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Newport City Council
Civic Centre
Newport
NP20 4UR

Attention: Luke Embrey

CERTIFICATE OF ANALYSIS

Date of report Generation: 12 October 2021
Customer: Newport City Council
Sample Delivery Group (SDG): 210918-46
Your Reference: Leachate Area 1 & 2 Sept 2021
Location: Newport landfill
Report No: 616747
Order Number: 700168991

This report has been revised and directly supersedes 616521 in its entirety.

We received 9 samples on Saturday September 18, 2021 and 9 of these samples were scheduled for analysis which was completed on Tuesday October 05, 2021. 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.

Chemical testing (unless subcontracted) performed at ALS Environmental Hawarden.

All sample data is provided by the customer. The reported results relate to the sample supplied, and on the basis that this data is correct.

Incorrect sampling dates and/or sample information will affect the validity of results.

The customer is not permitted to reproduce this report except in full without the approval of the laboratory.

Approved By:

Sonia McWhan

Operations Manager





CERTIFICATE OF ANALYSIS

Validated

SDG: 210918-46
Client Ref.: Leachate Area 1 &

Report Number: 616747
Location: Newport landfill

Superseded Report: 616521

Received Sample Overview

Lab Sample No(s)	Customer Sample Ref.	AGS Ref.	Depth (m)	Sampled Date
24999594	C3B		0.00 - 0.00	16/09/2021
24999611	C4B		0.00 - 0.00	16/09/2021
24999572	C2C		0.00 - 0.00	16/09/2021
24999549	LF08_07		0.00 - 0.00	17/09/2021
24999625	LF11_02		0.00 - 0.00	16/09/2021
24999671	LF11_03		0.00 - 0.00	17/09/2021
24999646	LF11_04		0.00 - 0.00	16/09/2021
24999656	LF11_06		0.00 - 0.00	16/09/2021
24999635	LF11_07		0.00 - 0.00	16/09/2021

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



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Results Legend X Test N No Determination Possible Sample Types - S - Soil/Solid UNS - Unspecified Solid GW - Ground Water SW - Surface Water LE - Land Leachate PL - Prepared Leachate PR - Process Water SA - Saline Water TE - Trade Effluent TS - Treated Sewage US - Untreated Sewage RE - Recreational Water DW - Drinking Water Non-regulatory UNL - Unspecified Liquid SL - Sludge G - Gas OTH - Other	Lab Sample No(s)	Customer Sample Reference	AGS Reference	Depth (m)	Container	Sample Type																
								ZnAc (ALE246)	NaOH (ALE245)	HNO3 Filtered (ALE204)	H2SO4 (ALE244)	500ml Plastic (ALE208)	250ml BOD (ALE212)	0.5l glass bottle (ALE227)	ZnAc (ALE246)	NaOH (ALE245)	HNO3 Filtered (ALE204)	H2SO4 (ALE244)	500ml Plastic (ALE208)	250ml BOD (ALE212)	0.5l glass bottle (ALE227)	
		24999594	C3B		0.00 - 0.00	NaOH (ALE245)	LE															
		24999611	C4B		0.00 - 0.00	NaOH (ALE245)	LE															
		24999572	C2C		0.00 - 0.00	NaOH (ALE245)	LE															
						250ml BOD (ALE212)	LE															
						0.5l glass bottle (ALE227)	LE															
Alkalinity as CaCO3	All	NDPs: 0 Tests: 4																				
Alkalinity Filtered as CaCO3	All	NDPs: 0 Tests: 4																				
Ammoniacal Nitrogen	All	NDPs: 0 Tests: 9																				
Anions by Kone (w)	All	NDPs: 1 Tests: 3																				
BOD True Total	All	NDPs: 0 Tests: 4																				
COD Unfiltered	All	NDPs: 0 Tests: 4																				
Conductivity (at 20 deg.C)	All	NDPs: 0 Tests: 4																				
Cyanide Comp/Free/Total/Thiocyanate	All	NDPs: 0 Tests: 9																				
Dissolved Metals by ICP-MS	All	NDPs: 0 Tests: 9																				
EPH (DRO) (C10-C40) Aqueous (W)	All	NDPs: 0 Tests: 9																				
Ionic Balance	All	NDPs: 1 Tests: 3																				
Mercury Dissolved	All	NDPs: 0 Tests: 9																				
Nitrite by Kone (w)	All	NDPs: 0 Tests: 4																				
Organotins in Aqueous Samples	All	NDPs: 0 Tests: 4																				
Pesticides (Suite I) by GCMS	All	NDPs: 0 Tests: 9																				



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Results Legend <div style="display: flex; flex-direction: column; gap: 5px;"> <div style="display: flex; align-items: center;"> <div style="width: 15px; height: 15px; background-color: yellow; border: 1px solid black; margin-right: 5px;"></div> Test </div> <div style="display: flex; align-items: center;"> <div style="width: 15px; height: 15px; background-color: red; border: 1px solid black; margin-right: 5px;"></div> No Determination Possible </div> </div> Sample Types - S - Soil/Solid UNS - Unspecified Solid GW - Ground Water SW - Surface Water LE - Land Leachate PL - Prepared Leachate PR - Process Water SA - Saline Water TE - Trade Effluent TS - Treated Sewage US - Untreated Sewage RE - Recreational Water DW - Drinking Water Non-regulatory UNL - Unspecified Liquid SL - Sludge G - Gas OTH - Other	Lab Sample No(s)	Customer Sample Reference	AGS Reference	Depth (m)	Container	Sample Type																							
								ZnAc (ALE246)	NaOH (ALE245)	HNO3 Filtered (ALE204)	H2SO4 (ALE244)	500ml Plastic (ALE208)	250ml BOD (ALE212)	0.5l glass bottle (ALE227)	ZnAc (ALE246)	NaOH (ALE245)	HNO3 Filtered (ALE204)	H2SO4 (ALE244)	500ml Plastic (ALE208)	250ml BOD (ALE212)	0.5l glass bottle (ALE227)	ZnAc (ALE246)	NaOH (ALE245)	HNO3 Filtered (ALE204)	H2SO4 (ALE244)	500ml Plastic (ALE208)	250ml BOD (ALE212)	0.5l glass bottle (ALE227)	
		24999594	C3B		0.00 - 0.00		LE																						
		24999611	C4B		0.00 - 0.00		LE																						
		24999572	C2C		0.00 - 0.00		LE																						
							LE																						
							LE																						
Pesticides (Suite II) by GCMS	All	NDPs: 0 Tests: 9																											
Pesticides (Suite III) by GCMS	All	NDPs: 0 Tests: 9																											
pH Value	All	NDPs: 0 Tests: 4																											
Phenols by HPLC (W)	All	NDPs: 0 Tests: 9																											
Phosphate by Kone (w)	All	NDPs: 0 Tests: 4																											
Pyrethroids in water by GC-MS	All	NDPs: 0 Tests: 4																											
Sulphide	All	NDPs: 0 Tests: 4																											
SVOC MS (W) - Aqueous	All	NDPs: 0 Tests: 9																											
Total Organic and Inorganic Carbon	All	NDPs: 0 Tests: 4																											
VOC MS (W)	All	NDPs: 0 Tests: 5																											

24999646	LF11_04	0.00 - 0.00	H2SO4 (ALE244)	LE																				
			0.5l glass bottle (ALE227)	LE	X	X			X															
			Vial (ALE297)	LE																				
			NaOH (ALE245)	LE																				
			HNO3 Filtered (ALE204)	LE																				
			H2SO4 (ALE244)	LE					X															
			0.5l glass bottle (ALE227)	LE	X	X																		
			Vial (ALE297)	LE																				
			NaOH (ALE245)	LE																				X
			HNO3 Filtered (ALE204)	LE																				
24999625	LF11_02	0.00 - 0.00	H2SO4 (ALE244)	LE																				
			0.5l glass bottle (ALE227)	LE	X	X			X															
			Vial (ALE297)	LE																				
			NaOH (ALE245)	LE																				
			HNO3 Filtered (ALE204)	LE																				
			H2SO4 (ALE244)	LE					X															
			0.5l glass bottle (ALE227)	LE	X	X																		
			Vial (ALE297)	LE																				
			NaOH (ALE245)	LE																				X
			HNO3 Filtered (ALE204)	LE																				
24999549	LF08_07	0.00 - 0.00	NaOH (ALE245)	LE																				
			HNO3 Filtered (ALE204)	LE																				
			H2SO4 (ALE244)	LE					X															
			500ml Plastic (ALE208)	LE				X																
			250ml BOD (ALE212)	LE																				
			0.5l glass bottle (ALE227)	LE	X	X																		
			Vial (ALE297)	LE																				
			NaOH (ALE245)	LE																				
			HNO3 Filtered (ALE204)	LE																				
			ZnAc (ALE246)	LE																				X



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Superseded Report: 616521

Results Legend	Lab Sample No(s)		24999646		24999656		24999635	
	Customer Sample Reference	AGS Reference	Depth (m)	Container		Sample Type		
<p>X Test</p> <p>N No Determination Possible</p> <p>Sample Types - S - Soil/Solid UNS - Unspecified Solid GW - Ground Water SW - Surface Water LE - Land Leachate PL - Prepared Leachate PR - Process Water SA - Saline Water TE - Trade Effluent TS - Treated Sewage US - Untreated Sewage RE - Recreational Water DW - Drinking Water Non-regulatory UNL - Unspecified Liquid SL - Sludge G - Gas OTH - Other</p>	LFT1_04		0.00 - 0.00	Vial (ALE297)	Vial (ALE297)	Vial (ALE297)	Vial (ALE297)	Vial (ALE297)
				HN03 Filtered (ALE204)	NAOH (ALE245)	HN03 Filtered (ALE204)	NAOH (ALE245)	HN03 Filtered (ALE204)
				0.5l glass bottle (ALE227)	0.5l glass bottle (ALE227)	0.5l glass bottle (ALE227)	0.5l glass bottle (ALE227)	0.5l glass bottle (ALE227)
				LE	LE	LE	LE	LE
Ammoniacal Nitrogen	All	NDPs: 0 Tests: 9			X		X	
Cyanide Comp/Free/Total/Thiocyanate	All	NDPs: 0 Tests: 9	X			X		X
Dissolved Metals by ICP-MS	All	NDPs: 0 Tests: 9	X		X		X	
EPH (DRO) (C10-C40) Aqueous (W)	All	NDPs: 0 Tests: 9		X		X		
Mercury Dissolved	All	NDPs: 0 Tests: 9	X		X		X	
Pesticides (Suite I) by GCMS	All	NDPs: 0 Tests: 9		X		X		
Pesticides (Suite II) by GCMS	All	NDPs: 0 Tests: 9		X		X		
Pesticides (Suite III) by GCMS	All	NDPs: 0 Tests: 9		X		X		
Phenols by HPLC (W)	All	NDPs: 0 Tests: 9		X		X		
SVOC MS (W) - Aqueous	All	NDPs: 0 Tests: 9		X		X		
VOC MS (W)	All	NDPs: 0 Tests: 5	X			X		X



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Results Legend			Customer Sample Ref.	C3B	C4B	C2C	LF08_07	LF11_02	LF11_03
#	ISO17025 accredited.		Depth (m) Sample Type Date Sampled Sampled Time Date Received SDG Ref Lab Sample No.(s) AGS Reference	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00
M	mCERTS accredited.			Land Leachate (LE)	Land Leachate (LE)	Land Leachate (LE)	Land Leachate (LE)	Land Leachate (LE)	Land Leachate (LE)
aq	Aqueous / settled sample.			16/09/2021	16/09/2021	16/09/2021	17/09/2021	16/09/2021	17/09/2021
diss.filt	Dissolved / filtered sample.			18/09/2021	18/09/2021	18/09/2021	18/09/2021	18/09/2021	18/09/2021
tot.unfilt	Total / unfiltered sample.			210918-46	210918-46	210918-46	210918-46	210918-46	210918-46
*	Subcontracted - refer to subcontractor report for accreditation status.			24999594	24999611	24999572	24999549	24999625	24999671
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery								
(F)	Trigger breach confirmed								
1-4*5@	Sample deviation (see appendix)								
Component	LOD/Units	Method							
Ionic balance	% Diff	Calulation		-6.55	7.5	-3.64			
Alkalinity, Total as CaCO3	<2 mg/l	TM043	9380 #	3560 #	6070 #	4450 #			
Alkalinity, Total as CaCO3 (diss.filt)	<2 mg/l	TM043	9110	3650	6600	4350			
Alkalinity, Bicarbonate as CaCO3 (diss.filt)	<2 mg/l	TM043	8490	3650	6600	4350			
BOD, unfiltered	<1 mg/l	TM045	333 #	40.2 #	62.9 #	34.2 #			
Organic Carbon, Total	<3 mg/l	TM090	1960	319	873	290			
Ammoniacal Nitrogen as N	<0.2 mg/l	TM099	1920	567	1740	685	320	560	
Sulphide	<0.01 mg/l	TM101	0.331	0.818	0.0128	0.0329			
COD, unfiltered	<7 mg/l	TM107	6140 #	1120 #	1750 #	987 #			
Conductivity @ 20 deg.C	<0.02 mS/cm	TM120	20.7 #	13.6 #	13.6 #	9.13 #			
Arsenic (diss.filt)	<0.5 µg/l	TM152	196 #	10.6 #	50 #	25.7 #	2.76 #	3.26 #	
Boron (diss.filt)	<10 µg/l	TM152	29300 #	7890 #	8090 #	6390 #			
Cadmium (diss.filt)	<0.08 µg/l	TM152	<0.08 #	<0.08 #	<0.08 #	<0.08 #			
Chromium (diss.filt)	<1 µg/l	TM152	601 #	64 #	185 #	48.7 #			
Copper (diss.filt)	<0.3 µg/l	TM152	1.07 #	<0.3 #	0.416 #	<0.3 #			
Lead (diss.filt)	<0.2 µg/l	TM152	2.51 #	<0.2 #	0.295 #	0.251 #			
Manganese (diss.filt)	<3 µg/l	TM152	221 #	1050 #	774 #	614 #			
Nickel (diss.filt)	<0.4 µg/l	TM152	166 #	83.1 #	129 #	110 #	8.89 #	49 #	
Selenium (diss.filt)	<1 µg/l	TM152	3.34 #	1.22 #	1.7 #	<1 #			
Zinc (diss.filt)	<1 µg/l	TM152	17.7 #	2.33 #	5.05 #	11.5 #			
Sodium (Dis.Filt)	<0.076 mg/l	TM152	2550 #	1530 #	1110 #	814 #			
Magnesium (Dis.Filt)	<0.036 mg/l	TM152	168 #	245 #	198 #	152 #			
Potassium (Dis.Filt)	<0.2 mg/l	TM152	599 #	324 #	461 #	322 #	192 #	263 #	
Calcium (Dis.Filt)	<0.2 mg/l	TM152	54.5 #	302 #	135 #	138 #			
Iron (Dis.Filt)	<0.019 mg/l	TM152	1.73 #	3.17 #	3.23 #	1.68 #			
Hardness, Total as CaCO3	<0.65 mg/l	TM152	830	1760	1150	970			
EPH Range >C10 - C40 (aq)	<100 µg/l	TM172	2720	2190	3250	836	3930	3060	
Mercury (diss.filt)	<0.01 µg/l	TM183	<0.01 #	<0.01 #	<0.01 #	<0.01 #	<0.01 #	<0.01 #	
Nitrite as NO2	<0.05 mg/l	TM184	<0.05	<0.05	<0.05	<0.05			
Phosphate (Ortho as PO4)	<0.05 mg/l	TM184	40.3	0.799	22.4	2.12			
Sulphate	<2 mg/l	TM184		<10	<10	<10			
Chloride	<2 mg/l	TM184		3490	1650	1180			



