Mohill Waste Water Discharge Licence

Annual Environmental Report 2012

Leitrim County Council
Water Services
2013

Agglomeration name:	Mohill Wastewater Treatment Plant & Agglomeration
Licence Type:	Waste Water Discharges Licence (Discharges from Agglomerations with a population equivalent of 2,001 to 10,000
Licensee:	Leitrim County Council
Licence Register Number:	D0277-01
Reporting Period:	01 January 2012 to 31December 2012
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1. EXECUTIVE SUMMARY AND INTRODUCTION

Leitrim County Council holds a waste water discharge licence (Register No. D0277-01) for Mohill agglomeration. This licence was granted on the 30 December 2010. The aim of this Annual Environmental Report (AER) is to provide a summary of activities relevant to the discharges from the 01 January 2012 to the 31 December 2012.

Mohill Agglomeration has a population equivalent (p.e) of 1,214. The plant has a design population equivalent of 3,000. The treatment plant is located in Coolabaun, Mohill. The primary discharge from the agglomeration flows into Mohill stream. There are no secondary discharges from the agglomeration. It is a combined sewer and the collected surface water and rain water gives a dilute influent. The highly variable influent can cause the sludge microorganisms to struggle and give rise to light floating solids on the top of the clarifier. This contributes to suspended solids breaches in the outflow. A consultant's review of the plant was carried out in 2013 with the aim of making the plant licence compliant. Screening was carried out on the effluent for priority substances and was found to comply with surface water and dangerous substances standards.

2. MONITORING REPORTS SUMMARY

2.1 Summary report on monthly influent monitoring

Include a summary presentation of waste water treatment plant influent monitoring results for BOD, COD, Suspended solids, Total Nitrogen and Total Phosphorus (where required by the licence). This can be presented in tabular format but **must include an interpretation of the significance of the results** in relation to licence requirements. These results are used to determine the mass loading and removal efficiencies of the works required by Condition 4 and the Organic and Hydraulic Capacities required under Condition 1.7.

Mohill influent is subject to a high degree of dilution from storm and surface water. Very low strength influents were recorded all year around. No high strength influents were observed.

Mohill Licence D0277-01 – Influent							
	BOD	COD	Suspended Solids	Total Nitrogen (as N)	Total Phosphorus (as P)	Hydraulic Loading m3/d	Organic Loading PE/day
Typical values	100 to 300	250 to 800	100 to 350	20 to 85	4 to 12		
Units	mg/l	mg/l	mg/l	mg/l	mg/l		
15/02/2012	44.2	150	116	25.4	2.588	267	197
08/03/2012	30.4	171	45.6	31.2	3.084	267	135
15/03/2012	88.5	468	146	38.8	5.32	267	394
26/04/2012	52.78	141	43	29	3.62	267	235
01/05/2012	178.2	538	215	37.8	4.08	267	793
03/05/2012	93.2	326	108	31.4	3.796	267	415
24/05/2012	158.7	300	63	50.4	4.56	267	706
31/05/2012	48.2	257	108.6	30.2	4.28	267	214
07/06/2012	41.4	141	60	17.12	2.1	267	184
04/07/2012	20.51	68	51.5	19.72	2.116	267	91

05/07/2012	77.2	198	37.5	29.8	3.644	267	344
10/07/2012	26.57	88	30	23.8	2.596	267	118
19/07/2012	43.2	173	71.3	29.6	3.23	267	192
25/07/2012	50.1	215	80	28	3.54	267	223
15/08/2012	56.61	148	86	13	1.888	267	252
21/08/2012	27.8	165	162	34.68	5.4	267	124
13/09/2012	213.5	490	161	36.8	3.592	267	950
18/09/2012	121.8	323	109.33	29	4.04	267	542
19/09/2012	144.2	222	77.3	25.4	3.06	267	642
03/10/2012	39.4	146	56.5	11.44	1.388	267	175
04/10/2012	27.86	128	63	20.6	2.332	267	124
17/10/2012	8	45	14	4.49	0.07	267	36
18/10/2012	2	<10	9	8.39	0.61	267	9
08/11/2012	89.1	246	111.33	34.2	3.372	267	396
20/11/2012	32.22	83	26	8.08	0.872	267	143
21/11/2012	60.23	298	54	13.18	1.484	267	268
22/11/2012	44.4	162	23.5	12.34	1.56	267	198
13/12/2012	114.6	196	116	35.4	3.852	267	510
Number of Samples	28	28	28	28	28		
Annual Max.	213.5	538	215	50.4	5.4		950
Annual Mean	69	218	80	25	3		308

2.2 Discharges from the agglomeration

A summary presentation of monitoring results for primary and secondary discharge point monitoring results as set out in Schedule B of the licence. The emission limit values (where applicable) should be included. This can be presented as a summary table with ELV exceedances clearly highlighted.

This section must include an interpretation of the significance of the results (i.e. a discussion on compliance with the ELVs and monitoring frequency specified in the licence). Where exceedances are reported they can be grouped by cause. Significance should be assessed in terms of their impact on receiving water quality/designation and frequency and duration of the exceedance. This should also summarise the measures taken or to be taken to eliminate/minimise the recurrence of the exceedance.

Mohill Licence D0277-01-Effluent until 31/12/2015							
Sample Date	**Ammonia (as N)**	**cBOD**	**COD**	**Orthophosphate (as P)**	**pH**	**Suspended Solids**	**Temperature**
	mg/l	mg/l	mg/l	mg/l	units	mg/l	°C
WWDL ELV (Schedule A)	2	2		1	6 to 9	10	25
ELV with Condition 2 interpretation	2.4 mg/l (3 samples may exceed). Complies	4 mg/l (3 samples may exceed). Does not Comply		1.2 mg/l (3 samples may exceed). Does not Comply	Complies	25 mg/l Does not Comply	Complies
Number of results	28	28	28	28	28	28	28
Number of sample results above ELV	1	17	0	5	0	14	0
Number of sample results above ELV with Condition 2 interpretation	0	12	0	3	0	5	
Annual Mean	0.33	3.21	42	0.527	7.497	20.770	12.719
Overall Compliance	Pass	Fail	Pass	Fail	Pass	Fail	Pass
15/02/2012	0.184	1.37	11	0.203	7.44	9.33	NT
08/03/2012	0.426	3.84	56	0.196	7.31	24.6	NT
15/03/2012	0.286	2.2	24	0.315	6.96	10.6	8.4
26/04/2012	0.049	4.4	70	0.106	7.52	15.66	8.6
01/05/2012	0.532	4.27	95	0.137	7.2	80	10.4
03/05/2012	0.437	4.84	119	0.137	7.22	105	14.2

24/05/2012	0.355	7.24	50	0.86	7.35	44.33	15.2
31/05/2012	0.321	3.99	87	1.02	7.38	61.6	15.1
07/06/2012	0.038	3.57	52	0.89	7.29	39	14.2
04/07/2012	0.137	2.83	11	0.61	7.79	10	14.9
05/07/2012	0.172	1.25	9	0.572	7.85	3	14.9
10/07/2012	0.399	3.54	24	0.81	7.65	11.3	14.7
19/07/2012	0.233	1.95	22	1.19	7.51	8.33	17
25/07/2012	0.164	1.87	20	0.807	7.75	10	15.7
15/08/2012	0.11	<1	28	0.71	7.57	24	16.8
21/08/2012	0.347	2.9	39	0.822	7.7	21.66	16.4
13/09/2012	0.395	<1	99	1.45	7.64	9.3	15
18/09/2012	0.283	3.18	31	1.46	7.38	4.33	14.4
19/09/2012	0.393	1.25	38	1.26	7.48	3.33	13.9
03/10/2012	0.046	2.19	29	0.18	7.43	13.3	12
04/10/2012	0.052	3.01	21	0.106	7.32	2.6	11.7
17/10/2012	0.094	<2	<10	0.073	7.3	5	10.7
18/10/2012	0.054	<2	<10	0.053	7.6	7	10.9
08/11/2012	0.136	3.05	23	0.205	7.61	3.3	10.2
20/11/2012	1.291	1.57	<7	0.11	7.64	4.33	9.8
21/11/2012	0.058	3.27	57	0.109	7.65	21.66	9.5
22/11/2012	0.116	1.25	21	0.107	7.76	4.66	9.1
13/12/2012	2.22	8.16	25	0.269	7.62	24.33	7

The particulars of condition 2 as they apply to Mohill effluent are outlined as follows.

Condition 2 (ii) reads "For cBOD and COD, no more than the relevant number of samples specified in Schedule B.2: Interpretation of Discharge Monitoring Results of this licence - Column 2 shall exceed the concentration Emission Limit Value based on the number of samples taken as listed in Schedule B.2: Interpretation of Discharge Monitoring Results of this licence - Column 1.
No individual result similarly calculated shall exceed the emission limit value by more than 100%."

12 out of 28 results exceeded the ELV of 4mg/l which includes 100% as per condition 2 of the licence. Most of the exceedances were just outside the limit of 4.0 mg/l with a maximum result for cBOD of 8.16 mg/l.

(iii) For Suspended Solids, no more than the relevant number of samples specified in *Schedule **B.2:** Interpretation of Discharge Monitoring Results* - Column 2, of this licence, shall exceed the concentration Emission Limit Value based on the number of samples taken as listed in *Schedule **B.2:** Interpretation of Discharge Monitoring Results* -Column 1, of this licence. No individual result similarly calculated shall exceed the emission limit value by more than 150%.

14 out of 28 SS results exceeded the ELV but this reduced to 5 out of 28 when condition 2 of the licence was applied. 2 of the exceedances were high at 80 and 105 mg/l. The majority of SS exceedances are close to the ELV and are due to the light floating solids on the clarifier. This may be attributed to two causes. 1.0- the influent is too diluted and retention too short to cultivate a robust MLSS. 2.0 The clarifier requires overhauling as detailed in the recent consultants review .

Condition 2 (iv) reads "For parameters other than pH, flow, cBOD, COD & Suspended Solids eight out of ten consecutive composite results shall not exceed the emission limit value. No individual result similarly calculated shall exceed the emission limit value by more than 20%."

Ammonia exceeded once -2.22 mg/l in December but was compliant for the rest of the year giving the required eight out of ten consecutive clear results.

Orthophosphate compliance was good most of the year but 5 of 28 samples taken breached the ELV, dropping to 3 out of 28 samples with condition 2 applied. The influent varies in concentration and the particular ferric dosing installed is not flow proportional – this makes it more difficult to get the ferric dose exactly right. The breaches were all minor.

The remaining parameters are summarised below.

Mohill Licence D0277-01-Effluent						
	Total Nitrogen mg/l	Total Phosphorus (as P) mg/l	Colour	Conductivity at 20°C uSm/cm^2	Odour	Oils Fats & Grease mg/l
Number of results	1	2	25	28	19	6
Annual mean				498		
15/02/2012			NT	572	NT	
08/03/2012			NT	609	NT	
15/03/2012			NT	684	NT	
26/04/2012			Light brown	442	Not Detected	
01/05/2012			Light cream	546	Not Detected	
03/05/2012			Brown	581	Not detected	
14/05/2012			NT	NT	NT	
24/05/2012			Cream	614	Not detected	
31/05/2012			Light brown	386	Earthy	
07/06/2012			Cream/Brown	409	Earthy	
04/07/2012			Colourless	503	NT	
03/07/2012			NT	NT	NT	

05/07/2012			Colourless	427	NT	
10/07/2012	NT	NT	Colourless	559	NT	
19/07/2012			Colourless	520	NT	
25/07/2012			Colourless	507	Not detected	
15/08/2012			Colourless	500	Musty	
21/08/2012			Cream	542	Musty	
13/09/2012	NT	NT	Colourless	155.6	Not detected	
18/09/2012	NT	NT	Colourless	550	Earthy	
18/09/2012			NT	NT	NT	
19/09/2012	15.8	1.36	Colourless	540	Not detected	
19/09/2012			NT	NT	NT	
20/09/2012			NT	NT	NT	
03/10/2012			Cream/brown	394	NT	
04/10/2012			Colourless	423	NT	
17/10/2012			Colourless	582	Musty	
18/10/2012			Colourless	483	Earthy	
08/11/2012			Colourless	664	Not detected	
20/11/2012			Colourless	459	Earthy	
21/11/2012			Colourless	466	Earthy	
22/11/2012			Colourless	545	Earthy	
13/12/2012			Colourless	693	Earthy	
13/12/2012		0.566	NT	NT	NT	

2.3 Treatment Efficiency Report

This is a summary presentation of the efficiency of the treatment process including information for all the parameters specified in the licence Condition 4.15. Treatment efficiency ranges from 37.6 % for total phosphorous to 95.4 % for cBOD. A plant upgrade is required to improve overall removal efficiency.

2.3 Treatment Efficiency Report						
	cBOD (kg/day)	**COD (kg/day)**	**SS (kg/day)**	**Total P (kg/day)**	**Total N (kg/day)**	**Comment**
Influent mass loading (kg/day)	18.5	58.2	21.4	0.8	6.8	
Effluent mass loading (kg/day)	0.86	11.3	5.55	0.36	4.22	
% Efficiency (% reduction of influent load)	95.4	80.5	74.1	53.6	37.6	

2.4 Treatment Capacity Report

Condition 1 of the licence requires the licensee to complete an annual assessment of the remaining organic and hydraulic treatment capacities within the waste water works (design capacity of plant, less flow-load calculation for representative period).
This must include a summary of the annual assessment of the remaining treatment capacity of the works expressed in terms of:

1. Hydraulic treatment capacity i.e. is the works sufficient to manage the volumetric flows in the agglomeration to licence requirements.
2. Organic treatment capacity i.e. is the works sufficient to treat the organic loading in the agglomeration to licence requirements.

