

Appendix 2-10 – Leachate Analysis



QUARTER 4 (ANNUAL) 2022
COMPLIANCE REPORT OF ANNUAL
LEACHATE MONITORING AT THE BORD NA
MÓNA DREHID WASTE MANAGEMENT
FACILITY, CO. KILDARE IN COMPLIANCE WITH
IED LICENCE REGISTER NO. W0201-03

Prepared by:

Donal Marron
Environmental Consultant



Monitoring Date:

26th October 2022

Report Date:

30th January 2023

EXECUTIVE SUMMARY

Drehid Waste Management Facility is required to conduct quarterly and annual leachate monitoring in compliance with the EPA IED Licence (W0201-03).

A leachate sample was obtained on the 26th October 2022 and was analysed for annual parameters as per the leachate monitoring schedule outlined in the IED Licence W0201-03. The results obtained are displayed in Table 1.0 and are typical of a landfill leachate sample.

1.0 LEACHATE RESULTS

The location of the Leachate (TK2) sampling point is the leachate storage tank to the south east of the landfill body.

Table 1.0 : Results of the Annual Chemical Analysis of Leachate Sample TK-2		
Sample ID	Units	TK-02
Received Date & Time		26/10/22
Sample Type		Leachate
pH	pH Units	8.0
Conductivity	µS/cm	21,822
BOD	mg/l O ₂	163
COD	mg/l O ₂	5,140
Chloride	mg/l	2,792.4
Fluoride	mg/l	0.8
Total Phosphorous	mg/l	17.432
NH ₃ -N	mg/l	1,553.36
Sulphate	mg/l	416.3
Sodium (Dissolved)	mg/l	2,033.6
Magnesium (Dissolved)	mg/l	130.9
Potassium (Dissolved)	mg/l	887.5
Calcium (Dissolved)	mg/l	186.3
Iron (Dissolved)	µg/l	854
Chromium (Dissolved)	µg/l	296
Manganese (Dissolved)	µg/l	473
Nickel (Dissolved)	µg/l	214
Copper (Dissolved)	µg/l	<14
Zinc (Dissolved)	µg/l	212
Cadmium (Dissolved)	µg/l	<1
Lead (Dissolved)	µg/l	<10
Arsenic (Dissolved)	µg/l	381.4
Mercury (Dissolved)	µg/l	<2
Cyanide	mg/l	0.08
TON	mg/l	<0.2

Notes

< Less than Laboratory Limit of Detection

Table 1.0 : Results of the Annual Chemical Analysis of Leachate Sample TK-2 (S-VOCs) Contd.

Determinand	units	Leachate TK2	Determinand	units	Leachate TK2
Phenols			Phthalates		
2-Chlorophenol	µg/l	<1	Bis(2-ethylhexyl) phthalate	µg/l	<5
2-Methylphenol	µg/l	11.5	Butylbenzyl phthalate	µg/l	<1
2-Nitrophenol	µg/l	<0.5	Di-n-butyl phthalate	µg/l	<1.5
2,4-Dichlorophenol	µg/l	<0.5	Di-n-Octyl phthalate	µg/l	<1
2,4-Dimethylphenol	µg/l	<1	Diethyl phthalate	µg/l	<1
2,4,5-Trichlorophenol	µg/l	<0.5	Dimethyl phthalate	µg/l	<1
2,4,6-Trichlorophenol	µg/l	<1	Other SVOCs		
4-Chloro-3-methylphenol	µg/l	<0.5	1,2-Dichlorobenzene	µg/l	<1
4-Methylphenol	µg/l	7	1,2,4-Trichlorobenzene	µg/l	<1
4-Nitrophenol	µg/l	<10	1,3-Dichlorobenzene	µg/l	<1
Pentachlorophenol	µg/l	<1	1,4-Dichlorobenzene	µg/l	<1
Phenol	µg/l	7	2-Nitroaniline	µg/l	<1
PAHs			2,4-Dinitrotoluene	µg/l	<0.5
2-Chloronaphthalene	µg/l	<1	2,6-Dinitrotoluene	µg/l	<1
2-Methylnaphthalene	µg/l	<1	3-Nitroaniline	µg/l	<1
Naphthalene	µg/l	2	4-Bromophenylphenylether	µg/l	<1
Acenaphthylene	µg/l	<0.5	4-Chloroaniline	µg/l	<1
Acenaphthene	µg/l	<1	4-Chlorophenylphenylether	µg/l	<1
Fluorene	µg/l	<0.5	4-Nitroaniline	µg/l	<0.5
Phenanthrene	µg/l	<0.5	Azobenzene	µg/l	<0.5
Anthracene	µg/l	<0.5	Bis(2-chloroethoxy)methane	µg/l	<0.5
Fluoranthene	µg/l	<0.5	Bis(2-chloroethyl)ether	µg/l	<1
Pyrene	µg/l	<0.5	Carbazole	µg/l	<0.5
Benzo(a)anthracene	µg/l	<0.5	Dibenzofuran	µg/l	<0.5
Chrysene	µg/l	<0.5	Hexachlorobenzene	µg/l	<1
Benzo(bk)fluoranthene	µg/l	<1	Hexachlorobutadiene	µg/l	<1
Benzo(a)pyrene	µg/l	<1	Hexachlorocyclopentadiene	µg/l	<1
Indeno(123cd)pyrene	µg/l	<1	Hexachloroethane	µg/l	<1
Dibenzo(ah)anthracene	µg/l	<0.5	Isophorone	µg/l	<0.5
Benzo(ghi)perylene	µg/l	<0.5	N-nitrosodi-n-propylamine	µg/l	<0.5
			Nitrobenzene	µg/l	<1