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Client Ref.: Leachate Area 1 & amp;

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Superseded Report: 616521

Results Legend			Customer Sample Ref.	C3B	C4B	C2C	LF08_07	LF11_02	LF11_03
# ISO17025 accredited. M MCERTS accredited. aq Aqueous / settled sample. dis,flt Dissolved / filtered sample. tot,unflt Total / unfiltered sample. * Subcontracted - refer to subcontractor report for accreditation status. ** % recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery (F) Trigger breach confirmed 1-446@ Sample deviation (see appendix)	Depth (m) Sample Type Date Sampled Sampled Time Date Received SDG Ref Lab Sample No.(s) AGS Reference		0.00 - 0.00 Land Leachate (LE) 16/09/2021 18/09/2021 210918-46 24999594	0.00 - 0.00 Land Leachate (LE) 16/09/2021 18/09/2021 210918-46 24999611	0.00 - 0.00 Land Leachate (LE) 16/09/2021 18/09/2021 210918-46 24999572	0.00 - 0.00 Land Leachate (LE) 17/09/2021 18/09/2021 210918-46 24999549	0.00 - 0.00 Land Leachate (LE) 16/09/2021 18/09/2021 210918-46 24999625	0.00 - 0.00 Land Leachate (LE) 17/09/2021 18/09/2021 210918-46 24999671	
Component	LOD/Units	Method							
Nitrate as NO3	<0.3 mg/l	TM184		0.62	<3	0.577			
Total Oxidised Nitrogen as N	<0.1 mg/l	TM184		0.136	<1	0.129			
Cyanide, Total	<0.05 mg/l	TM227	0.08 #	<0.05 #	<0.05 #	<0.05 #	<0.05 #	<0.05 #	<0.05 #
Cyanide, Free	<0.05 mg/l	TM227					<0.05 #	<0.05 #	<0.05 #
pH	<1 pH Units	TM256	7.97 #	7.29 #	7.72 #	7.92 #			
Phenol	<0.002 mg/l	TM259	0.55 #	<0.02 #	<0.02 #	<0.002 #	<0.002 #	0.02 #	0.02 #
Cresols	<0.006 mg/l	TM259	0.56 #	<0.06 #	<0.06 #	<0.006 #	0.01 #	0.02 #	0.02 #
Xylenols	<0.008 mg/l	TM259	0.3 #	<0.08 #	<0.08 #	0.08 #	0.03 #	0.05 #	0.05 #
Phenols, Total Detected monohydric	<0.016 mg/l	TM259	1.41 #	<0.16 #	<0.16 #	0.08 #	0.04 #	0.09 #	0.09 #
Dibutyl tin	<5 ng/l	TM328	<1500	<150	<1500	<300			
Tributyl tin	<1 ng/l	TM328	<300	<30	546	<60			
Tetrabutyl tin	<2 ng/l	TM328	<600	<60	<600	<120			
Triphenyl tin	<1 ng/l	TM328	<300	<30	<300	<60			
Surrogate**	%	TM328	51.3	68	73.4	59.3			
Trifluralin	<0.01 µg/l	TM343	<0.05	<0.01	<0.05	<0.01	<0.01	<0.01	<0.01
alpha-HCH	<0.01 µg/l	TM343	<0.05	<0.01	<0.05	<0.01	<0.01	<0.01	<0.01
gamma-HCH (Lindane)	<0.01 µg/l	TM343	<0.05	<0.01	<0.05	<0.01	<0.01	<0.01	<0.01
Heptachlor	<0.01 µg/l	TM343	<0.05	<0.01	<0.05	<0.01	<0.01	<0.01	<0.01
Aldrin	<0.01 µg/l	TM343	<0.05	<0.01	<0.05	<0.01	<0.01	<0.01	<0.01
beta-HCH	<0.01 µg/l	TM343	<0.05	<0.01	<0.05	<0.01	<0.01	<0.01	<0.01
Isodrin	<0.01 µg/l	TM343	<0.05	<0.01	<0.05	<0.01	<0.01	<0.01	<0.01
delta-HCH	<0.01 µg/l	TM343	<0.05	<0.01	<0.05	<0.01	<0.01	<0.01	<0.01
Heptachlor epoxide	<0.01 µg/l	TM343	<0.05	<0.01	<0.05	<0.01	<0.01	<0.01	<0.01
o,p'-DDE	<0.01 µg/l	TM343	<0.05	<0.01	<0.05	<0.01	<0.01	<0.01	<0.01
Endosulphan I	<0.01 µg/l	TM343	<0.05	<0.01	<0.05	<0.02	<0.01	<0.01	<0.02
trans-Chlordane	<0.01 µg/l	TM343	<0.05	<0.01	<0.05	<0.01	<0.01	<0.01	<0.01
cis-Chlordane	<0.01 µg/l	TM343	<0.05	<0.01	<0.05	<0.01	<0.01	<0.01	<0.01
p,p'-DDE	<0.01 µg/l	TM343	<0.05	<0.01	<0.05	<0.01	<0.01	<0.01	<0.01
Dieldrin	<0.01 µg/l	TM343	<0.05	<0.01	<0.05	<0.01	<0.01	<0.01	<0.01
o,p'-DDD (TDE)	<0.01 µg/l	TM343	<0.05	<0.01	<0.05	<0.01	<0.01	<0.01	<0.01
Endrin	<0.01 µg/l	TM343	<0.05	<0.01	<0.05	<0.01	<0.01	<0.01	<0.01
o,p'-DDT	<0.01 µg/l	TM343	<0.1	<0.01	<0.1	<0.02	<0.01	<0.01	<0.02



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Component	LOD/Units	Method							
p,p'-DDD (TDE)	<0.01 µg/l	TM343	<0.05	<0.01	<0.05	<0.01	<0.01	<0.01	<0.01
Endosulphan II	<0.02 µg/l	TM343	<0.1	<0.02	<0.1	<0.04	<0.02	<0.04	<0.04
p,p'-DDT	<0.01 µg/l	TM343	<0.1	<0.01	<0.1	<0.02	<0.01	<0.02	<0.02
o,p'-Methoxychlor	<0.01 µg/l	TM343	<0.1	<0.01	<0.1	<0.02	<0.01	<0.02	<0.02
p,p'-Methoxychlor	<0.01 µg/l	TM343	<0.1	<0.01	<0.1	<0.02	<0.01	<0.02	<0.02
Endosulphan Sulphate	<0.02 µg/l	TM343	<0.1	<0.02	<0.1	<0.02	<0.02	<0.02	<0.02
Permethrin I	<0.01 µg/l	TM343	<0.05	<0.01	<0.05	<0.01	<0.01	<0.01	<0.01
Permethrin II	<0.01 µg/l	TM343	<0.05	<0.01	<0.05	<0.01	<0.01	<0.01	<0.01
1,3,5-Trichlorobenzene	<0.01 µg/l	TM344	<0.1	<0.01	<0.1	<0.02	<0.01	<0.02	<0.02
Hexachlorobutadiene	<0.01 µg/l	TM344	<0.1	<0.01	<0.1	<0.02	<0.01	<0.02	<0.02
1,2,4-Trichlorobenzene	<0.01 µg/l	TM344	<0.1	<0.01	<0.1	<0.02	0.0484	<0.02	<0.02
1,2,3-Trichlorobenzene	<0.01 µg/l	TM344	<0.1	<0.01	<0.1	<0.02	<0.01	<0.02	<0.02
Dichlorvos	<0.01 µg/l	TM344	<0.1	<0.01	<0.1	<0.02	<0.01	<0.02	<0.02
Dichlobenil	<0.01 µg/l	TM344	<0.1	<0.01	<0.1	<0.02	<0.01	<0.02	<0.02
Mevinphos	<0.01 µg/l	TM344	<0.1	<0.01	<0.1	<0.02	<0.01	<0.02	<0.02
Tecnazene	<0.01 µg/l	TM344	<0.1	<0.01	<0.1	<0.02	<0.01	<0.02	<0.02
Hexachlorobenzene	<0.01 µg/l	TM344	<0.1	<0.01	<0.1	<0.02	<0.01	<0.02	<0.02
Demeton-S-methyl	<0.01 µg/l	TM344	<0.1	<0.01	<0.1	<0.02	<0.01	<0.02	<0.02
Phorate	<0.01 µg/l	TM344	<0.1	<0.01	<0.1	<0.02	<0.01	<0.02	<0.02
Diazinon	<0.01 µg/l	TM344	<0.1	<0.01	<0.1	<0.02	<0.01	<0.02	<0.02
Triallate	<0.01 µg/l	TM344	<0.1	<0.01	<0.1	<0.02	<0.01	<0.02	<0.02
Atrazine	<0.01 µg/l	TM344	<0.1	<0.01	0.225	<0.02	<0.01	<0.02	<0.02
Simazine	<0.01 µg/l	TM344	1.27	<0.01	1.3	<0.02	<0.01	<0.02	<0.02
Disulfoton	<0.01 µg/l	TM344	<0.1	<0.01	<0.1	<0.02	<0.01	<0.02	<0.02
Propetamphos	<0.01 µg/l	TM344	<0.1	<0.01	<0.1	<0.02	<0.01	<0.02	<0.02
Chlorpyrifos-methyl	<0.01 µg/l	TM344	<0.1	<0.02	<0.1	<0.02	<0.02	<0.02	<0.02
Dimethoate	<0.01 µg/l	TM344	<0.1	<0.02	<0.1	<0.02	<0.02	<0.02	<0.02
Pirimiphos-methyl	<0.01 µg/l	TM344	<0.1	<0.01	<0.1	<0.02	<0.01	<0.02	<0.02
Chlorpyrifos	<0.01 µg/l	TM344	<0.1	<0.01	<0.1	<0.02	<0.01	<0.02	<0.02
Methyl Parathion	<0.01 µg/l	TM344	<0.1	<0.02	<0.1	<0.02	<0.02	<0.02	<0.02
Malathion	<0.01 µg/l	TM344	<0.1	<0.02	<0.1	<0.02	<0.02	<0.02	<0.02
Fenthion	<0.01 µg/l	TM344	<0.1	<0.01	<0.1	<0.02	<0.01	<0.02	<0.02



CERTIFICATE OF ANALYSIS

Validated

SDG: 210918-46
Client Ref.: Leachate Area 1 & ;

Report Number: 616747
Location: Newport landfill

Superseded Report: 616521

Results Legend			Customer Sample Ref.	C3B	C4B	C2C	LF08_07	LF11_02	LF11_03
# ISO17025 accredited. M MCERTS accredited. aq Aqueous / settled sample. dis.filt Dissolved / filtered sample. tot.unfilt Total / unfiltered sample. * Subcontracted - refer to subcontractor report for accreditation status. ** % recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery (F) Trigger breach confirmed 1-446@ Sample deviation (see appendix)	Depth (m) Sample Type Date Sampled Sampled Time Date Received SDG Ref Lab Sample No.(s) AGS Reference		0.00 - 0.00 Land Leachate (LE) 16/09/2021 18/09/2021 210918-46 24999594	0.00 - 0.00 Land Leachate (LE) 16/09/2021 18/09/2021 210918-46 24999611	0.00 - 0.00 Land Leachate (LE) 16/09/2021 18/09/2021 210918-46 24999572	0.00 - 0.00 Land Leachate (LE) 17/09/2021 18/09/2021 210918-46 24999549	0.00 - 0.00 Land Leachate (LE) 16/09/2021 18/09/2021 210918-46 24999625	0.00 - 0.00 Land Leachate (LE) 17/09/2021 18/09/2021 210918-46 24999671	
Component	LOD/Units	Method							
Fenitrothion	<0.01 µg/l	TM344	<0.1	<0.02	<0.1	<0.02	<0.02	<0.02	<0.02
Triadimefon	<0.01 µg/l	TM344	<0.1	<0.01	<0.1	<0.02	<0.01	<0.02	<0.02
Pendimethalin	<0.01 µg/l	TM344	<0.1	<0.01	<0.1	<0.02	<0.01	<0.02	<0.02
Parathion	<0.01 µg/l	TM344	<0.1	<0.01	<0.1	<0.02	<0.01	<0.02	<0.02
Chlorfenvinphos	<0.01 µg/l	TM344	<0.1	<0.01	<0.1	<0.02	<0.01	<0.02	<0.02
trans-Chlordane	<0.01 µg/l	TM344	<0.1	<0.01	<0.1	<0.02	<0.01	<0.02	<0.02
cis-Chlordane	<0.01 µg/l	TM344	<0.1	<0.01	<0.1	<0.02	<0.01	<0.02	<0.02
Ethion	<0.01 µg/l	TM344	<0.1	<0.01	<0.1	<0.02	<0.01	<0.02	<0.02
Carbophenothion	<0.01 µg/l	TM344	<0.1	<0.02	<0.1	<0.02	<0.02	<0.02	<0.02
Triazophos	<0.01 µg/l	TM344	<0.1	<0.02	<0.1	<0.02	<0.02	<0.02	<0.02
Phosalone	<0.01 µg/l	TM344	<0.1	<0.03	<0.1	<0.02	<0.03	<0.02	<0.02
Azinphos methyl	<0.02 µg/l	TM344	<0.2	<0.2	<0.2	<0.08	<0.2	<0.08	<0.08
Azinphos ethyl	<0.02 µg/l	TM344	<0.2	<0.06	<0.2	<0.04	<0.06	<0.04	<0.04
Etridiazole	<0.01 µg/l	TM345	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Pentachlorobenzene	<0.01 µg/l	TM345	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Tributylphosphate	<0.01 µg/l	TM345	<2	<2.5	<2.5	<2.5	<4	<2.5	<2.5
Propachlor	<0.01 µg/l	TM345	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Quintozene (PCNB)	<0.01 µg/l	TM345	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Omethoate	<0.01 µg/l	TM345	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Propazine	<0.01 µg/l	TM345	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Propyzamide	<0.01 µg/l	TM345	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Alachlor	<0.01 µg/l	TM345	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Prometryn	<0.01 µg/l	TM345	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Telodrin	<0.01 µg/l	TM345	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Terbutryn	<0.01 µg/l	TM345	<0.3	<0.01	<0.2	<0.2	<0.01	<0.01	<0.01
Chlorothalonil	<0.01 µg/l	TM345	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Etrimphos	<0.01 µg/l	TM345	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Metazachlor	<0.01 µg/l	TM345	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Cyanazine	<0.01 µg/l	TM345	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Trietazine	<0.01 µg/l	TM345	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Coumaphos	<0.01 µg/l	TM345	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Phosphamidon I	<0.01 µg/l	TM345	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01



