

CARRICK-ON-SHANNON LANDFILL WASTE LICENCE 64-1

ANNUAL ENVIRONMENTAL REPORT

1. Reporting Period

1st January 2010 – 31st December 2010

2. Waste Activities Carried out at the Facility

Condition 5.1 of Waste Licence 64-1 states that no wastes shall be disposed of at the facility.

3. Quantity and Composition of Waste Received disposed of and recovered during the reporting period and each previous year.

No waste was received or disposed of at this facility as per condition 5.1 of Waste Licence 64-1.

4. Calculated Remaining Capacity of the Facility and the Year in which Final Capacity is expected to be reached.

This facility closed on the 24th May 2002 and the rehabilitation was substantially complete before the 31st December 2004.

5. Methods of Deposition of Waste

This facility closed on the 24th May 2002.

The construction and demolition waste used in the restoration of the activity was deposited using excavators, truck machines and dozers.

6. Summary Report on Emissions

Please see attached results for various parameters required to be monitored and analysed as per Waste Licence 64-1.

7. Resource and Energy Consumption Summary

There was no resource or energy consumption associated with waste activities at this site during the reporting period. The facility is closed.

8. Proposed Development of the Facility and Timescale of such Development

Leachate Management System

The leachate management control system involves a leachate collection system which discharges by gravity to a sump on the Eastern side of the landfill where it is pumped via a rising main to an existing foul sewer pumping station at "Oaklands" from where it is pumped to Carrick-on-Shannon wastewater treatment plant.

9. Report on restoration of the facility

Rehabilitation works at this facility are complete.

10. Volume of leachate produced and volume transported/discharged off-site

Not available

11. Report on development works undertaken during the reporting period, and a timescale for those proposed during the coming year.

The site is closed since 2002. Please see item 8 in relation to the leachate works.

12. Site survey showing existing levels of the facility at the end of the reporting period

Drawing NO. ENV/04/003 dated 20th September 2004 shows the outline of the mound and a typical cross section of the final shape of the covered landfill. This drawing was forwarded to the Agency on 25th October 2004.

13. Estimated annual and 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.

14. Estimated annual and cumulative quantity of indirect emissions to groundwater

No data available. Please see attached spreadsheet, which trends concentration results for various parameters required to be monitored and analysed as per Waste Licence 64-1.

15. Monthly water balance calculation and interpretation

No data available. Site closed since 2002.

16. Full title and written summary of any restoration and monitoring procedures developed by the licensee in the year which relates to the facility operation

There were no new procedures developed during the reporting period.

Tank, pipeline and bund testing and inspection report

The installation of the leachate collection system and manholes has been constructed in accordance with the landfill design manual.

All pipeline works were checked and approved by Leitrim County Council Engineering Staff and supervised at all times by the site executive civil technician. There are no tanks or bunds at the facility.

12. Reported Incidents and Complaints Summaries

Leitrim County Council did not receive any complaints in relation to Carrick landfill during this AER reporting period 2010 and there were no reportable incidents in this period.

13. Review of Nuisance Controls

There have been no complaints during the reporting period in relation to nuisance from birds, rodents etc. at this facility.

Reports on financial provision made under this licence, management and staffing structure of the facility, and a programme for public information

Leitrim County Council has provided all finances to carry out the works required in the license for the rehabilitation of Carrick landfill to date. Budgetary provision has been made to allow for the continual monitoring of the facility in accordance with the requirements of the license.

Other items Specified by the Agency

There are no other items specified by the Agency for inclusion in this Report



LEITRIM COUNTY COUNCIL

QUARTERLY MONITORING REPORT

Carrick on Shannon LANDFILL

Landfill Licence from the EPA – W-0064

1ST QUARTER 2010

For the Attention of:

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



Prepared by:


Jenny Pender

City Analysts Ltd

RESULTS:

Groundwater Quarterly Results – Carrick on Shannon

Sample Ref: MW9

Sampled Date: 18/01/10

Sampled Time: 11:30 am

Depth (m): 20.7m

Odour: No unusual odour

Weather/Visual Observation: Dry

City Analysts Ref: 75582

Analysis	Results	Units
Conductivity	749	µs/cm
pH	7.11	pH units
Ammonia	0.98	Mg/l
Temp	7	°C

Sampled Date: 15/02/10

Sampled Time: 11:30 am

Depth (m): 20.9m

Odour: No unusual odour

Weather/Visual Observation: Drizzle earlier that morning

City Analysts Ref: 77359

Analysis	Results	Units
Conductivity	631	µs/cm
pH	7.55	pH units
Ammonia	0.80	Mg/l
Temp	9.3	°C
Dissolved Oxygen	6.5	Mg/l O2

Sampled Date: 15/03/10

Sampled Time: 11:00

Depth (m): 20.6m

Odour: No unusual odour

Weather/Visual Observation: Sunny

City Analysts Ref: 78982

Analysis	Results	Units
Conductivity	867	µs/cm
pH	7.514	pH units
Ammonia	1.29	Mg/l
Temp	11.6	°C
Dissolved Oxygen	7.2	Mg/l O ₂
Chloride	33.11	Mg/l
Sodium	47.560	Mg/l
TOC	6.74	Mg/l
Potassium	5.6	Mg/l
Phenol	<5	µg/l
TON	<2	µg/l

Sample Ref: MW10

Sampled Date: 18/01/10

Sampled Time: 14:15

Depth (m): 5.8m

Odour: No unusual odour

Weather/Visual Observation: Dry

City Analysts Ref: 75583

Analysis	Results	Units
Conductivity	823	µs/cm
pH	7.47	pH units
Ammonia	0.62	Mg/l
Temp	7	°C

Sampled Date: 15/02/10

Sampled Time: 14:15

Depth (m): 5.7m

Odour: No unusual odour

Weather/Visual Observation: Sunny

City Analysts Ref: 77360

Analysis	Results	Units
Conductivity	699	µs/cm
pH	7.90	pH units
Ammonia	<0.1	Mg/l
Temp	10.7	°C
Dissolved Oxygen	4.4	Mg/lO2