Table 1.0 : Results of the Annual Chemical Analysis of Leachate Sample TK-2 (VOCs) Contd.					
Determinand	units	Leachate TK2	Determinand	units	Leachate TK2
Dichlorodifluoromethane	ug/l	<2	Ethylbenzene	ug/l	11
Methyl Tertiary Butyl Ether	ug/l	1.4	m/p-Xylene	ug/l	20
Chloromethane	ug/l	<3	o-Xylene	ug/l	11
Vinyl Chloride	ug/l	<0.1	Styrene	ug/l	<2
Bromomethane	ug/l	<1	Bromoform	ug/l	<2
Chloroethane	ug/l	<3	Isopropylbenzene	ug/l	<3
Trichlorofluoromethane	ug/l	<3	1,1,2,2-Tetrachloroethane	ug/l	<4
1,1-Dichloroethene (1,1 DCE)	ug/l	<3	Bromobenzene	ug/l	<2
Dichloromethane (DCM)	ug/l	<3	1,2,3-Trichloropropane	ug/l	<3
trans-1-2-Dichloroethene	ug/l	<3	Propylbenzene	ug/l	<3
1,1-Dichloroethane	ug/l	<3	2-Chlorotoluene	ug/l	<3
cis-1-2-Dichloroethene	ug/l	<3	1,3,5-Trimethylbenzene	ug/l	<3
2,2-Dichloropropane	ug/l	<1	4-Chlorotoluene	ug/l	<3
Bromochloromethane	ug/l	<2	tert-Butylbenzene	ug/l	<3
Chloroform	ug/l	<2	1,2,4-Trimethylbenzene	ug/l	5
1,1,1-Trichloroethane	ug/l	<2	sec-Butylbenzene	ug/l	<3
1,1-Dichloropropene	ug/l	<3	4-Isopropyltoluene	ug/l	14
Carbon tetrachloride	ug/l	<2	1,3-Dichlorobenzene	ug/l	<3
1,2-Dichloroethane	ug/l	5	1,4-Dichlorobenzene	ug/l	<3
Benzene	ug/l	4.4	n-Butylbenzene	ug/l	<3
Trichloroethene (TCE)	ug/l	<3	1,2-Dichlorobenzene	ug/l	<3
1,2-Dichloropropane	ug/l	<2	1,2-Dibromo-3-chloropropane	ug/l	<2
Dibromomethane	ug/l	<3	1,2,4-Trichlorobenzene	ug/l	<3
Bromodichloromethane	ug/l	<2	Hexachlorobutadiene	ug/l	<3
cis-1-3-Dichloropropene	ug/l	<2	Naphthalene	ug/l	2
Toluene	ug/l	25	1,2,3-Trichlorobenzene	ug/l	<3
trans-1-3-Dichloropropene	ug/l	<2	Dibromochloromethane	ug/l	<2
1,1,2-Trichloroethane	ug/l	<2	1,2-Dibromoethane	ug/l	<2
Tetrachloroethene (PCE)	ug/l	<3	Chlorobenzene	ug/l	<2
1,3-Dichloropropane	ug/l	<2	1,1,1,2-Tetrachloroethane	ug/l	<2

2.0 DISCUSSION

A leachate sample was obtained on the 26th of October 2022 and was analysed for annual parameters as per the leachate monitoring schedule outlined in section C.2.3 of the IED Licence (W0201-03). The results obtained are displayed in Table 1.0 and are typical of a landfill leachate sample.

The leachate sent off site for treatment in Quarter 4 2022 was sent to the below 4 No. locations:

- Enva, JFK Road, Naas Road, Dublin 12 (W0196-1)
- Leixlip Waste Water Treatment Plant, Leixlip, County Kildare (D0004-01)
- Rilta Environmental Limited, 402 Grants Drive, Greenogue Business Park, Rathcoole, Co. Dublin (W0192-03)
- Ringsend Waste Water Treatment Plant, Pigeon House Road, Ringsend, Dublin (D0034-01)

APPENDIX 1

Leachate Inspection Records

Laboratory Results

Location	Parameter	07-Oct-22	14-Oct-22	21-Oct-22	28-Oct-22	04-Nov-22	11-Nov-22	18-Nov-22	25-Nov-22	02-Dec-22	02-Sep-22	09-Dec-22	16-Dec-22	23-Dec-22	30-Dec-22
Phase 1/2	Leachate Level (m)	0.87	0.94	0.73	0.76	0.95	0.89	0.85	0.72	0.64	0.75	0.94	0.77	0.81	0.88
Phase 3/4	Leachate Level (m)	0.80	0.88	0.73	0.93	0.90	0.91	0.88	0.74	0.88	0.82	0.72	0.90	0.92	0.91
Phase 5/6	Leachate Level (m)	0.92	0.84	0.80	0.88	0.97	0.87	0.85	0.84	0.91	0.88	0.87	0.90	0.91	0.93
Phase 7/8	Leachate Level (m)	0.83	0.75	0.85	0.88	0.90	0.90	0.91	0.89	0.92	0.95	0.91	0.90	0.92	0.95
Phase 9/10	Leachate Level (m)	0.57	0.57	0.60	0.63	0.68	0.72	0.76	0.78	0.81	0.85	0.82	0.83	0.85	0.91
Phase 11/12	Leachate Level (m)	0.66	0.76	0.89	0.89	0.96	0.86	0.78	0.87	0.84	0.69	0.85	0.78	0.83	0.88
Phase 13/14	Leachate Level (m)	0.80	0.88	0.91	0.88	0.80	0.77	0.81	0.94	0.78	0.89	0.91	0.78	0.83	0.89
Holding Tank 1	Leachate Level (m)	2.35	2.70	2.94	2.83	2.38	2.11	3.03	3.02	2.29	3.12	2.16	2.71	2.11	2.15
Holding Tank 2	Leachate Level (m)	2.61	2.61	2.54	3.02	2.96	2.82	2.48	2.87	2.73	2.16	2.10	2.66	2.61	2.65

Leachate Daily Visual Inspection - October 2022

Date	Visual Inspection/Odour
01/10/2022	Dark Brown/Foul
02/10/2022	Dark Brown/Foul
03/10/2022	Dark Brown/Foul
04/10/2022	Dark Brown/Foul
05/10/2022	Dark Brown/Foul
06/10/2022	Dark Brown/Foul
07/10/2022	Dark Brown/Foul
08/10/2022	Dark Brown/Foul
09/10/2022	Dark Brown/Foul
10/10/2022	Dark Brown/Foul
11/10/2022	Dark Brown/Foul
12/10/2022	Dark Brown/Foul
13/10/2022	Dark Brown/Foul
14/10/2022	Dark Brown/Foul
15/10/2022	Dark Brown/Foul
16/10/2022	Dark Brown/Foul
17/10/2022	Dark Brown/Foul
18/10/2022	Dark Brown/Foul
19/10/2022	Dark Brown/Foul
20/10/2022	Dark Brown/Foul
21/10/2022	Dark Brown/Foul
22/10/2022	Dark Brown/Foul
23/10/2022	Dark Brown/Foul
24/10/2022	Dark Brown/Foul
25/10/2022	Dark Brown/Foul
26/10/2022	Dark Brown/Foul
27/10/2022	Dark Brown/Foul
28/10/2022	Dark Brown/Foul
29/10/2022	Dark Brown/Foul
30/10/2022	Dark Brown/Foul
31/10/2022	Dark Brown/Foul

