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Newport City Council
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Newport
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Attention: Robert Hester

CERTIFICATE OF ANALYSIS

Date of report Generation: 08 October 2019
Customer: Newport City Council
Sample Delivery Group (SDG): 190918-75
Your Reference: GW Sept Part 1
Location: Docks Way
Report No: 524499

This report has been revised and directly supersedes 524488 in its entirety.

We received 10 samples on Wednesday September 18, 2019 and 10 of these samples were scheduled for analysis which was completed on Thursday October 03, 2019. 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: 190918-75	Client Reference: GW Sept Part 1	Report Number: 524499
Location: Docks Way	Order Number: 700142918	Superseded Report: 524488

Received Sample Overview

Lab Sample No(s)	Customer Sample Ref.	AGS Ref.	Depth (m)	Sampled Date
20747350	GW03_09		0.00 - 0.00	17/09/2019
20747381	GW06_34		0.00 - 0.00	17/09/2019
20747274	GW06_36		0.00 - 0.00	17/09/2019
20747260	GW06_39		0.00 - 0.00	17/09/2019
20747290	GW07_40		0.00 - 0.00	17/09/2019
20747320	GW09_31		0.00 - 0.00	17/09/2019
20747335	GW09_32		0.00 - 0.00	17/09/2019
20747399	GW09_35		0.00 - 0.00	17/09/2019
20747306	GW12_30		0.00 - 0.00	17/09/2019
20747366	GW12_33		0.00 - 0.00	17/09/2019

Maximum Sample/Coolbox Temperature (°C) : 10.4

ISO5667-3 Water quality - Sampling - Part3 -
During Transportation samples shall be stored in a cooling device capable of maintaining a temperature of (5±3)°C.

ALS have data which show that a cool box with 4 frozen icepacks is capable of maintaining pre-chilled samples at a temperature of (5±3)°C for a period of up to 24hrs.

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



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SDG: 190918-75	Client Reference: GW Sept Part 1	Report Number: 524499	524499
Location: Docks Way	Order Number: 700142918	Superseded Report: 524488	524488

Results Legend <div style="margin-top: 5px;"> X Test N No Determination Possible </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	
		20747350	GW03_09		0.00 - 0.00	NaOH (ALE245) Vial (ALE297)	GW
		20747381	GW06_34		0.00 - 0.00	NaOH (ALE245) Vial (ALE297)	GW
		20747274	GW06_36		0.00 - 0.00	NaOH (ALE245) HNO3 Filtered (ALE204) H2SO4 (ALE244) 500ml Plastic (ALE208) 250ml BOD (ALE212) 0.5l glass bottle (ALE227)	GW
						NaOH (ALE245) HNO3 Filtered (ALE204) H2SO4 (ALE244) 500ml Plastic (ALE208) 250ml BOD (ALE212) 0.5l glass bottle (ALE227)	GW
						NaOH (ALE245) HNO3 Filtered (ALE204) H2SO4 (ALE244) 500ml Plastic (ALE208) 250ml BOD (ALE212) 0.5l glass bottle (ALE227)	GW
						NaOH (ALE245) HNO3 Filtered (ALE204) H2SO4 (ALE244) 500ml Plastic (ALE208) 250ml BOD (ALE212) 0.5l glass bottle (ALE227)	GW
Pesticides (Suite II) by GCMS	All	NDPs: 0 Tests: 10					
Pesticides (Suite III) by GCMS	All	NDPs: 0 Tests: 10					
pH Value	All	NDPs: 0 Tests: 10					
Phenols by HPLC (W)	All	NDPs: 0 Tests: 10					
Phosphate by Kone (w)	All	NDPs: 0 Tests: 10					
Sulphide	All	NDPs: 0 Tests: 10					
SVOC MS (W) - Aqueous	All	NDPs: 0 Tests: 10					
VOC MS (W)	All	NDPs: 0 Tests: 10					



CERTIFICATE OF ANALYSIS

Validated

SDG:	190918-75	Client Reference:	GW Sept Part 1	Report Number:	524499
Location:	Docks Way	Order Number:	700142918	Superseded Report:	524488