CERTIFICATE OF ANALYSIS

Validated

SDG: 210918-46
Client Ref.: Leachate Area 1 & amp;

Report Number: 616747
Location: Newport landfill

Superseded Report: 616521

Results Legend		Customer Sample Ref.	LF11_04	LF11_06	LF11_07			
#	ISO17025 accredited.	Depth (m) Sample Type Date Sampled Sampled Time Date Received SDG Ref Lab Sample No.(s) AGS Reference	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00			
M	mCERTS accredited.		Land Leachate (LE)	Land Leachate (LE)	Land Leachate (LE)			
aq	Aqueous / settled sample.		16/09/2021	16/09/2021	16/09/2021			
diss.filt	Dissolved / filtered sample.		18/09/2021	18/09/2021	18/09/2021			
tot.unfilt	Total / unfiltered sample.		210918-46	210918-46	210918-46			
*	Subcontracted - refer to subcontractor report for accreditation status.		24999646	24999656	24999635			
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery							
(F)	Trigger breach confirmed							
1-4*6@	Sample deviation (see appendix)							
Component	LOD/Units		Method					
Ammoniacal Nitrogen as N	<0.2 mg/l	TM099	1790	555	1340			
Arsenic (diss.filt)	<0.5 µg/l	TM152	19.9 #	3.42 #	16.4 #			
Nickel (diss.filt)	<0.4 µg/l	TM152	360 #	55.2 #	283 #			
Potassium (Dis.Filt)	<0.2 mg/l	TM152	897 #	287 #	475 #			
EPH Range >C10 - C40 (aq)	<100 µg/l	TM172	3330	826	4810			
Mercury (diss.filt)	<0.01 µg/l	TM183	<0.01 #	<0.01 #	<0.01 #			
Cyanide, Total	<0.05 mg/l	TM227	0.05 #	<0.05 #	<0.05 #			
Cyanide, Free	<0.05 mg/l	TM227	<0.05 #	<0.05 #	<0.05 #			
Phenol	<0.002 mg/l	TM259	<0.02 #	0.02 #	0.12 #			
Cresols	<0.006 mg/l	TM259	<0.06 #	0.02 #	<0.06 #			
Xylenols	<0.008 mg/l	TM259	0.1 #	0.03 #	<0.08 #			
Phenols, Total Detected monohydric	<0.016 mg/l	TM259	<0.16 #	0.07 #	<0.16 #			
Trifluralin	<0.01 µg/l	TM343	<0.01	<0.01	<0.01			
alpha-HCH	<0.01 µg/l	TM343	<0.01	<0.01	<0.01			
gamma-HCH (Lindane)	<0.01 µg/l	TM343	<0.01	<0.01	<0.01			
Heptachlor	<0.01 µg/l	TM343	<0.01	<0.01	<0.01			
Aldrin	<0.01 µg/l	TM343	<0.01	<0.01	<0.01			
beta-HCH	<0.01 µg/l	TM343	<0.01	<0.01	<0.01			
Isodrin	<0.01 µg/l	TM343	<0.01	<0.01	<0.01			
delta-HCH	<0.01 µg/l	TM343	<0.01	<0.01	<0.01			
Heptachlor epoxide	<0.01 µg/l	TM343	<0.01	<0.01	<0.01			
o,p'-DDE	<0.01 µg/l	TM343	<0.01	<0.01	<0.01			
Endosulphan I	<0.01 µg/l	TM343	<0.01	<0.01	<0.01			
trans-Chlordane	<0.01 µg/l	TM343	<0.01	<0.01	<0.01			
cis-Chlordane	<0.01 µg/l	TM343	<0.01	<0.01	<0.01			
p,p'-DDE	<0.01 µg/l	TM343	<0.01	<0.01	<0.01			
Dieldrin	<0.01 µg/l	TM343	<0.01	<0.01	<0.01			
o,p'-DDD (TDE)	<0.01 µg/l	TM343	<0.01	<0.01	<0.01			
Endrin	<0.01 µg/l	TM343	<0.01	<0.01	<0.01			
o,p'-DDT	<0.01 µg/l	TM343	<0.01	<0.01	<0.01			
p,p'-DDD (TDE)	<0.01 µg/l	TM343	<0.01	<0.01	<0.01			
Endosulphan II	<0.02 µg/l	TM343	<0.02	<0.02	<0.02			



CERTIFICATE OF ANALYSIS

Validated

SDG: 210918-46
Client Ref.: Leachate Area 1 & amp;

Report Number: 616747
Location: Newport landfill

Superseded Report: 616521

Results Legend		Customer Sample Ref.	LF11_04	LF11_06	LF11_07		
#	ISO17025 accredited.	Depth (m) Sample Type Date Sampled Sampled Time Date Received SDG Ref Lab Sample No.(s) AGS Reference	0.00 - 0.00 Land Leachate (LE)	0.00 - 0.00 Land Leachate (LE)	0.00 - 0.00 Land Leachate (LE)		
M	mCERTS accredited.		16/09/2021	16/09/2021	16/09/2021		
aq	Aqueous / settled sample.		18/09/2021	18/09/2021	18/09/2021		
dis.filt	Dissolved / filtered sample.		210918-46	210918-46	210918-46		
tot.unfilt	Total / unfiltered sample.		24999646	24999656	24999635		
*	Subcontracted - refer to subcontractor report for accreditation status.						
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery						
(F)	Trigger breach confirmed						
1-4&@	Sample deviation (see appendix)						
Component	LOD/Units		Method				
p,p'-DDT	<0.01 µg/l	TM343	<0.01	<0.01	<0.01		
o,p'-Methoxychlor	<0.01 µg/l	TM343	<0.01	<0.01	<0.01		
p,p'-Methoxychlor	<0.01 µg/l	TM343	<0.01	<0.01	<0.01		
Endosulphan Sulphate	<0.02 µg/l	TM343	<0.02	<0.02	<0.02		
Permethrin I	<0.01 µg/l	TM343	<0.01	<0.01	<0.01		
Permethrin II	<0.01 µg/l	TM343	<0.01	<0.01	<0.01		
1,3,5-Trichlorobenzene	<0.01 µg/l	TM344	<0.1	<0.01	<0.1		
Hexachlorobutadiene	<0.01 µg/l	TM344	<0.1	<0.01	<0.1		
1,2,4-Trichlorobenzene	<0.01 µg/l	TM344	<0.1	0.0586	<0.1		
1,2,3-Trichlorobenzene	<0.01 µg/l	TM344	<0.1	<0.01	<0.1		
Dichlorvos	<0.01 µg/l	TM344	<0.1	<0.01	<0.1		
Dichlobenil	<0.01 µg/l	TM344	<0.1	<0.01	<0.1		
Mevinphos	<0.01 µg/l	TM344	<0.1	<0.01	<0.1		
Tecnazene	<0.01 µg/l	TM344	<0.1	<0.01	<0.1		
Hexachlorobenzene	<0.01 µg/l	TM344	<0.1	<0.01	<0.1		
Demeton-S-methyl	<0.01 µg/l	TM344	<0.1	<0.01	<0.1		
Phorate	<0.01 µg/l	TM344	<0.1	<0.01	<0.1		
Diazinon	<0.01 µg/l	TM344	<0.1	<0.01	<0.1		
Triallate	<0.01 µg/l	TM344	<0.1	<0.01	<0.1		
Atrazine	<0.01 µg/l	TM344	0.423	<0.01	0.652		
Simazine	<0.01 µg/l	TM344	<0.1	<0.01	3		
Disulfoton	<0.01 µg/l	TM344	<0.1	<0.01	<0.1		
Propetamphos	<0.01 µg/l	TM344	<0.1	<0.01	<0.1		
Chlorpyrifos-methyl	<0.01 µg/l	TM344	<0.1	<0.02	<0.1		
Dimethoate	<0.01 µg/l	TM344	<0.1	<0.02	<0.1		
Pirimiphos-methyl	<0.01 µg/l	TM344	<0.1	<0.01	<0.1		
Chlorpyrifos	<0.01 µg/l	TM344	<0.1	<0.01	<0.1		
Methyl Parathion	<0.01 µg/l	TM344	<0.1	<0.02	<0.1		
Malathion	<0.01 µg/l	TM344	<0.1	<0.02	<0.1		
Fenthion	<0.01 µg/l	TM344	<0.1	<0.01	<0.1		
Fenitrothion	<0.01 µg/l	TM344	<0.1	<0.02	<0.1		
Triadimefon	<0.01 µg/l	TM344	<0.1	<0.01	<0.1		



CERTIFICATE OF ANALYSIS

Validated

SDG: 210918-46
Client Ref.: Leachate Area 1 & ;

Report Number: 616747
Location: Newport landfill

Superseded Report: 616521

Results Legend # ISO17025 accredited. M MCERTS accredited. an Aqueous / settled sample. dis.filt Dissolved / filtered sample. tot.unfilt Total / unfiltered sample. * Subcontracted - refer to subcontractor report for accreditation status. ** % recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery (F) Trigger breach confirmed 1-446@ Sample deviation (see appendix)		Customer Sample Ref. Depth (m) Sample Type Date Sampled Sampled Time Date Received SDG Ref Lab Sample No.(s) AGS Reference	LF11_04 0.00 - 0.00 Land Leachate (LE) 16/09/2021 18/09/2021 210918-46 24999646	LF11_06 0.00 - 0.00 Land Leachate (LE) 16/09/2021 18/09/2021 210918-46 24999656	LF11_07 0.00 - 0.00 Land Leachate (LE) 16/09/2021 18/09/2021 210918-46 24999635			
Component	LOD/Units	Method						
Pendimethalin	<0.01 µg/l	TM344	<0.1	<0.01	<0.1			
Parathion	<0.01 µg/l	TM344	<0.1	<0.01	<0.1			
Chlorfenvinphos	<0.01 µg/l	TM344	<0.1	<0.01	<0.1			
trans-Chlordane	<0.01 µg/l	TM344	<0.1	<0.01	<0.1			
cis-Chlordane	<0.01 µg/l	TM344	<0.1	<0.01	<0.1			
Ethion	<0.01 µg/l	TM344	<0.1	<0.01	<0.1			
Carbophenothion	<0.01 µg/l	TM344	<0.1	<0.02	<0.1			
Triazophos	<0.01 µg/l	TM344	<0.1	<0.02	<0.1			
Phosalone	<0.01 µg/l	TM344	<0.1	<0.03	<0.1			
Azinphos methyl	<0.02 µg/l	TM344	<0.2	<0.2	<0.2			
Azinphos ethyl	<0.02 µg/l	TM344	<0.2	<0.06	<0.2			
Etridiazole	<0.01 µg/l	TM345	<0.01	<0.01	<0.01			
Pentachlorobenzene	<0.01 µg/l	TM345	<0.01	<0.01	<0.01			
Tributylphosphate	<0.01 µg/l	TM345	<2	<3.5	<3			
Propachlor	<0.01 µg/l	TM345	<0.01	<0.01	<0.01			
Quintozene (PCNB)	<0.01 µg/l	TM345	<0.01	<0.01	<0.01			
Omethoate	<0.01 µg/l	TM345	<0.01	<0.01	<0.01			
Propazine	<0.01 µg/l	TM345	<0.01	<0.01	<0.01			
Propyzamide	<0.01 µg/l	TM345	<0.01	<0.01	<0.01			
Alachlor	<0.01 µg/l	TM345	<0.01	<0.01	<0.01			
Prometryn	<0.01 µg/l	TM345	<0.01	<0.01	<0.01			
Telodrin	<0.01 µg/l	TM345	<0.01	<0.01	<0.01			
Terbutryn	<0.01 µg/l	TM345	<0.1	0.0326	<0.1			
Chlorothalonil	<0.01 µg/l	TM345	<0.5	<0.5	<0.5			
Etrimphos	<0.01 µg/l	TM345	<0.01	<0.01	<0.01			
Metazachlor	<0.01 µg/l	TM345	<0.01	<0.01	<0.01			
Cyanazine	<0.01 µg/l	TM345	<0.01	<0.01	<0.01			
Trietazine	<0.01 µg/l	TM345	<0.01	<0.01	<0.01			
Coumaphos	<0.01 µg/l	TM345	<0.01	<0.01	<0.01			
Phosphamidon I	<0.01 µg/l	TM345	<0.01	<0.01	<0.01			
Phosphamidon II	<0.01 µg/l	TM345	<0.01	<0.01	<0.01			



CERTIFICATE OF ANALYSIS

Validated

SDG: 210918-46
Client Ref.: Leachate Area 1 & amp;