* As recorded on WIF 5.1 - Daily Site Inspection Checksheet

Leachate Daily Visual Inspection - November 2022

Date	Visual Inspection/Odour
01/11/2022	Dark Brown/Foul
02/11/2022	Dark Brown/Foul
03/11/2022	Dark Brown/Foul
04/11/2022	Dark Brown/Foul
05/11/2022	Dark Brown/Foul
06/11/2022	Dark Brown/Foul
07/11/2022	Dark Brown/Foul
08/11/2022	Dark Brown/Foul
09/11/2022	Dark Brown/Foul
10/11/2022	Dark Brown/Foul
11/11/2022	Dark Brown/Foul
12/11/2022	Dark Brown/Foul
13/11/2022	Dark Brown/Foul
14/11/2022	Dark Brown/Foul
15/11/2022	Dark Brown/Foul
16/11/2022	Dark Brown/Foul
17/11/2022	Dark Brown/Foul
18/11/2022	Dark Brown/Foul
19/11/2022	Dark Brown/Foul
20/11/2022	Dark Brown/Foul
21/11/2022	Dark Brown/Foul
22/11/2022	Dark Brown/Foul
23/11/2022	Dark Brown/Foul
24/11/2022	Dark Brown/Foul
25/11/2022	Dark Brown/Foul
26/11/2022	Dark Brown/Foul
27/11/2022	Dark Brown/Foul
28/11/2022	Dark Brown/Foul
29/11/2022	Dark Brown/Foul
30/11/2022	Dark Brown/Foul

* As recorded on WIF 5.1 - Daily Site Inspection Checksheet

Leachate Daily Visual Inspection - December 2022

Date	Visual Inspection/Odour
01/12/2022	Dark Brown/Foul
02/12/2022	Dark Brown/Foul
03/12/2022	Dark Brown/Foul
04/12/2022	Dark Brown/Foul
05/12/2022	Dark Brown/Foul
06/12/2022	Dark Brown/Foul
07/12/2022	Dark Brown/Foul
08/12/2022	Dark Brown/Foul
09/12/2022	Dark Brown/Foul
10/12/2022	Dark Brown/Foul
11/12/2022	Dark Brown/Foul
12/12/2022	Dark Brown/Foul
13/12/2022	Dark Brown/Foul
14/12/2022	Dark Brown/Foul
15/12/2022	Dark Brown/Foul
16/12/2022	Dark Brown/Foul
17/12/2022	Dark Brown/Foul
18/12/2022	Dark Brown/Foul
19/12/2022	Dark Brown/Foul
20/12/2022	Dark Brown/Foul
21/12/2022	Dark Brown/Foul
22/12/2022	Dark Brown/Foul
23/12/2022	Dark Brown/Foul
24/12/2022	Dark Brown/Foul
25/12/2022	Dark Brown/Foul
26/12/2022	Dark Brown/Foul
27/12/2022	Dark Brown/Foul
28/12/2022	Dark Brown/Foul
29/12/2022	Dark Brown/Foul
30/12/2022	Dark Brown/Foul
31/12/2022	Dark Brown/Foul

* As recorded on WIF 5.1 - Daily Site Inspection Checksheet

Marron Environmental
60 Seapoint
Dunbur Road
Wicklow
Co Wicklow
Ireland
A67 F761



Attention : Donal Marron
Date : 11th November, 2022
Your reference : J154
Our reference : Test Report 22/17700 Batch 1
Location : Drehid
Date samples received : 27th October, 2022
Status : Final Report
Issue : 1

Twenty four samples were received for analysis on 27th October, 2022 of which twenty four were scheduled for analysis. Please find attached our Test Report which should be read with notes at the end of the report and should include all sections if reproduced. Interpretations and opinions are outside the scope of any accreditation, and all results relate only to samples supplied.

All analysis is carried out on as received samples and reported on a dry weight basis unless stated otherwise. Results are not surrogate corrected.

Authorised By:



Bruce Leslie

Project Manager

Please include all sections of this report if it is reproduced

Element Materials Technology

Client Name: Marron Environmental
Reference: J154
Location: Drehid
Contact: Donal Marron
EMT Job No: 22/17700

EMT Sample No.	123-129	Please see attached notes for all abbreviations and acronyms		
Sample ID	LEACHATE			
Depth				
COC No / misc				
Containers	V H HNUF N P G			
Sample Date	26/10/2022			
Sample Type	Leachate			
Batch Number	1			
Date of Receipt	27/10/2022	LOD/LOR	Units	Method No.
Dissolved Arsenic	381.4 _{AA}	<2.5	ug/l	TM30/PM14
Dissolved Arsenic #	-	<2.5	ug/l	TM30/PM14
Dissolved Boron	8435 _{AA}	<12	ug/l	TM30/PM14
Dissolved Cadmium	<1.0 _{AA}	<0.5	ug/l	TM30/PM14
Dissolved Cadmium #	-	<0.5	ug/l	TM30/PM14
Dissolved Calcium	186.3 _{AA}	<0.2	mg/l	TM30/PM14
Dissolved Calcium #	-	<0.2	mg/l	TM30/PM14
Total Dissolved Chromium	296.0 _{AA}	<1.5	ug/l	TM30/PM14
Total Dissolved Chromium #	-	<1.5	ug/l	TM30/PM14
Dissolved Copper	<14 _{AA}	<7	ug/l	TM30/PM14
Dissolved Copper #	-	<7	ug/l	TM30/PM14
Total Dissolved Iron	854 _{AA}	<20	ug/l	TM30/PM14
Total Dissolved Iron #	-	<20	ug/l	TM30/PM14
Dissolved Lead	<10 _{AA}	<5	ug/l	TM30/PM14
Dissolved Lead #	-	<5	ug/l	TM30/PM14
Dissolved Magnesium	130.9 _{AA}	<0.1	mg/l	TM30/PM14
Dissolved Magnesium #	-	<0.1	mg/l	TM30/PM14
Dissolved Manganese	473 _{AA}	<2	ug/l	TM30/PM14
Dissolved Manganese #	-	<2	ug/l	TM30/PM14
Dissolved Mercury	<2 _{AA}	<1	ug/l	TM30/PM14
Dissolved Mercury #	-	<1	ug/l	TM30/PM14
Dissolved Nickel	214 _{AA}	<2	ug/l	TM30/PM14

