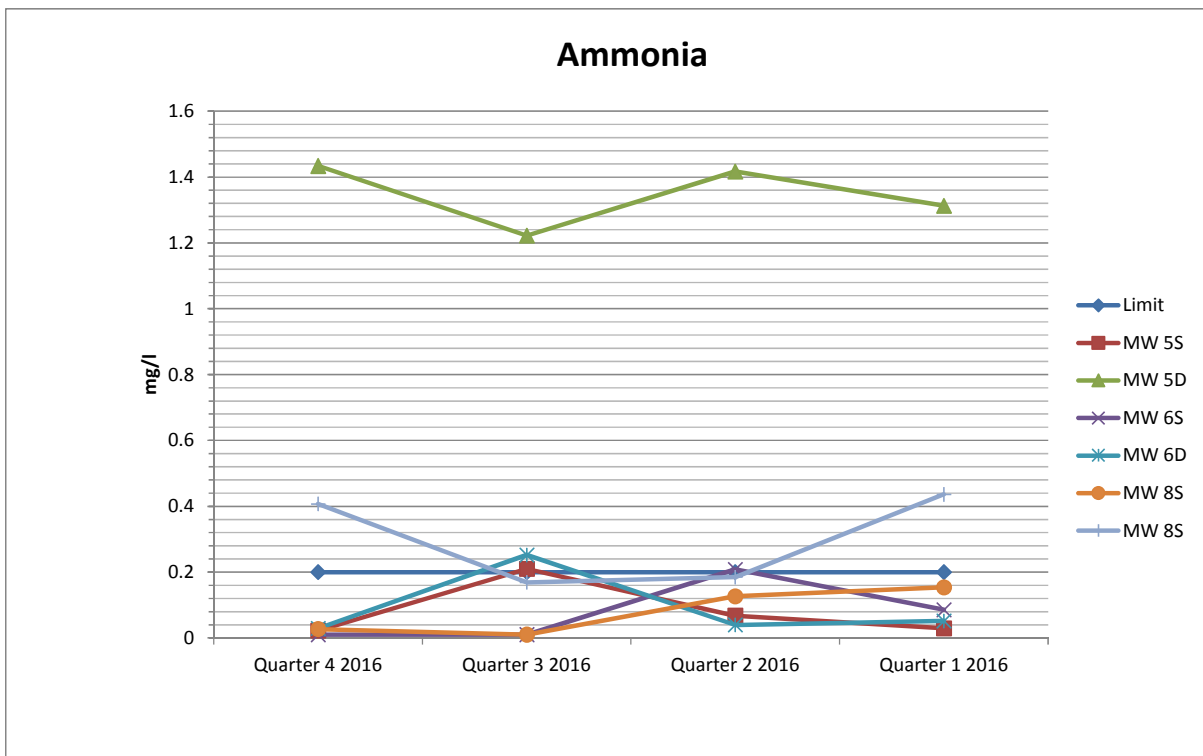
Table 5.2 Groundwater Summary Results

	Parameters	Temperature Onsite	PH Onsite	PH	Conductivity @ 20°C	Dissolved Oxygen Onsite	Dissolved Oxygen Onsite	Ammonia as N	TON as N	Total Organic Carbon
	Units	°C	pH Unit	pH Unit	uS/cm @20°C	%	mg/l O2	mg/l	mg/l	mg/l
5S	Quarter 4 2016	9.7	7.29	7.28	570	-	-	0.0	2.0	3.06
	Quarter 3 2016	15.4	-	7.33	481	4	0.4	0.2	7.1	3.52
	Quarter 2 2016	16.8	-	7.95	317	17.7	1.75	0.1	7.4	2.86
	Quarter 1 2016	8.6	8.42	7.98	425	29.9	3.4	0.0	-	2.4
5D	Quarter 4 2016	9.8	8.2	8.1	760			<b>1.4</b>	2.0	10.29
	Quarter 3 2016	14.8	-	8.1	675	2.9	0.3	<b>1.2</b>	8.1	1.38
	Quarter 2 2016	15.1	-	8.21	835	8.7	0.91	<b>1.4</b>	7.9	1.25
	Quarter 1 2016	8.7	8.35	8.16	747	12.9	1.56	<b>1.3</b>	-	1.04
6S	Quarter 4 2016	9.7	7.19	6.92	643	-	-	0.0	2.0	19.18
	Quarter 3 2016	15.3	-	7.27	579	3.2	0.31	0.0	7.2	5.9
	Quarter 2 2016	16	-	7.42	642	10.3	1.02	0.2	7.0	59.77
	Quarter 1 2016	8.6	7.5	7.06	576	13.3	1.61	0.1	-	12.49
6D	Quarter 4 2016	9.6	7.33	7.46	645	-	-	0.0	2.0	3.85
	Quarter 3 2016	14.8	-	7.42	572	3.1	0.32	<b>0.3</b>	7.2	2.66
	Quarter 2 2016	14.6	-	7.41	706	8.3	0.86	0.0	7.1	3.48
	Quarter 1 2016	8.7	7.68	7.46	597	17.8	2.07	0.1	-	2.01
8S	Quarter 4 2016	9.5	7.19	7.03	579			0.0	2.0	4.39
	Quarter 3 2016	14.3	-	7.56	498	5.3	0.58	0.0	7.3	4.54
	Quarter 2 2016	13.4	-	7.28	554	6.6	0.79	0.1	6.9	12.9
	Quarter 1 2016	7.5	7.74	7.53	432	18.7	2.27	0.2	-	4.17
8D	Quarter 4 2016	9.4	7.18	7.02	<b>1473</b>	-	-	<b>0.4</b>	2.0	1.97
	Quarter 3 2016	12.6	-	7.48	852	4.6	0.49	0.2	7.2	1.69
	Quarter 2 2016	13.5	-	7.37	422	12.6	1.31	0.2	7.1	5.17
	Quarter 1 2016	8.2	7.56	7.38	<b>1246</b>	19.6	2.33	<b>0.4</b>	-	1.45
IGV's		25.0	≥6.5&≤9.5	≥6.5&≤9.5	1000.0	NAC	NAC	0.2	NAC	

Graph 5.3



Graph 5.4



### **5.3 Leachate Monitoring**

Leachate monitoring is carried out annually at this landfill. Results for 2016 have been presented with previous monitoring result for comparison against the EPA Landfill Design Manual. The most recent leachate monitoring results are presented below or within the ranges outlined in the EPA Landfill Design Manual. Results obtained indicate the leachate is aged and weak in comparison to typical ranges for leachate concentrations in landfills.

**Table 5.3 Leachate Summary Results**

	Parameters	Temperature Onsite	PH	Conductivity @ 20°C	Ammonia as N	Chloride	CBOD5	COD	TON as N
	Units	°C	pH Unit	uS/cm @20°C	mg/l	mg/l	mg/l O2	mg/l O2	mg/l
Leachate Sump	Feb-16	7.1	6.88	834	2	104	3	21	5
	Sep-15	18	7.14	1371	10	3030	94	232	5
	Apr-15	-	6.69	2630	11	700	3	205	5
	EPA Design Manual	-	6.8-8.2	5,900-19,300	283-2,040	570 - 4,710	110-1,900	622-8,000	-

#### **5.4 Gas Emissions**

Landfill gas monitoring must be completed at 8 locations on a monthly basis in accordance with the EPA waste licence for this site. Landfill gas monitoring was not completed during 2016 due to complications which have arisen as a result of a change in monitoring personal. The location of the gas monitoring wells is currently unknown. However, Leitrim County Council are in the processes of acquiring a topographical survey of the landfill to identify the locations of all Ground Water, Surface Water, Leachate and Gas monitoring locations. Upon completion of the survey, landfill gas monitoring will be reinstated for 2017.

### **6.0 RESULTS SUMMARY & INTERPRETATION OF MONITORING**

Included in Appendix C is a copy of the 4<sup>th</sup> quarter monitoring results as reported by Monitoring Company City Analysts Ltd. Environmental monitoring at this landfill is lacking due to missing wells. Attempts to rectify this issue are currently underway in the hope of reaching compliance with the EPA Waste Licence before the end of 2017. We are also satisfied that there are no major environmental impacts associated with this facility.

### **7.0 RESOURCE & ENERGY CONSUMPTION SUMMARY**

As there is insufficient gas produced to run a gas flare or engine there is no use for the gas resource on site. There is no energy consumed on site.

### **8.0 VOLUMES OF LEACHATE PRODUCED & DISCHARGED**

There is no information available regarding the volume of leachate produced. Given that this is an unlined landfill, the leachate cannot be harnessed.

### **9.0 REPORT ON RESTORATION OF THE FACILITY**

The site is fully restored and the cap intact. Gorse overgrowth is monitored with periodic maintenance being undertaken when required.

**10.0 ESTIMATED ANNUAL & CUMULATIVE QUANTITIES OF  
LANDFILL GAS EMITTED FROM THE FACILITY**

Approval was granted by the EPA for a passive landfill gas venting system, as there were insufficient gas volumes to sustain a flaring system.

Methane and Carbon Dioxide are measured in concentration % v/v. However it is not possible to obtain accurate flow data so as provide an estimate of annual and cumulative quantity of landfill gas emitted from the facility.

**11.0 FULL TITLE & WRITTEN SUMMARY OF ANY PROCEDURES  
DEVELOPED BY THE LICENSEE IN THE YEAR WHICH RELATES TO THE  
FACILITY OPERATION**

There was no change to or development of any procedures undertaken by the licensee or monitoring contractor in 2016. The environmental monitoring contractor 'City Analysts Limited' adhere to all standard practices for environmental monitoring.

**12.0 TANK, PIPELINE AND BUND TESTING INSPECTION REPORT**

This requirement is non applicable in this instance as there are no operational tanks, pipelines or bunds at this closed landfill facility at present.

**13.0 REPORTED INCIDENTS & COMPLAINTS SUMMARY**

There were no complaints received by the EPA or the Local Authority regarding this facility in the reporting period 2016 and there were no reportable incidents encountered.

**14.0 REVIEW OF NUISANCE CONTROLS**

As there are no known nuisances associated with this site, there are no nuisance controls in place for noise or vermin. There is no odour detectable from the site and as these are the main nuisances associated with landfills. This is substantiated by the absence of complaints regarding the facility. However, if any nuisances arise at the facility, the licensee will deal with them using appropriate measures and procedures.



**15.0 FINANCIAL PROVISION & MANAGEMENT & STAFFING  
STRUCTURE**

Leitrim County Council made available appropriate finances to facilitate the rehabilitation works which were completed in conjunction with the capping and closure of the landfill. Budgetary provision has been made to allow for the monitoring of the facility in accordance with the requirements of the waste licence.

Executive Technician Karina O’Grady from Leitrim County Council deals with in full, any issues identified by the Agency Inspectors or any other party.

**Table 13.1** Management Structure 2016

<b>Position</b>	<b>Name</b>	<b>Duties</b>
Director of Services Environment	Joseph Gilhooly	Oversee and assign responsibilities to staff regarding landfill
Acting Senior Engineer	Brendan McKenna	Oversee general supervision, monitoring and reporting of the site.
Landfill Operations Managers	Karina O’Grady	Responsible for general supervision, monitoring and reporting of the site.

Contact Person for 2016/ 2017:

Karina O’Grady

Executive Technician

Waste Management Section

Leitrim County Council

Carrick-On-Shannon

Leitrim

Provision will be made in Leitrim County Council Official Estimates for Charges as required under Condition 11 of Waste Licence Ref. 65-1.

**16.0 ANY OTHER ITEMS AS SPECIFIED BY THE AGENCY**

A risk screening and technical assessment report was completed on this landfill during 2016 in accordance with the requirements of the waste licence. This report was submitted to the EPA in August 2016.

Currently there are 6 ground water boreholes being monitored at this site with a proposal for the installation of two additional wells.

Maintenance works in the form of removal of overgrown vegetation from the confines of the landfill was carried out in July 2016.