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	
					Vial (ALE297)	0.5l glass bottle (ALE227)	250ml BOD (ALE212)	500ml Plastic (ALE208)	H2SO4 (ALE244)	HNO3 Filtered (ALE204)	NaOH (ALE245)	Vial (ALE297)	0.5l glass bottle (ALE227)	250ml BOD (ALE212)		500ml Plastic (ALE208)
	20747320	GW09_31		0.00 - 0.00	Vial (ALE297)	0.5l glass bottle (ALE227)	250ml BOD (ALE212)	500ml Plastic (ALE208)	H2SO4 (ALE244)	HNO3 Filtered (ALE204)	NaOH (ALE245)	Vial (ALE297)	0.5l glass bottle (ALE227)	250ml BOD (ALE212)	500ml Plastic (ALE208)	GW
	20747335	GW09_32		0.00 - 0.00	Vial (ALE297)	0.5l glass bottle (ALE227)	250ml BOD (ALE212)	500ml Plastic (ALE208)	H2SO4 (ALE244)	HNO3 Filtered (ALE204)	NaOH (ALE245)	Vial (ALE297)	0.5l glass bottle (ALE227)	250ml BOD (ALE212)	500ml Plastic (ALE208)	GW
	20747399	GW09_35		0.00 - 0.00	Vial (ALE297)	0.5l glass bottle (ALE227)	250ml BOD (ALE212)	500ml Plastic (ALE208)	H2SO4 (ALE244)	HNO3 Filtered (ALE204)	NaOH (ALE245)	Vial (ALE297)	0.5l glass bottle (ALE227)	250ml BOD (ALE212)	500ml Plastic (ALE208)	GW
	20747306	GW12_30		0.00 - 0.00	Vial (ALE297)	0.5l glass bottle (ALE227)	250ml BOD (ALE212)	500ml Plastic (ALE208)	H2SO4 (ALE244)	HNO3 Filtered (ALE204)	NaOH (ALE245)	Vial (ALE297)	0.5l glass bottle (ALE227)	250ml BOD (ALE212)	500ml Plastic (ALE208)	GW
Pesticides (Suite II) by GCMS	All	NDPs: 0 Tests: 10				X							X			
Pesticides (Suite III) by GCMS	All	NDPs: 0 Tests: 10				X							X			
pH Value	All	NDPs: 0 Tests: 10					X			X					X	
Phenols by HPLC (W)	All	NDPs: 0 Tests: 10						X			X					X
Phosphate by Kone (w)	All	NDPs: 0 Tests: 10					X								X	
Sulphide	All	NDPs: 0 Tests: 10					X				X				X	
SVOC MS (W) - Aqueous	All	NDPs: 0 Tests: 10				X							X			
VOC MS (W)	All	NDPs: 0 Tests: 10				X						X				



CERTIFICATE OF ANALYSIS

Validated

SDG: 190918-75	Client Reference: GW Sept Part 1	Report Number: 524499	Superseded Report: 524488
Location: Docks Way	Order Number: 700142918		

Results Legend			Customer Sample Ref.		GW03_09	GW06_34	GW06_36	GW06_39	GW07_40	GW09_31
# ISO17025 accredited. M mCERTS accredited. aq 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 1.3*5@ Sample deviation (see appendix)	Depth (m) Sample Type Date Sampled Sampled Time Date Received SDG Ref Lab Sample No.(s) AGS Reference		GW03_09	GW06_34	GW06_36	GW06_39	GW07_40	GW09_31		
			0.00 - 0.00 Ground Water (GW) 17/09/2019	0.00 - 0.00 Ground Water (GW) 17/09/2019	0.00 - 0.00 Ground Water (GW) 17/09/2019	0.00 - 0.00 Ground Water (GW) 17/09/2019	0.00 - 0.00 Ground Water (GW) 17/09/2019	0.00 - 0.00 Ground Water (GW) 17/09/2019	0.00 - 0.00 Ground Water (GW) 17/09/2019	
			18/09/2019 190918-75 20747350	18/09/2019 190918-75 20747381	18/09/2019 190918-75 20747274	18/09/2019 190918-75 20747260	18/09/2019 190918-75 20747290	18/09/2019 190918-75 20747320		
Component	LOD/Units	Method								
Ionic balance	% Diff	Calculation	-4.36	4.62	-7.29	-2.9	-2.41	1.18		
Alkalinity, Total as CaCO3	<2 mg/l	TM043	1230	590	1030	848	683	440		
BOD, unfiltered	<1 mg/l	TM045	<1	12.9	<1	<1	4.06	<1		
Carbon, Organic (diss.filt)	<3 mg/l	TM090	16.1	14.1	13.1	23.9	19.4	8.96		
Ammoniacal Nitrogen as N	<0.2 mg/l	TM099	2.43	1.72	8.8	10.3	12.6	1.26		
Sulphide	<0.01 mg/l	TM101	<0.01	0.0142	0.025	<0.01	<0.01	<0.01		
COD, unfiltered	<7 mg/l	TM107	130	49.2	300	82.8	49.9	318		
Conductivity @ 20 deg.C	<0.005 mS/cm	TM120	7.98	1.24	10.5	4.17	1.91	1.61		
Arsenic (diss.filt)	<0.5 µg/l	TM152	3.9	4.59	1.62	6.62	17.6	3.75		
Boron (diss.filt)	<10 µg/l	TM152	1470	623	1450	1720	1860	479		
Cadmium (diss.filt)	<0.08 µg/l	TM152	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08		
Chromium (diss.filt)	<1 µg/l	TM152	<1	<1	<1	<1	<1	<1		
Copper (diss.filt)	<0.3 µg/l	TM152	0.564	<0.3	<0.3	0.316	0.347	<0.3		
Lead (diss.filt)	<0.2 µg/l	TM152	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2		
Manganese (diss.filt)	<3 µg/l	TM152	712	2670	260	2060	111	1310		
Nickel (diss.filt)	<0.4 µg/l	TM152	4.91	9.3	2.8	78.4	9.1	5.76		
Selenium (diss.filt)	<1 µg/l	TM152	<1	<1	<1	<1	<1	<1		
Zinc (diss.filt)	<1 µg/l	TM152	4.61	1.51	1.54	5.68	5.33	1.62		
Sodium (Dis.Filt)	<0.076 mg/l	TM152	1530	112	1750	520	301	141		
Magnesium (Dis.Filt)	<0.036 mg/l	TM152	150	47.2	236	146	61.6	45.6		
Potassium (Dis.Filt)	<0.2 mg/l	TM152	48.5	20.5	69.3	63.5	31.4	21.1		
Calcium (Dis.Filt)	<0.2 mg/l	TM152	158	166	215	228	30.7	188		
Iron (Dis.Filt)	<0.019 mg/l	TM152	0.0418	1.89	0.827	2.16	0.409	0.614		
Hardness, Total as CaCO3	<0.65 mg/l	TM152	1010	608	1510	1170	330	659		
EPH Range >C10 - C40 (aq)	<100 µg/l	TM172	<100	147	<100	<100	195	143		
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	<0.05	<0.05		
Phosphate (Ortho as PO4)	<0.05 mg/l	TM184	5.78	1.61	13.9	0.778	9.5	<0.05		
Sulphate	<2 mg/l	TM184	365	77.9	79.6	496	4.5	275		
Chloride	<2 mg/l	TM184	2270	91.1	3690	843	278	167		
Nitrate as NO3	<0.3 mg/l	TM184	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3		
Total Oxidised Nitrogen as N	<0.1 mg/l	TM184	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1		



