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Newport City Council
Civic Centre
Newport
NP20 4UR

Attention: Luke Embrey

CERTIFICATE OF ANALYSIS

Date of report Generation: 25 September 2020
Customer: Newport City Council
Sample Delivery Group (SDG): 200909-51
Your Reference: Area 1 Leachate Sept 2020
Location: Newport landfill
Report No: 568580

We received 8 samples on Wednesday September 09, 2020 and 8 of these samples were scheduled for analysis which was completed on Friday September 25, 2020. 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 (Method codes TM) or ALS Environmental Aberdeen (Method codes S).

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.

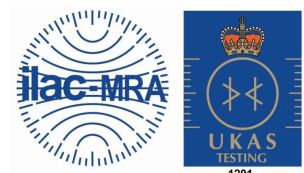
Incorrect sampling dates and/or sample information will affect the validity of results.

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: 200909-51 **Client Reference:** Area 1 Leachate Sept 2021 **Report Number:** 568580
Location: Newport landfill **Order Number:** 700154310 **Superseded Report:**

Received Sample Overview

Lab Sample No(s)	Customer Sample Ref.	AGS Ref.	Depth (m)	Sampled Date
22790646	LF03_01		0.00 - 0.00	08/09/2020
22790604	LF11_01		0.00 - 0.00	07/09/2020
22790585	LF11_02		0.00 - 0.00	07/09/2020
22790636	LF11_03		0.00 - 0.00	07/09/2020
22790626	LF11_04		0.00 - 0.00	07/09/2020
22790595	LF11_05		0.00 - 0.00	07/09/2020
22790613	LF11_06		0.00 - 0.00	07/09/2020
22790656	LF11_07		0.00 - 0.00	08/09/2020

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



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SDG:	200909-51	Client Reference:	Area 1 Leachate Sept 2021	Report Number:	568580
Location:	Newport landfill	Order Number:	700154310	Superseded Report:	

Results Legend <div style="display: flex; flex-direction: column; gap: 5px;"> <div style="display: flex; align-items: center;"> Test</div> <div style="display: flex; align-items: center;"> 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	
		22790646	LF03_01		0.00 - 0.00	NaOH (ALE297) Vial (ALE297) 0.5l glass bottle (ALE227)	LE
		22790604	LF11_01		0.00 - 0.00	NaOH (ALE245) HNO3 Filtered (ALE204) H2SO4 (ALE244)	LE
		22790585	LF11_02		0.00 - 0.00	NaOH (ALE245) HNO3 Filtered (ALE204) H2SO4 (ALE244)	LE
		22790636	LF11_03		0.00 - 0.00	NaOH (ALE297) Vial (ALE297) 0.5l glass bottle (ALE227)	LE
	Ammoniacal Nitrogen	All	NDPs: 0 Tests: 8				
	Cyanide Comp/Free/Total/Thiocyanate	All	NDPs: 0 Tests: 8				
Dissolved Metals by ICP-MS	All	NDPs: 0 Tests: 8					
EPH (DRO) (C10-C40) Aqueous (W)	All	NDPs: 0 Tests: 8					
Mercury Dissolved	All	NDPs: 0 Tests: 8					
Pesticides (Suite I) by GCMS	All	NDPs: 0 Tests: 8					
Pesticides (Suite II) by GCMS	All	NDPs: 0 Tests: 8					
Pesticides (Suite III) by GCMS	All	NDPs: 0 Tests: 8					
Phenols by HPLC (W)	All	NDPs: 0 Tests: 8					
SVOC MS (W) - Aqueous	All	NDPs: 0 Tests: 8					
VOC MS (W)	All	NDPs: 0 Tests: 8					



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SDG:	200909-51	Client Reference:	Area 1 Leachate Sept 2021	Report Number:	568580
Location:	Newport landfill	Order Number:	700154310	Superseded Report:	

Results Legend			Customer Sample Ref.	LF03_01	LF11_01	LF11_02	LF11_03	LF11_04	LF11_05
# ISO17025 accredited.				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.				08/09/2020	07/09/2020	07/09/2020	07/09/2020	07/09/2020	07/09/2020
diss.filt Dissolved / filtered sample.				09/09/2020	09/09/2020	09/09/2020	09/09/2020	09/09/2020	09/09/2020
tot.unfilt Total / unfiltered sample.				200909-51	200909-51	200909-51	200909-51	200909-51	200909-51
* Subcontracted - refer to subcontractor report for accreditation status.				22790646	22790604	22790585	22790636	22790626	22790595
** % 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									
1-343@ Sample deviation (see appendix)									
Component	LOD/Units	Method	Depth (m) Sample Type Date Sampled Sampled Time Date Received SDG Ref Lab Sample No.(s) AGS Reference						
Ammoniacal Nitrogen as N	<0.2 mg/l	TM099		1620	89.4	329	600	1970	1780
Arsenic (diss.filt)	<0.5 µg/l	TM152		16.6 #	6.42 #	3.29 #	4.56 #	21.2 #	59.5 #
Nickel (diss.filt)	<0.4 µg/l	TM152		225 #	2.55 #	8.97 #	52.1 #	371 #	452 #
Potassium (Dis.Filt)	<0.2 mg/l	TM152		505 #	49.5 #	200 #	331 #	892 #	816 #
EPH Range >C10 - C40 (aq)	<100 µg/l	TM172		10500	954	6970	4160	3290	142000
Mercury (diss.filt)	<0.01 µg/l	TM183		<0.1 #	<0.01 #	<0.01 #	<0.01 #	<0.1 #	<0.1 #
Cyanide, Total	<0.05 mg/l	TM227		0.05 #	<0.05 #	<0.05 #	<0.05 #	0.08 #	0.08 #
Cyanide, Free	<0.05 mg/l	TM227		<0.05 #	<0.05 #	<0.05 #	<0.05 #	<0.05 #	<0.05 #
Phenols, Total Detected monohydric	<0.016 mg/l	TM259		0.42 #	0.02 #	0.02 #	0.12 #	0.29 #	0.79 #
Trifluralin	<0.01 µg/l	TM343		<0.05	<0.01	<0.01	<0.01	<0.05	<1
alpha-HCH	<0.01 µg/l	TM343		<0.05	<0.01	<0.01	<0.01	<0.05	<1
gamma-HCH (Lindane)	<0.01 µg/l	TM343		<0.05	<0.01	<0.01	<0.01	<0.05	<1
Heptachlor	<0.01 µg/l	TM343		<0.1	<0.01	<0.01	<0.01	<0.1	<2
Aldrin	<0.01 µg/l	TM343		<0.05	<0.01	<0.01	<0.01	<0.05	<1
beta-HCH	<0.01 µg/l	TM343		<0.05	<0.01	<0.01	<0.01	<0.05	<1
Isodrin	<0.01 µg/l	TM343		<0.1	<0.01	<0.01	<0.01	<0.1	<2
delta-HCH	<0.01 µg/l	TM343		<0.1	<0.01	<0.01	<0.01	<0.1	<1
Heptachlor epoxide	<0.01 µg/l	TM343		<0.1	<0.01	<0.01	<0.01	<0.1	<1
o,p'-DDE	<0.01 µg/l	TM343		<0.05	<0.01	<0.01	<0.01	<0.05	<1
Endosulphan I	<0.01 µg/l	TM343		<0.05	<0.01	<0.01	<0.01	<0.05	<1
trans-Chlordane	<0.01 µg/l	TM343		<0.05	<0.01	<0.01	<0.01	<0.05	<1
cis-Chlordane	<0.01 µg/l	TM343		<0.05	<0.01	<0.01	<0.01	<0.05	<1
p,p'-DDE	<0.01 µg/l	TM343		<0.1	<0.01	<0.01	<0.01	<0.1	<1
Dieldrin	<0.01 µg/l	TM343		<0.05	<0.01	<0.01	<0.01	<0.05	<1
o,p'-DDD (TDE)	<0.01 µg/l	TM343		<0.05	<0.01	<0.01	<0.01	<0.05	<1
Endrin	<0.01 µg/l	TM343		<0.1	<0.01	<0.02	<0.02	<0.1	<3
o,p'-DDT	<0.01 µg/l	TM343		<0.1	<0.01	<0.03	<0.03	<0.1	<8
p,p'-DDD (TDE)	<0.01 µg/l	TM343		<0.05	<0.01	<0.01	<0.01	<0.05	<1
Endosulphan II	<0.02 µg/l	TM343		<0.1	<0.02	<0.02	<0.02	<0.1	<2
p,p'-DDT	<0.01 µg/l	TM343		<0.1	<0.01	<0.04	<0.04	<0.1	<10
o,p'-Methoxychlor	<0.01 µg/l	TM343		<0.1	<0.01	<0.03	<0.03	<0.1	<6
p,p'-Methoxychlor	<0.01 µg/l	TM343		<0.1	<0.01	<0.04	<0.04	<0.1	<10



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Location:	Newport landfill	Order Number:	700154310	Superseded Report:	