# **Appendix A PRTR Emissions Report**



| PRTR# : W0065 | Facility Name : Mohill Landfill | Filename : W0065\_2016.xls |  
Return Year : 2016 |

12/05/2017 11:14

[Guidance to completing the PRTR workbook](#)

# PRTR Returns Workbook

Version 1.1.19

<b>REFERENCE YEAR</b>	2016
-----------------------	------

## 1. FACILITY IDENTIFICATION

Parent Company Name	Leitrim County Council
Facility Name	Mohill Landfill
PRTR Identification Number	W0065
Licence Number	W0065-01

### Classes of Activity

No.	class_name
-	Refer to PRTR class activities below

Address 1	Tullybardan
Address 2	Mohill
Address 3	
Address 4	
	Leitrim
Country	Ireland
Coordinates of Location	-7.8642 53.9265
River Basin District	GBNIIENW
NACE Code	3821
Main Economic Activity	Treatment and disposal of non-hazardous waste
<b>AER Returns Contact Name</b>	Brona Keating
<b>AER Returns Contact Email Address</b>	b.keating@boylanengineering.ie
<b>AER Returns Contact Position</b>	Environmental Engineer
<b>AER Returns Contact Telephone Number</b>	0469286000
<b>AER Returns Contact Mobile Phone Number</b>	0870984598
<b>AER Returns Contact Fax Number</b>	
<b>Production Volume</b>	0.0
<b>Production Volume Units</b>	
<b>Number of Installations</b>	0
<b>Number of Operating Hours in Year</b>	0
<b>Number of Employees</b>	0
<b>User Feedback/Comments</b>	
<b>Web Address</b>	

## 2. PRTR CLASS ACTIVITIES

Activity Number	Activity Name
50.1	General
50.1	General

## 3. SOLVENTS REGULATIONS (S.I. No. 543 of 2002)

Is it applicable?	No
Have you been granted an exemption ?	No
If applicable which activity class applies (as per Schedule 2 of the regulations) ?	
Is the reduction scheme compliance route being used ?	

## 4. WASTE IMPORTED/ACCEPTED ONTO SITE

[Guidance on waste imported/accepted onto site](#)

Do you import/accept waste onto your site for on-site treatment (either recovery or disposal activities) ?	No
--	----

This question is only applicable if you are an IPPC or Quarry site

## A survey of landfill sites to determine the quantity of methane flared and or recovered in utilisation plants for 2016

Please choose from the drop down menu the license number for your site	<input type="text" value="W0065"/>
Please choose from the drop down menu the name of the landfill site	<input type="text" value="Mohill Landfill"/>
Please enter the number of flares operational at your site in 2016	<input type="text" value="0"/>
Please enter the number of engines operational at your site in 2016	<input type="text" value="0"/>
Total methane flared	<input type="text" value="0"/> kg/year
Total methane utilised in engines	<input type="text" value="0"/> kg/year

**Please note that the closing date for receipt of completed surveys is 31/03/2017**

### Introduction

The Office of Environmental Sustainability (OES) of the Environmental Protection Agency acts as the inventory agency in Ireland with responsibility for compiling and reporting national greenhouse gas inventories to the European Commission and the United Nations Framework Convention on Climate Change. In addition to meeting international commitments Ireland's national greenhouse gas inventory informs national agencies and Government departments as they face the challenge to curb emissions and meet Ireland's emission reduction targets under the Effort Sharing Decision (No. 406/2009/EC). The national inventory also informs data suppliers, making them aware of the importance of their contributions to the inventory process and a means of identifying areas where input data may be improved.

It is on this basis that the Environmental Protection Agency is asking landfill operators to partake in this survey so that the most up to date information on methane flaring and recovery in utilisation plants at landfill sites is used in calculating the contribution of the landfill sector to national greenhouse gas emissions

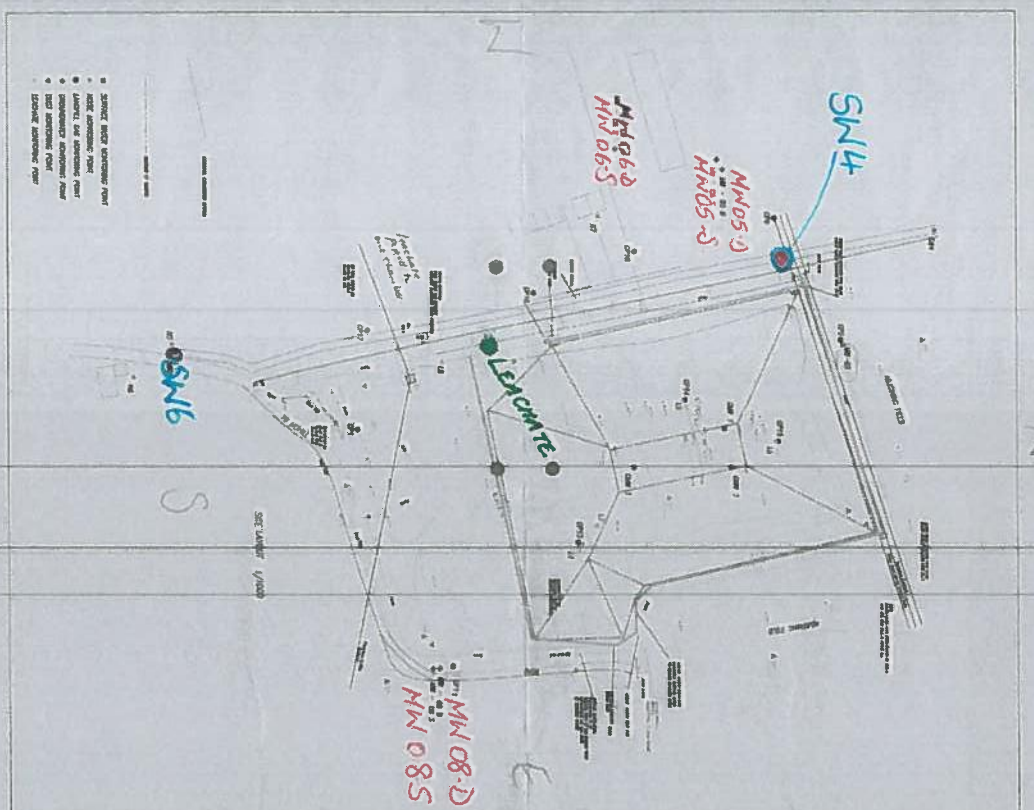
The Environmental Protection Agency wishes to thank you for partaking in this survey. If you have any questions about the survey and how to complete it please view the "Help sheet" worksheet. If however, your query is not answered by viewing the "Help sheet" worksheet please contact:

[LFGProject@epa.ie](mailto:LFGProject@epa.ie)

Once completed please send the completed file as an attachment clearly stating the name and or license number of the landfill site (e.g. W000 Xanadu landfill\_2015) to:

[LFGProject@epa.ie](mailto:LFGProject@epa.ie)

# **Appendix B Monitoring Locations**



- SCHEDULE 2000 ZONING DISTRICT
- SCHEDULE 2000 ZONING DISTRICT
- SCHEDULE 2000 ZONING DISTRICT
- SCHEDULE 2000 ZONING DISTRICT
- SCHEDULE 2000 ZONING DISTRICT
- SCHEDULE 2000 ZONING DISTRICT
- SCHEDULE 2000 ZONING DISTRICT
- SCHEDULE 2000 ZONING DISTRICT

LOT NO.	OWNER	ADDRESS	AREA	PERCENTAGE
100	LEICHTER, RALPH	2500 22ND ST	0.15	100%
101	LEICHTER, RALPH	2500 22ND ST	0.15	100%
102	LEICHTER, RALPH	2500 22ND ST	0.15	100%
103	LEICHTER, RALPH	2500 22ND ST	0.15	100%
104	LEICHTER, RALPH	2500 22ND ST	0.15	100%
105	LEICHTER, RALPH	2500 22ND ST	0.15	100%
106	LEICHTER, RALPH	2500 22ND ST	0.15	100%
107	LEICHTER, RALPH	2500 22ND ST	0.15	100%
108	LEICHTER, RALPH	2500 22ND ST	0.15	100%
109	LEICHTER, RALPH	2500 22ND ST	0.15	100%
110	LEICHTER, RALPH	2500 22ND ST	0.15	100%
111	LEICHTER, RALPH	2500 22ND ST	0.15	100%
112	LEICHTER, RALPH	2500 22ND ST	0.15	100%
113	LEICHTER, RALPH	2500 22ND ST	0.15	100%
114	LEICHTER, RALPH	2500 22ND ST	0.15	100%
115	LEICHTER, RALPH	2500 22ND ST	0.15	100%
116	LEICHTER, RALPH	2500 22ND ST	0.15	100%
117	LEICHTER, RALPH	2500 22ND ST	0.15	100%
118	LEICHTER, RALPH	2500 22ND ST	0.15	100%
119	LEICHTER, RALPH	2500 22ND ST	0.15	100%
120	LEICHTER, RALPH	2500 22ND ST	0.15	100%

**LEITCH COUNTY COUNCIL**  
 LEITCH COUNTY SERVICE DEPARTMENT  
 1000 W. 10th St., Leitch, Alberta T1S 1S5  
 TEL: 403-255-2233  
 FAX: 403-255-2234  
 WWW.LEITCH.CA

NEEDS TO BE PROVIDED  
 TO THE LEITCH COUNTY  
 SERVICE DEPARTMENT  
 FOR THE LEITCH  
 COUNTY SERVICE DEPARTMENT

# **Appendix C Quarter 4 Monitoring Results**





LEITRIM COUNTY COUNCIL

ANNUAL MONITORING REPORT

**Mohill LANDFILL**

**Landfill Licence from the EPA – W-0065**

4<sup>th</sup> QUARTER 2016

**For the Attention of:**

**Mr Sean Scott  
Leitrim Co Co  
Aras an Chontae  
Carrick On Shannon  
Co Leitrim**

**Prepared by:    Shane Reynolds            City Analysts Ltd**

## RESULTS:

### MW8 Shallow Quarterly/Annually Results – Mohill

Sampled Date: 05/12/2016

Sampled Time: 10:40

Depth (m): 0.5

Odour: No unusual odour

Weather/Visual Observation: Cloudy/Dry/Clean

City Analysts Ref: 341573

Analysis	Results	Units
1,1,1,2-Tetrachloroethane	µg/l	< 1.00
1,1,1-Trichloroethane	µg/l	< 1.00
1,1,2,2-Tetrachloroethane	µg/l	< 1.00
1,1,2-Trichloroethane	µg/l	< 1.00
1,1-Dichloroethane	µg/l	< 1.00
1,1-Dichloroethene	µg/l	< 1.00
1,1-Dichloropropene	µg/l	< 1.00
1,2,3-Trichlorobenzene	µg/l	< 1.00
1,2,3-Trichloropropane	µg/l	< 1.00
1,2,4-Trichlorobenzene (aq)	µg/l	< 1.00
1,2,4-Trichlorobenzene	µg/l	< 1.00
1,2,4-Trimethylbenzene	µg/l	< 1.00
1,2-Dibromo-3-chloropropane	µg/l	< 1.00
1,2-Dibromoethane	µg/l	< 1.00
1,2-Dichlorobenzene (aq)	µg/l	< 1.00
1,2-Dichlorobenzene	µg/l	< 1.00
1,2-Dichloroethane	µg/l	< 1.00
1,2-Dichloroethene Trans (E)	µg/l	< 1.00
1,2-Dichloroethene cis (Z)	µg/l	< 1.00
1,2-Dichloropropane	µg/l	< 1.00
1,3,5-Trichlorobenzene	µg/l	< 1.00
1,3,5-Trimethylbenzene	µg/l	< 1.00
1,3-Dichlorobenzene (aq)	µg/l	< 1.00
1,3-Dichlorobenzene	µg/l	< 1.00
1,3-Dichloropropane	µg/l	< 1.00
1,3-Dichloropropene Trans (E)	µg/l	< 1.00
1,3-Dichloropropene cis (Z)	µg/l	< 1.00
1,4-Dichlorobenzene (aq)	µg/l	< 1.00
1,4-Dichlorobenzene	µg/l	< 1.00
2,2-Dichloropropane	µg/l	< 1.00
2,4,5-Trichlorophenol (aq)	µg/l	< 1.00
2,4,6-Trichlorophenol (aq)	µg/l	< 1.00
2,4-Dichlorophenol (aq)	µg/l	< 1.00
2,4-Dimethylphenol (aq)	µg/l	< 1.00

