Rilta Environmental Ltd.

Annual Environmental Report (AER), Site 402, Greenogue Business Park.

April 2011

Revision: Final

TOBIN CONSULTING ENGINEERS

TOBIN

Patrick J. Tobin & Co. Ltd.

REPORT

PROJECT:

Rilta Environmental Ltd.
Site 402 – Environmental Monitoring

CLIENT:

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Greenogue Business Park,
Rathcoole,
County Dublin

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TOBIN Consulting Engineers							

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1 INTRODUCTION

The Environmental Protection Agency (EPA) issued Rilta Environmental Ltd. (RILTA) with Waste Licence Reg. No. W0192-03 for its site at Block 402, Greenogue Business Park, Rathcoole, County Dublin on 22nd July 2010. The facility is located within an industrial estate approximately 2 km east of Newcastle village and approximately 2.5km west of Rathcoole village. The facility has been in operation since 2004. RILTA retained Tobin Consulting Engineers (TOBIN) to prepare the Annual Environmental Report (AER) for the reporting period January 2010 to December 2010. This report has been prepared in accordance with Condition 11.10 and Schedule E of the waste licence.

This report addresses Condition 11.10 of the waste licence for the facility.

Condition 11.10 states:

'The licensee shall submit to the Agency by the 31st March of each year an AER covering the previous calendar year. This report which shall be to the satisfaction of the Agency shall include as a minimum the information specified in Schedule E: Annual Environmental Report, of this licence and shall be prepared in accordance with any relevant guidelines issued by the Agency'.

1.1 WASTE ACTIVITIES AND RECORDS

The RILTA facility is a fully engineered and contained industrial site. It is licensed to accept 111,000 tonnes of waste material per annum, as set out in Schedule A of the waste licence and summarised in Table 2-1 below.

Table 1-1 Waste Acceptance Tonnages as per Waste Licence 192–03

Waste Type		Maximum (Tonnes Per Annum) Note 3
Non-Hazardous Wastes Note 1,2	Commercial Waste	500
	Construction & Demolition Waste	500
	Industrial Sludges	1,000
	Other Industrial Waste	3,000
Non Hazardous Waste Total		5000
Hazardous Wastes		
EWC Code	Description *	
*13 05 03**	Interceptor sludges	10,000
*16 07 08**	Waste containing oil	2,000
*16 10 01**	Aqueous liquid waste containing dangerous substances	1,500
*17 05 03**	Soil and stones containing dangerous substances	60,000
*17 06 01** & *17 06 05**	Insulation materials and construction materials containing asbestos.	
Other Note 4		24,400
Hazardous Waste Total		106,000
Total		**111,000**

Note 1: Any proposals to accept other compatible non-hazardous waste types must be agreed in advance with the Agency.

Note 2: Excluding putrescible waste.

Note 3: The limitations on individual hazardous and non-hazardous waste types may be varied with the agreement of the agency subject to the individual total limits for hazardous and non-hazardous waste staying the same.

Note 4: Hazardous waste types as detailed in Attachment H.1 of the review application for this licence Reg No: 192-03 or may be otherwise agreed in advance with the agency.

Waste activities at the facility are restricted to those outlined in *Part 1 – Schedule of Activities Licensed.*

Licensed Waste Disposal Activities, in accordance with the 3rd Schedule of the Waste Management Act, 1996 to 2010:

Class 7: Physico-chemical treatment not referred to elsewhere in this Schedule (including evaporation, drying and calcination), which results in final compounds or mixtures, which are disposed of by means of any activity referred to in paragraphs 1 to 10 of this Schedule (including evaporation, drying and calcination);

Class 11: Blending or mixture prior to submission to any activity referred to in a preceding paragraph of this Schedule;

Class 12: Repackaging prior to submission to any activity referred to in a preceding paragraph of this Schedule; and

Class 13: Storage prior to submission to any activity referred to in a preceding paragraph of this Schedule, other than temporary storage, pending collection, on the premises where the waste concerned is produced.

Licensed Waste Disposal Activities, 4th Schedule of the Waste Management Acts 1996 to 2010.

Class 2: Recycling or reclamation of organic substances, which are not used as solvents (including composting and other biological transformation processes);

Class 3: Recycling or reclamation of metals and metal compounds;

Class 4: Recycling or reclamation of other inorganic materials;

Class 6: Recovery of components used for pollution abatement;

Class 8: Oil re-refining or other re-uses of oil; and

Class 13: Storage of waste intended for submission to any activity referred to in a preceding paragraph of this Schedule, other than temporary storage, pending collection, on the premises where such waste is produced.

2 EMISSIONS FROM THE FACILITY

Schedule C of Waste Licence 192-03 requires RILTA to carry out noise, air, dust, surface water, groundwater and wastewater emissions monitoring. The locations of these monitoring points are shown on Drawing 1250/01/1002, as submitted to the Environmental Protection Agency on the 28th of February 2005 and attached in Appendix A.

Monthly, quarterly and annual monitoring was carried out during the period 1st January 2010 to 31st December 2010. All monitoring results and reports have been submitted to the agency as required by Condition 11 and Schedule C of the waste licence. The following is a summary of the results and findings from the 2010 monitoring period.

2.1 GROUNDWATER EMISSIONS

Groundwater monitoring was conducted on a quarterly basis at 3 no. groundwater monitoring locations as set out Drawing 1250/01/1002 *(see Appendix A)*. Results for all 4 quarterly monitoring events were furnished to the agency as part of the environmental monitoring reports sent in April, July and October 2010 and January 2011.

2.1.1 Groundwater Monitoring (BH1)

The following is a summary of the values recorded for each parameter at BH1.

pH:

The pH of groundwater analysed from BH1 ranged from 7.6 to 8.37 during 2010. Results from all monitoring events had values within the normal pH range (6.5 ≥ pH ≤ 9.5) set out in the EPA Interim Guideline Values[1] (IGV) and reflects the natural background condition of the groundwater.

Conductivity:

The conductivity concentrations in BH1 ranged from 549µS/cm to 744µS/cm during 2010. Results from all monitoring events were within the normal electrical conductivity range and were considerably lower than the IGV limit (1000 µS/cm), reflecting normal background groundwater concentrations.

Heavy metals:

Concentrations of arsenic and mercury in BH1 were below the laboratory limit of detection (LOD) (1µg/l and 10µg/l respectively), during all monitoring events in 2010. Copper, chromium, cadmium, boron, nickel, iron, lead and zinc were all analysed as part of the annual groundwater suite of parameters for

[1] From the EPA Interim Report – 'TOWARDS SETTING GUIDELINE VALUES FOR THE PROTECTION OF GROUNDWATER IN IRELAND'

BH1 during Q3 2010. All concentrations of heavy metals at BH1 during 2010 were below the required limit levels set out in the EPA IGVs.

Inorganic:

The following inorganic parameters were analysed at BH1 during Q3 2010, as part of the annual groundwater suite: total alkalinity, cyanide, chloride, sulphate, potassium, sodium, calcium and magnesium. These parameters all had results within the limit values specified in the EPA IGVs, with the exception of chloride (35.7mg/l) which exceeded the EPA IGV (30mg/l).

Pesticide:

No concentrations of pesticides were detected during any monitoring event at BH1 during 2010.

List 1/11 Organic Substances, Mineral Oil, BTEX:

Concentrations of list 1/11 organic substances (VOCs & SVOCs), mineral oil and BTEX were below the laboratory LOD[2] during all groundwater monitoring events at BH1 during 2010.

2.1.2 Groundwater monitoring point 2 (BH2)

The following is a summary of the values recorded for each parameter at BH2.

pH:

The pH of groundwater analysed from BH2 ranged from 7.40 to 8.44 during 2010. Results from all monitoring events had values within the normal pH range set out in the IGVs ($6.5 \geq pH \leq 9.5$) and reflects the natural background condition of the groundwater.

Conductivity:

The conductivity concentrations in BH3 ranged from 557µS/cm to 756µS/cm during 2010. Results from all monitoring events were within the normal electrical conductivity range and were considerably lower than the IGV limit (1000 µS/cm), reflecting normal background groundwater concentrations.

Heavy metals:

Concentrations of arsenic at BH2 ranged from 2.67 – 7.55µg/l during 2010. This concentration is within the IGV limit of 10 µg/l. Similar to 2009, all groundwater sampled at BH2 had concentrations of mercury below the laboratory LOD (<0.01 µg/l).

Copper, chromium, cadmium, boron, nickel, iron, lead and zinc were all analysed as part of the annual groundwater suite of parameters for BH2, during Q3 2010. All concentrations of metals tested at BH2 during 2010 were below the required limit levels set out in the EPA IGVs.

[2] TPG CWG - Limit of Detection

Inorganic:

The following inorganic parameters were analysed at BH2 during Q3 2010, as part of the annual groundwater suite: total alkalinity, cyanide, chloride, sulphate, potassium, sodium, calcium and magnesium. These parameters all had results within the limit values specified in the EPA IGVs, with the exception of chloride (122mg/l) which exceeded the EPA IGV (30mg/l).

Pesticide:

No concentrations of pesticides were detected during any monitoring event at BH2 during 2010.

List 1/11 Organic Substances, Mineral Oil, BTEX:

All groundwater sampled at BH2 from January to December 2010 had concentrations of mineral oil and BTEX below the laboratory LOD[3], with the exception of mineral oil during Q2 (154 µg/l) and Q3 (173 µg/l).

List1/11 substances were detected at BH2 during all monitoring events in 2010. Volatile organic compounds (VOCs) were present in the form of methyl tertiary butyl ether (MTBE) during 2010 - 24µg/l during Q1, 11.5µg/l during Q2, 15.2µg/l during Q3 and 40.5µg/l during Q4. Concentrations of semi volatile organic compounds (SVOC) were not detected (were all below their respective laboratory LODs) at BH2 during 2010.

Although VOCs were detected in BH2 during 2010, all were below their respective IGV limit values.

2.1.3 Groundwater monitoring point 3 (BH3)

The following is a summary of the values recorded for each parameter at BH3.

pH:

The pH of the analysed groundwater from BH3 ranged from 8.8 to 10.2 during 2010. The reported pH values for BH3 were outside the pH range (6.5 ≥ pH ≤ 9.5) set out in the EPA IGV during Q1 (10.2), Q3 (9.81) and Q4 (9.96) 2010. As discussed in the previous AER 2009, pH levels at BH3 are assumed to be elevated due to the use of alkaline cements and backfill construction material, which was used during the installation of underground tanks at the facility. While still elevated the pH measured at BH3 does appear to be receding relative to historic ph results.

Conductivity:

The conductivity within BH3 ranged from 528µS/cm to 742µS/cm during Q2 2010. Concentrations recorded at BH3 were below required limits set out in the EPA IGVs (1000 µS/cm) during all monitoring events in 2010. It is suggested that the higher conductivity concentration to the north of the site may be attributable to backfill material from the construction of the underground tanks, where significant alkaline

[3] TPG CWG - Limit of Detection

cements and construction fill were placed within the environs of the facility prior to the installation of BH3.

Heavy metals:

Concentrations of arsenic at BH3 ranged from 8.44 – 14.4µg/l during 2010. Arsenic results at BH3 for Q2 (11.9µg/l), Q3 (14.4µg/l) and Q4 (11.4µg/l) slightly exceeded the EPA IGV (10 µg/l). Similar to 2009, all groundwater sampled at BH3 had concentrations of mercury below the laboratory LOD (<0.01 µg/l).

Copper, chromium, cadmium, boron, nickel, iron, lead and zinc were all analysed at BH3 during Q3 2010, as part of the annual groundwater testing suite of parameters. All concentrations of metals tested at BH2 during 2010 were below the required limit levels set out in the EPA IGVs.

Inorganic:

The following inorganic parameters were analysed at BH3 during Q3 2010 as part of the annual groundwater suite: total alkalinity, cyanide, chloride, sulphate, potassium, sodium, calcium and magnesium. These parameters all had results within the limit values specified in the EPA IGVs, with the exception of chloride (139mg/l) and potassium (7.85mg/l). The chloride (139mg/l) concentration at BH3 exceeded the EPA IGV (30mg/l) and the potassium (7.85mg/l) concentration at BH3 slightly exceeded the IGV (5mg/l).

Pesticide:

No Pesticide concentrations were detected during any monitoring event at BH3 during 2010.

List 1/11 Organic Substances, Mineral Oil, BTEX:

Mineral oil concentrations were below the laboratory limit of detection during all monitoring events at BH3 in 2010, with the exception of Q4 (109µg/l). The Q4 mineral oil result at BH3 (109 µg/l) exceeded the EPA IGV (10 µg/l). BTEX[4] concentrations at BH3 were found to be <10µg/l during all monitoring events in 2010.

List1/11 substances were detected at BH3 during all 4 monitoring events in 2010. VOCs in the form of MTBE were detected at BH3 during Q1 (116µg/l), Q2 (161µg/l), Q3 (93.4µg/l) and Q4 (43.6µg/l) 2010. Additional VOCs detected included dichloromethane (4.77µg/l), benzene (1.52µg/l), toluene (6.41µg/l) during Q1, benzene (1.31µg/l) and toluene (4.89µg/l) during Q2, toluene (3.03µg/l) during Q3, and dichloromethane (8.27µg/l) and toluene (3.49µg/l) during Q4 2010.

Concentrations of semi volatile organic compounds were not detected (were all below their respective laboratory LODs) at BH3 during 2010, with the exception of 2,4-dimethylphenol (2.4µg/l) and 2-methylphenol (3.59µg/l) during Q1, 4-methylphenol (13.8µg/l), 2-methylphenol (3.67µg/l) and phenol (17µg/l) during Q2, and 4-methylphenol (6.91µg/l), 2-methylphenol (2.12µg/l) and phenol (8.27µg/l) during Q3.

[4] TPG CWG - Limit of detection

Although VOCs and SVOCs were detected at BH3 during 2010 all parameters were below their respective IGVs with the exception of benzene[5] during Q1 and Q2, which exceeded the EPA IGV (1µg/l).

2.2 SURFACE WATER EMISSIONS

Groundwater monitoring was conducted on a quarterly basis at 3 no. surface water monitoring locations, as set out Drawing 1250/01/1002 *(see Appendix A).* Results for all 4 quarterly monitoring events were furnished to the agency as part of the environmental monitoring reports sent in April, July and October 2010 and January 2011.

2.2.1 Surface Water Monitoring

Results from all surface water monitoring locations indicate that surface water quality at the RILTA facility is within normal chemical range and is consistent with natural uncontaminated surface waters. The following is a summary of parameter concentrations at all surface water monitoring locations.

pH:

The values at all surface water monitoring locations are within the normal range (6.5 ≥ pH ≤ 9.5) set out in SI No. 278 of 2007[6] and reflect the natural conditions of this surface water feature.

Table 2-1 Surface Water pH Results - 2010

pH	Q1	Q2	Q3	Q4
SW1	8.37	8.17	8.32	8.54
SW2	8.4	8.2	8.28	8.63
SW3	8.29	8.12	8.17	7.85

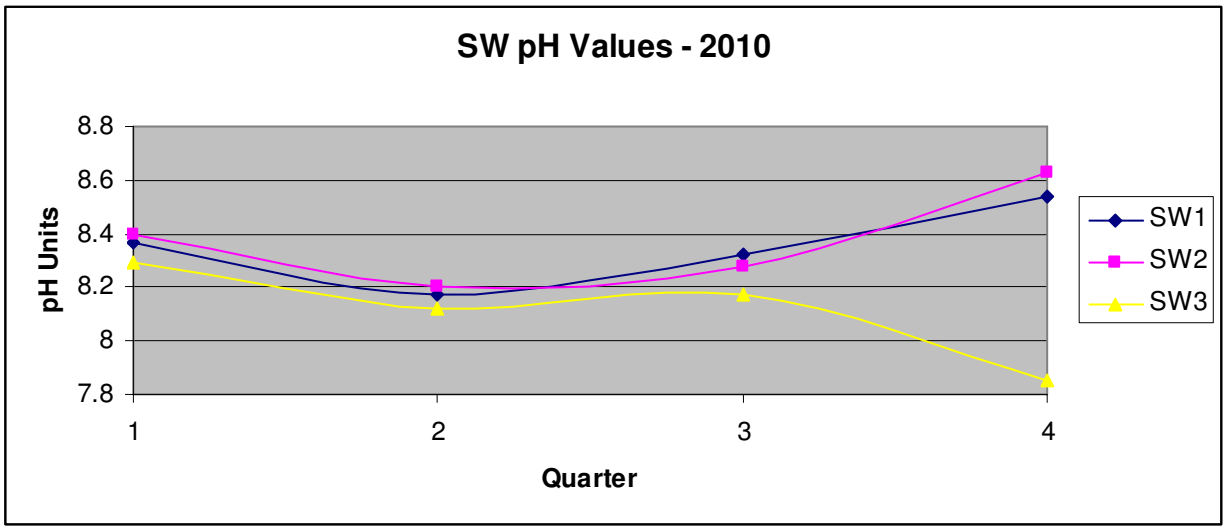

Figure 2-1 Surface Water pH Results - 2010

[5] Mass spectrometry (MS) method used – MS LOD is lower than TPG CWG method.
[6] SI No 278 of 2007 – European Communities (Drinking Water) (No. 2) Regulations

Chemical Oxygen Demand:

The chemical oxygen demand for at all monitoring locations was consistent with historic monitoring results from the site. COD results at SW1 and SW2 were below 10mg/l during all monitoring events in 2010, concentrations were slightly elevated in SW3 with a peak concentration of 59.7mg/l during Q3. There is no limit for surface water COD set out in waste licence 192-03 or SI No. 278 of 2007. COD results from 2010 are summarised in Table 2-2 below.

Table 2-2 Surface Water COD Results - 2010

COD	Q1	Q2	Q3	Q4
SW1	7.47	7	7.88	7.33
SW2	8.57	8.88	7.05	8.1
SW3	44.5	43.8	59.7	25.6

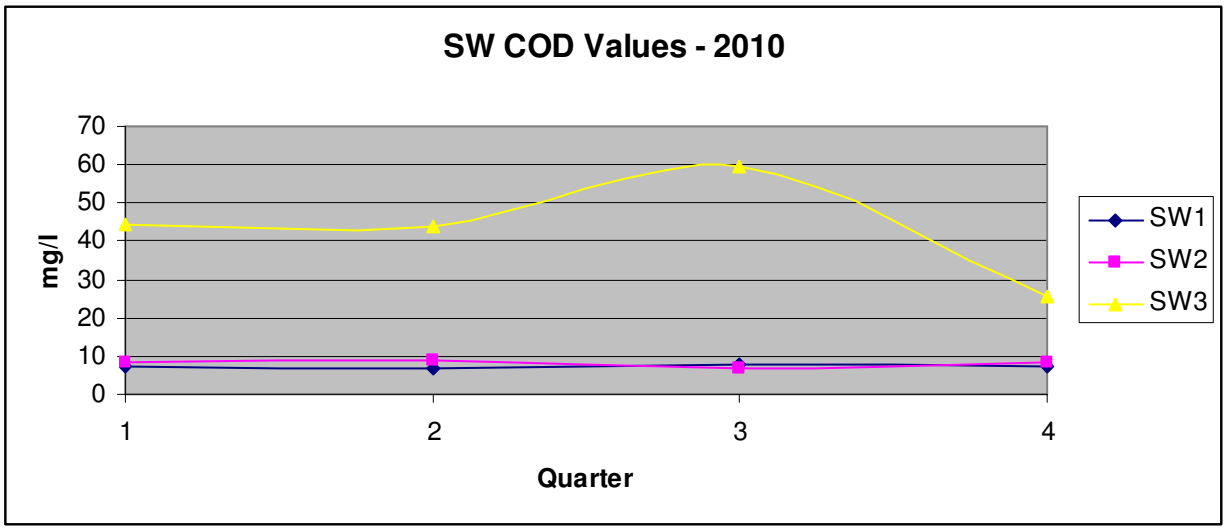

Figure 2-2 Surface Water COD Results - 2010

Suspended Solids:

The concentrations of suspended solids at all surface water monitoring locations were below the limit levels set out in waste licence 192–03 (35mg/l) for all monitoring events during 2010.

Table 2-3 Surface Water Total Suspended Solids Results - 2010

TSS	Q1	Q2	Q3	Q4
SW1	6	2	2.5	8.5
SW2	6	2	2.5	9
SW3	6	5	9.5	9.5

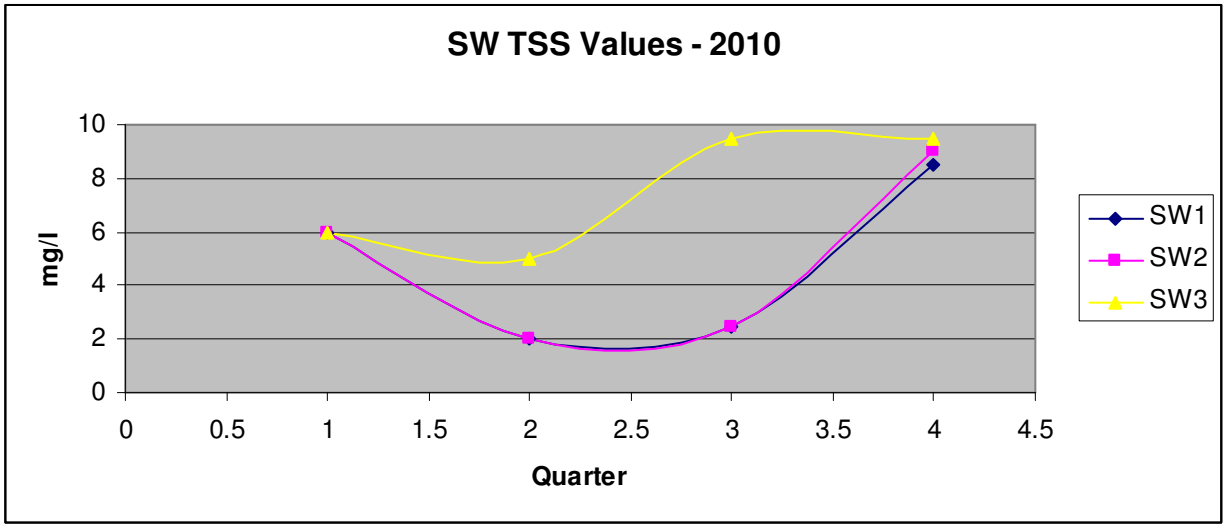

Figure 2-3 Surface Water Total Suspended Solids Results - 2010

Mineral Oils:

Concentrations of Mineral Oil were below the licence limit (5,000ug/l) at all monitoring locations during 2010. Although SW3 had concentrations above the laboratory LOD (10ug/l) it remained significantly below the limit value set out in W192-03 (5000ug/l).