Dissolved Nickel #	-	<2	ug/l	TM30/PM14
Dissolved Potassium	887.5 _{AC}	<0.1	mg/l	TM30/PM14
Dissolved Potassium #	-	<0.1	mg/l	TM30/PM14
Dissolved Sodium	2033.6 _{AC}	<0.1	mg/l	TM30/PM14
Dissolved Sodium #	-	<0.1	mg/l	TM30/PM14
Dissolved Zinc	212 _{AA}	<3	ug/l	TM30/PM14
Dissolved Zinc #	-	<3	ug/l	TM30/PM14
Total Phosphorus	17432 _{AB}	<5	ug/l	TM30/PM14
EPH (C8-C40) #	-	<10	ug/l	TM5/PM30
Fluoride	0.8	<0.3	mg/l	TM173/PM0
Sulphate as SO4	416.3	<0.5	mg/l	TM38/PM0
Sulphate as SO4 #	-	<0.5	mg/l	TM38/PM0
Chloride	2792.4	<0.3	mg/l	TM38/PM0
Chloride #	-	<0.3	mg/l	TM38/PM0
Nitrate as NO3 #	-	<0.2	mg/l	TM38/PM0
Ortho Phosphate as PO4	31.97	<0.06	mg/l	TM38/PM0
Ortho Phosphate as PO4 #	-	<0.06	mg/l	TM38/PM0
Total Oxidised Nitrogen as N	<0.2	<0.2	mg/l	TM38/PM0

Element Materials Technology

Client Name: Marron Environmental
Reference: J154
Location: Drehid
Contact: Donal Marron
EMT Job No: 22/17700

EMT Sample No.	123-129			
Sample ID	LEACHATE			
Depth		Please see attached notes for all abbreviations and acronyms		
COC No / misc				
Containers	V H HNUF N P G			
Sample Date	26/10/2022			
Sample Type	Leachate			
Batch Number	1	LOD/LOR	Units	Method No.
Date of Receipt	27/10/2022			
SVOC MS				
Phenols				
2-Chlorophenol	<1	<1	ug/l	TM16/PM30
2-Chlorophenol #	-	<1	ug/l	TM16/PM30
2-Methylphenol	11.5	<0.5	ug/l	TM16/PM30
2-Methylphenol #	-	<0.5	ug/l	TM16/PM30
2-Nitrophenol	<0.5	<0.5	ug/l	TM16/PM30
2,4-Dichlorophenol	<0.5	<0.5	ug/l	TM16/PM30
2,4-Dichlorophenol #	-	<0.5	ug/l	TM16/PM30
2,4-Dimethylphenol	<1	<1	ug/l	TM16/PM30
2,4,5-Trichlorophenol	<0.5	<0.5	ug/l	TM16/PM30
2,4,5-Trichlorophenol #	-	<0.5	ug/l	TM16/PM30
2,4,6-Trichlorophenol	<1	<1	ug/l	TM16/PM30
4-Chloro-3-methylphenol	<0.5	<0.5	ug/l	TM16/PM30
4-Chloro-3-methylphenol #	-	<0.5	ug/l	TM16/PM30
4-Methylphenol	7	<1	ug/l	TM16/PM30
4-Nitrophenol	<10	<10	ug/l	TM16/PM30
Pentachlorophenol	<1	<1	ug/l	TM16/PM30
Phenol	7	<1	ug/l	TM16/PM30
PAHs				
2-Chloronaphthalene	<1	<1	ug/l	TM16/PM30
2-Chloronaphthalene #	-	<1	ug/l	TM16/PM30
2-Methylnaphthalene	<1	<1	ug/l	TM16/PM30
2-Methylnaphthalene #	-	<1	ug/l	TM16/PM30
Naphthalene	2	<1	ug/l	TM16/PM30
Naphthalene #	-	<1	ug/l	TM16/PM30
Acenaphthylene	<0.5	<0.5	ug/l	TM16/PM30
Acenaphthylene #	-	<0.5	ug/l	TM16/PM30
Acenaphthene	<1	<1	ug/l	TM16/PM30
Acenaphthene #	-	<1	ug/l	TM16/PM30
Fluorene	<0.5	<0.5	ug/l	TM16/PM30
Fluorene #	-	<0.5	ug/l	TM16/PM30
Phenanthrene	<0.5	<0.5	ug/l	TM16/PM30

Phenanthrene #	-	<0.5	ug/l	TM16/PM30
Anthracene	<0.5	<0.5	ug/l	TM16/PM30
Anthracene #	-	<0.5	ug/l	TM16/PM30
Fluoranthene	<0.5	<0.5	ug/l	TM16/PM30
Fluoranthene #	-	<0.5	ug/l	TM16/PM30
Pyrene	<0.5	<0.5	ug/l	TM16/PM30
Pyrene #	-	<0.5	ug/l	TM16/PM30
Benzo(a)anthracene	<0.5	<0.5	ug/l	TM16/PM30
Benzo(a)anthracene #	-	<0.5	ug/l	TM16/PM30
Chrysene	<0.5	<0.5	ug/l	TM16/PM30
Chrysene #	-	<0.5	ug/l	TM16/PM30
Benzo(bk)fluoranthene	<1	<1	ug/l	TM16/PM30
Benzo(bk)fluoranthene #	-	<1	ug/l	TM16/PM30
Benzo(a)pyrene	<1	<1	ug/l	TM16/PM30
Indeno(123cd)pyrene	<1	<1	ug/l	TM16/PM30
Dibenzo(ah)anthracene	<0.5	<0.5	ug/l	TM16/PM30
Dibenzo(ah)anthracene #	-	<0.5	ug/l	TM16/PM30
Benzo(ghi)perylene	<0.5	<0.5	ug/l	TM16/PM30
Benzo(ghi)perylene #	-	<0.5	ug/l	TM16/PM30
Phthalates				
Bis(2-ethylhexyl) phthalate	<5	<5	ug/l	TM16/PM30
Butylbenzyl phthalate	<1	<1	ug/l	TM16/PM30
Di-n-butyl phthalate	<1.5	<1.5	ug/l	TM16/PM30
Di-n-butyl phthalate #	-	<1.5	ug/l	TM16/PM30
Di-n-Octyl phthalate	<1	<1	ug/l	TM16/PM30
Diethyl phthalate	<1	<1	ug/l	TM16/PM30
Diethyl phthalate #	-	<1	ug/l	TM16/PM30
Dimethyl phthalate	<1	<1	ug/l	TM16/PM30

Element Materials Technology

Client Name: Marron Environmental
Reference: J154
Location: Drehid
Contact: Donal Marron
EMT Job No: 22/17700