2,4-Dinitrotoluene (aq)	µg/l	< 1.00
2,6-Dinitrotoluene (aq)	µg/l	< 1.00
2-Chloronaphthalene (aq)	µg/l	< 1.00
2-Chlorophenol (aq)	µg/l	< 1.00
2-Chlorotoluene	µg/l	< 1.00
2-Methylnaphthalene (aq)	µg/l	< 1.00
2-Methylphenol (aq)	µg/l	< 1.00
2-Nitroaniline (aq)	µg/l	< 1.00
2-Nitrophenol (aq)	µg/l	< 1.00
3-Nitroaniline (aq)	µg/l	< 1.00
4-Bromophenylphenylether (aq)	µg/l	< 1.00
4-Chloro-3-methylphenol (aq)	µg/l	< 1.00
4-Chloroaniline (aq)	µg/l	< 1.00
4-Chlorophenylphenylether (aq)	µg/l	< 1.00
4-Chlorotoluene	µg/l	< 1.00
4-Methylphenol (aq)	µg/l	< 1.00
4-Nitroaniline (aq)	µg/l	< 1.00
4-Nitrophenol (aq)	µg/l	< 1.00
4-iso-Propyltoluene	µg/l	< 1.00
Aldrin	µg/l	< 0.01
Alkalinity CaCO3	mg/l	306.353
Ammonia as N	mg/l	0.027
Ammoniacal Nitrogen as N	mg/l	< 0.200
Antimony, Dissolved	µg/l	0.67
Arsenic, Dissolved	µg/l	0.52
Azinphos-ethyl	µg/l	< 0.01
Azinphos-methyl	µg/l	< 0.01
Azobenzene (aq)	µg/l	< 1.00
Barium, Dissolved	µg/l	19.6
Benzene	µg/l	< 1.00
Benzo(k)fluoranthene (aq)	µg/l	< 1.00
Beryllium, Dissolved	µg/l	< 0.10
Boron, Dissolved	µg/l	17.8
Boron	µg/l	98.61
Bromobenzene	µg/l	< 1.00
Bromochloromethane	µg/l	< 1.00
Bromodichloromethane	µg/l	< 1.00
Bromoform	µg/l	< 1.00
Bromomethane	µg/l	< 1.00
Butylbenzyl phthalate (aq)	µg/l	< 1.00
Cadmium, Dissolved	µg/l	< 0.10
Cadmium	µg/l	0.39
Calcium	mg/l	134.057
Carbazole (aq)	µg/l	< 1.00
Carbon disulphide	µg/l	< 1.00
Carbontetrachloride	µg/l	< 1.00
Carbophenothion	µg/l	< 0.01
Chlorfenvinphos	µg/l	< 0.01
Chloride	mg/l	22.848
Chlorobenzene	µg/l	< 1.00

Chloroethane	µg/l	< 1.00
Chloroform	µg/l	< 1.00
Chloromethane	µg/l	< 1.00
Chlorothalonil	µg/l	< 0.01
Chlorpyriphos- methyl	µg/l	< 0.01
Chlorpyriphos	µg/l	< 0.01
Chromium, Dissolved	µg/l	< 1.20
Chromium	µg/l	1.43
Cobalt, Dissolved	µg/l	< 0.15
Coliforms	MPN/100ml	1413.6
Conductivity @ 20°C	uS/cm @20°C	579
Copper, Dissolved	µg/l	< 0.85
Copper	mg/l	
Copper	µg/l	4.89
Cyanide, Free	mg/l	< 0.05
Cyanide, Total	mg/l	< 0.05
Cyanide, Total	µg/l	< 1.70
Diazinon	µg/l	< 0.01
Dibenzofuran (aq)	µg/l	< 1.00
Dibromochloromethane	µg/l	< 1.00
Dibromomethane	µg/l	< 1.00
Dibutyl tin	µg/l	< 5.00
Dichlorodifluoromethane	µg/l	< 1.00
Dichloromethane	µg/l	< 3.00
Dichlorvos	µg/l	< 0.01
Dieldrin	µg/l	< 0.01
Diethyl phthalate (aq)	µg/l	< 1.00
Dimethoate	µg/l	< 0.01
Dimethyl phthalate (aq)	µg/l	< 1.00
Disulfoton	µg/l	< 0.01
Endosulphan II	µg/l	< 0.01
Endosulphan I	µg/l	< 0.01
Endosulphan sulphate	µg/l	< 0.01
Endrin	µg/l	< 0.01
Ethion	µg/l	< 0.01
Ethylbenzene	µg/l	< 1.00
Etrimphos	µg/l	< 0.01
Faecal Coliforms	cfu/100ml	76
Fenitrothion	µg/l	< 0.01
Fenthion	µg/l	< 0.01
Fluoride	mg/l	0.2
Heptachlor Epoxide	µg/l	< 0.01
Heptachlor	µg/l	< 0.01
Hexachlorobenzene (aq)	µg/l	< 1.00
Hexachlorobenzene	µg/l	< 0.01
Hexachlorobutadiene (aq)	µg/l	< 1.00
Hexachlorobutadiene	µg/l	< 1.00
Hexachlorocyclopentadiene (aq)	µg/l	< 1.00
Hexachloroethane (aq)	µg/l	< 1.00
Iron	mg/l	

Iron	µg/l	243.09
Isodrin	µg/l	< 0.01
Isophorone (aq)	µg/l	< 1.00
Isopropylbenzene	µg/l	< 1.00
Lead, Dissolved	µg/l	< 0.10
Lead	mg/l	
Lead	µg/l	< 0.80
M&P-Xylene	µg/l	< 1.00
Magnesium	mg/l	5.205
Malathion	µg/l	< 0.01
Manganese	µg/l	126.53
Mercury, Dissolved	µg/l	< 0.01
Mercury	µg/l	< 0.06
Methyl parathion	µg/l	< 0.01
Methyl tertiary butyl ether (MTBE)	µg/l	< 1.00
Mevinphos	µg/l	< 0.01
Mineral oil >C10 - C40 (aq)	µg/l	< 10.00
Molybdenum, Dissolved	µg/l	1.09
Naphthalene	µg/l	< 1.00
Nickel, Dissolved	µg/l	3.14
Nitrite as N	mg/l	< 0.02
Nitrobenzene (aq)	µg/l	< 1.00
O-Xylene	µg/l	< 1.00
Orthophosphate as P	mg/l	< 0.025
PH Onsite	pH Unit	7.19
PH	pH Unit	7.03
Parathion	µg/l	< 0.01
Pendimethalin	µg/l	< 0.01
Pentachlorophenol (aq)	µg/l	< 1.00
Permethrin II	µg/l	< 0.01
Permethrin I	µg/l	< 0.01
Phenol (aq)	µg/l	< 1.00
Phenolics as Phenol	mg/l	< 0.020
Phosalone	µg/l	< 0.01
Phosphate (ortho) as PO4	mg/l	< 0.05
Phosphorus, Dissolved	µg/l	< 15.00
Phosphorus, Total as P	mg/l	< 0.050
Pirimiphos-methyl	µg/l	< 0.01
Potassium	mg/l	1.572
Propetamphos	µg/l	< 0.01
Propylbenzene	µg/l	< 1.00
Quintozene (PCNB)	µg/l	< 0.01
Selenium, Dissolved	µg/l	< 1.00
Silicon, Dissolved	mg/l	2.39
Silver, Dissolved	µg/l	< 1.50
Sodium	mg/l	13.137
Styrene	µg/l	< 1.00
Sulphate	mg/l	< 20.000
TON as N	mg/l	< 2.000
Tecnazene	µg/l	< 0.01

Tellurium, Dissolved	µg/l	< 7.00
Telodrin	µg/l	< 0.01
Temperature Onsite	°C	9.5
Tetrabutyl tin	ng/l	< 2.00
Tetrachloroethene	µg/l	< 1.00
Thallium, Dissolved	µg/l	< 2.00
Tin, Dissolved	µg/l	0.61
Titanium, Dissolved	µg/l	4.5
Toluene	µg/l	< 1.00
Total Organic Carbon	mg/l	4.39
Total Suspended Solids	mg/l	2920
Trans-chlordane	µg/l	< 0.01
Triadimefon	µg/l	< 0.01
Triallate	µg/l	< 0.01
Triazophos	µg/l	< 0.01
Tributyl tin	ng/l	< 1.00
Trichloroethene	µg/l	< 1.00
Trichlorofluoromethane	µg/l	< 1.00
Trifluralin	µg/l	< 0.01
Triphenyl tin	ng/l	< 1.00
Uranium, Soluble	µg/l	< 1.50
Vanadium, Dissolved	µg/l	< 1.30
Vinyl chloride	µg/l	< 1.00
Zinc, Dissolved	µg/l	< 1.30
Zinc	µg/l	41.59
alpha-Hexachlorocyclohexane HCH/Lindane	µg/l	< 0.01
beta-Hexachlorocyclohexane HCH/Lindane	µg/l	< 0.01
bis(2-Chloroethoxy)methane (aq)	µg/l	< 1.00
bis(2-Chloroethyl)ether (aq)	µg/l	< 1.00
bis(2-Ethylhexyl) phthalate (aq)	µg/l	< 2.00
cis-Chlordane	µg/l	< 0.01
gamma-Hexachlorocyclohexane HCH/Lindane	µg/l	< 0.01
n-Butylbenzene	µg/l	< 1.00
n-Dibutyl phthalate (aq)	µg/l	< 1.00
n-Dioctyl phthalate (aq)	µg/l	< 5.00
n-Nitroso-n-dipropylamine (aq)	µg/l	< 1.00
o,p'-TDE (DDD)	µg/l	< 0.01
o,p-DDE	µg/l	< 0.01
o,p-DDT	µg/l	< 0.01
o,p-Methoxychlor	µg/l	< 0.01
p,p'-TDE (DDD)	µg/l	< 0.01
p,p-DDE	µg/l	< 0.01
p,p-DDT	µg/l	< 0.01
p,p-Methoxychlor	µg/l	< 0.01
sec-Butylbenzene	µg/l	< 1.00
tert-Amyl methyl ether (TAME)	µg/l	< 1.00
tert-Butylbenzene	µg/l	< 1.00

## MW8 Deep Quarterly /Annually Results – Mohill

**Sampled Date: 05/12/2016**

Sampled Time: 10:55

Depth (m): 0.8

Odour: No unusual odour

Weather/Visual Observation: Cloudy/Dry/Clean

**City Analysts Ref: 341574**

Analysis	Results	Units
1,1,1,2-Tetrachloroethane	µg/l	< 1.00
1,1,1-Trichloroethane	µg/l	< 1.00
1,1,2,2-Tetrachloroethane	µg/l	< 1.00
1,1,2-Trichloroethane	µg/l	< 1.00
1,1-Dichloroethane	µg/l	< 1.00
1,1-Dichloroethene	µg/l	< 1.00
1,1-Dichloropropene	µg/l	< 1.00
1,2,3-Trichlorobenzene	µg/l	< 1.00
1,2,3-Trichloropropane	µg/l	< 1.00
1,2,4-Trichlorobenzene (aq)	µg/l	< 1.00
1,2,4-Trichlorobenzene	µg/l	< 1.00
1,2,4-Trimethylbenzene	µg/l	< 1.00
1,2-Dibromo-3-chloropropane	µg/l	< 1.00
1,2-Dibromoethane	µg/l	< 1.00
1,2-Dichlorobenzene (aq)	µg/l	< 1.00
1,2-Dichlorobenzene	µg/l	< 1.00
1,2-Dichloroethane	µg/l	< 1.00
1,2-Dichloroethene Trans (E)	µg/l	< 1.00
1,2-Dichloroethene cis (Z)	µg/l	< 1.00
1,2-Dichloropropane	µg/l	< 1.00
1,3,5-Trichlorobenzene	µg/l	< 1.00
1,3,5-Trimethylbenzene	µg/l	< 1.00
1,3-Dichlorobenzene (aq)	µg/l	< 1.00
1,3-Dichlorobenzene	µg/l	< 1.00
1,3-Dichloropropane	µg/l	< 1.00
1,3-Dichloropropene Trans (E)	µg/l	< 1.00
1,3-Dichloropropene cis (Z)	µg/l	< 1.00
1,4-Dichlorobenzene (aq)	µg/l	< 1.00
1,4-Dichlorobenzene	µg/l	< 1.00
2,2-Dichloropropane	µg/l	< 1.00
2,4,5-Trichlorophenol (aq)	µg/l	< 1.00
2,4,6-Trichlorophenol (aq)	µg/l	< 1.00
2,4-Dichlorophenol (aq)	µg/l	< 1.00
2,4-Dimethylphenol (aq)	µg/l	< 1.00
2,4-Dinitrotoluene (aq)	µg/l	< 1.00