Table 2-4 Surface Water Mineral Oil Results - 2010

Mineral Oil	Q1	Q2	Q3	Q4
SW1	10	10	10	10
SW2	10	10	10	10
SW3	93.9	224	690	2580

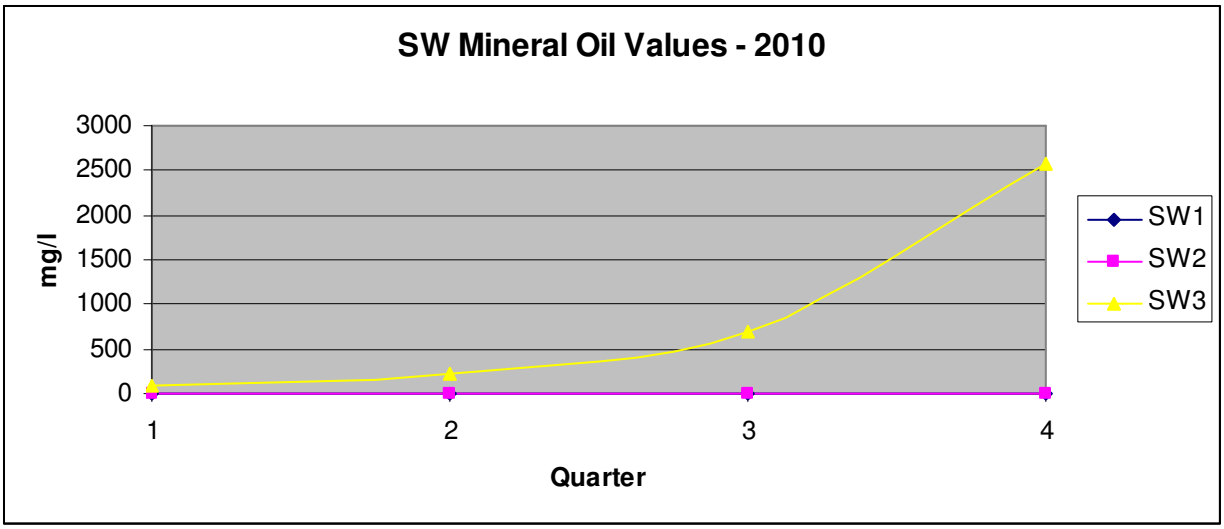

Figure 2-4 Surface Water Mineral Oil Results – 2010

2.3 WASTEWATER EMISSIONS

Waste water monitoring was conducted on a monthly basis at 1 no. monitoring location, as per Schedule C of the waste licence 192-03 and illustrated on Drawing 1250/01/1002 *(see Appendix A).* Results for all 12 no. monitoring events were furnished to the agency as part of the quarterly environmental monitoring reports sent to the Agency in April, July and October 2010, and January 2011.

2.3.1 Wastewater Monitoring

The concentration of pH was within the required licence limit (6.5 ≥ pH ≤ 10) during all monitoring events in 2010. A summary of the reported monthly pH concentrations is contained in Table 3-1 and Figure 3-1 below.

The concentration of mineral oil at WW1 was below the required licence limit during all monitoring events in 2010. A summary of the reported monthly mineral oil concentrations is contained in Table 3-1 and illustrated in Figure 3-2 below.

Concentrations of zinc, copper, chromium, lead, nickel, arsenic, benzene, toluene, ethyl-benzene and total xylene were all below respective licence limits during 2010. The reported monthly WW1 concentrations for these parameters are summarised in Table 3-1 and illustrated in Figure 3-2 below.

Concentrations of BOD, COD, sulphate, surfactants, suspended solids and ammonical nitrogen[7] were all below respective licence limits during 2010. A summary of the reported monthly WW1 concentrations for these parameters is contained in Table 3-1 and illustrated in Figure 3-4 below.

The total wastewater volume emitted during 2010 was 37495m³ (37495000 litres).

[7] Ammonical nitrogen was added to the WW1 monthly parameters in 2010, as part of licence 192-03.

Table 2-5 Wastewater Results - 2010

Parameter	Units	2010											
		Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec
pH	*pH units*	8.39	9.02	7.53	7.85	8.35	7.87	8.04	7.31	8.18	6.13	7.58	7.66
BOD	*mg/l*	32.3	37.4	663	50.2	27.9	77.5	303	47.6	51.6	83.3	226	201
COD	*mg/l*	474	626	1470	572	543	270	651	350	223	240	495	583
Sulphate SO_4	*mg/l*	19.8	24.9	97	41.9	28.5	49.1	48.3	147	151	36.8	35.8	76.2
Surfactants	*mg/l*	0.304	0.736	3.31	0.746	0.492	0.719	0.921	0.67	0.442	0.113	0.189	0.53
Zinc Zn	*µg/l*	131	291	2310	129	258	260	60.8	525	528	365	104	1050
Copper Cu	*µg/l*	269	328	118	14.3	137	131	5.04	8.82	13.1	1.3	38.1	18.4
Chromium	*µg/l*	91.6	84.3	13.8	24	44.9	29.2	6.09	<3	<3	<3	4.99	<3
Lead	*µg/l*	2.09	2.59	3.39	0.209	2.12	3.92	0.419	0.349	0.545	0.47	1.27	0.078
Nickel	*µg/l*	38.2	93.4	331	130	82.2	109	67.4	56.7	54	91.4	21.8	201
Arsenic	*µg/l*	52.4	22.6	<1.9	12.2	15.3	4	3.45	3.22	2.4	<2	<2	<2
Benzene	*µg/l*	<7	<7	78.1	<7	<7	<7	15	11.8	6.67	<1.3	1.61	9.21
Toluene	*µg/l*	<4	28	353	38.5	13.5	60	84	74.4	29.3	1.4	3.49	59.5
Ethylbenzene	*µg/l*	<5	<5	11.9	<5	<5	<5	<5	3.89	<2.5	2.5	<2.5	5.09
Total Xylene	*µg/l*	<10	13	156.5	14.5	3.32	40	44	24.9	14.5	<4.5	<4.5	35
Suspended Solids	*mg/l*	12.1	24	28	47	37.6	23.6	47.4	5	18	8.5	13	16
Ammonical Nitrogen	*mg/l*	-	-	-	-	-	-	-	-	0.266	<0.2	0.988	1.1

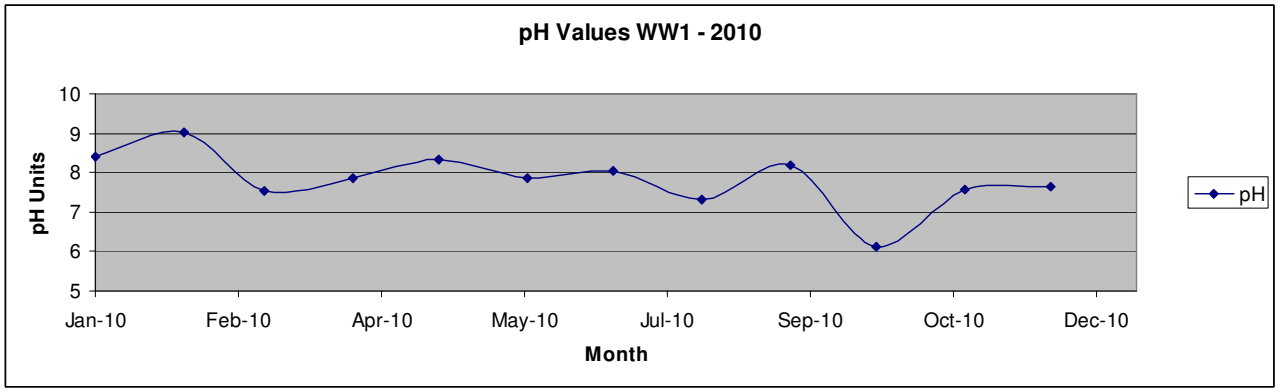

Figure 2-5 Wastewater – pH Trend Data 2010

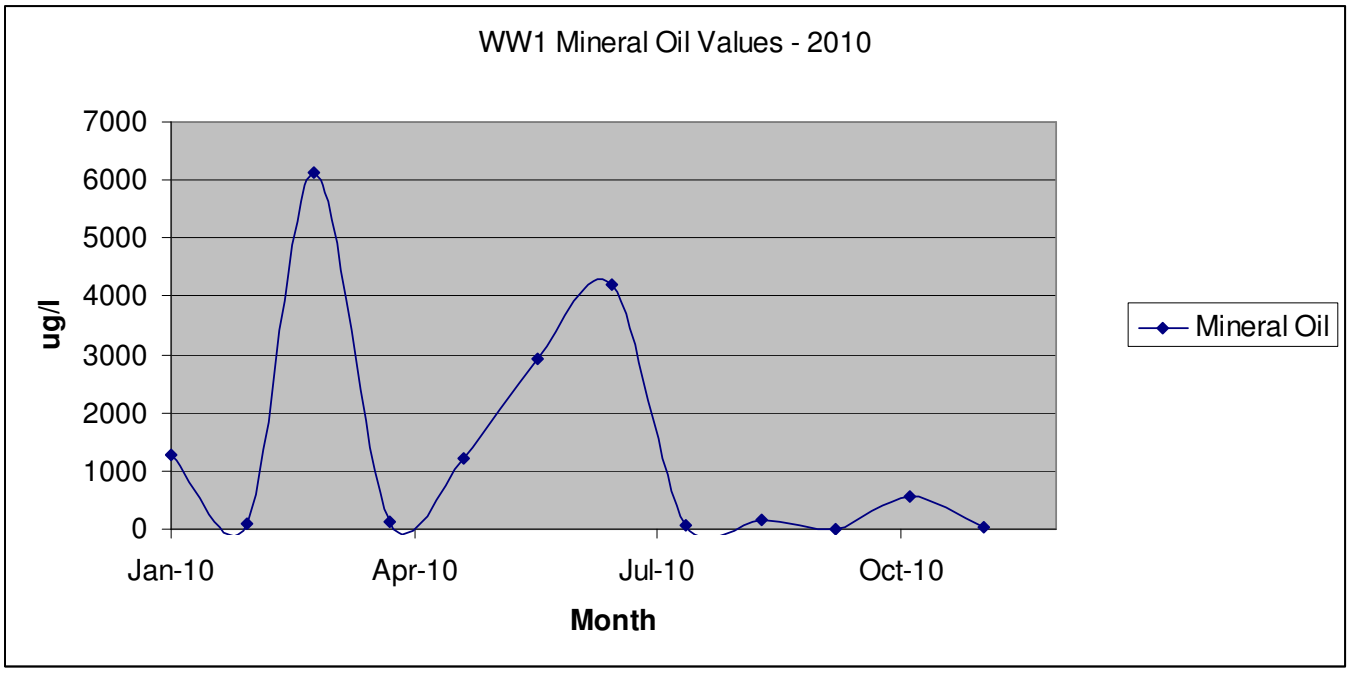

Figure 2-6 Wastewater – Mineral Oil Trend Data 2010

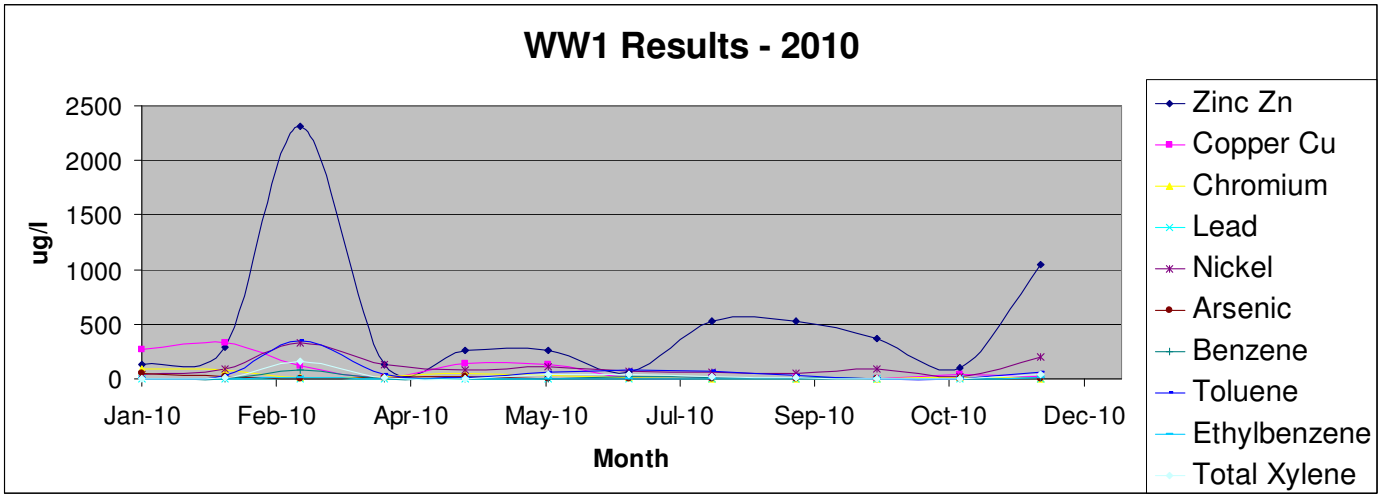

Figure 2-7 Wastewater – Metals and BTEX Trend Data 2010

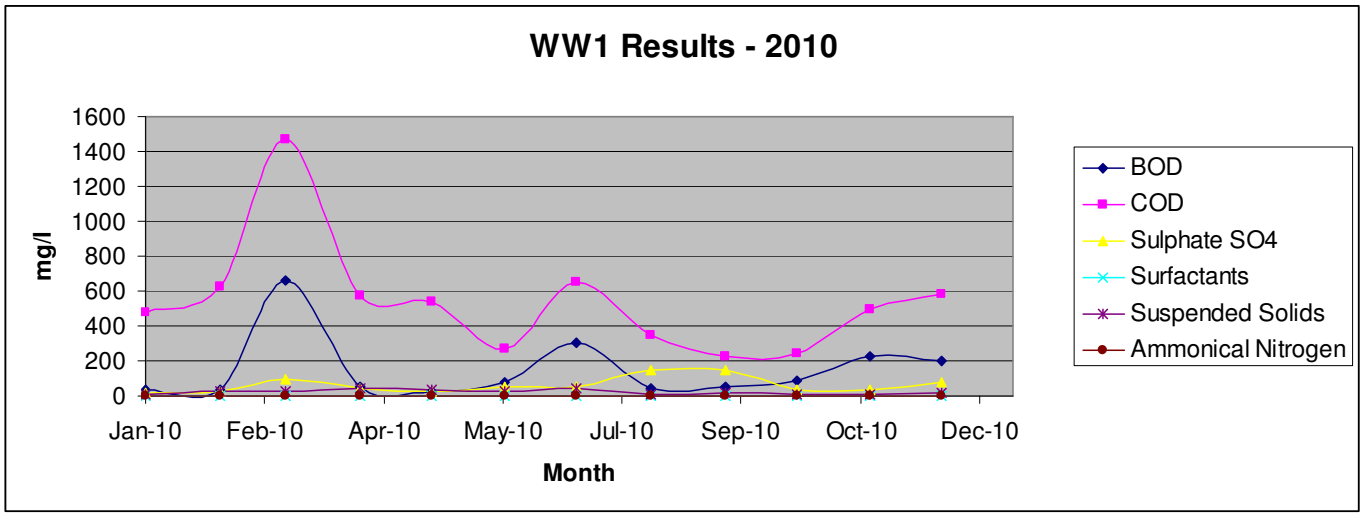

Figure 2-8 Wastewater – Miscellaneous Parameter Trend Data 2010

3 WASTE MANAGEMENT RECORD

The following tables summarise the types and quantities of waste handled over the period 1st January 2010 to 31st December 2010, at RILTA's Greenogue facility.

Table 3-1 Waste Types & Quantities - 2010

Waste Type	EWC Code	Weight/ Tonnes
Mine Screenings	EWC 01 01 01	45.67
Drilling muds	EWC 01 05 05	636.76
Agrichemical	EWC 02 01 08	0.12
Waste from prep foods	EWC 02 02 99	20.735
waste from prep foods	EWC 02 03 01	1
Off Spec Product	EWC 02 07 04	204.045
Wood preservative	EWC 03 02 01	0.84
Oil Spill	EWC 05 01 05	21.75
Sulphuric Acid	EWC 06 01 01	97.98
Hydrochloric acid	EWC 06 01 02	6.21
Nitric Acid	EWC 06 01 05	67.23
Other Acids	EWC 06 01 06	213.54
Nitric Acid	EWC 06 01 99	24.92
Lime	EWC 06 02 01	1.045
Sodium Hydroxide	EWC 06 02 04	72.31
Alkali/Bases	EWC 06 02 05	169.46
Salt Sludge	EWC 06 03 14	79.47
Mercury	EWC 06 04 04	0.773
Silicone	EWC 06 08 02	0.85
Corrosive Liquid	EWC 07 01 01	10.64
Solvent	EWC 07 01 03	0.42
Solvent	EWC 07 01 04	1.58
Silica	EWC 07 01 10	0.15
Cont glassware	EWC 07 01 99	0.16
Bead Blast	EWC 07 02 99	0.353
Pentachlorophenol (wood Preservative)	EWC 07 04 03	0.002
Aqueous waste	EWC 07 05 01	21.87
Solvent	EWC 07 05 04	19.162
process Filter Cake	EWC 07 05 11	0.71
Sludge from on site treatment	EWC 07 05 12	124.06
Grease	EWC 07 06 08	2.145
Redundant Cosmetics	EWC 07 06 99	2.42
Paint relatated	EWC 08 01 11	122.73
Aqueous paint Waste	EWC 08 01 12	81.92
Paint related waste	EWC 08 01 13	13.155

Waste Type	EWC Code	Weight/ Tonnes
Aqueous Ink Waste	EWC 08 03 08	16.22
Waste Ink	EWC 08 03 12	47.35
Varnish	EWC 08 03 13	1.62
Adhesive	EWC 08 04 09	52.455
Polyol	EWC 08 04 10	3.41
Water washings traces of synthetic dispersion of Rubber	EWC 08 04 16	7.70
Isocyanate Waste	EWC 08 05 01	0.87
Photographic Waste	EWC 09 01 01	3.445
Developer	EWC 09 01 03	0.4
Photo Developer	EWC 09 01 04	94.605
Photographic waste	EWC 09 01 05	1.643
Boiler Ash	EWC 10 01 04	43.395
Boiler Ash	EWC 10 01 14	3.49
Oily Waste	EWC 10 02 11	3.92
Cutter sludge containing lead UN3077	EWC 10 11 13	365.31
Spent Acid	EWC 11 01 05	144.08
Processed Filtercake	EWC 11 01 09	161.52
Filter Cake	EWC 11 01 10	57.222
Corrosive waste	EWC 11 01 11	1.96
Aqueous Waste	EWC 11 01 12	1.77
Methylated Spirits	EWC 11 01 13	0.12
Lapp Sludge	EWC 11 01 99	13.12
Exchange Filters	EWC 11 02 06	0.06
Dust	EWC 11 05 99	5.62
Coolant/water mix	EWC 12 01 07	23.32
Coolant	EWC 12 01 09	905.29
Hydraulic Oil	EWC 13 01 05	1.18
Hydraulic Oil	EWC 13 01 13	4.12
Waste Oil (Hydraulic Oil)	EWC 13 02 04	0.39
Lube Oil	EWC 13 02 05	5.29
Engine/Gear/Lube oil	EWC 13 02 06	30.85
Waste Oil	EWC 13 02 08	1,845.34
Oil/PCBS	EWC 13 03 01	4.335
Transformer Oil	EWC 13 03 06	11.34
Waste hydraulic Oil	EWC 13 03 10	46.14
Bilge Oils	EWC 13 04 03	165.42
Dig Out	EWC 13 05 01	0.62
Interceptor	EWC 13 05 03	3,898.63
Oily Waste	EWC 13 05 06	7.04
Oily Waste	EWC 13 05 07	6,710.26

Waste Type	EWC Code	Weight/ Tonnes
Interceptor waste	EWC 13 05 08	3.34
Fuel Waste	EWC 13 07 01	150.75
Diesel Waste	EWC 13 07 02	14.17
Fuel Waste	EWC 13 07 03	12.80
Oil Spill	EWC 13 08 99	1,238.60
Aerosols	EWC 14 06 01	0.8
Solvent	EWC 14 06 02	38.288
Mixed Organic Solvents	EWC 14 06 03	499.61
Solvent Sludge	EWC 14 06 05	0.05
Plastic Packaging	EWC 15 01 02	2.08
Car Exhausts	EWC 15 01 04	52.19
Contaminated Packaging	EWC 15 01 10	1485.28
Absorbents	EWC 15 02 02	665.187
Absorbents	EWC 15 02 03	0.14
Oil Filters	EWC 16 01 07	10.543
Environmentally Hazardous Liquid	EWC 16 01 10	0.03
Glycol	EWC 16 01 14	11.64
Coolants/Glycol	EWC 16 01 15	8.67
Glass	EWC 16 01 20	1.266
Capacitators containing PCBs	EWC 16 02 09	11.845
Contaminated Equipment	EWC 16 02 13	1.41
WEEE	EWC 16 02 14	3.65
WEEE	EWC 16 02 16	2.24
Aqueous Waste	EWC 16 03 03	7.02
Off Spec Unused products	EWC 16 03 04	92.97
Organic Waste containing dangerous sub	EWC 16 03 05	4.39
Mixed Organic Solvents	EWC 16 04 03	0.3
Aerosols	EWC 16 05 04	7.679
Lab Waste	EWC 16 05 06	54.66
Lab Chemicals	EWC 16 05 07	30.92
Env Haz Liq	EWC 16 05 08	1.11
Fire extinguishers	EWC 16 05 09	1.58
Batteries Led/Acid	EWC 16 06 01	5507.1
Batteries Ni/Cd	EWC 16 06 02	6.36
Batteries Alkaline	EWC 16 06 04	25.53
Batteries Li Ion	EWC 16 06 05	0.57
Tank Cleaning waste	EWC 16 07 08	869.56
Tank Cleaning	EWC 16 07 09	280.61
Bund area waste	EWC 16 07 99	116.72
Spent Catalyst	EWC 16 08 02	1.4

Waste Type	EWC Code	Weight/ Tonnes
oxidizing substances	EWC 16 09 04	7.13
Aqueous Liquid Washings	EWC 16 10 01	1397.73
Aqueous liquid	EWC 16 10 02	318.93
Concrete	EWC 17 01 01	62.24
Bitumen waste	EWC 17 03 01	2.65
Contaminated Soil	EWC 17 05 03	10925.27
Contaminated Soil	EWC 17 05 04	84.44
Asbestos	EWC 17 06 01	2928.725
Asbestos	EWC 17 06 03	1.28
Asbestos	EWC 17 06 04	0.51
Asbestos	EWC 17 06 05	2476.896
Unused Disposal Needles	EWC 18 01 01	0.19
Spent Medicines	EWC 18 01 06	19.002
Pharmaceutical waste	EWC 18 01 08	0.605
Spent Medicines	EWC 18 01 09	41.507
Veterinary waste	EWC 18 02 08	64.985
Silica Powder	EWC 19 01 14	0.14
Filtercake	EWC 19 02 05	38.88
Effluent Waste	EWC 19 02 99	26.90
leachate	EWC 19 07 03	22,155.91
Sludge waste	EWC 19 08 99	11.44
Water clarification waste	EWC 19 09 02	29.46
Spent Activated Carbon	EWC 19 09 04	15.85
Spent Activated Carbon	EWC 19 09 05	93.86
Retention Pond Waste	EWC 19 12 11	50.04
Leachate	EWC 19 12 12	2,157.78
Flammable Liquid	EWC 20 01 13	0.28
Hydroflouric acid	EWC 20 01 14	0.01
Floor Cleaner	EWC 20 01 15	0.98
Pesticides, Weedkillers, Herbicides, Antifreeze	EWC 20 01 19	10.03
flourescent tubes	EWC 20 01 21	0.525
Aerosols / CFCs	EWC 20 01 23	3.086
edible oil and fat	EWC 20 01 25	2.295
Lubricating Grease	EWC 20 01 26	7
Paints inks adhesives resins	EWC 20 01 27	444.43
Detergent	EWC 20 01 29	8.46
Detergents	EWC 20 01 30	0.055
Waste Meds	EWC 20 01 31	0.15
Non Reg Medicines, cosmetics, Pharmaceuticals	EWC 20 01 32	1.625
Wood	EWC 20 01 38	0.4

Waste Type	EWC Code	Weight/ Tonnes
Drain waste	EWC 20 03 99	35.46

As per Waste Licence No: 192-03, RILTA is allowed to accept up to 111,000 tonnes/year of waste consisting of hazardous waste, commercial waste, construction and demolition waste, industrial sludges and industrial waste at the facility.