A copy of the detailed assessment can be included as an appendix to the AER. Where relevant, findings from this assessment should be considered under the Programme of Improvements required under Condition 5.

There is no flow monitoring data for 2012 so calculations were made based on the original design population equivalent and a theoretical population equivalent. This data is unreliable and probably underestimates the hydraulic load to the plant.

2.4 Treatment Capacity Report	
Hydraulic Capacity - Design / As Constructed (m3/day)	3000
Hydraulic Capacity - Current loading (m3/day)	1214
Hydraulic Capacity - Remaining (m3/day)	nil
Organic Capacity - Design / As Constructed (PE)	3000
Organic Capacity - Current loading (PE)	308
Organic Capacity - Remaining (PE)	2692
Will the capacity be exceeded in the next three years? (Yes/No)	yes

2.5 Ambient Monitoring Summary

Most parameters were increased downstream of the plant. Ammonia was higher downstream on all sampling occasions. In May ammonia was 85 times higher downstream compared to upstream. When averaged over the year at 0.481 mg/l ammonia is about 7 times the EQS of 0.065 mg/l set for Good status in the SW 2009 Regulations.
BOD was higher downstream in 9 out of the 11 samples taken. In June BOD was 10 times higher downstream compared to upstream. BOD when averaged over the year is 5.40 mg/l which is about 4 times the mean value of 1.5 mg/l in the SW 2009 Regulations.
Dissolved Oxygen was lower downstream of the plant in 9 of the 11 times sampled. It dropped to 45 and 69% in May and June of 2012. This is considerably lower than the EQS of 80 to 120% for dissolved oxygen for the good status water bodies.
There was no change in pH and temperature downstream of the plant.

2.5 Ambient monitoring summary			
Ambient monitoring Point from WWDL	**Irish Grid Reference**	**EPA Feature Coding Tool Code**	**Does assessment of the ambient monitoring results indicate that the discharge is impacting on water quality Yes/NO**
Downstream 90m from WWTP	209050E 296219N	RS26R020057	Yes

2.6 Data collection and reporting requirements under the Urban Waste Water Treatment Directive

This data is to be submitted electronically via EDEN and the Urban Waste Water System at http://www.epa.ie/UrbanWasteWater/admindefault.asp. As with previous years the EPA will separately make a request under Section 61 of the *EPA Act, (1992,* as amended) to each local authority requiring the submission of the annual urban waste water information for agglomerations and treatment plants for the previous year.

Mohill wastewater data was returned in April 2013.

2.7 Pollutant Release and Transfer Register (PRTR) - report for previous year

The reporting of **PRTR Emissions and Waste Transfers** is a requirement which arises from both the PRTR Regulations and within individual EPA Licenses. All WWDL facilities are obliged to report their annual mass emissions to Air and Water, and their Waste Transfers using the AER/PRTR Emissions Reporting Workbook.

See Appendix 8.1 for Emission Calculation Toolset and AER Returns Workbook

3. OPERATIONAL REPORTS SUMMARY

3.1 Complaints Summary

Condition 6 of the WWDL requires that:

"The licensee shall record all complaints of an environmental nature related to the discharge(s) to waters from the waste water works in accordance with the national environmental complaints procedure. Each record shall give details of the date and time of the complaint, the name of the complainant (if provided), and the nature of the complaint. A record shall also be kept of the response made in the case of each complaint."

Number	Date & Time	Nature of Complaint	Cause of Complaint	Actions taken to resolve issue	Closed (Y/N)
None					

3.2 Reported Incidents Summary

Condition 6 of the WWDL requires that:

"The licensee shall make a record of any incident. This record shall include details of the nature, extent and impact of, and circumstances giving rise to, the incident. The record shall include all corrective actions taken to manage the incident, to minimize the effects on the environment, and to avoid recurrence. The licensee shall, as soon as practicable following incident notification, submit to the Agency the incident record including clean up and recurrence prevention measures."

The Glossary of Terms in the introduction of each licence defines an incident as follows:

"The following shall constitute an incident (as defined in the licence) for the purpose of this licence

- *any discharge that does not comply with the requirements of this licence;*
- *any incident with the potential for environmental contamination of surface water, or groundwater, or posing an environmental threat to land, or requiring an emergency response by the relevant Water Services Authority."*

Date & Time	Incident Description	Cause	Corrective Action	Authorities Contacted	Reported to EPA Yes/No	Closed (Y/N)
26/04/2012	cBOD 4.4 mg/l	Inadequate treatment	Upgrade plant	Fisheries and Longford Co Council	Yes	No
01/05/2012	cBOD 4.27 mg/l SS 80 mg	Inadequate treatment	Upgrade plant	Fisheries and Longford Co Council	Yes	No
03/05/2012	cBOD 4.84mg/l SS 105 mg	Inadequate treatment	Upgrade plant	Fisheries and Longford Co Council	Yes	No
15/08/2012	cBOD 4.84mg/l SS 24 mg/l	Inadequate treatment	Upgrade plant	Fisheries and Longford Co Council	Yes	No
21/08/2012	cBOD 2.99 mg/l SS 21.66 mg/l	Inadequate treatment	Upgrade plant	Fisheries and Longford Co Council	Yes	No

13/09/2012	OPO4 1.45 mg/l	Inadequate treatment	Upgrade plant	Fisheries and Longford Co Council	Yes	No
19/09/2012	cBOD 3.18 mg/l OPO4 1.26 mg/l	Inadequate treatment	Upgrade plant	Fisheries and Longford Co Council	Yes	No
03/10/2012	cBOD 2.19 mg/l	Inadequate treatment	Upgrade plant	Fisheries and Longford Co Council	Yes	No
04/10/2012	cBOD 3.01 mg/l	Inadequate treatment	Upgrade plant	Fisheries and Longford Co Council	Yes	No
21/11/2012	cBOD mg/l 3.27 SS mg/l 21.66	Inadequate treatment	Upgrade plant	Fisheries and Longford Co Council	Yes	No
08/11/2012	SS mg/l 3.05	Inadequate treatment	Upgrade plant	Fisheries and Longford Co Council	Yes	No
13/12/2012	CBOD5 4.71mg/L	Inadequate treatment	Upgrade plant	Fisheries and Longford Co Council	Yes	No
13/12/2012	CBOD5 8.16 mg/L SSmg/l 24.33 NH3 mg/l 2.22	Inadequate treatment	Upgrade plant	Fisheries and Longford Co Council	Yes	No

Number of Incidents in 2012	14
Number of Incidents reported to the EPA via EDEN in 2012	14
Explanation of any discrepancies between the two numbers above	No discrepancy

4. INFRASTRUCTURAL ASSESSMENT AND PROGRAMME OF IMPROVEMENTS

4.1 Storm water overflow identification and inspection report

Condition 4 of the licence details the specific information required in this report. The Storm Water Overflow Identification & Inspection report findings should be summarised in the 2nd AER and reviewed every three years thereafter. **The AER should contain an update for the years between full reviews** (e.g. years 3, 4, 6, 7, 9, 10, 12.). The report should detail progress at achieving compliance with criteria. A copy of the detailed assessment can be included as an appendix to the AER.

Additional SWOs and/or changes to Schedule A3: Discharges to be discontinued or, Schedule C: Specified Improvement Programme, requirements (including compliance dates) must be notified to the EPA under Condition 1.7 as a Technical Amendment or Licence Review may be required to accommodate the change. This must not be done as part of the AER.

An infrastructural assessment and programme of improvements wwas submitted for the 2011 AER. There have been no changes in the storm water over flow or general infrastructure in 2012. A review is being undertaken at present and will be reported on in 2014.

Section 5. Environmental Liability and Financial Provisions

5.1 Statement of Measures

Condition 7 of the WWDL requires the licensee to prepare and submit an Annual Statement of Measures as part of the AER. This must contain the measures taken or adopted by the Licensee to prevent environmental damage anticipated following events or accidents/incidents associated with discharges or overflows from the waste water works. This should include cessation / decommissioning of any discharge associated with the works if expected within 3 years. This statement must be signed by the Director(s) responsible for the WWDL each year.

5.2 Environmental Liabilities Risk Assessment

Condition 7 of the WWDL details the specific information required in this assessment and report. The ELRA report findings should be summarised in the 2nd AER. The ELRA shall be reviewed as necessary to reflect any significant change to the volume or character of effluent discharged, and in any case every three years. Where relevant the AER should contain an update for the years between full reviews.

5. ENVIRONMENTAL LIABIITY AND FINANCIAL PROVISION

Table 4 Statement of Measures

Risk I.D.	Risk Score	Mitigation measure to be taken	Outcome	Action	Date for completion	Owner/Contact Person
1	4	Check tanks for leakage regularly	reduce risk of leaks to minimum	Carry out regular checks	ongoing	S.E.E O&M
2	4	Check pipes for leakage regularly	reduce risk of leaks to minimum	Carry out regular checks	ongoing	S.E.E O&M
3	3	Check ferric storage and dosing for leakage. Adopt Standard Operating Procedure for Ferric delivery	reduce risk of leaks to minimum	Carry out regular checks	ongoing	S.E.E O&M
4	8	Maintenance Programme	reduce risk of leaks to minimum	Set up and implement Maintenance Programme	In progress	S.E.E O&M
5	9	Check pumping stations for overflows regularly	reduce risk of leaks to minimum	Carry out regular checks		S.E.E O&M
6	4	check for odour at the plant	reduce risk of odour issues	Carry out regular checks	ongoing	S.E.E O&M
7	4	check for noise at the plant	reduce risk of noise issues	Carry out regular checks	ongoing	S.E.E O&M

8	2	Adopt Standard Operating Procedure SOP for sludge handling on and off site.	reduce risk of leaks to minimum	Write and adhere to SOP. Review current plan for plant upgrade to include provision for sludge spillage at the plant	Not yet started	S.E.E O&M
9	2	sludge disposal handled by licensed sludge contractor	reduce risk of leaks to minimum	continue with current practice	ongoing	S.E.E O&M
10	5	Fire & Health And Safety inspection carried out on plant.	reduce risk of untreated sewage going to the Mohill stream		completed	S.E.E O&M
11	6	Fire inspection at pumping stations	reduce risk of untreated sewage going to the Mohill stream	Carry out regular checks	ongoing	S.E.E O&M
12	6	Check pumping stations for power failure regularly	reduce risk of untreated sewage going to the Mohill stream	Carry out regular checks	December 2013	S.E.E O&M
13	6	Continue monitoring for discharge from emergency overflows. Reduce storm water flow from housing estates.	Reduce storm water flow to the Mohill stream	Include provision for upgrade pumping stations	ongoing	S.E.E O&M

14	8	Devise plan to deal with ESB outage at plant	Better water quality in Mohill stream	ESB to notify overseer of power outage.	December 2013	S.E.E O&M

Statement
I confirm the above are the measures which will be taken by the Local Authority in 2013

The appropriate officer should sign the Programme of Measures.

Signed by _____ Date: _____

Print signature name: John McGuinness
Position in organisation Director of Services.

Priority Substance Assessment summary table	
	Self Assessment checks
Does the assessment use the Desk Top Study Method or Screening Analysis to determine if the discharge contains the parameters in Appendix 1 of the EPA guidance	Desk top study and Screening analysis.
Does the assessment include a review of Trade inputs to the works	Yes
Does the assessment include a review of other inputs to the works	Yes
Does the report include an assessment of the significance of the results where a listed material is present in the discharge e.g. impact on the relevant EQS standard for the receiving water)	No listed substances present
Does the assessment identify that priority substances may be impacting the receiving water	No

6.4 Toxicity / Leachate Management

Condition 4 of the licence details the specific information required in this report. This requirement is typically applied where there is a potential for the discharge to contain priority/dangerous substances and/or accepts landfill leachate for treatment at the WWTP.

Preferred format for Toxicity / Leachate Management Report summary table:

Is a Toxicity / Leachate Management Report required in the 2012 AER (or outstanding from previous AER)		Yes
What % of the total influent is leachate?		Small but actual % is unknown
Does the study identify any constituents of the leachate that present an environmental risk?		No
List leachate constituent identified and impact	*(insert a row for each constituent)*	Mercury at low levels 0.1 to 0.7 ug/l

Has the WWTP suitability to treat the leachate been assessed?	Yes
What are the results of the assessment (Suitable / Not Suitable / Suitable subject to improvement programme works completion)	Suitable
Has the study identified the max and operational loadings (mass, volume and rate of addition) for leachate to the WWTP?	No
Is there a monitoring programme for the priority substances identified above?	Yes
Have trigger and action levels for the concentration of identified leachate constituents been established to prevent impact on the receiving water?	No

The following table must be included where the WSA has identified that any of the discharges from the agglomeration are impacted by acceptance of leachate at the WWTP:

Leachate Management Assessment finding	**Corrective Action(s) identified to reduce/eliminate risk**	**% Completed**	**Date for completion**	***Reference to relevant section of the Improvement Programme.***
Leachate is very dilute. Mercury levels of 0.1 to 0.7ug/l were found in 2011 monitoring. These levels will be assimilated by the overall volume of influent to the plant.	No actions required	N/A	N/A	N/A

A copy of the detailed assessment can be included as an appendix to the AER. Where relevant, findings from this assessment should be considered under the Programme of Improvements required under Condition 5.6.7

Section 7. Certification and Sign Off

As part of the requirements of the WWDL, each licensee shall ensure that the AER report is **certified** as accurate and is representative by the Director of Services or a nominated, suitably qualified and experienced deputy.