CERTIFICATE OF ANALYSIS

Validated

SDG: 190918-75
Location: Docks Way

Client Reference: GW Sept Part 1
Order Number: 700142918

Report Number: 524499
Superseded Report: 524488

Results Legend			Customer Sample Ref.	GW03_09	GW06_34	GW06_36	GW06_39	GW07_40	GW09_31
#	ISO17025 accredited.								
M	mCERTS accredited.								
aq	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								
1-3*5@	Sample deviation (see appendix)								
			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
			Sample Type	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)
			Date Sampled	17/09/2019	17/09/2019	17/09/2019	17/09/2019	17/09/2019	17/09/2019
			Date Received	18/09/2019	18/09/2019	18/09/2019	18/09/2019	18/09/2019	18/09/2019
			SDG Ref	190918-75	190918-75	190918-75	190918-75	190918-75	190918-75
			Lab Sample No.(s)	20747350	20747381	20747274	20747260	20747290	20747320
			AGS Reference						
Component	LOD/Units	Method							
Cyanide, Total	<0.05 mg/l	TM227	<0.05 #	<0.05 #	<0.05 #	<0.05 #	<0.05 #	<0.05 #	<0.05 #
pH	<1 pH Units	TM256	7.9 #	7.47 #	7.44 #	7.86 #	8.2 #	7.69 #	
Phenols, Total Detected monohydric	<0.016 mg/l	TM259	<0.016 #	<0.016 #	<0.016 #	<0.016 #	<0.016 #	<0.016 #	<0.016 #
Dibutyl tin	<5 ng/l	TM328	<5	<5	<5	<5	<5	<5	<5
Tributyl tin	<1 ng/l	TM328	<1	<1	<1	<1	<1	<1	<1
Tetrabutyl tin	<2 ng/l	TM328	<2	<2	<2	<2	<2	<2	<2
Triphenyl tin	<1 ng/l	TM328	<1	<1	<1	<1	<1	<1	<1
Surrogate	%	TM328	106	73.1	90.5	106	89.1	101	
Trifluralin	<0.01 µg/l	TM343	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
alpha-HCH	<0.01 µg/l	TM343	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
gamma-HCH (Lindane)	<0.01 µg/l	TM343	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Heptachlor	<0.01 µg/l	TM343	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Aldrin	<0.01 µg/l	TM343	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
beta-HCH	<0.01 µg/l	TM343	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Isodrin	<0.01 µg/l	TM343	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
delta-HCH	<0.01 µg/l	TM343	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Heptachlor epoxide	<0.01 µg/l	TM343	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
o,p'-DDE	<0.01 µg/l	TM343	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Endosulphan I	<0.01 µg/l	TM343	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
trans-Chlordane	<0.01 µg/l	TM343	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
cis-Chlordane	<0.01 µg/l	TM343	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
p,p'-DDE	<0.01 µg/l	TM343	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Dieldrin	<0.01 µg/l	TM343	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
o,p'-DDD (TDE)	<0.01 µg/l	TM343	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Endrin	<0.01 µg/l	TM343	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
o,p'-DDT	<0.01 µg/l	TM343	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
p,p'-DDD (TDE)	<0.01 µg/l	TM343	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Endosulphan II	<0.02 µg/l	TM343	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
p,p'-DDT	<0.01 µg/l	TM343	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
o,p'-Methoxychlor	<0.01 µg/l	TM343	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
p,p'-Methoxychlor	<0.01 µg/l	TM343	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Endosulphan Sulphate	<0.02 µg/l	TM343	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02