The above table shows that the total volume of waste accepted by RILTA from January 1st 2010 to December 31st 2010 was 71,407.24 tonnes.

4 RESOURSE CONSUMPTION SUMMARY

The main energy use at RILTA includes:

- Gas
- Electricity
- Water

A review of electricity and gas bills for the period from 01/01/09 to 31/12/09 shows that RILTA used the following quantities.

Table 4-1 Resource and Energy Consumption - 2010

Energy	Units	Figures for 2010	Figures for 2009	Figures for 2008	Figures for 2007
Gas	*KwH*	175,932	525,347	1,663,901	977,260
Electricity	*KwH*	422,560	472,300	477,591	320,000
Water	m^3	13132	8,880	9,122	7,100
Diesel	*L*	9888	10,843	11,667	8,470
Oil	*L*	288,600	65,884	0	0

RILTA Environmental changed from a gas fired burner to an oil fired burner, as a larger burner was required for the oil treatment process. Hence the decrease in gas and increase in oil consumed.

5 COMPLAINTS SUMMARY

There were 4 no. complaints received during 2010, 3 no. related to odour. Odours were hard to pinpoint but RILTA management have made a concerted effort to keep both our industrial neighbours and the Greenogue Management Company informed of activities which may cause odours, such as moving soil etc. The additional complaint related to a broken steam pipe which caused a spray of steam into an adjoining site. However, this was rectified in less than one hour.

6 ENVIRONMENTAL MANAGEMENT

6.1 SCHEDULE OF ENVIRONMENTAL OBJECTIVES AND TARGETS

Details of the Environmental Management Programmes (EMP) for the RILTA facility are contained in Appendix B.

6.2 ENVIRONMENTAL MANAGEMENT PROGRAMME

Details of the 2010 and 2011 EMPs for the RILTA facility are contained in Appendix B.

7 POLLUTANT RELEASE AND TRANSFER REGISTER (PRTR)

Details of the 2010 and 2011 Pollutant Release Transfer Register (PRTR) for the RILTA facility are contained in Appendix C.

8 NOISE MONITORING

The noise emission limits given in Waste Licence 192-03 are 55 dB(A) for daytime and 45 dB(A) for night time. These levels specifically relate to noise emissions arising from the facility, measured at any noise sensitive location. A more detailed noise monitoring report for this period is contained in Appendix D.

The noise emissions from RILTA Environmental Ltd. are given in Table 8-1 and Table 8-2 below.

Table 8-1 RILTA Daytime Noise - 2010

DAY TIME					
Receptor	**Time**	**Leq**	**L10**	**L90**	**Notes**
N1	14:36	56.9	59.9	49.2	Plant not audible, Passing traffic and aircraft overhead dominant at this location
N2	16:25	51.9	54.6	45.4	Aircraft noise dominant, noise from adjoining facility, RILTA audible.
N3	15:48	62.8	60.6	52.4	Over head aircraft dominant, trucks and adjacent site noise audible, digger in operation next site, RILTA largely inaudible.
N4	15:14	63.7	61.7	48.4	Passing traffic is dominant, overhead aircraft, facility inaudible, aircraft and helicopters very low and very frequent.

Table 8-2 RILTA Night Time Noise - 2010

NIGHT TIME					
Receptor	**Time**	**Leq**	**L10**	**L90**	**Notes**
N1	23:50	44.5	45.3	41.2	Passing traffic
N2	22:40	43.5	42.1	40.0	Stream audible, aircraft overhead, distant road traffic, helicopter
N3	22:05	52.6	55.9	55.2	RILTA audible at 46/47dB in lull periods, noise from neighbouring facilities and stream audible, fan audible.
N4	23:15	44.3	43.4	35.4	Passing traffic on internal industrial estate roads.

Noise levels recorded at the four EPA agreed noise monitoring locations contain noise emissions from adjacent industrial sites, low flying aircraft and traffic on the internal road network of the industrial estate. Noise emissions from the RILTA facility were audible only during daytime monitoring and not audible during the night time monitoring. Note that the EPA agreed noise monitoring locations are all on site and do not reflect emissions at noise sensitive locations.

The A-weighted equivalent continuous sound pressure level (LAeq, 30 min) recorded at the RILTA facility was less than 55 dB(A) at noise monitoring location N2 only, during the daytime monitoring event. Where the measured LAeq, 30 min exceeded 55 dB(A), this was due to the addition of extraneous noise sources such as low flying aircraft from nearby Baldonnell Airport, passing traffic on the internal roads of the industrial estate, distant traffic on the N7 and activities in adjacent sites.

No noise emissions due to the RILTA facility were generally audible during the night time monitoring period. During the night time monitoring period the A-weighted equivalent continuous sound pressure level (LAeq, 30 min) exceeded 45 dB(A) (night time) limit at N3 only. The exceedance at N3 was directly attributable to extraneous noise sources such as traffic on the industrial estate road network, the adjacent flowing stream or low flying aircraft from nearby Baldonnell Airport.

There were no impulsive noise emissions audible at any of the monitoring locations during the daytime or night time monitoring period. With regard to tonal emissions, Figures 1 to 8 *(see Appendix D)* indicate that tonal components were present at 2 no. daytime monitoring locations (N3 & N4). However, no tonal emissions at these frequencies were recorded at any other monitoring location during the day or night time monitoring event.

There was a pure tone at 20Hz measured at monitoring location N3 (Day Monitoring). The tone at this frequency was not present at the same location during the night time survey. During the daytime survey at N4 there was a pure tone at 25Hz. The tone at N4 (25Hz) was not observed at any other monitoring location during either the day or night time monitoring events, and as such is unlikely to have originated due to RILTA activities.

There was a tonal component at 50Hz measured at monitoring location N3 (Night Monitoring). The tone at this frequency was inaudible at all locations during the night time survey. The 5dB penalty has not been added as it is unlikely that the tone is due to mains hum, as it was not present at this location during the daytime survey and as such is likely to be derived from an off-site source. Full 1/3 octave frequency band analysis of both day and night time surveys is presented in Appendix D.

9 AMBIENT MONITORING

9.1 DUST

According to Schedule E of the waste licence, dust monitoring is required at the facility three times a year (twice between May and September), at monitoring locations illustrated on Drawing 1250/01/1002 *(see Appendix A).* Dust monitoring was carried out at four separate locations at the 4 no. corner boundaries of the RILTA facility. The samples were delivered to Alcontrol Laboratories for analysis.

The results for each sample location D1, D2, D3 and D4 are included in Appendix E. In summary the air quality at all monitoring locations was good, with no exceedances recorded during the 2010 monitoring period. The dust deposition limit of 350 mg/m^2/day was not exceeded during 2010 and the highest recorded concentration for the site (233mg/m^2/day) was recorded during the June monitoring event at D4.

Table 9-1 Dust Monitoring Results - 2010

Monitoring Period	D1 mg/m^2/d	D2 mg/m^2/d	D3 mg/m^2/d	D4 mg/m^2/d	Source of Dust
June 2010	151	110	141	233	No Exceedances
Sep 2010	117	97	95.5	74.1	No Exceedances
Dec 2010*	3.7	7.41	1.39	9.26	No Exceedances

Note: Heavy snowfall resulted in low dust results for this period.

9.2 VOC EMISSIONS

Odour Monitoring Ireland were commissioned by Rilta Environmental Limited to perform volatile organic compound (VOC) monitoring of the three licensed emission points located within the facility. All results from the 2010 monitoring were in compliance with required limits, with the exception of the volume flow at A2.

The full report from OMI detailing ambient emissions from the RILTA facility is contained in Appendix F.

10 TANK AND PIPELINE TESTING AND INSPECTION REPORT

As per Condition 11 of waste licence 192-03, any reports on integrity testing of bunds or tanks will be furnished to the agency upon completion. Previous bund tests were reported to the Agency in the 2008 and 2009 AER and thus, were not due to be carried out within this reporting period.

11 ENERGY EFFICIENCY AUDIT REPORT

The energy audit was completed in 2008 and the details were furnished to the Agency. Another audit is due for completion in 2011.

11.1 WATER DEMAND AND TRADE EFFLUENT DISCHARGE

While considerable water is used throughout the site 1355m^3 of treated effluent was re-used in 2010. This water was used to break up sludge in the settlement tanks and also on occasion by the vacuum tankers in their water tanks and also in the on site centrifuges. Research and development is continuing with a view to 'polishing' the effluent to a degree where it can be re-used more often and in more appliances.

11.2 EFFICIENCY OF USE OF RAW MATERIALS/ REDUCTION IN WASTE GENERATED

The main raw material used on site is paint. The current economic conditions have resulted in an increase in the usage of re-conditioned drums produced by RILTA and therefore the volume of paint has risen. RILTA is however, currently investigating the possibility of lower solvent-content paints.

12 DEVELOPMENT/INFRASTRUCTURAL WORKS

There were no infrastructural works carried out in 2010. A pilot treatment plant was put in place September but results so far have been inconclusive. RILTA has notified the Agency of its intention to install new oil holding tanks in an extended bund, these works has not yet commenced.

13 FINANCIAL PROVISION

A proposal in respect of financial provision is to be updated and will be furnished to the Agency as part of the proposals on ELRA and CRAMP.

13.1 MANAGEMENT AND STAFFING STRUCTURE

Details of the management and staffing structure are contained in Appendix G.

13.2 PROGRAMME FOR PUBLIC INFORMATION

RILTA maintains a 'Public File' which contains all correspondence between RILTA and the Agency, all waste data and monitoring data as required by waste licence 0192-03. This file is available for viewing during normal office hours.

14 DECOMMISSIONING MANAGEMENT PLAN

This is currently being reviewed by RILTA and is due to be submitted to the Agency in April 2011.

14.1 PREVENTION OF ENVIRONMENTAL DAMAGE AND REMEDIAL ACTIONS (ENVIRONMENTAL LIABILITIES)

This is currently being reviewed by RILTA and is due to be submitted to the Agency in April 2011.

14.2 ENVIRONMENTAL LIABILITIES RISK ASSESSMENT (ELRA)

This is currently being reviewed by RILTA and is due to be submitted to the Agency in April 2011.

APPENDIX A

Site Maps

Monitoring Location Map

Monitoring Point Locations (to National Grid Reference)

Groundwater Monitoring Points
BH1 E301555, N 228440
BH2 E301600, N228550
BH3 E301630, N228555

Underground Settlement Tank Monitoring Points
GW1 E301630, N228515
GW2 E301650, N228540
GW3 E301625, N228540

Surface Water/Invertebrate Monitoring Points
SW1/KS1 E301670, N228562
SW2/KS2 E301565, N228555
SW3 (Proposed) E301480, N228560

Dust Monitoring Points
D1 E301630, N228450
D2 E301580, N228550
D3 E301670, N228555
D4 E301630, N228420

Noise Monitoring Points
N1 E301630, N228450
N2 E301580, N228550
N3 E301670, N228555
N4 E301630, N228420

Air Monitoring Points
A1 E301620, N228440
A2 E301630, N228445
A3 E301630, N228460

Waste Water Monitoring Point
EFF (Proposed) E301655, N228530

Legend:

- Licence Boundary
- Surface Water Monitoring Points
- Invertebrate Kick Sampling Monitoring Points
- Dust Monitoring Points
- Noise Monitoring Points
- Waste Water Monitoring Point
- Groundwater Monitoring Points
- Underground Settlement Tank Monitoring Points
- Air Monitoring Points

KS1
SW1
D3
N3
BUNDED TANK AREA
BH3
SW3
BH2
VEHICLE WASH AREA
SW2
KS2
D2
N2
DOCK LEVELLER
GW2
GW3
EFF
RACKED STORAGE
GW1
WASTE TREATMENT CENTRE 1858 SQ.M
STATION 1859 SQ.M
HAZARDOUS WASTE TRANSFER
CONTAMINATED SOIL STORAGE
A3
A1
DRUM CENTRE 1858 SQ.M
A2
OFFICE BLOCK 400 SQ.M
WEIGHBRIDGE
DOCK LEVELLER
D1
N1
BH1
GATE
D4
N4
ELECTRICAL SWITCHROOM

Notes:

1. Figured Dimensions only to be taken from this drawing
2. All Drawings to be checked by the Contractor on site
3. Engineer to be informed of any discrepancies before any work commences
4. All levels relate to Ordnance Survey Datum at Malin Head

suffix	revisions	date	by

Client

Drawing Title
SITE LAYOUT PLAN

Project
INTEGRATED WASTE MANAGEMENT FACILITY, GREENOGUE, CO. DUBLIN

Scale: 1/500

Drawn by	Checked by	Date
MARKCONROY	DAMIENGREHAN	January 2007

ENGINEER IN CHARGE: DAMIEN GREHAN

TOBIN
Patrick J. Tobin & Co. Ltd.
Block 19-3
Blanchardstown Corporate Park
Dublin 15.
Ireland
Tel. 01 8030401
Fax. 01 8030410
email info@tobin.ie

Drawing No.
1250/01/1002

Rev.

APPENDIX B

Environmental Management Plan

EMP 2010

EMP 2011

RILTA ENVIRONMENTAL Ltd.

ENVIRONMENTAL MANAGEMENT SYSTEM

ENVIRONMENTAL MANAGEMENT PLAN

ER-003

In accordance with
ISO 14001

ENVIRONMENTAL MANAGEMENT PROGRAMME FOR THE ACHIEVEMENT OF OBJECTIVES AND TARGETS

EMP Ref.	***Objective***	***Environmental Management Programme for the implementation of objectives.***	***Completion Date***	***Completed (Y/N)***
1	Increase environmental awareness among RILTA staff.	Develop and issue quarterly e-mail environmental bulletin.	June 10	N
2	Promote best practice in the processing of waste generated on site.	Assess implications of food regulations and formulate waste minimization plan accordingly.	Sept 10	Y
3	Reduce fugitive emissions.	Annual monitoring of fugitive emissions.	Ongoing	Y

EMP Ref.	***Objective***	***Environmental Management Programme for the implementation of objectives.***	***Completion Date***	***Completed (Y/N)***
4	Improve site housekeeping.	Insist that only fully and correctly labeled drums/IBCs are accepted on site. Investigate the possibility of building a wall at the north end of the site to control litter and other contaminants from reaching the river.	Ongoing	Yes No
5	Promote best practice for mixing incompatible wastes.	Complete re-assessment of storage in Bays 4 and 7 and implement findings All corrosive wastes moved to Bay 7.	June 2010	Yes

EMP Ref.	***Objective***	***Environmental Management Programme for the implementation of objectives.***	***Completion Date***	***Completed (Y/N)***
6	Reduce use of hazardous raw materials used on site.	Implement the 'treat waste with waste' best practice method on an ongoing basis Waste Acceptance criteria updated and laboratory capabilities enhanced to ensure best results. Reduce volume of Xylene by 5%	Ongoing Dec 2010	Yes No
7	Optimize the quality of effluent discharged to sewer	Offer the customer free sample analysis for waste in order to get as much waste pre-tested as possible. Waste Acceptance criteria updated. Investigate the JLJ reverse osmosis system as a means of secondary/tertiary form of treatment Biological Treatment plant piloted in its stead	Ongoing Oct 2010	Yes No

EMP Ref.	***Objective***	***Environmental Management Programme for the implementation of objectives.***	***Completion Date***	***Completed (Y/N)***
8	To be a good and considerate neighbour.	Complete noise monitoring.	Ongoing	Yes
		Review site landscaping project to enhance the visual aspect of the site. Plans to erect visual barrier put on hold Jan 2011	Sept 2010	Yes
		Monitor adjoining river on a yearly basis.	Ongoing	Yes
		Maintain a 'complaints register' and review annually.	Ongoing	Yes
		Liaise with industrial neighbours on a quarterly basis	Ongoing	Yes
		Implement 'closed door' policy system	Ongoing	Yes
		Investigate the effectiveness of general site extraction fans	August 2010	No
9	Fire Safety	Complete building fire safety review and implement findings. In draft form	September 2010	Yes

RILTA ENVIRONMENTAL Ltd.

ENVIRONMENTAL MANAGEMENT SYSTEM

ENVIRONMENTAL MANAGEMENT PLAN

ER-003

In accordance with
ISO 14001

ENVIRONMENTAL MANAGEMENT PROGRAMME FOR THE ACHIEVEMENT OF OBJECTIVES AND TARGETS

EMP Ref.	***Objective***	***Environmental Management Programme for the implementation of objectives.***	***Completion Date***	***Completed (Y/N)***
1	Increase environmental awareness among RILTA staff.	Develop and issue quarterly e-mail environmental bulletin.	June 11	
2	Promote best practice in the processing of waste generated on site.	Extend Green bin system to all office and warehouse areas.	Sept 11	
3	Reduce fugitive emissions.	Annual monitoring of fugitive emissions.	Ongoing	

EMP Ref.	***Objective***	***Environmental Management Programme for the implementation of objectives.***	***Completion Date***	***Completed (Y/N)***
4	Improve site housekeeping.	Insist that only fully and correctly labeled drums/IBCs are accepted on site. Investigate the possibility of building a wall at the north end of the site to control litter and other contaminants from reaching the river.	Ongoing tbc	
5	Reduce trade effluent sent to foul sewer	Investigate tertiary treatment of effluent with a view of re-using treated aqueous waste.	Oct 2011	

EMP Ref.	***Objective***	***Environmental Management Programme for the implementation of objectives.***	***Completion Date***	***Completed (Y/N)***
6	Reduce use of hazardous raw materials used on site.	Implement the 'treat waste with waste' best practice method on an ongoing basis Reduce volume of Xylene by 5%	Ongoing Dec 2011	
7	Optimize the quality of effluent discharged to sewer	Offer the customer free sample analysis for waste in order to get as much waste pre-tested as possible. Investigate tertiary treatment of effluent.	Ongoing Oct 2011	

EMP Ref.	***Objective***	***Environmental Management Programme for the implementation of objectives.***	***Completion Date***	***Completed (Y/N)***
8	To be a good and considerate neighbour.	Complete noise monitoring. Monitor adjoining river on a yearly basis. Maintain a 'complaints register' and review annually. Liaise with industrial neighbours on a quarterly basis Implement 'closed door' policy system	Ongoing Ongoing Ongoing Ongoing Ongoing	
9	Fire Safety	Complete building fire safety review and implement findings.	September 2011	
10	To Be Energy Efficient	Complete energy audit	Dec 2011	

APPENDIX C

Pollutant Release and Transfer Register (PRTR)

Environmental Protection Agency

Guidance to completing the PRTR workbook

AER Returns Workbook

Version 1.1.11

REFERENCE YEAR	2010

1. FACILITY IDENTIFICATION

Parent Company Name	Rilta Environmental Ltd (formerly known as SITA Environmental Ltd)
Facility Name	Rilta Environmental Limited
PRTR Identification Number	W0192
Licence Number	W0192-03

Waste or IPPC Classes of Activity

No.	class_name
4.13	Storage of waste intended for submission to any activity referred to in a preceding paragraph of this Schedule, other than temporary storage, pending collection, on the premises where such waste is produced.
3.11	Blending or mixture prior to submission to any activity referred to in a preceding paragraph of this Schedule.
3.12	Repackaging prior to submission to any activity referred to in a preceding paragraph of this Schedule.
3.13	Storage prior to submission to any activity referred to in a preceding paragraph of this Schedule, other than temporary storage, pending collection, on the premises where the waste concerned is produced.
3.7	##########
4.2	Recycling or reclamation of organic substances which are not used as solvents (including composting and other biological transformation processes).
4.3	Recycling or reclamation of metals and metal compounds.
4.4	Recycling or reclamation of other inorganic materials.
4.6	Recovery of components used for pollution abatement.
4.8	Oil re-refining or other re-uses of oil.
Address 1	Block 402, Grant's Drive
Address 2	Greenogue Business Park
Address 3	Rathcoole
Address 4	County Dublin
Country	Ireland
Coordinates of Location	-8.48281 51.8695
River Basin District	IESW
NACE Code	3832
Main Economic Activity	Recovery of sorted materials
AER Returns Contact Name	Colm Hussey
AER Returns Contact Email Address	Colm.Hussey@rilta.ie
AER Returns Contact Position	
AER Returns Contact Telephone Number	01 4018000
AER Returns Contact Mobile Phone Number	
AER Returns Contact Fax Number	01 4018080
Production Volume	0.0
Production Volume Units	
Number of Installations	1
Number of Operating Hours in Year	140000
Number of Employees	64

User Feedback/Comments	
Web Address	www.rilta.ie

2. PRTR CLASS ACTIVITIES

Activity Number	Activity Name
5(a)	Installations for the recovery or disposal of hazardous waste
5(c)	Installations for the disposal of non-hazardous waste
50.1	General

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

Is it applicable?	No
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 ?	