Does the AER include an executive summary?	Yes
Does the AER include an assessment of the performance of the Waste Water Works (i.e. have the results of assessments been interpreted against WWDL requirements and or Environmental Quality Standards)?	Yes
Is there a need to advise the EPA for consideration of a technical amendment / review of the licence?	No
List reason e.g. additional SWO identified *(insert lines as required)*	
Is there a need to request/advise the EPA of any modifications to the existing WWDL? Refer to Condition 1.7 (changes to works/discharges) & Condition 4 (changes to monitoring location, frequency etc.)	No
List reason e.g. failure to complete specified works within dates specified in the licence, changes to monitoring requirements *(insert lines as required)*	
Have these processes commenced? (i.e. Request for Technical Amendment / Licence Review / Change Request)	N/A
Are all outstanding reports and assessments from previous AERs included as an appendix to this AER?	Section 6
List outstanding reports *(Leachate assessment)*	Section 6.4

Reference to all the above must be included in the certification and sign off page submitted by licensees. The Final page of each AER should be signed by the Director of Services or a nominated official.

DECLARATION

7.1 Declaration by Director of Services

I certify that the information given in this Annual Environmental Report is truthful, accurate and complete.

Signed by _____ Date: _____

Print signature name: John McGuinness
Position in organisation: Director of Services

Section 8. Appendix

Section 8.1 Pollutant Release and Transfer Register

Emission Calculation Toolset and AER Returns Workbook

Wastewater Treatment Data Input

CELL COLOUR KEY:

- **INPUT** - Select value from drop down list
- **INPUT** - type in your facility value in cell
- **OUTPUT** - automaticaly generated cell value

Facility Name	Mohill Wastewater Treatment Plant
Address	Mohill Co Leitrim
Reporting Year	2012
Licence Reg. No.	D0277

Enter Facility Details

P.E. (Actual Treated)	<10000 p.e.
Saline Intrusion	No saline intrusion
Type of Treatment	Secondary Treatment - Activated Sludge
Nutrient Removal	Phosphorus Removal Only - Biological/Chemical/Wetland

These parameters are required to generate estimated PRTR mass emission values.
Click on the cell and select from the drop down menu.
Refer to the Definitions below for further information.

Please enter Total Annual Flow (m³/annum):

Treated (Predominant/Main Emission):	97484 m3/annum
Fugitive Emissions:	9748 m3/annum
TOTAL:	107232 m3/annum

Final effluent volume released via the main emission point
Additional estimated volume released in storm bypasses

Definition of Input Requirements

P.E. (Actual Treated): P.E. (population equivalent) is a measurement of the average organic biodegradable load received daily at the treatment plant. A population equivalent of 1 (1 p.e.) means the organic biodegradable load having a five-day biochemical oxygen demand (BOD5) of 60g of oxygen per day. Select a P.E. band (**<10,000 p.e., 10,000 - 50,000 p.e., >50,000 p.e.**) into which the actual operating P.E. of the treatment plant falls. (Please note: the operating P.E. is based on the existing population served and not the design population size of the UWWTP).

Saline Intrusion: Identify whether saline intrusion is known to occur within the sewage network serving the treatment plant. This will be the case for some coastally located UWWTPs.

Type of Treatment: Identify the type of treatment provided at the plant. Treatment options are "No Treatment", "Primary Treatment Only", "Secondary Treatment - Activated Sludge", "Secondary Treatment - Attached Growth", "Tertiary Treatment - Filtration", and "Tertiary Treatment - Disinfection".

Nutrient Removal: Identify whether nutrient removal is employed at the treatment plant. Nutrient removal options are "Phosphorus Removal Only - Biological/Chemical/Wetland", "Nitrogen Removal Only", "Phosphorous and Nitrogen Removal", and "No Nutrient Removal".

Air Emission - Inputs

CELL COLOUR KEY

ee4c9a5293807be81e8	INPUT - type in your facility value in cell
	OUTPUT - automatically generated cell value

RELEASES TO AIR

Air: Emissions from WWTP Works

Data Entry Table: Characteristics of the WWTP

For use where no data from on-site monitoring of air emissions from the plant are available.
Nitrous Oxide (N2O) calculated directly for actual p.e. data

For information only:
Calculated Values (see Calculations Worksheet)

TOW kg BOD / annum	*TOW = "Total Organically biodegradable material in domestic (=municipal) Wastewater"*
26,605	Total p.e. served TOW equivalent
41,639	Design p.e. TOW equivalent
307	**Quality check: p.e. of influent BOD kg/annum**
4,380	*BOD content of sludge removed kg/annum*
0	*BOD content of sludge digested kg/annum*
2,356	Residual BOD net of sludge removed/digested kg/annum

1 Loadings and Works		
A Facility Loadings Data for Reporting Year	**Value**	
Total p.e. served	1,214	*Enter Actual Population Equivalent of catchment*
Design p.e.	1,900	*Enter Design Population Equivalent of facility*
Total influent BOD kg/annum (measured)	6,736	*Enter total annual quantity:* ***NB note units: kg/annum***
Total Sludge removed offsite kg Dry Matter / annum	10,950	*Enter total annual quantity:* ***NB note units: kg/annum***
Total Sludge digested on-site kg Dry Matter / annum	0	*Enter total annual quantity:* ***NB note units: kg/annum***

B Characteristics of the Works	**Status**		
B1 Aerobic plant			
Does the aerobic section of the plant contain dissolved oxygen?	Y	*Y / N (default is "Y")*	**Methane Conversion factor for the aerobic plant will be determined by this answer**
All tanks covered and extracted to on-site flare?	N	*Y / N (default is "N")*	**Releases will be reported as "Fugitive"**
% of Headspace biogas utilised on site (0 - 100)		*Only required if Headspace extraction on site. Calculate by % operation of engine. Default assumption is Zero utilisation*	
% of Headspace biogas flared (0 - 100)		*Only required if Headspace extraction on site. Calculate by % operation of flare. Default assumption is Zero flaring*	
Total % biogas utilised or flared onsite			

B2 Onsite Anaerobic Digestion for sludge treatment	**Status**		
Anaerobic digestion on site?		*Y / N (default is "N")*	**Releases will be reported as "Emission Point 1"**
% of Digester biogas utilised on site (0 - 100)		*Only required if Anaerobic digestion on site. Calculate by % operation of engine. Default assumption is Zero utilisation*	
% of Digester biogas flared (0 - 100)		*Only required if Anaerobic digestion on site. Calculate by % operation of flare. Default assumption is Zero flaring*	
Total % biogas utilised or flared onsite			

2 Estimated Fuel use at the UWWTP	Diesel Usage Tonnes/annum		
Total Diesel Use on site in the year	0	***Tonne / annum***	**Releases will be reported as "Fugitive"**

The output data is presented on this worksheet in the precise format for transfer directly into the "**Releases to Air**" Worksheet of your AER/PRTR Emissions Reporting Workbook

PRTR No. Annex II	Name	ESTIMATED QUANTITIES			
		Emission Point 1	**T (Total) KG/Year**	**A (Accidental) KG/Year**	**F (Fugitive) KG/Year**
1	Methane (CH4)	0	0	0	0
2	Carbon Monoxide (CO)	0	0	0	0
3	Carbon Dioxide (CO2)	0	2,946	0	2,946
5	Nitrous oxide (N2O)		0	0	0
7	Non-methane volatile organic compounds (NMVOC)		0	0	0
8	Nitrogen oxides (NOx/NO2)	0	0	0	0
11	Sulphur oxides (SOx/SO2)		0	0	0

Measured Values

CELL COLOUR
INPUT - type in your facility value in cell
OUTPUT - automatcaly generated cell value

Enter all measured values in this sheet

Note: If you do not have measured values then LEAVE THE CELL BLANK

Measured values reported in this worksheet should be the average concentration of the pollutant measured over the previous reporting year. Measured values should be used when they are available rather than estimated values from the Toolset. Measured values relate to parameters that are analysed in a laboratory. Please enter the measured values to the orange cells in mg/l for the year.

Note: the unit of measurement must be in mg/l for all parameters entered on this sheet.

Where measured values are reported, the Method Code must be indicated in the "Method of Measurement" column. The method code used shall be in accordance with the internationally approved measurement methods - please refer to the UWW PRTR Electronic Toolset Guidance Document on the EPA website. The method description should also be provided as indicated below.

Note: Wastewater licensed pollutants such as BOD and COD, Ortho- P are included at the bottom of this sheet - please enter annual measured data in mg/l for these.

Method Codes

ISO/CEN Standard - If the laboratory is working to an ISO/CEN standard that is on the approved list of standards, you should use this as the method code. Example for Total Nitrogen is EN ISO 11905-1 1998. Leave the Description Field Blank in the PRTR Workbook.	Example for Total Nitrogen	EN ISO 11905-1:1998	Method Description: Blank
OTH - If the method you are using is not an ISO/CEN standard or does not fall under any of the other method codes then use OTH. This method code would apply when using methods from the Standard Methods for the Analysis of Water and Wastewater series or when using a Hach Spectrophotometric Method for Total Nitrogen, for example. Use the method code OTH and please put a description of the method in the method description field in the PRTR Emissions Reporting Workbook.	Example for Total Phosphorus	OTH	Method Description: Standard Methods for the Analysis of Water and Wastewater - Total P Analysis

UWWT Facility Details:	<10000 p.e., No saline intrusion, Secondary Treatment - Activated Sludge, Phosphorus Removal Only - Biological/Chemical/Wetland

Enter your measured values in these two columns

Double-click the cells below to select the method code

Enter your method description in this column

PRTR Substances:

PRTR Nr.	CAS No.	Parameter	Treated Effluent Concentration (mg/l)	Fugitive Emission Concentration (mg/l)	Treated Effluent Mass emission (kg/annum)	Fugitive Emission Mass emission (kg/annum)	Method of Measurement (Method Code)	Method Description (Analytical Method)
12		Total nitrogen (as N)	15.800		1540.250	0.000	ALT	Ganimede N
13		Total phosphorus (as P)	1.360		132.579	0.000	ALT	Ganimede P
76		Total organic carbon			0.000	0.000		
79		Chlorides (as total Cl)			0.000	0.000		
82		Cyanides (as total CN)			0.000	0.000		
83		Fluorides (as total F)			0.000	0.000		
17		Arsenic and compounds (as As)			0.000	0.000		
18		Cadmium and compounds (as Cd)			0.000	0.000		
19		Chromium and compounds (as Cr)			0.000	0.000		
20		Copper and compounds (as Cu)			0.000	0.000		
21		Mercury and compounds (as Hg)			0.000	0.000		
22		Nickel and compounds (as Ni)			0.000	0.000		
23		Lead and compounds (as Pb)			0.000	0.000		
24		Zinc and compounds (as Zn)			0.000	0.000		
31	85535-84-8	Chloroalkanes (C10-C13)			0.000	0.000		
25	15972-60-8	Alachlor			0.000	0.000		
26	309-00-2	Aldrin			0.000	0.000		
36	60-57-1	Dieldrin			0.000	0.000		
39	72-20-8	Endrin			0.000	0.000		
41	76-44-8	Heptachlor			0.000	0.000		
28	57-74-9	Chlordane			0.000	0.000		
29	143-50-0	Chlordecone			0.000	0.000		
46	2385-85-5	Mirex			0.000	0.000		
38	115-29-7	Endosulphan			0.000	0.000		
45	58-89-9	Lindane (1,2,3,4,5,6-hexachlorocyclohexane)			0.000	0.000		
89	465-73-6	Isodrin			0.000	0.000		
33	50-29-3	DDT - sum of all isomers			0.000	0.000		
77	1582-09-8	Trifluralin			0.000	0.000		
42	118-74-1	Hexachlorobenzene (HCB)			0.000	0.000		
43	87-68-3	Hexachlorobutadiene (HCBD)			0.000	0.000		
30	470-90-6	Chlorfenvinphos			0.000	0.000		
32	2921-88-2	Chlorpyrifos			0.000	0.000		
27	1912-24-9	Atrazine			0.000	0.000		
51	122-34-9	Simazine			0.000	0.000		
37	330-54-1	Diuron			0.000	0.000		
67	34123-59-6	Isoproturon			0.000	0.000		
75		Triphenyltin			0.000	0.000		
69		Organotin			0.000	0.000		
74		Tributyltin			0.000	0.000		
72		PAH, Total			0.000	0.000		
91	191-24-2	Benzo[ghi]perylene			0.000	0.000		