Sampled Date: 15/03/10

Sampled Time: 12:20

Depth (m): 6.5m

Odour: No unusual odour

Weather/Visual Observation: Sunny

City Analysts Ref: 78983

Analysis	Results	Units
Conductivity	901	µs/cm
pH	7.876	pH units
Ammonia	0.33	Mg/l
Temp	11.4	°C
Dissolved Oxygen	7.2	Mg/l O2
Chloride	21.96	Mg/l
Sodium	67.760	Mg/l
TOC	5.27	Mg/l
Potassium	13.8	Mg/l
TON	16.78	Mg/l
Phenol	<5	µg/l

Sampled Date: 21/04/10

Sampled Time: 21/04/10

Depth (m): 5.8

Odour: No unusual odour

Weather/Visual Observation: Dry

City Analysts Ref: 80813

Analysis	Results	Units
Conductivity	696	µs/cm
pH	7.76	pH units
Ammonia	0.70	Mg/l
Temp	12.8	°C
Dissolved Oxygen	5.3	Mg/lO2

Leachate Quarterly Results – Carrick on Shannon

Sampled Time: 29/03/10

Time: 11:00

Depth (m): Tank Headspace: 1.5 m

Odour: No unusual odour

Weather/Visual Observation: Drizzle

City Analysts Ref: 79593

Analysis	Results	Units
Naphthalene	<0.01	µg/l
Acenaphthylene	0.01	µg/l
Acenaphthene	0.01	µg/l
Flourene	0.01	µg/l
Phenanthrene	0.01	µg/l
Anthracene	0.01	µg/l
Flouranthene	0.01	µg/l
Pyrene	0.01	µg/l
Benzo(a)anthracene	0.01	µg/l
Chrysene	0.01	µg/l
Benzo(b)flouranthene	0.01	µg/l
Benzo(k)flouranthene	0.01	µg/l
Benzo(a)pyrene	0.01	µg/l
Indeno(123cd)pyrene	0.01	µg/l
Dibenzo(ah)anthracene	0.01	µg/l
Benzo(ghi)perylene	0.01	µg/l
PAH, Total	0.01	µg/l

SW1b Quarterly Results – Carrick on Shannon

Sampled Time: 29/03/10

Time: 12:00

Depth (m): Tank Headspace: N/A

Odour: No unusual odour

Weather/Visual Observation: Sunny/Stagnant/very little flow

City Analysts Ref: 78984

Analysis	Results	Units
Conductivity	599	µs/cm
pH	7.173	pH units
Ammonia	0.32	Mg/l
Temp	8.1	°C
Dissolved Oxygen	3.5	Mg/l O2
Chloride	26.96	Mg/l
TSS	10	Mg/l
CBOD5	<4	Mg/l
COD	58	Mg/l

SW5 Quarterly Results – Carrick on Shannon

Sampled Time: 29/03/10

Time: 13:00

Depth (m): Tank Headspace: N/A

Odour: No unusual odour

Weather/Visual Observation: Sunny/Stagnant/very little flow

City Analysts Ref: 78985

Analysis	Results	Units
Conductivity	855	µs/cm
pH	7.514	pH units
Ammonia	4	Mg/l
Temp	6.8	°C
Dissolved Oxygen	7.7	Mg/l O2
Chloride	61.83	Mg/l
TSS	<2	Mg/l
CBOD5	<4	Mg/l
COD	39	Mg/l

SW6 Quarterly Results – Carrick on Shannon

Sampled Time: 29/03/10

Time: 12:40

Depth (m): Tank Headspace: N/A

Odour: No unusual odour

Weather/Visual Observation: Sunny/Stagnant/very little flow

Note: No sample taken, sampling point was dry

SW7 Quarterly Results – Carrick on Shannon

Sampled Time: 29/03/10

Time: 14:00

Depth (m): Tank Headspace: N/A

Odour: No unusual odour

Weather/Visual Observation: Sunny/Stagnant/very little flow

City Analysts Ref: 78986

Analysis	Results	Units
Conductivity	473	µs/cm
pH	7.589	pH units
Ammonia	0.15	Mg/l
Temp	6.7	°C
Dissolved Oxygen	7.7	Mg/l O2
Chloride	21.50	Mg/l
TSS	5	Mg/l
CBOD5	<4	Mg/l
COD	35	Mg/l

SW8 Quarterly Results – Carrick on Shannon

Sampled Time: 29/03/10

Time: 15:30

Depth (m): Tank Headspace: N/A

Odour: No unusual odour

Weather/Visual Observation: Sunny/Stagnant/very little flow

Note: No sample taken, sampling point was dry



LEITRIM COUNTY COUNCIL

QUARTERLY MONITORING REPORT

Carrick on Shannon LANDFILL

Landfill Licence from the EPA – W-0064

2ND QUARTER 2010

For the Attention of:

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

Prepared by:


Jenny Pender

City Analysts Ltd

RESULTS:

Groundwater Quarterly Results – Carrick on Shannon

Sample Ref: MW10

Sampled Date: 21/04/10

Sampled Time: 14:15

Depth (m): 5.8

Odour: No unusual odour

Weather/Visual Observation: Dry

City Analysts Ref: 80813

Analysis	Results	Units
Conductivity	696	µs/cm
pH	7.76	pH units
Ammonia	0.70	Mg/l
Temperature	12.8	°C
Dissolved O2	5.3	Mg/l O2

Sample Ref: MW09

Sampled Date: 26/04/10

Sampled Time: 11:30

Depth (m): 20.7

Odour: No unusual odour

Weather/Visual Observation: Dry

City Analysts Ref: 81094

Analysis	Results	Units
Conductivity	836	µs/cm
pH	7.63	pH units
Ammonia	0.41	Mg/l
Temp	15.9	°C
Dissolved O2	7.4	Mg/l O2

Sample Ref: GW9

Sampled Date:28/05/10

Sampled Time: 12:00

Depth (m): 20.4m

Odour: No unusual odour

Weather/Visual Observation: Dry

City Analysts Ref: 83037

Analysis	Results	Units
Conductivity	712	µs/cm
pH	7.64	pH units
Ammonia	0.38	Mg/l
Temp	14.1	°C
Dissolved O2	7.8	Mg/l O2