4.1 RELEASES TO AIR Link to previous years emissions data | PRTR# : W0192 | Facility Name : Rilta Environmental Limited | Filename : W0192_2010.xls | Return Year : 2010 | 31/03/2011 09:35

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
					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	Emission Point 2	Emission Point 3	T (Total) KG/Year	A (Accidental) KG/Year	F (Fugitive) KG/Year
351 - Total Organic Carbon (as C)		C	OTH	Calculated using bi-annual TOC measurement x 1000hrs operation time	160.0	270.0	50.0	480.0	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: Rilta Environmental Limited

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

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 on

RELEASES TO WATERS					Please enter all quantities in this section in KGs			
POLLUTANT					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 PRTR POLLUTANTS

RELEASES TO WATERS					Please enter all quantities in this section in KGs			
POLLUTANT					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 WATERS					Please enter all quantities in this section in KGs			
POLLUTANT					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
306	COD	C	OTH	Average measured COD x Site area (11,000m2) x Average Rainfall (700mm)	331.1	331.1	0.0	0.0
240	Suspended Solids	C	OTH	Ave. Measured TSS x site area x rainfall	61.6	61.6	0.0	0.0
324	Mineral oils	C	OTH	Ave measured mineral oil x site area x rainfall	6.9	6.9	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
19	**Chromium and compounds (as Cr)**	C	OTH	Average value measured x Total volume discharged (37495m3)	0.93	0.93	0.0	0.0
20	Copper and compounds (as Cu)	C	OTH	Average value measured x Total volume discharged (37495m3)	3.37	3.37	0.0	0.0
62	Benzene	C	OTH	Average value measured x Total volume discharged (37495m3)	0.46	0.46	0.0	0.0
17	Arsenic and compounds (as As)	C	OTH	Average value measured x Total volume discharged (37495m3)	0.37	0.37	0.0	0.0
65	Ethyl benzene	C	OTH	Average value measured x Total volume discharged (37495m3)	0.075	0.075	0.0	0.0
22	Nickel and compounds (as Ni)	C	OTH	Average value measured x Total volume discharged (37495m3)	3.99	3.99	0.0	0.0
23	Lead and compounds (as Pb)	C	OTH	Average value measured x Total volume discharged (37495m3)	0.06	0.06	0.0	0.0
73	Toluene	C	OTH	Average value measured x Total volume discharged (37495m3)	2.34	2.34	0.0	0.0
78	Xylenes	C	OTH	Average value measured x Total volume discharged (37495m3)	1.11	1.11	0.0	0.0
24	Zinc and compounds (as Zn)	C	OTH	Average value measured x Total volume discharged (37495m3)	18.78	18.78	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
303	BOD	C	OTH	Average value measured x Total volume discharged (37495m3)	5624.25	5624.25	0.0	0.0
306	COD	C	OTH	Average value measured x Total volume discharged (37495m3)	20284.79	20284.79	0.0	0.0
308	Detergents (as MBAS)	C	OTH	Average value measured x Total volume discharged (37495m3)	30.0	30.0	0.0	0.0
324	Mineral oils	C	OTH	Average value measured x Total volume discharged (37495m3)	52.37	52.37	0.0	0.0
343	Sulphate	C	OTH	Average value measured x Total volume discharged (37495m3)	2362.18	2362.18	0.0	0.0
240	Suspended Solids	C	OTH	Average value measured x Total volume discharged (37495m3)	881.13	881.13	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# : W0192 | Facility Name : Rilta Environmental Limited | Filename : W0192_2010.xls | Return Year : 2010 | 31/03/2011 09:38

SECTION A : PRTR POLLUTANTS

RELEASES TO LAND					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
					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		
			Method Used				
Pollutant No.	Name	M/C/E	Method Code	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

Transfer Destination	European Waste Code	Hazardous	Quantity (Tonnes per Year)	Description of Waste	Waste Treatment Operation	Method Used M/C/E	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)
To Other Countries	01 03 05	Yes	118.22	other tailings containing dangerous substances	D5	M	Weighed	Abroad	IAG GmbH,A7-64111	Ihlenberg,Selmsdorg,.,DE23923,Germany	IAG GmbH,A7-64111,Ihlenberg,Selmsdorg,.,DE23923,Germany	Ihlenberg,Selmsdorg,.,DE23923,Germany
Within the Country	02 03 04	No	11.31	materials unsuitable for consumption or processing	D8	M	Weighed	Offsite in Ireland	Premier Proteins Ltd.,P045-05	Poolboy,.,Ballinalsoe,Co. Galway,Ireland		
To Other Countries	02 07 04	No	198.58	materials unsuitable for consumption or processing	R10	M	Weighed	Abroad	K Nord,108ZEB026	Industriepark 6,.,Ganderkesee,D27777,Germany		
To Other Countries	06 01 01	Yes	34.54	sulphuric acid and sulphurous acid	R6	M	Weighed	Abroad	Future Industrial Solutions,EA Ref	Kirkby,.,Liverpool,L33 7UF,United Kingdom	Future Industrial Solutions,EA Ref,Kirkby,.,Liverpool,L33 7UF,United Kingdom	Kirkby,.,Liverpool,L33 7UF,United Kingdom
To Other Countries	06 01 06	Yes	74.48	other acids	R6	M	Weighed	Abroad	Revatech SA,No. Ref	Rue de l'Ile Monsin 95,.,Engis,B4020,Belgium	Revatech SA,No. Ref,Rue de l'Ile Monsin 95,.,Engis,B4020,Belgium	Rue de l'Ile Monsin 95,.,Engis,B4020,Belgium
To Other Countries	06 01 99	No	86.3	wastes not otherwise specified	R6	M	Weighed	Abroad	Revatech SA,No. Ref	Rue de l'Ile Monsin 95,.,Engis,B4020,Belgium		
Within the Country	06 03 14	No	66.0	solid salts and solution other than those mentioned in 06 03 11 and 06 03 13	R5	M	Weighed	Abroad	Zimmerman,783/240406	Gottlieb Daimler Strasse 3-7,.,Gutersloh,33334,Germany		
Within the Country	07 05 04	Yes	1.03	other organic solvents, washing liquids and mother liquors	D13	M	Weighed	Offsite in Ireland	Indaver,W036-02	Tolka Quay,Dublin Port,Dublin,1,Ireland	Indaver,W036-02,Tolka Quay,Dublin Port,Dublin,1,Ireland	Tolka Quay,Dublin Port,Dublin,1,Ireland
To Other Countries	09 01 05	Yes	92.72	bleach solutions and bleach fixer solutions	R4	M	Weighed	Abroad	Remondis (UK) Ltd.,WML/0707/MO1	Blackrod,Bolton,Lancashire, BL6 5SL,United kingdom	Remondis (UK) Ltd.,WML/0707/MO1,Blackrod,Bolton,Lancashire,BL6 5SL,United kingdom	Blackrod,Bolton,Lancashire, BL6 5SL,United kingdom
To Other Countries	10 01 04	Yes	92.9	oil fly ash and boiler dust	R5	M	Weighed	Abroad	Zimmerman,783/240406	Gottlieb Daimler Strasse 3-7,.,Gutersloh,33334,Germany	Zimmerman,783/240406	Gottlieb Daimler Strasse 3-7,.,Gutersloh,33334,Germany
To Other Countries	10 11 13	Yes	395.08	glass-polishing and -grinding sludge containing dangerous substances	D9	M	Weighed	Abroad	Zimmerman,783/240406	Gottlieb Daimler Strasse 3-7,.,Gutersloh,33334,Germany	Zimmerman,783/240406,Gottlieb Daimler Strasse 3-7,.,Gutersloh,33334,Germany	Gottlieb Daimler Strasse 3-7,.,Gutersloh,33334,Germany
To Other Countries	11 01 09	Yes	22.0	sludges and filter cakes containing dangerous substances	R5	M	Weighed	Abroad	Revatech SA,No. Ref	Rue de l'Ile Monsin 95,.,Engis,B4020,Belgium	Revatech SA,No. Ref,Rue de l'Ile Monsin 95,.,Engis,B4020,Belgium	Rue de l'Ile Monsin 95,.,Engis,B4020,Belgium
To Other Countries	11 01 09	Yes	86.78	sludges and filter cakes containing dangerous substances	R5	M	Weighed	Abroad	Remondis (UK) Ltd.,WML/0707/MO1	Blackrod,Bolton,Lancashire, BL6 5SL,United kingdom	Zimmerman,783/240406,Gottlieb Daimler Strasse 3-7,.,Gutersloh,33334,Germany	Gottlieb Daimler Strasse 3-7,.,Gutersloh,33334,Germany
To Other Countries	11 05 99	No	15.84	wastes not otherwise specified	R4	M	Weighed	Abroad	Revatech SA,No. Ref	Rue de l'Ile Monsin 95,.,Engis,B4020,Belgium		
Within the Country	13 07 01	Yes	19.54	fuel oil and diesel	R13	M	Weighed	Abroad	Veolia,W050-02	Corrin,.,Fermoy,Co. Cork,Ireland		
To Other Countries	14 06 03	Yes	22.0	other solvents and solvent mixtures	R2	M	Weighed	Abroad	RCN,120900718	Daimlerstrasse 26,.,Gock,D47574,Germany	RCN,120900718,Daimlerstrasse 26,.,Gock,D47574,Germany	Daimlerstrasse 26,.,Gock,D47574,Germany
To Other Countries	14 06 03	Yes	315.86	other solvents and solvent mixtures	R1	M	Weighed	Abroad	ATM,821780	Vlasweg 12,.,Moerdijk,4782 PW,Netherlands	ATM,821780,Vlasweg 12,.,Moerdijk,4782 PW,Netherlands	Vlasweg 12,.,Moerdijk,4782 PW,Netherlands
Within the Country	15 01 04	No	3.16	metallic packaging	R4	M	Weighed	Offsite in Ireland	A1 Metals,WMP007d	Acragar,.,Mountmellick,Co. laois,Ireland		

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					
To Other Countries	15 01 10	Yes	72.76	packaging containing residues of or contaminated by dangerous substances	R3	M	Weighed	Abroad	Nehlsen GmbH,A-4187 HH	Louis Krages Strasse 10,.,Bremen,D28237,Germany	Nehlsen GmbH,A-4187 HH,Louis Krages Strasse 10,.,Bremen,D28237,Germany	Louis Krages Strasse 10,.,Bremen,D28237,Germany
To Other Countries	15 02 02	Yes	384.46	absorbents, filter materials (including oil filters not otherwise specified), wiping cloths, protective clothing contaminated by dangerous substances	R1	M	Weighed	Abroad	ATM,821780	Vlasweg 12,.,Moerdijk,4782 PW,Netherlands	ATM,821780,Vlasweg 12,.,Moerdijk,4782 PW,Netherlands	Vlasweg 12,.,Moerdijk,4782 PW,Netherlands
Within the Country	16 01 07	Yes	44.28	oil filters	R4	M	Weighed	Offsite in Ireland	Felix Gormley Metals,WP07/015	Monery,Crossdowney,Co. Cavan,.,Ireland	Megasa Siderurgica SL,12548,Ctra Castilla ,802-820,Naron (La Coruna),15572,Spain	Ctra Castilla ,802-820,Naron (La Coruna),15572,Spain
To Other Countries	16 02 09	Yes	4.36	transformers and capacitors containing PCBs	R4	M	Weighed	Offsite in Ireland	Sita Decontamination,D/PMVC/01F28/33629	Westvaardijk ,97,Grimbergen,1850,Belgium	Sita Decontamination,D/PMVC/01F28/33629,Westvaardijk ,97,Grimbergen,1850,Belgium	Westvaardijk ,97,Grimbergen,1850,Belgium
Within the Country	16 02 09	Yes	10.0	transformers and capacitors containing PCBs	R13	M	Weighed	Offsite in Ireland	Cedar,W0185-01	Unit14A1,Greenogue Business Park,Rathcoole,Co. Dublin,Ireland	Sita Decontamination,D/PMVC/01F28/33629,Westvaardijk ,97,Grimbergen,1850,Belgium	Westvaardijk ,97,Grimbergen,1850,Belgium
Within the Country	16 02 14	No	4.02	discarded equipment other than those mentioned in 16 02 09 to 16 02 13	R13	M	Weighed	Offsite in Ireland	Rehab Recycling,WFP-DS-10-0008-01	Unit 77 Broomhill Road,Tallaght,Dublin ,24,Ireland		
To Other Countries	16 05 04	Yes	10.92	gases in pressure containers (including halons) containing dangerous substances	D1	M	Weighed	Abroad	Remondis ,08HRO03001	Am Kanal 9,.,Bramshe,49565,Germany	Remondis ,08HRO03001,Am Kanal 9,.,Bramshe,49565,Germany	Am Kanal 9,.,Bramshe,49565,Germany
To Other Countries	16 05 06	Yes	41.64	laboratory chemicals, consisting of or containing dangerous substances, including mixtures of laboratory chemicals	R1	M	Weighed	Abroad	ATM,821780	Vlasweg 12,.,Moerdijk,4782 PW,Netherlands	ATM,821780,Vlasweg 12,.,Moerdijk,4782 PW,Netherlands	Vlasweg 12,.,Moerdijk,4782 PW,Netherlands
To Other Countries	16 05 07	Yes	59.66	discarded inorganic chemicals consisting of or containing dangerous substances	R6	M	Weighed	Abroad	Revatech SA,No. Ref	Rue de l'Ile Monsin 95,.,Engis,B4020,Belgium	Revatech SA,No. Ref,Rue de l'Ile Monsin 95,.,Engis,B4020,Belgium	Rue de l'Ile Monsin 95,.,Engis,B4020,Belgium
To Other Countries	16 10 01	Yes	44.0	aqueous liquid wastes containing dangerous substances	D8	M	Weighed	Abroad	ATM,821780	Vlasweg 12,.,Moerdijk,4782 PW,Netherlands	ATM,821780,Vlasweg 12,.,Moerdijk,4782 PW,Netherlands	Vlasweg 12,.,Moerdijk,4782 PW,Netherlands
To Other Countries	16 10 01	Yes	22.0	aqueous liquid wastes containing dangerous substances	D8	M	Weighed	Abroad	K Nord,108ZEB026	Industriepark 6,.,Ganderkesee,D27777,Germany	K Nord,108ZEB026,Industriepark 6,.,Ganderkesee,D27777,Germany	Industriepark 6,.,Ganderkesee,D27777,Germany
To Other Countries	16 10 01	Yes	592.16	aqueous liquid wastes containing dangerous substances	D8	M	Weighed	Abroad	Revatech SA,No. Ref	Rue de l'Ile Monsin 95,.,Engis,B4020,Belgium	Revatech SA,No. Ref,Rue de l'Ile Monsin 95,.,Engis,B4020,Belgium	Rue de l'Ile Monsin 95,.,Engis,B4020,Belgium
Within the Country	16 10 01	Yes	4.0	aqueous liquid wastes containing dangerous substances	D9	M	Weighed	Abroad	Enva,W041-01	Smithstown Industrial Estate,Shannon,Co. Clare,.,Ireland	Enva,W041-01,Smithstown Industrial Estate,Shannon,Co. Clare,.,Ireland	Smithstown Industrial Estate,Shannon,Co. Clare,.,Ireland
To Other Countries	16 10 01	Yes	25.1	aqueous liquid wastes containing dangerous substances	R3	M	Weighed	Abroad	Revatech SA,No. Ref	Rue de l'Ile Monsin 95,.,Engis,B4020,Belgium	Revatech SA,No. Ref,Rue de l'Ile Monsin 95,.,Engis,B4020,Belgium	Rue de l'Ile Monsin 95,.,Engis,B4020,Belgium
To Other Countries	18 01 08	Yes	18.72	cytotoxic and cytostatic medicines	R1	M	Weighed	Abroad	ATM,821780	Vlasweg 12,.,Moerdijk,4782 PW,Netherlands	ATM,821780,Vlasweg 12,.,Moerdijk,4782 PW,Netherlands	Vlasweg 12,.,Moerdijk,4782 PW,Netherlands

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					
To Other Countries	18 02 08	No	18.9	medicines other than those mentioned in 18 02 07	R3	M	Weighed	Abroad	ATM,821780	Vlasweg 12,.,Moerdijk,4782 PW,Netherlands		
To Other Countries	20 01 27	Yes	340.36	paint, inks, adhesives and resins containing dangerous substances	D9	M	Weighed	Abroad	Recyfuel SA,P-ENV07-01	Zoning Industriel d'Ehein,.,Engis,B4480,Belgium	Recyfuel SA,P-ENV07-01,Zoning Industriel d'Ehein,.,Engis,B4480,Belgium	Zoning Industriel d'Ehein,.,Engis,B4480,Belgium
To Other Countries	20 01 27	Yes	22.44	paint, inks, adhesives and resins containing dangerous substances	R1	M	Weighed	Abroad	ATM,821780	Vlasweg 12,.,Moerdijk,4782 PW,Netherlands	ATM,821780,Vlasweg 12,.,Moerdijk,4782 PW,Netherlands	Vlasweg 12,.,Moerdijk,4782 PW,Netherlands
To Other Countries	20 01 27	Yes	669.95	paint, inks, adhesives and resins containing dangerous substances	R3	M	Weighed	Abroad	ATM,821780	Vlasweg 12,.,Moerdijk,4782 PW,Netherlands	ATM,821780,Vlasweg 12,.,Moerdijk,4782 PW,Netherlands	Vlasweg 12,.,Moerdijk,4782 PW,Netherlands
To Other Countries	20 01 27	Yes	170.62	paint, inks, adhesives and resins containing dangerous substances	R1	M	Weighed	Abroad	ATM,821780	Vlasweg 12,.,Moerdijk,4782 PW,Netherlands	ATM,821780,Vlasweg 12,.,Moerdijk,4782 PW,Netherlands	Vlasweg 12,.,Moerdijk,4782 PW,Netherlands
To Other Countries	20 01 27	Yes	150.94	paint, inks, adhesives and resins containing dangerous substances	R3	M	Weighed	Abroad	Nehlsen GmbH,A-4187 HH	Louis Krages Strasse 10,.,Bremen,D28237,Germany	Nehlsen GmbH,A-4187 HH,Louis Krages Strasse 10,.,Bremen,D28237,Germany	Louis Krages Strasse 10,.,Bremen,D28237,Germany
To Other Countries	20 01 27	Yes	19.36	paint, inks, adhesives and resins containing dangerous substances	R3	M	Weighed	Abroad	Recyfuel SA,P-ENV07-01	Zoning Industriel d'Ehein,.,Engis,B4480,Belgium	Recyfuel SA,P-ENV07-01,Zoning Industriel d'Ehein,.,Engis,B4480,Belgium	Zoning Industriel d'Ehein,.,Engis,B4480,Belgium
Within the Country	20 01 36	No	2.04	discarded electrical and electronic equipment other than those mentioned in 20 01 21, 20 01 23 and 20 01 35	R4	M	Weighed	Offsite in Ireland	Recycling Village,WP2007/20	Tinure,Monasterboice,Co. Louth,.,Ireland		
To Other Countries	17 05 04	No	10743.96	soil and stones other than those mentioned in 17 05 03	D1	M	Weighed	Offsite in Ireland	KTK Landfill,W081-04	Brownstown,Kilcullen,Co. Kildare,.,Ireland		
To Other Countries	17 05 03	Yes	65.2	soil and stones containing dangerous substances	D1	M	Weighed	Abroad	Buhck GmbH,KGA53F00502	Rappenberg,Wiershop,.,21502,Germany	Buhck GmbH,KGA53F00502,Rappenberg,Wiershop,.,21502,Germany	Rappenberg,Wiershop,.,21502,Germany
To Other Countries	**17 06 01**	**Yes**	3715.78	insulation materials containing asbestos	D1	M	Weighed	Abroad	Buhck GmbH,KGA53F00502	Rappenberg,Wiershop,.,21502,Germany	Buhck GmbH,KGA53F00502,Rappenberg,Wiershop,.,21502,Germany	Rappenberg,Wiershop,.,21502,Germany
To Other Countries	17 06 05	Yes	1755.72	construction materials containing asbestos (18)	D1	M	Weighed	Abroad	Buhck GmbH,KGA53F00502	Rappenberg,Wiershop,.,21502,Germany	Buhck GmbH,KGA53F00502,Rappenberg,Wiershop,.,21502,Germany	Rappenberg,Wiershop,.,21502,Germany
To Other Countries	13 02 08	Yes	1625.0	other engine, gear and lubricating oils	R9	M	Weighed	Abroad	North Refinery,2009-35-003/24 MV	OOSTERWIERUM 25,.,HJ Farmsum,9936,Netherlands	North Refinery,2009-35-003/24 MV,OOSTERWIERUM 25,.,HJ Farmsum,9936,Netherlands	OOSTERWIERUM 25,.,HJ Farmsum,9936,Netherlands
To Other Countries	13 03 07	Yes	300.0	mineral-based non-chlorinated insulating and heat transmission oils	R1	M	Weighed	Abroad	Midland Oil,GP3135SD	Halesowen,.,West Midlands,B63 39N,United Kingdom	Midland Oil,GP3135SD,Halesowen,.,West Midlands,B63 39N,United Kingdom	Halesowen,.,West Midlands,B63 39N,United Kingdom
To Other Countries	13 07 02	Yes	25.0	petrol	R9	M	Weighed	Abroad	North Refinery,2009-35-003/24 MV	OOSTERWIERUM 25,.,HJ Farmsum,9936,Netherlands	North Refinery,2009-35-003/24 MV,OOSTERWIERUM 25,.,HJ Farmsum,9936,Netherlands	OOSTERWIERUM 25,.,HJ Farmsum,9936,Netherlands

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					
To Other Countries	19 03 04	Yes	1450.0	wastes marked as hazardous, partly (20) stabilised	D8	M	Weighed	Abroad	TerraCon GmbH,EG0102	Hoverstrasse 74-76,,,Hamburg,20539,Germany	TerraCon GmbH,EG0102,Hoverstrasse 74-76,,,Hamburg,20539,Germany	Hoverstrasse 74-76,,,Hamburg,20539,Germany
Within the Country	16 06 05	No	0.51	other batteries and accumulators	R4	M	Weighed	Offsite in Ireland	Recycling Village,WP2007/20	Tinure,Monasterboice,Co. Louth,,,Ireland		
To Other Countries	16 06 01	Yes	5236.89	lead batteries	R4	M	Weighed	Abroad	HJ Enthoven,BL5598	South Darley,,,Derbyshire,DE4 2LP,United Kingdom	HJ Enthoven,BL5598,South Darley,,,Derbyshire,DE4 2LP,United Kingdom	South Darley,,,Derbyshire,DE4 2LP,United Kingdom
Within the Country	16 06 02	Yes	7.92	Ni-Cd batteries	R4	M	Weighed	Offsite in Ireland	Recycling Village,WP2007/20	Tinure,Monasterboice,Co. Louth,,,Ireland	Recycling Village,WP2007/20,Tinure,Monasterboice,Co. Louth,,,Ireland	Tinure,Monasterboice,Co. Louth,,,Ireland
Within the Country	16 06 04	No	32.52	alkaline batteries (except 16 06 03)	R4	M	Weighed	Offsite in Ireland	Recycling Village,WP2007/20	Tinure,Monasterboice,Co. Louth,,,Ireland		
To Other Countries	16 06 01	Yes	136.82	lead batteries	R4	M	Weighed	Abroad	Recyclex SA,.	6 place de la Madeline,,,Paris,75008,France	Recyclex SA,,,6 place de la Madeline,,,Paris,75008,France	6 place de la Madeline,,,Paris,75008,France
Within the Country	20 01 39	No	330.0	plastics	R13	M	Weighed	Offsite in Ireland	Greenstar,W0188-01	Unit 14B Greenogue Business Park,Rathcoole,Co. Dublin,,,Ireland		
Within the Country	20 01 40	No	314.0	metals	R13	M	Weighed	Offsite in Ireland	A1 Metals,WMP007d	Acragar,,,Mountmellick,Co. laois,Ireland		

* Select a row by double-clicking the Description of Waste then click the delete button

APPENDIX D

Annual Noise Monitoring Report - 2010

RILTA ENVIRONMENTAL LTD.