61	120-12-7	Anthracene			0.000	0.000		
68	91-20-3	Naphthalene			0.000	0.000		
88	206-44-0	Fluoranthene			0.000	0.000		
50	1336-36-3	Polychlorinated biphenyls (PCBs) - sum of 11 congeners			0.000	0.000		
40		Halogenated organic compounds (as AOX)			0.000	0.000		
52	127-18-4	Tetrachloroethylene (PER)			0.000	0.000		
53	56-23-5	Tetrachloromethane (TCM)			0.000	0.000		
57	79-01-6	Trichloroethylene			0.000	0.000		
60	75-01-4	Vinyl chloride			0.000	0.000		
34	107-06-2	1,2-dichloroethane (EDC)			0.000	0.000		
35	75-09-2	Dichloromethane (DCM)			0.000	0.000		
71	108-95-2	Phenols (as total C)			0.000	0.000		
87	1806-26-4	Octylphenols and Octylphenol Ethoxylates			0.000	0.000		
64		Nonylphenol and Nonylphenol ethoxylates (NP/NPEs)			0.000	0.000		
54	12002-48-1	Trichlorobenzenes (TCBs) (all isomers)			0.000	0.000		
49	87-86-5	Pentachlorophenol (PCP)			0.000	0.000		
48	608-93-5	Pentachlorobenzene			0.000	0.000		
62	71-43-2	Benzene as BTEX			0.000	0.000		
73	108-88-3	Toluene as BTEX			0.000	0.000		
78	1330-20-7	Xylenes (total mass of ortho, para and meta-xylene)BTEX			0.000	0.000		
65	100-41-4	Ethyl benzene (BTEX)			0.000	0.000		
70	117-81-7	Di(2-ethylhexyl)phthalate			0.000	0.000		
59	8001-35-2	Toxaphene			0.000	0.000		
90	36355-1-8	Hexabromobiphenyl			0.000	0.000		
63		Brominated diphenylethers (PBDE)			0.000	0.000		

Non-PRTR Substances:

PRTR Nr.	CAS No.	Parameter	Treated Effluent Concentration (mg/l)	Fugitive Emission Concentration (mg/l)	Treated Effluent Mass emission (kg/annum)	Fugitive Emission Mass emission (kg/annum)	Method of Measurement (Method Code)	Method Description (Analytical Method)
370		Selenium			0.000	0.000		
205		Antimony (as Sb)			0.000	0.000		
368		Molybdenum			0.000	0.000		
358		Tin			0.000	0.000		
373		Barium			0.000	0.000		
374		Boron			0.000	0.000		
356		Cobalt			0.000	0.000		
386		Vanadium			0.000	0.000		
388		Dichlobenil			0.000	0.000		
383		Linuron			0.000	0.000		
385		Mecoprop Total			0.000	0.000		
380		2,4 Dichlorophenol (2,4 D)			0.000	0.000		
384		MCPA			0.000	0.000		
382		Glyphosate			0.000	0.000		
389		Benzo[a]pyrene			0.000	0.000		
390		Benzo[b]fluoranthene			0.000	0.000		
391		Benzo[k]fluoranthene			0.000	0.000		
392		Indeno(1,2,3-c,d)pyrene			0.000	0.000		
393		Carbon tetrachloride			0.000	0.000		
394		2,6-Dichlorobenzamide			0.000	0.000		
395		Dicofol			0.000	0.000		
396		Hexabromocyclododecane (HBCD)			0.000	0.000		
397		PFOS			0.000	0.000		
238		Ammonia (as N)	0.333		32.462	0.000	ALT	ISBN 0117516139
305		BOD	3.000		292.453	0.000	ALT	Electrode Standard Methods
306		COD	39.000		3801.884	0.000	ALT	eter DR 5000 Dichromate Reflux Me
362		Kjeldahl Nitrogen			0.000	0.000		
327		Nitrate (as N)			0.000	0.000		
372		Nitrite (as N)			0.000	0.000		
332		Ortho-phosphate (as PO4)	0.527		51.374	0.000	ALT	arbid Acid ISBN 011751582 5
241		Suspended Solids	21.000		2047.168	0.000	ALT	C Filtration Standard Method

Licensed Pollutants listed above

Wastewater Emissions Estimates

CELL COLOUR KEY

OUTPUT - automaticaly generated cell value

Note: There are no user input requirements in this worksheet

These values are generated in the Toolset based on the data filled in on the Waste Water Treatment Data Input Sheet (i.e. Generated by the Estimation Toolset)

UWWT Facility Details:	<10000 p.e., No saline intrusion, Secondary Treatment - Activated Sludge, Phosphorus Removal Only - Biological/Chemical/Wetland

PRTR substances estimated by tool:

PRTR Nr.	CAS No.	Parameter	Treated Effluent Concentration (mg/l)	Fugitive Emission Concentration (mg/l)	Treated Effluent Mass emission (kg/annum)	Fugitive Emission Mass emission (kg/annum)	Total Mass Emission (kg/annum)
12		Total nitrogen (as N)	14.455	23.480	1409.134	228.883	1638.017
13		Total phosphorus (as P)	0.878	4.295	85.575	41.868	127.443
76		Total organic carbon	9.220	13.102	898.782	127.718	1026.500
79		Chlorides (as total Cl)	54.120	64.800	5275.845	631.670	5907.515
82		Cyanides (as total CN)	0.003	0.003	0.286	0.027	0.313
83		Fluorides (as total F)	0.235	0.221	22.909	2.158	25.067
17		Arsenic and compounds (as As)	0.001	0.001	0.055	0.011	0.067
18		Cadmium and compounds (as Cd)	0.000	0.000	0.026	0.003	0.029
19		Chromium and compounds (as Cr)	0.001	0.000	0.078	0.001	0.079
20		Copper and compounds (as Cu)	0.003	0.006	0.292	0.055	0.348
21		Mercury and compounds (as Hg)	0.000	0.000	0.000	0.001	0.001
22		Nickel and compounds (as Ni)	0.004	0.004	0.415	0.035	0.450
23		Lead and compounds (as Pb)	0.003	0.011	0.296	0.105	0.402
24		Zinc and compounds (as Zn)	0.049	0.122	4.812	1.188	6.000
31	85535-84-8	Chloroalkanes (C10-C13)	0.000	0.000	0.020	0.002	0.023
25	15972-60-8	Alachlor	0.000	0.000	0.000	0.000	0.000
26	309-00-2	Aldrin	0.000	0.000	0.000	0.000	0.000
36	60-57-1	Dieldrin	0.000	0.000	0.000	0.000	0.000
39	72-20-8	Endrin	0.000	0.000	0.000	0.000	0.000
41	76-44-8	Heptachlor	0.000	0.000	0.000	0.000	0.000
28	57-74-9	Chlordane	0.000	0.000	0.000	0.000	0.000
29	143-50-0	Chlordecone	0.000	0.000	0.000	0.000	0.000
46	2385-85-5	Mirex	0.000	0.000	0.000	0.000	0.000
38	115-29-7	Endosulphan	0.000	0.000	0.000	0.000	0.000
45	58-89-9	Lindane (1,2,3,4,5, 6 -hexachlorocyclohexane)	0.000	0.000	0.000	0.000	0.000
89	465-73-6	Isodrin	0.000	0.000	0.000	0.000	0.000
33	50-29-3	DDT - sum of all isomers	0.000	0.000	0.000	0.000	0.000
77	1582-09-8	Trifluralin	0.000	0.000	0.000	0.000	0.000
42	118-74-1	Hexachlorobenzene (HCB)	0.000	0.000	0.000	0.000	0.000
43	87-68-3	Hexachlorobutadiene (HCBD)	0.000	0.000	0.000	0.000	0.000
30	470-90-6	Chlorfenvinphos	0.000	0.000	0.000	0.000	0.000
32	2921-88-2	Chlorpyrifos	0.000	0.000	0.000	0.000	0.000
27	1912-24-9	Atrazine	0.000	0.000	0.001	0.000	0.001
51	122-34-9	Simazine	0.000	0.000	0.001	0.000	0.002
37	330-54-1	Diuron	0.000	0.000	0.003	0.000	0.003
67	34123-59-6	Isoproturon	0.000	0.000	0.001	0.000	0.001
75		Triphenyltin	0.000	0.000	0.000	0.000	0.000
69		Organotin	0.000	0.000	0.000	0.000	0.000
74		Tributyltin	0.000	0.000	0.000	0.000	0.000
72		PAH, Total	0.000	0.000	0.001	0.002	0.003
91	191-24-2	Benzo[ghi]perylene	0.000	0.000	0.000	0.000	0.000
61	120-12-7	Anthracene	0.000	0.000	0.000	0.000	0.000
68	91-20-3	Naphthalene	0.000	0.000	0.000	0.001	0.002

88	206-44-0	Flouranthene	0.000	0.000	0.000	0.000	0.000
50	1336-36-3	Polychlorinated biphenyls (PCBs) - sum of 11 cong	0.000	0.000	0.000	0.000	0.000
40		Halogenated organic compounds (as AOX)	0.002	0.002	0.233	0.023	0.256
52	127-18-4	Tetrachloroethylene (PER)	0.000	0.000	0.006	0.000	0.006
53	56-23-5	Tetrachloromethane (TCM)	0.000	0.000	0.000	0.000	0.000
57	79-01-6	Trichloroethylene	0.000	0.000	0.000	0.000	0.000
60	75-01-4	Vinyl chloride	0.000	0.000	0.000	0.000	0.000
34	107-06-2	1,2-dichloroethane (EDC)	0.000	0.000	0.000	0.000	0.000
35	75-09-2	Dichloromethane (DCM)	0.000	0.000	0.004	0.001	0.006
71	108-95-2	Phenols (as total C)	0.001	0.081	0.089	0.788	0.877
87	1806-26-4	Octylphenols and Octylphenol Ethoxylates	0.000	0.000	0.000	0.000	0.000
64		Nonylphenol and Nonylphenol ethoxylates (NP/NP	0.000	0.001	0.008	0.011	0.019
54	12002-48-1	Trichlorobenzenes (TCBs) (all isomers)	0.000	0.000	0.000	0.000	0.000
49	87-86-5	Pentachlorophenol (PCP)	0.000	0.000	0.000	0.000	0.000
48	608-93-5	Pentachlorobenzene	0.000	0.000	0.000	0.000	0.000
62	71-43-2	Benzene as BTEX	0.000	0.000	0.002	0.002	0.003
73	108-88-3	Toluene as BTEX	0.000	0.014	0.048	0.136	0.184
78	1330-20-7	Xylenes (total mass of ortho, para and meta-xylene	0.000	0.002	0.011	0.015	0.027
65	100-41-4	Ethyl benzene (BTEX)	0.000	0.000	0.002	0.001	0.003
70	117-81-7	Di(2-ethylhexyl)phthalate	0.001	0.003	0.089	0.029	0.118
59	8001-35-2	Toxaphene	0.000	0.000	0.000	0.000	0.000
90	36355-1-8	Hexabromobiphenyl	0.000	0.000	0.000	0.000	0.000
63		Brominated diphenylethers (PBDE)	0.000	0.000	0.000	0.000	0.000
non PRTR substances estimated by tool:							
PRTR Nr.	**CAS No.**	**Parameter**	**Treated Effluent Concentration (mg/l)**	**Fugitive Emission Concentration (mg/l)**	**Treated Effluent Mass emission (kg/annum)**	**Fugitive Emission Mass emission (kg/annum)**	**Total Mass Emission (kg/annum)**
N/A		Total Hardness (mg/l CaCO3)	201.750	291.000	19667.437	2836.668	22504.105
N/A		Selenium	0.000	0.000	0.000	0.000	0.000
N/A		Antimony	0.000	0.000	0.015	0.005	0.020
N/A		Molybdenum	0.000	0.001	0.000	0.014	0.014
N/A		Tin	0.000	0.000	0.014	0.000	0.014
N/A		Barium	0.013	0.036	1.291	0.351	1.643
N/A		Boron	0.061	0.089	5.957	0.868	6.825
N/A		Cobalt	0.000	0.000	0.017	0.003	0.020
N/A		Vanadium	0.003	0.005	0.266	0.051	0.317
N/A		Dichlobenil	0.000	0.000	0.000	0.000	0.000
N/A		Linuron	0.000	0.000	0.000	0.000	0.000
N/A		Mecoprop	0.000	0.000	0.010	0.001	0.012
N/A		2,4-D	0.000	0.000	0.005	0.000	0.005
N/A		MCPA	0.000	0.000	0.009	0.000	0.009
N/A		Glyphosate	0.002	0.000	0.149	0.004	0.153
N/A		Benzo[a]pyrene	0.000	0.000	0.000	0.000	0.000
N/A		Benzo[b]fluoranthene	0.000	0.000	0.000	0.000	0.000
N/A		Benzo[k]fluoranthene	0.000	0.000	0.000	0.000	0.000
N/A		Indeno[1,2,3-c,d]pyrene	0.000	0.000	0.000	0.000	0.000
N/A		Carbon tetrachloride	0.000	0.000	0.000	0.000	0.000
N/A		2,6-Dichlorobenzamide	0.000	0.000	0.008	0.001	0.008
N/A		Dicofol	-	-	#VALUE!	#VALUE!	#VALUE!
N/A		Hexabromocyclododecane (HBCD)	0.000	0.000	0.000	0.000	0.000
N/A		PFOS	0.000	0.000	0.000	0.000	0.000

Releases to Water Output Table

CELL COLOUR KEY:
INPUT - Type in your facility value in cell
OUTPUT - automatically generated cell value

Click the Red Arrow to transfer all the measured and estimated data to the PRTR Emissions Reporting Workbook for this specific UWWTP. Please ensure the PRTR Workbook is closed prior to the transfer and select the correct PRTR Workbook from your dedicated folder for this UWWTP.

Please ensure that all the inputs for Air and Water are completed prior to transfer. Please update the PRTR Workbook with method descriptions and waste transfers prior to upload.