EMT Sample No.	123-129			
Sample ID	LEACHATE			
Depth		Please see attached notes for all abbreviations and acronyms		
COC No / misc				
Containers	V H HNUF N P G			
Sample Date	26/10/2022			
Sample Type	Leachate			
Batch Number	1	LOD/LOR	Units	Method No.
Date of Receipt	27/10/2022			
SVOC MS				
Other SVOCs				
1,2-Dichlorobenzene	<1	<1	ug/l	TM16/PM30
1,2-Dichlorobenzene #	-	<1	ug/l	TM16/PM30
1,2,4-Trichlorobenzene	<1	<1	ug/l	TM16/PM30
1,2,4-Trichlorobenzene #	-	<1	ug/l	TM16/PM30
1,3-Dichlorobenzene	<1	<1	ug/l	TM16/PM30
1,3-Dichlorobenzene #	-	<1	ug/l	TM16/PM30
1,4-Dichlorobenzene	<1	<1	ug/l	TM16/PM30
1,4-Dichlorobenzene #	-	<1	ug/l	TM16/PM30
2-Nitroaniline	<1	<1	ug/l	TM16/PM30
2,4-Dinitrotoluene	<0.5	<0.5	ug/l	TM16/PM30
2,4-Dinitrotoluene #	-	<0.5	ug/l	TM16/PM30
2,6-Dinitrotoluene	<1	<1	ug/l	TM16/PM30
3-Nitroaniline	<1	<1	ug/l	TM16/PM30
4-Bromophenylphenylether	<1	<1	ug/l	TM16/PM30
4-Bromophenylphenylether #	-	<1	ug/l	TM16/PM30
4-Chloroaniline	<1	<1	ug/l	TM16/PM30
4-Chlorophenylphenylether	<1	<1	ug/l	TM16/PM30
4-Chlorophenylphenylether #	-	<1	ug/l	TM16/PM30
4-Nitroaniline	<0.5	<0.5	ug/l	TM16/PM30
Azobenzene	<0.5	<0.5	ug/l	TM16/PM30
Azobenzene #	-	<0.5	ug/l	TM16/PM30
Bis(2-chloroethoxy)methane	<0.5	<0.5	ug/l	TM16/PM30
Bis(2-chloroethoxy)methane #	-	<0.5	ug/l	TM16/PM30
Bis(2-chloroethyl)ether	<1	<1	ug/l	TM16/PM30
Bis(2-chloroethyl)ether #	-	<1	ug/l	TM16/PM30
Carbazole	<0.5	<0.5	ug/l	TM16/PM30
Carbazole #	-	<0.5	ug/l	TM16/PM30
Dibenzofuran	<0.5	<0.5	ug/l	TM16/PM30
Dibenzofuran #	-	<0.5	ug/l	TM16/PM30
Hexachlorobenzene	<1	<1	ug/l	TM16/PM30
Hexachlorobenzene #	-	<1	ug/l	TM16/PM30

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Element Materials Technology

Client Name: Marron Environmental
Reference: J154
Location: Drehid
Contact: Donal Marron
EMT Job No: 22/17700

EMT Sample No.	123-129	Please see attached notes for all abbreviations and acronyms		
Sample ID	LEACHATE			
Depth				
COC No / misc				
Containers	V H HNUF N P G			
Sample Date	26/10/2022			
Sample Type	Leachate			
Batch Number	1	LOD/LOR	Units	Method No.
Date of Receipt	27/10/2022			
VOC MS				
Dichlorodifluoromethane	<2	<2	ug/l	TM15/PM10
Methyl Tertiary Butyl Ether	1.4	<0.1	ug/l	TM15/PM10
Methyl Tertiary Butyl Ether #	-	<0.1	ug/l	TM15/PM10
Chloromethane	<3	<3	ug/l	TM15/PM10
Chloromethane #	-	<3	ug/l	TM15/PM10
Vinyl Chloride	<0.1	<0.1	ug/l	TM15/PM10
Vinyl Chloride #	-	<0.1	ug/l	TM15/PM10
Bromomethane	<1	<1	ug/l	TM15/PM10
Chloroethane	<3	<3	ug/l	TM15/PM10
Chloroethane #	-	<3	ug/l	TM15/PM10
Trichlorofluoromethane	<3	<3	ug/l	TM15/PM10
Trichlorofluoromethane #	-	<3	ug/l	TM15/PM10
1,1-Dichloroethene (1,1 DCE)	<3	<3	ug/l	TM15/PM10
1,1-Dichloroethene (1,1 DCE) #	-	<3	ug/l	TM15/PM10
Dichloromethane (DCM)	<3	<3	ug/l	TM15/PM10
Dichloromethane (DCM) #	-	<3	ug/l	TM15/PM10
trans-1-2-Dichloroethene	<3	<3	ug/l	TM15/PM10
trans-1-2-Dichloroethene #	-	<3	ug/l	TM15/PM10
1,1-Dichloroethane	<3	<3	ug/l	TM15/PM10
1,1-Dichloroethane #	-	<3	ug/l	TM15/PM10
cis-1-2-Dichloroethene	<3	<3	ug/l	TM15/PM10
cis-1-2-Dichloroethene #	-	<3	ug/l	TM15/PM10
2,2-Dichloropropane	<1	<1	ug/l	TM15/PM10
Bromochloromethane	<2	<2	ug/l	TM15/PM10
Bromochloromethane #	-	<2	ug/l	TM15/PM10
Chloroform	<2	<2	ug/l	TM15/PM10
Chloroform #	-	<2	ug/l	TM15/PM10
1,1,1-Trichloroethane	<2	<2	ug/l	TM15/PM10
1,1,1-Trichloroethane #	-	<2	ug/l	TM15/PM10
1,1-Dichloropropene	<3	<3	ug/l	TM15/PM10
1,1-Dichloropropene #	-	<3	ug/l	TM15/PM10
Carbon tetrachloride	<2	<2	ug/l	TM15/PM10

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Carbon tetrachloride #	-	<2	ug/l	TM15/PM10
1,2-Dichloroethane	5	<2	ug/l	TM15/PM10
1,2-Dichloroethane #	-	<2	ug/l	TM15/PM10
Benzene	4.4	<0.5	ug/l	TM15/PM10
Benzene #	-	<0.5	ug/l	TM15/PM10
Trichloroethene (TCE)	<3	<3	ug/l	TM15/PM10
Trichloroethene (TCE) #	-	<3	ug/l	TM15/PM10
1,2-Dichloropropane	<2	<2	ug/l	TM15/PM10
1,2-Dichloropropane #	-	<2	ug/l	TM15/PM10
Dibromomethane	<3	<3	ug/l	TM15/PM10
Dibromomethane #	-	<3	ug/l	TM15/PM10
Bromodichloromethane	<2	<2	ug/l	TM15/PM10
Bromodichloromethane #	-	<2	ug/l	TM15/PM10
cis-1-3-Dichloropropene	<2	<2	ug/l	TM15/PM10
Toluene	25	<5	ug/l	TM15/PM10
Toluene #	-	<5	ug/l	TM15/PM10
trans-1-3-Dichloropropene	<2	<2	ug/l	TM15/PM10
1,1,2-Trichloroethane	<2	<2	ug/l	TM15/PM10
1,1,2-Trichloroethane #	-	<2	ug/l	TM15/PM10
Tetrachloroethene (PCE)	<3	<3	ug/l	TM15/PM10
Tetrachloroethene (PCE) #	-	<3	ug/l	TM15/PM10
1,3-Dichloropropane	<2	<2	ug/l	TM15/PM10
1,3-Dichloropropane #	-	<2	ug/l	TM15/PM10
Dibromochloromethane	<2	<2	ug/l	TM15/PM10
Dibromochloromethane #	-	<2	ug/l	TM15/PM10
1,2-Dibromoethane	<2	<2	ug/l	TM15/PM10
1,2-Dibromoethane #	-	<2	ug/l	TM15/PM10
Chlorobenzene	<2	<2	ug/l	TM15/PM10
Chlorobenzene #	-	<2	ug/l	TM15/PM10
1,1,1,2-Tetrachloroethane	<2	<2	ug/l	TM15/PM10