2,6-Dinitrotoluene (aq)	µg/l	< 1.00
2-Chloronaphthalene (aq)	µg/l	< 1.00
2-Chlorophenol (aq)	µg/l	< 1.00
2-Chlorotoluene	µg/l	< 1.00
2-Methylnaphthalene (aq)	µg/l	< 1.00
2-Methylphenol (aq)	µg/l	< 1.00
2-Nitroaniline (aq)	µg/l	< 1.00
2-Nitrophenol (aq)	µg/l	< 1.00
3-Nitroaniline (aq)	µg/l	< 1.00
4-Bromophenylphenylether (aq)	µg/l	< 1.00
4-Chloro-3-methylphenol (aq)	µg/l	< 1.00
4-Chloroaniline (aq)	µg/l	< 1.00
4-Chlorophenylphenylether (aq)	µg/l	< 1.00
4-Chlorotoluene	µg/l	< 1.00
4-Methylphenol (aq)	µg/l	< 1.00
4-Nitroaniline (aq)	µg/l	< 1.00
4-Nitrophenol (aq)	µg/l	< 1.00
4-iso-Propyltoluene	µg/l	< 1.00
Aldrin	µg/l	< 0.01
Alkalinity CaCO3	mg/l	309.925
Ammonia as N	mg/l	0.407
Ammoniacal Nitrogen as N	mg/l	0.484
Antimony, Dissolved	µg/l	0.21
Arsenic, Dissolved	µg/l	0.53
Azinphos-ethyl	µg/l	< 0.01
Azinphos-methyl	µg/l	< 0.01
Azobenzene (aq)	µg/l	< 1.00
Barium, Dissolved	µg/l	161
Benzene	µg/l	< 1.00
Benzo(k)fluoranthene (aq)	µg/l	< 1.00
Beryllium, Dissolved	µg/l	< 0.10
Boron, Dissolved	µg/l	88.3
Boron	µg/l	103.34
Bromobenzene	µg/l	< 1.00
Bromochloromethane	µg/l	< 1.00
Bromodichloromethane	µg/l	< 1.00
Bromoform	µg/l	< 1.00
Bromomethane	µg/l	< 1.00
Butylbenzyl phthalate (aq)	µg/l	< 1.00
Cadmium, Dissolved	µg/l	< 0.10
Cadmium	µg/l	3.37
Calcium	mg/l	161.349
Carbazole (aq)	µg/l	< 1.00
Carbon disulphide	µg/l	< 1.00
Carbontetrachloride	µg/l	< 1.00
Carbophenothion	µg/l	< 0.01
Chlorfenvinphos	µg/l	< 0.01
Chloride	mg/l	339.806
Chlorobenzene	µg/l	< 1.00
Chloroethane	µg/l	< 1.00



Chloroform	µg/l	< 1.00
Chloromethane	µg/l	< 1.00
Chlorothalonil	µg/l	< 0.01
Chlorpyrifos- methyl	µg/l	< 0.01
Chlorpyrifos	µg/l	< 0.01
Chromium, Dissolved	µg/l	< 1.20
Chromium	µg/l	1.18
Cobalt, Dissolved	µg/l	< 0.15
Coliforms	MPN/100ml	68670
Conductivity @ 20°C	uS/cm @20°C	1473
Copper, Dissolved	µg/l	< 0.85
Copper	µg/l	6.18
Cyanide, Free	mg/l	< 0.05
Cyanide, Total	mg/l	< 0.05
Cyanide, Total	µg/l	< 1.70
Diazinon	µg/l	< 0.01
Dibenzofuran (aq)	µg/l	< 1.00
Dibromochloromethane	µg/l	< 1.00
Dibromomethane	µg/l	< 1.00
Dibutyl tin	µg/l	< 5.00
Dichlorodifluoromethane	µg/l	< 1.00
Dichloromethane	µg/l	< 3.00
Dichlorvos	µg/l	< 0.01
Dieldrin	µg/l	< 0.01
Diethyl phthalate (aq)	µg/l	< 1.00
Dimethoate	µg/l	< 0.01
Dimethyl phthalate (aq)	µg/l	< 1.00
Disulfoton	µg/l	< 0.01
Endosulphan II	µg/l	< 0.01
Endosulphan I	µg/l	< 0.01
Endosulphan sulphate	µg/l	< 0.01
Endrin	µg/l	< 0.01
Ethion	µg/l	< 0.01
Ethylbenzene	µg/l	< 1.00
Etrimphos	µg/l	< 0.01
Faecal Coliforms	cfu/100ml	800
Fenitrothion	µg/l	< 0.01
Fenthion	µg/l	< 0.01
Fluoride	mg/l	0.5
Heptachlor Epoxide	µg/l	< 0.01
Heptachlor	µg/l	< 0.01
Hexachlorobenzene (aq)	µg/l	< 1.00
Hexachlorobenzene	µg/l	< 0.01
Hexachlorobutadiene (aq)	µg/l	< 1.00
Hexachlorobutadiene	µg/l	< 1.00
Hexachlorocyclopentadiene (aq)	µg/l	< 1.00
Hexachloroethane (aq)	µg/l	< 1.00
Iron	µg/l	39.29
Isodrin	µg/l	< 0.01
Isophorone (aq)	µg/l	< 1.00

Isopropylbenzene	µg/l	< 1.00
Lead, Dissolved	µg/l	< 0.10
Lead	µg/l	6.4
M&P-Xylene	µg/l	< 1.00
Magnesium	mg/l	58.733
Malathion	µg/l	< 0.01
Manganese	µg/l	44.32
Mercury, Dissolved	µg/l	< 0.01
Mercury	µg/l	< 0.06
Methyl parathion	µg/l	< 0.01
Methyl tertiary butyl ether (MTBE)	µg/l	< 1.00
Mevinphos	µg/l	< 0.01
Mineral oil >C10 - C40 (aq)	µg/l	18.4
Molybdenum, Dissolved	µg/l	< 0.62
Naphthalene	µg/l	< 1.00
Nickel, Dissolved	µg/l	1.95
Nitrite as N	mg/l	0.05
Nitrobenzene (aq)	µg/l	< 1.00
O-Xylene	µg/l	< 1.00
Orthophosphate as P	mg/l	< 0.025
PH Onsite	pH Unit	7.18
PH	pH Unit	7.02
Parathion	µg/l	< 0.01
Pendimethalin	µg/l	< 0.01
Pentachlorophenol (aq)	µg/l	< 1.00
Permethrin II	µg/l	< 0.01
Permethrin I	µg/l	< 0.01
Phenol (aq)	µg/l	< 1.00
Phenolics as Phenol	mg/l	< 0.020
Phosalone	µg/l	< 0.01
Phosphate (ortho) as PO4	mg/l	< 0.05
Phosphorus, Dissolved	µg/l	< 15.00
Phosphorus, Total as P	mg/l	< 0.050
Pirimiphos-methyl	µg/l	< 0.01
Potassium	mg/l	5.211
Propetamphos	µg/l	< 0.01
Propylbenzene	µg/l	< 1.00
Quintozene (PCNB)	µg/l	< 0.01
Selenium, Dissolved	µg/l	< 1.00
Silicon, Dissolved	mg/l	5.98
Silver, Dissolved	µg/l	< 1.50
Sodium	mg/l	31.906
Styrene	µg/l	< 1.00
Sulphate	mg/l	< 20.000
TON as N	mg/l	< 2.000
Tecnazene	µg/l	< 0.01
Tellurium, Dissolved	µg/l	< 7.00
Telodrin	µg/l	< 0.01
Temperature Onsite	°C	9.4
Tetrabutyl tin	ng/l	< 2.00

Tetrachloroethene	µg/l	< 1.00
Thallium, Dissolved	µg/l	< 2.00
Tin, Dissolved	µg/l	< 0.36
Titanium, Dissolved	µg/l	3.8
Toluene	µg/l	< 1.00
Total Organic Carbon	mg/l	1.97
Total Suspended Solids	mg/l	102
Trans-chlordane	µg/l	< 0.01
Triadimefon	µg/l	< 0.01
Triallate	µg/l	< 0.01
Triazophos	µg/l	< 0.01
Tributyl tin	ng/l	< 1.00
Trichloroethene	µg/l	< 1.00
Trichlorofluoromethane	µg/l	< 1.00
Trifluralin	µg/l	< 0.01
Triphenyl tin	ng/l	< 1.00
Uranium, Soluble	µg/l	< 1.50
Vanadium, Dissolved	µg/l	< 1.30
Vinyl chloride	µg/l	< 1.00
Zinc, Dissolved	µg/l	2.71
Zinc	µg/l	24.56
alpha-Hexachlorocyclohexane HCH/Lindane	µg/l	< 0.01
beta-Hexachlorocyclohexane HCH/Lindane	µg/l	< 0.01
bis(2-Chloroethoxy)methane (aq)	µg/l	< 1.00
bis(2-Chloroethyl)ether (aq)	µg/l	< 1.00
bis(2-Ethylhexyl) phthalate (aq)	µg/l	< 2.00
cis-Chlordane	µg/l	< 0.01
gamma-Hexachlorocyclohexane HCH/Lindane	µg/l	< 0.01
n-Butylbenzene	µg/l	< 1.00
n-Dibutyl phthalate (aq)	µg/l	< 1.00
n-Dioctyl phthalate (aq)	µg/l	< 5.00
n-Nitroso-n-dipropylamine (aq)	µg/l	< 1.00
o,p'-TDE (DDD)	µg/l	< 0.01
o,p-DDE	µg/l	< 0.01
o,p-DDT	µg/l	< 0.01
o,p-Methoxychlor	µg/l	< 0.01
p,p'-TDE (DDD)	µg/l	< 0.01
p,p-DDE	µg/l	< 0.01
p,p-DDT	µg/l	< 0.01
p,p-Methoxychlor	µg/l	< 0.01
sec-Butylbenzene	µg/l	< 1.00
tert-Amyl methyl ether (TAME)	µg/l	< 1.00
tert-Butylbenzene	µg/l	< 1.00

## SW4 Quarterly/Annually Results – Mohill

**Sampled Date: 05/12/2016**

Sampled Time: 11;20

Depth (m): Not required

Odour: No unusual odour

Weather/Visual Observation: Cloudy/Dry/Clean

**City Analysts Ref: 341575**

Analysis	Results	Units
Alkalinity CaCO3	mg/l	220.166
Ammonia as N	mg/l	0.062
Boron	µg/l	57.13
CBOD5	mg/l O2	< 2
COD	mg/l O2	56
Cadmium	µg/l	0.2
Calcium	mg/l	80.805
Chloride	mg/l	14.976
Chromium	µg/l	< 0.60
Conductivity @ 20°C	uS/cm @20°C	400
Copper	µg/l	5.01
Dissolved Oxygen Onsite	%	3.8
Dissolved Oxygen Onsite	mg/l O2	0.45
Iron	µg/l	543.35
Lead	µg/l	< 0.80
Magnesium	mg/l	5.668
Manganese	µg/l	37.9
Mercury	µg/l	< 0.06
Orthophosphate as P	mg/l	< 0.025
PH Onsite	pH Unit	7.95
PH	pH Unit	7.85
Phosphorus, Total as P	mg/l	0.086
Potassium	mg/l	2.083
Sodium	mg/l	9.863
Sulphate	mg/l	< 20.000
TON as N	mg/l	< 2.000
Temperature Onsite	°C	8.8
Total Suspended Solids	mg/l	5
Zinc	µg/l	26.83

## SW6 Quarterly/Annually Results – Mohill

**Sampled Date: 05/12/2016**

Sampled Time: 11:35

Depth (m): Not required

Odour: No unusual odour

Weather/Visual Observation: Cloudy/Dry/Clean

**City Analysts Ref: 341576**

Analysis	Results	Units
Alkalinity CaCO3	mg/l	236.433
Ammonia as N	mg/l	0.073
Boron	µg/l	55.37
CBOD5	mg/l O2	< 2
COD	mg/l O2	52
Cadmium	µg/l	< 0.13
Calcium	mg/l	84.41
Chloride	mg/l	15.558
Chromium	µg/l	< 0.60
Conductivity @ 20°C	uS/cm @20°C	435
Copper	µg/l	4.79
Dissolved Oxygen Onsite	%	4
Dissolved Oxygen Onsite	mg/l O2	0.5
Iron	µg/l	367.49
Lead	µg/l	< 0.80
Magnesium	mg/l	4.72
Manganese	µg/l	34.89
Mercury	µg/l	< 0.06
Orthophosphate as P	mg/l	< 0.025
PH Onsite	pH Unit	8.08
PH	pH Unit	7.87
Phosphorus, Total as P	mg/l	0.07
Potassium	mg/l	1.907
Sodium	mg/l	9.846
Sulphate	mg/l	< 20.000
TON as N	mg/l	< 2.000
Temperature Onsite	°C	7.2
Total Suspended Solids	mg/l	5
Zinc	µg/l	19.41