Annual Noise Survey
2010

October 2010

Final

TOBIN CONSULTING ENGINEERS

TOBIN
Patrick J. Tobin & Co. Ltd.

REPORT

PROJECT: **RILTA Site 402 Noise survey September 2010**

CLIENT: **RILTA Environmental Ltd.**
Greenogue Business Park,
Rathcoole,
D24

COMPANY: **TOBIN Consulting Engineers**
Block 10-4,
Blanchardstown Corporate Park,
Dublin 15

www.tobin.ie

DOCUMENT AMENDMENT RECORD

Client:	**Rilta Environmental Ltd**
Project:	**Greenogue noise Monitoring**
Title:	**September 2010 Noise monitoring**

PROJECT NUMBER: 3084				DOCUMENT REF: 3084 – 01 - 04			
Final	Annual Noise Report	DC	18/10/11	ST	18/10/11	DG	18/10/11
Revision	**Description & Rationale**	**Originated**	**Date**	**Checked**	**Date**	**Authorised**	**Date**
TOBIN Consulting Engineers							

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APPENDICES

1 INTRODUCTION

This report deals with the noise monitoring requirement conditions of RILTA Environmental Ltd. (RILTA) hazardous waste facility at Greenogue Business Park, Rathcoole, Co. Dublin, Waste Licence No. 192-03.

2 NOISE MONITORING SURVEY

Tobin Consulting Engineers (TOBIN) were commissioned by RILTA to carry out an annual day and night time noise survey at their facility in Grenogue Business Park. The noise survey was carried out within the site boundary of the waste facility, at 4 no. locations agreed with the EPA (see Drawing No. 1250/01/1002). Weather conditions during monitoring event were dry and calm with no breeze. The following conditions were adhered to in undertaking the survey:

- Measurement of noise levels was undertaken using Type 1 instrumentation;
- Cognisance was taken of the EPA's 'Environmental Noise Survey Guidance Document, 2003;
- The survey was carried out in accordance with ISO 1996 Acoustics - Description and Measurement of Environmental Noise: Parts 1/2/3.

2.1 INSTRUMENTATION USED

The following instrumentation was used in the environmental noise monitoring survey:

- One Larson Davis 824 Precision Integrating Sound Level Analyser/Data logger with *Real-Time* Frequency Analyser Facility;
- Wind Shield Type: Larson Davis 2120 Windscreen; and
- Calibration Type: Larson Davis Precision Acoustic Calibrator Model CA200.

2.2 MEASUREMENT PROCEDURE

Daytime and night time noise monitoring was carried out by TOBIN on 1st September 2010. Noise monitoring was undertaken for 30 minute intervals at four agreed EPA locations. All the environmental noise analysers had data logging facilities were set on real-time, the logged data was later downloaded via a personal computer using software. One third octave frequency analysis was taken at the locations using the 824 Precision Integrating Sound Level Analyser/Data logger with *real-time* frequency analyser facility.

The measurement locations were all away from reflecting surfaces and at 1.5m height above local ground.

All acoustic instrumentation was calibrated before and after the survey period and no drift of calibration was observed (calibration level 114dB at 1000Hz).

2.3 RESULTS OF NOISE SURVEY

The noise monitoring locations are summarised in Table 2-1 below and illustrated on Drawing No. 1250/01/1002. The results of the noise survey are given in Table 2-2. The 1/3 octave frequency analysis data is given in graphical format in Appendix A.

Table 2-1 Noise Monitoring Locations

Monitoring Location	Description
N1	South western boundary of site
N2	North western boundary of site
N3	North eastern boundary of site
N4	South eastern boundary of site

Location N1

Noise monitoring location N1 is located at the southwestern boundary of the site, adjacent to the site car park and to the access road to RILTA within Greenogue Business Park. Noise at this location was dominated in both the day and night period by Baldonnel air traffic.

Location N2

N2 is located in the northwestern corner of the site, behind the racked storage building. Aircraft, road traffic and adjacent facilities were the main noise contributors at N2.

Location N3

N3 is located at the northeastern site boundary, adjacent to the tank farm. At this location, activity from neighbouring facilities, truck movements and aviation traffic dominated the noise sources. The RILTA facility was audible in lulls.

Location N4

Noise monitoring location N4 is located in the southeastern corner of the site. Passing road traffic and air traffic from Baldonnel dominated the noise climate at this location. The RILTA facility was largely inaudible.

Table 2-2 Noise Monitoring Results – dB(A) and 30 minute intervals

Receptor	Time	Leq	L10	L90	Notes
DAY TIME					
N1	14:36	56.9	59.9	49.2	Plant not audible, Passing traffic and aircraft overhead dominant at this location
N2	16:25	51.9	54.6	45.4	Aircraft noise dominant, noise from adjoining facility, RILTA audible.
N3	15:48	62.8	60.6	52.4	Over head aircraft dominant, trucks and adjacent site noise audible, digger in operation next site, RILTA largely inaudible.
N4	15:14	63.7	61.7	48.4	Passing traffic is dominant, overhead aircraft, facility inaudible, aircraft and helicopters very low and very frequent.
NIGHT TIME					
N1	23:50	44.5	45.3	41.2	Passing traffic
N2	22:40	43.5	42.1	40.0	Stream audible, aircraft overhead, distant road traffic, helicopter
N3	22:05	52.6	55.9	55.2	RILTA audible at 46/47dB in lull periods, noise from neighbouring facilities and stream audible, fan audible.
N4	23:15	44.3	43.4	35.4	Passing traffic on internal industrial estate roads.

3 CONCLUSION

The noise emission limits given in Waste Licence 192-03 are 55 dB(A) for daytime and 45 dB(A) for night time. These levels specifically relate to noise emissions arising from the facility, measured at any noise sensitive location.

The noise emissions from RILTA Environmental Ltd. are given in Table 2-2 above.

Noise levels recorded at the four EPA agreed noise monitoring locations contain noise emissions from adjacent industrial sites, low flying aircraft and traffic on the internal road network of the industrial estate. Noise emissions from the RILTA facility were audible only during daytime monitoring and not audible during the night time monitoring. Note that the EPA agreed noise monitoring locations are all on site and do not reflect emissions at noise sensitive locations.

The A-weighted equivalent continuous sound pressure level (LAeq, 30 min) recorded at the RILTA facility was less than 55 dB(A) at noise monitoring location N2 only, during the daytime monitoring event. Where the measured LAeq, 30 min exceeded 55 dB(A), this was due to the addition of extraneous noise sources such as low flying aircraft from nearby Baldonnell Airport, passing traffic on the internal roads of the industrial estate, distant traffic on the N7 and activities in adjacent sites.

No noise emissions due to the RILTA facility were generally audible during the night time monitoring period. During the night time monitoring period the A-weighted equivalent continuous sound pressure level (LAeq, 30 min) exceeded 45 dB(A) (night time) limit at N3 only. The

exceedance at N3 was directly attributable to extraneous noise sources such as traffic on the industrial estate road network, the adjacent flowing stream or low flying aircraft from nearby Baldonnell Airport.

There were no impulsive noise emissions audible at any of the monitoring locations during the daytime or night time monitoring period. With regard to tonal emissions, Figures 1 to 8 (see Appendix A) indicate that tonal components were present at 2 no. daytime monitoring locations (N3 & N4). However, no tonal emissions at these frequencies were recorded at any other monitoring location during the day or night time monitoring event.

There was a pure tone at 20Hz measured at monitoring location N3 (Day Monitoring). The tone at this frequency was not present at the same location during the night time survey. During the daytime survey at N4 there was a pure tone at 25Hz. The tone at N4 (25Hz) was not observed at any other monitoring location during either the day or night time monitoring events, and as such is unlikely to have originated due to RILTA activities.

There was a tonal component at 50Hz measured at monitoring location N3 (Night Monitoring). The tone at this frequency was inaudible at all locations during the night time survey. The 5dB penalty has not been added as it is unlikely that the tone is due to mains hum, as it was not present at this location during the daytime survey and as such is likely to be derived from an off-site source. Full 1/3 octave frequency band analysis of both day and night time surveys is presented in Appendix A.