Element Materials Technology

Client Name: Marron Environmental
Reference: J154
Location: Drehid
Contact: Donal Marron
EMT Job No: 22/17700

EMT Sample No.	123-129	Please see attached notes for all abbreviations and acronyms		
Sample ID	LEACHATE			
Depth				
COC No / misc				
Containers	V H HNUF N P G			
Sample Date	26/10/2022			
Sample Type	Leachate			
Batch Number	1	LOD/LOR	Units	Method No.
Date of Receipt	27/10/2022			
VOC MS Continued				
1,1,1,2-Tetrachloroethane #	-	<2	ug/l	TM15/PM10
Ethylbenzene	11	<1	ug/l	TM15/PM10
Ethylbenzene #	-	<1	ug/l	TM15/PM10
m/p-Xylene	20	<2	ug/l	TM15/PM10
m/p-Xylene #	-	<2	ug/l	TM15/PM10
o-Xylene	11	<1	ug/l	TM15/PM10
o-Xylene #	-	<1	ug/l	TM15/PM10
Styrene	<2	<2	ug/l	TM15/PM10
Bromoform	<2	<2	ug/l	TM15/PM10
Bromoform #	-	<2	ug/l	TM15/PM10
Isopropylbenzene	<3	<3	ug/l	TM15/PM10
Isopropylbenzene #	-	<3	ug/l	TM15/PM10
1,1,2,2-Tetrachloroethane	<4	<4	ug/l	TM15/PM10
Bromobenzene	<2	<2	ug/l	TM15/PM10
Bromobenzene #	-	<2	ug/l	TM15/PM10
1,2,3-Trichloropropane	<3	<3	ug/l	TM15/PM10
1,2,3-Trichloropropane #	-	<3	ug/l	TM15/PM10
Propylbenzene	<3	<3	ug/l	TM15/PM10
Propylbenzene #	-	<3	ug/l	TM15/PM10
2-Chlorotoluene	<3	<3	ug/l	TM15/PM10
2-Chlorotoluene #	-	<3	ug/l	TM15/PM10
1,3,5-Trimethylbenzene	<3	<3	ug/l	TM15/PM10
1,3,5-Trimethylbenzene #	-	<3	ug/l	TM15/PM10
4-Chlorotoluene	<3	<3	ug/l	TM15/PM10
4-Chlorotoluene #	-	<3	ug/l	TM15/PM10
tert-Butylbenzene	<3	<3	ug/l	TM15/PM10
tert-Butylbenzene #	-	<3	ug/l	TM15/PM10
1,2,4-Trimethylbenzene	5	<3	ug/l	TM15/PM10
1,2,4-Trimethylbenzene #	-	<3	ug/l	TM15/PM10
sec-Butylbenzene	<3	<3	ug/l	TM15/PM10
sec-Butylbenzene #	-	<3	ug/l	TM15/PM10
4-Isopropyltoluene	14	<3	ug/l	TM15/PM10

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NOTES TO ACCOMPANY ALL SCHEDULES AND REPORTS

EMT Job No.: 22/17700

SOILS and ASH

Please note we are only MCERTS accredited (UK soils only) for sand, loam and clay and any other matrix is outside our scope of accreditation.

Where an MCERTS report has been requested, you will be notified within 48 hours of any samples that have been identified as being outside our MCERTS scope. As validation has been performed on clay, sand and loam, only samples that are predominantly these matrices, or combinations of them will be within our MCERTS scope. If samples are not one of a combination of the above matrices they will not be marked as MCERTS accredited.

It is assumed that you have taken representative samples on site and require analysis on a representative subsample. Stones will generally be included unless we are requested to remove them.

All samples will be discarded one month after the date of reporting, unless we are instructed to the contrary. Asbestos samples are retained for 6 months.

If you have not already done so, please send us a purchase order if this is required by your company.

Where appropriate please make sure that our detection limits are suitable for your needs, if they are not, please notify us immediately.

All analysis is reported on a dry weight basis unless stated otherwise. Limits of detection for analyses carried out on as received samples are not moisture content corrected. Results are not surrogate corrected. Samples are dried at 35°C ±5°C unless otherwise stated. Moisture content for CEN Leachate tests are dried at 105°C ±5°C. Ash samples are dried at 37°C ±5°C.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

Where a CEN 10:1 ZERO Headspace VOC test has been carried out, a 10:1 ratio of water to wet (as received) soil has been used.

% Asbestos in Asbestos Containing Materials (ACMs) is determined by reference to HSG 264 The Survey Guide - Appendix 2 : ACMs in buildings listed in order of ease of fibre release.

Sufficient amount of sample must be received to carry out the testing specified. Where an insufficient amount of sample has been received the testing may not meet the requirements of our accredited methods, as such accreditation may be removed.

Negative Neutralization Potential (NP) values are obtained when the volume of NaOH (0.1N) titrated (pH 8.3) is greater than the volume of HCl (1N) to reduce the pH of the sample to 2.0 - 2.5. Any negative NP values are corrected to 0.

The calculation of Pyrite content assumes that all oxidisable sulphides present in the sample are pyrite. This may not be the case. The calculation may be an overestimate when other sulphides such as Barite (Barium Sulphate) are present.

WATERS

Please note we are not a UK Drinking Water Inspectorate (DWI) Approved Laboratory .

ISO17025 accreditation applies to surface water and groundwater and usually one other matrix which is analysis specific, any other liquids are outside our scope of accreditation.

As surface waters require different sample preparation to groundwaters the laboratory must be informed of the water type when submitting samples.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

STACK EMISSIONS

Where an MCERTS report has been requested, you will be notified within 48 hours of any samples that have been identified as being outside our MCERTS scope. As validation for Dioxins and Furans and Dioxin like PCBs has been performed on XAD-2 Resin, only samples which use this resin will be within our MCERTS scope.