## MW5 Shallow Quarterly/Annually Results – Mohill

**Sampled Date: 05/12/2016**

Sampled Time: 11:55

Depth (m): 0.5

Odour: No unusual odour

Weather/Visual Observation: Cloudy/Dry/Clean

**City Analysts Ref: 341569**

Analysis	Results	Units
1,1,1,2-Tetrachloroethane	µg/l	< 1.00
1,1,1-Trichloroethane	µg/l	< 1.00
1,1,2,2-Tetrachloroethane	µg/l	< 1.00
1,1,2-Trichloroethane	µg/l	< 1.00
1,1-Dichloroethane	µg/l	< 1.00
1,1-Dichloroethene	µg/l	< 1.00
1,1-Dichloropropene	µg/l	< 1.00
1,2,3-Trichlorobenzene	µg/l	< 1.00
1,2,3-Trichloropropane	µg/l	< 1.00
1,2,4-Trichlorobenzene (aq)	µg/l	< 1.00
1,2,4-Trichlorobenzene	µg/l	< 1.00
1,2,4-Trimethylbenzene	µg/l	< 1.00
1,2-Dibromo-3-chloropropane	µg/l	< 1.00
1,2-Dibromoethane	µg/l	< 1.00
1,2-Dichlorobenzene (aq)	µg/l	< 1.00
1,2-Dichlorobenzene	µg/l	< 1.00
1,2-Dichloroethane	µg/l	< 1.00
1,2-Dichloroethene Trans (E)	µg/l	< 1.00
1,2-Dichloroethene cis (Z)	µg/l	< 1.00
1,2-Dichloropropane	µg/l	< 1.00
1,3,5-Trichlorobenzene	µg/l	< 1.00
1,3,5-Trimethylbenzene	µg/l	< 1.00
1,3-Dichlorobenzene (aq)	µg/l	< 1.00
1,3-Dichlorobenzene	µg/l	< 1.00
1,3-Dichloropropane	µg/l	< 1.00
1,3-Dichloropropene Trans (E)	µg/l	< 1.00
1,3-Dichloropropene cis (Z)	µg/l	< 1.00
1,4-Dichlorobenzene (aq)	µg/l	< 1.00
1,4-Dichlorobenzene	µg/l	< 1.00
2,2-Dichloropropane	µg/l	< 1.00
2,4,5-Trichlorophenol (aq)	µg/l	< 1.00
2,4,6-Trichlorophenol (aq)	µg/l	< 1.00
2,4-Dichlorophenol (aq)	µg/l	< 1.00
2,4-Dimethylphenol (aq)	µg/l	< 1.00
2,4-Dinitrotoluene (aq)	µg/l	< 1.00
2,6-Dinitrotoluene (aq)	µg/l	< 1.00
2-Chloronaphthalene (aq)	µg/l	< 1.00

2-Chlorophenol (aq)	µg/l	< 1.00
2-Chlorotoluene	µg/l	< 1.00
2-Methylnaphthalene (aq)	µg/l	< 1.00
2-Methylphenol (aq)	µg/l	< 1.00
2-Nitroaniline (aq)	µg/l	< 1.00
2-Nitrophenol (aq)	µg/l	< 1.00
3-Nitroaniline (aq)	µg/l	< 1.00
4-Bromophenylphenylether (aq)	µg/l	< 1.00
4-Chloro-3-methylphenol (aq)	µg/l	< 1.00
4-Chloroaniline (aq)	µg/l	< 1.00
4-Chlorophenylphenylether (aq)	µg/l	< 1.00
4-Chlorotoluene	µg/l	< 1.00
4-Methylphenol (aq)	µg/l	< 1.00
4-Nitroaniline (aq)	µg/l	< 1.00
4-Nitrophenol (aq)	µg/l	< 1.00
4-iso-Propyltoluene	µg/l	< 1.00
Aldrin	µg/l	< 0.01
Alkalinity CaCO3	mg/l	289.316
Ammonia as N	mg/l	0.022
Ammoniacal Nitrogen as N	mg/l	< 0.200
Antimony, Dissolved	µg/l	0.18
Arsenic, Dissolved	µg/l	< 0.51
Azinphos-ethyl	µg/l	< 0.01
Azinphos-methyl	µg/l	< 0.01
Azobenzene (aq)	µg/l	< 1.00
Barium, Dissolved	µg/l	37.4
Benzene	µg/l	< 1.00
Benzo(k)fluoranthene (aq)	µg/l	< 1.00
Beryllium, Dissolved	µg/l	< 0.10
Boron, Dissolved	µg/l	24.8
Boron	µg/l	< 50.00
Bromobenzene	µg/l	< 1.00
Bromochloromethane	µg/l	< 1.00
Bromodichloromethane	µg/l	< 1.00
Bromoform	µg/l	< 1.00
Bromomethane	µg/l	< 1.00
Butylbenzyl phthalate (aq)	µg/l	< 1.00
Cadmium, Dissolved	µg/l	< 0.10
Cadmium	µg/l	0.3
Calcium	mg/l	105.517
Carbazole (aq)	µg/l	< 1.00
Carbon disulphide	µg/l	< 1.00
Carbontetrachloride	µg/l	< 1.00
Carbophenothion	µg/l	< 0.01
Chlorfenvinphos	µg/l	< 0.01
Chloride	mg/l	18.268
Chlorobenzene	µg/l	< 1.00
Chloroethane	µg/l	< 1.00
Chloroform	µg/l	< 1.00
Chloromethane	µg/l	< 1.00

Chlorothalonil	µg/l	< 0.01
Chlorpyrifos- methyl	µg/l	< 0.01
Chlorpyrifos	µg/l	< 0.01
Chromium, Dissolved	µg/l	< 1.20
Chromium	µg/l	0.84
Cobalt, Dissolved	µg/l	< 0.15
Coliforms	MPN/100ml	770.1
Conductivity @ 20°C	uS/cm @20°C	570
Copper, Dissolved	µg/l	< 0.85
Copper	µg/l	5.13
Cyanide, Free	mg/l	< 0.05
Cyanide, Total	mg/l	< 0.05
Cyanide, Total	µg/l	< 1.70
Diazinon	µg/l	< 0.01
Dibenzofuran (aq)	µg/l	< 1.00
Dibromochloromethane	µg/l	< 1.00
Dibromomethane	µg/l	< 1.00
Dibutyl tin	µg/l	< 5.00
Dichlorodifluoromethane	µg/l	< 1.00
Dichloromethane	µg/l	< 3.00
Dichlorvos	µg/l	< 0.01
Dieldrin	µg/l	< 0.01
Diethyl phthalate (aq)	µg/l	< 1.00
Dimethoate	µg/l	< 0.01
Dimethyl phthalate (aq)	µg/l	< 1.00
Disulfoton	µg/l	< 0.01
Endosulphan II	µg/l	< 0.01
Endosulphan I	µg/l	< 0.01
Endosulphan sulphate	µg/l	< 0.01
Endrin	µg/l	< 0.01
Ethion	µg/l	< 0.01
Ethylbenzene	µg/l	< 1.00
Etrimphos	µg/l	< 0.01
Faecal Coliforms	cfu/100ml	53
Fenitrothion	µg/l	< 0.01
Fenthion	µg/l	< 0.01
Fluoride	mg/l	0.2
Heptachlor Epoxide	µg/l	< 0.01
Heptachlor	µg/l	< 0.01
Hexachlorobenzene (aq)	µg/l	< 1.00
Hexachlorobenzene	µg/l	< 0.01
Hexachlorobutadiene (aq)	µg/l	< 1.00
Hexachlorobutadiene	µg/l	< 1.00
Hexachlorocyclopentadiene (aq)	µg/l	< 1.00
Hexachloroethane (aq)	µg/l	< 1.00
Iron	mg/l	
Iron	µg/l	40.95
Isodrin	µg/l	< 0.01
Isophorone (aq)	µg/l	< 1.00
Isopropylbenzene	µg/l	< 1.00



Lead, Dissolved	µg/l	< 0.10
Lead	µg/l	1.46
M&P-Xylene	µg/l	< 1.00
Magnesium	mg/l	6.912
Malathion	µg/l	< 0.01
Manganese	µg/l	10.08
Mercury, Dissolved	µg/l	< 0.01
Mercury	µg/l	< 0.06
Methyl parathion	µg/l	< 0.01
Methyl tertiary butyl ether (MTBE)	µg/l	< 1.00
Mevinphos	µg/l	< 0.01
Mineral oil >C10 - C40 (aq)	µg/l	< 10.00
Molybdenum, Dissolved	µg/l	< 0.62
Naphthalene	µg/l	< 1.00
Nickel, Dissolved	µg/l	1.15
Nitrite as N	mg/l	< 0.02
Nitrobenzene (aq)	µg/l	< 1.00
O-Xylene	µg/l	< 1.00
Orthophosphate as P	mg/l	< 0.025
PH Onsite	pH Unit	7.29
PH	pH Unit	7.28
Parathion	µg/l	< 0.01
Pendimethalin	µg/l	< 0.01
Pentachlorophenol (aq)	µg/l	< 1.00
Permethrin II	µg/l	< 0.01
Permethrin I	µg/l	< 0.01
Phenol (aq)	µg/l	< 1.00
Phenolics as Phenol	mg/l	< 0.020
Phosalone	µg/l	< 0.01
Phosphate (ortho) as PO4	mg/l	< 0.05
Phosphorus, Dissolved	µg/l	< 15.00
Phosphorus, Total as P	mg/l	< 0.050
Pirimiphos-methyl	µg/l	< 0.01
Potassium	mg/l	1.196
Propetamphos	µg/l	< 0.01
Propylbenzene	µg/l	< 1.00
Quintozene (PCNB)	µg/l	< 0.01
Selenium, Dissolved	µg/l	< 1.00
Silicon, Dissolved	mg/l	2.79
Silver, Dissolved	µg/l	< 1.50
Sodium	mg/l	12.283
Styrene	µg/l	< 1.00
Sulphate	mg/l	< 20.000
TON as N	mg/l	< 2.000
Tecnazene	µg/l	< 0.01
Tellurium, Dissolved	µg/l	< 7.00
Telodrin	µg/l	< 0.01
Temperature Onsite	°C	9.7
Tetrabutyl tin	ng/l	< 2.00
Tetrachloroethene	µg/l	< 1.00

Thallium, Dissolved	µg/l	< 2.00
Tin, Dissolved	µg/l	0.53
Titanium, Dissolved	µg/l	4.31
Toluene	µg/l	< 1.00
Total Organic Carbon	mg/l	3.06
Total Suspended Solids	mg/l	25
Trans-chlordane	µg/l	< 0.01
Triadimefon	µg/l	< 0.01
Triallate	µg/l	< 0.01
Triazophos	µg/l	< 0.01
Tributyl tin	ng/l	< 1.00
Trichloroethene	µg/l	< 1.00
Trichlorofluoromethane	µg/l	< 1.00
Trifluralin	µg/l	< 0.01
Triphenyl tin	ng/l	< 1.00
Uranium, Soluble	µg/l	< 1.50
Vanadium, Dissolved	µg/l	< 1.30
Vinyl chloride	µg/l	< 1.00
Zinc, Dissolved	µg/l	35.4
Zinc	µg/l	43.36
alpha-Hexachlorocyclohexane HCH/Lindane	µg/l	< 0.01
beta-Hexachlorocyclohexane HCH/Lindane	µg/l	< 0.01
bis(2-Chloroethoxy)methane (aq)	µg/l	< 1.00
bis(2-Chloroethyl)ether (aq)	µg/l	< 1.00
bis(2-Ethylhexyl) phthalate (aq)	µg/l	< 2.00
cis-Chlordane	µg/l	< 0.01
gamma-Hexachlorocyclohexane HCH/Lindane	µg/l	< 0.01
n-Butylbenzene	µg/l	< 1.00
n-Dibutyl phthalate (aq)	µg/l	< 1.00
n-Dioctyl phthalate (aq)	µg/l	< 5.00
n-Nitroso-n-dipropylamine (aq)	µg/l	< 1.00
o,p'-TDE (DDD)	µg/l	< 0.01
o,p-DDE	µg/l	< 0.01
o,p-DDT	µg/l	< 0.01
o,p-Methoxychlor	µg/l	< 0.01
p,p'-TDE (DDD)	µg/l	< 0.01
p,p-DDE	µg/l	< 0.01
p,p-DDT	µg/l	< 0.01
p,p-Methoxychlor	µg/l	< 0.01
sec-Butylbenzene	µg/l	< 1.00
tert-Amyl methyl ether (TAME)	µg/l	< 1.00
tert-Butylbenzene	µg/l	< 1.00