Sample Ref: GW10

Sampled Date: 28/05/10

Sampled Time: 14:00

Depth (m): 5.8m

Odour: No unusual odour

Weather/Visual Observation: Dry

City Analysts Ref: 83038

Analysis	Results	Units
Conductivity	413	µs/cm
pH	8.41	pH units
Ammonia	1.85	Mg/l
Temp	11.8	°C
Dissolved Oxygen	5.3	Mg/l O2

Sample Ref: MW09

Sampled Date: 08/06/10

Sampled Time: 13:00

Depth (m): 20.m

Odour: No unusual odour

Weather/Visual Observation: Dry

City Analysts Ref: 83589

Analysis	Results	Units
Coliform	26.96	MPN/100ml
Feecal coliform	0	Cfu/100ml
Ammonia	1.21	Mg/l
Conductivity	802	µs/cm
pH	7.23	pH units
TOC	7.54	Mg/l
Temperature	12.2	°C
Boron	140	µg/l
Cadmium	2.0	µg/l
Chloride	158	Mg/l
Chromium	8	µg/l
Copper	28	µg/l
Fluoride	0.8	Mg/l
Iron	9059	µg/l
Lead	20.70	µg/l
Alkalinity as HCO ₃	436	Mg/l
Magnesium	29.8	Mg/l
Manganese	2340	µg/l
Total Phosphorous	371.0	µg/l
Potassium	8.1	Mg/l
Sodium	47.160	Mg/l
Sulphate	27.2	Mg/l
TON as N	13.36	Mg/l
Zinc	59.4	µg/l
Calcium	158	Mg/l
Residue on Ignition	0.12	%

List 1 and 2 Organics - MW09

Analysis	Results	Units
Barium, Total as Ba	0.181	mg/l
Beryllium	<0.01	mg/l
Boron, Total	0	mg/l
Cobalt, Total as Co	0.011	mg/l
Molybdenum	<0.002	mg/l
Nickel	0.025	mg/l
Nitrate as N	0.80	mg/l
Silver	0.006	mg/l
Phosphorous, Total	203.00	ug/l
Tellurium	<0.110	ug/l
Thallium	<0.004	mg/l
Tin	<0.01	mg/l
Titanium	0.165	mg/l
Uranium	1.6	ug/l
Vanadium	0.013	mg/l
2,3,6 TBA	<0.05	ug/l
2,4 D	<0.05	ug/l
2,4 Db	<0.05	ug/l
2,4,5-T	<0.05	ug/l
Bentazone	<0.05	ug/l
Bromoxynil	<0.05	ug/l
Clopyralid	<0.05	ug/l
Dicamba	<0.05	ug/l
Dichlorprop	<0.05	ug/l
Fluroxypyr	<0.05	ug/l
loxynil	<0.05	ug/l
MCPA	<0.05	ug/l
MCPB	<0.05	ug/l
Mecoprop (Total)	<0.04	ug/l
Triclopyr	<0.05	ug/l
Benazolin	<0.06	ug/l
Fenoprop	<0.05	ug/l
124 TCB	<20.00	ng/l
Aldrin	<8.00	ng/l
Alpha HCH	<6.00	ng/l
Beta HCH	<6.00	ng/l
Dichlobenil	<4.00	ng/l
Dieldrin	<8.00	ng/l
EndosulfanA (alpha-Endosulfan)	<8.00	ng/l
EndosulfanB (beta-Endosulfan)	<8.00	ng/l
Endrin	<8.00	ng/l
Hexachlorobenzene	<4.00	ng/l
Hexachlorobutadiene	<14.00	ng/l

Gamma-HCH (Lindane)	<6.00	ng/l
Heptachlor Epoxide	<4.00	ng/l
Isodrin	<8.00	ng/l
op`-DDE	<4.00	ng/l
op`-DDT	<4.00	ng/l
op`-DDD (TDE)	<4.00	ng/l
pp`-DDE	<4.00	ng/l
pp`-DDD (TDE)	<4.00	ng/l
pp`-DDT	<4.00	ng/l
1,3,5 Trichlorobenzene	<20.00	ng/l
Tecnazene	<20.00	ng/l
Triallate	<20.00	ng/l
1,2,3 Trichlorobenzene	<20.00	ng/l
Trifluralin	<60.00	ng/l
alpha - Chlordane	<8.00	ng/l
gamma - Chlordane	<4.00	ng/l
Acenaphthene	<2.0	ug/l
Acenaphthylene	<2.0	ug/l
Anthracene	<2.0	ug/l
Benzo (a) anthracene	<2.0	ug/l
Benzo (a) pyrene	<2.0	ug/l
Benzo (b) flouranthene	<2.0	ug/l
Benzo (ghi) perylene	<2.0	ug/l
Benzo (k) fluoranthene	<2.0	ug/l
Chrysene	<2.0	ug/l
Dibenz(a,h) anthracene	<2.0	ug/l
Fluorene	<2.0	ug/l
Fluoranthene	<2.0	ug/l
Indeno(1,2,3-cd)pyrene	<2.0	ug/l
Naphthalene	<4.0	ug/l
Phenanthrene	<2.0	ug/l
Pyrene	<2.0	ug/l
2-Chlorophenol	<2.0	ug/l
4-Chloro-3-methylPhenol	<2.0	ug/l
2,4-Dichlorophenol	<2.0	ug/l
2,4-Dimethylphenol	<2.0	ug/l
2 Nitrophenol	<2.0	ug/l
Pentachlorophenol	<2.0	ug/l
2,4,5-Trichlorophenol	<2.0	ug/l
2,4,6-Trichlorophenol	<2.0	ug/l
4-Nitrophenol	<10.0	ug/l
Bis(2-chloroisopropyl)ether	<2.0	ug/l
Bis(2-chloroethyl)ether	<2.0	ug/l
4-Chlorophenyl-phenylether	<2.0	ug/l
4-Bromophenyl-phenylether	<2.0	ug/l
Bis(2-ethylhexyl)phthlate	<2.0	ug/l
Benzylbutylphthalate	<2.0	ug/l
Dimethylphthalate	<2.0	ug/l