APPENDIX A

1/3 Octave Frequency Analysis
Day & Night Noise Surveys

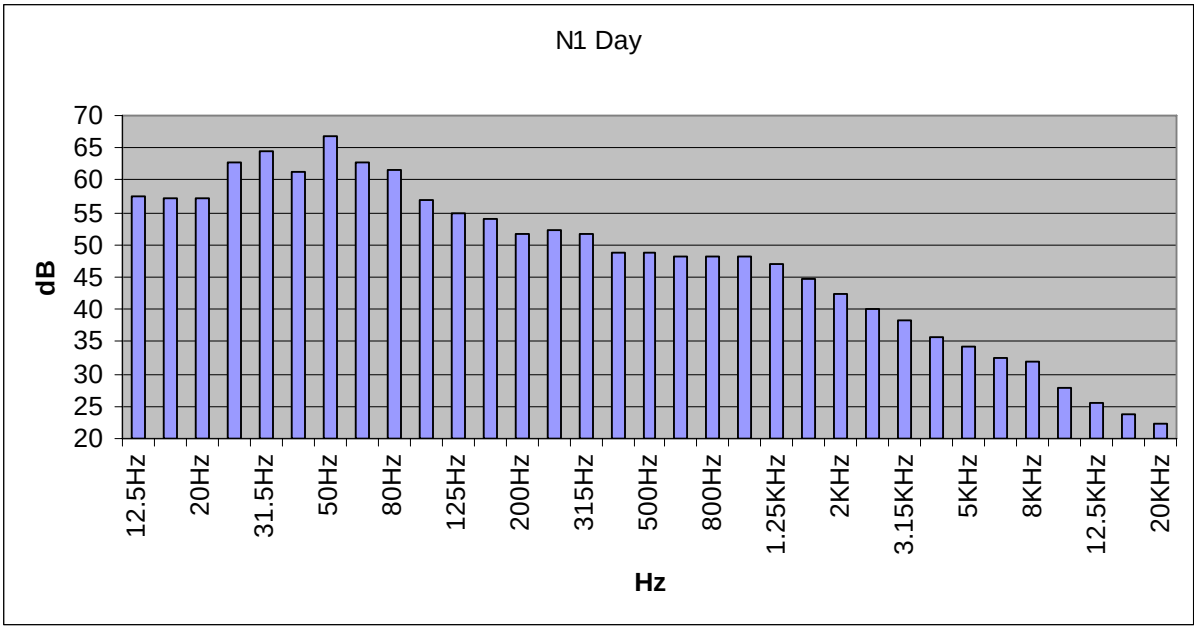


Figure 1 N1 Daytime Frequency Analysis

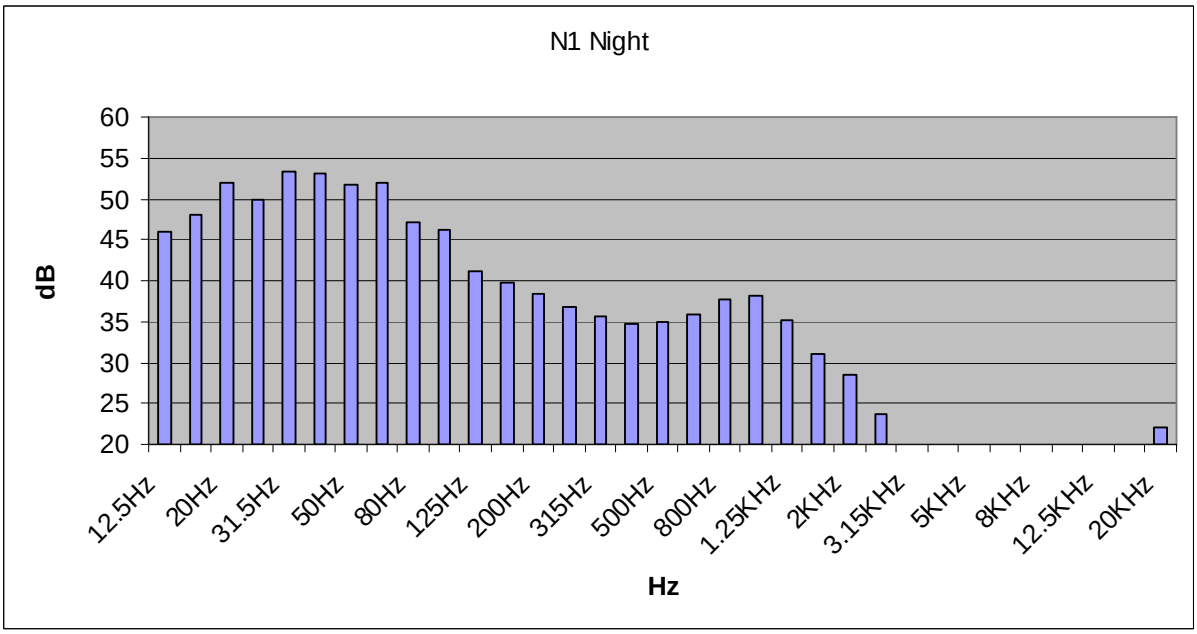


Figure 2 N1 Night Time Frequency Analysis

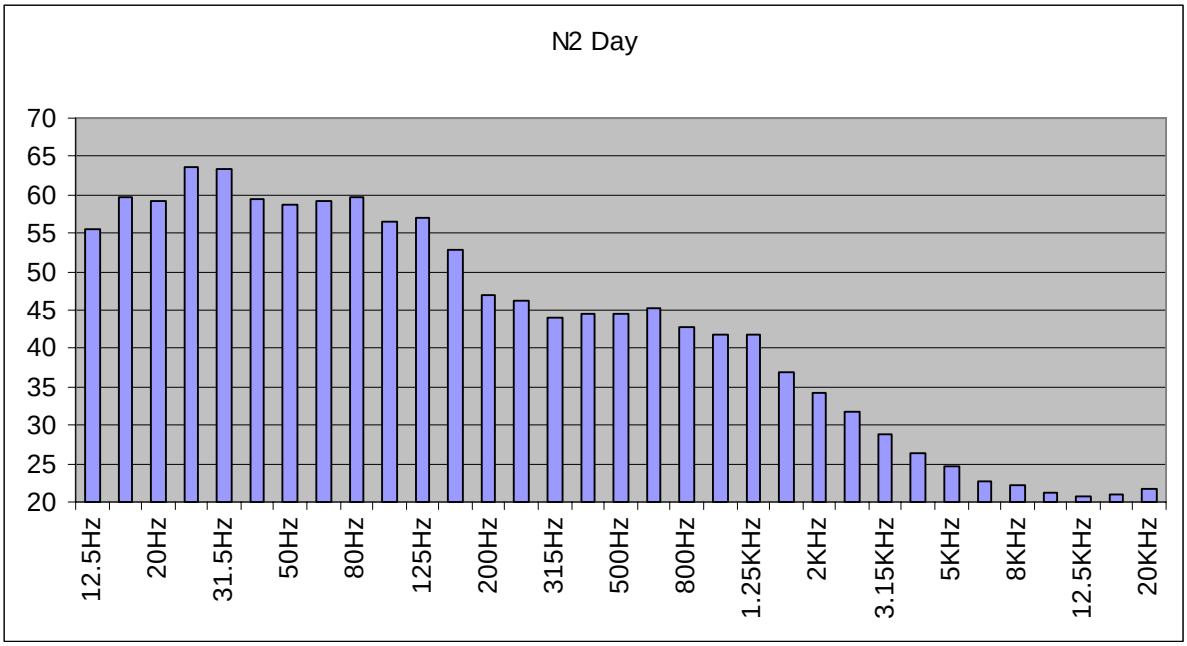


Figure 3 N2 Daytime Frequency Analysis

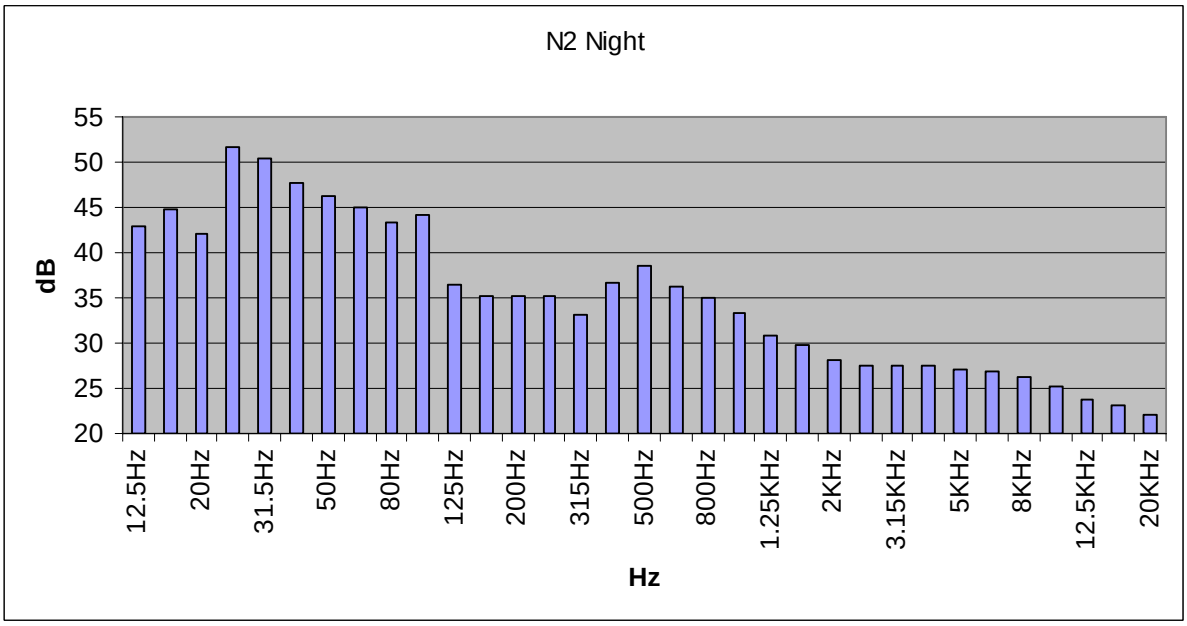


Figure 4 N2 Night Time Frequency Analysis

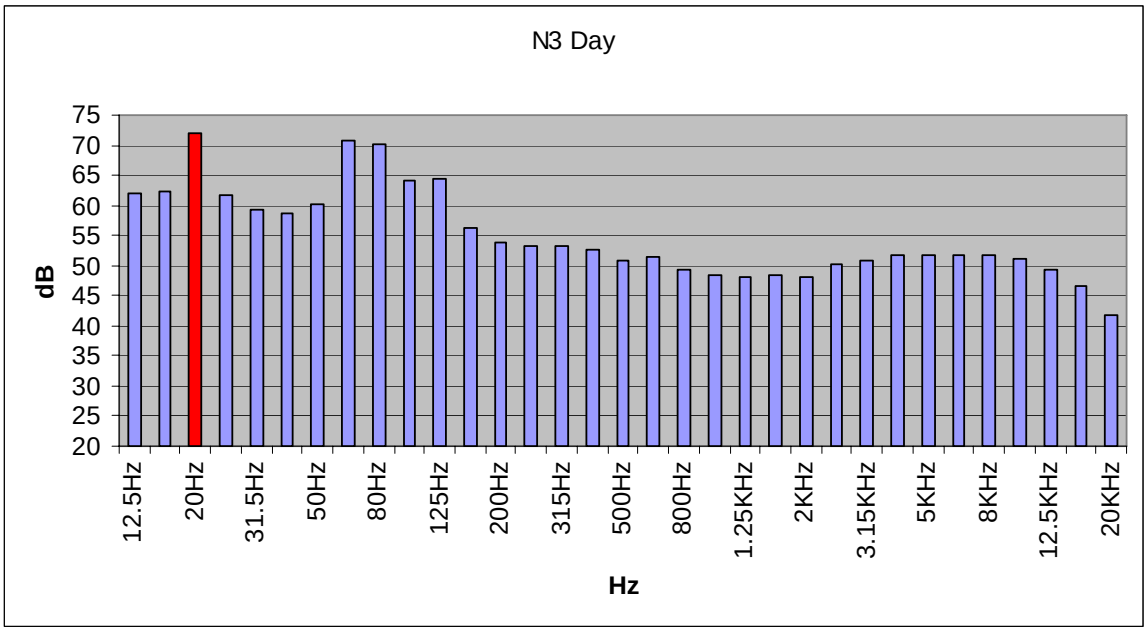


Figure 5 N3 Daytime Frequency Analysis

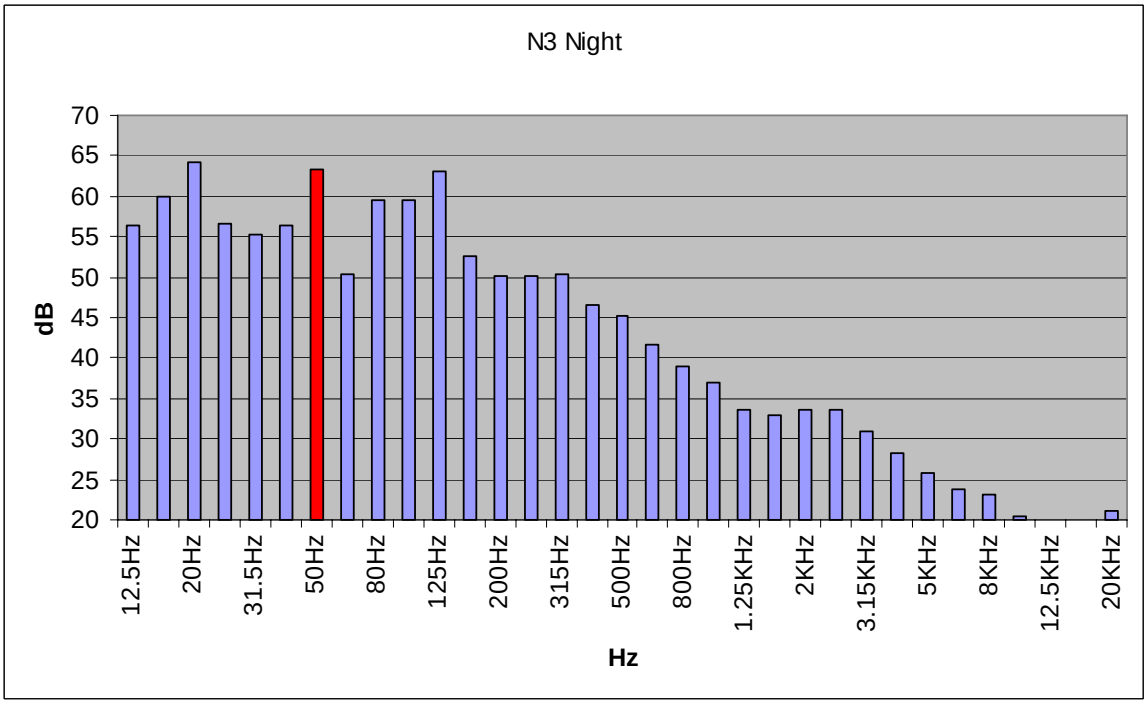


Figure 6 N3 Night Time Frequency Analysis

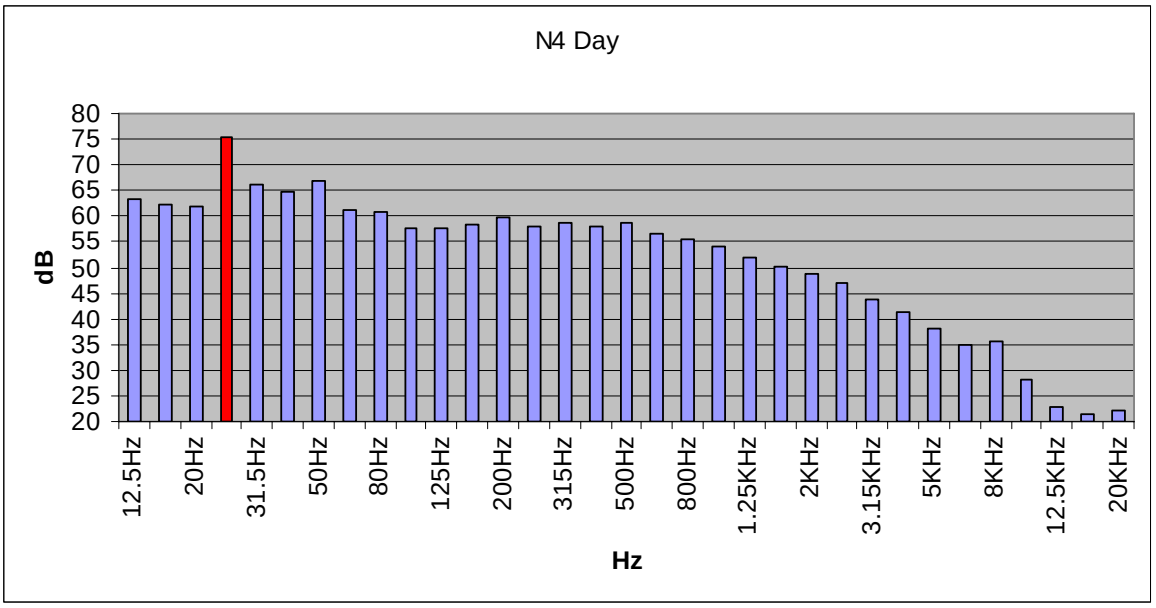


Figure 7 N4 Daytime Frequency Analysis

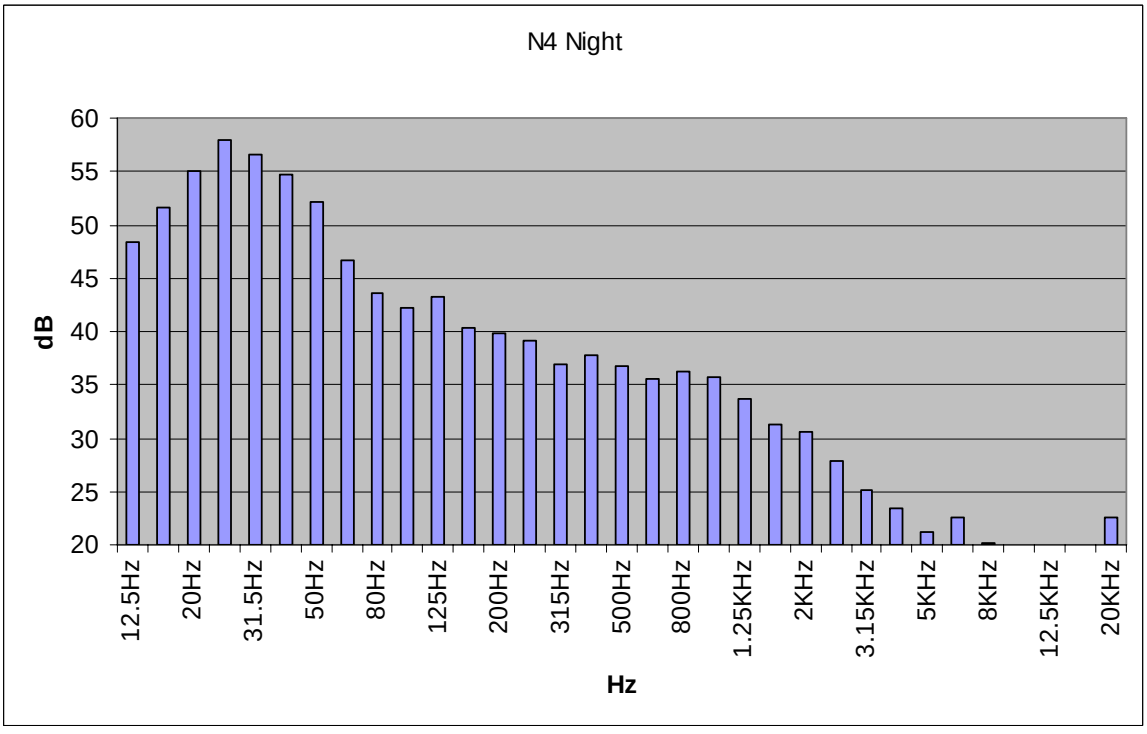


Figure 8 N4 Night Time Frequency Analysis

APPENDIX E

Laboratory Dust Monitoring Results - 2010

ALcontrol Laboratories

Unit 18A
Rosemount Business Park
Ballycoolin
Dublin 11
Tel : (0035) 3188 29893

Attention: David Corrigan

CERTIFICATE OF ANALYSIS

Date:	17 June 2010		
Customer:	D_TOBIN_DUB-17		
Sample Delivery Group (SDG):	100608-47	**Report No.:**	87438
Your Reference:	3084		
Location:	Rilta Enviro LTD		

We received 4 samples on Friday June 04, 2010 and 4 of these samples were scheduled for analysis which was completed on Thursday June 17, 2010. Accredited laboratory tests are defined within the report, but opinions, interpretations and on-site data expressed herein are outside the scope of ISO 17025 accreditation.

Should this report require incorporation into client reports, it must be used in its entirety and not simply with the data sections alone.

All chemical testing (unless subcontracted) is performed at ALcontrol Hawarden Laboratories.

Asbestos testing - we are not accredited for screening soil samples for asbestos fibres. We are only accredited to identify asbestos fibres in bulk material (ACM).

Approved By:

Iain Swinton

Operations Director - Land UK & Ireland

Validated

ALcontrol Laboratories Analytical Services

SDG:	100608-47	**Customer:**	Tobin
Job:	D_TOBIN_DUB-17	**Attention:**	David Corrigan
Client Reference:	3084	**Order No.:**	1777
Location:	Rilta Enviro LTD	**Report No:**	87438

Received Sample Overview

Lab Sample No(s)	Customer Sample Ref.	Depth (m)	Sampled Date
1657819	D1 1		04/06/2010
1657824	D2 1		04/06/2010
1657829	D3 1		04/06/2010
1657840	D4 1		04/06/2010

Only received samples which have had analysis scheduled will be shown on the following pages.

Validated

ALcontrol Laboratories Analytical Services

SDG:	100608-47	**Customer:**	Tobin
Job:	D_TOBIN_DUB-17	**Attention:**	David Corrigan
Client Reference:	3084	**Order No.:**	1777
Location:	Rilta Enviro LTD	**Report No:**	87438

LIQUID

Results Legend X Test N No Determination Possible	Lab Sample No(s)	1657819	1657824	1657829	1657840	Total
	Customer Sample Ref.	D1	D2	D3	D4	
	Depth (m)					
	Container	1l glass bottle (D)	1l glass bottle (D)	1l glass bottle (D)	1l glass bottle (D)	
Dust in Water	All		X	X	X	X	0 4

Validated

ALcontrol Laboratories Analytical Services

SDG:	100608-47	**Customer:**	Tobin
Job:	D_TOBIN_DUB-17	**Attention:**	David Corrigan
Client Reference:	3084	**Order No.:**	1777
Location:	Rilta Enviro LTD	**Report No:**	87438

Test Completion dates

SDG reference: 100608-47

Lab Sample No(s)	**1657819**	**1657824**	**1657829**	**1657840**
Customer Sample Ref.	**D1**	**D2**	**D3**	**D4**
Depth				
Type	**LIQUID**	**LIQUID**	**LIQUID**	**LIQUID**
Dust in Water	17/06/2010	17/06/2010	17/06/2010	17/06/2010

Validated

ALcontrol Laboratories Analytical Services

SDG:	100608-47	**Customer:**	Tobin
Job:	D_TOBIN_DUB-17	**Attention:**	David Corrigan
Client Reference:	3084	**Order No.:**	1777
Location:	Rilta Enviro LTD	**Report No:**	87438

Results Legend	
#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	subcontracted test.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of the individual compounds within the samples are not corrected for this recovery.

Component	LOD/Units	Method	Customer Sample Ref.	Depth (m)	Sample Type	Date Sampled	Date Received	SDG Ref	Lab Sample No.(s)
			D1		Water(GW/SW)	04/06/2010	04/06/2010	100608-47	1657819
			D2		Water(GW/SW)	04/06/2010	04/06/2010	100608-47	1657824
			D3		Water(GW/SW)	04/06/2010	04/06/2010	100608-47	1657829
			D4		Water(GW/SW)	04/06/2010	04/06/2010	100608-47	1657840
Dust, Total	<0.026 mg/m2/day	TM253	151						
Dust, Organic	mg/m2/day	TM253	56.5						
Dust, Inorganic	mg/m2/day	TM253	94						
			110						
			63.1						
			47						
			141						
			49.4						
			91.7						
			233						
			127						
			106						

Table of Results - Appendix

SDG Number : 100608-47 **Client :** Tobin **Client Ref :** 3084

REPORT KEY

Results expressed as (e.g.) 1.03E-07 is equivalent to 1.03x10-7

NDP	No Determination Possible	#	ISO 17025 Accredited	*	Subcontracted Test	M	MCERTS Accredited
NFD	No Fibres Detected	PFD	Possible Fibres Detected	»	Result previously reported (Incremental reports only)	EC	Equivalent Carbon (Aromatics C8-C35)

Note: Method detection limits are not always achievable due to various circumstances beyond our control

Method No	Reference	Description	Wet/Dry Sample [1]
TM253	Dust is collected either using a "Frisbee" collector this is the "Stockholm" method or using a "jam jar" collector, this is the "Berghoff" method.	The Determination of Dust	

[1] Applies to Solid samples only. DRY indicates samples have been dried at 35°C. NA = not applicable.

APPENDIX

APPENDIX

1. Results are expressed on a dry weight basis (dried at 35°C) for all soil analyses except for the following: NRA Leach tests, flash point, ammonium as NH_4 by the BRE method, VOC TICS, SVOC TICS, TOF-MS SCAN/SEARCH and TOF-MS TICS.
2. Samples will be run in duplicate upon request, but an additional charge may be incurred.
3. If sufficient sample is received a sub sample will be retained free of charge for 30 days after analysis is completed (e-mailed) for both soil jars, tubs and volatile jars. All waters and vials will be discarded 10 days after the analysis is completed (e-mailed). All material removed during an asbestos containing material screen and analysed for the presence of asbestos will be retained for a period of 6 months after the analysis date. All samples received and not scheduled will be disposed of one month after the date of receipt unless we are instructed to the contrary. Once the initial period has expired, a storage charge will be applied for each month or part thereof until the client cancels the request for sample storage. ALcontrol Laboratories reserve the right to charge for samples received and stored but not analysed.
4. With respect to turnaround, we will always endeavour to meet client requirements wherever possible, but turnaround times cannot be absolutely guaranteed due to so many variables beyond our control.
5. We take responsibility for any test performed by sub-contractors (marked with an asterisk). We endeavour to use UKAS/MCERTS Accredited Laboratories, who either complete a quality questionnaire or are audited by ourselves. For some determinands there are no UKAS/MCERTS Accredited Laboratories, in this instance a laboratory with a known track record will be utilised.
6. When requested, the individual sub sample scheduled will be screened in house for the presence of large asbestos containing material fragments/pieces. If no asbestos containing material is found this will be reported as 'no asbestos containing material detected'. If asbestos containing material is detected it will be removed and analysed by our documented in house method TM048 based on HSG 248 (2005), which is accredited to ISO17025. If asbestos containing material is present no further analysis will be undertaken. At no point is the fibre content of the soil sample determined.
7. If no separate volatile sample is supplied by the client, the integrity of the data may be compromised if the laboratory is required to create a sub-sample from the bulk sample – similarly, if a headspace or sediment is present in the volatile sample. This will be flagged up as an invalid VOC on the test schedule or recorded on the log sheet.
8. If appropriate preserved bottles are not received preservation will take place on receipt. However, the integrity of the data may be compromised.
9. NDP – No determination possible due to insufficient/unsuitable sample.
10. Metals in water are performed on a filtered sample, and therefore represent dissolved metals – total metals must be requested separately.
11. A table containing the date of analysis for each parameter is not routinely included with the report, but is available upon request.
12. Results relate only to the items tested
13. **Surrogate recoveries** – Most of our organic methods include surrogates, the recovery of which is monitored and reported. For EPH, MO, PAH, GRO and VOCs on soils the result is not surrogate corrected, but a percentage recovery is quoted. Acceptable limits for most organic methods are 70 – 130 %.
14. **Product analyses** – Organic analyses on products can only be semi-quantitative due to the matrix effects and high dilution factors employed.
15. Phenols monohydric by HPLC include phenol, cresols (2-Methylphenol, 3-Methylphenol and 4-Methylphenol) and Xylenols (2,3 Dimethylphenol, 2,4 Dimethylphenol, 2,5 Dimethylphenol, 2,6 Dimethylphenol, 3,4 Dimethyphenol, 3,5 Dimethylphenol).
16. Total of 5 speciated phenols by HPLC includes Phenol, 2,3,5-Trimethyl Phenol, 2-Isopropylphenol, Cresols and Xylenols (as detailed in 14).
17. Stones/debris are not routinely removed. We always endeavour to take a representative sub sample from the received sample.
18. Our MCERTS accreditation for PAHs by GCMS applies to all product types apart from Kerosene, where naphthalene only is not accredited.
19. In certain circumstances the method detection limit may be elevated due to the sample being outside the calibration range. Other factors that may contribute to this include possible interferences. In both cases the sample would be diluted which would cause the method detection limit to be raised.
19. Mercury results quoted on soils will not include volatile mercury as the analysis is performed on a dried and crushed sample.
20. For the BSEN 12457-3 two batch process to allow the cumulative release to be calculated, the volume of the leachate produced is measured and filtered for all tests. We therefore cannot carry out any unfiltered analysis. The tests affected include volatiles GCFID/GCMS and all subcontracted analysis.
21. For all leachate preparations (NRA, DIN, TCLP, BSEN 12457-1, 2, 3) volatile loss may occur, as we do not employ zero headspace extraction.
22. We are accredited to MCERTS for sand, clay and loam/topsoil, or any of these materials – whether these are derived from naturally occurring soil profiles, or from fill/made ground, as long as these materials constitute the major part of the sample. Other coarse granular material such as concrete, gravel and brick are not accredited if they comprise the major part of the sample.
23. Analysis and identification of specific compounds using GCFID is by retention time only, and we routinely calibrate and quantify for benzene, toluene, ethylbenzenes and xylenes (BTEX). For total volatiles in the C4 – C10 range, the total area of the chromatogram is integrated and expressed as ug/kg or ug/l. Although this analysis is commonly used for the quantification of gasoline range organics (GRO), the system will also detect other compounds such as chlorinated solvents, and this may lead to a falsely high result with respect to hydrocarbons only. It is not possible to specifically identify these non-hydrocarbons, as standards are not routinely run for any other compounds, and for more definitive identification, volatiles by GCMS should be utilised.

LIQUID MATRICES EXTRACTION SUMMARY

ANALYSIS	EXTRACTION SOLVENT	EXTRACTION METHOD	ANALYSIS
PAH MS	HEXANE	STIRRED EXTRACTION (STIR-BAR)	GC MS
EPH	HEXANE	STIRRED EXTRACTION (STIR-BAR)	GC FID
EPH CWG	HEXANE	STIRRED EXTRACTION (STIR-BAR)	GC FID
MINERAL OIL	HEXANE	STIRRED EXTRACTION (STIR-BAR)	GC FID
PCB 7 CONGENERS	HEXANE	STIRRED EXTRACTION (STIR-BAR)	GC MS
PCB TOTAL	HEXANE	STIRRED EXTRACTION (STIR-BAR)	GS MS
SVOC	DCM	LIQUID/LIQUID SHAKE	GC MS
FREE SULPHUR	DCM	SOLID PHASE EXTRACTION	HPLC
PEST OCP/OPP	DCM	LIQUID/LIQUID SHAKE	GC MS
TRIAZINE HERBS	DCM	LIQUID/LIQUID SHAKE	GC MS
PHENOLS MS	DCM	SOLID PHASE EXTRACTION	GC MS
TPH by INFRA RED (IR)	TCE	LIQUID/LIQUID EXTRACTION	HPLC
MINERAL OIL by IR	TCE	LIQUID/LIQUID EXTRACTION	HPLC
GLYCOLS	NONE	DIRECT INJECTION	GC FID

SOLID MATRICES EXTRACTION SUMMARY

ANALYSIS	D/C OR WET	EXTRACTION SOLVENT	EXTRACTION METHOD	ANALYSIS
Solvent Extractable Matter	D&C	DCM	SOXTHERM	GRAVIMETRIC
Cyclohexane Ext. Matter	D&C	CYCLOHEXANE	SOXTHERM	GRAVIMETRIC
Thin Layer Chromatography	D&C	DCM	SOXTHERM	IATROSCAN
Elemental Sulphur	D&C	DCM	SOXTHERM	HPLC
Phenols by GCMS	WET	DCM	SOXTHERM	GC-MS
Herbicides	D&C	HEXANE:ACETONE	SOXTHERM	GC-MS
Pesticides	D&C	HEXANE:ACETONE	SOXTHERM	GC-MS
EPH (DRO)	D&C	HEXANE:ACETONE	END OVER END	GC-FID
EPH (Min oil)	D&C	HEXANE:ACETONE	END OVER END	GC-FID
EPH (Cleaned up)	D&C	HEXANE:ACETONE	END OVER END	GC-FID
EPH CWG by GC	D&C	HEXANE:ACETONE	END OVER END	GC-FID
PCB tot / PCB con	D&C	HEXANE:ACETONE	END OVER END	GC-MS
Polyaromatic Hydrocarbons (MS)	WET	HEXANE:ACETONE	Microwave TM218.	GC-MS
C8-C40 (C6-C40)EZ Flash	WET	HEXANE:ACETONE	SHAKER	GC-EZ
Polyaromatic Hydrocarbons Rapid GC	WET	HEXANE:ACETONE	SHAKER	GC-EZ
Semi Volatile Organic Compounds	WET	DCM:ACETONE	SONICATE	GC-MS

Identification of Asbestos in Bulk Materials

The results for asbestos identification for soil samples are obtained from possible Asbestos Containing Material, removed during the 'Screening of soils for Asbestos Containing Materials', which have been examined to determine the presence of asbestos fibres using Alcontrol Laboratories (Hawarden) in-house method of transmitted/polarised light microscopy and central stop dispersion staining, based on HSG 248 (2005).

Visual Estimation Of Fibre Content.

Estimation of fibre content is not permitted as part of our UKAS accredited test other than: -

Trace – Where only one or two asbestos fibres were identified.

Further guidance on typical asbestos fibre content of manufactured products can be found in MDHS 100.

The identification of asbestos containing materials falls within our schedule of tests for which we hold UKAS accreditation, however opinions, interpretations and all other information contained in the report are outside the scope of UKAS accreditation.

Asbestos Type	Common Name
Chrysotile	White Asbestos
Amosite	Brown Asbestos
Crocidolite	Blue Asbestos
Fibrous Actinolite	-
Fibrous Anthophyllite	-
Fibrous Tremolite	-

ALcontrol Laboratories

Unit 18A
Rosemount Business Park
Ballycoolin
Dublin 11
Tel : (0035) 3188 29893

Attention: David Corrigan

CERTIFICATE OF ANALYSIS

Date:	21 September 2010		
Customer:	D_TOBIN_DUB-32		
Sample Delivery Group (SDG):	100916-49	**Report No.:**	97476
Your Reference:	3084 (1250)		
Location:	Rilta		

We received 4 samples on Thursday September 16, 2010 and 4 of these samples were scheduled for analysis which was completed on Tuesday September 21, 2010. Accredited laboratory tests are defined within the report, but opinions, interpretations and on-site data expressed herein are outside the scope of ISO 17025 accreditation.

Should this report require incorporation into client reports, it must be used in its entirety and not simply with the data sections alone.

All chemical testing (unless subcontracted) is performed at ALcontrol Hawarden Laboratories.

Asbestos testing - we are not accredited for screening soil samples for asbestos fibres. We are only accredited to identify asbestos fibres in bulk material (ACM).

Approved By:

Iain Swinton

Business Director - Land UK & Ireland

Validated

ALcontrol Laboratories Analytical Services

SDG:	100916-49	**Customer:**	Tobin
Job:	D_TOBIN_DUB-32	**Attention:**	David Corrigan
Client Reference:	3084 (1250)	**Order No.:**	1892
Location:	Rilta	**Report No:**	97476

Received Sample Overview

Lab Sample No(s)	Customer Sample Ref.	AGS Ref.	Depth (m)	Sampled Date
2094946	D1			
2094953	D2			
2094958	D3			
2094965	D4			

Only received samples which have had analysis scheduled will be shown on the following pages.