Report Number: 616747
Location: Newport landfill

Superseded Report: 616521

SVOC MS (W) - Aqueous

Results Legend			Customer Sample Ref.	C3B	C4B	C2C	LF08_07	LF11_02	LF11_03
#	ISO17025 accredited.		Depth (m) Sample Type Date Sampled Sampled Time Date Received SDG Ref Lab Sample No.(s) AGS Reference	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00
M	mCERTS accredited.			Land Leachate (LE)	Land Leachate (LE)	Land Leachate (LE)	Land Leachate (LE)	Land Leachate (LE)	Land Leachate (LE)
aq	Aqueous / settled sample.			16/09/2021	16/09/2021	16/09/2021	17/09/2021	16/09/2021	17/09/2021
diss,fit	Dissolved / filtered sample.			18/09/2021	18/09/2021	18/09/2021	18/09/2021	18/09/2021	18/09/2021
tot.unfilt	Total / unfiltered sample.			210918-46	210918-46	210918-46	210918-46	210918-46	210918-46
*	Subcontracted - refer to subcontractor report for accreditation status.			24999594	24999611	24999572	24999549	24999625	24999671
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery								
(F)	Trigger breach confirmed								
1-4*\$@	Sample deviation (see appendix)								
Component	LOD/Units	Method							
1,2,4-Trichlorobenzene (aq)	<1 µg/l	TM176		<20	<10	<10	<8	<10	<8
1,2-Dichlorobenzene (aq)	<1 µg/l	TM176		<20	<10	<10	<8	<10	<8
1,3-Dichlorobenzene (aq)	<1 µg/l	TM176		<20	<10	<10	<8	<10	<8
1,4-Dichlorobenzene (aq)	<1 µg/l	TM176		<20	<10	<10	<8	<10	<8
2,4,5-Trichlorophenol (aq)	<1 µg/l	TM176		<20	<10	<10	<8	<10	<8
2,4,6-Trichlorophenol (aq)	<1 µg/l	TM176		<20	<10	<10	<8	<10	<8
2,4-Dichlorophenol (aq)	<1 µg/l	TM176		<20	<10	<10	<8	<10	<8
2,4-Dimethylphenol (aq)	<1 µg/l	TM176		32.2	<10	<10	<8	<10	<8
2,4-Dinitrotoluene (aq)	<1 µg/l	TM176		<20	<10	<10	<8	<10	<8
2,6-Dinitrotoluene (aq)	<1 µg/l	TM176		<20	<10	<10	<8	<10	<8
2-Chloronaphthalene (aq)	<1 µg/l	TM176		<20	<10	<10	<8	<10	<8
2-Chlorophenol (aq)	<1 µg/l	TM176		<20	<10	<10	<8	<10	<8
2-Methylnaphthalene (aq)	<1 µg/l	TM176		<20	<10	<10	<8	<10	<8
2-Methylphenol (aq)	<1 µg/l	TM176		180	<10	<10	<8	<10	<8
2-Nitroaniline (aq)	<1 µg/l	TM176		<20	<10	<10	<8	<10	<8
2-Nitrophenol (aq)	<1 µg/l	TM176		<20	<10	<10	<8	<10	<8
3-Nitroaniline (aq)	<1 µg/l	TM176		<20	<10	<10	<8	<10	<8
4-Bromophenylphenylether (aq)	<1 µg/l	TM176		<20	<10	<10	<8	<10	<8
4-Chloro-3-methylphenol (aq)	<1 µg/l	TM176		<20	<10	<10	<8	<10	<8
4-Chloroaniline (aq)	<1 µg/l	TM176		<20	<10	<10	<8	<10	<8
4-Chlorophenylphenylether (aq)	<1 µg/l	TM176		<20	<10	<10	<8	<10	<8
4-Methylphenol (aq)	<1 µg/l	TM176		295	<10	<10	<8	<10	<8
4-Nitroaniline (aq)	<1 µg/l	TM176		<20	<10	<10	<8	<10	<8
4-Nitrophenol (aq)	<1 µg/l	TM176		<20	<10	<10	<8	<10	<8
Azobenzene (aq)	<1 µg/l	TM176		<20	<10	<10	<8	<10	<8
Acenaphthylene (aq)	<1 µg/l	TM176		<20	<10	<10	<8	<10	<8
Acenaphthene (aq)	<1 µg/l	TM176		<20	<10	<10	<8	<10	<8
Anthracene (aq)	<1 µg/l	TM176		<20	<10	<10	<8	<10	<8
bis(2-Chloroethyl)ether (aq)	<1 µg/l	TM176		<20	<10	<10	<8	<10	<8
bis(2-Chloroethoxy)methane (aq)	<1 µg/l	TM176		<20	<10	<10	<8	<10	<8
bis(2-Ethylhexyl) phthalate (aq)	<2 µg/l	TM176		<40	<20	<20	<16	<20	<16
Butylbenzyl phthalate (aq)	<1 µg/l	TM176		<20	<10	<10	<8	<10	<8



CERTIFICATE OF ANALYSIS

Validated

SDG: 210918-46
Client Ref.: Leachate Area 1 & amp;

Report Number: 616747
Location: Newport landfill

Superseded Report: 616521

SVOC MS (W) - Aqueous

Results Legend			Customer Sample Ref.	C3B	C4B	C2C	LF08_07	LF11_02	LF11_03
#	ISO17025 accredited.		Depth (m) Sample Type Date Sampled Sampled Time Date Received SDG Ref Lab Sample No.(s) AGS Reference	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00
M	mCERTS accredited.			Land Leachate (LE)	Land Leachate (LE)	Land Leachate (LE)	Land Leachate (LE)	Land Leachate (LE)	Land Leachate (LE)
aq	Aqueous / settled sample.			16/09/2021	16/09/2021	16/09/2021	17/09/2021	16/09/2021	17/09/2021
dis.filt	Dissolved / filtered sample.								
tot.unfilt	Total / unfiltered sample.								
*	Subcontracted - refer to subcontractor report for accreditation status.								
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery								
(F)	Trigger breach confirmed								
1-4&@	Sample deviation (see appendix)								
Component	LOD/Units	Method							
Benzo(a)anthracene (aq)	<1 µg/l	TM176		<20	<10	<10	<8	<10	<8
Benzo(b)fluoranthene (aq)	<1 µg/l	TM176		<20	<10	<10	<8	<10	<8
Benzo(k)fluoranthene (aq)	<1 µg/l	TM176		<20	<10	<10	<8	<10	<8
Benzo(a)pyrene (aq)	<1 µg/l	TM176		<20	<10	<10	<8	<10	<8
Benzo(g,h,i)perylene (aq)	<1 µg/l	TM176		<20	<10	<10	<8	<10	<8
Carbazole (aq)	<1 µg/l	TM176		<20	<10	<10	<8	<10	<8
Chrysene (aq)	<1 µg/l	TM176		<20	<10	<10	<8	<10	<8
Dibenzofuran (aq)	<1 µg/l	TM176		<20	<10	<10	<8	<10	<8
n-Dibutyl phthalate (aq)	<1 µg/l	TM176		<20	<10	<10	<8	<10	<8
Diethyl phthalate (aq)	<1 µg/l	TM176		<20	<10	<10	<8	<10	<8
Dibenzo(a,h)anthracene (aq)	<1 µg/l	TM176		<20	<10	<10	<8	<10	<8
Dimethyl phthalate (aq)	<1 µg/l	TM176		<20	<10	<10	<8	<10	<8
n-Dioctyl phthalate (aq)	<5 µg/l	TM176		<100	<50	<50	<40	<50	<40
Fluoranthene (aq)	<1 µg/l	TM176		<20	<10	<10	<8	<10	<8
Fluorene (aq)	<1 µg/l	TM176		<20	<10	<10	<8	<10	<8
Hexachlorobenzene (aq)	<1 µg/l	TM176		<20	<10	<10	<8	<10	<8
Hexachlorobutadiene (aq)	<1 µg/l	TM176		<20	<10	<10	<8	<10	<8
Pentachlorophenol (aq)	<1 µg/l	TM176		<20	<10	<10	<8	<10	<8
Phenol (aq)	<1 µg/l	TM176		<20	<10	<10	<8	<10	<8
n-Nitroso-n-dipropylamine (aq)	<1 µg/l	TM176		<20	<10	<10	<8	<10	<8
Hexachloroethane (aq)	<1 µg/l	TM176		<20	<10	<10	<8	<10	<8
Nitrobenzene (aq)	<1 µg/l	TM176		<20	<10	<10	<8	<10	<8
Naphthalene (aq)	<1 µg/l	TM176		<20	<10	<10	<8	<10	8.76
Isophorone (aq)	<1 µg/l	TM176		<20	<10	<10	<8	<10	<8
Hexachlorocyclopentadiene (aq)	<1 µg/l	TM176		<20	<10	<10	<8	<10	<8
Phenanthrene (aq)	<1 µg/l	TM176		<20	<10	<10	<8	<10	<8
Indeno(1,2,3-cd)pyrene (aq)	<1 µg/l	TM176		<20	<10	<10	<8	<10	<8
Pyrene (aq)	<1 µg/l	TM176		<20	<10	<10	<8	<10	<8
SVOC TIC (aq)		TM176		Detected	Detected	Detected	Detected	Detected	Detected
Total SVOC TIC	<10 µg/l	TM176		41200	10700	7850	3680	492	2340
Benzothiazolone	µg/l	TM176		2300	2680	incomplete		176	146
Bis(methylethylidene)Phenol	µg/l	TM176					198		



CERTIFICATE OF ANALYSIS

Validated

SDG: 210918-46
Client Ref.: Leachate Area 1 & amp;

Report Number: 616747
Location: Newport landfill

Superseded Report: 616521

SVOC MS (W) - Aqueous

Results Legend		Customer Sample Ref.	LF11_04	LF11_06	LF11_07			
#	ISO17025 accredited.	Depth (m) Sample Type Date Sampled Sampled Time Date Received SDG Ref Lab Sample No.(s) AGS Reference	0.00 - 0.00 Land Leachate (LE)	0.00 - 0.00 Land Leachate (LE)	0.00 - 0.00 Land Leachate (LE)			
M	mCERTS accredited.		16/09/2021	16/09/2021	16/09/2021			
aq	Aqueous / settled sample.		18/09/2021	18/09/2021	18/09/2021			
diss,fit	Dissolved / filtered sample.		210918-46	210918-46	210918-46			
tot.unfilt	Total / unfiltered sample.		24999646	24999656	24999635			
*	Subcontracted - refer to subcontractor report for accreditation status.							
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery							
(F)	Trigger breach confirmed							
1-4\$@	Sample deviation (see appendix)							
Component	LOD/Units		Method					
1,2,4-Trichlorobenzene (aq)	<1 µg/l	TM176	<10	<4	<10			
1,2-Dichlorobenzene (aq)	<1 µg/l	TM176	<10	<4	<10			
1,3-Dichlorobenzene (aq)	<1 µg/l	TM176	<10	<4	<10			
1,4-Dichlorobenzene (aq)	<1 µg/l	TM176	<10	<4	<10			
2,4,5-Trichlorophenol (aq)	<1 µg/l	TM176	<10	<4	<10			
2,4,6-Trichlorophenol (aq)	<1 µg/l	TM176	<10	<4	<10			
2,4-Dichlorophenol (aq)	<1 µg/l	TM176	<10	<4	<10			
2,4-Dimethylphenol (aq)	<1 µg/l	TM176	<10	<4	<10			
2,4-Dinitrotoluene (aq)	<1 µg/l	TM176	<10	<4	<10			
2,6-Dinitrotoluene (aq)	<1 µg/l	TM176	<10	<4	<10			
2-Chloronaphthalene (aq)	<1 µg/l	TM176	<10	<4	<10			
2-Chlorophenol (aq)	<1 µg/l	TM176	<10	<4	<10			
2-Methylnaphthalene (aq)	<1 µg/l	TM176	<10	<4	<10			
2-Methylphenol (aq)	<1 µg/l	TM176	<10	<4	<10			
2-Nitroaniline (aq)	<1 µg/l	TM176	<10	<4	<10			
2-Nitrophenol (aq)	<1 µg/l	TM176	<10	<4	<10			
3-Nitroaniline (aq)	<1 µg/l	TM176	<10	<4	<10			
4-Bromophenylphenylether (aq)	<1 µg/l	TM176	<10	<4	<10			
4-Chloro-3-methylphenol (aq)	<1 µg/l	TM176	<10	<4	<10			
4-Chloroaniline (aq)	<1 µg/l	TM176	<10	<4	<10			
4-Chlorophenylphenylether (aq)	<1 µg/l	TM176	<10	<4	<10			
4-Methylphenol (aq)	<1 µg/l	TM176	<10	<4	<10			
4-Nitroaniline (aq)	<1 µg/l	TM176	<10	<4	<10			
4-Nitrophenol (aq)	<1 µg/l	TM176	<10	<4	<10			
Azobenzene (aq)	<1 µg/l	TM176	<10	<4	<10			
Acenaphthylene (aq)	<1 µg/l	TM176	<10	<4	<10			
Acenaphthene (aq)	<1 µg/l	TM176	<10	4.16	<10			
Anthracene (aq)	<1 µg/l	TM176	<10	<4	<10			
bis(2-Chloroethyl)ether (aq)	<1 µg/l	TM176	<10	<4	<10			
bis(2-Chloroethoxy)methane (aq)	<1 µg/l	TM176	<10	<4	<10			
bis(2-Ethylhexyl) phthalate (aq)	<2 µg/l	TM176	35.7	<8	89.2			
Butylbenzyl phthalate (aq)	<1 µg/l	TM176	<10	<4	<10			



CERTIFICATE OF ANALYSIS

Validated

SDG: 210918-46
Client Ref.: Leachate Area 1 & amp;

Report Number: 616747
Location: Newport landfill

Superseded Report: 616521

SVOC MS (W) - Aqueous

Results Legend		Customer Sample Ref.	LF11_04	LF11_06	LF11_07		
#	ISO17025 accredited.	Depth (m) Sample Type Date Sampled Sampled Time Date Received SDG Ref Lab Sample No.(s) AGS Reference	0.00 - 0.00 Land Leachate (LE)	0.00 - 0.00 Land Leachate (LE)	0.00 - 0.00 Land Leachate (LE)		
M	mCERTS accredited.		16/09/2021	16/09/2021	16/09/2021		
aq	Aqueous / settled sample.						
dis.filt	Dissolved / filtered sample.						
tot.unfilt	Total / unfiltered sample.						
*	Subcontracted - refer to subcontractor report for accreditation status.						
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery		18/09/2021	18/09/2021	18/09/2021		
(F)	Trigger breach confirmed		210918-46	210918-46	210918-46		
1-4&@	Sample deviation (see appendix)		24999646	24999656	24999635		
Component	LOD/Units		Method				
Benzo(a)anthracene (aq)	<1 µg/l	TM176	<10	<4	<10		
Benzo(b)fluoranthene (aq)	<1 µg/l	TM176	<10	<4	<10		
Benzo(k)fluoranthene (aq)	<1 µg/l	TM176	<10	<4	<10		
Benzo(a)pyrene (aq)	<1 µg/l	TM176	<10	<4	<10		
Benzo(g,h,i)perylene (aq)	<1 µg/l	TM176	<10	<4	<10		
Carbazole (aq)	<1 µg/l	TM176	<10	<4	<10		
Chrysene (aq)	<1 µg/l	TM176	<10	<4	<10		
Dibenzofuran (aq)	<1 µg/l	TM176	<10	<4	<10		
n-Dibutyl phthalate (aq)	<1 µg/l	TM176	<10	<4	<10		
Diethyl phthalate (aq)	<1 µg/l	TM176	<10	<4	<10		
Dibenzo(a,h)anthracene (aq)	<1 µg/l	TM176	<10	<4	<10		
Dimethyl phthalate (aq)	<1 µg/l	TM176	<10	<4	<10		
n-Dioctyl phthalate (aq)	<5 µg/l	TM176	<50	<20	<50		
Fluoranthene (aq)	<1 µg/l	TM176	<10	<4	<10		
Fluorene (aq)	<1 µg/l	TM176	<10	<4	<10		
Hexachlorobenzene (aq)	<1 µg/l	TM176	<10	<4	<10		
Hexachlorobutadiene (aq)	<1 µg/l	TM176	<10	<4	<10		
Pentachlorophenol (aq)	<1 µg/l	TM176	<10	<4	<10		
Phenol (aq)	<1 µg/l	TM176	<10	<4	<10		
n-Nitroso-n-dipropylamine (aq)	<1 µg/l	TM176	<10	<4	<10		
Hexachloroethane (aq)	<1 µg/l	TM176	<10	<4	<10		
Nitrobenzene (aq)	<1 µg/l	TM176	<10	<4	<10		
Naphthalene (aq)	<1 µg/l	TM176	<10	8.31	12.2		
Isophorone (aq)	<1 µg/l	TM176	<10	<4	<10		
Hexachlorocyclopentadiene (aq)	<1 µg/l	TM176	<10	<4	<10		
Phenanthrene (aq)	<1 µg/l	TM176	<10	<4	<10		
Indeno(1,2,3-cd)pyrene (aq)	<1 µg/l	TM176	<10	<4	<10		
Pyrene (aq)	<1 µg/l	TM176	<10	<4	<10		
SVOC TIC (aq)		TM176	Detected	Detected	Detected		
Total SVOC TIC	<10 µg/l	TM176	5930	2370	10100		
Benzothiazolone	µg/l	TM176		127			
Diterbutyl--hydroxyphenylpropionic acid		TM176		250			