Facility Name:	Mohill Wastewater Treatment Plant
Address:	Mohill Co Leitrim
Reporting year:	2012

Treated: Final effluent volume released via main emission point	97,484
Fugitive: Estimated additional volume released in storm bypasses	9,748
Total Annual Flow (m³/annum):	107232.2

SECTION A : WWTP SPECIFIC PRTR POLLUTANTS

Note '#VALUE!' error messages will disappear when flow data are entered above

POLLUTANT			Method Used		QUANTITY				E-PRTR reporting threshold kg/annum
No. Annex II	Name	M/E	Method of Measurement	Designation or Description	Emission Point 1	F (Fugitive) kg/year	A (Accidental) kg/year *(Enter site specific data)*	T (Total) kg/year	
12	Total nitrogen	M	ALT	Ganimede N	1,540 250	228 883		1,769.133	50,000
13	Total phosphorus	M	ALT	Ganimede P	132 579	41 868		174.446	5,000
76	Total organic carbon (TOC) (as total C or COD/3)	E	ESTIMATE	EPA UWWTP Tool Version 5 0	898 782	127.718		1,026 500	50,000
79	Chlorides (as total Cl)	E	ESTIMATE	EPA UWWTP Tool Version 5 0	5 275 845	631 670		5 907 515	2,000,000
82	Cyanides (as total CN)	E	ESTIMATE	EPA UWWTP Tool Version 5 0	0 286	0 027		0 313	50
83	Fluorides (as total F)	E	ESTIMATE	EPA UWWTP Tool Version 5 0	22 909	2 158		25 067	2,000
17	Arsenic and compounds (as As)	E	ESTIMATE	EPA UWWTP Tool Version 5 0	0 055	0 011		0 067	5
18	Cadmium and compounds (as Cd)	E	ESTIMATE	EPA UWWTP Tool Version 5 0	0 026	0 003		0 029	5
19	Chromium and compounds (as Cr)	E	ESTIMATE	EPA UWWTP Tool Version 5 0	0 078	0 001		0 079	50
20	Copper and compounds (as Cu)	E	ESTIMATE	EPA UWWTP Tool Version 5 0	0 292	0 055		0 348	50
21	Mercury and compounds (as Hg)	E	ESTIMATE	EPA UWWTP Tool Version 5 0	0 000	0 001		0 001	1
22	Nickel and compounds (as Ni)	E	ESTIMATE	EPA UWWTP Tool Version 5 0	0 415	0 035		0 450	20
23	Lead and compounds (as Pb)	E	ESTIMATE	EPA UWWTP Tool Version 5 0	0 296	0 105		0 402	20
24	Zinc and compounds (as Zn)	E	ESTIMATE	EPA UWWTP Tool Version 5 0	4 812	1 188		6 000	100
31	Chloroalkanes (C10-C13)	E	ESTIMATE	EPA UWWTP Tool Version 5 0	0 020	0 002		0 023	1
25	Alachlor	E	ESTIMATE	EPA UWWTP Tool Version 5 0	0 000	0 000		0 000	1
26	Aldrin	E	ESTIMATE	EPA UWWTP Tool Version 5 0	0 000	0 000		0 000	1
36	Dieldrin	E	ESTIMATE	EPA UWWTP Tool Version 5 0	0 000	0 000		0 000	1
39	Endrin	E	ESTIMATE	EPA UWWTP Tool Version 5 0	0 000	0 000		0 000	1
41	Heptachlor	E	ESTIMATE	EPA UWWTP Tool Version 5 0	0 000	0 000		0 000	1
28	Chlordane	E	ESTIMATE	EPA UWWTP Tool Version 5 0	0 000	0 000		0 000	1
29	Chlordecone	E	ESTIMATE	EPA UWWTP Tool Version 5 0	0 000	0 000		0 000	1
46	Mirex	E	ESTIMATE	EPA UWWTP Tool Version 5 0	0 000	0 000		0 000	1
36	Endosulphan	E	ESTIMATE	EPA UWWTP Tool Version 5 0	0 000	0 000		0 000	1
45	Lindane	E	ESTIMATE	EPA UWWTP Tool Version 5 0	0 000	0 000		0 000	1
89	Isodrin	E	ESTIMATE	EPA UWWTP Tool Version 5 0	0 000	0 000		0 000	1
33	DDT	E	ESTIMATE	EPA UWWTP Tool Version 5 0	0 000	0 000		0 000	1
77	Trifluralin	E	ESTIMATE	EPA UWWTP Tool Version 5 0	0 000	0 000		0 000	1
42	Hexachlorobenzene	E	ESTIMATE	EPA UWWTP Tool Version 5 0	0 000	0 000		0 000	1
43	Hexachlorobutadiene	E	ESTIMATE	EPA UWWTP Tool Version 5 0	0 000	0 000		0 000	1
30	Chlorfenvinphos	E	ESTIMATE	EPA UWWTP Tool Version 5 0	0 000	0 000		0 000	1
32	Chlorpyrifos	E	ESTIMATE	EPA UWWTP Tool Version 5 0	0 000	0 000		0 000	1
27	Atrazine	E	ESTIMATE	EPA UWWTP Tool Version 5 0	0 001	0 000		0 001	1
51	Simazine	E	ESTIMATE	EPA UWWTP Tool Version 5 0	0 001	0 000		0 002	1
37	Diuron	E	ESTIMATE	EPA UWWTP Tool Version 5 0	0 003	0 000		0 003	1
67	Isoproturon	E	ESTIMATE	EPA UWWTP Tool Version 5 0	0 001	0 000		0 001	1
75	Triphenyltin and compounds	E	ESTIMATE	EPA UWWTP Tool Version 5 0	0 000	0 000		0 000	1
69	Organotin compounds(as total Sn)	E	ESTIMATE	EPA UWWTP Tool Version 5 0	0 000	0 000		0 000	50
74	Tributyltin and compounds	E	ESTIMATE	EPA UWWTP Tool Version 5 0	0 000	0 000		0 000	1
72	Polycyclic aromatic hydrocarbons (PAHs)	E	ESTIMATE	EPA UWWTP Tool Version 5 0	0 001	0 002		0 003	5
91	Benzo(g,h,i)perylene	E	ESTIMATE	EPA UWWTP Tool Version 5 0	0 000	0 000		0 000	1
61	Anthracene	E	ESTIMATE	EPA UWWTP Tool Version 5 0	0 000	0 000		0 000	1
68	Naphthalene	E	ESTIMATE	EPA UWWTP Tool Version 5 0	0 000	0 001		0 002	10
88	Fluoranthene	E	ESTIMATE	EPA UWWTP Tool Version 5 0	0 000	0 000		0 000	1
50	Polychlorinated biphenyls (PCBs)	E	ESTIMATE	EPA UWWTP Tool Version 5 0	0 000	0 000		0 000	0,1
40	Halogenated organic compounds (as AOX)	E	ESTIMATE	EPA UWWTP Tool Version 5 0	0 233	0 023		0 256	1,000
52	Tetrachloroethylene (PER)	E	ESTIMATE	EPA UWWTP Tool Version 5 0	0 006	0 000		0 006	10
53	Tetrachloromethane (TCM)	E	ESTIMATE	EPA UWWTP Tool Version 5 0	0 000	0 000		0 000	1
57	Trichloroethylene	E	ESTIMATE	EPA UWWTP Tool Version 5 0	0 000	0 000		0 000	10
60	Vinyl chloride	E	ESTIMATE	EPA UWWTP Tool Version 5 0	0 000	0 000		0 000	10
34	1,2-dichloroethane (EDC)	E	ESTIMATE	EPA UWWTP Tool Version 5 0	0 000	0 000		0 000	10
35	Dichloromethane (DCM)	E	ESTIMATE	EPA UWWTP Tool Version 5 0	0 004	0 001		0 006	10
71	Phenols (as total C)	E	ESTIMATE	EPA UWWTP Tool Version 5 0	0 089	0 788		0 877	20
87	Octylphenols and Octylphenol ethoxylates	E	ESTIMATE	EPA UWWTP Tool Version 5 0	0 000	0 000		0 000	1
64	Nonylphenol and Nonylphenol ethoxylates (NP/NPEs)	E	ESTIMATE	EPA UWWTP Tool Version 5 0	0 008	0 011		0 019	1
54	Trichlorobenzenes (TCBs) (all isomers)	E	ESTIMATE	EPA UWWTP Tool Version 5 0	0 000	0 000		0 000	1
49	Pentachlorophenol (PCP)	E	ESTIMATE	EPA UWWTP Tool Version 5 0	0 000	0 000		0 000	1
48	Pentachlorobenzene	E	ESTIMATE	EPA UWWTP Tool Version 5 0	0 000	0 000		0 000	1
62	Benzene	E	ESTIMATE	EPA UWWTP Tool Version 5 0	0 002	0 002		0 003	200
73	Toluene	E	ESTIMATE	EPA UWWTP Tool Version 5 0	0 048	0 136		0 184	200
78	Xylenes	E	ESTIMATE	EPA UWWTP Tool Version 5 0	0 011	0 015		0 027	200
65	Ethyl benzene	E	ESTIMATE	EPA UWWTP Tool Version 5 0	0 002	0 001		0 003	200
70	Di-(2-ethyl hexyl) phthalate (DEHP)	E	ESTIMATE	EPA UWWTP Tool Version 5 0	0 089	0 029		0 118	1
59	Toxaphene	E	ESTIMATE	EPA UWWTP Tool Version 5 0	0 000	0 000		0 000	1
90	Hexabromobiphenyl	E	ESTIMATE	EPA UWWTP Tool Version 5 0	0 000	0 000		0 000	0,1
63	Brominated diphenylethers (PBDE)	E	ESTIMATE	EPA UWWTP Tool Version 5 0	0 000	0 000		0 000	1

SECTION C : REMAINING NON-PRTR SUBSTANCES AND POLLUTANT EMISSIONS AS REQUIRED IN YOUR LICENCE

POLLUTANT			Method Used		QUANTITY			
No. Annex II	Name	M/E	Method Code	Designation or Description *(Note: replace with site-specific data if applicable)*	Emission Point 1	F (Fugitive) kg/year	A (Accidental) kg/year *(Enter site specific data)*	T (Total) kg/year

370	Selenium	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.000	0.000		0.000
205	Antimony (as Sb)	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.015	0.005		0.020
368	Molybdenum	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.000	0.014		0.014
358	Tin	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.014	0.000		0.014
373	Barium	E	ESTIMATE	EPA UWWTP Tool Version 5.0	1.291	0.351		1.643
374	Boron	E	ESTIMATE	EPA UWWTP Tool Version 5.0	5.957	0.868		6.825
356	Cobalt	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.017	0.003		0.020
386	Vanadium	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.266	0.051		0.317
388	Dichlobenil	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.000	0.000		0.000
383	Linuron	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.000	0.000		0.000
385	Mecoprop Total	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.010	0.001		0.012
380	2,4 Dichlorophenol (2,4 D)	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.005	0.000		0.005
384	MCPA	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.009	0.000		0.009
382	Glyphosate	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.149	0.004		0.153
389	Benzo[a]pyrene	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.000	0.000		0.000
390	Benzo[b]fluoranthene	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.000	0.000		0.000
391	Benzo[k]fluoranthene	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.000	0.000		0.000
392	Indeno[1,2,3-c,d]pyrene	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.000	0.000		0.000
393	Carbon tetrachloride	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.000	0.000		0.000
394	2,6-Dichlorobenzamide	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.008	0.001		0.008
395	Dicofol	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.000	0.000		0.000
396	Hexabromocyclodecane (HBCD)	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.000	0.000		0.000
397	PFOS	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.000	0.000		0.000
238	Ammonia (as N)	M	ALT	ISBN 0117516139	32.462	0.000		32.462
303	BOD	M	ALT	DO Electrode Standard Methods	292.453	0.000		292.453
306	COD	M	ALT	Spectrophotometer DR. 5000 Dichromate Reflux Method	3,801.884	0.000		3,801.884
362	Kjeldahl Nitrogen	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.000	0.000		0.000
327	Nitrate (as N)	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.000	0.000		0.000
372	Nitrite (as N)	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.000	0.000		0.000
332	Ortho-phosphate (as PO4)	M	ALT	Ascorbic Acid ISBN 011751582 5	51.374	0.000		51.374
240	Suspended Solids	M	ALT	GFC Filtration Standard Method	2,047.168	0.000		2,047.168

Environmental Protection Agency

Guidance to completing the PRTR workbook

AER Returns Workbook

Version 1.1.16

REFERENCE YEAR	2012

1. FACILITY IDENTIFICATION

Parent Company Name	Leitrim County Council
Facility Name	Mohill Waste Water Treatment Plant
PRTR Identification Number	D0277
Licence Number	D0277-01

Waste or IPPC Classes of Activity

No.	class_name
30.4	General

Address 1	Park Lane House
Address 2	Carrick-on-Shannon
Address 3	County Leitrim
Address 4	
	Leitrim
Country	Ireland
Coordinates of Location	-7.86184 53.9164
River Basin District	IEGBNISH
NACE Code	3700
Main Economic Activity	Sewerage
AER Returns Contact Name	Billy Lowe
AER Returns Contact Email Address	blowe@leitrimcoco.ie
AER Returns Contact Position	Senior Engineer
AER Returns Contact Telephone Number	071 9620005 601
AER Returns Contact Mobile Phone Number	0866994710
AER Returns Contact Fax Number	071 9621982
Production Volume	97484.2
Production Volume Units	1
Number of Installations	1
Number of Operating Hours in Year	8760
Number of Employees	1
User Feedback/Comments	blowe@leitrimcoco.ie
Web Address	http://www.leitrimcoco.ie/

2. PRTR CLASS ACTIVITIES

Activity Number	Activity Name
5(f)	Urban waste-water treatment plants

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

Is it applicable?	
Have you been granted an exemption ?	
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) ?	