Validated

ALcontrol Laboratories Analytical Services

SDG:	100916-49	**Customer:**	Tobin
Job:	D_TOBIN_DUB-32	**Attention:**	David Corrigan
Client Reference:	3084 (1250)	**Order No.:**	1892
Location:	Rilta	**Report No:**	97476

LIQUID

Results Legend

X Test

N No Determination Possible

			Lab Sample No(s)	2094946	2094953	2094958	2094965
			Customer Sample Ref.	D1	D2	D3	D4
			AGS Ref.				
			Depth (m)				
			Container	2l glass bottle	2l glass bottle	2l glass bottle	2l glass bottle
Dust in Water	All	NDPs: 0 Tests: 4		X	X	X	X

Validated

ALcontrol Laboratories Analytical Services

SDG:	100916-49	**Customer:**	Tobin
Job:	D_TOBIN_DUB-32	**Attention:**	David Corrigan
Client Reference:	3084 (1250)	**Order No.:**	1892
Location:	Rilta	**Report No:**	97476

Test Completion Dates

Lab Sample No(s)	2094946	2094953	2094958	2094965
Customer Sample Ref.	D1	D2	D3	D4
AGS Ref.				
Depth				
Type	LIQUID	LIQUID	LIQUID	LIQUID
Dust in Water	21/09/2010	21/09/2010	21/09/2010	21/09/2010

Validated

ALcontrol Laboratories Analytical Services

SDG:	100916-49	**Customer:**	Tobin
Job:	D_TOBIN_DUB-32	**Attention:**	David Corrigan
Client Reference:	3084 (1250)	**Order No.:**	1892
Location:	Rilta	**Report No:**	97476

Results Legend	
#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	subcontracted test.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of the individual compounds within the samples are not corrected for this recovery.

Component	LOD/Units	Method	Customer Sample Ref.	D1	D2	D3	D4		
			Depth (m)						
			Sample Type	Water(GW/SW)	Water(GW/SW)	Water(GW/SW)	Water(GW/SW)		
			Date Sampled	16/09/2010	16/09/2010	16/09/2010	16/09/2010		
			Date Received	100916-49	100916-49	100916-49	100916-49		
			SDG Ref	2094946	2094953	2094958	2094965		
			Lab Sample No.(s)						
			AGS Reference						
Dust, Total	<0.026 mg/m2/day	TM253		117	97.3	95.5	74.1		
Dust, Organic	mg/m2/day	TM253		53.6	74.1	32.1	37.5		
Dust, Inorganic	mg/m2/day	TM253		63.4	23.2	63.4	36.6		

Table of Results - Appendix

SDG Number : 100916-49 **Client :** D_TOBIN_DUB **Client Ref :** 3084 (1250)

REPORT KEY

Results expressed as (e.g.) 1.03E-07 is equivalent to 1.03x10-7

NDP	No Determination Possible	#	ISO 17025 Accredited	*	Subcontracted Test	M	MCERTS Accredited
NFD	No Fibres Detected	PFD	Possible Fibres Detected	»	Result previously reported (Incremental reports only)	EC	Equivalent Carbon (Aromatics C8-C35)

Note: Method detection limits are not always achievable due to various circumstances beyond our control

Method No	Reference	Description	Wet/Dry Sample [1]	Surrogate Corrected
TM253	Dust is collected either using a "Frisbee" collector this is the "Stockholm" method or using a "jam jar" collector, this is the "Berghoff" method.	The Determination of Dust		

[1] Applies to Solid samples only. DRY indicates samples have been dried at 35°C. NA = not applicable.

APPENDIX

APPENDIX

1. Results are expressed on a dry weight basis (dried at 35°C) for all soil analyses except for the following: NRA Leach tests, flash point, ammonium as NH_4 by the BRE method, VOC TICS, SVOC TICS, TOF-MS SCAN/SEARCH and TOF-MS TICS.
2. Samples will be run in duplicate upon request, but an additional charge may be incurred.
3. If sufficient sample is received a sub sample will be retained free of charge for 30 days after analysis is completed (e-mailed) for both soil jars, tubs and volatile jars. All waters and vials will be discarded 10 days after the analysis is completed (e-mailed). All material removed during an asbestos containing material screen and analysed for the presence of asbestos will be retained for a period of 6 months after the analysis date. All samples received and not scheduled will be disposed of one month after the date of receipt unless we are instructed to the contrary. Once the initial period has expired, a storage charge will be applied for each month or part thereof until the client cancels the request for sample storage. ALcontrol Laboratories reserve the right to charge for samples received and stored but not analysed.
4. With respect to turnaround, we will always endeavour to meet client requirements wherever possible, but turnaround times cannot be absolutely guaranteed due to so many variables beyond our control.
5. We take responsibility for any test performed by sub-contractors (marked with an asterisk). We endeavour to use UKAS/MCERTS Accredited Laboratories, who either complete a quality questionnaire or are audited by ourselves. For some determinands there are no UKAS/MCERTS Accredited Laboratories, in this instance a laboratory with a known track record will be utilised.
6. When requested, the individual sub sample scheduled will be screened in house for the presence of large asbestos containing material fragments/pieces. If no asbestos containing material is found this will be reported as 'no asbestos containing material detected'. If asbestos containing material is detected it will be removed and analysed by our documented in house method TM048 based on HSG 248 (2005), which is accredited to ISO17025. If asbestos containing material is present no further analysis will be undertaken. At no point is the fibre content of the soil sample determined.
7. If no separate volatile sample is supplied by the client, the integrity of the data may be compromised if the laboratory is required to create a sub-sample from the bulk sample – similarly, if a headspace or sediment is present in the volatile sample. This will be flagged up as an invalid VOC on the test schedule or recorded on the log sheet.
8. If appropriate preserved bottles are not received preservation will take place on receipt. However, the integrity of the data may be compromised.
9. NDP – No determination possible due to insufficient/unsuitable sample.
10. Metals in water are performed on a filtered sample, and therefore represent dissolved metals – total metals must be requested separately.
11. A table containing the date of analysis for each parameter is not routinely included with the report, but is available upon request.
12. Results relate only to the items tested
13. **Surrogate recoveries** – Most of our organic methods include surrogates, the recovery of which is monitored and reported. For EPH, MO, PAH, GRO and VOCs on soils the result is not surrogate corrected, but a percentage recovery is quoted. Acceptable limits for most organic methods are 70 – 130 %.
14. **Product analyses** – Organic analyses on products can only be semi-quantitative due to the matrix effects and high dilution factors employed.
15. Phenols monohydric by HPLC include phenol, cresols (2-Methylphenol, 3-Methylphenol and 4-Methylphenol) and Xylenols (2,3 Dimethylphenol, 2,4 Dimethylphenol, 2,5 Dimethylphenol, 2,6 Dimethylphenol, 3,4 Dimethyphenol, 3,5 Dimethylphenol).
16. Total of 5 speciated phenols by HPLC includes Phenol, 2,3,5-Trimethyl Phenol, 2-Isopropylphenol, Cresols and Xylenols (as detailed in 14).
17. Stones/debris are not routinely removed. We always endeavour to take a representative sub sample from the received sample.
18. Our MCERTS accreditation for PAHs by GCMS applies to all product types apart from Kerosene, where naphthalene only is not accredited.
19. In certain circumstances the method detection limit may be elevated due to the sample being outside the calibration range. Other factors that may contribute to this include possible interferences. In both cases the sample would be diluted which would cause the method detection limit to be raised.
19. Mercury results quoted on soils will not include volatile mercury as the analysis is performed on a dried and crushed sample.
20. For the BSEN 12457-3 two batch process to allow the cumulative release to be calculated, the volume of the leachate produced is measured and filtered for all tests. We therefore cannot carry out any unfiltered analysis. The tests affected include volatiles GCFID/GCMS and all subcontracted analysis.
21. For all leachate preparations (NRA, DIN, TCLP, BSEN 12457-1, 2, 3) volatile loss may occur, as we do not employ zero headspace extraction.
22. We are accredited to MCERTS for sand, clay and loam/topsoil, or any of these materials – whether these are derived from naturally occurring soil profiles, or from fill/made ground, as long as these materials constitute the major part of the sample. Other coarse granular material such as concrete, gravel and brick are not accredited if they comprise the major part of the sample.
23. Analysis and identification of specific compounds using GCFID is by retention time only, and we routinely calibrate and quantify for benzene, toluene, ethylbenzenes and xylenes (BTEX). For total volatiles in the C4 – C10 range, the total area of the chromatogram is integrated and expressed as ug/kg or ug/l. Although this analysis is commonly used for the quantification of gasoline range organics (GRO), the system will also detect other compounds such as chlorinated solvents, and this may lead to a falsely high result with respect to hydrocarbons only. It is not possible to specifically identify these non-hydrocarbons, as standards are not routinely run for any other compounds, and for more definitive identification, volatiles by GCMS should be utilised.

LIQUID MATRICES EXTRACTION SUMMARY

ANALYSIS	EXTRACTION SOLVENT	EXTRACTION METHOD	ANALYSIS
PAH MS	HEXANE	STIRRED EXTRACTION (STIR-BAR)	GC MS
EPH	HEXANE	STIRRED EXTRACTION (STIR-BAR)	GC FID
EPH CWG	HEXANE	STIRRED EXTRACTION (STIR-BAR)	GC FID
MINERAL OIL	HEXANE	STIRRED EXTRACTION (STIR-BAR)	GC FID
PCB 7 CONGENERS	HEXANE	STIRRED EXTRACTION (STIR-BAR)	GC MS
PCB TOTAL	HEXANE	STIRRED EXTRACTION (STIR-BAR)	GS MS
SVOC	DCM	LIQUID/LIQUID SHAKE	GC MS
FREE SULPHUR	DCM	SOLID PHASE EXTRACTION	HPLC
PEST OCP/OPP	DCM	LIQUID/LIQUID SHAKE	GC MS
TRIAZINE HERBS	DCM	LIQUID/LIQUID SHAKE	GC MS
PHENOLS MS	DCM	SOLID PHASE EXTRACTION	GC MS
TPH by INFRA RED (IR)	TCE	LIQUID/LIQUID EXTRACTION	HPLC
MINERAL OIL by IR	TCE	LIQUID/LIQUID EXTRACTION	HPLC
GLYCOLS	NONE	DIRECT INJECTION	GC FID

SOLID MATRICES EXTRACTION SUMMARY

ANALYSIS	D/C OR WET	EXTRACTION SOLVENT	EXTRACTION METHOD	ANALYSIS
Solvent Extractable Matter	D&C	DCM	SOXTHERM	GRAVIMETRIC
Cyclohexane Ext. Matter	D&C	CYCLOHEXANE	SOXTHERM	GRAVIMETRIC
Thin Layer Chromatography	D&C	DCM	SOXTHERM	IATROSCAN
Elemental Sulphur	D&C	DCM	SOXTHERM	HPLC
Phenols by GCMS	WET	DCM	SOXTHERM	GC-MS
Herbicides	D&C	HEXANE:ACETONE	SOXTHERM	GC-MS
Pesticides	D&C	HEXANE:ACETONE	SOXTHERM	GC-MS
EPH (DRO)	D&C	HEXANE:ACETONE	END OVER END	GC-FID
EPH (Min oil)	D&C	HEXANE:ACETONE	END OVER END	GC-FID
EPH (Cleaned up)	D&C	HEXANE:ACETONE	END OVER END	GC-FID
EPH CWG by GC	D&C	HEXANE:ACETONE	END OVER END	GC-FID
PCB tot / PCB con	D&C	HEXANE:ACETONE	END OVER END	GC-MS
Polyaromatic Hydrocarbons (MS)	WET	HEXANE:ACETONE	Microwave TM218.	GC-MS
C8-C40 (C6-C40)EZ Flash	WET	HEXANE:ACETONE	SHAKER	GC-EZ
Polyaromatic Hydrocarbons Rapid GC	WET	HEXANE:ACETONE	SHAKER	GC-EZ
Semi Volatile Organic Compounds	WET	DCM:ACETONE	SONICATE	GC-MS

Identification of Asbestos in Bulk Materials

The results for asbestos identification for soil samples are obtained from possible Asbestos Containing Material, removed during the 'Screening of soils for Asbestos Containing Materials', which have been examined to determine the presence of asbestos fibres using Alcontrol Laboratories (Hawarden) in-house method of transmitted/polarised light microscopy and central stop dispersion staining, based on HSG 248 (2005).

Visual Estimation Of Fibre Content.

Estimation of fibre content is not permitted as part of our UKAS accredited test other than: -

Trace – Where only one or two asbestos fibres were identified.

Further guidance on typical asbestos fibre content of manufactured products can be found in MDHS 100.

The identification of asbestos containing materials falls within our schedule of tests for which we hold UKAS accreditation, however opinions, interpretations and all other information contained in the report are outside the scope of UKAS accreditation.

Asbestos Type	Common Name
Chrysotile	White Asbestos
Amosite	Brown Asbestos
Crocidolite	Blue Asbestos
Fibrous Actinolite	-
Fibrous Anthophyllite	-
Fibrous Tremolite	-

ALcontrol Laboratories

Unit 18A
Rosemount Business Park
Ballycoolin
Dublin 11
Tel : (0035) 3188 29893

Tobin
Block 10 - 4
Blanchardstown Corporate Park
Dublin

Attention: David Corrigan

CERTIFICATE OF ANALYSIS

Date:	17 January 2011
Customer:	D_TOBIN_DUB
Sample Delivery Group (SDG):	110104-17
Your Reference:	04.1.11
Location:	Dust Samples 23.11.10 - 29.12.10
Report No:	111283

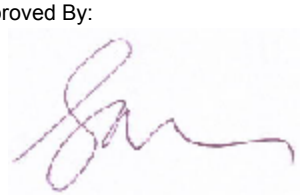
We received 4 samples on Tuesday January 04, 2011 and 4 of these samples were scheduled for analysis which was completed on Monday January 17, 2011. Accredited laboratory tests are defined within the report, but opinions, interpretations and on-site data expressed herein are outside the scope of ISO 17025 accreditation.

Should this report require incorporation into client reports, it must be used in its entirety and not simply with the data sections alone.

All chemical testing (unless subcontracted) is performed at ALcontrol Hawarden Laboratories.

Asbestos testing - we are not accredited for screening soil samples for asbestos fibres. We are only accredited to identify asbestos fibres in bulk material (ACM).

Approved By:



Sonia McWhan

Laboratory Manager

CERTIFICATE OF ANALYSIS

SDG:	110104-17	**Location:**	Dust Samples 23.11.10 - 29.12.10	**Order Number:**	1986
Job:	D_TOBIN_DUB-44	**Customer:**	Tobin	**Report Number:**	111283
Client Reference:	04.1.11	**Attention:**	David Corrigan	**Superseded Report:**	

Received Sample Overview

Lab Sample No(s)	Customer Sample Ref.	AGS Ref.	Depth (m)	Sampled Date
2645605	D1			23/11/2010
2645607	D2			23/11/2010
2645613	D3			23/11/2010
2645617	D4			23/11/2010

Only received samples which have had analysis scheduled will be shown on the following pages.

CERTIFICATE OF ANALYSIS

SDG:	110104-17	**Location:**	Dust Samples 23.11.10 - 29.12.10	**Order Number:**	1986
Job:	D_TOBIN_DUB-44	**Customer:**	Tobin	**Report Number:**	111283
Client Reference:	04.1.11	**Attention:**	David Corrigan	**Superseded Report:**	

Test Schedule

LIQUID

Results Legend

X **Test**

N **No Determination Possible**

			Lab Sample No(s)	Customer Sample Reference	AGS Reference	Depth (m)	Container
			2645605	D1			PLAS BOT (D)
			2645607	D2			PLAS BOT (D)
			2645613	D3			PLAS BOT (D)
			2645617	D4			PLAS BOT (D)
Dust in Water	All	NDPs: 0 Tests: 4	X	X	X	X	

CERTIFICATE OF ANALYSIS

SDG:	110104-17	**Location:**	Dust Samples 23.11.10 - 29.12.10	**Order Number:**	1986
Job:	D_TOBIN_DUB-44	**Customer:**	Tobin	**Report Number:**	111283
Client Reference:	04.1.11	**Attention:**	David Corrigan	**Superseded Report:**	

Results Legend

#	ISO17025 accredited.
M	*m*CERTS accredited.
§	Non-conforming work.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	subcontracted test.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of the individual compounds within the samples are not corrected for this recovery.

Component	LOD/Units	Method	Customer Sample R	D1	D2	D3	D4		
			Depth (m)	.	.	.	.		
			Sample Type	Water(GW/SW)	Water(GW/SW)	Water(GW/SW)	Water(GW/SW)		
			Date Sampled	23/11/2010	23/11/2010	23/11/2010	23/11/2010		
			Date Received	04/01/2011	04/01/2011	04/01/2011	04/01/2011		
			SDG Ref	110104-17	110104-17	110104-17	110104-17		
			Lab Sample No.(s)	2645605	2645607	2645613	2645617		
			AGS Reference						
Dust, Total	<0.026 mg/m2/da	TM253		3.7	7.41	1.39	9.26		

CERTIFICATE OF ANALYSIS

SDG:	110104-17	**Location:**	Dust Samples 23.11.10 - 29.12.10	**Order Number:**	1986
Job:	D_TOBIN_DUB-44	**Customer:**	Tobin	**Report Number:**	111283
Client Reference:	04.1.11	**Attention:**	David Corrigan	**Superseded Report:**	

Table of Results - Appendix

REPORT KEY

Results expressed as (e.g.) 1.03E-07 is equivalent to 1.03x10-7

NDP	No Determination Possible	#	ISO 17025 Accredited	*	Subcontracted Test	M	MCERTS Accredited
NFD	No Fibres Detected	PFD	Possible Fibres Detected	»	Result previously reported (Incremental reports only)	EC	Equivalent Carbon (Aromatics C8-C35)

Note: Method detection limits are not always achievable due to various circumstances beyond our control

Method No	Reference	Description	Wet/Dry Sample [1]	Surrogate Corrected
TM253	Dust is collected either using a “Frisbee” collector this is the “Stockholm” method or using a “jam jar” collector, this is the “Berghoff” method.	The Determination of Dust		

[1] Applies to Solid samples only. DRY indicates samples have been dried at 35°C. NA = not applicable.

CERTIFICATE OF ANALYSIS

SDG:	110104-17	**Location:**	Dust Samples 23.11.10 - 29.12.10	**Order Number:**	1986
Job:	D_TOBIN_DUB-44	**Customer:**	Tobin	**Report Number:**	111283
Client Reference:	04.1.11	**Attention:**	David Corrigan	**Superseded Report:**	

Test Completion Dates

Lab Sample No(s)	2645605	2645607	2645613	2645617
Customer Sample Ref.	D1	D2	D3	D4
AGS Ref.				
Depth				
Type	LIQUID	LIQUID	LIQUID	LIQUID
Dust in Water	11-Jan-2011	11-Jan-2011	11-Jan-2011	11-Jan-2011

CERTIFICATE OF ANALYSIS

SDG:	110104-17	**Location:**	Dust Samples 23.11.10 - 29.12.10	**Order Number:**	1986
Job:	D_TOBIN_DUB-44	**Customer:**	Tobin	**Report Number:**	111283
Client Reference:	04.1.11	**Attention:**	David Corrigan	**Superseded Report:**	

CERTIFICATE OF ANALYSIS

SDG:	110104-17	**Location:**	Dust Samples 23.11.10 - 29.12.10	**Order Number:**	1986
Job:	D_TOBIN_DUB-44	**Customer:**	Tobin	**Report Number:**	111283
Client Reference:	04.1.11	**Attention:**	David Corrigan	**Superseded Report:**	

Appendix

1. Results are expressed on a dry weight basis (dried at 35ºC) for all soil analyses except for the following: NRA Leach tests, flash point, ammonium as NH4 by the BRE method, VOC TICS, SVOC TICS, TOF-MS SCAN/SEARCH and TOF-MS TICS.

2. Samples will be run in duplicate upon request, but an additional charge may be incurred.

3. If sufficient sample is received a sub sample will be retained free of charge for 30 days after analysis is completed (e-mailed) for both soil jars, tubs and volatile jars. All waters and vials will be discarded 10 days after the analysis is completed (e-mailed). All material removed during an asbestos containing material screen and analysed for the presence of asbestos will be retained for a period of 6 months after the analysis date. All samples received and not scheduled will be disposed of one month after the date of receipt unless we are instructed to the contrary. Once the initial period has expired, a storage charge will be applied for each month or part thereof until the client cancels the request for sample storage. ALcontrol Laboratories reserve the right to charge for samples received and stored but not analysed.

4. With respect to turnaround, we will always endeavour to meet client requirements wherever possible, but turnaround times cannot be absolutely guaranteed due to so many variables beyond our control.

5. We take responsibility for any test performed by sub-contractors (marked with an asterisk). We endeavour to use UKAS/MCERTS Accredited Laboratories, who either complete a quality questionnaire or are audited by ourselves. For some determinands there are no UKAS/MCERTS Accredited Laboratories, in this instance a laboratory with a known track record will be utilised.

6. When requested, the individual sub sample scheduled will be screened in house for the presence of large asbestos containing material fragments/pieces. If no asbestos containing material is found this will be reported as 'no asbestos containing material detected'. If asbestos containing material is detected it will be removed and analysed by our documented in house method TM048 based on HSG 248 (2005), which is accredited to ISO17025. If asbestos containing material is present no further analysis will be undertaken. At no point is the fibre content of the soil sample determined.

7. If no separate volatile sample is supplied by the client, the integrity of the data may be compromised if the laboratory is required to create a sub-sample from the bulk sample -similarly, if a headspace or sediment is present in the volatile sample. This will be flagged up as an invalid VOC on the test schedule or recorded on the log sheet.

8. If appropriate preserved bottles are not received preservation will take place on receipt. However, the integrity of the data may be compromised.

9. NDP -No determination possible due to insufficient/unsuitable sample.

10. Metals in water are performed on a filtered sample, and therefore represent dissolved metals -total metals must be requested separately.

11. A table containing the date of analysis for each parameter is not routinely included with the report, but is available upon request.

12. Results relate only to the items tested

13. **Surrogate recoveries** -Most of our organic methods include surrogates, the recovery of which is monitored and reported. For EPH, MO, PAH, GRO and VOCs on soils the result is not surrogate corrected, but a percentage recovery is quoted. Acceptable limits for most organic methods are 70 -130 %.

14. **Product analyses** -Organic analyses on products can only be semi-quantitative due to the matrix effects and high dilution factors
employed.

15. Phenols monohydric by HPLC include phenol, cresols (2-Methylphenol, 3-Methylphenol and 4-Methylphenol) and Xylenols (2,3 Dimethylphenol, 2,4 Dimethylphenol, 2,5 Dimethylphenol, 2,6 Dimethylphenol, 3,4 Dimethyphenol, 3,5 Dimethylphenol).

16. Total of 5 speciated phenols by HPLC includes Phenol, 2,3,5-Trimethyl Phenol, 2-Isopropylphenol, Cresols and Xylenols (as detailed in 14).

17. Stones/debris are not routinely removed. We always endeavour to take a representative sub sample from the received sample.