Results Legend			Customer Sample Ref.	LF03_01	LF11_01	LF11_02	LF11_03	LF11_04	LF11_05
# ISO17025 accredited. M mCERTS accredited. sq Aqueous / settled sample. diss.fit Dissolved / filtered sample. tot.unfit 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 1-345@ 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) 08/09/2020 . 09/09/2020 200909-51 22790646	0.00 - 0.00 Land Leachate (LE) 07/09/2020 . 09/09/2020 200909-51 22790604	0.00 - 0.00 Land Leachate (LE) 07/09/2020 . 09/09/2020 200909-51 22790585	0.00 - 0.00 Land Leachate (LE) 07/09/2020 . 09/09/2020 200909-51 22790636	0.00 - 0.00 Land Leachate (LE) 07/09/2020 . 09/09/2020 200909-51 22790626	0.00 - 0.00 Land Leachate (LE) 07/09/2020 . 09/09/2020 200909-51 22790595	
Component	LOD/Units	Method							
Endosulphan Sulphate	<0.02 µg/l	TM343	<0.1	<0.02	<0.04	<0.04	<0.1	<4	
Permethrin I	<0.01 µg/l	TM343	<0.05	<0.01	<0.02	<0.02	<0.05	<1	
Permethrin II	<0.01 µg/l	TM343	<0.05	<0.01	<0.02	<0.02	<0.05	<1	
1,3,5-Trichlorobenzene	<0.01 µg/l	TM344	<0.1	<0.05	<0.02	<0.02	<0.01	<1	
Hexachlorobutadiene	<0.01 µg/l	TM344	<0.1	<0.05	<0.02	<0.02	<0.1	<1	
1,2,4-Trichlorobenzene	<0.01 µg/l	TM344	<0.1	<0.05	<0.02	<0.02	<0.1	<1	
1,2,3-Trichlorobenzene	<0.01 µg/l	TM344	<0.1	<0.05	<0.02	<0.02	<0.1	<1	
Dichlorvos	<0.01 µg/l	TM344	<0.1	<0.05	<0.02	<0.02	<0.1	<1	
Dichlobenil	<0.01 µg/l	TM344	<0.1	<0.05	<0.02	<0.02	<0.1	<1	
Mevinphos	<0.01 µg/l	TM344	<0.1	<0.05	<0.02	<0.02	<0.1	<1	
Tecnazene	<0.01 µg/l	TM344	<0.1	<0.05	<0.02	<0.02	<0.1	<1	
Hexachlorobenzene	<0.01 µg/l	TM344	<0.1	<0.05	<0.02	<0.02	<0.1	<1	
Demeton-S-methyl	<0.01 µg/l	TM344	<0.1	<0.05	<0.02	<0.02	<0.1	<1	
Phorate	<0.01 µg/l	TM344	<0.1	<0.05	<0.02	<0.02	<0.1	<1	
Diazinon	<0.01 µg/l	TM344	<0.1	<0.05	<0.02	<0.02	<0.1	<1	
Triallate	<0.01 µg/l	TM344	<0.1	<0.05	<0.02	<0.02	<0.1	<1	
Atrazine	<0.01 µg/l	TM344	<0.1	<0.05	<0.02	<0.02	<0.1	<1	
Simazine	<0.01 µg/l	TM344	<0.1	<0.05	<0.02	<0.02	<0.1	<1	
Disulfoton	<0.01 µg/l	TM344	<0.1	<0.05	<0.02	<0.02	<0.1	<1	
Propetamphos	<0.01 µg/l	TM344	<0.1	<0.05	<0.02	<0.02	<0.1	<1	
Chlorpyrifos-methyl	<0.01 µg/l	TM344	<0.1	<0.05	<0.02	<0.02	<0.1	<1	
Dimethoate	<0.01 µg/l	TM344	<0.1	<0.05	<0.02	<0.02	<0.1	<1	
Pirimiphos-methyl	<0.01 µg/l	TM344	<0.1	<0.05	<0.02	<0.02	<0.1	<1	
Chlorpyrifos	<0.01 µg/l	TM344	<0.1	<0.05	<0.02	<0.02	<0.1	<1	
Methyl Parathion	<0.01 µg/l	TM344	<0.1	<0.05	<0.02	<0.02	<0.1	<1	
Malathion	<0.01 µg/l	TM344	<0.1	<0.05	<0.02	<0.02	<0.1	<1	
Fenthion	<0.01 µg/l	TM344	<0.1	<0.05	<0.02	<0.02	<0.1	<1	
Fenitrothion	<0.01 µg/l	TM344	<0.1	<0.05	<0.02	<0.02	<0.1	<1	
Triadimefon	<0.01 µg/l	TM344	<0.1	<0.05	<0.02	<0.02	<0.1	<1	
Pendimethalin	<0.01 µg/l	TM344	<0.1	<0.05	<0.02	<0.02	<0.1	<1	
Parathion	<0.01 µg/l	TM344	<0.1	<0.05	<0.02	<0.02	<0.1	<1	
Chlorfenvinphos	<0.01 µg/l	TM344	<0.1	<0.05	<0.02	<0.02	<0.1	<1	



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SDG:	200909-51	Client Reference:	Area 1 Leachate Sept 2021	Report Number:	568580
Location:	Newport landfill	Order Number:	700154310	Superseded Report:	

#	Customer Sample Ref.	LF11_06	LF11_07																																																																									
<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 15%;">Results Legend</td> <td colspan="6"> Depth (m) Sample Type Date Sampled Sampled Time Date Received SDG Ref Lab Sample No.(s) AGS Reference </td> </tr> <tr> <td>ISO17025 accredited.</td> <td>0.00 - 0.00</td> <td>0.00 - 0.00</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>mCERTS accredited.</td> <td>Land Leachate (LE)</td> <td>Land Leachate (LE)</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Aqueous / settled sample.</td> <td>07/09/2020</td> <td>08/09/2020</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Dissolved / filtered sample.</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Total / unfiltered sample.</td> <td>09/09/2020</td> <td>09/09/2020</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Subcontracted - refer to subcontractor report for accreditation status.</td> <td>200909-51</td> <td>200909-51</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>% 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</td> <td>22790613</td> <td>22790656</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Trigger breach confirmed</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Sample deviation (see appendix)</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </table>							Results Legend	Depth (m) Sample Type Date Sampled Sampled Time Date Received SDG Ref Lab Sample No.(s) AGS Reference						ISO17025 accredited.	0.00 - 0.00	0.00 - 0.00					mCERTS accredited.	Land Leachate (LE)	Land Leachate (LE)					Aqueous / settled sample.	07/09/2020	08/09/2020					Dissolved / filtered sample.							Total / unfiltered sample.	09/09/2020	09/09/2020					Subcontracted - refer to subcontractor report for accreditation status.	200909-51	200909-51					% 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	22790613	22790656					Trigger breach confirmed							Sample deviation (see appendix)						
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Arsenic (diss.filt)	<0.5 µg/l	TM152	5.33 #	21.3 #																																																																								
Nickel (diss.filt)	<0.4 µg/l	TM152	58.8 #	362 #																																																																								
Potassium (Dis.Filt)	<0.2 mg/l	TM152	365 #	559 #																																																																								
EPH Range >C10 - C40 (aq)	<100 µg/l	TM172	937	8200																																																																								
Mercury (diss.filt)	<0.01 µg/l	TM183	<0.01 #	<0.1 #																																																																								
Cyanide, Total	<0.05 mg/l	TM227	<0.05 #	0.05 #																																																																								
Cyanide, Free	<0.05 mg/l	TM227	<0.05 #	<0.05 #																																																																								
Phenols, Total Detected monohydric	<0.016 mg/l	TM259	0.11 #	0.33 #																																																																								
Trifluralin	<0.01 µg/l	TM343	<0.01	<0.05																																																																								
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Endosulphan I	<0.01 µg/l	TM343	<0.01	<0.05																																																																								
trans-Chlordane	<0.01 µg/l	TM343	<0.01	<0.05																																																																								
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p,p'-DDE	<0.01 µg/l	TM343	<0.01	<0.1																																																																								
Dieldrin	<0.01 µg/l	TM343	<0.01	<0.05																																																																								
o,p'-DDD (TDE)	<0.01 µg/l	TM343	<0.01	<0.05																																																																								
Endrin	<0.01 µg/l	TM343	<0.02	<0.1																																																																								
o,p'-DDT	<0.01 µg/l	TM343	<0.03	<0.1																																																																								
p,p'-DDD (TDE)	<0.01 µg/l	TM343	<0.01	<0.05																																																																								
Endosulphan II	<0.02 µg/l	TM343	<0.02	<0.1																																																																								
p,p'-DDT	<0.01 µg/l	TM343	<0.04	<0.1																																																																								
o,p'-Methoxychlor	<0.01 µg/l	TM343	<0.03	<0.1																																																																								
p,p'-Methoxychlor	<0.01 µg/l	TM343	<0.04	<0.1																																																																								



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Location:	Newport landfill	Order Number:	700154310	Superseded Report:	

Results Legend			Customer Sample Ref.					
# ISO17025 accredited. M mCERTS accredited. sq Aqueous / settled sample. diss.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 1-345@ Sample deviation (see appendix)	Depth (m) Sample Type Date Sampled Sampled Time Date Received SDG Ref Lab Sample No.(s) AGS Reference	LF11_06 0.00 - 0.00 Land Leachate (LE) 07/09/2020 09/09/2020 200909-51 22790613	LF11_07 0.00 - 0.00 Land Leachate (LE) 08/09/2020 09/09/2020 200909-51 22790656					
Component	LOD/Units	Method						
Endosulphan Sulphate	<0.02 µg/l	TM343	<0.04	<0.1				
Permethrin I	<0.01 µg/l	TM343	<0.02	<0.05				
Permethrin II	<0.01 µg/l	TM343	<0.02	<0.05				
1,3,5-Trichlorobenzene	<0.01 µg/l	TM344	<0.02	<0.05				
Hexachlorobutadiene	<0.01 µg/l	TM344	<0.02	<0.05				
1,2,4-Trichlorobenzene	<0.01 µg/l	TM344	<0.02	<0.05				
1,2,3-Trichlorobenzene	<0.01 µg/l	TM344	<0.02	<0.05				
Dichlorvos	<0.01 µg/l	TM344	<0.02	<0.05				
Dichlobenil	<0.01 µg/l	TM344	<0.02	<0.05				
Mevinphos	<0.01 µg/l	TM344	<0.02	<0.05				
Tecnazene	<0.01 µg/l	TM344	<0.02	<0.05				
Hexachlorobenzene	<0.01 µg/l	TM344	<0.02	<0.05				
Demeton-S-methyl	<0.01 µg/l	TM344	<0.02	<0.05				
Phorate	<0.01 µg/l	TM344	<0.02	<0.05				
Diazinon	<0.01 µg/l	TM344	<0.02	<0.05				
Triallate	<0.01 µg/l	TM344	<0.02	<0.05				
Atrazine	<0.01 µg/l	TM344	<0.02	<0.05				
Simazine	<0.01 µg/l	TM344	<0.02	<0.05				
Disulfoton	<0.01 µg/l	TM344	<0.02	<0.05				
Propetamphos	<0.01 µg/l	TM344	<0.02	<0.05				
Chlorpyriphos-methyl	<0.01 µg/l	TM344	<0.02	<0.05				
Dimethoate	<0.01 µg/l	TM344	<0.02	<0.05				
Pirimiphos-methyl	<0.01 µg/l	TM344	<0.02	<0.05				
Chlorpyriphos	<0.01 µg/l	TM344	<0.02	<0.05				
Methyl Parathion	<0.01 µg/l	TM344	<0.02	<0.05				
Malathion	<0.01 µg/l	TM344	<0.02	<0.05				
Fenthion	<0.01 µg/l	TM344	<0.02	<0.05				
Fenitrothion	<0.01 µg/l	TM344	<0.02	<0.05				
Triadimefon	<0.01 µg/l	TM344	<0.02	<0.05				
Pendimethalin	<0.01 µg/l	TM344	<0.02	<0.05				
Parathion	<0.01 µg/l	TM344	<0.02	<0.05				
Chlorfenvinphos	<0.01 µg/l	TM344	<0.02	<0.05				



CERTIFICATE OF ANALYSIS

Validated

SDG:	200909-51	Client Reference:	Area 1 Leachate Sept 2021	Report Number:	568580
Location:	Newport landfill	Order Number:	700154310	Superseded Report:	