Where appropriate please make sure that our detection limits are suitable for your needs, if they are not, please notify us immediately.

DEVIATING SAMPLES

All samples should be submitted to the laboratory in suitable containers with sufficient ice packs to sustain an appropriate temperature for the requested analysis. The temperature of sample receipt is recorded on the confirmation schedules in order that the client can make an informed decision as to whether testing should still be undertaken.

SURROGATES

Surrogate compounds are added during the preparation process to monitor recovery of analytes. However low recovery in soils is often due to peat, clay or other organic rich matrices. For waters this can be due to oxidants, surfactants, organic rich sediments or remediation fluids. Acceptable limits for most organic methods are 70 - 130% and for VOCs are 50 - 150%. When surrogate recoveries are outside the performance criteria but the associated AQC passes this is assumed to be due to matrix effect. Results are not surrogate corrected.

DILUTIONS

A dilution suffix indicates a dilution has been performed and the reported result takes this into account. No further calculation is required.

BLANKS

Where analytes have been found in the blank, the sample will be treated in accordance with our laboratory procedure for dealing with contaminated blanks.

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All solid results are expressed on a dry weight basis unless stated otherwise.

NOTE

Data is only reported if the laboratory is confident that the data is a true reflection of the samples analysed. Data is only reported as accredited when all the requirements of our Quality System have been met. In certain circumstances where all the requirements of the Quality System have not been met, for instance if the associated AQC has failed, the reason is fully investigated and documented. The sample data is then evaluated alongside the other quality control checks performed during analysis to determine its suitability. Following this evaluation, provided the sample results have not been effected, the data is reported but accreditation is removed. It is a UKAS requirement for data not reported as accredited to be considered indicative only, but this does not mean the data is not valid.

Where possible, and if requested, samples will be re-extracted and a revised report issued with accredited results. Please do not hesitate to contact the laboratory if further details are required of the circumstances which have led to the removal of accreditation.

Laboratory records are kept for a period of no less than 6 years.

REPORTS FROM THE SOUTH AFRICA LABORATORY

Any method number not prefixed with SA has been undertaken in our UK laboratory unless reported as subcontracted.

Measurement Uncertainty

Measurement uncertainty defines the range of values that could reasonably be attributed to the measured quantity. This range of values has not been included within the reported results. Uncertainty expressed as a percentage can be provided upon request.

Customer Provided Information

Sample ID and depth is information provided by the customer.

ABBREVIATIONS and ACRONYMS USED

#	ISO17025 (UKAS Ref No. 4225) accredited - UK.
SA	ISO17025 (SANAS Ref No.T0729) accredited - South Africa
B	Indicates analyte found in associated method blank.
DR	Dilution required.
M	MCERTS accredited.
NA	Not applicable
NAD	No Asbestos Detected.
ND	None Detected (usually refers to VOC and/SVOC TICs).
NDP	No Determination Possible
SS	Calibrated against a single substance
SV	Surrogate recovery outside performance criteria. This may be due to a matrix effect.
W	Results expressed on as received basis.
+	AQC failure, accreditation has been removed from this result, if appropriate, see 'Note' on previous page.
>>	Results above calibration range, the result should be considered the minimum value. The actual result could be significantly higher.
*	Analysis subcontracted to an Element Materials Technology approved laboratory.
AD	Samples are dried at 35°C ±5°C
CO	Suspected carry over
LOD/LOR	Limit of Detection (Limit of Reporting) in line with ISO 17025 and MCERTS
ME	Matrix Effect
NFD	No Fibres Detected
BS	AQC Sample
LB	Blank Sample
N	Client Sample
TB	Trip Blank Sample
OC	Outside Calibration Range
AA	x2 Dilution
AB	x5 Dilution
AC	x20 Dilution

HWOL ACRONYMS AND OPERATORS USED

HS	Headspace Analysis.
EH	Extractable Hydrocarbons - i.e. everything extracted by the solvent.
CU	Clean-up - e.g. by florisil, silica gel.
1D	GC - Single coil gas chromatography.
Total	Aliphatics & Aromatics.
AL	Aliphatics only.
AR	Aromatics only.
2D	GC-GC - Double coil gas chromatography.
#1	EH_Total but with humics mathematically subtracted
#2	EU_Total but with fatty acids mathematically subtracted
_	Operator - underscore to separate acronyms (exception for +).
+	Operator to indicate cumulative e.g. EH+HS_Total or EH_CU+HS_Total
MS	Mass Spectrometry.

EMT Job No: 22/17700

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/S ANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM5	Modified 8015B v2:1996 method for the determination of solvent Extractable Petroleum Hydrocarbons (EPH) within the range C8-C40 by GCFID. For waters the solvent extracts dissolved phase plus a sheen if present.	PM30	Water samples are extracted with solvent using a magnetic stirrer to create a vortex.	Yes			
TM15	Modified USEPA 8260B v2:1996. Quantitative Determination of Volatile Organic Compounds (VOCs) by Headspace GC-MS.	PM10	Modified US EPA method 5021A v2:2014. Preparation of solid and liquid samples for GC headspace analysis.				
TM15	Modified USEPA 8260B v2:1996. Quantitative Determination of Volatile Organic Compounds (VOCs) by Headspace GC-MS.	PM10	Modified US EPA method 5021A v2:2014. Preparation of solid and liquid samples for GC headspace analysis.	Yes			
TM16	Modified USEPA 8270D v5:2014. Quantitative determination of Semi-Volatile Organic compounds (SVOCs) by GC-MS.	PM30	Water samples are extracted with solvent using a magnetic stirrer to create a vortex.				
TM16	Modified USEPA 8270D v5:2014. Quantitative determination of Semi-Volatile Organic compounds (SVOCs) by GC-MS.	PM30	Water samples are extracted with solvent using a magnetic stirrer to create a vortex.	Yes			
TM30	Determination of Trace Metals by ICP-OES (Inductively Coupled Plasma – Optical Emission Spectrometry): WATERS by Modified USEPA Method 200.7, Rev. 4.4, 1994; Modified EPA Method 6010B, Rev.2, Dec 1996; Modified BS EN ISO 11885:2009: SOILS by Modified USEP 6010B, Rev.2, Dec.1996; Modified EPA Method 3050B, Rev.2, Dec.1996	PM14	Preparation of waters and leachates for metals by ICP OES/ICP MS. Samples are filtered for Dissolved metals, and remain unfiltered for Total metals then acidified				
TM30	Determination of Trace Metals by ICP-OES (Inductively Coupled Plasma – Optical Emission Spectrometry): WATERS by Modified USEPA Method 200.7, Rev. 4.4, 1994; Modified EPA Method 6010B, Rev.2, Dec 1996; Modified BS EN ISO 11885:2009: SOILS by Modified USEP 6010B, Rev.2, Dec.1996; Modified EPA Method 3050B, Rev.2, Dec.1996	PM14	Preparation of waters and leachates for metals by ICP OES/ICP MS. Samples are filtered for Dissolved metals, and remain unfiltered for Total metals then acidified	Yes			
TM37	Modified methods - TSS: USEPA 160.2 (1963), EN612:2009 and APHA SM5011 2540D:1999 22nd Edition; VSS: USEPA 1684 (Jan 2001), USEPA 160.4 (1971) and SMEWW 2540E:1999 22nd Edition. Gravimetric determination of Total Suspended Solids (TSS) and Volatile Suspended Solids (VSS). Sample is filtered through a 1.5um pore size glass fibre filter and the resulting residue is dried and weighed at 105°C for TSS and 550°C for VSS.	PM0	No preparation is required.	Yes			
TM38	Soluble Ion analysis using Discrete Analyser. Modified US EPA methods: Chloride 325.2 (1978), Sulphate 375.4 (Rev.2 1993), o-Phosphate 365.2 (Rev.2 1993), TON 353.1 (Rev.2 1993), Nitrite 354.1 (1971), Hex Cr 7196A (1992), NH4+ 350.1 (Rev.2 1993) – All anions comparable to BS ISO 15923-1: 2013	PM0	No preparation is required.				
TM38	Soluble Ion analysis using Discrete Analyser. Modified US EPA methods: Chloride 325.2 (1978), Sulphate 375.4 (Rev.2 1993), o-Phosphate 365.2 (Rev.2 1993), TON 353.1 (Rev.2 1993), Nitrite 354.1 (1971), Hex Cr 7196A (1992), NH4+ 350.1 (Rev.2 1993) – All anions comparable to BS ISO 15923-1: 2013	PM0	No preparation is required.	Yes			