4.1 RELEASES TO AIR

Link to previous years emissions data

SECTION A : SECTOR SPECIFIC PRTR POLLUTANTS

RELEASES TO AIR					Please enter all quantities in this section in KGs			
POLLUTANT		METHOD				QUANTITY		
			Method Used					
No. Annex II	Name	M/C/E	Method Code	Designation or Description	Emission Point 1	T (Total) KG/Year	A (Accidental) KG/Year	F (Fugitive) KG/Year
01	Methane (CH4)	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.0	0.0	0.0	0.0
02	Carbon monoxide (CO)	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.0	0.0	0.0	0.0
03	Carbon dioxide (CO2)	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.0	2946.0	0.0	2946.0
05	Nitrous oxide (N2O)	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.0	0.0	0.0	0.0
07	Non-methane volatile organic compounds (NMVOC)	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.0	0.0	0.0	0.0
08	Nitrogen oxides (NOx/NO2)	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.0	0.0	0.0	0.0
11	Sulphur oxides (SOx/SO2)	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.0	0.0	0.0	0.0

* Select a row by double-clicking on the Pollutant Name (Column B) then click the delete button

SECTION B : REMAINING PRTR POLLUTANTS

RELEASES TO AIR					Please enter all quantities in this section in KGs			
POLLUTANT		METHOD				QUANTITY		
			Method Used					
No. Annex II	Name	M/C/E	Method Code	Designation or Description	Emission Point 1	T (Total) KG/Year	A (Accidental) KG/Year	F (Fugitive) KG/Year
					0.0	0.0	0.0	0.0

* Select a row by double-clicking on the Pollutant Name (Column B) then click the delete button

SECTION C : REMAINING POLLUTANT EMISSIONS (As required in your Licence

RELEASES TO AIR					Please enter all quantities in this section in KGs			
POLLUTANT		METHOD				QUANTITY		
			Method Used					
Pollutant No.	Name	M/C/E	Method Code	Designation or Description	Emission Point 1	T (Total) KG/Year	A (Accidental) KG/Year	F (Fugitive) KG/Year
					0.0	0.0	0.0	0.0

* Select a row by double-clicking on the Pollutant Name (Column B) then click the delete button

Additional Data Requested from Landfill operators

For the purposes of the National Inventory on Greenhouse Gases, landfill operators are requested to provide summary data on landfill gas (Methane) flared or utilised on their facilities to accompany the figures for total methane generated. Operators should only report their Net methane (CH4) emission to the environment under T(total) KG/yr for Section A: Sector specific PRTR pollutants above. Please complete the table below:

Landfill: Mohill Waste Water Treatment Plant

Please enter summary data on the quantities of methane flared and / or utilised	T (Total) kg/Year	M/C/E	Method Used: Method Code	Method Used: Designation or Description	Facility Total Capacity m3 per hour	
Total estimated methane generation (as per site model)	0.0				N/A	
Methane flared	0.0				0.0	(Total Flaring Capacity)
Methane utilised in engine/s	0.0				0.0	(Total Utilising Capacity)
Net methane emission (as reported in Section A above)	0.0				N/A	

4.2 RELEASES TO WATERS

Link to previous years emissions data

| PRTR# : D0277 | Facility Name : Mohill Waste Water Treatment Plant | Filename : D0277_2012.xls | Return Year : 2012 | 02/09/2013 15:52

SECTION A : SECTOR SPECIFIC PRTR POLLUTANTS

Data on ambient monitoring of storm/surface water or groundwater, conducted as part of your licence requirements, should NOT be submitted under AER / PRTR Reporting as this only co

RELEASES TO WATERS					Please enter all quantities in this section in KGs			
POLLUTANT			Method Used		QUANTITY			
No Annex II	Name	M/C/E	Method Code	Designation or Description	Emission Point 1	T (Total) KG/Year	A (Accidental) KG/Year	F (Fugitive) KG/Year
34	1 2-dichloroethane (EDC)	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.0	0.0	0.0	0.0
25	Alachlor	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.0	0.0	0.0	0.0
26	Aldrin	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.0	0.0	0.0	0.0
61	Anthracene	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.0	0.0	0.0	0.0
17	Arsenic and compounds (as As)	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.055	0.066	0.0	0.011
27	Atrazine	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.001	0.001	0.0	0.0
62	Benzene	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.002	0.004	0.0	0.002
91	Benzo(g,h i)perylene	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.0	0.0	0.0	0.0
63	Brominated diphenylethers (PBDE)	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.0	0.0	0.0	0.0
18	Cadmium and compounds (as Cd)	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.026	0.029	0.0	0.003
28	Chlordane	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.0	0.0	0.0	0.0
29	Chlordecone	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.0	0.0	0.0	0.0
30	Chlorfenvinphos	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.0	0.0	0.0	0.0
79	Chlorides (as Cl)	E	ESTIMATE	EPA UWWTP Tool Version 5.0	5275.845	5907.515	0.0	631.67
31	Chloro-alkanes, C10-C13	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.02	0.022	0.0	0.002
32	Chlorpyrifos	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.0	0.0	0.0	0.0
19	Chromium and compounds (as Cr)	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.078	0.079	0.0	0.001
20	Copper and compounds (as Cu)	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.292	0.347	0.0	0.055
82	Cyanides (as total CN)	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.286	0.313	0.0	0.027
33	DDT	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.0	0.0	0.0	0.0
70	Di-(2-ethyl hexyl) phthalate (DEHP)	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.089	0.118	0.0	0.029
35	Dichloromethane (DCM)	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.004	0.005	0.0	0.001
36	Dieldrin	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.0	0.0	0.0	0.0
37	Diuron	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.003	0.003	0.0	0.0
38	Endosulphan	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.0	0.0	0.0	0.0
39	Endrin	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.0	0.0	0.0	0.0
85	Ethyl benzene	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.002	0.003	0.0	0.001
88	Fluoranthene	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.0	0.0	0.0	0.0

83	Fluorides (as total F)	E	ESTIMATE	EPA UWWTP Tool Version 5.0	22.909	25.067	0.0	2.158
40	Halogenated organic compounds (as AOX)	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.233	0.256	0.0	0.023
41	Heptachlor	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.0	0.0	0.0	0.0
90	Hexabromobiphenyl	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.0	0.0	0.0	0.0
42	Hexachlorobenzene (HCB)	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.0	0.0	0.0	0.0
43	Hexachlorobutadiene (HCBD)	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.0	0.0	0.0	0.0
89	Isodrin	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.0	0.0	0.0	0.0
67	Isoproturon	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.001	0.001	0.0	0.0
23	Lead and compounds (as Pb)	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.296	0.401	0.0	0.105
45	Lindane	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.0	0.0	0.0	0.0
21	Mercury and compounds (as Hg)	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.0	0.001	0.0	0.001
46	Mirex	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.0	0.0	0.0	0.0
68	Naphthalene	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.0	0.001	0.0	0.001
22	Nickel and compounds (as Ni)	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.415	0.45	0.0	0.035
84	Nonylphenol and Nonylphenol ethoxylates (NP/NPEs)	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.008	0.019	0.0	0.011
87	Octylphenols and Octylphenol ethoxylates	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.0	0.0	0.0	0.0
69	Organotin compounds (as total Sn)	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.0	0.0	0.0	0.0
48	Pentachlorobenzene	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.0	0.0	0.0	0.0
49	Pentachlorophenol (PCP)	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.0	0.0	0.0	0.0
71	Phenols (as total C)	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.089	0.877	0.0	0.788
50	Polychlorinated biphenyls (PCBs)	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.0	0.0	0.0	0.0
72	Polycyclic aromatic hydrocarbons (PAHs)	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.001	0.003	0.0	0.002
51	Simazine	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.001	0.001	0.0	0.0
52	Tetrachloroethylene (PER)	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.006	0.006	0.0	0.0
53	Tetrachloromethane (TCM)	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.0	0.0	0.0	0.0
73	Toluene	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.048	0.184	0.0	0.136
12	Total nitrogen	M	ALT	Ganimede N	1540.25	1769.133	0.0	228.883
76	Total organic carbon (TOC) (as total C or COD/3)	E	ESTIMATE	EPA UWWTP Tool Version 5.0	898.782	1026.5	0.0	127.718
13	Total phosphorus	M	ALT	Ganimede P	132.579	174.447	0.0	41.868
59	Toxaphene	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.0	0.0	0.0	0.0
74	Tributyltin and compounds	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.0	0.0	0.0	0.0
54	Trichlorobenzenes (TCBs)(all isomers)	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.0	0.0	0.0	0.0
57	Trichloroethylene	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.0	0.0	0.0	0.0

77	Trifluralin	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.0	0.0	0.0	0.0
75	Triphenyltin and compounds	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.0	0.0	0.0	0.0
60	Vinyl chloride	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.0	0.0	0.0	0.0
78	Xylenes	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.011	0.026	0.0	0.015
24	Zinc and compounds (as Zn)	E	ESTIMATE	EPA UWWTP Tool Version 5.0	4.812	6.0	0.0	1.188

* Select a row by double-clicking on the Pollutant Name (Column B) then click the delete button

SECTION B : REMAINING PRTR POLLUTANTS

RELEASES TO WATERS					Please enter all quantities in this section in KGs			
POLLUTANT					QUANTITY			
No Annex II	Name	M/C/E	Method Used Method Code	Method Used Designation or Description	Emission Point 1	T (Total) KG/Year	A (Accidental) KG/Year	F (Fugitive) KG/Year
					0.0	0.0	0.0	0.0

* Select a row by double-clicking on the Pollutant Name (Column B) then click the delete button

SECTION C : REMAINING POLLUTANT EMISSIONS (as required in your Licence)

RELEASES TO WATERS					Please enter all quantities in this section in KGs			
POLLUTANT					QUANTITY			
Pollutant No	Name	M/C/E	Method Used Method Code	Method Used Designation or Description	Emission Point 1	T (Total) KG/Year	A (Accidental) KG/Year	F (Fugitive) KG/Year
370	Selenium	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.0	0.0	0.0	0.0
205	Antimony (as Sb)	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.015	0.02	0.0	0.005
368	Molybdenum	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.0	0.014	0.0	0.014
358	Tin	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.014	0.014	0.0	0.0
373	Barium	E	ESTIMATE	EPA UWWTP Tool Version 5.0	1.291	1.642	0.0	0.351
374	Boron	E	ESTIMATE	EPA UWWTP Tool Version 5.0	5.957	6.825	0.0	0.868
356	Cobalt	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.017	0.02	0.0	0.003
386	Vanadium	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.266	0.317	0.0	0.051
388	Dichlobenil	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.0	0.0	0.0	0.0
383	Linuron	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.0	0.0	0.0	0.0
385	Mecoprop Total	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.01	0.011	0.0	0.001
380	2 4 Dichlorophenol (2 4 D)	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.005	0.005	0.0	0.0
384	MCPA	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.009	0.009	0.0	0.0
382	Glyphosate	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.149	0.153	0.0	0.004
389	Benzo[a]pyrene	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.0	0.0	0.0	0.0
390	Benzo[b]fluoranthene	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.0	0.0	0.0	0.0
391	Benzo[k]fluoranthene	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.0	0.0	0.0	0.0
392	Indeno[1 2 3-c d]pyrene	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.0	0.0	0.0	0.0
393	Carbon tetrachloride	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.0	0.0	0.0	0.0

394	2,6-Dichlorobenzamide	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.008	0.009	0.0	0.001
395	Dicofol	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.0	0.0	0.0	0.0
396	Hexabromocyclodecane (HBCD)	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.0	0.0	0.0	0.0
397	PFOS	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.0	0.0	0.0	0.0
238	Ammonia (as N)	M	ALT	ISBN 0117516139	32.462	32.462	0.0	0.0
303	BOD	M	ALT	DO Electrode Standard Methods	292.453	292.453	0.0	0.0
306	COD	M	ALT	Spectrophotometer DR 5000 Dichromate Reflux Method	3801.884	3801.884	0.0	0.0
362	Kjeldahl Nitrogen	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.0	0.0	0.0	0.0
327	Nitrate (as N)	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.0	0.0	0.0	0.0
372	Nitrite (as N)	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.0	0.0	0.0	0.0
332	Ortho-phosphate (as PO4)	M	ALT	Ascorbid Acid ISBN 011751582 5	51.374	51.374	0.0	0.0
240	Suspended Solids	M	ALT	GFC Filtration Standard Method	2047.168	2047.168	0.0	0.0

* Select a row by double-clicking on the Pollutant Name (Column B) then click the delete button

4.3 RELEASES TO WASTEWATER OR SEWER

Link to previous years emissions data

SECTION A : PRTR POLLUTANTS

OFFSITE TRANSFER OF POLLUTANTS DESTINED FOR WASTE-WATER TREATMENT OR SEWER					Please enter all quantities in this section in KGs			
POLLUTANT		METHOD			QUANTITY			
			Method Used					
No. Annex II	Name	M/C/E	Method Code	Designation or Description	Emission Point 1	T (Total) KG/Year	A (Accidental) KG/Year	F (Fugitive) KG/Year
					0.0	0.0	0.0	0.0

* Select a row by double-clicking on the Pollutant Name (Column B) then click the delete button