SVOC MS (W) - Aqueous

Results Legend			Customer Sample Ref.	LF03_01	LF11_01	LF11_02	LF11_03	LF11_04	LF11_05
# ISO17025 accredited. M MCERTS accredited. aq Aqueous / settled sample. diss.fit Dissolved / filtered sample. tot.unfit 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 1-3*5@ 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) 08/09/2020	0.00 - 0.00 Land Leachate (LE) 07/09/2020	0.00 - 0.00 Land Leachate (LE) 07/09/2020	0.00 - 0.00 Land Leachate (LE) 07/09/2020	0.00 - 0.00 Land Leachate (LE) 07/09/2020	0.00 - 0.00 Land Leachate (LE) 07/09/2020	0.00 - 0.00 Land Leachate (LE) 07/09/2020
Component	LOD/Units	Method							
1,2,4-Trichlorobenzene (aq)	<1 µg/l	TM176	<50	<10	<8	<8	<50	<50	♦
1,2-Dichlorobenzene (aq)	<1 µg/l	TM176	<50	<10	<8	<8	<50	<50	♦
1,3-Dichlorobenzene (aq)	<1 µg/l	TM176	<50	<10	<8	<8	<50	<50	♦
1,4-Dichlorobenzene (aq)	<1 µg/l	TM176	<50	<10	<8	<8	<50	<50	♦
2,4,5-Trichlorophenol (aq)	<1 µg/l	TM176	<50	<10	<8	<8	<50	<50	♦
2,4,6-Trichlorophenol (aq)	<1 µg/l	TM176	<50	<10	<8	<8	<50	<50	♦
2,4-Dichlorophenol (aq)	<1 µg/l	TM176	<50	<10	<8	<8	<50	<50	♦
2,4-Dimethylphenol (aq)	<1 µg/l	TM176	<50	<10	<8	<8	<50	<50	♦
2,4-Dinitrotoluene (aq)	<1 µg/l	TM176	<50	<10	<8	<8	<50	<50	♦
2,6-Dinitrotoluene (aq)	<1 µg/l	TM176	<50	<10	<8	<8	<50	<50	♦
2-Chloronaphthalene (aq)	<1 µg/l	TM176	<50	<10	<8	<8	<50	<50	♦
2-Chlorophenol (aq)	<1 µg/l	TM176	<50	<10	<8	<8	<50	<50	♦
2-Methylnaphthalene (aq)	<1 µg/l	TM176	<50	<10	<8	<8	<50	<50	♦
2-Methylphenol (aq)	<1 µg/l	TM176	<50	<10	<8	<8	<50	<50	♦
2-Nitroaniline (aq)	<1 µg/l	TM176	<50	<10	<8	<8	<50	<50	♦
2-Nitrophenol (aq)	<1 µg/l	TM176	<50	<10	<8	<8	<50	<50	♦
3-Nitroaniline (aq)	<1 µg/l	TM176	<50	<10	<8	<8	<50	<50	♦
4-Bromophenylphenylether (aq)	<1 µg/l	TM176	<50	<10	<8	<8	<50	<50	♦
4-Chloro-3-methylphenol (aq)	<1 µg/l	TM176	<50	<10	<8	<8	<50	<50	♦
4-Chloroaniline (aq)	<1 µg/l	TM176	<50	<10	<8	<8	<50	<50	♦
4-Chlorophenylphenylether (aq)	<1 µg/l	TM176	<50	<10	<8	<8	<50	<50	♦
4-Methylphenol (aq)	<1 µg/l	TM176	<50	<10	<8	<8	<50	<50	♦
4-Nitroaniline (aq)	<1 µg/l	TM176	<50	<10	<8	<8	<50	<50	♦
4-Nitrophenol (aq)	<1 µg/l	TM176	<50	<10	<8	<8	<50	<50	♦
Azobenzene (aq)	<1 µg/l	TM176	<50	<10	<8	<8	<50	<50	♦
Acenaphthylene (aq)	<1 µg/l	TM176	<50	<10	<8	<8	<50	<50	♦
Acenaphthene (aq)	<1 µg/l	TM176	<50	<10	<8	<8	<50	<50	♦
Anthracene (aq)	<1 µg/l	TM176	<50	<10	<8	<8	<50	<50	♦
bis(2-Chloroethyl)ether (aq)	<1 µg/l	TM176	<50	<10	<8	<8	<50	<50	♦
bis(2-Chloroethoxy)methane (aq)	<1 µg/l	TM176	<50	<10	<8	<8	<50	<50	♦
bis(2-Ethylhexyl) phthalate (aq)	<2 µg/l	TM176	<100	<20	<16	<16	<100	3960	♦
Butylbenzyl phthalate (aq)	<1 µg/l	TM176	<50	<10	<8	<8	<50	<50	♦



CERTIFICATE OF ANALYSIS

Validated

SDG:	200909-51	Client Reference:	Area 1 Leachate Sept 2021	Report Number:	568580
Location:	Newport landfill	Order Number:	700154310	Superseded Report:	

SVOC MS (W) - Aqueous

Results Legend			Customer Sample Ref.	LF03_01	LF11_01	LF11_02	LF11_03	LF11_04	LF11_05
#	M	aq	Depth (m)	Sample Type	Date Sampled	Sampled Time	Date Received	SDG Ref	Lab Sample No.(s)
dis.filt	tot.unfilt	**	(F)	1-3&@	AGS Reference				
ISO17025 accredited. mCERTS accredited. Aqueous / filtered sample. Dissolved / filtered sample. 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 Trigger breach confirmed				0.00 - 0.00 Land Leachate (LE)	0.00 - 0.00 Land Leachate (LE)	0.00 - 0.00 Land Leachate (LE)	0.00 - 0.00 Land Leachate (LE)	0.00 - 0.00 Land Leachate (LE)	0.00 - 0.00 Land Leachate (LE)
				08/09/2020	07/09/2020	07/09/2020	07/09/2020	07/09/2020	07/09/2020
				09/09/2020	09/09/2020	09/09/2020	09/09/2020	09/09/2020	09/09/2020
				200909-51	200909-51	200909-51	200909-51	200909-51	200909-51
				22790646	22790604	22790585	22790636	22790626	22790595
Component	LOD/Units	Method							
Benzo(a)anthracene (aq)	<1 µg/l	TM176	<50	<10	<8	<8	<50	<50	<50
Benzo(b)fluoranthene (aq)	<1 µg/l	TM176	<50	<10	<8	<8	<50	<50	<50
Benzo(k)fluoranthene (aq)	<1 µg/l	TM176	<50	<10	<8	<8	<50	<50	<50
Benzo(a)pyrene (aq)	<1 µg/l	TM176	<50	<10	<8	<8	<50	<50	<50
Benzo(g,h,i)perylene (aq)	<1 µg/l	TM176	<50	<10	<8	<8	<50	<50	<50
Carbazole (aq)	<1 µg/l	TM176	<50	<10	<8	<8	<50	<50	<50
Chrysene (aq)	<1 µg/l	TM176	<50	<10	<8	<8	<50	<50	<50
Dibenzofuran (aq)	<1 µg/l	TM176	<50	<10	<8	<8	<50	<50	<50
n-Dibutyl phthalate (aq)	<1 µg/l	TM176	<50	61.9	71.7	11.7	<50	<50	<50
Diethyl phthalate (aq)	<1 µg/l	TM176	<50	<10	<8	<8	<50	<50	<50
Dibenzo(a,h)anthracene (aq)	<1 µg/l	TM176	<50	<10	<8	<8	<50	<50	<50
Dimethyl phthalate (aq)	<1 µg/l	TM176	<50	<10	<8	<8	<50	<50	<50
n-Dioctyl phthalate (aq)	<5 µg/l	TM176	<250	<50	<40	<40	<250	<250	<250
Fluoranthene (aq)	<1 µg/l	TM176	<50	<10	<8	<8	<50	<50	<50
Fluorene (aq)	<1 µg/l	TM176	<50	<10	<8	<8	<50	<50	<50
Hexachlorobenzene (aq)	<1 µg/l	TM176	<50	<10	<8	<8	<50	<50	<50
Hexachlorobutadiene (aq)	<1 µg/l	TM176	<50	<10	<8	<8	<50	<50	<50
Pentachlorophenol (aq)	<1 µg/l	TM176	<50	<10	<8	<8	<50	<50	<50
Phenol (aq)	<1 µg/l	TM176	<50	<10	<8	<8	<50	<50	<50
n-Nitroso-n-dipropylamine (aq)	<1 µg/l	TM176	<50	<10	<8	<8	<50	<50	<50
Hexachloroethane (aq)	<1 µg/l	TM176	<50	<10	<8	<8	<50	<50	<50
Nitrobenzene (aq)	<1 µg/l	TM176	<50	<10	<8	<8	<50	<50	<50
Naphthalene (aq)	<1 µg/l	TM176	<50	<10	<8	<8	<50	<50	<50
Isophorone (aq)	<1 µg/l	TM176	<50	<10	<8	<8	<50	<50	<50
Hexachlorocyclopentadiene (aq)	<1 µg/l	TM176	<50	<10	<8	<8	<50	<50	<50
Phenanthrene (aq)	<1 µg/l	TM176	<50	<10	<8	<8	<50	<50	<50
Indeno(1,2,3-cd)pyrene (aq)	<1 µg/l	TM176	<50	<10	<8	<8	<50	<50	<50
Pyrene (aq)	<1 µg/l	TM176	<50	<10	<8	<8	<50	<50	<50
SVOC TIC (aq)		TM176	Detected	Not Detected	Detected	Detected	Detected	Detected	Detected
Total SVOC TIC	<10 µg/l	TM176	5650	<100	571	1550	2240	210000	210000
2(3H)-Benzothiazolone	µg/l	TM176			165	138			
3,5,5-trimethyl hexanoic acid	µg/l	TM176	2380		167	658	2240	14000	14000



CERTIFICATE OF ANALYSIS

Validated

SDG:	200909-51	Client Reference:	Area 1 Leachate Sept 2021	Report Number:	568580
Location:	Newport landfill	Order Number:	700154310	Superseded Report:	

SVOC MS (W) - Aqueous

#	Customer Sample Ref.	LF11_06	LF11_07			
<div style="font-size: small;"> Results Legend # ISO17025 accredited. M mCERTS accredited. aq Aqueous / settled sample. diss.fit Dissolved / filtered sample. tot.unfit 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 1-3*5@ Sample deviation (see appendix) </div>						
	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) 07/09/2020 . 09/09/2020 200909-51 22790613	0.00 - 0.00 Land Leachate (LE) 08/09/2020 . 09/09/2020 200909-51 22790656			
Component	LOD/Units	Method				
1,2,4-Trichlorobenzene (aq)	<1 µg/l	TM176	<10	<50		
1,2-Dichlorobenzene (aq)	<1 µg/l	TM176	<10	<50		
1,3-Dichlorobenzene (aq)	<1 µg/l	TM176	<10	<50		
1,4-Dichlorobenzene (aq)	<1 µg/l	TM176	<10	<50		
2,4,5-Trichlorophenol (aq)	<1 µg/l	TM176	<10	<50		
2,4,6-Trichlorophenol (aq)	<1 µg/l	TM176	<10	<50		
2,4-Dichlorophenol (aq)	<1 µg/l	TM176	<10	<50		
2,4-Dimethylphenol (aq)	<1 µg/l	TM176	<10	<50		
2,4-Dinitrotoluene (aq)	<1 µg/l	TM176	<10	<50		
2,6-Dinitrotoluene (aq)	<1 µg/l	TM176	<10	<50		
2-Chloronaphthalene (aq)	<1 µg/l	TM176	<10	<50		
2-Chlorophenol (aq)	<1 µg/l	TM176	<10	<50		
2-Methylnaphthalene (aq)	<1 µg/l	TM176	<10	<50		
2-Methylphenol (aq)	<1 µg/l	TM176	<10	<50		
2-Nitroaniline (aq)	<1 µg/l	TM176	<10	<50		
2-Nitrophenol (aq)	<1 µg/l	TM176	<10	<50		
3-Nitroaniline (aq)	<1 µg/l	TM176	<10	<50		
4-Bromophenylphenylether (aq)	<1 µg/l	TM176	<10	<50		
4-Chloro-3-methylphenol (aq)	<1 µg/l	TM176	<10	<50		
4-Chloroaniline (aq)	<1 µg/l	TM176	<10	<50		
4-Chlorophenylphenylether (aq)	<1 µg/l	TM176	<10	<50		
4-Methylphenol (aq)	<1 µg/l	TM176	<10	<50		
4-Nitroaniline (aq)	<1 µg/l	TM176	<10	<50		
4-Nitrophenol (aq)	<1 µg/l	TM176	<10	<50		
Azobenzene (aq)	<1 µg/l	TM176	<10	<50		
Acenaphthylene (aq)	<1 µg/l	TM176	<10	<50		
Acenaphthene (aq)	<1 µg/l	TM176	<10	<50		
Anthracene (aq)	<1 µg/l	TM176	<10	<50		
bis(2-Chloroethyl)ether (aq)	<1 µg/l	TM176	<10	<50		
bis(2-Chloroethoxy)methane (aq)	<1 µg/l	TM176	<10	<50		
bis(2-Ethylhexyl) phthalate (aq)	<2 µg/l	TM176	<20	<100		
Butylbenzyl phthalate (aq)	<1 µg/l	TM176	<10	<50		