## MW5 Deep Quarterly /Annually Results – Mohill

**Sampled Date: 05/12/2016**

Sampled Time: 12.10

Depth (m): 0.3

Odour: No unusual odour

Weather/Visual Observation: Cloudy/Dry/Clean

**City Analysts Ref: 341570**

Analysis	Results	Units
1,1,1,2-Tetrachloroethane	µg/l	< 1.00
1,1,1-Trichloroethane	µg/l	< 1.00
1,1,2,2-Tetrachloroethane	µg/l	< 1.00
1,1,2-Trichloroethane	µg/l	< 1.00
1,1-Dichloroethane	µg/l	< 1.00
1,1-Dichloroethene	µg/l	< 1.00
1,1-Dichloropropene	µg/l	< 1.00
1,2,3-Trichlorobenzene	µg/l	< 1.00
1,2,3-Trichloropropane	µg/l	< 1.00
1,2,4-Trichlorobenzene (aq)	µg/l	< 1.00
1,2,4-Trichlorobenzene	µg/l	< 1.00
1,2,4-Trimethylbenzene	µg/l	< 1.00
1,2-Dibromo-3-chloropropane	µg/l	< 1.00
1,2-Dibromoethane	µg/l	< 1.00
1,2-Dichlorobenzene (aq)	µg/l	< 1.00
1,2-Dichlorobenzene	µg/l	< 1.00
1,2-Dichloroethane	µg/l	< 1.00
1,2-Dichloroethene Trans (E)	µg/l	< 1.00
1,2-Dichloroethene cis (Z)	µg/l	< 1.00
1,2-Dichloropropane	µg/l	< 1.00
1,3,5-Trichlorobenzene	µg/l	< 1.00
1,3,5-Trimethylbenzene	µg/l	< 1.00
1,3-Dichlorobenzene (aq)	µg/l	< 1.00
1,3-Dichlorobenzene	µg/l	< 1.00
1,3-Dichloropropane	µg/l	< 1.00
1,3-Dichloropropene Trans (E)	µg/l	< 1.00
1,3-Dichloropropene cis (Z)	µg/l	< 1.00
1,4-Dichlorobenzene (aq)	µg/l	< 1.00
1,4-Dichlorobenzene	µg/l	< 1.00
2,2-Dichloropropane	µg/l	< 1.00
2,4,5-Trichlorophenol (aq)	µg/l	< 1.00
2,4,6-Trichlorophenol (aq)	µg/l	< 1.00
2,4-Dichlorophenol (aq)	µg/l	< 1.00
2,4-Dimethylphenol (aq)	µg/l	< 1.00
2,4-Dinitrotoluene (aq)	µg/l	< 1.00
2,6-Dinitrotoluene (aq)	µg/l	< 1.00

2-Chloronaphthalene (aq)	µg/l	< 1.00
2-Chlorophenol (aq)	µg/l	< 1.00
2-Chlorotoluene	µg/l	< 1.00
2-Methylnaphthalene (aq)	µg/l	< 1.00
2-Methylphenol (aq)	µg/l	< 1.00
2-Nitroaniline (aq)	µg/l	< 1.00
2-Nitrophenol (aq)	µg/l	< 1.00
3-Nitroaniline (aq)	µg/l	< 1.00
4-Bromophenylphenylether (aq)	µg/l	< 1.00
4-Chloro-3-methylphenol (aq)	µg/l	< 1.00
4-Chloroaniline (aq)	µg/l	< 1.00
4-Chlorophenylphenylether (aq)	µg/l	< 1.00
4-Chlorotoluene	µg/l	< 1.00
4-Methylphenol (aq)	µg/l	1.63
4-Nitroaniline (aq)	µg/l	< 1.00
4-Nitrophenol (aq)	µg/l	< 1.00
4-iso-Propyltoluene	µg/l	< 1.00
Aldrin	µg/l	< 0.01
Alkalinity CaCO3	mg/l	311.557
Ammonia as N	mg/l	1.434
Ammoniacal Nitrogen as N	mg/l	1.42
Antimony, Dissolved	µg/l	0.37
Arsenic, Dissolved	µg/l	0.54
Azinphos-ethyl	µg/l	< 0.01
Azinphos-methyl	µg/l	< 0.01
Azobenzene (aq)	µg/l	< 1.00
Barium, Dissolved	µg/l	20
Benzene	µg/l	< 1.00
Benzo(k)fluoranthene (aq)	µg/l	< 1.00
Beryllium, Dissolved	µg/l	< 0.10
Boron, Dissolved	µg/l	3770
Boron	µg/l	3274.08
Bromobenzene	µg/l	< 1.00
Bromochloromethane	µg/l	< 1.00
Bromodichloromethane	µg/l	< 1.00
Bromoform	µg/l	< 1.00
Bromomethane	µg/l	< 1.00
Butylbenzyl phthalate (aq)	µg/l	< 1.00
Cadmium, Dissolved	µg/l	< 0.10
Cadmium	µg/l	0.29
Calcium	mg/l	25.086
Carbazole (aq)	µg/l	< 1.00
Carbon disulphide	µg/l	< 1.00
Carbontetrachloride	µg/l	< 1.00
Carbophenothion	µg/l	< 0.01
Chlorfenvinphos	µg/l	< 0.01
Chloride	mg/l	13.324
Chlorobenzene	µg/l	< 1.00
Chloroethane	µg/l	< 1.00
Chloroform	µg/l	< 1.00

Chloromethane	µg/l	< 1.00
Chlorothalonil	µg/l	< 0.01
Chlorpyrifos- methyl	µg/l	< 0.01
Chlorpyrifos	µg/l	< 0.01
Chromium, Dissolved	µg/l	< 1.20
Chromium	µg/l	1.7
Cobalt, Dissolved	µg/l	< 0.15
Coliforms	MPN/100ml	461.1
Conductivity @ 20°C	uS/cm @20°C	760
Copper, Dissolved	µg/l	< 0.85
Copper	µg/l	4.35
Cyanide, Free	mg/l	< 0.05
Cyanide, Total	mg/l	< 0.05
Cyanide, Total	µg/l	< 1.70
Diazinon	µg/l	< 0.01
Dibenzofuran (aq)	µg/l	< 1.00
Dibromochloromethane	µg/l	< 1.00
Dibromomethane	µg/l	< 1.00
Dibutyl tin	µg/l	< 5.00
Dichlorodifluoromethane	µg/l	< 1.00
Dichloromethane	µg/l	< 3.00
Dichlorvos	µg/l	< 0.01
Dieldrin	µg/l	< 0.01
Diethyl phthalate (aq)	µg/l	< 1.00
Dimethoate	µg/l	< 0.01
Dimethyl phthalate (aq)	µg/l	< 1.00
Disulfoton	µg/l	< 0.01
Endosulphan II	µg/l	< 0.01
Endosulphan I	µg/l	< 0.01
Endosulphan sulphate	µg/l	< 0.01
Endrin	µg/l	< 0.01
Ethion	µg/l	< 0.01
Ethylbenzene	µg/l	< 1.00
Etrimphos	µg/l	< 0.01
Faecal Coliforms	cfu/100ml	91
Fenitrothion	µg/l	< 0.01
Fenthion	µg/l	< 0.01
Fluoride	mg/l	6.7
Heptachlor Epoxide	µg/l	< 0.01
Heptachlor	µg/l	< 0.01
Hexachlorobenzene (aq)	µg/l	< 1.00
Hexachlorobenzene	µg/l	< 0.01
Hexachlorobutadiene (aq)	µg/l	< 1.00
Hexachlorobutadiene	µg/l	< 1.00
Hexachlorocyclopentadiene (aq)	µg/l	< 1.00
Hexachloroethane (aq)	µg/l	< 1.00
Iron	µg/l	1581.79
Isodrin	µg/l	< 0.01
Isophorone (aq)	µg/l	< 1.00
Isopropylbenzene	µg/l	< 1.00

Lead, Dissolved	µg/l	< 0.10
Lead	µg/l	3.46
M&P-Xylene	µg/l	< 1.00
Magnesium	mg/l	32.317
Malathion	µg/l	< 0.01
Manganese	µg/l	196.97
Mercury, Dissolved	µg/l	< 0.01
Mercury	µg/l	< 0.06
Methyl parathion	µg/l	< 0.01
Methyl tertiary butyl ether (MTBE)	µg/l	< 1.00
Mevinphos	µg/l	< 0.01
Mineral oil >C10 - C40 (aq)	µg/l	< 10.00
Molybdenum, Dissolved	µg/l	0.78
Naphthalene	µg/l	< 1.00
Nickel, Dissolved	µg/l	0.53
Nitrite as N	mg/l	< 0.02
Nitrobenzene (aq)	µg/l	< 1.00
O-Xylene	µg/l	< 1.00
Orthophosphate as P	mg/l	< 0.025
PH Onsite	pH Unit	8.2
PH	pH Unit	8.1
Parathion	µg/l	< 0.01
Pendimethalin	µg/l	< 0.01
Pentachlorophenol (aq)	µg/l	< 1.00
Permethrin II	µg/l	< 0.01
Permethrin I	µg/l	< 0.01
Phenol (aq)	µg/l	< 1.00
Phenolics as Phenol	mg/l	< 0.020
Phosalone	µg/l	< 0.01
Phosphate (ortho) as PO4	mg/l	< 0.05
Phosphorus, Dissolved	µg/l	< 15.00
Phosphorus, Total as P	mg/l	0.102
Pirimiphos-methyl	µg/l	< 0.01
Potassium	mg/l	9.55
Propetamphos	µg/l	< 0.01
Propylbenzene	µg/l	< 1.00
Quintozene (PCNB)	µg/l	< 0.01
Selenium, Dissolved	µg/l	< 1.00
Silicon, Dissolved	mg/l	4.01
Silver, Dissolved	µg/l	< 1.50
Sodium	mg/l	100
Styrene	µg/l	< 1.00
Sulphate	mg/l	123.227
TON as N	mg/l	< 2.000
Tecnazene	µg/l	< 0.01
Tellurium, Dissolved	µg/l	< 7.00
Telodrin	µg/l	< 0.01
Temperature Onsite	°C	9.8
Tetrabutyl tin	ng/l	< 2.00
Tetrachloroethene	µg/l	< 1.00

Thallium, Dissolved	µg/l	< 2.00
Tin, Dissolved	µg/l	0.66
Titanium, Dissolved	µg/l	5.01
Toluene	µg/l	< 1.00
Total Organic Carbon	mg/l	10.29
Total Suspended Solids	mg/l	122
Trans-chlordane	µg/l	< 0.01
Triadimefon	µg/l	< 0.01
Triallate	µg/l	< 0.01
Triazophos	µg/l	< 0.01
Tributyl tin	ng/l	< 1.00
Trichloroethene	µg/l	< 1.00
Trichlorofluoromethane	µg/l	< 1.00
Trifluralin	µg/l	< 0.01
Triphenyl tin	ng/l	< 1.00
Uranium, Soluble	µg/l	< 1.50
Vanadium, Dissolved	µg/l	< 1.30
Vinyl chloride	µg/l	< 1.00
Zinc, Dissolved	µg/l	3.76
Zinc	µg/l	22.97
alpha-Hexachlorocyclohexane HCH/Lindane	µg/l	< 0.01
beta-Hexachlorocyclohexane HCH/Lindane	µg/l	< 0.01
bis(2-Chloroethoxy)methane (aq)	µg/l	< 1.00
bis(2-Chloroethyl)ether (aq)	µg/l	< 1.00
bis(2-Ethylhexyl) phthalate (aq)	µg/l	< 2.00
cis-Chlordane	µg/l	< 0.01
gamma-Hexachlorocyclohexane HCH/Lindane	µg/l	< 0.01
n-Butylbenzene	µg/l	< 1.00
n-Dibutyl phthalate (aq)	µg/l	< 1.00
n-Dioctyl phthalate (aq)	µg/l	< 5.00
n-Nitroso-n-dipropylamine (aq)	µg/l	< 1.00
o,p'-TDE (DDD)	µg/l	< 0.01
o,p-DDE	µg/l	< 0.01
o,p-DDT	µg/l	< 0.01
o,p-Methoxychlor	µg/l	< 0.01
p,p'-TDE (DDD)	µg/l	< 0.01
p,p-DDE	µg/l	< 0.01
p,p-DDT	µg/l	< 0.01
p,p-Methoxychlor	µg/l	< 0.01
sec-Butylbenzene	µg/l	< 1.00
tert-Amyl methyl ether (TAME)	µg/l	< 1.00
tert-Butylbenzene	µg/l	< 1.00