CERTIFICATE OF ANALYSIS

Validated

SDG: 210918-46
Client Ref.: Leachate Area 1 & amp;

Report Number: 616747
Location: Newport landfill

Superseded Report: 616521

VOC MS (W)

Results Legend		Customer Sample Ref.	LF11_02	LF11_03	LF11_04	LF11_06	LF11_07
#	ISO17025 accredited.	Depth (m) Sample Type Date Sampled Sampled Time Date Received SDG Ref Lab Sample No.(s) AGS Reference	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00
M	mCERTS accredited.		Land Leachate (LE)	Land Leachate (LE)	Land Leachate (LE)	Land Leachate (LE)	Land Leachate (LE)
aq	Aqueous / settled sample.		16/09/2021	17/09/2021	16/09/2021	16/09/2021	16/09/2021
diss.filt	Dissolved / filtered sample.		18/09/2021	18/09/2021	18/09/2021	18/09/2021	18/09/2021
tot.unfilt	Total / unfiltered sample.		210918-46	210918-46	210918-46	210918-46	210918-46
*	Subcontracted - refer to subcontractor report for accreditation status.		24999625	24999671	24999646	24999656	24999635
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery						
(F)	Trigger breach confirmed						
1-4*\$@	Sample deviation (see appendix)						
Component	LOD/Units		Method				
Dibromofluoromethane**	%	TM208	113	113	110	113	108
Toluene-d8**	%	TM208	101	101	99.4	101	99.9
4-Bromofluorobenzene**	%	TM208	102	101	97.9	101	99.9
Dichlorodifluoromethane	<1 µg/l	TM208	<1	<1	<1	<1	<1
Chloromethane	<1 µg/l	TM208	<1	<1	<1	<1	<1
Vinyl chloride	<1 µg/l	TM208	<1	<1	<1	<1	<1
Bromomethane	<1 µg/l	TM208	<1	<1	<1	<1	<1
Chloroethane	<1 µg/l	TM208	<1	<1	<1	<1	<1
Trichlorofluoromethane	<1 µg/l	TM208	<1	<1	<1	<1	<1
1,1-Dichloroethene	<1 µg/l	TM208	<1	<1	<1	<1	<1
Carbon disulphide	<1 µg/l	TM208	<1	<1	<1	<1	9.51
Dichloromethane	<3 µg/l	TM208	<3	<3	<3	<3	<3
Methyl tertiary butyl ether (MTBE)	<1 µg/l	TM208	<1	<1	1.5	1.65	2.96
trans-1,2-Dichloroethene	<1 µg/l	TM208	<1	<1	<1	<1	<1
1,1-Dichloroethane	<1 µg/l	TM208	<1	<1	<1	<1	<1
cis-1,2-Dichloroethene	<1 µg/l	TM208	<1	<1	<1	<1	2.46
2,2-Dichloropropane	<1 µg/l	TM208	<1	<1	<1	<1	<1
Bromochloromethane	<1 µg/l	TM208	<1	<1	<1	<1	<1
Chloroform	<1 µg/l	TM208	<1	<1	<1	<1	<1
1,1,1-Trichloroethane	<1 µg/l	TM208	<1	<1	<1	<1	<1
1,1-Dichloropropene	<1 µg/l	TM208	<1	<1	<1	<1	<1
Carbontetrachloride	<1 µg/l	TM208	<1	<1	<1	<1	<1
1,2-Dichloroethane	<1 µg/l	TM208	<1	<1	<1	<1	<1
Benzene	<1 µg/l	TM208	5.49	5.56	7.05	4.8	6.07
Trichloroethene	<1 µg/l	TM208	<1	<1	<1	<1	<1
1,2-Dichloropropane	<1 µg/l	TM208	<1	<1	<1	<1	<1
Dibromomethane	<1 µg/l	TM208	<1	<1	<1	<1	<1
Bromodichloromethane	<1 µg/l	TM208	<1	<1	<1	<1	<1
cis-1,3-Dichloropropene	<1 µg/l	TM208	<1	<1	<1	<1	<1
Toluene	<1 µg/l	TM208	<1	<1	7.32	<1	2.79
trans-1,3-Dichloropropene	<1 µg/l	TM208	<1	<1	<1	<1	<1
1,1,2-Trichloroethane	<1 µg/l	TM208	<1	<1	<1	<1	<1



CERTIFICATE OF ANALYSIS

Validated

SDG: 210918-46
Client Ref.: Leachate Area 1 & amp;

Report Number: 616747
Location: Newport landfill

Superseded Report: 616521

VOC MS (W)

Results Legend			Customer Sample Ref.	LF11_02	LF11_03	LF11_04	LF11_06	LF11_07		
#	ISO17025 accredited.		Depth (m) Sample Type Date Sampled Sampled Time Date Received SDG Ref Lab Sample No.(s) AGS Reference	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00		
M	mCERTS accredited.			Land Leachate (LE)	Land Leachate (LE)	Land Leachate (LE)	Land Leachate (LE)	Land Leachate (LE)	Land Leachate (LE)	
aq	Aqueous / settled sample.			16/09/2021	17/09/2021	16/09/2021	16/09/2021	16/09/2021	16/09/2021	
dis.filt	Dissolved / filtered sample.									
tot.unfilt	Total / unfiltered sample.									
*	Subcontracted - refer to subcontractor report for accreditation status.									
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery			18/09/2021	18/09/2021	18/09/2021	18/09/2021	18/09/2021	18/09/2021	
(F)	Trigger breach confirmed			210918-46	210918-46	210918-46	210918-46	210918-46	210918-46	
1-4&@	Sample deviation (see appendix)			24999625	24999671	24999646	24999656	24999635		
Component	LOD/Units	Method								
1,3-Dichloropropane	<1 µg/l	TM208	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #		
Tetrachloroethene	<1 µg/l	TM208	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #		
Dibromochloromethane	<1 µg/l	TM208	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #		
1,2-Dibromoethane	<1 µg/l	TM208	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #		
Chlorobenzene	<1 µg/l	TM208	5.25 #	3.65 #	<1 #	2.8 #	1.58 #			
1,1,1,2-Tetrachloroethane	<1 µg/l	TM208	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #		
Ethylbenzene	<1 µg/l	TM208	<1 #	1.01 #	7.72 #	<1 #	16.8 #			
m,p-Xylene	<1 µg/l	TM208	13.4 #	6.61 #	16.2 #	<1 #	8.27 #			
o-Xylene	<1 µg/l	TM208	2.09 #	2.3 #	10.7 #	<1 #	14.6 #			
Styrene	<1 µg/l	TM208	<1 #	<1 #	<1 #	<1 #	1 #			
Bromoform	<1 µg/l	TM208	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #		
Isopropylbenzene	<1 µg/l	TM208	3.01 #	11.4 #	<1 #	4.07 #	2.76 #			
1,1,2,2-Tetrachloroethane	<1 µg/l	TM208	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #		
1,2,3-Trichloropropane	<1 µg/l	TM208	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #		
Bromobenzene	<1 µg/l	TM208	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #		
Propylbenzene	<1 µg/l	TM208	1.73 #	1.03 #	<1 #	1.41 #	1.59 #			
2-Chlorotoluene	<1 µg/l	TM208	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #		
1,3,5-Trimethylbenzene	<1 µg/l	TM208	<1 #	<1 #	2.93 #	<1 #	3.44 #			
4-Chlorotoluene	<1 µg/l	TM208	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #		
tert-Butylbenzene	<1 µg/l	TM208	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #		
1,2,4-Trimethylbenzene	<1 µg/l	TM208	5.12 #	3.44 #	9.89 #	<1 #	10.9 #			
sec-Butylbenzene	<1 µg/l	TM208	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #		
4-iso-Propyltoluene	<1 µg/l	TM208	<1 #	<1 #	13 #	<1 #	1.21 #			
1,3-Dichlorobenzene	<1 µg/l	TM208	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #		
1,4-Dichlorobenzene	<1 µg/l	TM208	2.34 #	1.25 #	1.46 #	2.46 #	1.03 #			
n-Butylbenzene	<1 µg/l	TM208	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #		
1,2-Dichlorobenzene	<1 µg/l	TM208	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #		
1,2-Dibromo-3-chloropropane	<1 µg/l	TM208	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #		
1,2,4-Trichlorobenzene	<1 µg/l	TM208	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #		
Hexachlorobutadiene	<1 µg/l	TM208	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #		
tert-Amyl methyl ether (TAME)	<1 µg/l	TM208	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #		
Naphthalene	<1 µg/l	TM208	2.73 #	9.01 #	2.31 #	<1 #	9.78 #			



CERTIFICATE OF ANALYSIS

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SDG: 210918-46
Client Ref.: Leachate Area 1 &

Report Number: 616747
Location: Newport landfill

Superseded Report: 616521

Notification of NDPs (No determination possible)

Date Received : 18/09/2021 07:13:26

Sample No	Customer Sample Ref.	Depth (m)	Test	Comment
24999594	C3B	0.00 - 0.00	Ionic Balance	Sample too coloured
24999594	C3B	0.00 - 0.00	Ionic Balance	Sample too coloured
24999594	C3B	0.00 - 0.00	Anions by Kone (w)	Sample too coloured
24999594	C3B	0.00 - 0.00	Anions by Kone (w)	Sample too coloured



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Client Ref.: Leachate Area 1 & amp;

Location: Newport landfill

Table of Results - Appendix

Method No	Reference	Description
Calculation		
TM043	Method 2320B, AWWA/APHA, 20th Ed., 1999 / BS 2690: Part109 1984	Determination of alkalinity in aqueous samples
TM045	MEWAM BOD5 2nd Ed.HMSO 1988 / Method 5210B, AWWA/APHA, 20th Ed., 1999; SCA Blue Book 130	Determination of BOD5 (ATU) Filtered by Oxygen Meter on liquids
TM090	Method 5310, AWWA/APHA, 20th Ed., 1999 / Modified: US EPA Method 415.1 & 9060	Determination of Total Organic Carbon/Total Inorganic Carbon in Water and Waste Water
TM099	BS 2690: Part 7:1968 / BS 6068: Part2.11:1984	Determination of Ammonium in Water Samples using the Kone Analyser
TM101	Method 4500B & C, AWWA/APHA, 20th Ed., 1999	Determination of Sulphide in soil and water samples using the Kone Analyser
TM107	ISO 6060-1989	Determination of Chemical Oxygen Demand using COD Dr Lange Kit
TM120	Method 2510B, AWWA/APHA, 20th Ed., 1999 / BS 2690: Part 9:1970	Determination of Electrical Conductivity using a Conductivity Meter
TM152	Method 3125B, AWWA/APHA, 20th Ed., 1999	Analysis of Aqueous Samples by ICP-MS
TM172	Analysis of Petroleum Hydrocarbons in Environmental Media – Total Petroleum Hydrocarbon Criteria	EPH in Waters
TM176	EPA 8270D Semi-Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)	Determination of SVOCs in Water by GCMS
TM183	BS EN 23506:2002, (BS 6068-2.74:2002) ISBN 0 580 38924 3	Determination of Trace Level Mercury in Waters and Leachates by PSA Cold Vapour Atomic Fluorescence Spectrometry
TM184	EPA Methods 325.1 & 325.2,	The Determination of Anions in Aqueous Matrices using the Kone Spectrophotometric Analysers
TM208	Modified: US EPA Method 8260b & 624	Determination of Volatile Organic Compounds by Headspace / GC-MS in Waters
TM227	Standard methods for the examination of waters and wastewaters 20th Edition, AWWA/APHA Method 4500.	Determination of Total Cyanide, Free (Easily Liberatable) Cyanide and Thiocyanate
TM256	The measurement of Electrical Conductivity and the Laboratory determination of pH Value of Natural, Treated and Wastewaters. HMSO, 1978. ISBN 011 751428 4.	Determination of pH in Water and Leachate using the GLpH pH Meter
TM259	by HPLC	Determination of Phenols in Waters and Leachates by HPLC
TM328		
TM343	EPA 8270D - Semi-Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)	Determination of Selected Pesticides (Suite I) in Liquids by GCMS
TM344	EPA 8270D – Semi-Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)	Determination of selected pesticides (Suite II) by GCMS
TM345	EPA 8270D – Semi-Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)	Determination of selected pesticides (Suite III) by GCMS
TM398		Pyrethroids in water by GC-MS

NA = not applicable.

Chemical testing (unless subcontracted) performed at ALS Environmental Hawarden (Method codes TM) or ALS Environmental Aberdeen (Method codes S).