Di-n-butylphthalate	<2.0	ug/l
Di-n-octylphthalate	<2.0	ug/l
1,2 Dichlorobenzene	<2.000	ug/l
1,2,4-Trichlorobenzene	<2.000	ug/l
1,3 Dichlorobenzene	<2.000	ug/l
1,4 Dichlorobenzene	<2.000	ug/l
2,4,6-Tribromophenol	85.000	% Recovery
2,4-Dinitrotoluene	<2.000	ug/l
2,6-Dinitrotoluene	<2.000	ug/l
2-Chloronaphthalene	<2.000	ug/l
2-Flourobiphenyl	97.000	% Recovery
2-Fluorophenol	90.100	% Recovery
2-Methylnaphthalene	<2.000	ug/l
2-Methylphenol	<2.000	ug/l
3&4-Methylphenol	<2.000	ug/l
bis(2-chloroethoxy)methane	<2.000	ug/l
Dibenzofuran	<2.000	ug/l
Diphenylamine	<2.000	ug/l
Hexachlorobenzene	<2.000	ug/l
Hexachlorobutadiene	<2.000	ug/l
Hexachloroethane	<2.000	ug/l
Isophorone	<2.000	ug/l
N-nitrosodi-n-propylamine	<2.000	ug/l
Nitrobenzene	<2.000	ug/l
Nitrobenzene-d5	95.400	% Recovery
Phenol	<2.000	ug/l
Phenol-d6	92.900	% Recovery
SVOC	<2.000	ug/l
Terphenyl-d14	108.200	% Recovery
Diethylphthalate	<2.000	ug/l
SVOC + TICS	<2.000	ug/l
TPH >C6 - C8	<10	ug/l
TPH >C8 - C10	<10	ug/l
TPH >C10 - C16	40	ug/l
TPH >C16 - C24	28	ug/l
TPH >C24 - C40	45	ug/l
TPH >C6 - C40	113	ug/l
Chlortoluron	<0.05	ug/l
Diuron	<0.05	ug/l
Isoproturon	<0.05	ug/l
Linuron	<0.05	ug/l
Monuron	<0.05	ug/l
Methabenzthiazuron	<0.05	ug/l
Monolinuron	<0.05	ug/l
Dichlorodifluoromethane	<1.0	ug/l
Chloromethane	<1.0	ug/l
Bromomethane	<1.0	ug/l
Vinyl Chloride	<1.0	ug/l

Chloroethane	<1.0	ug/l
Trichlorofluoromethane	<1.0	ug/l
1,2-Dichloroethane	<1.0	ug/l
Cis-1,2-dichloroethene	<1.0	ug/l
2,2-Dichloropropane	<1.0	ug/l
Chloroform	<1.0	ug/l
1,1-Dichloroethene	<1.0	ug/l
1,1,1-Trichloroethane	<1.0	ug/l
1,1-Dichloropropene	<1.0	ug/l
Benzene	<1.0	ug/l
Carbon Tetrachloride	<1.0	ug/l
1,2-Dichloropropane	<1.0	ug/l
Trichloroethene	<1.0	ug/l
Dibromomethane	<1.0	ug/l
Bromodichloromethane	<1.0	ug/l
Trans-1,3-dichloropropene	<1.0	ug/l
Cis-1,3-dichloropropene	<1.0	ug/l
Toluene	<1.0	ug/l
1,1,2-trichloroethane	<1.0	ug/l
Dibromochloromethane	<1.0	ug/l
1,2-dibromoethane	<1.0	ug/l
Tetrachloroethene	<1.0	ug/l
Chlorobenzene	<1.0	ug/l
1,1,1,2-tetrachloroethane	<1.0	ug/l
Ethyl Benzene	<1.0	ug/l
m,p-xylene	<1.0	ug/l
Bromoform	<1.0	ug/l
Stryrene	<1.0	ug/l
1,1,2,2-tetrachloroethane	<1.0	ug/l
o-xylene	<1.0	ug/l
1,2,3-trichloropropane	<1.0	ug/l
Isopropylbenzene	<1.0	ug/l
2-chlorotoluene	<1.0	ug/l
n-propylbenzene	<1.0	ug/l
4-chlorotoluene	<1.0	ug/l
1,3,5-trimethylbenzene	<1.0	ug/l
tert-butylbenzene	<1.0	ug/l
sec-butylbenzene	<1.0	ug/l
p-isopropyltoluene	<1.0	ug/l
1,2,4-trimethylbenzene	<1.0	ug/l
1,3-dichlorobenzene	<1.0	ug/l
1,4-dichlorobenzene	<1.0	ug/l
1,2-dichlorobenzene	<1.0	ug/l
n-butylbenzene	<1.0	ug/l
1,2-dibromo-3-chloropropane	<2.0	ug/l
Bromochloromethane	<1.0	ug/l
1,3-dichloropropane	<1.0	ug/l
Bromobenzene	<1.0	ug/l

1,2,3-trichlorobenzene	<1.0	ug/l
1,2,4-trichlorobenzene	<1.0	ug/l
Dichloromethane	<1.000	ug/l
Hexachlorobutadiene	<1.0	ug/l
MTBE	<1.0	ug/l
Naphthalene	<1.0	ug/l
Trans-1,2-dichloroethene	<1.0	ug/l
1,1-Dichloroethane	<1.0	ug/l
VOC + TICS	<1.000	ug/l
Mercury, Total as Hg	0.0004	mg/l
Nickel, Total	0.013	mg/l
Azinphos methyl	<0.008	ug/l
Carbophenothion	<0.006	ug/l
Chlorfenvinphos	<0.004	ug/l
Demeton-S-Methyl	See Comment	ug/l
Diazinon	<0.006	ug/l
Dichlorvos	<0.004	ug/l
Dimethoate	<0.040	ug/l
Fenithroton	<0.004	ug/l
Malathion	<0.008	ug/l
Mevinphos	<0.040	ug/l
Phorate	<0.008	ug/l
Phosalone	<0.008	ug/l
Pirimiphos methyl	<0.010	ug/l
Propetamphos	<0.006	ug/l
Triazophos	<0.004	ug/l
Azinphos ethyl	<0.008	ug/l
Chloropyriphos	<0.004	ug/l
Fenithion	<0.004	ug/l
Disulphoton	See Comment	ug/l
Parathion - ethyl	<0.01	ug/l
Parathion - methyl	<0.006	ug/l
Antimony	<0.004	mg/l
Arsenic, Total as As	0.008	mg/l
Selenium, Total as Se	0.0020	mg/l
Tributyltin	<0.020	ug/l

Note: Unable to analyse for Demeton-S-Methyl and Disulphoton due to AQC failure.