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SDG:	190918-75	Client Reference:	GW Sept Part 1	Report Number:	524499
Location:	Docks Way	Order Number:	700142918	Superseded Report:	524488

Results Legend			Customer Sample Ref.	GW03_09	GW06_34	GW06_36	GW06_39	GW07_40	GW09_31
# ISO17025 accredited. M mCERTS accredited. aq 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 1-3*5@ Sample deviation (see appendix)			GW03_09	GW06_34	GW06_36	GW06_39	GW07_40	GW09_31	
			Depth (m) Sample Type Date Sampled Sampled Time Date Received SDG Ref Lab Sample No.(s) AGS Reference	0.00 - 0.00 Ground Water (GW) 17/09/2019	0.00 - 0.00 Ground Water (GW) 17/09/2019	0.00 - 0.00 Ground Water (GW) 17/09/2019	0.00 - 0.00 Ground Water (GW) 17/09/2019	0.00 - 0.00 Ground Water (GW) 17/09/2019	0.00 - 0.00 Ground Water (GW) 17/09/2019
Component	LOD/Units	Method							
Permethrin I	<0.01 µg/l	TM343	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Permethrin II	<0.01 µg/l	TM343	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
1,3,5-Trichlorobenzene	<0.01 µg/l	TM344	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Hexachlorobutadiene	<0.01 µg/l	TM344	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
1,2,4-Trichlorobenzene	<0.01 µg/l	TM344	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
1,2,3-Trichlorobenzene	<0.01 µg/l	TM344	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Dichlorvos	<0.01 µg/l	TM344	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Dichlobenil	<0.01 µg/l	TM344	0.215	<0.01	<0.01	0.329	<0.01	<0.01	<0.01
Mevinphos	<0.01 µg/l	TM344	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Tecnazene	<0.01 µg/l	TM344	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Hexachlorobenzene	<0.01 µg/l	TM344	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Demeton-S-methyl	<0.01 µg/l	TM344	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Phorate	<0.01 µg/l	TM344	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Diazinon	<0.01 µg/l	TM344	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Triallate	<0.01 µg/l	TM344	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Atrazine	<0.01 µg/l	TM344	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Simazine	<0.01 µg/l	TM344	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Disulfoton	<0.01 µg/l	TM344	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Propetamphos	<0.01 µg/l	TM344	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Chlorpyrifos-methyl	<0.01 µg/l	TM344	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Dimethoate	<0.01 µg/l	TM344	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Pirimiphos-methyl	<0.01 µg/l	TM344	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Chlorpyrifos	<0.01 µg/l	TM344	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Methyl Parathion	<0.01 µg/l	TM344	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Malathion	<0.01 µg/l	TM344	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Fenthion	<0.01 µg/l	TM344	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Fenitrothion	<0.01 µg/l	TM344	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Triadimefon	<0.01 µg/l	TM344	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Pendimethalin	<0.01 µg/l	TM344	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Parathion	<0.01 µg/l	TM344	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Chlorfenvinphos	<0.01 µg/l	TM344	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
trans-Chlordane	<0.01 µg/l	TM344	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01



CERTIFICATE OF ANALYSIS

Validated

SDG: 190918-75
Location: Docks Way

Client Reference: GW Sept Part 1
Order Number: 700142918

Report Number: 524499
Superseded Report: 524488

Results Legend		Customer Sample Ref.	GW09_32	GW09_35	GW12_30	GW12_33		
#	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		
M	mCERTS accredited.		Ground Water (GW)	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)		
aq	Aqueous / settled sample.		17/09/2019	17/09/2019	17/09/2019	17/09/2019		
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							
1.3.4.6@	Sample deviation (see appendix)							
Component	LOD/Units		Method					
Ionic balance	% Diff	Calculation	-1.95	-11.7	-6.38	-3.96		
Alkalinity, Total as CaCO3	<2 mg/l	TM043	510	855	920	745		
BOD, unfiltered	<1 mg/l	TM045	13.9	<1	<1	8.19		
Carbon, Organic (diss.filt)	<3 mg/l	TM090	18.7	12.2	23.6	15.1		
Ammoniacal Nitrogen as N	<0.2 mg/l	TM099	1.58	10.8	1.75	12.3		
Sulphide	<0.01 mg/l	TM101	<0.01	<0.01	<0.01	0.0206		
COD, unfiltered	<7 mg/l	TM107	108	171	79.6	58.4		
Conductivity @ 20 deg.C	<0.005 mS/cm	TM120	2.01	11.6	2.81	2.71		
Arsenic (diss.filt)	<0.5 µg/l	TM152	3.17	14.7	3.42	99.5		
Boron (diss.filt)	<10 µg/l	TM152	653	1370	777	930		
Cadmium (diss.filt)	<0.08 µg/l	TM152	<0.08	<0.08	<0.08	<0.08		
Chromium (diss.filt)	<1 µg/l	TM152	<1	<1	<1	<1		
Copper (diss.filt)	<0.3 µg/l	TM152	<0.3	<0.3	0.544	<0.3		
Lead (diss.filt)	<0.2 µg/l	TM152	<0.2	<0.2	<0.2	<0.2		
Manganese (diss.filt)	<3 µg/l	TM152	1480	651	2220	1030		
Nickel (diss.filt)	<0.4 µg/l	TM152	6.13	4	15.8	4.69		
Selenium (diss.filt)	<1 µg/l	TM152	<1	<1	<1	<1		
Zinc (diss.filt)	<1 µg/l	TM152	8.64	2.38	5.03	4.02		
Sodium (Dis.Filt)	<0.076 mg/l	TM152	241	1790	361	305		
Magnesium (Dis.Filt)	<0.036 mg/l	TM152	53.7	249	79.9	91.7		
Potassium (Dis.Filt)	<0.2 mg/l	TM152	24.3	69.9	13.3	34.8		
Calcium (Dis.Filt)	<0.2 mg/l	TM152	157	253	139	143		
Iron (Dis.Filt)	<0.019 mg/l	TM152	0.467	3.45	0.0672	0.709		
Hardness, Total as CaCO3	<0.65 mg/l	TM152	613	1660	677	734		
EPH Range >C10 - C40 (aq)	<100 µg/l	TM172	256	<100	110	481		
Mercury (diss.filt)	<0.01 µg/l	TM183	<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	0.08	9.71	0.789	5.94		
Sulphate	<2 mg/l	TM184	364	132	91.8	57.9		
Chloride	<2 mg/l	TM184	220	4360	481	550		
Nitrate as NO3	<0.3 mg/l	TM184	<0.3	<0.3	1.97	<0.3		
Total Oxidised Nitrogen as N	<0.1 mg/l	TM184	<0.1	<0.1	0.452	<0.1		