CERTIFICATE OF ANALYSIS

Validated

SDG:	200909-51	Client Reference:	Area 1 Leachate Sept 2021	Report Number:	568580
Location:	Newport landfill	Order Number:	700154310	Superseded Report:	

SVOC MS (W) - Aqueous

Results Legend			Customer Sample Ref.					
#	M	aq	dis.filt	tot.unfilt	**	(F)	1-3*5@	@
ISO17025 accredited. mCERTS accredited. Aqueous / settled sample. Dissolved / filtered sample. 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. Trigger breach confirmed 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			200909-51	22790613		
		0.00 - 0.00			200909-51	22790656		
		Land Leachate (LE)						
		07/09/2020						
		Land Leachate (LE)						
		08/09/2020						
Component	LOD/Units	Method	LF11_06	LF11_07				
Benzo(a)anthracene (aq)	<1 µg/l	TM176	<10	<50				
Benzo(b)fluoranthene (aq)	<1 µg/l	TM176	<10	<50				
Benzo(k)fluoranthene (aq)	<1 µg/l	TM176	<10	<50				
Benzo(a)pyrene (aq)	<1 µg/l	TM176	<10	<50				
Benzo(g,h,i)perylene (aq)	<1 µg/l	TM176	<10	<50				
Carbazole (aq)	<1 µg/l	TM176	<10	<50				
Chrysene (aq)	<1 µg/l	TM176	<10	<50				
Dibenzofuran (aq)	<1 µg/l	TM176	<10	<50				
n-Dibutyl phthalate (aq)	<1 µg/l	TM176	11.1	<50				
Diethyl phthalate (aq)	<1 µg/l	TM176	<10	<50				
Dibenzo(a,h)anthracene (aq)	<1 µg/l	TM176	<10	<50				
Dimethyl phthalate (aq)	<1 µg/l	TM176	<10	<50				
n-Dioctyl phthalate (aq)	<5 µg/l	TM176	<50	<250				
Fluoranthene (aq)	<1 µg/l	TM176	<10	<50				
Fluorene (aq)	<1 µg/l	TM176	<10	<50				
Hexachlorobenzene (aq)	<1 µg/l	TM176	<10	<50				
Hexachlorobutadiene (aq)	<1 µg/l	TM176	<10	<50				
Pentachlorophenol (aq)	<1 µg/l	TM176	<10	<50				
Phenol (aq)	<1 µg/l	TM176	<10	<50				
n-Nitroso-n-dipropylamine (aq)	<1 µg/l	TM176	<10	<50				
Hexachloroethane (aq)	<1 µg/l	TM176	<10	<50				
Nitrobenzene (aq)	<1 µg/l	TM176	<10	<50				
Naphthalene (aq)	<1 µg/l	TM176	<10	<50				
Isophorone (aq)	<1 µg/l	TM176	<10	<50				
Hexachlorocyclopentadiene (aq)	<1 µg/l	TM176	<10	<50				
Phenanthrene (aq)	<1 µg/l	TM176	<10	<50				
Indeno(1,2,3-cd)pyrene (aq)	<1 µg/l	TM176	<10	<50				
Pyrene (aq)	<1 µg/l	TM176	<10	<50				
SVOC TIC (aq)		TM176	Detected	Detected				
Total SVOC TIC	<10 µg/l	TM176	1310	4870				
2(3H)-Benzothiazolone	µg/l	TM176	101					
3,5,5-trimethyl hexanoic acid	µg/l	TM176	987	4340				



CERTIFICATE OF ANALYSIS

Validated

SDG: 200909-51
Location: Newport landfill

Client Reference: Area 1 Leachate Sept 2021
Order Number: 700154310

Report Number: 568580
Superseded Report:

VOC MS (W)

Results Legend			Customer Sample Ref.	LF03_01	LF11_01	LF11_02	LF11_03	LF11_04	LF11_05
#	ISO17025 accredited.			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.			08/09/2020	07/09/2020	07/09/2020	07/09/2020	07/09/2020	07/09/2020
diss.fit	Dissolved / filtered sample.			09/09/2020	09/09/2020	09/09/2020	09/09/2020	09/09/2020	09/09/2020
tot.unfilt	Total / unfiltered sample.			200909-51	200909-51	200909-51	200909-51	200909-51	200909-51
*	Subcontracted - refer to subcontractor report for accreditation status.			22790646	22790604	22790585	22790636	22790626	22790595
**	% 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								
1-348@	Sample deviation (see appendix)								
Component	LOD/Units	Method	AGS Reference						
Dibromofluoromethane**	%	TM208		111	114	112	112	111	110
Toluene-d8**	%	TM208		100	98.9	99.5	99.3	99.7	94.3
4-Bromofluorobenzene**	%	TM208		100	101	100	100	98.5	87.1
Dichlorodifluoromethane	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
Chloromethane	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
Vinyl chloride	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
Bromomethane	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
Chloroethane	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
Trichlorofluoromethane	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
1,1-Dichloroethene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
Carbon disulphide	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
Dichloromethane	<3 µg/l	TM208		<3 #	<3 #	<3 #	<3 #	<3 #	<3 #
Methyl tertiary butyl ether (MTBE)	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	1.14 #	1.41 #
trans-1,2-Dichloroethene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
1,1-Dichloroethane	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
cis-1,2-Dichloroethene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	1.2 #
2,2-Dichloropropane	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
Bromochloromethane	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
Chloroform	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
1,1,1-Trichloroethane	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
1,1-Dichloropropene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
Carbontetrachloride	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
1,2-Dichloroethane	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
Benzene	<1 µg/l	TM208		4.95 #	<1 #	4.64 #	2.56 #	8.1 #	10.8 #
Trichloroethene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
1,2-Dichloropropane	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
Dibromomethane	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
Bromodichloromethane	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
cis-1,3-Dichloropropene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
Toluene	<1 µg/l	TM208		6.56 #	<1 #	1.16 #	<1 #	8.26 #	7.07 #
trans-1,3-Dichloropropene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
1,1,2-Trichloroethane	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #



CERTIFICATE OF ANALYSIS

Validated

SDG:	200909-51	Client Reference:	Area 1 Leachate Sept 2021	Report Number:	568580
Location:	Newport landfill	Order Number:	700154310	Superseded Report:	

VOC MS (W)

Results Legend			Customer Sample Ref.	LF03_01	LF11_01	LF11_02	LF11_03	LF11_04	LF11_05
# ISO17025 accredited. M mCERTS accredited. sq Aqueous / settled sample. dis.fit Dissolved / filtered sample. tot.unfit 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 1-3&@ Sample deviation (see appendix)			LF03_01	LF11_01	LF11_02	LF11_03	LF11_04	LF11_05	
	Depth (m)		0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00
	Sample Type		Land Leachate (LE)	Land Leachate (LE)	Land Leachate (LE)	Land Leachate (LE)	Land Leachate (LE)	Land Leachate (LE)	Land Leachate (LE)
	Date Sampled		08/09/2020	07/09/2020	07/09/2020	07/09/2020	07/09/2020	07/09/2020	07/09/2020
	Sampled Time	
	Date Received		09/09/2020	09/09/2020	09/09/2020	09/09/2020	09/09/2020	09/09/2020	09/09/2020
	SDG Ref		200909-51	200909-51	200909-51	200909-51	200909-51	200909-51	200909-51
	Lab Sample No.(s)		22790646	22790604	22790585	22790636	22790626	22790595	22790595
	AGS Reference								
Component	LOD/Units	Method							
1,3-Dichloropropane	<1 µg/l	TM208	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
Tetrachloroethene	<1 µg/l	TM208	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
Dibromochloromethane	<1 µg/l	TM208	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
1,2-Dibromoethane	<1 µg/l	TM208	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
Chlorobenzene	<1 µg/l	TM208	3.71 #	<1 #	4.08 #	2.24 #	<1 #	1.06 #	1.06 #
1,1,1,2-Tetrachloroethane	<1 µg/l	TM208	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
Ethylbenzene	<1 µg/l	TM208	36.3 #	<1 #	<1 #	<1 #	9.18 #	6.99 #	6.99 #
m,p-Xylene	<1 µg/l	TM208	79.6 #	1.69 #	11.6 #	3.24 #	15.3 #	15.9 #	15.9 #
o-Xylene	<1 µg/l	TM208	26.9 #	<1 #	2.32 #	1.36 #	8.24 #	11.7 #	11.7 #
Styrene	<1 µg/l	TM208	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
Bromoform	<1 µg/l	TM208	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
Isopropylbenzene	<1 µg/l	TM208	2.22 #	<1 #	1.31 #	1.37 #	<1 #	1.37 #	1.37 #
1,1,2,2-Tetrachloroethane	<1 µg/l	TM208	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
1,2,3-Trichloropropane	<1 µg/l	TM208	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
Bromobenzene	<1 µg/l	TM208	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
Propylbenzene	<1 µg/l	TM208	2.24 #	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
2-Chlorotoluene	<1 µg/l	TM208	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
1,3,5-Trimethylbenzene	<1 µg/l	TM208	5.8 #	<1 #	<1 #	<1 #	2.49 #	2.54 #	2.54 #
4-Chlorotoluene	<1 µg/l	TM208	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
tert-Butylbenzene	<1 µg/l	TM208	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
1,2,4-Trimethylbenzene	<1 µg/l	TM208	26.7 #	<1 #	3.96 #	1.27 #	8.26 #	8.43 #	8.43 #
sec-Butylbenzene	<1 µg/l	TM208	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
4-iso-Propyltoluene	<1 µg/l	TM208	8.98 #	<1 #	<1 #	<1 #	14.5 #	5.91 #	5.91 #
1,3-Dichlorobenzene	<1 µg/l	TM208	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
1,4-Dichlorobenzene	<1 µg/l	TM208	4.49 #	<1 #	2.57 #	1.23 #	1.61 #	<1 #	<1 #
n-Butylbenzene	<1 µg/l	TM208	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
1,2-Dichlorobenzene	<1 µg/l	TM208	<1 #	<1 #	1.15 #	<1 #	<1 #	<1 #	<1 #
1,2-Dibromo-3-chloropropane	<1 µg/l	TM208	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
1,2,4-Trichlorobenzene	<1 µg/l	TM208	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
Hexachlorobutadiene	<1 µg/l	TM208	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
tert-Amyl methyl ether (TAME)	<1 µg/l	TM208	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
Naphthalene	<1 µg/l	TM208	8.37 #	<1 #	1.1 #	4.03 #	1.72 #	4.32 #	4.32 #



CERTIFICATE OF ANALYSIS

Validated

SDG:	200909-51	Client Reference:	Area 1 Leachate Sept 2021	Report Number:	568580
Location:	Newport landfill	Order Number:	700154310	Superseded Report:	

VOC MS (W)