SECTION B : REMAINING POLLUTANT EMISSIONS (as required in your Licence)

OFFSITE TRANSFER OF POLLUTANTS DESTINED FOR WASTE-WATER TREATMENT OR SEWER					Please enter all quantities in this section in KGs			
POLLUTANT		METHOD			QUANTITY			
			Method Used					
Pollutant No.	Name	M/C/E	Method Code	Designation or Description	Emission Point 1	T (Total) KG/Year	A (Accidental) KG/Year	F (Fugitive) KG/Year
					0.0	0.0	0.0	0.0

* Select a row by double-clicking on the Pollutant Name (Column B) then click the delete button

4.4 RELEASES TO LAND

Link to previous years emissions data

| PRTR# : D0277 | Facility Name : Mohill Waste Water Treatment Plant | Filename : D0277_2012.xls | Return Year : 2012 | 02/09/2013 16:26

SECTION A : PRTR POLLUTANTS

RELEASES TO LAND					Please enter all quantities in this section in KGs		
POLLUTANT		METHOD			QUANTITY		
No. Annex II	Name	M/C/E	Method Used	Designation or Description	Emission Point 1	T (Total) KG/Year	A (Accidental) KG/Year
					0.0	0.0	0.0

* Select a row by double-clicking on the Pollutant Name (Column B) then click the delete button

SECTION B : REMAINING POLLUTANT EMISSIONS (as required in your Licence)

RELEASES TO LAND					Please enter all quantities in this section in KGs		
POLLUTANT		METHOD			QUANTITY		
Pollutant No.	Name	M/C/E	Method Used	Designation or Description	Emission Point 1	T (Total) KG/Year	A (Accidental) KG/Year
					0.0	0.0	0.0

* Select a row by double-clicking on the Pollutant Name (Column B) then click the delete button

5. ONSITE TREATMENT & OFFSITE TRANSFERS OF WASTE

Please enter all quantities on this sheet in Tonnes

5

Transfer Destination	European Waste Code	Hazardous	Quantity (Tonnes per Year)	Description of Waste	Waste Treatment Operation	Method Used		Location of Treatment	Haz Waste : Name and Licence/Permit No of Next Destination Facility Non Haz Waste: Name and Licence/Permit No of Recover/Disposer	Haz Waste : Address of Next Destination Facility Non Haz Waste: Address of Recover/Disposer	Name and License / Permit No. and Address of Final Recoverer / Disposer (HAZARDOUS WASTE ONLY)	Actual Address of Final Destination i.e. Final Recovery / Disposal Site (HAZARDOUS WASTE ONLY)
						M/C/E	Method Used					
Within the Country	**19 08 05**	**No**	11.0	sludges from treatment of urban waste water	R10	C	Volume Calculation	Offsite in Ireland	Longford County Council,.	Longford County Council,Great Water Street,Longford,Co. Longford,Ireland		

* Select a row by double-clicking the Description of Waste item and the delete button

Section 8.2 Priority/Listed/Dangerous Substances Screen

Complete Laboratory Solutions
RosMuc, Co. Galway.
[Tel] 091 574355
[Fax] 091 574356
[Email] services@cls.ie
[web] www.completelabsolutions.com

Client	:	Padraig Tierney, Water Services,	Report No.	:	175045
		Leitrim County Council,	Date of Receipt	:	04/10/2012
		Water Treatment Plant	Start Date of Analysis	:	04/10/2012
		Carrick on Shannon	Date of Report	:	30/11/2012
		Co Leitrim	Order Number	:	4000118615
			Sample taken by	:	Client

CERTIFICATE OF ANALYSIS

Lab No	Sample Description		Test	Result	Units
402388	Priority Sub W12438 - Mohill Wastewater	6-9	pH	7.7	pH Units
			Conductivity @20C	472	uS/cm
		30	Copper, total	4	ug/l
			Chloride	24.7	mg/l
			Total Hardness (Kone)	195	mg/l CaCO3
		8	Phenols, total (low level)	<0.5	ug/l
		10	Cyanide, total (low level)	<10	ug/l
		0.05	Mercury	<0.1	ug/l
		0.7	Linuron	<0.04	ug/l
			SVOC	<1.0	ug/l
			PCB as Arochlors	<4	ng/l
		0.6	Fluoride	0.3	mg/l
			VOC	<1.0	ug/l
		25	Arsenic, total	0.9	ug/l
		50	Zinc, total	45	ug/l
		4.7/3.4	Chromium, total	<0.5	ug/l
		1.000	Boron	23	ug/l
		20	Nickel, total	<0.5	ug/l
		7.2	Lead, total	<0.5	ug/l
		5.0	Antimony, total	<0.5	ug/l
		0.15	Cadmium, total	<0.5	ug/l
			Barium, total	22	ug/l
			Cobalt, total	<0.5	ug/l
		10	Selenium, total	<0.5	ug/l
			Vanadium, total	7	ug/l
			Molybdenum, total	0.6	ug/l
			Tin, total	<0.5	ug/l
		60	Glyphosate	0.16	ug/l
			TOC	4.58	mg/l
			Dichlobenil	<0.01	ug/l
			2,4-D	0.02	ug/l
			MCPA	<0.02	ug/l
			Mecoprop (MCPP)	<0.02	ug/l
		D/S	2,6-Dichlorobenzamide	0.04	ug/l
		1 0.6	Atrazine	<0.01	ug/l
		0.2	Diuron	<0.03	ug/l
		0.3	Isoproturon	<0.03	ug/l
		1 1	Simazine	<0.01	ug/l
		0.1	Isodrin	<0.01	ug/l
			Dieldrin	<0.01	ug/l

Mercury - Result < 0.1 (0.05)
Cadmium - Result < 0.5 (0.15)

ISO 17025 INAB ACCREDITED TESTING DETAILED IN SCOPE REG NO. 108T

Approved by: Rita McGrath

Rita McGrath
Environmental Scientist

See reverse for Test Specifications

Test	Specification	Subcontracted	CLS 17025 Status	Sub 17025 Status
Zinc, total	ICP-MS CLS 129	No	Yes	No
VOC	GCMS, (USEPA 8260B)	Yes	No	Yes
Vanadium, total	ICP-MS CLS 129	No	Yes	No
Total Hardness (Kone)	Konelab CLS 77	No	Yes	No
TOC	CLS 150	No	Yes	No
Tin, total	ICP-MS CLS129	No	Yes	No
SVOC	GC	Yes	No	No
Simazine	DIN EN ISO 10695	Yes	No	Yes
Selenium, total	ICP-MS CLS129	No	Yes	No
Phenols, total (low level)	SBD 29	Yes	No	Yes
pH	CLS 26	No	Yes	No
PCB as Arochlors	GC	Yes	No	Yes
Nickel, total	ICP-MS CLS129	No	Yes	No
Molybdenum, total	ICP-MS CLS129	No	Yes	No
Mercury	Atomic Fluorescence	Yes	No	Yes
Mecoprop (MCPP)	DIN EN ISO 15913	Yes	No	Yes
MCPA	DIN EN ISO 15913	Yes	No	Yes
Linuron	ISO 11369; ISO17025 accredited	Yes	No	Yes
Lead, total	ICP-MS CLS 129	No	Yes	No
Isoproturon	DIN EN ISO 11369; ISO17025 accredited	Yes	No	Yes
Isodrin	ISO 110695; ISO17025 accredited	Yes	No	Yes
Glyphosate	DIN 38407-22 (ISO/SD 16308 saline waters)	Yes	No	Yes
Fluoride	ISE	Yes	No	Yes
Diuron	DIN EN ISO 11369	Yes	No	Yes
Dieldrin	ISO 110695; ISO17025 accredited	Yes	No	Yes
Dichlobenil	ISO 10695	Yes	No	Yes
Cyanide, total (low level)	Colorimetric	Yes	No	Yes
Copper, total	ICP-MS CLS 129	No	Yes	No
Conductivity @20C	CLS 67	No	Yes	No
Cobalt, total	ICP-MS CLS129	No	Yes	No
Chromium, total	ICP-MS CLS129	No	Yes	No
Chloride	Konelab CLS 36	No	Yes	No
Cadmium, total	ICP-MS CLS 129	No	Yes	No
Boron	ICP-MS CLS129	No	Yes	No
Barium, total	ICP-MS CLS129	No	Yes	No
Atrazine	DIN EN ISO 10695	Yes	No	Yes
Arsenic, total	ICP-MS CLS 129	No	Yes	No
Antimony, total	ICP-MS CLS 129	No	Yes	No
2,6-Dichlorobenzamide	DIN EN ISO 10695; ISO17025 accredited	Yes	No	Yes
2,4-D	DIN EN ISO 15913	Yes	No	Yes

Laboratory Analysis, Sampling, Technical Backup, Training, Food Safety Program Auditing and Monitoring are all ISO 9001:2008 certified

4409

Report Number: **COV/889384/2012** Issue **1**
Laboratory Number: **13214844** Sample **1** of **2**

Sample Source: **Complete Laboratory Solutions**
Sample Point Description: **Complete Laboratory Solutions**
Sample Description: **402388**
Sample Matrix: **Water**
Sample Date/Time:
Sample Received: **05 October 2012**
Analysis Complete: **24 October 2012**

Mohill

Test Description	Result	Units	Accreditation	Method
Mercury, Total as Hg	<0.1	ug/l	Y Cov	WAS013
Cyanide, Total as CN	<0.009	mg/l	Y Cov	WAS018
Fluoride as F	0.3	mg/l	Y Cov	WAS029
PCB 28	<4	ng/l	Y Cov	GEO47
PCB 52	<4	ng/l	Y Cov	GEO47
PCB 101	<4	ng/l	Y Cov	GEO47
PCB 118	<4	ng/l	Y Cov	GEO47
PCB 138	<4	ng/l	Y Cov	GEO47
PCB 153	<4	ng/l	Y Cov	GEO47
PCB 180	<4	ng/l	Y Cov	GEO47
VOC	Y	ug/l	Y Cov	GEO32
Dichlorodifluoromethane	<1.0	ug/l	Y Cov	GEO32
Chloromethane	<1.0	ug/l	Y Cov	GEO32
Chloroethane	<1.0	ug/l	Y Cov	GEO32
Bromomethane	<1.0	ug/l	Y Cov	GEO32
Trichlorofluoromethane	<1.0	ug/l	Y Cov	GEO32
1,1-Dichloroethene	<1.0	ug/l	Y Cov	GEO32
Dichloromethane	<1.0	ug/l	Y Cov	GEO32
1,1-Dichloroethane	<1.0	ug/l	Y Cov	GEO32
cis-1,2-Dichloroethene	<1.0	ug/l	Y Cov	GEO32
2,2-Dichloropropane	<1.0	ug/l	Y Cov	GEO32
Chloroform	<1.0	ug/l	Y Cov	GEO32
Bromochloromethane	<1.0	ug/l	Y Cov	GEO32
1,1,1-Trichloroethane	<1.0	ug/l	Y Cov	GEO32
1,1-Dichloropropene	<1.0	ug/l	Y Cov	GEO32
1,2-Dichloroethane	<1.0	ug/l	Y Cov	GEO32
Benzene	<1.0	ug/l	Y Cov	GEO32
1,2-Dichloropropane	<1.0	ug/l	Y Cov	GEO32
Trichloroethene	<1.0	ug/l	Y Cov	GEO32
Bromodichloromethane	<1.0	ug/l	Y Cov	GEO32
Dibromomethane	<1.0	ug/l	Y Cov	GEO32

Laboratory Number: **13214844** Sample **1** of **2**

Sample Source: **Complete Laboratory Solutions**
Sample Point Description: **Complete Laboratory Solutions**
Sample Description: **402388**
Sample Matrix: **Water**
Sample Date/Time:
Sample Received: **05 October 2012**
Analysis Complete: **24 October 2012**

Mohill

Test Description	Result	Units	Accreditation	Method
cis-1,3-Dichloropropene	<1.0	ug/l	Y Cov	GEO32
Toluene	<1.0	ug/l	Y Cov	GEO32
trans-1,3-Dichloropropene	<1.0	ug/l	Y Cov	GEO32
1,1,2-Trichloroethane	<1.0	ug/l	Y Cov	GEO32
Carbon Tetrachloride	<1.0	ug/l	Y Cov	GEO32
Vinyl Chloride	<0.5	ug/l	Y Cov	GEO32
1,3-Dichloropropane	<1.0	ug/l	Y Cov	GEO32
Tetrachloroethene	<1.0	ug/l	Y Cov	GEO32
Dibromochloromethane	<1.0	ug/l	Y Cov	GEO32
1,2-Dibromoethane	<1.0	ug/l	Y Cov	GEO32
Chlorobenzene	<1.0	ug/l	Y Cov	GEO32
1,1,1,2-Tetrachloroethane	<1.0	ug/l	Y Cov	GEO32
Ethyl Benzene	<1.0	ug/l	Y Cov	GEO32
m&p-Xylene	<1.0	ug/l	Y Cov	GEO32
o-Xylene	<1.0	ug/l	Y Cov	GEO32
Styrene	<1.0	ug/l	Y Cov	GEO32
Bromoform	<1.0	ug/l	Y Cov	GEO32
trans-1,2-Dichloroethene	<1.0	ug/l	Y Cov	GEO32
Isopropylbenzene	<1.0	ug/l	Y Cov	GEO32
1,1,2,2-Tetrachloroethane	<1.0	ug/l	Y Cov	GEO32
1,2,3-Trichloropropane	<1.0	ug/l	Y Cov	GEO32
n-Propylbenzene	<1.0	ug/l	Y Cov	GEO32
Bromobenzene	<1.0	ug/l	Y Cov	GEO32
2-Chlorotoluene	<1.0	ug/l	Y Cov	GEO32
1,3,5-Trimethylbenzene	<1.0	ug/l	Y Cov	GEO32
4-Chlorotoluene	<1.0	ug/l	Y Cov	GEO32
tert-Butylbenzene	<1.0	ug/l	Y Cov	GEO32
1,2,4-Trimethylbenzene	<1.0	ug/l	Y Cov	GEO32
sec-Butylbenzene	<1.0	ug/l	Y Cov	GEO32
p-Isopropyltoluene	<1.0	ug/l	Y Cov	GEO32
1,3-Dichlorobenzene	<1.0	ug/l	Y Cov	GEO32
1,4-Dichlorobenzene	<1.0	ug/l	Y Cov	GEO32