CERTIFICATE OF ANALYSIS

Validated

SDG: 190918-75
Location: Docks Way

Client Reference: GW Sept Part 1
Order Number: 700142918

Report Number: 524499
Superseded Report: 524488

Results Legend			Customer Sample Ref.	GW09_32	GW09_35	GW12_30	GW12_33		
#	ISO17025 accredited.		Depth (m) Sample Type Date Sampled Sampled Time Date Received SDG Ref Lab Sample No.(s) AGS Reference	0.00 - 0.00 Ground Water (GW) 17/09/2019	0.00 - 0.00 Ground Water (GW) 17/09/2019	0.00 - 0.00 Ground Water (GW) 17/09/2019	0.00 - 0.00 Ground Water (GW) 17/09/2019		
M	mCERTS accredited.								
aq	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								
1-3*5@	Sample deviation (see appendix)								
Component	LOD/Units	Method							
Cyanide, Total	<0.05 mg/l	TM227	<0.05 #	<0.05 #	<0.05 #	<0.05 #			
pH	<1 pH Units	TM256	8.18 #	7.43 #	7.47 #	7.41 #			
Phenols, Total Detected monohydric	<0.016 mg/l	TM259	<0.016 #	<0.016 #	<0.016 #	<0.016 #			
Dibutyl tin	<5 ng/l	TM328	<5	<5	<5	<5			
Tributyl tin	<1 ng/l	TM328	<1	<1	<1	<1			
Tetrabutyl tin	<2 ng/l	TM328	<2	<2	<2	<2			
Triphenyl tin	<1 ng/l	TM328	<1	<1	<1	<1			
Surrogate	%	TM328	66.1	94.6	99.3	96.7			
Trifluralin	<0.01 µg/l	TM343	<0.01	<0.01	<0.01	<0.01			
alpha-HCH	<0.01 µg/l	TM343	<0.01	<0.01	<0.01	<0.01			
gamma-HCH (Lindane)	<0.01 µg/l	TM343	<0.01	<0.01	<0.01	<0.01			
Heptachlor	<0.01 µg/l	TM343	<0.01	<0.01	<0.01	<0.01			
Aldrin	<0.01 µg/l	TM343	<0.02	<0.02	<0.02	<0.02			
beta-HCH	<0.01 µg/l	TM343	<0.01	<0.01	<0.01	<0.01			
Isodrin	<0.01 µg/l	TM343	<0.01	<0.01	<0.01	<0.01			
delta-HCH	<0.01 µg/l	TM343	<0.01	<0.01	<0.01	<0.01			
Heptachlor epoxide	<0.01 µg/l	TM343	<0.01	<0.01	<0.01	<0.01			
o,p'-DDE	<0.01 µg/l	TM343	<0.01	<0.01	<0.01	<0.01			
Endosulphan I	<0.01 µg/l	TM343	<0.01	<0.01	<0.01	<0.01			
trans-Chlordane	<0.01 µg/l	TM343	<0.01	<0.01	<0.01	<0.01			
cis-Chlordane	<0.01 µg/l	TM343	<0.01	<0.01	<0.01	<0.01			
p,p'-DDE	<0.01 µg/l	TM343	<0.01	<0.01	<0.01	<0.01			
Dieldrin	<0.01 µg/l	TM343	<0.01	<0.01	<0.01	<0.01			
o,p'-DDD (TDE)	<0.01 µg/l	TM343	<0.01	<0.01	<0.01	<0.01			
Endrin	<0.01 µg/l	TM343	<0.01	<0.01	<0.01	<0.01			
o,p'-DDT	<0.01 µg/l	TM343	<0.01	<0.01	<0.01	<0.01			
p,p'-DDD (TDE)	<0.01 µg/l	TM343	<0.01	<0.01	<0.01	<0.01			
Endosulphan II	<0.02 µg/l	TM343	<0.02	<0.02	<0.02	<0.02			
p,p'-DDT	<0.01 µg/l	TM343	<0.01	<0.01	<0.01	<0.01			
o,p'-Methoxychlor	<0.01 µg/l	TM343	<0.01	<0.01	<0.01	<0.01			
p,p'-Methoxychlor	<0.01 µg/l	TM343	<0.01	<0.01	<0.01	<0.01			
Endosulphan Sulphate	<0.02 µg/l	TM343	<0.02	<0.02	<0.02	<0.02			