Results Legend		Customer Sample Ref.	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)			
M	mCERTS accredited.		07/09/2020	08/09/2020			
aq	Aqueous / settled sample.		09/09/2020	09/09/2020			
diss.filt	Dissolved / filtered sample.		200909-51	200909-51			
tot.unfilt	Total / unfiltered sample.		22790613	22790656			
*	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						
1-34\$@	Sample deviation (see appendix)						
Component	LOD/Units		Method				
Dibromofluoromethane**	%	TM208	113	103			
Toluene-d8**	%	TM208	99.8	99.5			
4-Bromofluorobenzene**	%	TM208	101	101			
Dichlorodifluoromethane	<1 µg/l	TM208	<1 #	<1 #			
Chloromethane	<1 µg/l	TM208	<1 #	<1 #			
Vinyl chloride	<1 µg/l	TM208	<1 #	<1 #			
Bromomethane	<1 µg/l	TM208	<1 #	<1 #			
Chloroethane	<1 µg/l	TM208	<1 #	<1 #			
Trichlorofluoromethane	<1 µg/l	TM208	<1 #	<1 #			
1,1-Dichloroethene	<1 µg/l	TM208	<1 #	<1 #			
Carbon disulphide	<1 µg/l	TM208	<1 #	22.1 #			
Dichloromethane	<3 µg/l	TM208	<3 #	<3 #			
Methyl tertiary butyl ether (MTBE)	<1 µg/l	TM208	1.51 #	2.79 #			
trans-1,2-Dichloroethene	<1 µg/l	TM208	<1 #	<1 #			
1,1-Dichloroethane	<1 µg/l	TM208	<1 #	<1 #			
cis-1,2-Dichloroethene	<1 µg/l	TM208	<1 #	2.56 #			
2,2-Dichloropropane	<1 µg/l	TM208	<1 #	<1 #			
Bromochloromethane	<1 µg/l	TM208	<1 #	<1 #			
Chloroform	<1 µg/l	TM208	<1 #	<1 #			
1,1,1-Trichloroethane	<1 µg/l	TM208	<1 #	<1 #			
1,1-Dichloropropene	<1 µg/l	TM208	<1 #	<1 #			
Carbontetrachloride	<1 µg/l	TM208	<1 #	<1 #			
1,2-Dichloroethane	<1 µg/l	TM208	<1 #	<1 #			
Benzene	<1 µg/l	TM208	4.51 #	7.2 #			
Trichloroethene	<1 µg/l	TM208	<1 #	<1 #			
1,2-Dichloropropane	<1 µg/l	TM208	<1 #	<1 #			
Dibromomethane	<1 µg/l	TM208	<1 #	<1 #			
Bromodichloromethane	<1 µg/l	TM208	<1 #	<1 #			
cis-1,3-Dichloropropene	<1 µg/l	TM208	<1 #	<1 #			
Toluene	<1 µg/l	TM208	1.34 #	3.6 #			
trans-1,3-Dichloropropene	<1 µg/l	TM208	<1 #	<1 #			
1,1,2-Trichloroethane	<1 µg/l	TM208	<1 #	<1 #			



CERTIFICATE OF ANALYSIS

Validated

SDG:	200909-51	Client Reference:	Area 1 Leachate Sept 2021	Report Number:	568580
Location:	Newport landfill	Order Number:	700154310	Superseded Report:	

VOC MS (W)

Results Legend			Customer Sample Ref.	LF11_06	LF11_07			
# ISO17025 accredited. M mCERTS accredited. sq Aqueous / settled sample. diss.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 1-345@ 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) 07/09/2020 . 09/09/2020 200909-51 22790613	0.00 - 0.00 Land Leachate (LE) 08/09/2020 . 09/09/2020 200909-51 22790656				
Component	LOD/Units	Method						
1,3-Dichloropropane	<1 µg/l	TM208	<1 #	<1 #				
Tetrachloroethene	<1 µg/l	TM208	<1 #	<1 #				
Dibromochloromethane	<1 µg/l	TM208	<1 #	<1 #				
1,2-Dibromoethane	<1 µg/l	TM208	<1 #	<1 #				
Chlorobenzene	<1 µg/l	TM208	2.88 #	1.52 #				
1,1,1,2-Tetrachloroethane	<1 µg/l	TM208	<1 #	<1 #				
Ethylbenzene	<1 µg/l	TM208	<1 #	20.2 #				
m,p-Xylene	<1 µg/l	TM208	<1 #	10.1 #				
o-Xylene	<1 µg/l	TM208	<1 #	14.1 #				
Styrene	<1 µg/l	TM208	<1 #	<1 #				
Bromoform	<1 µg/l	TM208	<1 #	<1 #				
Isopropylbenzene	<1 µg/l	TM208	2.81 #	2.77 #				
1,1,1,2,2-Tetrachloroethane	<1 µg/l	TM208	<1 #	<1 #				
1,2,3-Trichloropropane	<1 µg/l	TM208	<1 #	<1 #				
Bromobenzene	<1 µg/l	TM208	<1 #	<1 #				
Propylbenzene	<1 µg/l	TM208	<1 #	1.52 #				
2-Chlorotoluene	<1 µg/l	TM208	<1 #	<1 #				
1,3,5-Trimethylbenzene	<1 µg/l	TM208	<1 #	3.59 #				
4-Chlorotoluene	<1 µg/l	TM208	<1 #	<1 #				
tert-Butylbenzene	<1 µg/l	TM208	<1 #	<1 #				
1,2,4-Trimethylbenzene	<1 µg/l	TM208	<1 #	11.7 #				
sec-Butylbenzene	<1 µg/l	TM208	<1 #	<1 #				
4-iso-Propyltoluene	<1 µg/l	TM208	<1 #	1.17 #				
1,3-Dichlorobenzene	<1 µg/l	TM208	<1 #	<1 #				
1,4-Dichlorobenzene	<1 µg/l	TM208	2.28 #	1.24 #				
n-Butylbenzene	<1 µg/l	TM208	<1 #	<1 #				
1,2-Dichlorobenzene	<1 µg/l	TM208	<1 #	<1 #				
1,2-Dibromo-3-chloropropane	<1 µg/l	TM208	<1 #	<1 #				
1,2,4-Trichlorobenzene	<1 µg/l	TM208	<1 #	<1 #				
Hexachlorobutadiene	<1 µg/l	TM208	<1 #	<1 #				
tert-Amyl methyl ether (TAME)	<1 µg/l	TM208	<1 #	<1 #				
Naphthalene	<1 µg/l	TM208	4.51 #	8.04 #				



CERTIFICATE OF ANALYSIS

Validated

SDG: 200909-51 **Client Reference:** Area 1 Leachate Sept 2021 **Report Number:** 568580
Location: Newport landfill **Order Number:** 700154310 **Superseded Report:**

Table of Results - Appendix

Method No	Reference	Description
TM099	BS 2690: Part 7:1968 / BS 6068: Part2.11:1984	Determination of Ammonium in Water Samples using the Kone Analyser
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
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
TM259	by HPLC	Determination of Phenols in Waters and Leachates by HPLC
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

NA = not applicable.

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



CERTIFICATE OF ANALYSIS

Validated

SDG: 200909-51 **Client Reference:** Area 1 Leachate Sept 2021 **Report Number:** 568580
Location: Newport landfill **Order Number:** 700154310 **Superseded Report:**

Test Completion Dates

Lab Sample No(s)	22790646	22790604	22790585	22790636	22790626	22790595	22790613	22790656
Customer Sample Ref.	LF03_01	LF11_01	LF11_02	LF11_03	LF11_04	LF11_05	LF11_06	LF11_07
AGS Ref.								
Depth	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00
Type	Land Leachate	Land Leachate	Land Leachate	Land Leachate	Land Leachate	Land Leachate	Land Leachate	Land Leachate

Ammoniacal Nitrogen	15-Sep-2020	15-Sep-2020	15-Sep-2020	16-Sep-2020	15-Sep-2020	16-Sep-2020	16-Sep-2020	15-Sep-2020
Cyanide Comp/Free/Total/Thiocyanate	16-Sep-2020	16-Sep-2020	16-Sep-2020	16-Sep-2020	16-Sep-2020	16-Sep-2020	16-Sep-2020	16-Sep-2020
Dissolved Metals by ICP-MS	15-Sep-2020	15-Sep-2020	15-Sep-2020	16-Sep-2020	16-Sep-2020	15-Sep-2020	16-Sep-2020	15-Sep-2020
EPH (DRO) (C10-C40) Aqueous (W)	15-Sep-2020	15-Sep-2020	16-Sep-2020	16-Sep-2020	15-Sep-2020	16-Sep-2020	16-Sep-2020	15-Sep-2020
Mercury Dissolved	16-Sep-2020	15-Sep-2020	15-Sep-2020	16-Sep-2020	16-Sep-2020	16-Sep-2020	16-Sep-2020	16-Sep-2020
Pesticides (Suite I) by GCMS	21-Sep-2020	16-Sep-2020	22-Sep-2020	22-Sep-2020	21-Sep-2020	23-Sep-2020	22-Sep-2020	21-Sep-2020
Pesticides (Suite II) by GCMS	21-Sep-2020	21-Sep-2020	21-Sep-2020	21-Sep-2020	21-Sep-2020	21-Sep-2020	21-Sep-2020	21-Sep-2020
Pesticides (Suite III) by GCMS	25-Sep-2020	22-Sep-2020	25-Sep-2020	25-Sep-2020	22-Sep-2020	25-Sep-2020	25-Sep-2020	25-Sep-2020
Phenols by HPLC (W)	15-Sep-2020	15-Sep-2020	15-Sep-2020	16-Sep-2020	15-Sep-2020	16-Sep-2020	16-Sep-2020	16-Sep-2020
SVOC MS (W) - Aqueous	16-Sep-2020	16-Sep-2020	18-Sep-2020	18-Sep-2020	18-Sep-2020	17-Sep-2020	16-Sep-2020	18-Sep-2020
VOC MS (W)	15-Sep-2020	15-Sep-2020	15-Sep-2020	15-Sep-2020	15-Sep-2020	15-Sep-2020	15-Sep-2020	15-Sep-2020



CERTIFICATE OF ANALYSIS

Validated

SDG: 200909-51 Client Reference: Area 1 Leachate Sept 2021 Report Number: 568580
Location: Newport landfill Order Number: 700154310 Superseded Report:

Chromatogram

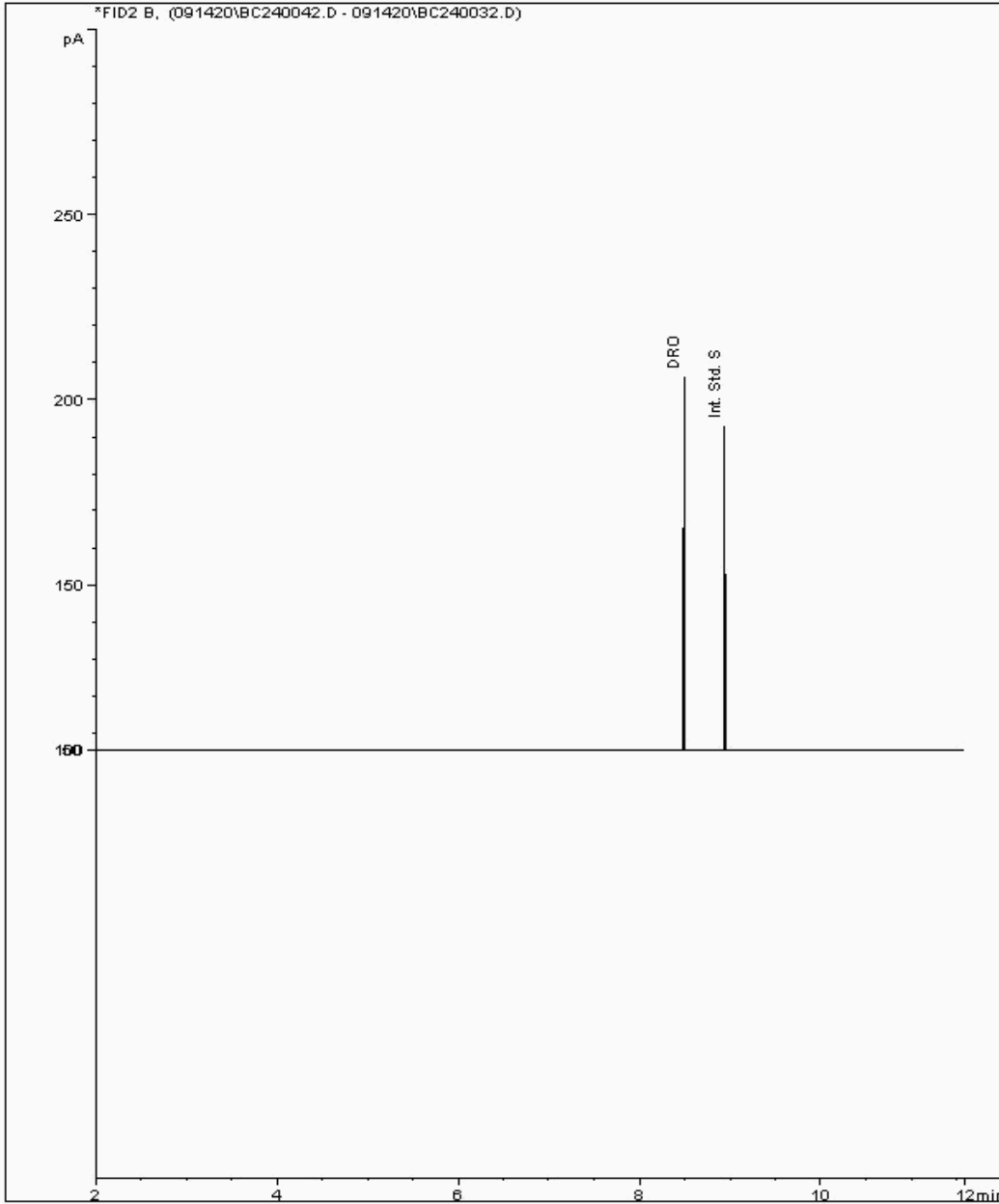
Analysis: EPH (DRO) (C10-C40) Aqueous (W)

Sample No : 22821930
Sample ID : LF11_07

Depth : 0.00 - 0.00

EPH Range Organics (C10 - C40)

Sample Identity: 21403150-
Date Acquired : 15/09/2020 10:39:31 PM
Units : mg/l





CERTIFICATE OF ANALYSIS

Validated

SDG: 200909-51 Client Reference: Area 1 Leachate Sept 2021 Report Number: 568580
Location: Newport landfill Order Number: 700154310 Superseded Report:

Chromatogram

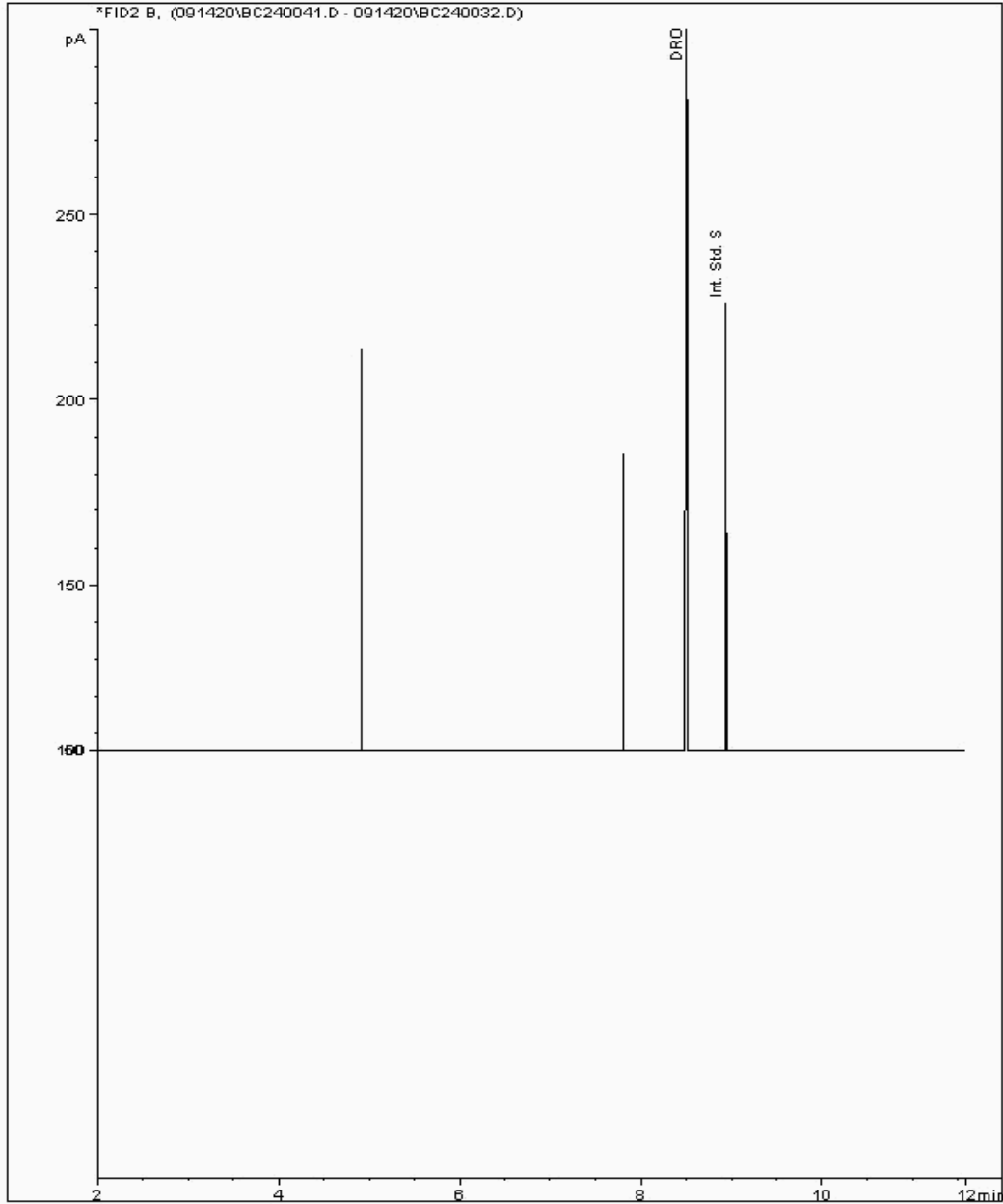
Analysis: EPH (DRO) (C10-C40) Aqueous (W)

Sample No : 22821946
Sample ID : LF03_01

Depth : 0.00 - 0.00

EPH Range Organics (C10 - C40)

Sample Identity: 21403132-
Date Acquired : 15/09/2020 10:16:56 PM
Units : mg/l





CERTIFICATE OF ANALYSIS

Validated

SDG: 200909-51 Client Reference: Area 1 Leachate Sept 2021 Report Number: 568580
Location: Newport landfill Order Number: 700154310 Superseded Report:

Chromatogram

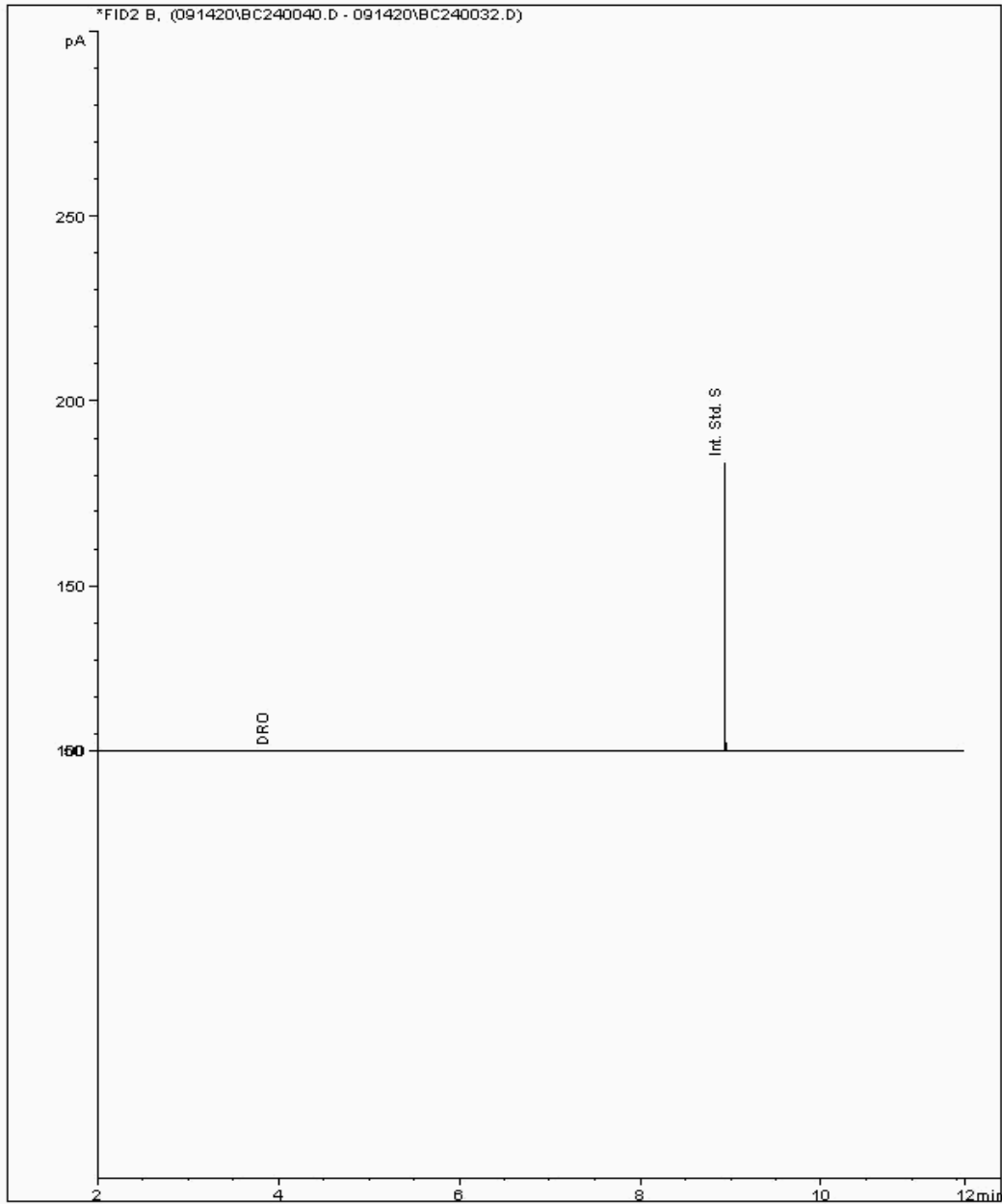
Analysis: EPH (DRO) (C10-C40) Aqueous (W)