18. Our MCERTS accreditation for PAHs by GCMS applies to all product types apart from Kerosene, where naphthalene only is not
accredited.

19. In certain circumstances the method detection limit may be elevated due to the sample being outside the calibration range. Other factors that may contribute to this include possible interferences. In both cases the sample would be diluted which would cause the method detection limit to be raised.

20. Mercury results quoted on soils will not include volatile mercury as the analysis is performed on a dried and crushed sample.

21. For the BSEN 12457-3 two batch process to allow the cumulative release to be calculated, the volume of the leachate produced is measured and filtered for all tests. We therefore cannot carry out any unfiltered analysis. The tests affected include volatiles GCFID/GCMS and all subcontracted analysis.

22. For all leachate preparations (NRA, DIN, TCLP, BSEN 12457-1, 2, 3) volatile loss may occur, as we do not employ zero headspace extraction.

23. We are accredited to MCERTS for sand, clay and loam/topsoil, or any of these materials -whether these are derived from naturally occurring soil profiles, or from fill/made ground, as long as these materials constitute themajor part of the sample. Other coarse granular material such as concrete, gravel and brick are not accredited if they comprise the major part of the sample.

24. Analysis and identification of specific compounds using GCFID is by retention time only, and we routinely calibrate and quantify for benzene, toluene, ethylbenzenes and xylenes (BTEX). For total volatiles in the C4 -C10 range, the total area of the chromatogram is integrated and expressed as ug/kg or ug/l. Although this analysis is commonly used for the quantification of gasoline range organics (GRO), the system will also detect other compounds such as chlorinated solvents, and this may lead to a falsely high result with respect to hydrocarbons only. It is not possible to specifically identify these non-hydrocarbons, as standards are not routinely run for any other compounds, and for more definitive identification, volatiles by GCMS should be utilised.

SOLID MATRICES EXTRACTION SUMMARY

ANALYSIS	D/C OR WET	EXTRACTION SOLVENT	EXTRACTION METHOD	ANALYSIS
SOLVENT EXTRACTABLE MATTER	D&C	DCM	SOXTHERM	GRAVIMETRIC
CYCLOHEXANE EXT. MATTER	D&C	CYCLOHEXANE	SOXTHERM	GRAVIMETRIC
THIN LAYER CHROMATOGRAPHY	D&C	DCM	SOXTHERM	IATROSCAN
ELEMENTAL SULPHUR	D&C	DCM	SOXTHERM	HPLC
PHENOLS BY GCMS	WET	DCM	SOXTHERM	GC-MS
HERBICIDES	D&C	HEXANE/ACETONE	SOXTHERM	GC-MS
PESTICIDES	D&C	HEXANE/ACETONE	SOXTHERM	GC-MS
EPH (DRO)	D&C	HEXANE/ACETONE	END OVER END	GC-FID
EPH (MIN OIL)	D&C	HEXANE/ACETONE	END OVER END	GC-FID
EPH (CLEANED UP)	D&C	HEXANE/ACETONE	END OVER END	GC-FID
EPH CWG BY GC	D&C	HEXANE/ACETONE	END OVER END	GC-FID
PCB TOT / PCB CON	D&C	HEXANE/ACETONE	END OVER END	GC-MS
POLYAROMATIC HYDROCARBONS (MS)	WET	HEXANE/ACETONE	MICROWAVE TM218.	GC-MS
C8-C40 (C8-C40) EZ FLASH	WET	HEXANE/ACETONE	SHAKER	GC-EZ
POLYAROMATIC HYDROCARBONS RAPID GC	WET	HEXANE/ACETONE	SHAKER	GC-EZ
SEMI VOLATILE ORGANIC COMPOUNDS	WET	DCM/ACETONE	SONICATE	GC-MS

LIQUID MATRICES EXTRACTION SUMMARY

ANALYSIS	EXTRACTION SOLVENT	EXTRACTION METHOD	ANALYSIS
PAH-MS	HEXANE	STIRRED EXTRACTION (STIR-BAR)	GC-MS
EPH	HEXANE	STIRRED EXTRACTION (STIR-BAR)	GC FID
EPH CWG	HEXANE	STIRRED EXTRACTION (STIR-BAR)	GC FID
MINERAL OIL	HEXANE	STIRRED EXTRACTION (STIR-BAR)	GC FID
PCB 7 CONGENERS	HEXANE	STIRRED EXTRACTION (STIR-BAR)	GC-MS
PCB TOTAL	HEXANE	STIRRED EXTRACTION (STIR-BAR)	GC-MS
SVOC	DCM	LIQUID/LIQUID SHAKE	GC-MS
FREE SULPHUR	DCM	SOLID PHASE EXTRACTION	HPLC
PEST OCP/OPP	DCM	LIQUID/LIQUID SHAKE	GC-MS
TRIAZINE HERBS	DCM	LIQUID/LIQUID SHAKE	GC-MS
PHENOLS-MS	DCM	SOLID PHASE EXTRACTION	GC-MS
TPH by INFRARED (IR)	TCE	LIQUID/LIQUID SHAKE	HPLC
MINERAL OIL by IR	TCE	LIQUID/LIQUID SHAKE	HPLC
GLYCOLS	NONE	DIRECT INJECTION	GC-MS

Identification of Asbestos in Bulk Materials

The results for asbestos identification for soil samples are obtained from possible Asbestos Containing Material, removed during the 'Screening of soils for Asbestos Containing Materials', which have been examined to determine the presence of asbestos fibres using Alcontrol Laboratories (Hawarden) in-house method of transmitted/polarised light microscopy and central stop dispersion staining, based on HSG 248 (2005).

Asbestos Type	Common Name
Chrysotile	White Asbestos
Amosite	Brown Asbestos
Crocidolite	Blue Asbestos
Fibrous Actinolite	-
Fibrous Anthophyllite	-
Fibrous Tremolite	-

Visual Estimation Of Fibre Content

Estimation of fibre content is not permitted as part of our UKAS accredited test other than: -
Trace -Where only one or two asbestos fibres were identified.

Further guidance on typical asbestos fibre content of manufactured products can be found in MDHS 100.

The identification of asbestos containing materials falls within our schedule of tests for which we hold UKAS accreditation, however opinions, interpretations and all other information contained in the report are outside the scope of UKAS accreditation.

APPENDIX F

OMI – Emissions Report 2010

ODOUR & ENVIRONMENTAL ENGINEERING CONSULTANTS

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ROUND 1 2010-MONITORING OF VOC EXHAUST STACKS CONCENTRATIONS AT RILTA LTD, BLOCK 402, GREENOGUE BUSINESS PARK, RATHCOOLE, CO. DUBLIN

PERFORMED BY ODOUR MONITORING IRELAND ON BEHALF OF RILTA ENVIRONMENTAL LIMITED

PREPARED BY:	Dr. John Casey
ATTENTION:	Mr. Colm Hussey
LICENCE NUMBER:	WL00192-03
LICENCE HOLDER:	Rilta Environmental Limited
FACILITY NAME:	Block 402, Grants's Drive
DATE OF MONITORING VISIT:	13th Aug. 2010
NAME AND ADDRESS OF CLIENT ORGANISATION:	Rilta Environmental Ltd., Block 402, Grants's Drive, Greenogue Business Park, Rathcoole, Co. Dublin
NAME AND ADDRESS OF MONITORING ORGANISATION:	Odour Monitoring Ireland, Unit 32 DeGranville Court, Dublin Road, Trim, Co. Meath
DATE OF REPORTING:	16th Feb. 2011
NAME AND THE FUNCTION OF THE PERSON APPROVING THE REPORT:	Dr. Brian Sheridan, Managing Partner, Odour Monitoring Ireland
REPORT NUMBER:	2011A71(1)
REVIEWERS:	

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This document is submitted as part of environmental monitoring carried out by Odour Monitoring Ireland. The results reported are representative of actual conditions on the day of monitoring.

Respectively submitted,

Brian Sheridan B.Sc. M.Sc. (Agr) Ph.D (Eng).

For and on behalf of Odour Monitoring Ireland™

DOCUMENT AMENDMENT RECORD

Client: ***Rilta Environmental Limited***

Title: Round 1 2010 - Monitoring of VOC concentrations at Rilta Environmental Ltd., Block 402, Greenogue Business Park, Rathcoole, Co. Dublin

Project Number: 2011A71(1)			**Document Reference:** 2011A71(1)		
2011A71(1)	Document for review	JWC	BAS	BAS	16/02/2011
Revision	**Purpose/Description**	**Originated**	**Checked**	**Authorised**	**Date**

Part 1 - Executive Summary

The results of the monitoring exercise are contained in Section 2 of this report.

- Mass emissions for locations A1, A2 and A3 are in compliance with emission limit values as set out in Schedule B of Waste licence 192-03.
- Volume flow for locations A1, A2 and A3 were in compliance with emission limit values as set out in Schedule B of Waste licence 192-03.

1.1 Monitoring Objectives

Odour Monitoring Ireland were commissioned by Rilta Environmental Limited to perform Volatile Organic Compound (VOC) monitoring of the three licensed emission points located within the facility. The survey was carried out on the 13th August 2010. The monitoring was carried out at this facility as part of compliance monitoring with the requirements of Waste licence W0192-03. The emissions testing was carried out by Odour Monitoring Ireland on behalf of Rilta Environmental Limited.

1.2 Special Monitoring Requirements

There were no special monitoring requirements for this campaign.

1.3 The substances to be monitored at each emission point

The parameters listed in *Table 1.1* were monitored using the appropriate instrumentation as illustrated in *Table 1.1*. All monitoring was carried out in accordance with Environmental Protection Agency Office of Environmental Enforcement (OEE) Air Emission Monitoring Guidance Note 2 (AG2).

Table 1.1. Monitored parameters and techniques

Sample location	Parameter	Analytical method
A1, A2, A3	Volumetric airflow rate & Temperature (^{0}C)	Pitot in accordance with EN13284-1:2002. MGO coated K type thermocouple and PT100
A1, A2, A3	Total Organic Carbon (TOC)	EN13649:2002 analysis via Gas Chromatography in an UKAS accredited lab.

This report presents details of this monitoring programme. This environmental monitoring was carried out Dr. John Casey, Managing Partner, Odour Monitoring Ireland on the 13th August 2010. Results and Conclusions are presented herein.

2. Monitoring Results

This section will present the results of the monitoring exercise.

2.1 Operating Information

Emission Point Reference	Date	Process Type	Process Duration	Fuel	Feedstock	Abatement	Load
A1	13/08/2010	Drum washer	Continuous	N/A	Air emission from washing processes	No	Air emission from washing processes
A2	13/08/2010	Drum painter	Continuous	N/A	Air emission from paint processes	No	Air emission from paint processes
A3	13/08/2010	Drum dryer	Continuous	N/A	Air emission from drying processes	No	Air emission from drying processes

2.2 Monitoring Result Reference Conditions

Emission Point Reference	Temperature (K)	Pressure	Moisture Correction	Oxygen Correction (%)
A1	K	101.3	Yes	None
A2	K	101.3	Yes	None
A3	K	101.3	Yes	None

2.3. Sampling Location Summary

Comment	Yes/No
Recommended 5 hydraulic diameters straight length before sampling plane	Yes*
Recommended 2 hydraulic diameters straight length after sampling plane	Yes*
Ports number <1.5m - 2 ports >1.5m - 4 ports	2 ports*
Appropriate port size	Yes
Suitable working platform	Yes

Note: *Airflow rate in accordance with EN13284 with exception of location A1 due to access issues airflow rate was performed at one plane on the base of the stack.

2.4. Sampling time runs

Parameter	Approx. Sampling period per location
Volumetric air flow rate	Manually calculated
Stack gas temp	35 minutes
T A Luft Organics	35 minutes

Table 2.5. Measurement results and emission limit values within Waste licence 192-03 - Schedule B

Emission Point	Temperature (Kelvin)	Limit Volumetric airflow rate ($Nm^3\ hr^{-1}$)	Measured Volumetric airflow rate ($Nm^3\ hr^{-1}$)
A1	292.15	5,292	3,011
A2	308.15	5,292	5,239
A3	299.15	2,520	1,930

Table 2.6. Results of monitoring at Emission Point A1

Library/ID	Conc. of VOC (mgC/ Nm^3)	Mass Flow of Speciated VOC (kg/hr)
Total Organic Carbon (TOC as carbon)	52.4 mgC/Nm^3	0.16 kg/hr
Total Organic Carbon (TOC as carbon) Limit value	-	1.0 kg/hr

Table 2.7. Results of monitoring at Emission Point A2

Library/ID	Conc of VOC (mgC/Nm^3)	Mass Flow of Speciated VOC (kg/hr)
Total Organic Carbon (TOC as carbon)	13.5 mgC/Nm^3	0.08 kg/hr
Total Organic Carbon (TOC as carbon) Limit value	-	0.10 kg/hr

Table 2.8. Results of VOC Monitoring at Emission Point A3.

Library/ID	Conc of Speciated VOC (mg Nm^{-3} as C)	Mass Flow of Speciated VOC (kg/hr)
Total Organic Carbon (TOC as carbon)	3.2 mgC/Nm^3	0.007kg/hr
Total Organic Carbon (TOC as carbon) Limit value	-	0.30 kg/hr

Mass emissions for locations A1, A2 and A3 are in compliance with emission limit values as set out in Schedule B of Waste licence 192-03. Volume flow for locations A1, A2 and A3 were in compliance with emission limit values as set out in Schedule B of Waste licence 192-03.

4. Conclusions

The following conclusions were drawn from the study:

- Mass emissions for locations A1, A2 and A3 are in compliance with emission limit values as set out in Schedule B of Waste licence 192-03.
- Volume flow for locations A1, A2 and A3 were in compliance with emission limit values as set out in Schedule B of Waste licence 192-03.

5. *Appendix I*-Sampling, analysis

5.1.1 Location of Sampling

Rilta Environmental Ltd., Block 402, Grants's Drive, Greenogue Business Park, Rathcoole, Co. Dublin

5.1.2 Date & Time of Sampling

13th August 2010

5.1.3 Personnel Present During Sampling

Dr. John Casey, Odour Monitoring Ireland, Trim, Co. Meath.
MCERTS level 1: MM0674

5.1.4 Instrumentation check list

Federal Method 2 S type pitot and MGO coated thermocouple;
L type pitot tube
Testo 400 handheld and appropriate probes.
SKC sample pumps and Bios Primary calibrator and glass impingers.

ODOUR & ENVIRONMENTAL ENGINEERING CONSULTANTS

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ROUND 2 2010-MONITORING OF VOC EXHAUST STACKS CONCENTRATIONS AT RILTA LTD, BLOCK 402, GREENOGUE BUSINESS PARK, RATHCOOLE, CO. DUBLIN

PERFORMED BY ODOUR MONITORING IRELAND ON BEHALF OF RILTA ENVIRONMENTAL LIMITED

PREPARED BY:	Dr. John Casey
ATTENTION:	Mr. Colm Hussey
LICENCE NUMBER:	WL00192-03
LICENCE HOLDER:	Rilta Environmental Limited
FACILITY NAME:	Block 402, Grants's Drive
DATE OF MONITORING VISIT:	01st Oct. 2010
NAME AND ADDRESS OF CLIENT ORGANISATION:	Rilta Environmental Ltd., Block 402, Grants's Drive, Greenogue Business Park, Rathcoole, Co. Dublin
NAME AND ADDRESS OF MONITORING ORGANISATION:	Odour Monitoring Ireland, Unit 32 DeGranville Court, Dublin Road, Trim, Co. Meath
DATE OF REPORTING:	16th Feb. 2011
NAME AND THE FUNCTION OF THE PERSON APPROVING THE REPORT:	Dr. Brian Sheridan, Managing Partner, Odour Monitoring Ireland
REPORT NUMBER:	2011A72(1)
REVIEWERS:	

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This document is submitted as part of environmental monitoring carried out by Odour Monitoring Ireland. The results reported are representative of actual conditions on the day of monitoring.

Respectively submitted,

Brian Sheridan B.Sc. M.Sc. (Agr) Ph.D (Eng).

For and on behalf of Odour Monitoring Ireland™

DOCUMENT AMENDMENT RECORD

Client: ***Rilta Environmental Limited***

Title: Round 2 2010 - Monitoring of VOC concentrations at Rilta Environmental Ltd., Block 402, Greenogue Business Park, Rathcoole, Co. Dublin

Project Number: 2011A72(1)			**Document Reference:** 2011A72(1)		
2011A72(1)	Document for review	JWC	BAS	BAS	16/02/2011
Revision	**Purpose/Description**	**Originated**	**Checked**	**Authorised**	**Date**

Part 1 - Executive Summary

The results of the monitoring exercise are contained in Section 2 of this report.

- Mass emissions for location A1, A2 and A3 are in compliance with emission limit values as set out in Schedule B of Waste licence 192-03. Volume flow for locations A1 and A3 were in compliance with emission limit values as set out in Schedule B of Waste licence 192-03. Volume flow for location A2 was not in compliance with emission limit values as set out in Schedule B of Waste licence 192-03.

1.1 Monitoring Objectives

Odour Monitoring Ireland were commissioned by Rilta Environmental Limited to perform Volatile Organic Compound (VOC) monitoring of three licensed emission points located within the facility. The survey was carried out on the 01st October 2010. The monitoring was carried out at this facility as part of compliance monitoring with the requirements of Waste licence W0192-03. The emissions testing was carried out by Odour Monitoring Ireland on behalf of Rilta Environmental Limited.

1.2 Special Monitoring Requirements

There were no special monitoring requirements for this campaign.

1.3 The substances to be monitored at each emission point

The parameters listed in *Table 1.1* were monitored using the appropriate instrumentation as illustrated in *Table 1.1*. All monitoring was carried out in accordance with Environmental Protection Agency Office of Environmental Enforcement (OEE) Air Emission Monitoring Guidance Note 2 (AG2).

Table 1.1. Monitored parameters and techniques

Sample location	Parameter	Analytical method
A1, A2, A3	Volumetric airflow rate & Temperature (^{0}C)	Pitot in accordance with EN13284-1:2002. MGO coated K type thermocouple and PT100
A1, A2, A3	Total Organic Carbon (TOC)	EN13649:2002 analysis via Gas Chromatography in an UKAS accredited lab.

This report presents details of this monitoring programme. This environmental monitoring was carried out Dr. John Casey, Managing Partner, Odour Monitoring Ireland on the 01st October 2010. Results and Conclusions are presented herein.

2. Monitoring Results

This section will present the results of the monitoring exercise.

2.1 Operating Information

Emission Point Reference	Date	Process Type	Process Duration	Fuel	Feedstock	Abatement	Load
A1	01/10/2010	Drum washer	Continuous	N/A	Air emission from washing processes	No	Air emission from washing processes
A2	01/10/2010	Drum painter	Continuous	N/A	Air emission from paint processes	No	Air emission from paint processes
A3	01/10/2010	Drum dryer	Continuous	N/A	Air emission from drying processes	No	Air emission from drying processes

2.2 Monitoring Result Reference Conditions

Emission Point Reference	Temperature (K)	Pressure	Moisture Correction	Oxygen Correction (%)
A1	K	101.3	Yes	None
A2	K	101.3	Yes	None
A3	K	101.3	Yes	None

2.3. Sampling Location Summary

Comment	Yes/No
Recommended 5 hydraulic diameters straight length before sampling plane	Yes*
Recommended 2 hydraulic diameters straight length after sampling plane	Yes*
Ports number <1.5m - 2 ports >1.5m - 4 ports	2 ports*
Appropriate port size	Yes
Suitable working platform	Yes

Note: *Airflow rate in accordance with EN13284 with exception of location A1 due to access issues airflow rate was performed at one plane on the base of the stack.

2.4. Sampling time runs

Parameter	Approx. Sampling period per location
Volumetric air flow rate	Manually calculated
Stack gas temp	34 minutes
T A Luft Organics	34 minutes

Table 2.5. Measurement results and emission limit values within Waste licence 192-03 - Schedule B

Emission Point	Temperature (Kelvin)	Limit Volumetric airflow rate ($Nm^3\ hr^{-1}$)	Measured Volumetric airflow rate ($Nm^3\ hr^{-1}$)
A1	288.15	5,292	3,054
A2	291.15	5,292	6,221
A3	296.15	2,520	1,814

Table 2.6. Results of monitoring at Emission Point A1

Library/ID	Conc. of VOC ($mgC/\ Nm^3$)	Mass Flow of Speciated VOC (kg/hr)
Total Organic Carbon (TOC as carbon)	50.1mgC/Nm^3	0.15 kg/hr
Total Organic Carbon (TOC as carbon) Limit value	-	1.0 kg/hr

Table 2.7. Results of monitoring at Emission Point A2

Library/ID	Conc of VOC (mgC/Nm^3)	Mass Flow of Speciated VOC (kg/hr)
Total Organic Carbon (TOC as carbon)	14 mgC/Nm^3	0.09 kg/hr
Total Organic Carbon (TOC as carbon) Limit value	-	0.10 kg/hr

Table 2.8. Results of VOC Monitoring at Emission Point A3.

Library/ID	Conc of Speciated VOC ($mg\ Nm^{-3}$ as C)	Mass Flow of Speciated VOC (kg/hr)
Total Organic Carbon (TOC as carbon)	2.5 mgC/Nm^3	0.004 kg/hr
Total Organic Carbon (TOC as carbon) Limit value	-	0.30 kg/hr

Mass emissions for location A1, A2 and A3 are in compliance with emission limit values as set out in Schedule B of Waste licence 192-03. Volume flow for locations A1 and A3 were in compliance with emission limit values as set out in Schedule B of Waste licence 192-03. Volume flow for location A2 was not in compliance with emission limit values as set out in Schedule B of Waste licence 192-03.

4. Conclusions

The following conclusions were drawn from the study:

- Mass emissions for location A1, A2 and A3 are in compliance with emission limit values as set out in Schedule B of Waste licence 192-03. Volume flow for locations A1 and A3 were in compliance with emission limit values as set out in Schedule B of Waste licence 192-03. Volume flow for location A2 was not in compliance with emission limit values as set out in Schedule B of Waste licence 192-03.

5. *Appendix I*-Sampling, analysis

5.1.1 Location of Sampling

Rilta Environmental Ltd., Block 402, Grants's Drive, Greenogue Business Park, Rathcoole, Co. Dublin

5.1.2 Date & Time of Sampling

01st October 2010

5.1.3 Personnel Present During Sampling

Dr. John Casey, Odour Monitoring Ireland, Trim, Co. Meath.
MCERTS level 1: MM0674

5.1.4 Instrumentation check list

Federal Method 2 S type pitot and MGO coated thermocouple;
L type pitot tube
Testo 400 handheld and appropriate probes.
SKC sample pumps and Bios Primary calibrator and glass impingers.

APPENDIX G

Environmental Management and Staffing Structure - 2010

Rilta Environmental Management Structure