## MW6 Shallow Quarterly /Annually Results – Mohill

**Sampled Date: 05/12/2016**

Sampled Time: 12:20

Depth (m): 0.3

Odour: No unusual odour

Weather/Visual Observation: Cloudy/Dry/Clean

**City Analysts Ref: 341571**

Analysis	Results	Units
1,1,1,2-Tetrachloroethane	µg/l	< 1.00
1,1,1-Trichloroethane	µg/l	< 1.00
1,1,2,2-Tetrachloroethane	µg/l	< 1.00
1,1,2-Trichloroethane	µg/l	< 1.00
1,1-Dichloroethane	µg/l	< 1.00
1,1-Dichloroethene	µg/l	< 1.00
1,1-Dichloropropene	µg/l	< 1.00
1,2,3-Trichlorobenzene	µg/l	< 1.00
1,2,3-Trichloropropane	µg/l	< 1.00
1,2,4-Trichlorobenzene (aq)	µg/l	< 4.00
1,2,4-Trichlorobenzene	µg/l	< 1.00
1,2,4-Trimethylbenzene	µg/l	< 1.00
1,2-Dibromo-3-chloropropane	µg/l	< 1.00
1,2-Dibromoethane	µg/l	< 1.00
1,2-Dichlorobenzene (aq)	µg/l	< 4.00
1,2-Dichlorobenzene	µg/l	< 1.00
1,2-Dichloroethane	µg/l	< 1.00
1,2-Dichloroethene Trans (E)	µg/l	< 1.00
1,2-Dichloroethene cis (Z)	µg/l	< 1.00
1,2-Dichloropropane	µg/l	< 1.00
1,3,5-Trichlorobenzene	µg/l	< 1.00
1,3,5-Trimethylbenzene	µg/l	< 1.00
1,3-Dichlorobenzene (aq)	µg/l	< 4.00
1,3-Dichlorobenzene	µg/l	< 1.00
1,3-Dichloropropane	µg/l	< 1.00
1,3-Dichloropropene Trans (E)	µg/l	< 1.00
1,3-Dichloropropene cis (Z)	µg/l	< 1.00
1,4-Dichlorobenzene (aq)	µg/l	< 4.00
1,4-Dichlorobenzene	µg/l	< 1.00
2,2-Dichloropropane	µg/l	< 1.00
2,4,5-Trichlorophenol (aq)	µg/l	< 4.00
2,4,6-Trichlorophenol (aq)	µg/l	< 4.00
2,4-Dichlorophenol (aq)	µg/l	< 4.00
2,4-Dimethylphenol (aq)	µg/l	< 4.00
2,4-Dinitrotoluene (aq)	µg/l	< 4.00
2,6-Dinitrotoluene (aq)	µg/l	< 4.00
2-Chloronaphthalene (aq)	µg/l	< 4.00



2-Chlorophenol (aq)	µg/l	< 4.00
2-Chlorotoluene	µg/l	< 1.00
2-Methylnaphthalene (aq)	µg/l	< 4.00
2-Methylphenol (aq)	µg/l	< 4.00
2-Nitroaniline (aq)	µg/l	< 4.00
2-Nitrophenol (aq)	µg/l	< 4.00
3-Nitroaniline (aq)	µg/l	< 4.00
4-Bromophenylphenylether (aq)	µg/l	< 4.00
4-Chloro-3-methylphenol (aq)	µg/l	< 4.00
4-Chloroaniline (aq)	µg/l	< 4.00
4-Chlorophenylphenylether (aq)	µg/l	< 4.00
4-Chlorotoluene	µg/l	< 1.00
4-Methylphenol (aq)	µg/l	< 4.00
4-Nitroaniline (aq)	µg/l	< 4.00
4-Nitrophenol (aq)	µg/l	< 4.00
4-iso-Propyltoluene	µg/l	< 1.00
Aldrin	µg/l	< 0.01
Alkalinity CaCO3	mg/l	321.558
Ammonia as N	mg/l	< 0.010
Ammoniacal Nitrogen as N	mg/l	< 0.200
Antimony, Dissolved	µg/l	< 0.16
Arsenic, Dissolved	µg/l	< 0.51
Azinphos-ethyl	µg/l	< 0.01
Azinphos-methyl	µg/l	< 0.01
Azobenzene (aq)	µg/l	< 4.00
Barium, Dissolved	µg/l	54.1
Benzene	µg/l	< 1.00
Benzo(k)fluoranthene (aq)	µg/l	< 4.00
Beryllium, Dissolved	µg/l	< 0.10
Boron, Dissolved	µg/l	23.4
Boron	µg/l	221.62
Bromobenzene	µg/l	< 1.00
Bromochloromethane	µg/l	< 1.00
Bromodichloromethane	µg/l	< 1.00
Bromoform	µg/l	< 1.00
Bromomethane	µg/l	< 1.00
Butylbenzyl phthalate (aq)	µg/l	< 4.00
Cadmium, Dissolved	µg/l	< 0.10
Cadmium	µg/l	4.88
Calcium	mg/l	617
Carbazole (aq)	µg/l	< 4.00
Carbon disulphide	µg/l	< 1.00
Carbontetrachloride	µg/l	< 1.00
Carbophenothion	µg/l	< 0.01
Chlorfenvinphos	µg/l	< 0.01
Chloride	mg/l	33.676
Chlorobenzene	µg/l	< 1.00
Chloroethane	µg/l	< 1.00
Chloroform	µg/l	< 1.00
Chloromethane	µg/l	< 1.00

Chlorothalonil	µg/l	< 0.01
Chlorpyrifos- methyl	µg/l	< 0.01
Chlorpyrifos	µg/l	< 0.01
Chromium, Dissolved	µg/l	< 1.20
Chromium	µg/l	4.62
Cobalt, Dissolved	µg/l	< 0.15
Coliforms	MPN/100ml	2720
Conductivity @ 20°C	uS/cm @20°C	643
Copper, Dissolved	µg/l	< 0.85
Copper	µg/l	62.23
Cyanide, Free	mg/l	< 0.05
Cyanide, Total	mg/l	< 0.05
Cyanide, Total	µg/l	1.9
Diazinon	µg/l	< 0.01
Dibenzofuran (aq)	µg/l	< 4.00
Dibromochloromethane	µg/l	< 1.00
Dibromomethane	µg/l	< 1.00
Dibutyl tin	µg/l	< 30.00
Dichlorodifluoromethane	µg/l	< 1.00
Dichloromethane	µg/l	< 3.00
Dichlorvos	µg/l	< 0.01
Dieldrin	µg/l	< 0.01
Diethyl phthalate (aq)	µg/l	< 4.00
Dimethoate	µg/l	< 0.01
Dimethyl phthalate (aq)	µg/l	< 4.00
Disulfoton	µg/l	< 0.01
Endosulphan II	µg/l	< 0.01
Endosulphan I	µg/l	< 0.01
Endosulphan sulphate	µg/l	< 0.01
Endrin	µg/l	< 0.01
Ethion	µg/l	< 0.01
Ethylbenzene	µg/l	< 1.00
Etrimphos	µg/l	< 0.01
Faecal Coliforms	cfu/100ml	47
Fenitrothion	µg/l	< 0.01
Fenthion	µg/l	< 0.01
Fluoride	mg/l	0.3
Heptachlor Epoxide	µg/l	< 0.01
Heptachlor	µg/l	< 0.01
Hexachlorobenzene (aq)	µg/l	< 4.00
Hexachlorobenzene	µg/l	< 0.01
Hexachlorobutadiene (aq)	µg/l	< 4.00
Hexachlorobutadiene	µg/l	< 1.00
Hexachlorocyclopentadiene (aq)	µg/l	< 4.00
Hexachloroethane (aq)	µg/l	< 4.00
Iron	µg/l	14200
Isodrin	µg/l	< 0.01
Isophorone (aq)	µg/l	< 4.00
Isopropylbenzene	µg/l	< 1.00
Lead, Dissolved	µg/l	< 0.10

Lead	µg/l	31.07
M&P-Xylene	µg/l	< 1.00
Magnesium	mg/l	14.262
Malathion	µg/l	< 0.01
Manganese	µg/l	3080
Mercury, Dissolved	µg/l	< 0.01
Mercury	µg/l	< 0.06
Methyl parathion	µg/l	< 0.01
Methyl tertiary butyl ether (MTBE)	µg/l	< 1.00
Mevinphos	µg/l	< 0.01
Mineral oil >C10 - C40 (aq)	µg/l	< 10.00
Molybdenum, Dissolved	µg/l	0.76
Naphthalene	µg/l	< 1.00
Nickel, Dissolved	µg/l	1.28
Nitrite as N	mg/l	0.04
Nitrobenzene (aq)	µg/l	< 4.00
O-Xylene	µg/l	< 1.00
Orthophosphate as P	mg/l	< 0.025
PH Onsite	pH Unit	7.19
PH	pH Unit	6.92
Parathion	µg/l	< 0.01
Pendimethalin	µg/l	< 0.01
Pentachlorophenol (aq)	µg/l	< 4.00
Permethrin II	µg/l	< 0.01
Permethrin I	µg/l	< 0.01
Phenol (aq)	µg/l	< 4.00
Phenolics as Phenol	mg/l	< 0.020
Phosalone	µg/l	< 0.01
Phosphate (ortho) as PO4	mg/l	< 0.05
Phosphorus, Dissolved	µg/l	< 15.00
Phosphorus, Total as P	mg/l	< 0.050
Pirimiphos-methyl	µg/l	< 0.01
Potassium	mg/l	3.004
Propetamphos	µg/l	< 0.01
Propylbenzene	µg/l	< 1.00
Quintozene (PCNB)	µg/l	< 0.01
Selenium, Dissolved	µg/l	< 1.00
Silicon, Dissolved	mg/l	2.71
Silver, Dissolved	µg/l	< 1.50
Sodium	mg/l	29.988
Styrene	µg/l	< 1.00
Sulphate	mg/l	< 20.000
TON as N	mg/l	< 2.000
Tecnazene	µg/l	< 0.01
Tellurium, Dissolved	µg/l	< 7.00
Telodrin	µg/l	< 0.01
Temperature Onsite	°C	9.7
Tetrabutyl tin	ng/l	< 12.00
Tetrachloroethene	µg/l	< 1.00
Thallium, Dissolved	µg/l	< 2.00

Tin, Dissolved	µg/l	0.38
Titanium, Dissolved	µg/l	4.97
Toluene	µg/l	< 1.00
Total Organic Carbon	mg/l	19.18
Total Suspended Solids	mg/l	3536
Trans-chlordane	µg/l	< 0.01
Triadimefon	µg/l	< 0.01
Triallate	µg/l	< 0.01
Triazophos	µg/l	< 0.01
Tributyl tin	ng/l	< 6.00
Trichloroethene	µg/l	< 1.00
Trichlorofluoromethane	µg/l	< 1.00
Trifluralin	µg/l	< 0.01
Triphenyl tin	ng/l	< 6.00
Uranium, Soluble	µg/l	< 1.50
Vanadium, Dissolved	µg/l	< 1.30
Vinyl chloride	µg/l	< 1.00
Zinc, Dissolved	µg/l	< 1.30
Zinc	µg/l	67.97
alpha-Hexachlorocyclohexane HCH/Lindane	µg/l	< 0.01
beta-Hexachlorocyclohexane HCH/Lindane	µg/l	< 0.01
bis(2-Chloroethoxy)methane (aq)	µg/l	< 4.00
bis(2-Chloroethyl)ether (aq)	µg/l	< 4.00
bis(2-Ethylhexyl) phthalate (aq)	µg/l	< 8.00
cis-Chlordane	µg/l	< 0.01
gamma-Hexachlorocyclohexane HCH/Lindane	µg/l	< 0.01
n-Butylbenzene	µg/l	< 1.00
n-Dibutyl phthalate (aq)	µg/l	< 4.00
n-Dioctyl phthalate (aq)	µg/l	< 20.00
n-Nitroso-n-dipropylamine (aq)	µg/l	< 4.00
o,p'-TDE (DDD)	µg/l	< 0.01
o,p-DDE	µg/l	< 0.01
o,p-DDT	µg/l	< 0.01
o,p-Methoxychlor	µg/l	< 0.01
p,p'-TDE (DDD)	µg/l	< 0.01
p,p-DDE	µg/l	< 0.01
p,p-DDT	µg/l	< 0.01
p,p-Methoxychlor	µg/l	< 0.01
sec-Butylbenzene	µg/l	< 1.00
tert-Amyl methyl ether (TAME)	µg/l	< 1.00
tert-Butylbenzene	µg/l	< 1.00