CERTIFICATE OF ANALYSIS

Validated

SDG: 190918-75
Location: Docks Way

Client Reference: GW Sept Part 1
Order Number: 700142918

Report Number: 524499
Superseded Report: 524488

Results Legend			Customer Sample Ref.	GW09_32	GW09_35	GW12_30	GW12_33
#	ISO17025 accredited.						
M	mCERTS accredited.						
aq	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						
1-3*5@	Sample deviation (see appendix)						
		Depth (m)	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	
		Sample Type	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)	
		Date Sampled	17/09/2019	17/09/2019	17/09/2019	17/09/2019	
		Sampled Time					
		Date Received	18/09/2019	18/09/2019	18/09/2019	18/09/2019	
		SDG Ref	190918-75	190918-75	190918-75	190918-75	
		Lab Sample No.(s)	20747335	20747399	20747306	20747366	
		AGS Reference					
Component	LOD/Units	Method					
Permethrin I	<0.01 µg/l	TM343	<0.01	<0.01	<0.01	<0.01	
Permethrin II	<0.01 µg/l	TM343	<0.01	<0.01	<0.01	<0.01	
1,3,5-Trichlorobenzene	<0.01 µg/l	TM344	<0.01	<0.01	<0.01	<0.01	
Hexachlorobutadiene	<0.01 µg/l	TM344	<0.01	<0.01	<0.01	<0.01	
1,2,4-Trichlorobenzene	<0.01 µg/l	TM344	<0.01	<0.01	<0.01	<0.01	
1,2,3-Trichlorobenzene	<0.01 µg/l	TM344	<0.01	<0.01	<0.01	<0.01	
Dichlorvos	<0.01 µg/l	TM344	<0.01	<0.01	<0.01	<0.01	
Dichlobenil	<0.01 µg/l	TM344	<0.01	<0.01	<0.01	<0.01	
Mevinphos	<0.01 µg/l	TM344	<0.01	<0.01	<0.01	<0.01	
Tecnazene	<0.01 µg/l	TM344	<0.01	<0.01	<0.01	<0.01	
Hexachlorobenzene	<0.01 µg/l	TM344	<0.01	<0.01	<0.01	<0.01	
Demeton-S-methyl	<0.01 µg/l	TM344	<0.01	<0.01	<0.01	<0.01	
Phorate	<0.01 µg/l	TM344	<0.01	<0.01	<0.01	<0.01	
Diazinon	<0.01 µg/l	TM344	<0.01	<0.01	<0.01	<0.01	
Triallate	<0.01 µg/l	TM344	<0.01	<0.01	<0.01	<0.01	
Atrazine	<0.01 µg/l	TM344	<0.01	<0.01	<0.01	<0.01	
Simazine	<0.01 µg/l	TM344	<0.01	<0.01	<0.01	<0.01	
Disulfoton	<0.01 µg/l	TM344	<0.01	<0.01	<0.01	<0.01	
Propetamphos	<0.01 µg/l	TM344	<0.01	<0.01	<0.01	<0.01	
Chlorpyrifos-methyl	<0.01 µg/l	TM344	<0.01	<0.01	<0.01	<0.01	
Dimethoate	<0.01 µg/l	TM344	<0.01	<0.01	<0.01	<0.01	
Pirimiphos-methyl	<0.01 µg/l	TM344	<0.01	<0.01	<0.01	<0.01	
Chlorpyrifos	<0.01 µg/l	TM344	<0.01	<0.01	<0.01	<0.01	
Methyl Parathion	<0.01 µg/l	TM344	<0.01	<0.01	<0.01	<0.01	
Malathion	<0.01 µg/l	TM344	<0.01	<0.01	<0.01	<0.01	
Fenthion	<0.01 µg/l	TM344	<0.01	<0.01	<0.01	<0.01	
Fenitrothion	<0.01 µg/l	TM344	<0.01	<0.01	<0.01	<0.01	
Triadimefon	<0.01 µg/l	TM344	<0.01	<0.01	<0.01	<0.01	
Pendimethalin	<0.01 µg/l	TM344	<0.01	<0.01	<0.01	<0.01	
Parathion	<0.01 µg/l	TM344	<0.01	<0.01	<0.01	<0.01	
Chlorfenvinphos	<0.01 µg/l	TM344	<0.01	<0.01	<0.01	<0.01	
trans-Chlordane	<0.01 µg/l	TM344	<0.01	<0.01	<0.01	<0.01	