Sample Ref: MW10

Sampled Date: 08/06/10

Sampled Time: 15:30

Depth (m): 3.m

Odour: No unusual odour

Weather/Visual Observation: Drizzle

City Analysts Ref: 83590

Analysis	Results	Units
Coliform	5370	MPN/100ml
Feacal coliform	7	Cfu/100ml
Ammonia	0.70	Mg/l
Conductivity	751	µs/cm
pH	7.57	pH units
TOC	5.75	Mg/l
Temperature	11.3	°C
Boron	337	µg/l
Cadmium	0.7	µg/l
Chloride	19.73	Mg/l
Chromium	<5	µg/l
Copper	39	µg/l
Fluoride	1.1	Mg/l
Iron	12670	µg/l
Lead	6.36	µg/l
Alkalinity as HCO ₃	222	Mg/l
Magnesium	52.7	Mg/l
Manganese	1978	µg/l
Total Phosphorous	666	µg/l
Potassium	13.3	Mg/l
Sodium	55.670	Mg/l
Sulphate	<20	Mg/l
TON as N	<2	Mg/l
Zinc	67.8	µg/l
Calcium	221	Mg/l
Residue on Ignition	7.51	%

List 1 and 2 Organics - MW10

Analysis	Results	Units
Barium, Total as Ba	0.297	mg/l
Beryllium	<0.01	mg/l
Cobalt, Total as Co	<0.001	mg/l
Molybdenum	0.009	mg/l
Nickel	0.013	mg/l
Nitrate as N	<0.30	mg/l
Silver	<0.009	mg/l
Phosphorous, Total	29.00	ug/l
Tellurium	<0.110	ug/l
Thallium	<0.004	mg/l
Tin	0.01	mg/l
Titanium	0.015	mg/l
Uranium	1.1	ug/l
Vanadium	<0.002	mg/l
2,3,6 TBA	<0.05	ug/l
2,4 D	<0.05	ug/l
2,4 Db	<0.05	ug/l
2,4,5-T	<0.05	ug/l
Bentazone	<0.05	ug/l
Bromoxynil	<0.05	ug/l
Clopyralid	<0.05	ug/l
Dicamba	<0.05	ug/l
Dichlorprop	<0.05	ug/l
Fluroxypyr	<0.05	ug/l
loxynil	<0.05	ug/l
MCPA	<0.05	ug/l
MCPB	<0.05	ug/l
Mecoprop (Total)	<0.04	ug/l
Triclopyr	<0.05	ug/l
Benazolin	<0.06	ug/l
Fenoprop	<0.05	ug/l
124 TCB	<20.00	ng/l
Aldrin	<8.00	ng/l
Alpha HCH	<6.00	ng/l
Beta HCH	<6.00	ng/l
Dichlobenil	<4.00	ng/l
Dieldrin	<8.00	ng/l
EndosulfanA (alpha-Endosulfan)	<8.00	ng/l
EndosulfanB (beta-Endosulfan)	<8.00	ng/l

Endrin	<8.00	ng/l
Hexachlorobenzene	<4.00	ng/l
Hexachlorobutadiene	<14.00	ng/l
Gamma-HCH (Lindane)	<6.00	ng/l
Heptachlor Epoxide	<4.00	ng/l
Isodrin	<8.00	ng/l
op`-DDE	<4.00	ng/l
op`-DDT	<4.00	ng/l
op`-DDD (TDE)	<4.00	ng/l
pp`-DDE	<4.00	ng/l
pp`-DDD (TDE)	<4.00	ng/l
pp`-DDT	<4.00	ng/l
1,3,5 Trichlorobenzene	<20.00	ng/l
Tecnazene	<20.00	ng/l
Triallate	<20.00	ng/l
1,2,3 Trichlorobenzene	<20.00	ng/l
Trifluralin	<60.00	ng/l
alpha - Chlordane	<8.00	ng/l
gamma - Chlordane	<4.00	ng/l
Acenaphthene	<1.0	ug/l
Acenaphthylene	<1.0	ug/l
Anthracene	<1.0	ug/l
Benzo (a) anthracene	<1.0	ug/l
Benzo (a) pyrene	<1.0	ug/l
Benzo (b) flouranthene	<1.0	ug/l
Benzo (ghi) perylene	<1.0	ug/l
Benzo (k) fluoranthene	<1.0	ug/l
Chrysene	<1.0	ug/l
Dibenz(a,h) anthracene	<1.0	ug/l
Fluorene	<1.0	ug/l
Fluoranthene	<1.0	ug/l
Indeno(1,2,3-cd)pyrene	<1.0	ug/l
Naphthalene	<2.0	ug/l
Phenanthrene	<1.0	ug/l
Pyrene	<1.0	ug/l
2-Chlorophenol	<1.0	ug/l
4-Chloro-3-methylPhenol	<1.0	ug/l
2,4-Dichlorophenol	<1.0	ug/l
2,4-Dimethylphenol	<1.0	ug/l
2 Nitrophenol	<1.0	ug/l
Pentachlorophenol	<1.0	ug/l
2,4,5-Trichlorophenol	<1.0	ug/l
2,4,6-Trichlorophenol	<1.0	ug/l
4-Nitrophenol	<5.0	ug/l
Bis(2-chloroisopropyl)ether	<1.0	ug/l
Bis(2-chloroethyl)ether	<1.0	ug/l
4-Chlorophenyl-phenylether	<1.0	ug/l
4-Bromophenyl-phenylether	<1.0	ug/l