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Laboratory Number: **13214844** Sample **1** of **2**

Sample Source: **Complete Laboratory Solutions**
Sample Point Description: **Complete Laboratory Solutions**
Sample Description: **402388**
Sample Matrix: **Water**
Sample Date/Time:
Sample Received: **05 October 2012**
Analysis Complete: **24 October 2012**

Mohill

Test Description	Result	Units	Accreditation	Method
n-Butylbenzene	<1.0	ug/l	Y Cov	GEO32
1,2-Dichlorobenzene	<1.0	ug/l	Y Cov	GEO32
1,2-Dibromo-3-chloropropane	<2.0	ug/l	Y Cov	GEO32
1,2,4-Trichlorobenzene	<1.0	ug/l	Y Cov	GEO32
Hexachlorobutadiene	<1.0	ug/l	Y Cov	GEO32
Naphthalene	<1.0	ug/l	Y Cov	GEO32
1,2,3-Trichlorobenzene	<1.0	ug/l	Y Cov	GEO32
MTBE	<1.0	ug/l	Y Cov	GEO32
Dibromofluoromethane	94.0	%Recovery	N Cov	GEO32
Toluene-d8	98.2	%Recovery	N Cov	GEO32
4-Bromofluorobenzene	97.4	%Recovery	N Cov	GEO32
SVOC	y	ug/l	Y Cov	GEO40
Phenol	<1.0	ug/l	Y Cov	GEO40
Bis(2-chloroethyl)ether	<1.0	ug/l	Y Cov	GEO40
2-Chlorophenol	<1.0	ug/l	Y Cov	GEO40
1,3-Dichlorobenzene	<1.0	ug/l	Y Cov	GEO40
1,4-Dichlorobenzene	<1.0	ug/l	Y Cov	GEO40
2-Methylphenol	<1.0	ug/l	Y Cov	GEO40
3&4-Methylphenol	<1.0	ug/l	N Cov	GEO40
Dibenzofuran	<1.0	ug/l	N Cov	GEO40
1,2-Dichlorobenzene	<1.0	ug/l	Y Cov	GEO40
Bis(2-chloroisopropyl)ether	<1.0	ug/l	Y Cov	GEO40
n-Nitrosodi-n-propylamine	<1.0	ug/l	Y Cov	GEO40
Hexachloroethane	<1.0	ug/l	Y Cov	GEO40
Nitrobenzene	<1.0	ug/l	Y Cov	GEO40
Isophorone	<1.0	ug/l	Y Cov	GEO40
2,4-Dimethylphenol	<1.0	ug/l	Y Cov	GEO40
2-Nitrophenol	<1.0	ug/l	Y Cov	GEO40
Bis(2-chloroethoxy)methane	<1.0	ug/l	Y Cov	GEO40
2,4-Dichlorophenol	<1.0	ug/l	Y Cov	GEO40
1,2,4-Trichlorobenzene	<1.0	ug/l	Y Cov	GEO40
Naphthalene	<2.0	ug/l	Y Cov	GEO40

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Laboratory Number: **13214844** Sample **1** of **2**

Sample Source: **Complete Laboratory Solutions**
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Test Description	Result	Units	Accreditation	Method
Hexachlorobutadiene	<1.0	ug/l	Y Cov	GEO40
4-Chloro-3-methylphenol	<1.0	ug/l	Y Cov	GEO40
2-Methylnaphthalene	<1.0	ug/l	Y Cov	GEO40
2,4,6-Trichlorophenol	<1.0	ug/l	Y Cov	GEO40
2,4,5-Trichlorophenol	<1.0	ug/l	Y Cov	GEO40
2-Chloronaphthalene	<1.0	ug/l	Y Cov	GEO40
Dimethylphthalate	<1.0	ug/l	Y Cov	GEO40
2,6-Dinitrotoluene	<1.0	ug/l	Y Cov	GEO40
Acenaphthylene	<1.0	ug/l	Y Cov	GEO40
Acenaphthene	<1.0	ug/l	Y Cov	GEO40
2,4-Dinitrotoluene	<1.0	ug/l	Y Cov	GEO40
Diethylphthalate	<1.0	ug/l	Y Cov	GEO40
4-Nitrophenol	<5.0	ug/l	Y Cov	GEO40
4-Chlorophenyl phenyl ether	<1.0	ug/l	Y Cov	GEO40
Fluorene	<1.0	ug/l	Y Cov	GEO40
Diphenylamine	<1.0	ug/l	N Cov	GEO40
4-Bromophenyl Phenyl Ether	<1.0	ug/l	Y Cov	GEO40
Hexachlorobenzene	<1.0	ug/l	Y Cov	GEO40
Pentachlorophenol	<1.0	ug/l	Y Cov	GEO40
Phenanthrene	<1.0	ug/l	Y Cov	GEO40
Anthracene	<1.0	ug/l	Y Cov	GEO40
di-n-Butylphthalate	<1.0	ug/l	Y Cov	GEO40
Fluoranthene	<1.0	ug/l	Y Cov	GEO40
Pyrene	<1.0	ug/l	Y Cov	GEO40
Benzyl Butyl Phthalate	<1.0	ug/l	Y Cov	GEO40
Benzo(a)anthracene	<1.0	ug/l	Y Cov	GEO40
Chrysene	<1.0	ug/l	Y Cov	GEO40
Bis(2-ethylhexyl)phthalate	<5.0	ug/l	Y Cov	GEO40
Di-n-octylphthalate	<1.0	ug/l	Y Cov	GEO40
Benzo(b)fluoranthene	<1.0	ug/l	Y Cov	GEO40
Benzo(k)fluoranthene	<1.0	ug/l	Y Cov	GEO40
Benzo(a)pyrene	<1.0	ug/l	Y Cov	GEO40

Report Number: **COV/889384/2012** Issue 1

Laboratory Number: **13214844** Sample **1** of **2**

Sample Source: **Complete Laboratory Solutions**
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Sample Matrix: **Water**
Sample Date/Time:
Sample Received: **05 October 2012**
Analysis Complete: **24 October 2012**

Mohill

Test Description	Result	Units	Accreditation	Method
Indeno(1,2,3-c,d)pyrene	<1.0	ug/l	Y Cov	GEO40
Dibenz(a,h)anthracene	<1.0	ug/l	Y Cov	GEO40
Benzo(g,h,i)perylene	<1.0	ug/l	Y Cov	GEO40
2-Fluorophenol	97.7	%Recovery	N Cov	GEO40
Phenol-d6	87.0	%Recovery	N Cov	GEO40
Nitrobenzene-d5	97.1	%Recovery	N Cov	GEO40
2-Fluorobiphenyl	97.3	%Recovery	N Cov	GEO40
2,4,6-Tribromophenol	90.2	%Recovery	N Cov	GEO40
Terphenyl-d14	97.7	%Recovery	N Cov	GEO40
Phenol, Low Level	<0.50	ug/l	Y Cov	GEO18
2-Chlorophenol, Low Level	<0.10	ug/l	Y Cov	GEO18
O-Methylphenol low level	<0.10	ug/l	Y Cov	GEO18
M/P-Methylphenol low level	<0.10	ug/l	Y Cov	GEO18
2,4-Dimethylphenol, Low Level	<0.10	ug/l	Y Cov	GEO18
3,5-Dimthphenol low level	<0.10	ug/l	Y Cov	GEO18
2,4-Dichlorophenol low level	<0.10	ug/l	Y Cov	GEO18
4-Chlorophenol low level	<0.10	ug/l	Y Cov	GEO18
2,4,6-Trichlorophenol low leve	<0.10	ug/l	Y Cov	GEO18

Analyst Comments for 13214844: The date of sampling has not been provided and therefore sample stability times cannot be assessed. It is therefore possible that the results provided may be compromised.

Accreditation Codes: Y = UKAS Accredited, N = Not UKAS Accredited, M = MCERTS.
Analysed at: Brd = Bridgend, Cov = Coventry, Rea = Reading, Run = Runcorn, S = Subcontracted, Wak = Wakefield.
For Microbiological determinands 0 or ND=Not Detected, For Legionella ND=Not Detected in volume of sample filtered. The LOD for the Legionella analysis will increase where the volume analysed is <1000g (1g is approximately equivalent to 1ml for sample volume analysed).
I/S=Insufficient sample

Signed: J Fell Name: **J. Fell** Date: **24 October 2012**

Title: **Chemistry Operations Manager**

Customer: Complete Laboratory Solutions Rosmuc, Co. Galway,

Sample ID: Sample Number 402388

Date of receipt: 09.10.2012 Mahill

Sampler: Customer

Start of analysis: 09.10.2012 **End of analysis:** 30.11.2012

Parameter	Method	Unit	LOQ	Results
2,4-D	DIN EN ISO 15913	µg/l	0,01	0,02
MCPA	DIN EN ISO 15913	µg/l	0,02	< 0,02
Mecoprop (MCPP)	DIN EN ISO 15913	µg/l	0,02	< 0,02
2,6-Dichlorobenzamide	DIN EN ISO 10695	µg/l	0,02	0,04
Atrazine	DIN EN ISO 10695	µg/l	0,01	< 0,01
Dichlobenil	DIN EN ISO 10695	µg/l	0,01	< 0,01
Dieldrin	DIN EN ISO 10695	µg/l	0,01	< 0,01
Isodrin	DIN EN ISO 10695	µg/l	0,01	< 0,01
Simazine	DIN EN ISO 10695	µg/l	0,01	< 0,01
Diuron	DIN EN ISO 11369	µg/l	0,03	< 0,03
Isoproturon	DIN EN ISO 11369	µg/l	0,03	< 0,03
Linuron	DIN EN ISO 11369	µg/l	0,04	< 0,04
Glyphosate	ISO 16308	µg/l	0,04	0,16
Comments:				

IWW Rheinisch-Westfälisches Institut für Wasser
Beratungs- und Entwicklungsgesellschaft mbH
- Leitung Bereich Wasserqualität -

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Dr. P. Balsaa

Appendix 8.3

Ambient Monitoring. – The effect of the outfall at the downstream site.

Ammonia	US	DS1	Factor of increase DS.
15/02/2012	0.029	0.268	9
22/02/2012	0.043	0.156	4
06/03/2012	0.034	0.759	22
31/05/2012	0.014	1.249	89
07/06/2012	0.073	1.2	16
12/07/2012	0.025	0.163	7
19/07/2012	0.034	0.757	22
09/08/2012	0.028	0.126	5
13/09/2012	0.043	0.181	4
18/09/2012	0.079	0.272	3
03/10/2012	0.028	0.164	6
BOD	**US**	**DS1**	**Factor of increase DS.**
15/02/2012	1.39	2.68	2
22/02/2012	2.33	2.47	1
06/03/2012	0.95	5.69	6
31/05/2012	2.68	7	3
07/06/2012	1.84	17.5	10
12/07/2012	1.6	5.32	3
19/07/2012	2.28	6.33	3
09/08/2012	1.06	1.14	1
13/09/2012	1.39	4.38	3
18/09/2012	1.38	3.44	2
03/10/2012	2.3	3.48	2
DO	**US**	**DS1**	**Decrease in DO**
15/02/2012	94	88	6
22/02/2012	95	94	1
06/03/2012	94	84	10
31/05/2012	89	45	44
07/06/2012	92	69	23
12/07/2012	95	80	15
09/08/2012	105	93	12
13/09/2012	97	88	9
18/09/2012	95	80	15
03/10/2012	88	81	7
23/10/2012	87	87	0

pH	US	DS1	Factor of increase DS.
15/02/2012	7.59	7.71	1
22/02/2012	7.2	7.26	1
06/03/2012	7.5	7.5	1
31/05/2012	7.67	7.55	1
07/06/2012	7.43	7.53	1
12/07/2012	7.79	7.79	1
19/07/2012	7.68	7.64	1
09/08/2012	7.74	7.76	1
13/09/2012	7.77	7.82	1
18/09/2012	7.84	7.71	1
03/10/2012	7.35	7.37	1
Temperature	**US**	**DS1**	**Factor of increase DS.**
15/02/2012	7.5	7.6	1
22/02/2012	9.4	9.3	1
06/03/2012	5.5	6.3	1
31/05/2012	13.7	14.3	1
07/06/2012	12	12	1
12/07/2012	12.1	13.8	1
19/07/2012	13	14	1
09/08/2012	14.8	15.4	1
13/09/2012	13	13.3	1
18/09/2012	10.7	12.5	1
03/10/2012	10	10.1	1
23/10/2012	10.2		