Sample No : 22821970
Sample ID : LF11_01

Depth : 0.00 - 0.00

EPH Range Organics (C10 - C40)

Sample Identity: 21403084-
Date Acquired : 15/09/2020 09:54:24 PM
Units : mg/l





CERTIFICATE OF ANALYSIS

Validated

SDG: 200909-51 Client Reference: Area 1 Leachate Sept 2021 Report Number: 568580
Location: Newport landfill Order Number: 700154310 Superseded Report:

Chromatogram

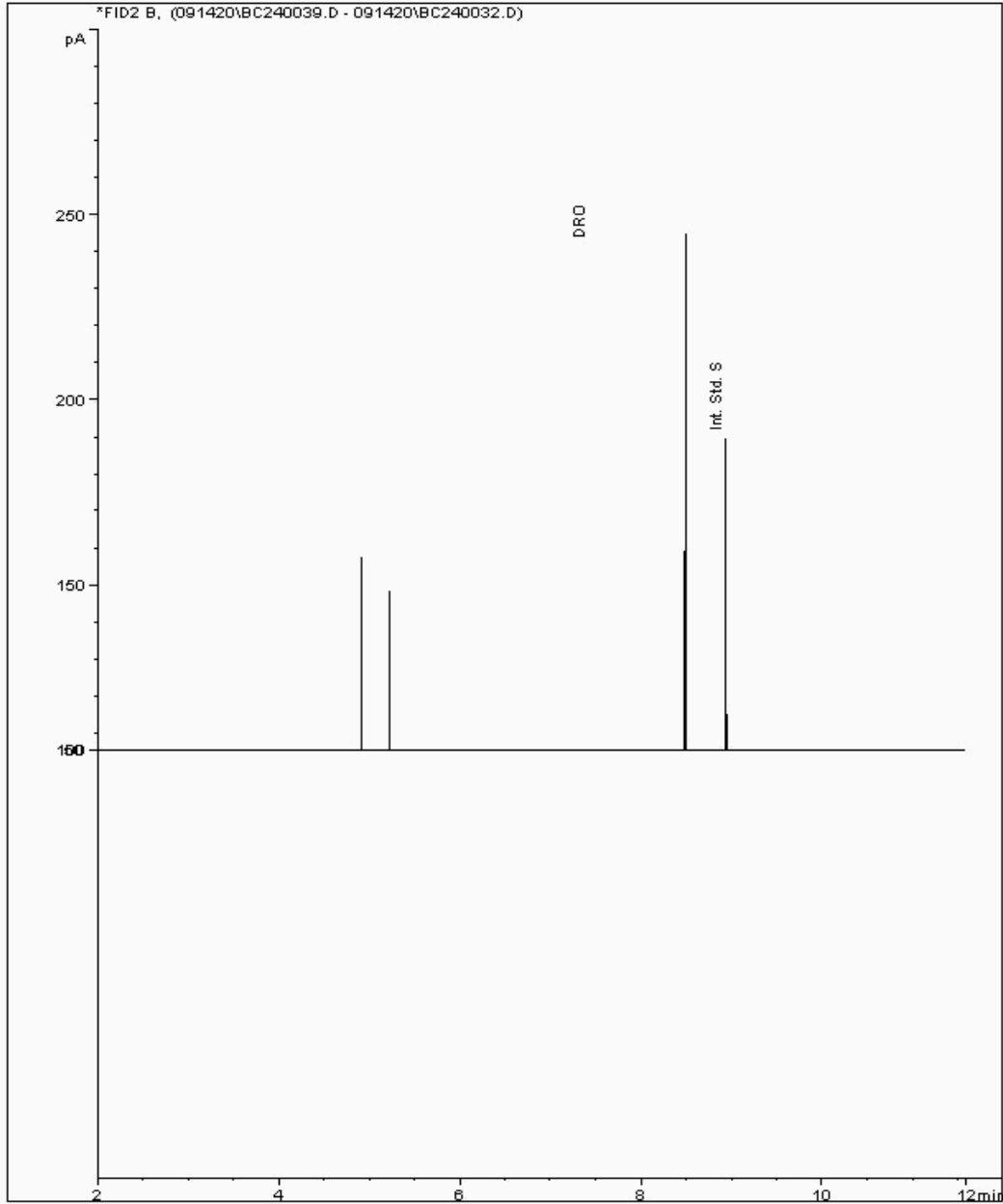
Analysis: EPH (DRO) (C10-C40) Aqueous (W)

Sample No : 22822210
Sample ID : LF11_04

Depth : 0.00 - 0.00

EPH Range Organics (C10 - C40)

Sample Identity: 21403108-
Date Acquired : 15/09/2020 09:31:43 PM
Units : mg/l





CERTIFICATE OF ANALYSIS

Validated

SDG: 200909-51 Client Reference: Area 1 Leachate Sept 2021 Report Number: 568580
Location: Newport landfill Order Number: 700154310 Superseded Report:

Chromatogram

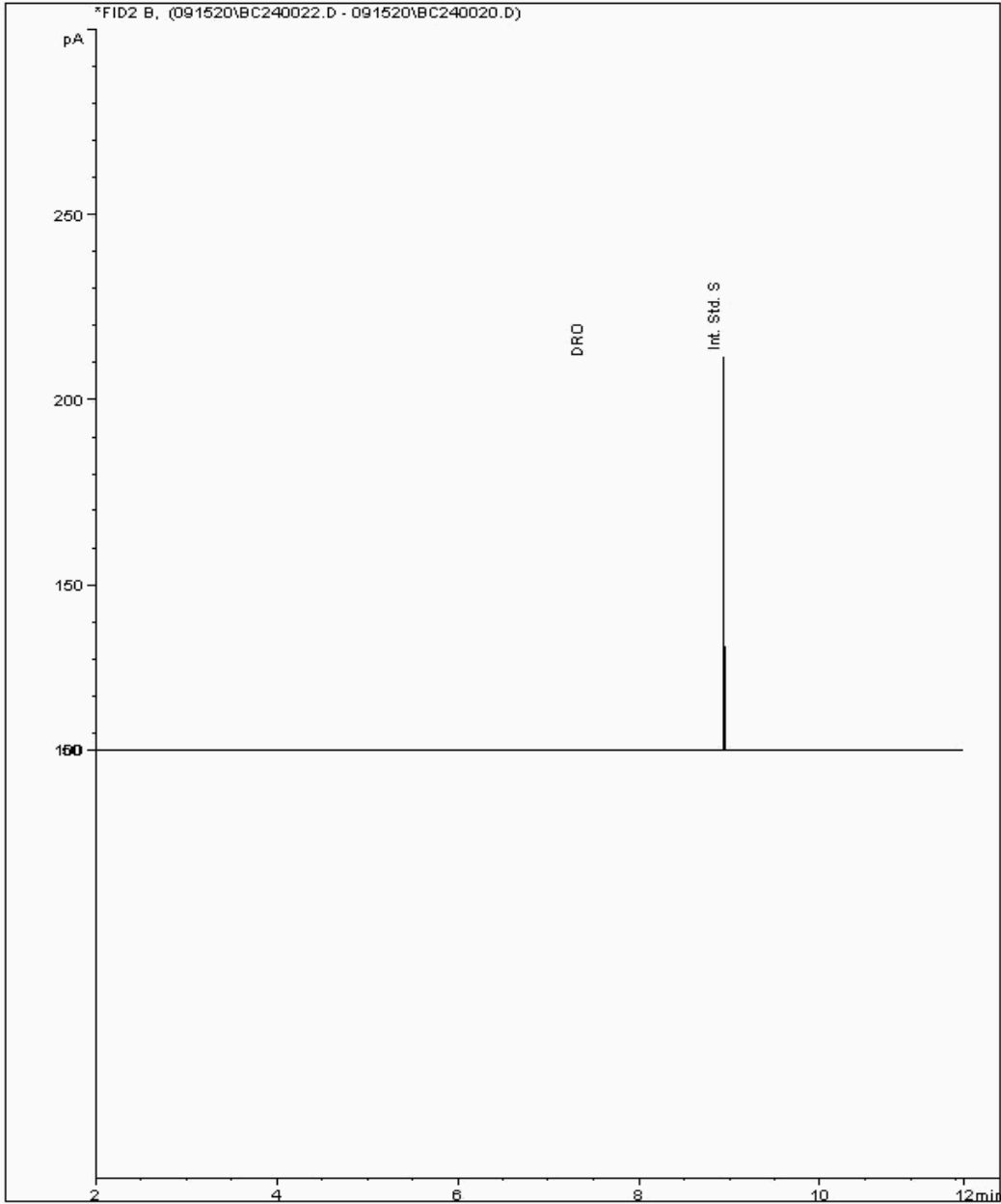
Analysis: EPH (DRO) (C10-C40) Aqueous (W)

Sample No : 22826324
Sample ID : LF11_06

Depth : 0.00 - 0.00

EPH Range Organics (C10 - C40)

Sample Identity: 21403096-
Date Acquired : 15/09/2020 21:52:32 PM
Units : mg/l





CERTIFICATE OF ANALYSIS

Validated

SDG: 200909-51 Client Reference: Area 1 Leachate Sept 2021 Report Number: 568580
Location: Newport landfill Order Number: 700154310 Superseded Report:

Chromatogram

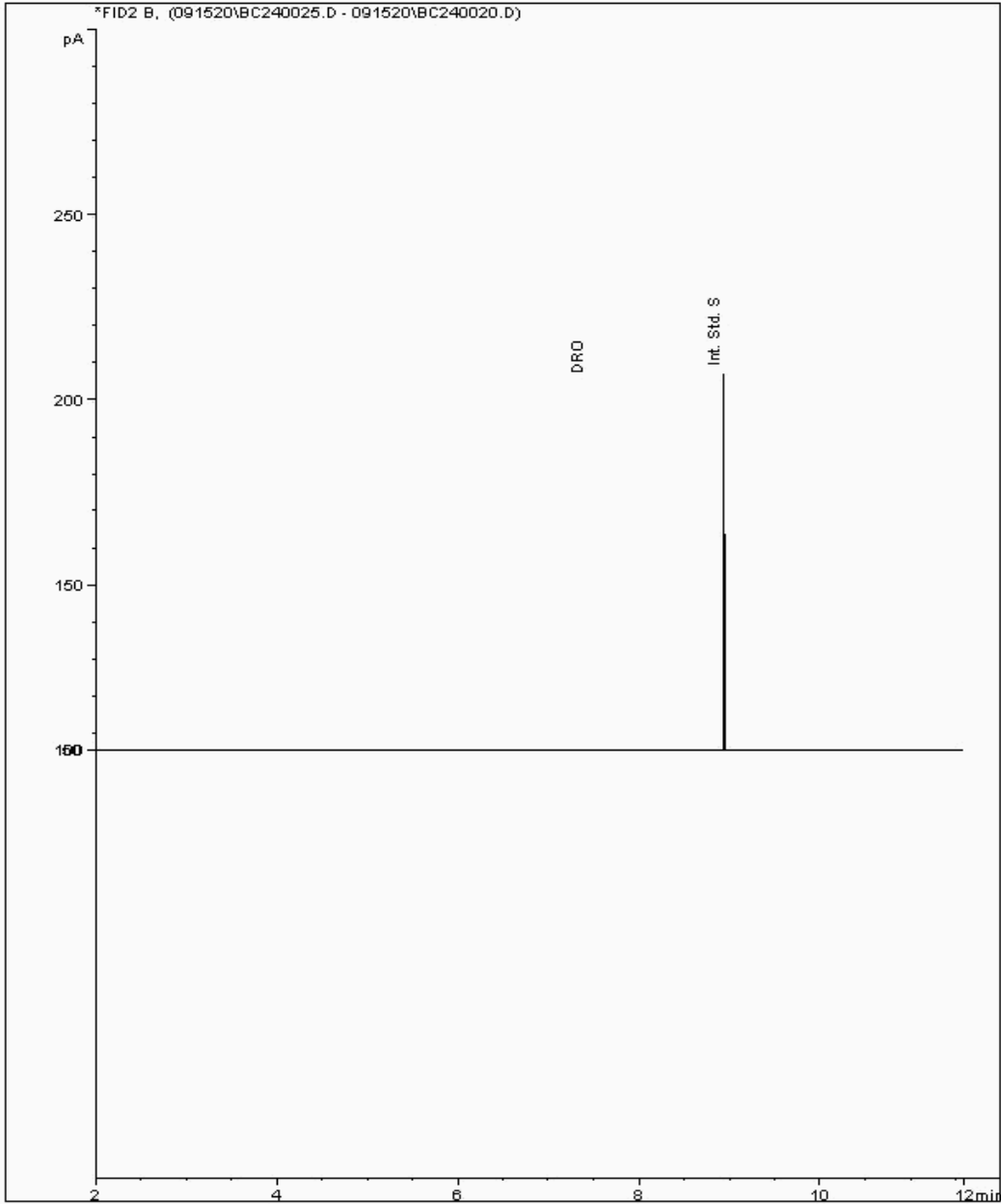
Analysis: EPH (DRO) (C10-C40) Aqueous (W)