Bis(2-ethylhexyl)phthalate	<1.0	ug/l
Benzylbutylphthalate	<1.0	ug/l
Dimethylphthalate	<1.0	ug/l
Di-n-butylphthalate	<1.0	ug/l
Di-n-octylphthalate	<1.0	ug/l
1,2 Dichlorobenzene	<1.000	ug/l
1,2,4-Trichlorobenzene	<1.000	ug/l
1,3 Dichlorobenzene	<1.000	ug/l
1,4 Dichlorobenzene	<1.000	ug/l
2,4,6-Tribromophenol	76.500	% Recovery
2,4-Dinitrotoluene	<1.000	ug/l
2,6-Dinitrotoluene	<1.000	ug/l
2-Chloronaphthalene	<1.000	ug/l
2-Fluorobiphenyl	94.200	% Recovery
2-Fluorophenol	84.800	% Recovery
2-Methylnaphthalene	<1.000	ug/l
2-Methylphenol	<1.000	ug/l
3&4-Methylphenol	<1.000	ug/l
bis(2-chloroethoxy)methane	<1.000	ug/l
Dibenzofuran	<1.000	ug/l
Diphenylamine	<1.000	ug/l
Hexachlorobenzene	<1.000	ug/l
Hexachlorobutadiene	<1.000	ug/l
Hexachloroethane	<1.000	ug/l
Isophorone	<1.000	ug/l
N-nitrosodi-n-propylamine	<1.000	ug/l
Nitrobenzene	<1.000	ug/l
Nitrobenzene-d5	90.500	% Recovery
Phenol	<1.000	ug/l
Phenol-d6	87.000	% Recovery
SVOC	<1.000	ug/l
Terphenyl-d14	98.400	% Recovery
Diethylphthalate	<1.000	ug/l
SVOC + TICS	<1.000	ug/l
TPH >C6 - C8	<10	ug/l
TPH >C8 - C10	<10	ug/l
TPH >C10 - C16	<10	ug/l
TPH >C16 - C24	<10	ug/l
TPH >C24 - C40	22	ug/l
TPH >C6 - C40	22	ug/l
Chlortoluron	<0.05	ug/l
Diuron	<0.05	ug/l
Isoproturon	<0.05	ug/l
Linuron	<0.05	ug/l
Monuron	<0.05	ug/l
Methabenzthiazuron	<0.05	ug/l
Monolinuron	<0.05	ug/l
Dichlorodifluoromethane	<1.0	ug/l

Chloromethane	<1.0	ug/l
Bromomethane	<1.0	ug/l
Vinyl Chloride	<1.0	ug/l
Chloroethane	<1.0	ug/l
Trichlorofluoromethane	<1.0	ug/l
1,2-Dichloroethane	<1.0	ug/l
Cis-1,2-dichloroethene	<1.0	ug/l
2,2-Dichloropropane	<1.0	ug/l
Chloroform	<1.0	ug/l
1,1-Dichloroethene	<1.0	ug/l
1,1,1-Trichloroethane	<1.0	ug/l
1,1-Dichloropropene	<1.0	ug/l
Benzene	<1.0	ug/l
Carbon Tetrachloride	<1.0	ug/l
1,2-Dichloropropane	<1.0	ug/l
Trichloroethene	<1.0	ug/l
Dibromomethane	<1.0	ug/l
Bromodichloromethane	<1.0	ug/l
Trans-1,3-dichloropropene	<1.0	ug/l
Cis-1,3-dichloropropene	<1.0	ug/l
Toluene	<1.0	ug/l
1,1,2-trichloroethane	<1.0	ug/l
Dibromochloromethane	<1.0	ug/l
1,2-dibromoethane	<1.0	ug/l
Tetrachloroethene	<1.0	ug/l
Chlorobenzene	<1.0	ug/l
1,1,1,2-tetrachloroethane	<1.0	ug/l
Ethyl Benzene	<1.0	ug/l
m,p-xylene	<1.0	ug/l
Bromoform	<1.0	ug/l
Stryrene	<1.0	ug/l
1,1,2,2-tetrachloroethane	<1.0	ug/l
o-xylene	<1.0	ug/l
1,2,3-trichloropropane	<1.0	ug/l
Isopropylbenzene	<1.0	ug/l
2-chlorotoluene	<1.0	ug/l
n-propylbenzene	<1.0	ug/l
4-chlorotoluene	<1.0	ug/l
1,3,5-trimethylbenzene	<1.0	ug/l
tert-butylbenzene	<1.0	ug/l
sec-butylbenzene	<1.0	ug/l
p-isopropyltoluene	<1.0	ug/l
1,2,4-trimethylbenzene	<1.0	ug/l
1,3-dichlorobenzene	<1.0	ug/l
1,4-dichlorobenzene	<1.0	ug/l
1,2-dichlorobenzene	<1.0	ug/l
n-butylbenzene	<1.0	ug/l
1,2-dibromo-3-chloropropane	<2.0	ug/l

Bromochloromethane	<1.0	ug/l
1,3-dichloropropane	<1.0	ug/l
Bromobenzene	<1.0	ug/l
1,2,3-trichlorobenzene	<1.0	ug/l
1,2,4-trichlorobenzene	<1.0	ug/l
Dichloromethane	<1.000	ug/l
Hexachlorobutadiene	<1.0	ug/l
MTBE	<1.0	ug/l
Naphthalene	<1.0	ug/l
Trans-1,2-dichloroethene	<1.0	ug/l
1,1-Dichloroethane	<1.0	ug/l
VOC + TICS	<1.000	ug/l
Mercury, Total as Hg	<0.0001	mg/l
Nickel, Total	0.013	mg/l
Azinphos methyl	<0.008	ug/l
Carbophenothion	<0.006	ug/l
Chlorfenvinphos	<0.004	ug/l
Demeton-S-Methyl	See Comment	
Diazinon	<0.006	ug/l
Dichlorvos	<0.004	ug/l
Dimethoate	<0.040	ug/l
Fenithroton	<0.004	ug/l
Malathion	<0.008	ug/l
Mevinphos	<0.040	ug/l
Phorate	<0.008	ug/l
Phosalone	<0.008	ug/l
Pirimiphos methyl	<0.010	ug/l
Propetamphos	<0.006	ug/l
Triazophos	<0.004	ug/l
Azinphos ethyl	<0.008	ug/l
Chloropyriphos	<0.004	ug/l
Fenithion	<0.004	ug/l
Disulphoton	See Comment	
Parathion - ethyl	<0.01	ug/l
Parathion - methyl	<0.006	ug/l
Antimony	<0.004	mg/l
Arsenic, Total as As	<0.001	mg/l
Selenium, Total as Se	0.0010	mg/l
Tributyltin	<0.020	ug/l