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Test Completion Dates

Lab Sample No(s) Customer Sample Ref. AGS Ref. Depth Type	24999594	24999611	24999572	24999549	24999625	24999671	24999646	24999656	24999635
	C3B	C4B	C2C	LF08_07	LF11_02	LF11_03	LF11_04	LF11_06	LF11_07
	Land	Land	Land	Land	Land	Land	Land	Land	Land
Alkalinity as CaCO3	27-Sep-2021	27-Sep-2021	27-Sep-2021	27-Sep-2021					
Alkalinity Filtered as CaCO3	27-Sep-2021	21-Sep-2021	21-Sep-2021	21-Sep-2021					
Ammoniacal Nitrogen	22-Sep-2021	22-Sep-2021	22-Sep-2021	22-Sep-2021	24-Sep-2021	24-Sep-2021	27-Sep-2021	24-Sep-2021	27-Sep-2021
Anions by Kone (w)		24-Sep-2021	24-Sep-2021	24-Sep-2021					
BOD True Total	23-Sep-2021	23-Sep-2021	23-Sep-2021	23-Sep-2021					
COD Unfiltered	22-Sep-2021	20-Sep-2021	20-Sep-2021	20-Sep-2021					
Conductivity (at 20 deg.C)	23-Sep-2021	22-Sep-2021	22-Sep-2021	22-Sep-2021					
Cyanide Comp/Free/Total/Thiocyanate	22-Sep-2021	22-Sep-2021	27-Sep-2021	22-Sep-2021	24-Sep-2021	24-Sep-2021	27-Sep-2021	22-Sep-2021	24-Sep-2021
Dissolved Metals by ICP-MS	24-Sep-2021	24-Sep-2021	24-Sep-2021	24-Sep-2021	23-Sep-2021	24-Sep-2021	24-Sep-2021	24-Sep-2021	24-Sep-2021
EPH (DRO) (C10-C40) Aqueous (W)	23-Sep-2021	23-Sep-2021	23-Sep-2021	23-Sep-2021	23-Sep-2021	23-Sep-2021	23-Sep-2021	23-Sep-2021	23-Sep-2021
Ionic Balance		24-Sep-2021	24-Sep-2021	24-Sep-2021					
Mercury Dissolved	27-Sep-2021	24-Sep-2021	27-Sep-2021	27-Sep-2021	23-Sep-2021	24-Sep-2021	27-Sep-2021	24-Sep-2021	27-Sep-2021
Nitrite by Kone (w)	22-Sep-2021	22-Sep-2021	23-Sep-2021	22-Sep-2021					
Organotins in Aqueous Samples	28-Sep-2021	23-Sep-2021	28-Sep-2021	28-Sep-2021					
Pesticides (Suite I) by GCMS	27-Sep-2021	27-Sep-2021	27-Sep-2021	27-Sep-2021	27-Sep-2021	27-Sep-2021	27-Sep-2021	27-Sep-2021	27-Sep-2021
Pesticides (Suite II) by GCMS	24-Sep-2021	23-Sep-2021	24-Sep-2021	28-Sep-2021	23-Sep-2021	28-Sep-2021	24-Sep-2021	23-Sep-2021	24-Sep-2021
Pesticides (Suite III) by GCMS	28-Sep-2021	28-Sep-2021	28-Sep-2021	28-Sep-2021	28-Sep-2021	28-Sep-2021	28-Sep-2021	28-Sep-2021	28-Sep-2021
pH Value	23-Sep-2021	20-Sep-2021	20-Sep-2021	20-Sep-2021					
Phenols by HPLC (W)	23-Sep-2021	23-Sep-2021	23-Sep-2021	05-Oct-2021	24-Sep-2021	24-Sep-2021	24-Sep-2021	24-Sep-2021	24-Sep-2021
Phosphate by Kone (w)	23-Sep-2021	20-Sep-2021	20-Sep-2021	20-Sep-2021					
Pyrethroids in water by GC-MS	28-Sep-2021	28-Sep-2021	28-Sep-2021	28-Sep-2021					
Sulphide	21-Sep-2021	23-Sep-2021	23-Sep-2021	23-Sep-2021					
SVOC MS (W) - Aqueous	27-Sep-2021	27-Sep-2021	27-Sep-2021	24-Sep-2021	23-Sep-2021	24-Sep-2021	27-Sep-2021	24-Sep-2021	27-Sep-2021
Total Organic and Inorganic Carbon	22-Sep-2021	22-Sep-2021	22-Sep-2021	22-Sep-2021					
VOC MS (W)					24-Sep-2021	24-Sep-2021	24-Sep-2021	24-Sep-2021	24-Sep-2021



CERTIFICATE OF ANALYSIS

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SDG: 210918-46
Client Ref.: Leachate Area 1 &

Report Number: 616747
Location: Newport landfill

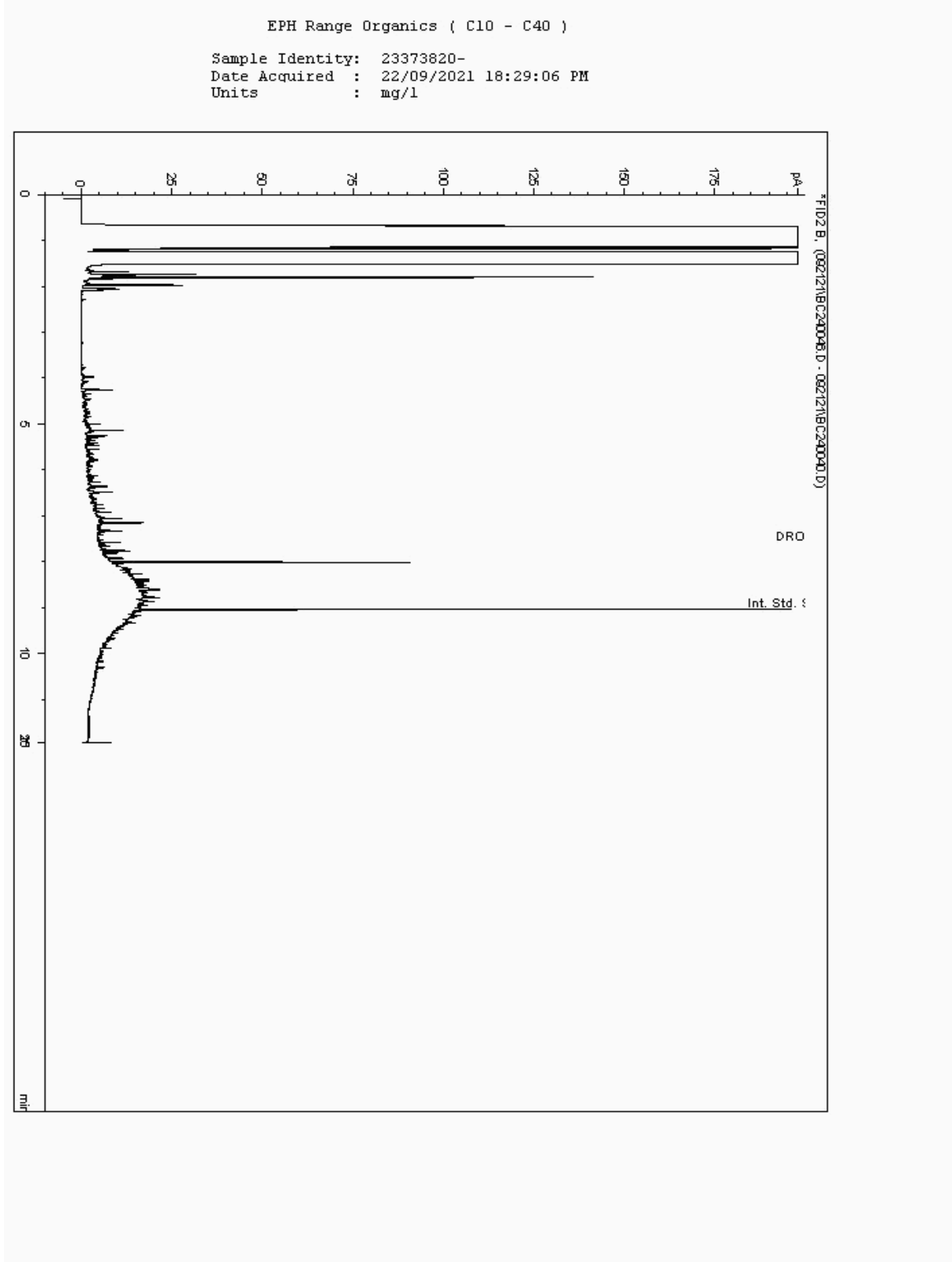
Superseded Report: 616521

Chromatogram

Analysis: EPH (DRO) (C10-C40) Aqueous (W)

Sample No : 25001448
Sample ID : LF11_02

Depth : 0.00 - 0.00





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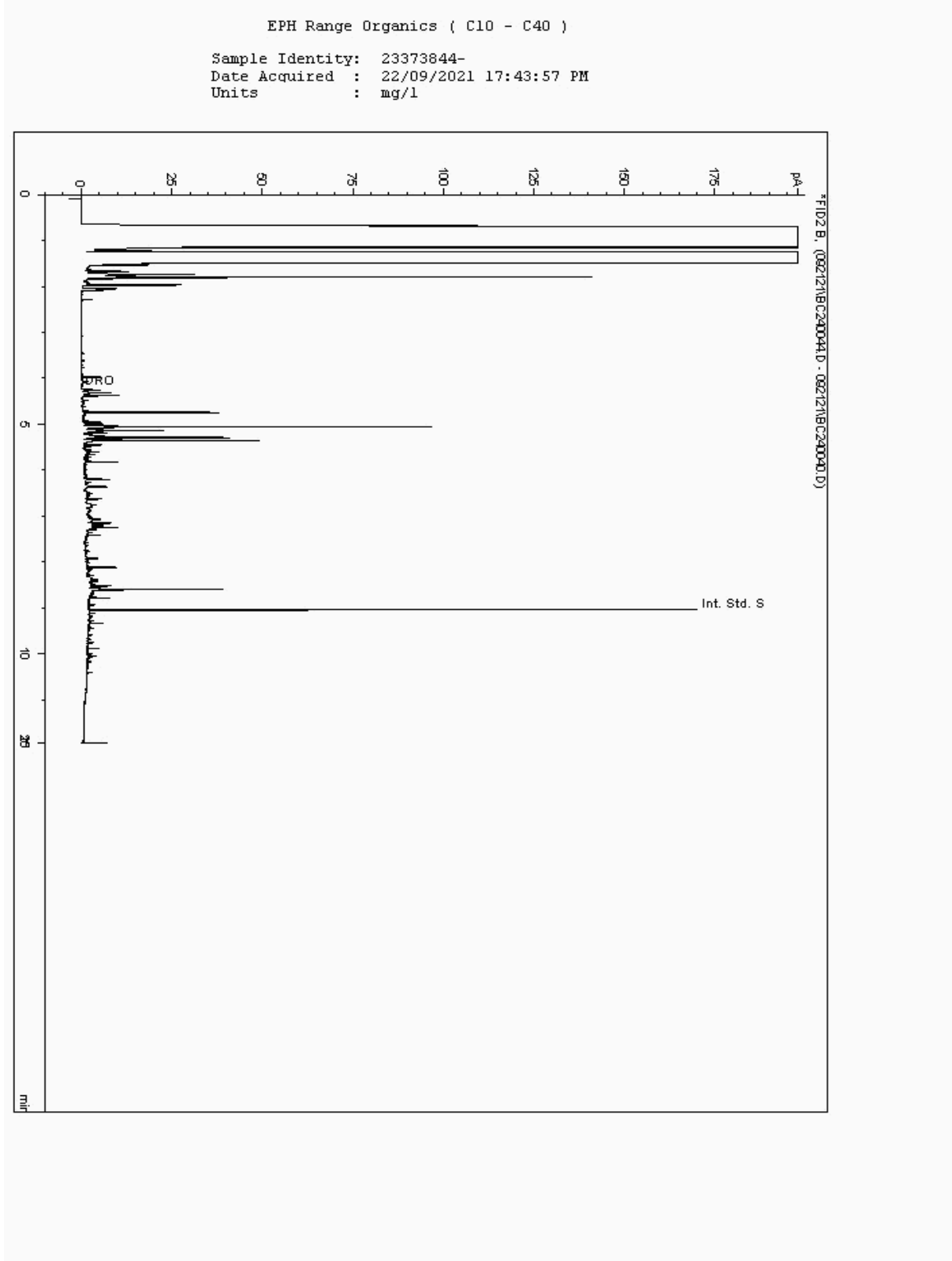
Superseded Report: 616521

Chromatogram

Analysis: EPH (DRO) (C10-C40) Aqueous (W)

Sample No : 25010232
Sample ID : LF11_04

Depth : 0.00 - 0.00





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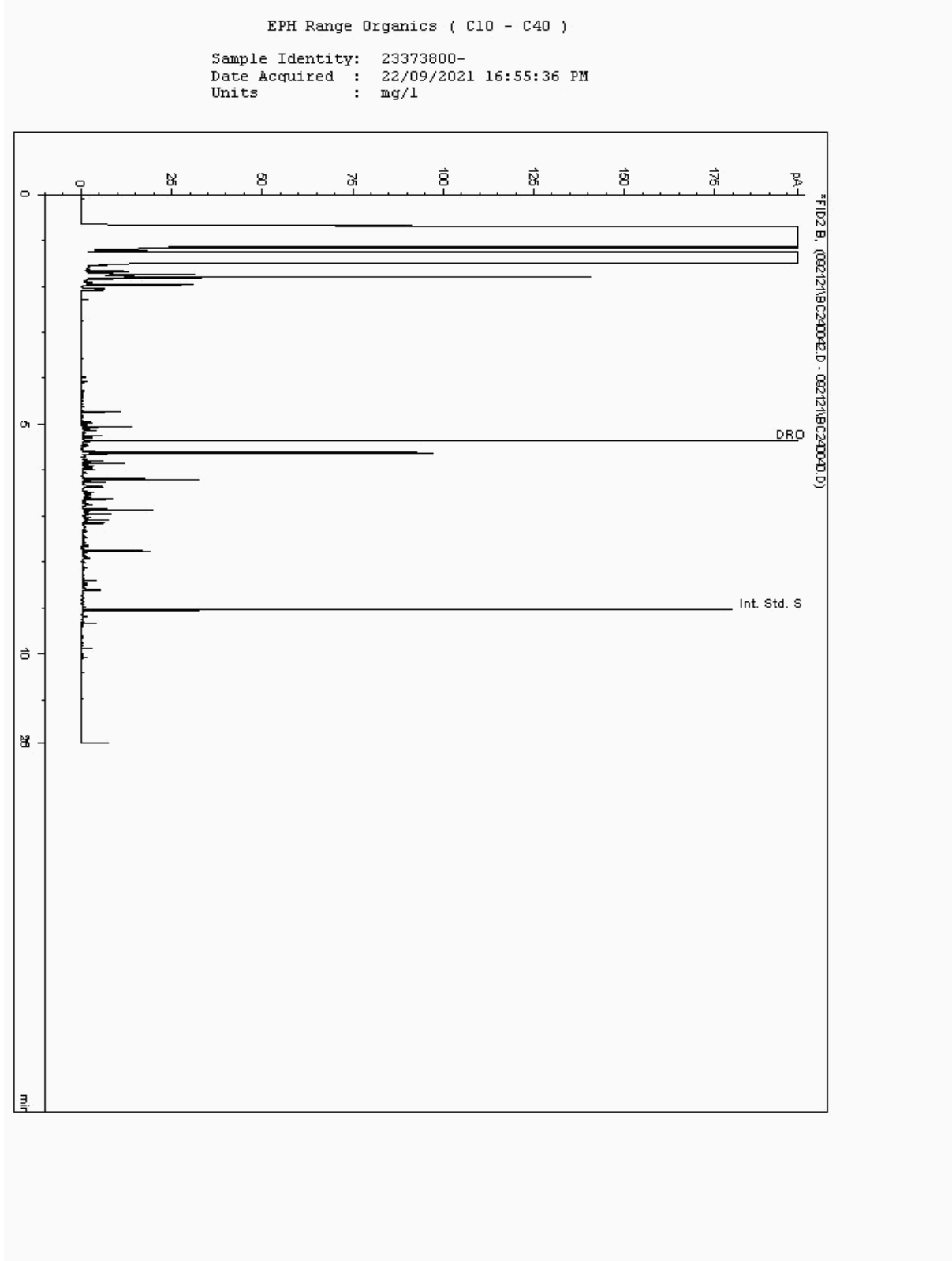
Superseded Report: 616521