Sample No : 22826349
Sample ID : LF11_03

Depth : 0.00 - 0.00

EPH Range Organics (C10 - C40)

Sample Identity: 21403120-
Date Acquired : 15/09/2020 23:06:22 PM
Units : mg/l





CERTIFICATE OF ANALYSIS

Validated

SDG: 200909-51 Client Reference: Area 1 Leachate Sept 2021 Report Number: 568580
Location: Newport landfill Order Number: 700154310 Superseded Report:

Chromatogram

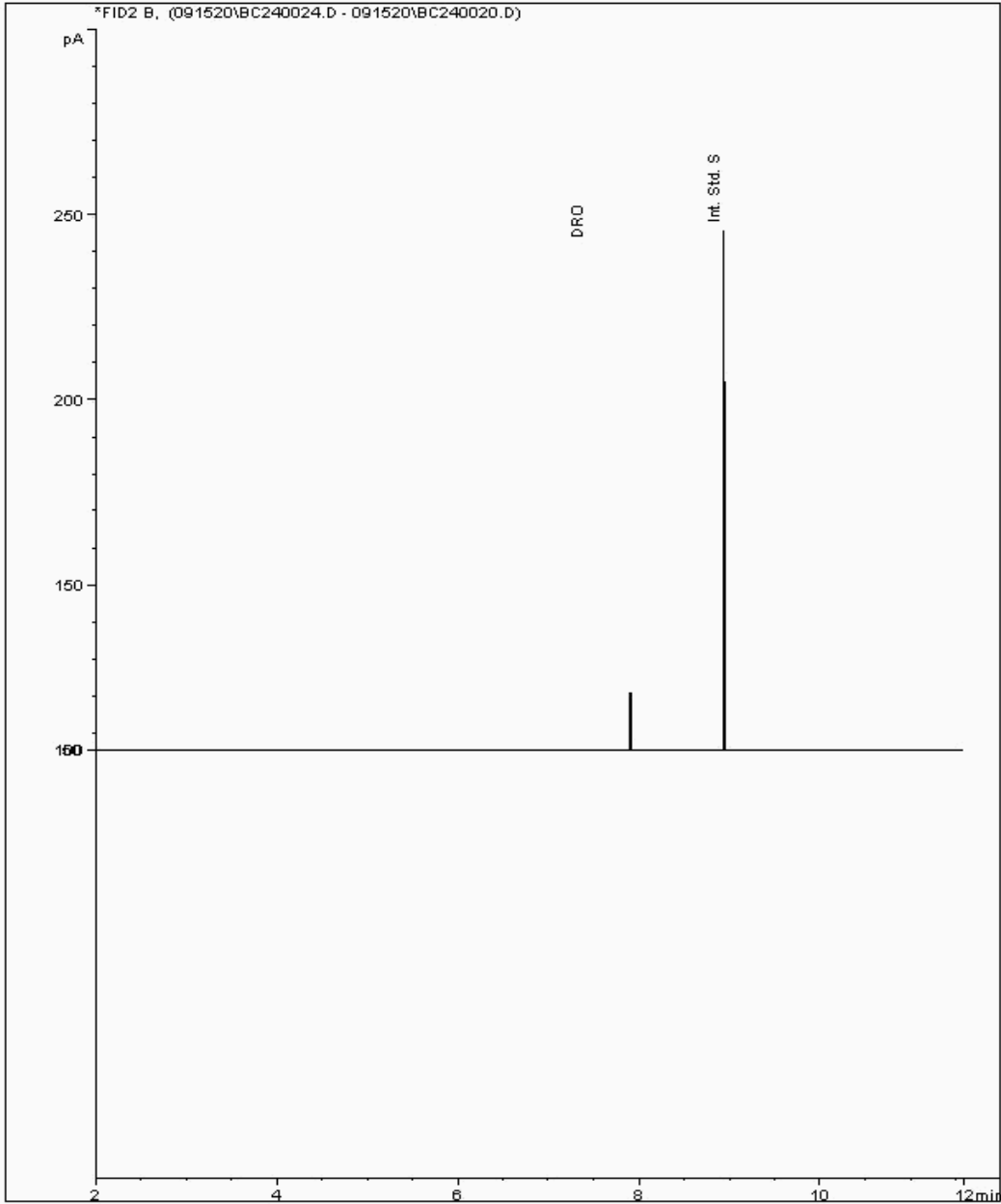
Analysis: EPH (DRO) (C10-C40) Aqueous (W)

Sample No : 22826372
Sample ID : LF11_02

Depth : 0.00 - 0.00

EPH Range Organics (C10 - C40)

Sample Identity: 21403054-
Date Acquired : 15/09/2020 22:41:46 PM
Units : mg/l





CERTIFICATE OF ANALYSIS

Validated

SDG: 200909-51 Client Reference: Area 1 Leachate Sept 2021 Report Number: 568580
Location: Newport landfill Order Number: 700154310 Superseded Report:

Chromatogram

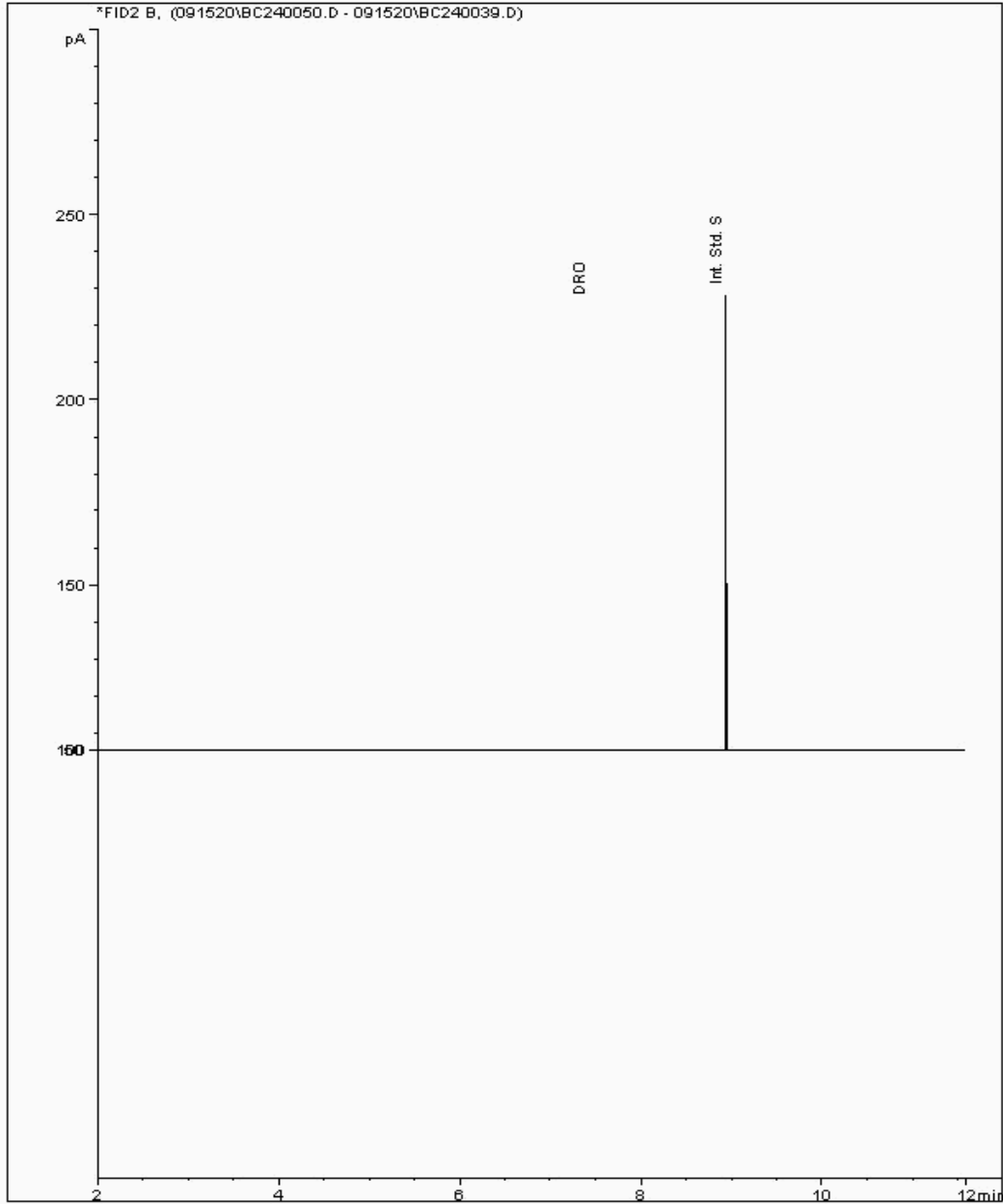
Analysis: EPH (DRO) (C10-C40) Aqueous (W)

Sample No : 22826383
Sample ID : LF11_05

Depth : 0.00 - 0.00

EPH Range Organics (C10 - C40)

Sample Identity: 21403069-
Date Acquired : 16/09/2020 11:16:44 PM
Units : mg/l





CERTIFICATE OF ANALYSIS

SDG: 200909-51	Client Reference: Area 1 Leachate Sept 2020	Report Number: 568580
Location: Newport landfill	Order Number: 700154310	Superseded Report:

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

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. **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.

18. 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
§	Sampled on date not provided
◆	Sample holding time exceeded in laboratory
@	Sample holding time exceeded due to late arrival of instructions or samples

19. 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

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, based on HSG 248 (2005).

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

Visual Estimation Of Fibre Content

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

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.

Standing Committee of Analysts, *The Quantification of Asbestos in Soil (2017)*.

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.