Note: Unable to analyse for Demeton-S-Methyl and Disulphoton due to AQC failure.

Sample Ref: SW5

Sampled Date: 08/06/10

Sampled Time: 09:40

Depth (m): n/a

Odour: No unusual odour

Weather/Visual Observation: Drizzle

City Analysts Ref: 83591

Analysis	Results	Units
Ammonia as N	2.19	mg/l
CBOD5	2	mg/l
Chloride	41.34	mg/l
COD	39	mg/l
Conductivity	547	µs/cm at 20°C
Dissolved Oxygen	6.9	mg/l O2
pH	7.13	pH Units
Temperature	12.8	°C
TSS	34	mg/l
Alkalinity as HCO3	260	mg/l
Cadmium, Total	<0.5	ug/l
Calcium	83.1	mg/l
Chromium, Total	<5	ug/l
Copper, Total	<20	ug/l
Iron, Total	3769	ug/l
Lead, Total	<2.5	ug/l
Magnesium, Total	5.5	mg/l
Manganese, Total	708	ug/l
Phosphorus, total as P	308.0	ug/l
Potassium	<5	mg/l
Sodium	31.180	mg/l
Sulphate	38.6	mg/l
TON as N	<2	mg/l
Zinc, total	<20	ug/l
Mercury, Total as Hg	<0.0001	mg/l

Sample Ref: SW7

Sampled Date: 08/06/10

Sampled Time: 09:05

Depth (m): n/a

Odour: No unusual odour

Weather/Visual Observation: Dry wheatear/very little flow

City Analysts Ref: 83592

Analysis	Result	Units
Ammonia as N	0.67	mg/l
CBOD5	<2	mg/l
Chloride	33.83	mg/l
COD	35	mg/l
Conductivity	474	µs/cm at 20°C
Dissolved Oxygen	2.5	mg/l O2
pH	7.29	pH Units
Temperature	13.8	°C
TSS	8	mg/l
Alkalinity as HCO3	207	mg/l
Cadmium, Total	<0.5	ug/l
Calcium	76.5	mg/l
Chromium, Total	<5	ug/l
Copper, Total	<20	ug/l
Iron, Total	1603	ug/l
Lead, Total	<2.5	ug/l
Magnesium, Total	<5	mg/l
Manganese, Total	1504	ug/l
Phosphorus, total as P	326.0	ug/l
Potassium	17.9	mg/l
Sodium	20.950	mg/l
Sulphate	32.2	mg/l
TON as N	<2	mg/l
Zinc, total	<20	ug/l
Mercury, Total as Hg	<0.0001	mg/l
Cyanide, Total	<0.1	mg/l

Leachate Quarterly Results – Carrick on Shannon

Sampled Time: 08/06/10

Time: 12:10

Depth (m): 1.8m

Odour: No unusual odour

Weather/Visual Observation: Drizzle /Leachate was quite clear in colour

City Analysts Ref: 83593

Analysis	Results	Units
Coliforms	3880.0	MPN/100ml
Faecal Coliforms	2	cfu/100ml
Ammonia as N	<1	mg/l
Conductivity	645	µs/cm at 20°C
pH	7.52	pH Units
Temperature	13.7	°C
TON as N	<5	mg/l
Chloride	<50	mg/l
Iron, Total	0.3	mg/l
Potassium	<5	mg/l
Sodium	17.590	mg/l
Boron, Total	<100	ug/l
Cadmium	<0.2	mg/l
Calcium	147.0	mg/l
Chromium, Total	<0.2	mg/l
Copper, Total	<0.2	mg/l
Cyanide, Total	<0.1	mg/l
Fluoride	0.3	mg/l
Lead, Total	<0.2	mg/l
Magnesium, Total	9.2	mg/l
Manganese, Total	<0.2	mg/l
Mercury, Total as Hg	<0.0001	mg/l
Sulphate	48.2	mg/l
Phosphorous, Total	<1	mg/l
Zinc, total	<0.2	mg/l
COD	16	mg/l
CBOD5	<4	mg/l

Sample Ref: SW1B

Sampled Date: 08/06/10

Sampled Time: 10:20

Depth (m): n/a

Odour: No unusual odour

Weather/Visual Observation: Dry weather/No sample taken –sampling point was dry

Sample Ref: SW6

Sampled Date: 08/06/10

Sampled Time: 15:10

Depth (m): n/a

Odour: No unusual odour

Weather/Visual Observation: Dry weather /No sample taken –sampling point was dry

Sample Ref: SW8

Sampled Date: 08/06/10

Sampled Time: 10:40

Depth (m): n/a

Odour: No unusual odour

Weather/Visual Observation: Dry weather/No sample taken –sampling point was dry



LEITRIM COUNTY COUNCIL

QUARTERLY MONITORING REPORT

MohillLANDFILL

Landfill Licence from the EPA – W-0065

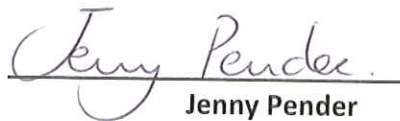
3rd QUARTER 2010



For the Attention of:

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

Prepared by:


Jenny Pender

City Analysts Ltd

RESULTS:

MW 5S Results – Mohill

Sampled Time: 30/09/10

Sampled Time: 9:00am

City Analysts Ref: 90814

Analysis	Results	Units
Conductivity	583	µs/cm
pH	7.1	pH units
Ammonia	<1	Mg/l
Temperature	12.9	°C
TOC	1.55	Mg/l

MW 5D Results – Mohill

Sampled Time: 30/09/10

Sampled Time: 9:00am

City Analysts Ref: 90815

Analysis	Results	Units
Conductivity	570	µs/cm
pH	7.8	pH units
Ammonia	<1	Mg/l
Temperature	11.6	°C
TOC	1.06	Mg/l

MW 6S Results – Mohill

Sampled Time: 30/09/10

Sampled Time: 9:15am

City Analysts Ref: 90816

Analysis	Results	Units
Conductivity	714	µs/cm
pH	7.8	pH units
Ammonia	<1	Mg/l
Temperature	11.3	°C
TOC	1.76	Mg/l

MW 6D Results – Mohill

Sampled Time: 30/09/10

Sampled Time: 9:15am

City Analysts Ref: 90817

Analysis	Results	Units
Conductivity	714	µs/cm
pH	7.2	pH units
Ammonia	<1	Mg/l
Temperature	12.6	°C
TOC	1.00	Mg/l

MW 8S Results – Mohill

Sampled Time: 30/09/10

Sampled Time: 9:30am

City Analysts Ref: 90818

Analysis	Results	Units
Conductivity	2000	µs/cm
pH	7.2	pH units
Ammonia	<1	Mg/l
Temperature	12.7	°C
TOC	3.21	Mg/l

MW 8D Results – Mohill

Sampled Time: 30/09/10

Sampled Time: 9:30am

City Analysts Ref: 90819

Analysis	Results	Units
Conductivity	897	µs/cm
pH	7.2	pH units
Ammonia	<1	Mg/l
Temperature	11.3	°C
TOC	0.96	Mg/l

SW4Results – Mohill

Sampled Time: 30/09/10

Sampled Time: 9:30am

City Analysts Ref: 90820

Analysis	Results	Units
Ammonia as N	<1	mg/l
Chloride	18	mg/l
Conductivity	326	µs/cm at 20°C
Dissolved Oxygen	7.8	mg/l O ₂
pH	7.4	pH Units
Temperature	11.2	°C
CBOD5	<4	mg/l
COD	74	mg/l
TSS	<2	mg/l

SW6 Results – Mohill

Sampled Time: 30/09/10

Sampled Time: 9:35am

City Analysts Ref: 90821

Analysis	Results	Units
Ammonia as N	<1	mg/l
Chloride	20	mg/l
Conductivity	359	µs/cm at 20°C
Dissolved Oxygen	7.9	mg/l O ₂
pH	8.0	pH Units
Temperature	11.2	°C
CBOD5	<4	mg/l
COD	69	mg/l
TSS	8	mg/l

SWL8 Results – Mohill

Sampled Date: 30/09/10

Sampled Time: 9:40am

City Analysts Ref: 90822

Analysis	Results	Units
Ammonia as N	11.36	mg/l
Chloride	456	mg/l
Conductivity	2250	µs/cm at 20°C
pH	7.2	pH Units
Temperature	12.3	°C
CBOD5	<4	mg/l
COD	35	mg/l



LEITRIM COUNTY COUNCIL

QUARTERLY MONITORING REPORT

MohillLANDFILL

Landfill Licence from the EPA – W-0065

4th QUARTER 2010

For the Attention of:

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

Prepared by:


Jenny Pender

City Analysts Ltd

RESULTS:

MW 5S Results – Mohill

Sampled Time: 14/12/10

Sampled Time: 12:10

City Analysts Ref: 95147

Analysis	Results	Units
Conductivity	665	µs/cm
Ammonia	<0.1	Mg/l
TOC	1.40	Mg/l

MW 5D Results – Mohill

Sampled Time: 14/12/10

Sampled Time: 12:25

City Analysts Ref: 95148

Analysis	Results	Units
Conductivity	981	µs/cm
Ammonia	0.55	Mg/l
TOC	2.30	Mg/l

MW 6S Results – Mohill

Sampled Time: 14/12/10

Sampled Time: 12:30

City Analysts Ref: 95149

Analysis	Results	Units
Conductivity	849	µs/cm
Ammonia	<0.1	Mg/l
TOC	2.90	Mg/l

MW 6D Results – Mohill

Sampled Time: 14/12/10

Sampled Time: 12:40

City Analysts Ref: 95150

Analysis	Results	Units
Conductivity	1068	µs/cm
Ammonia	<0.1	Mg/l
TOC	2.10	Mg/l

MW 8S Results – Mohill

Sampled Time: 14/12/10

Sampled Time: 12:45

City Analysts Ref: 95151

Analysis	Results	Units
Conductivity	664	µs/cm
Ammonia	<0.1	Mg/l
TOC	1.40	Mg/l

MW 8D Results – Mohill

Sampled Time: 14/12/10

Sampled Time: 12:50

City Analysts Ref: 95152

Analysis	Results	Units
Conductivity	998	µs/cm
Ammonia	0.65	Mg/l
TOC	2.50	Mg/l

SW4Results – Mohill

Sampled Time: 14/12/10

Sampled Time: 13:10

City Analysts Ref: 95153

Analysis	Results	Units
Ammonia as N	0.11	mg/l
Chloride	25.23	mg/l
Conductivity	445	µs/cm at 20°C
Dissolved Oxygen	7.4	mg/l O ₂
CBOD5	2	mg/l
COD	49	mg/l
TSS	3	mg/l

SW6 Results – Mohill

Sampled Time: 14/12/10

Sampled Time: 13:20

City Analysts Ref: 95154

Analysis	Results	Units
Ammonia as N	0.11	mg/l
Chloride	25.56	mg/l
Conductivity	445	µs/cm at 20°C
Dissolved Oxygen	7.6	mg/l O ₂
CBOD5	<2	mg/l
COD	46	mg/l
TSS	3	mg/l