Chromatogram

Analysis: EPH (DRO) (C10-C40) Aqueous (W)

Sample No : 25010302
Sample ID : C4B

Depth : 0.00 - 0.00





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Report Number: 616747
Location: Newport landfill

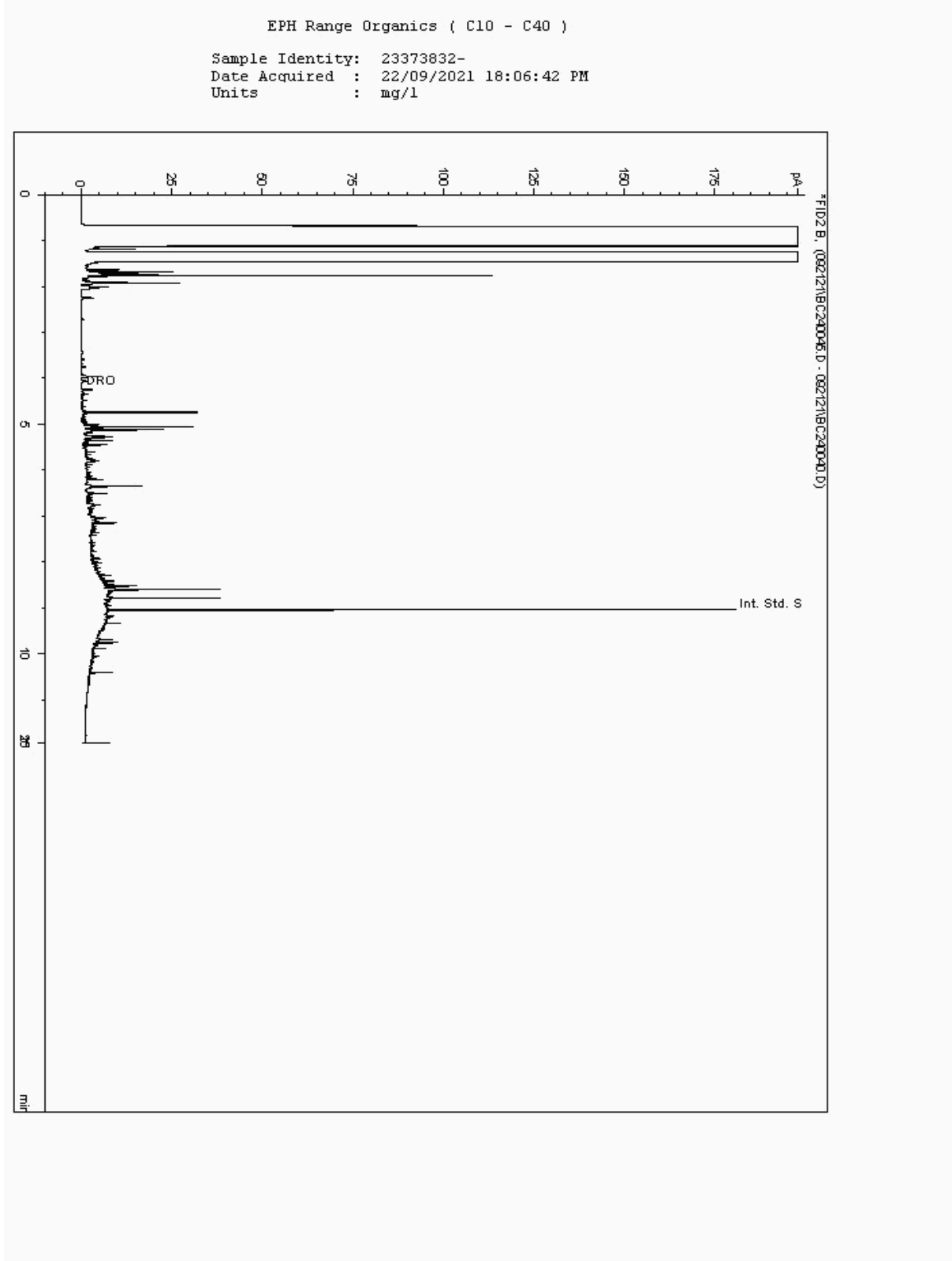
Superseded Report: 616521

Chromatogram

Analysis: EPH (DRO) (C10-C40) Aqueous (W)

Sample No : 25010313
Sample ID : LF11_07

Depth : 0.00 - 0.00





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Report Number: 616747
Location: Newport landfill

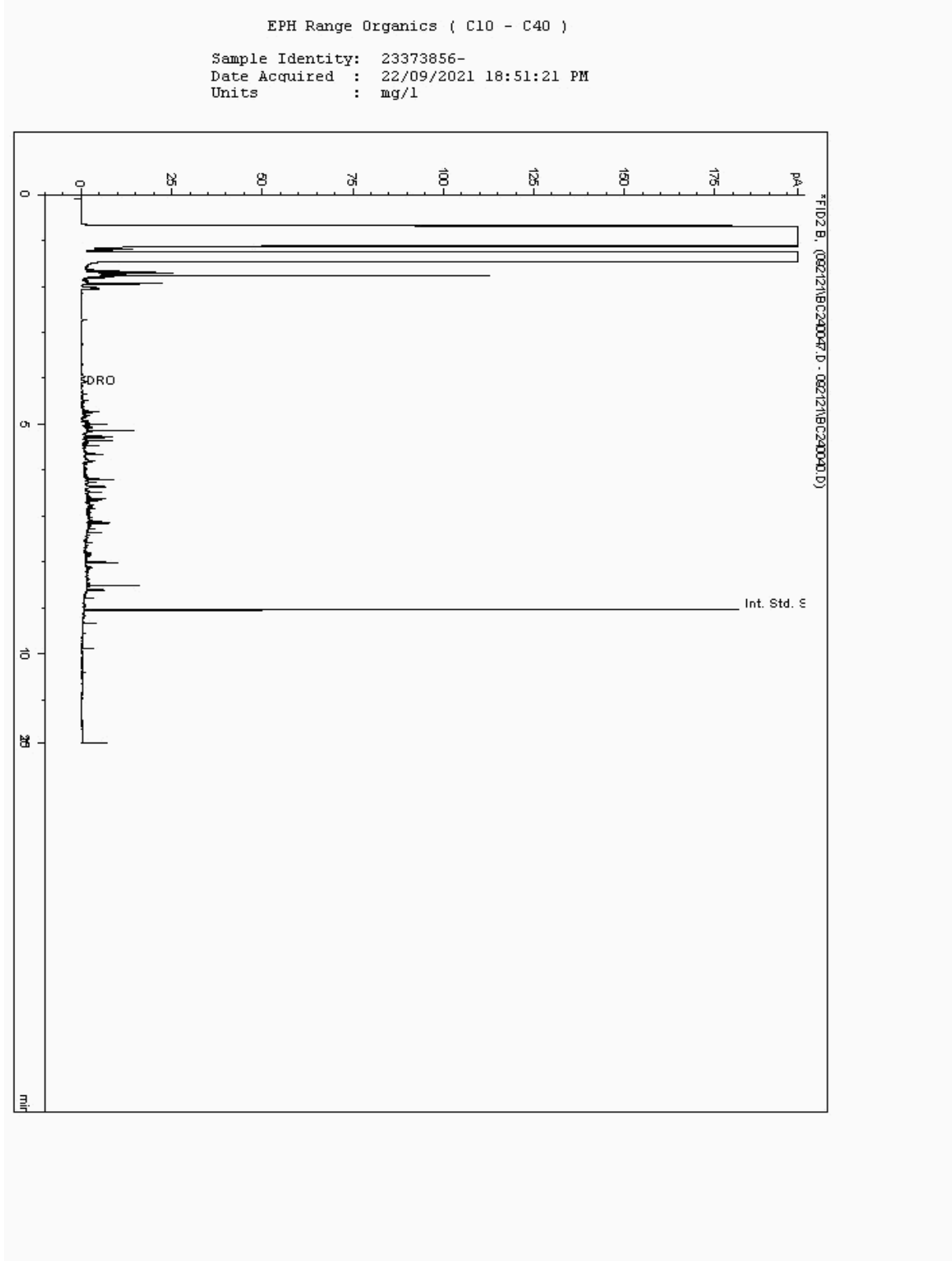
Superseded Report: 616521

Chromatogram

Analysis: EPH (DRO) (C10-C40) Aqueous (W)

Sample No : 25010333
Sample ID : LF11_06

Depth : 0.00 - 0.00





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Report Number: 616747
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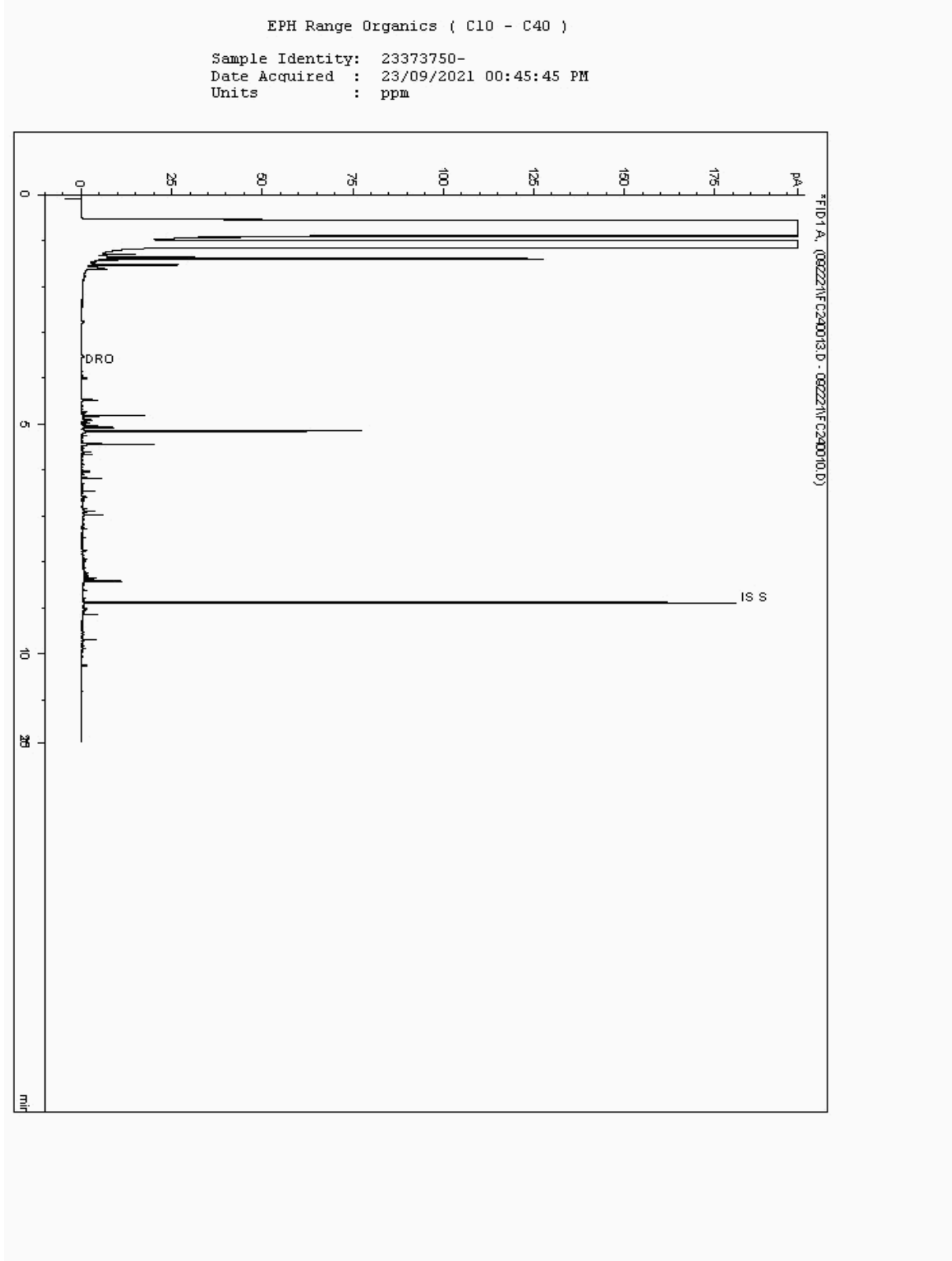
Superseded Report: 616521

Chromatogram

Analysis: EPH (DRO) (C10-C40) Aqueous (W)

Sample No : 25018541
Sample ID : C2C

Depth : 0.00 - 0.00





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Report Number: 616747
Location: Newport landfill

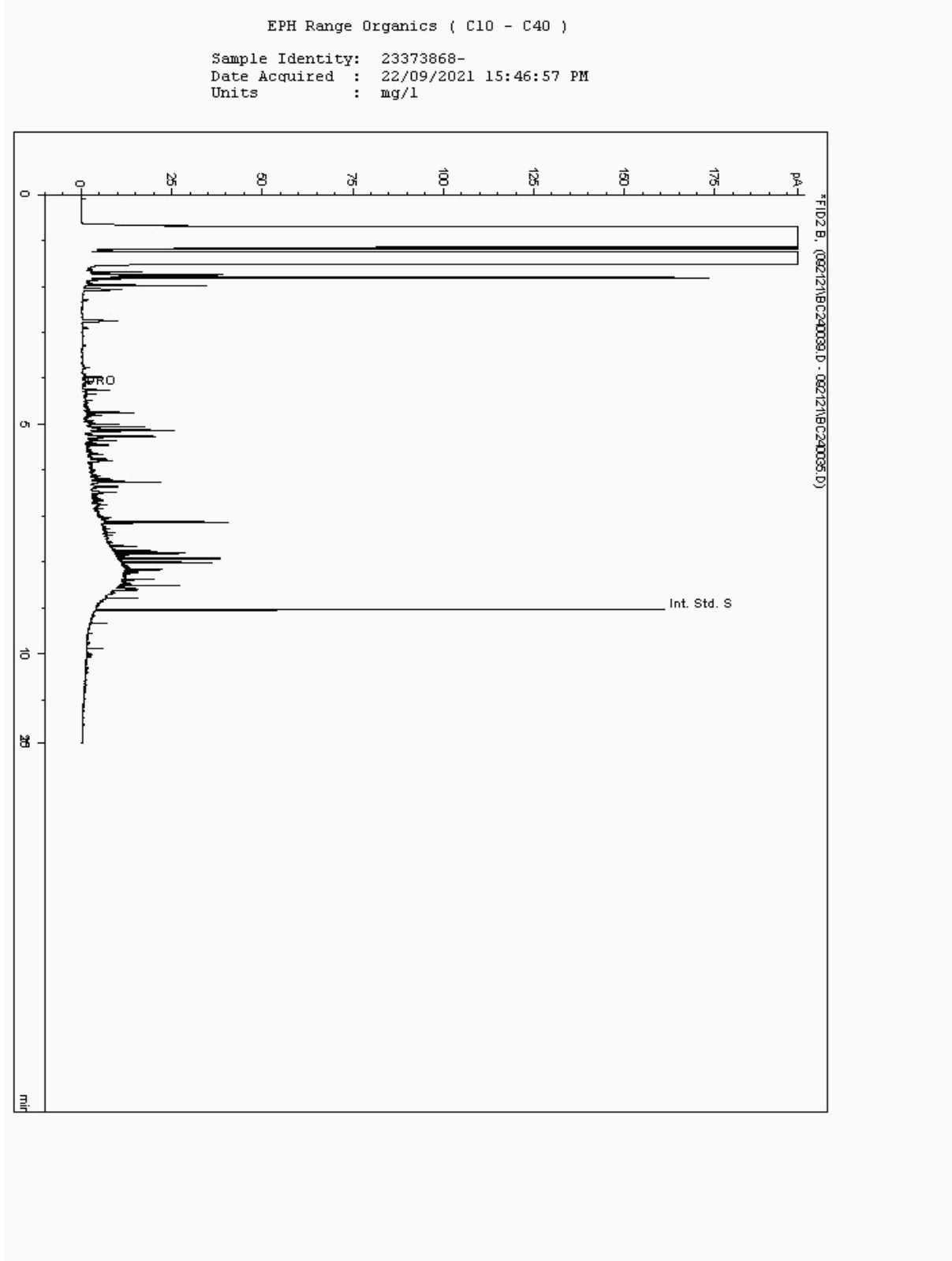
Superseded Report: 616521

Chromatogram

Analysis: EPH (DRO) (C10-C40) Aqueous (W)