EMT Job No: 22/17700

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/S ANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM57	Modified US EPA Method 410.4. (Rev. 2.0 1993) Comparable with ISO 15705:2002. Chemical Oxygen Demand is determined by hot digestion with Potassium Dichromate and measured spectrophotometrically.	PM0	No preparation is required.				
TM57	Modified US EPA Method 410.4. (Rev. 2.0 1993) Comparable with ISO 15705:2002. Chemical Oxygen Demand is determined by hot digestion with Potassium Dichromate and measured spectrophotometrically.	PM0	No preparation is required.	Yes			
TM73	Modified US EPA methods 150.1 (1982) and 9045D Rev. 4 - 2004) and BS1377-3:1990. Determination of pH by Metrohm automated probe analyser.	PM0	No preparation is required.				
TM73	Modified US EPA methods 150.1 (1982) and 9045D Rev. 4 - 2004) and BS1377-3:1990. Determination of pH by Metrohm automated probe analyser.	PM0	No preparation is required.	Yes			
TM76	Modified US EPA method 120.1 (1982). Determination of Specific Conductance by Metrohm automated probe analyser.	PM0	No preparation is required.				
TM76	Modified US EPA method 120.1 (1982). Determination of Specific Conductance by Metrohm automated probe analyser.	PM0	No preparation is required.	Yes			
TM89	Modified USEPA method OIA-1667 (1999). Determination of cyanide by Flow Injection Analyser. Where WAD cyanides are required a Ligand displacement step is carried out before analysis.	PM0	No preparation is required.				
TM173	Analysis of fluoride by ISE (Ion Selective Electrode) using modified ISE method 9214 - 340.2 (EPA 1998)	PM0	No preparation is required.				

Client: Drihid Waste Management Order Number: 3082510
Primary Contact:
Address: Drihid Waste Management, Drihid, Co Kildare

Sample Number: ALT ID 3543006 **Date Received:** 26/10/2022 **Date Tested:** 27/10/2022
INAB P9 Classification: Trade wastes
Sample Description: SW4

Test	Result	Unit(s)	Method	Technique
BOD with ATU	1	mg/L O2	ECTM004	HACH (LDO®)

Sample Number: ALT ID 3543007 **Date Received:** 26/10/2022 **Date Tested:** 27/10/2022
INAB P9 Classification: Trade wastes
Sample Description: SW5

Test	Result	Unit(s)	Method	Technique
BOD with ATU	2	mg/L O2	ECTM004	HACH (LDO®)

Sample Number: ALT ID 3543008 **Date Received:** 26/10/2022 **Date Tested:** 27/10/2022
INAB P9 Classification: Trade wastes
Sample Description: SW6

Test	Result	Unit(s)	Method	Technique
BOD with ATU	2	mg/L O2	ECTM004	HACH (LDO®)

Sample Number: ALT ID 3543009 **Date Received:** 26/10/2022 **Date Tested:** 27/10/2022
INAB P9 Classification: Trade wastes
Sample Description: LEACHATE

Test	Result	Unit(s)	Method	Technique
BOD with ATU	163	mg/L O2	ECTM004	HACH (LDO®)

The results in this report were authorised by:



Chiara Lou Baczynski
Laboratory Manager - Environmental & Allergen

Samples tested at: ALT Chemical Testing Laboratory, Unit T, M7 Business Park, Newhall, Naas, Co. Kildare, Ireland.



Report Status: Final Report
Date of Issue: 09-Nov-2022
Report Number: 1497740
Project: 1-221026-15100
Page 2 of 2
Order Number: 3082510

Client: Drihid Waste Management

Disclaimer(s)

Results in this report relate only to the items tested.

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Results reported as cfu/cm² are calculated based on information supplied by the relevant customer regarding the specific area swabbed.

* beside the method or lack of INAB symbol signifies that **Advanced Laboratory Testing** are not INAB accredited for this method.

Samples are retained post analysis for a period of 10 days. Samples are stored frozen by default except in the case of RSA requirements.

Unless otherwise stated as a Test Certificate comment, samples were received in a satisfactory condition.

Sampling including the date and time swabs are taken at source and area swabbed is outside the activities of ALT-MxNS and Scope of INAB Accreditation.

Environmental swab samples should ideally be tested within 4 hours of being taken at source or within a maximum of 24 hours.

Swabs which are tested after 24 hours of being taken at source will result in a detrimental effect on results.

If the date and time which swabs are sampled is not referenced when submitting paperwork, ALT-MxNS will not be able to determine if swabs have been tested within the allocated 24 hour window nor the effect on results.

The results in this report were authorised by:



Chiara Lou Baczynski
Laboratory Manager - Environmental & Allergen

Samples tested at: ALT Chemical Testing Laboratory, Unit T, M7 Business Park,
Newhall, Naas, Co. Kildare, Ireland.