## MW6 Deep Quarterly/Annually Results – Mohill

**Sampled Date: 05/12/2016**

Sampled Time: 12:35

Depth (m): 0.3

Odour: No unusual odour

Weather/Visual Observation: Cloudy/Dry/Clean

**City Analysts Ref: 341572**

Analysis	Results	Units
1,1,1,2-Tetrachloroethane	µg/l	< 1.00
1,1,1-Trichloroethane	µg/l	< 1.00
1,1,2,2-Tetrachloroethane	µg/l	< 1.00
1,1,2-Trichloroethane	µg/l	< 1.00
1,1-Dichloroethane	µg/l	< 1.00
1,1-Dichloroethene	µg/l	< 1.00
1,1-Dichloropropene	µg/l	< 1.00
1,2,3-Trichlorobenzene	µg/l	< 1.00
1,2,3-Trichloropropane	µg/l	< 1.00
1,2,4-Trichlorobenzene (aq)	µg/l	< 1.00
1,2,4-Trichlorobenzene	µg/l	< 1.00
1,2,4-Trimethylbenzene	µg/l	< 1.00
1,2-Dibromo-3-chloropropane	µg/l	< 1.00
1,2-Dibromoethane	µg/l	< 1.00
1,2-Dichlorobenzene (aq)	µg/l	< 1.00
1,2-Dichlorobenzene	µg/l	< 1.00
1,2-Dichloroethane	µg/l	< 1.00
1,2-Dichloroethene Trans (E)	µg/l	< 1.00
1,2-Dichloroethene cis (Z)	µg/l	< 1.00
1,2-Dichloropropane	µg/l	< 1.00
1,3,5-Trichlorobenzene	µg/l	< 1.00
1,3,5-Trimethylbenzene	µg/l	< 1.00
1,3-Dichlorobenzene (aq)	µg/l	< 1.00
1,3-Dichlorobenzene	µg/l	< 1.00
1,3-Dichloropropane	µg/l	< 1.00
1,3-Dichloropropene Trans (E)	µg/l	< 1.00
1,3-Dichloropropene cis (Z)	µg/l	< 1.00
1,4-Dichlorobenzene (aq)	µg/l	< 1.00
1,4-Dichlorobenzene	µg/l	< 1.00
2,2-Dichloropropane	µg/l	< 1.00
2,4,5-Trichlorophenol (aq)	µg/l	< 1.00
2,4,6-Trichlorophenol (aq)	µg/l	< 1.00
2,4-Dichlorophenol (aq)	µg/l	< 1.00
2,4-Dimethylphenol (aq)	µg/l	< 1.00
2,4-Dinitrotoluene (aq)	µg/l	< 1.00
2,6-Dinitrotoluene (aq)	µg/l	< 1.00
2-Chloronaphthalene (aq)	µg/l	< 1.00

2-Chlorophenol (aq)	µg/l	< 1.00
2-Chlorotoluene	µg/l	< 1.00
2-Methylnaphthalene (aq)	µg/l	< 1.00
2-Methylphenol (aq)	µg/l	< 1.00
2-Nitroaniline (aq)	µg/l	< 1.00
2-Nitrophenol (aq)	µg/l	< 1.00
3-Nitroaniline (aq)	µg/l	< 1.00
4-Bromophenylphenylether (aq)	µg/l	< 1.00
4-Chloro-3-methylphenol (aq)	µg/l	< 1.00
4-Chloroaniline (aq)	µg/l	< 1.00
4-Chlorophenylphenylether (aq)	µg/l	< 1.00
4-Chlorotoluene	µg/l	< 1.00
4-Methylphenol (aq)	µg/l	< 1.00
4-Nitroaniline (aq)	µg/l	< 1.00
4-Nitrophenol (aq)	µg/l	< 1.00
4-iso-Propyltoluene	µg/l	< 1.00
Aldrin	µg/l	< 0.01
Alkalinity CaCO3	mg/l	318.606
Ammonia as N	mg/l	0.029
Ammoniacal Nitrogen as N	mg/l	< 0.200
Antimony, Dissolved	µg/l	0.27
Arsenic, Dissolved	µg/l	0.64
Azinphos-ethyl	µg/l	< 0.01
Azinphos-methyl	µg/l	< 0.01
Azobenzene (aq)	µg/l	< 1.00
Barium, Dissolved	µg/l	96.2
Benzene	µg/l	< 1.00
Benzo(k)fluoranthene (aq)	µg/l	< 1.00
Beryllium, Dissolved	µg/l	< 0.10
Boron, Dissolved	µg/l	477
Boron	µg/l	456.12
Bromobenzene	µg/l	< 1.00
Bromochloromethane	µg/l	< 1.00
Bromodichloromethane	µg/l	< 1.00
Bromoform	µg/l	< 1.00
Bromomethane	µg/l	< 1.00
Butylbenzyl phthalate (aq)	µg/l	< 1.00
Cadmium, Dissolved	µg/l	< 0.10
Cadmium	µg/l	0.48
Calcium	mg/l	95.845
Carbazole (aq)	µg/l	< 1.00
Carbon disulphide	µg/l	< 1.00
Carbontetrachloride	µg/l	< 1.00
Carbophenothion	µg/l	< 0.01
Chlorfenvinphos	µg/l	< 0.01
Chloride	mg/l	24.215
Chlorobenzene	µg/l	< 1.00
Chloroethane	µg/l	< 1.00
Chloroform	µg/l	< 1.00
Chloromethane	µg/l	< 1.00

Chlorothalonil	µg/l	< 0.01
Chlorpyrifos- methyl	µg/l	< 0.01
Chlorpyrifos	µg/l	< 0.01
Chromium, Dissolved	µg/l	< 1.20
Chromium	µg/l	0.63
Cobalt, Dissolved	µg/l	< 0.15
Coliforms	MPN/100ml	1299.7
Conductivity @ 20°C	uS/cm @20°C	645
Copper, Dissolved	µg/l	< 0.85
Copper	µg/l	5.69
Cyanide, Free	mg/l	< 0.05
Cyanide, Total	mg/l	< 0.05
Cyanide, Total	µg/l	< 1.70
Diazinon	µg/l	< 0.01
Dibenzofuran (aq)	µg/l	< 1.00
Dibromochloromethane	µg/l	< 1.00
Dibromomethane	µg/l	< 1.00
Dibutyl tin	µg/l	< 5.00
Dichlorodifluoromethane	µg/l	< 1.00
Dichloromethane	µg/l	< 3.00
Dichlorvos	µg/l	< 0.01
Dieldrin	µg/l	< 0.01
Diethyl phthalate (aq)	µg/l	< 1.00
Dimethoate	µg/l	< 0.01
Dimethyl phthalate (aq)	µg/l	< 1.00
Disulfoton	µg/l	< 0.01
Endosulphan II	µg/l	< 0.01
Endosulphan I	µg/l	< 0.01
Endosulphan sulphate	µg/l	< 0.01
Endrin	µg/l	< 0.01
Ethion	µg/l	< 0.01
Ethylbenzene	µg/l	< 1.00
Etrimphos	µg/l	< 0.01
Faecal Coliforms	cfu/100ml	45
Fenitrothion	µg/l	< 0.01
Fenthion	µg/l	< 0.01
Fluoride	mg/l	1.3
Heptachlor Epoxide	µg/l	< 0.01
Heptachlor	µg/l	< 0.01
Hexachlorobenzene (aq)	µg/l	< 1.00
Hexachlorobenzene	µg/l	< 0.01
Hexachlorobutadiene (aq)	µg/l	< 1.00
Hexachlorobutadiene	µg/l	< 1.00
Hexachlorocyclopentadiene (aq)	µg/l	< 1.00
Hexachloroethane (aq)	µg/l	< 1.00
Iron	µg/l	252.06
Isodrin	µg/l	< 0.01
Isophorone (aq)	µg/l	< 1.00
Isopropylbenzene	µg/l	< 1.00
Lead, Dissolved	µg/l	< 0.10

Lead	µg/l	< 0.80
M&P-Xylene	µg/l	< 1.00
Magnesium	mg/l	22.596
Malathion	µg/l	< 0.01
Manganese	µg/l	9.71
Mercury, Dissolved	µg/l	< 0.01
Mercury	µg/l	< 0.06
Methyl parathion	µg/l	< 0.01
Methyl tertiary butyl ether (MTBE)	µg/l	< 1.00
Mevinphos	µg/l	< 0.01
Mineral oil >C10 - C40 (aq)	µg/l	< 10.00
Molybdenum, Dissolved	µg/l	0.77
Naphthalene	µg/l	< 1.00
Nickel, Dissolved	µg/l	0.52
Nitrite as N	mg/l	0.05
Nitrobenzene (aq)	µg/l	< 1.00
O-Xylene	µg/l	< 1.00
Orthophosphate as P	mg/l	< 0.025
PH Onsite	pH Unit	7.33
PH	pH Unit	7.46
Parathion	µg/l	< 0.01
Pendimethalin	µg/l	< 0.01
Pentachlorophenol (aq)	µg/l	< 1.00
Permethrin II	µg/l	< 0.01
Permethrin I	µg/l	< 0.01
Phenol (aq)	µg/l	< 1.00
Phenolics as Phenol	mg/l	< 0.020
Phosalone	µg/l	< 0.01
Phosphate (ortho) as PO4	mg/l	< 0.05
Phosphorus, Dissolved	µg/l	< 15.00
Phosphorus, Total as P	mg/l	< 0.050
Pirimiphos-methyl	µg/l	< 0.01
Potassium	mg/l	2.65
Propetamphos	µg/l	< 0.01
Propylbenzene	µg/l	< 1.00
Quintozene (PCNB)	µg/l	< 0.01
Selenium, Dissolved	µg/l	< 1.00
Silicon, Dissolved	mg/l	3.74
Silver, Dissolved	µg/l	< 1.50
Sodium	mg/l	23.712
Styrene	µg/l	< 1.00
Sulphate	mg/l	25.002
TON as N	mg/l	< 2.000
Tecnazene	µg/l	< 0.01
Tellurium, Dissolved	µg/l	< 7.00
Telodrin	µg/l	< 0.01
Temperature Onsite	°C	9.6
Tetrabutyl tin	ng/l	< 2.00
Tetrachloroethene	µg/l	< 1.00
Thallium, Dissolved	µg/l	< 2.00



Tin, Dissolved	µg/l	0.53
Titanium, Dissolved	µg/l	4.11
Toluene	µg/l	< 1.00
Total Organic Carbon	mg/l	3.85
Total Suspended Solids	mg/l	36
Trans-chlordane	µg/l	< 0.01
Triadimefon	µg/l	< 0.01
Triallate	µg/l	< 0.01
Triazophos	µg/l	< 0.01
Tributyl tin	ng/l	< 1.00
Trichloroethene	µg/l	< 1.00
Trichlorofluoromethane	µg/l	< 1.00
Trifluralin	µg/l	< 0.01
Triphenyl tin	ng/l	< 1.00
Uranium, Soluble	µg/l	< 1.50
Vanadium, Dissolved	µg/l	< 1.30
Vinyl chloride	µg/l	< 1.00
Zinc, Dissolved	µg/l	14.7
Zinc	µg/l	3.98
alpha-Hexachlorocyclohexane HCH/Lindane	µg/l	< 0.01
beta-Hexachlorocyclohexane HCH/Lindane	µg/l	< 0.01
bis(2-Chloroethoxy)methane (aq)	µg/l	< 1.00
bis(2-Chloroethyl)ether (aq)	µg/l	< 1.00
bis(2-Ethylhexyl) phthalate (aq)	µg/l	< 2.00
cis-Chlordane	µg/l	< 0.01
gamma-Hexachlorocyclohexane HCH/Lindane	µg/l	< 0.01
n-Butylbenzene	µg/l	< 1.00
n-Dibutyl phthalate (aq)	µg/l	< 1.00
n-Dioctyl phthalate (aq)	µg/l	< 5.00
n-Nitroso-n-dipropylamine (aq)	µg/l	< 1.00
o,p'-TDE (DDD)	µg/l	< 0.01
o,p-DDE	µg/l	< 0.01
o,p-DDT	µg/l	< 0.01
o,p-Methoxychlor	µg/l	< 0.01
p,p'-TDE (DDD)	µg/l	< 0.01
p,p-DDE	µg/l	< 0.01
p,p-DDT	µg/l	< 0.01
p,p-Methoxychlor	µg/l	< 0.01
sec-Butylbenzene	µg/l	< 1.00
tert-Amyl methyl ether (TAME)	µg/l	< 1.00
tert-Butylbenzene	µg/l	< 1.00

## Leachate Quarterly /Annually Results – Mohill

**Sampled Date: 05/12/2016**

Sampled Time: 12:45

Depth (m): Not required

Odour: No unusual odour

Weather/Visual Observation: Cloudy/Dry/Clean

**City Analysts Ref: 341577**

Analysis	Results	Units
Ammonia as N	mg/l	6.131
Boron	µg/l	134.65
CBOD5	mg/l O2	7
COD	mg/l O2	37
Cadmium	mg/l	< 0.200
Calcium	mg/l	122.646
Chloride	mg/l	278.659
Chromium	mg/l	< 0.200
Coliforms	MPN/100ml	72700
Conductivity @ 20°C	uS/cm @20°C	1481
Copper	mg/l	< 0.200
Cyanide, Total	mg/l	< 0.020
Faecal Coliforms	cfu/100ml	5300
Fluoride	mg/l	0.2
Iron	mg/l	20.6
Lead	mg/l	< 0.200
Magnesium	mg/l	12.336
Manganese	mg/l	1.352
Mercury	mg/l	< 0.001
Orthophosphate as P	mg/l	< 0.025
PH Onsite	pH Unit	7.1
PH	pH Unit	6.95
Phosphorus, Total as P	mg/l	< 2.000
Potassium	mg/l	11.811
Sodium	mg/l	138
Sulphate	mg/l	32.645
TON as N	mg/l	< 5.000
Temperature Onsite	°C	7.6
Zinc	mg/l	< 0.200