Sample No : 25018608
Sample ID : LF11_03

Depth : 0.00 - 0.00





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Location: Newport landfill

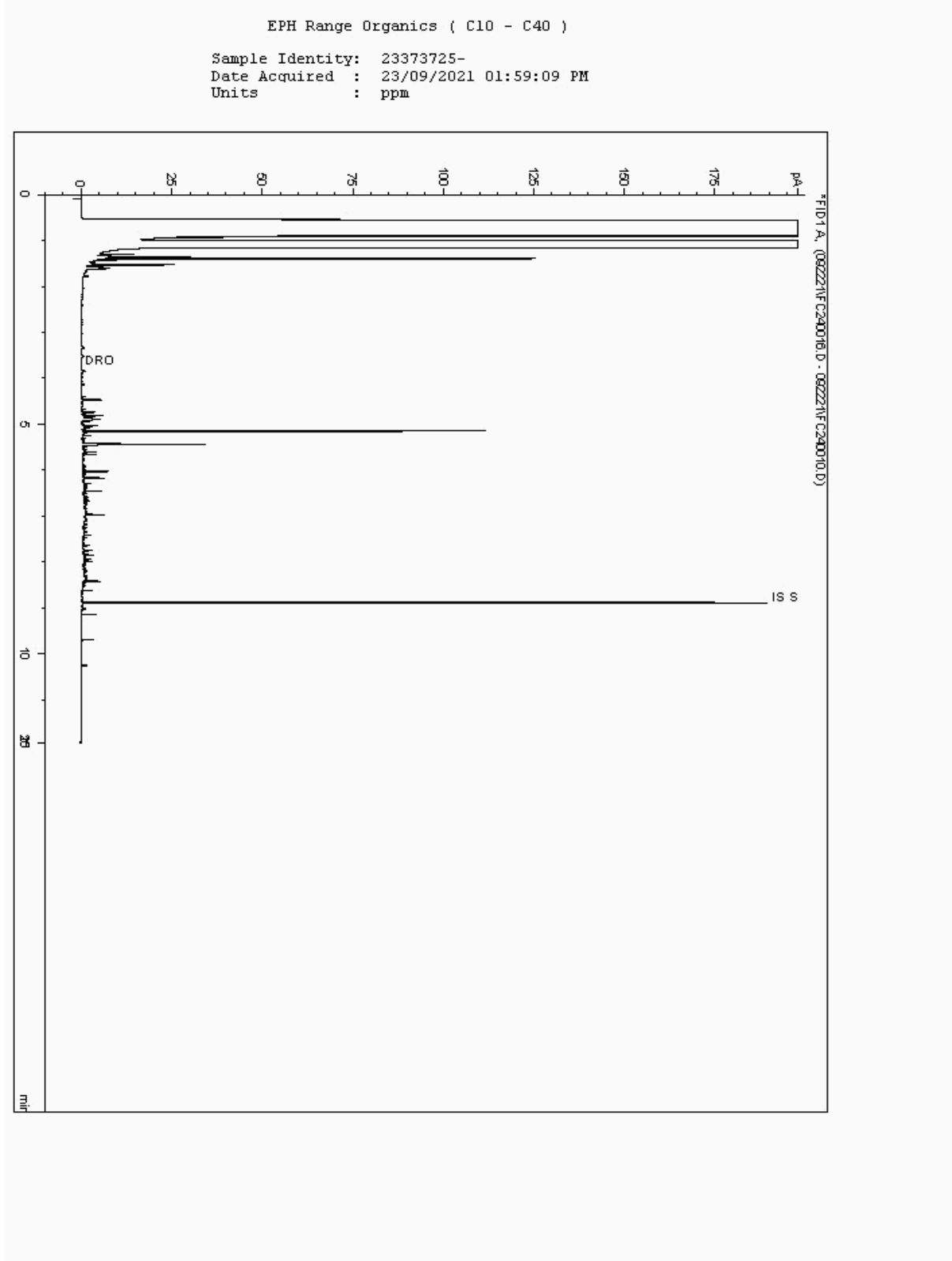
Superseded Report: 616521

Chromatogram

Analysis: EPH (DRO) (C10-C40) Aqueous (W)

Sample No : 25018660
Sample ID : LF08_07

Depth : 0.00 - 0.00





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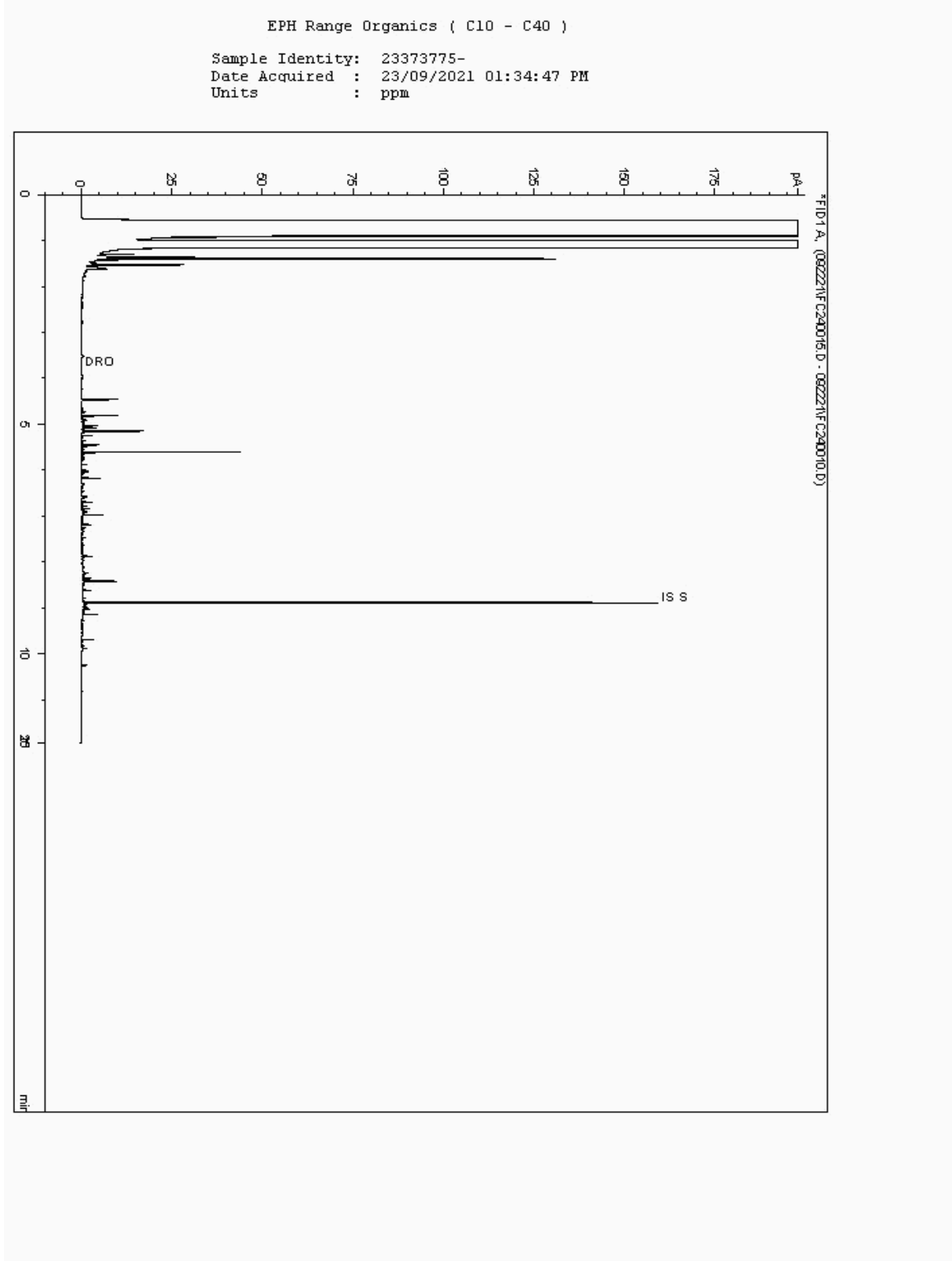
Superseded Report: 616521

Chromatogram

Analysis: EPH (DRO) (C10-C40) Aqueous (W)

Sample No : 25018679
Sample ID : C3B

Depth : 0.00 - 0.00



ALS Environmental, Land	Issue No. 4
	Date: 03/03/2020
QF.7.5.1 Data Amendments Form	Issued and Authorised by Quality Manager

SDG	Sample Event	Sample ID	Date Amended	Amendment Reason	Analysis/Component	Authorised (Lab Manager)	Previous Value	New Value	Units	Supersedes Report
210918-46	24999549	LF08_07 [0.00 - 0.00]	05/10/2021	Analytical/Quality Issue	Xylenols	C Birtwistle	0.01	0.08	mg/l	614981
210918-46	24999549	LF08_07 [0.00 - 0.00]	05/10/2021	Analytical/Quality Issue	Total Monohydric Phenols	C Birtwistle	<0.016	0.08	mg/l	614981



CERTIFICATE OF ANALYSIS

SDG: 210918-46 Client Reference: Leachate Area 1 & Report Number: 616747
 Location: Newport landfill Order Number: 700168991 Superseded Report: 616521

Appendix

General

1. Results are expressed on a dry weight basis (dried at 35°C) for all soil analyses except for the following: NRA and CEN Leach tests, flash point LOI, pH, ammonium as NH₄ by the BRE method, VOC TICs and SVOC TICs.

2. If sufficient sample is received a sub sample will be retained free of charge for 30 days after analysis is completed (e-mailed) for all sample types unless the sample is destroyed on testing. The prepared soil sub sample that is analysed for asbestos will be retained for a period of 6 months after the analysis date. All bulk samples 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. ALS reserve the right to charge for samples received and stored but not analysed.

3. 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.

4. 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.

5. If no separate volatile sample is supplied by the client, or if a headspace or sediment is present in the volatile sample, the integrity of the data may be compromised. This will be flagged up as an invalid VOC on the test schedule and the result marked as deviating on the test certificate.

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

7. Results relate only to the items tested.

8. LoDs (Limit of Detection) for wet tests reported on a dry weight basis are not corrected for moisture content.

9. **Surrogate recoveries** - Surrogates are added to your sample to monitor recovery of the test requested. A % recovery is reported, results are not corrected for the recovery measured. Typical recoveries for organics tests are 70-130%. Recoveries in soils are affected by organic rich or clay rich matrices. Waters can be affected by remediation fluids or high amounts of sediment. Test results are only ever reported if all of the associated quality checks pass; it is assumed that all recoveries outside of the values above are due to matrix affect.

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

11. 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.

12. For dried and crushed preparations of soils volatile loss may occur e.g volatile mercury

13. For leachate preparations other than Zero Headspace Extraction (ZHE) volatile loss may occur.

14. 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.

15. 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 C5-C12 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.

16. 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.

17 Data retention. All records, communications and reports pertaining to the analysis are archived for seven years from the date of issue of the final report.

18. **Tentatively Identified Compounds (TICs)** are non-target peaks in VOC and SVOC analysis. All non-target peaks detected with a concentration above the LoD are subjected to a mass spectral library search. Non-target peaks with a library search confidence of >75% are reported based on the best mass spectral library match. When a non-target peak with a library search confidence of <75% is detected it is reported as "mixed hydrocarbons". Non-target compounds identified from the scan data are semi-quantified relative to one of the deuterated internal standards, under the same chromatographic conditions as the target compounds. This result is reported as a semi-quantitative value and reported as Tentatively Identified Compounds (TICs). TICs are outside the scope of UKAS accreditation and are not moisture corrected.

19. Sample Deviations

If a sample is classed as deviated then the associated results may be compromised.

1	Container with Headspace provided for volatiles analysis
2	Incorrect container received
3	Deviation from method
4	Matrix interference
◆	Sample holding time exceeded in laboratory
@	Sample holding time exceeded due to late arrival of instructions or samples
§	Sampled on date not provided

20. Asbestos

When requested, the individual sub sample scheduled will be analysed in house for the presence of asbestos fibres and asbestos containing material by our documented in house method TM048 based on HSG 248 (2005), which is accredited to ISO17025. If a specific asbestos fibre type is not found this will be reported as "Not detected". If no asbestos fibre types are found all will be reported as "Not detected" and the sub sample analysed deemed to be clear of asbestos. If an asbestos fibre type is found it will be reported as detected (for each fibre type found). Testing can be carried out on asbestos positive samples, but, due to Health and Safety considerations, may be replaced by alternative tests or reported as No Determination Possible (NDP). The quantity of asbestos present is not determined unless specifically requested.

Identification of Asbestos in Bulk Materials & Soils

The results for identification of asbestos in bulk materials are obtained from supplied bulk materials which have been examined to determine the presence of asbestos fibres using ALS (Hawarden) in-house method of transmitted/polarised light microscopy and central stop dispersion staining, based on HSG 248 (2005).

The results for identification of asbestos in soils are obtained from a homogenised sub sample which has been examined to determine the presence of asbestos fibres using ALS (Hawarden) in-house method of transmitted/polarised light microscopy and central stop dispersion staining.

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.

Respirable Fibres

Respirable fibres are defined as fibres of <3 µm diameter, longer than 5 µm and with aspect ratios of at least 3:1 that can be inhaled into the lower regions of the lung and are generally acknowledged to be most important predictor of hazard and risk for cancers of the lung.

Further guidance on typical asbestos fibre content of manufactured products can be found in HSG 264.

The identification of asbestos containing materials and soils 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.