CERTIFICATE OF ANALYSIS

Validated

SDG: 190918-75
Location: Docks Way

Client Reference: GW Sept Part 1
Order Number: 700142918

Report Number: 524499
Superseded Report: 524488

SVOC MS (W) - Aqueous

Results Legend			Customer Sample Ref.	GW03_09	GW06_34	GW06_36	GW06_39	GW07_40	GW09_31
#	ISO17025 accredited.								
M	mCERTS accredited.								
aq	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								
1.3x5@	Sample deviation (see appendix)								
			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
			Sample Type	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)
			Date Sampled	17/09/2019	17/09/2019	17/09/2019	17/09/2019	17/09/2019	17/09/2019
			Sampled Time
			Date Received	18/09/2019	18/09/2019	18/09/2019	18/09/2019	18/09/2019	18/09/2019
			SDG Ref	190918-75	190918-75	190918-75	190918-75	190918-75	190918-75
			Lab Sample No.(s)	20747350	20747381	20747274	20747260	20747290	20747320
			AGS Reference						
Component	LOD/Units	Method							
1,2,4-Trichlorobenzene (aq)	<1 µg/l	TM176	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
1,2-Dichlorobenzene (aq)	<1 µg/l	TM176	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
1,3-Dichlorobenzene (aq)	<1 µg/l	TM176	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
1,4-Dichlorobenzene (aq)	<1 µg/l	TM176	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
2,4,5-Trichlorophenol (aq)	<1 µg/l	TM176	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
2,4,6-Trichlorophenol (aq)	<1 µg/l	TM176	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
2,4-Dichlorophenol (aq)	<1 µg/l	TM176	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
2,4-Dimethylphenol (aq)	<1 µg/l	TM176	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
2,4-Dinitrotoluene (aq)	<1 µg/l	TM176	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
2,6-Dinitrotoluene (aq)	<1 µg/l	TM176	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
2-Chloronaphthalene (aq)	<1 µg/l	TM176	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
2-Chlorophenol (aq)	<1 µg/l	TM176	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
2-Methylnaphthalene (aq)	<1 µg/l	TM176	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
2-Methylphenol (aq)	<1 µg/l	TM176	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
2-Nitroaniline (aq)	<1 µg/l	TM176	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
2-Nitrophenol (aq)	<1 µg/l	TM176	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
3-Nitroaniline (aq)	<1 µg/l	TM176	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
4-Bromophenylphenylether (aq)	<1 µg/l	TM176	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
4-Chloro-3-methylphenol (aq)	<1 µg/l	TM176	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
4-Chloroaniline (aq)	<1 µg/l	TM176	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
4-Chlorophenylphenylether (aq)	<1 µg/l	TM176	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
4-Methylphenol (aq)	<1 µg/l	TM176	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
4-Nitroaniline (aq)	<1 µg/l	TM176	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
4-Nitrophenol (aq)	<1 µg/l	TM176	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
Azobenzene (aq)	<1 µg/l	TM176	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
Acenaphthylene (aq)	<1 µg/l	TM176	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
Acenaphthene (aq)	<1 µg/l	TM176	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
Anthracene (aq)	<1 µg/l	TM176	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
bis(2-Chloroethyl)ether (aq)	<1 µg/l	TM176	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
bis(2-Chloroethoxy)methane (aq)	<1 µg/l	TM176	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
bis(2-Ethylhexyl) phthalate (aq)	<2 µg/l	TM176	<2 #	<2 #	<2 #	<2 #	<2 #	<2 #	<2 #
Butylbenzyl phthalate (aq)	<1 µg/l	TM176	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #



CERTIFICATE OF ANALYSIS

Validated

SDG: 190918-75
Location: Docks Way

Client Reference: GW Sept Part 1
Order Number: 700142918

Report Number: 524499
Superseded Report: 524488

SVOC MS (W) - Aqueous

Results Legend			Customer Sample Ref.	GW03_09	GW06_34	GW06_36	GW06_39	GW07_40	GW09_31	
#	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.			Ground Water (GW)	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)
aq	Aqueous / settled sample.			17/09/2019	17/09/2019	17/09/2019	17/09/2019	17/09/2019	17/09/2019	17/09/2019
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			18/09/2019	18/09/2019	18/09/2019	18/09/2019	18/09/2019	18/09/2019	18/09/2019
(F)	Trigger breach confirmed			190918-75	190918-75	190918-75	190918-75	190918-75	190918-75	190918-75
1-3*5@	Sample deviation (see appendix)			20747350	20747381	20747274	20747260	20747290	20747320	20747320
Component	LOD/Units	Method								
Benzo(a)anthracene (aq)	<1 µg/l	TM176	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #	
Benzo(b)fluoranthene (aq)	<1 µg/l	TM176	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #	
Benzo(k)fluoranthene (aq)	<1 µg/l	TM176	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #	
Benzo(a)pyrene (aq)	<1 µg/l	TM176	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #	
Benzo(g,h,i)perylene (aq)	<1 µg/l	TM176	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #	
Carbazole (aq)	<1 µg/l	TM176	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #	
Chrysene (aq)	<1 µg/l	TM176	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #	
Dibenzofuran (aq)	<1 µg/l	TM176	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #	
n-Dibutyl phthalate (aq)	<1 µg/l	TM176	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #	
Diethyl phthalate (aq)	<1 µg/l	TM176	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #	
Dibenzo(a,h)anthracene (aq)	<1 µg/l	TM176	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #	
Dimethyl phthalate (aq)	<1 µg/l	TM176	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #	
n-Dioctyl phthalate (aq)	<5 µg/l	TM176	<5 #	<5 #	<5 #	<5 #	<5 #	<5 #	<5 #	
Fluoranthene (aq)	<1 µg/l	TM176	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #	
Fluorene (aq)	<1 µg/l	TM176	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #	
Hexachlorobenzene (aq)	<1 µg/l	TM176	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #	
Hexachlorobutadiene (aq)	<1 µg/l	TM176	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #	
Pentachlorophenol (aq)	<1 µg/l	TM176	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #	
Phenol (aq)	<1 µg/l	TM176	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #	
n-Nitroso-n-dipropylamine (aq)	<1 µg/l	TM176	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #	
Hexachloroethane (aq)	<1 µg/l	TM176	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #	
Nitrobenzene (aq)	<1 µg/l	TM176	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #	
Naphthalene (aq)	<1 µg/l	TM176	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #	
Isophorone (aq)	<1 µg/l	TM176	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #	
Hexachlorocyclopentadiene (aq)	<1 µg/l	TM176	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #	
Phenanthrene (aq)	<1 µg/l	TM176	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #	
Indeno(1,2,3-cd)pyrene (aq)	<1 µg/l	TM176	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #	
Pyrene (aq)	<1 µg/l	TM176	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #	
SVOC TIC (aq)		TM176	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Detected	Not Detected	
Total SVOC TIC	<10 µg/l	TM176	<10	<10	<10	<10	<10	13.2	<10	
Hexadecanoic acid	µg/l	TM176					13.2			



CERTIFICATE OF ANALYSIS

Validated

SDG: 190918-75
Location: Docks Way

Client Reference: GW Sept Part 1
Order Number: 700142918

Report Number: 524499
Superseded Report: 524488

SVOC MS (W) - Aqueous

Results Legend			Customer Sample Ref.	GW09_32	GW09_35	GW12_30	GW12_33		
# ISO17025 accredited. M mCERTS accredited. aq 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 1.3x5@ Sample deviation (see appendix)			GW09_32	GW09_35	GW12_30	GW12_33			
			Depth (m) Sample Type Date Sampled Sampled Time Date Received SDG Ref Lab Sample No.(s) AGS Reference	0.00 - 0.00 Ground Water (GW) 17/09/2019 18/09/2019 190918-75 20747335	0.00 - 0.00 Ground Water (GW) 17/09/2019 18/09/2019 190918-75 20747399	0.00 - 0.00 Ground Water (GW) 17/09/2019 18/09/2019 190918-75 20747306	0.00 - 0.00 Ground Water (GW) 17/09/2019 18/09/2019 190918-75 20747366		
Component	LOD/Units	Method							
1,2,4-Trichlorobenzene (aq)	<1 µg/l	TM176	<1 #	<1 #	<1 #	<1 #	<1 #		
1,2-Dichlorobenzene (aq)	<1 µg/l	TM176	<1 #	<1 #	<1 #	<1 #	<1 #		
1,3-Dichlorobenzene (aq)	<1 µg/l	TM176	<1 #	<1 #	<1 #	<1 #	<1 #		
1,4-Dichlorobenzene (aq)	<1 µg/l	TM176	<1 #	<1 #	<1 #	<1 #	<1 #		
2,4,5-Trichlorophenol (aq)	<1 µg/l	TM176	<1 #	<1 #	<1 #	<1 #	<1 #		
2,4,6-Trichlorophenol (aq)	<1 µg/l	TM176	<1 #	<1 #	<1 #	<1 #	<1 #		
2,4-Dichlorophenol (aq)	<1 µg/l	TM176	<1 #	<1 #	<1 #	<1 #	<1 #		
2,4-Dimethylphenol (aq)	<1 µg/l	TM176	<1 #	<1 #	<1 #	<1 #	<1 #		
2,4-Dinitrotoluene (aq)	<1 µg/l	TM176	<1 #	<1 #	<1 #	<1 #	<1 #		
2,6-Dinitrotoluene (aq)	<1 µg/l	TM176	<1 #	<1 #	<1 #	<1 #	<1 #		
2-Chloronaphthalene (aq)	<1 µg/l	TM176	<1 #	<1 #	<1 #	<1 #	<1 #		
2-Chlorophenol (aq)	<1 µg/l	TM176	<1 #	<1 #	<1 #	<1 #	<1 #		
2-Methylnaphthalene (aq)	<1 µg/l	TM176	<1 #	<1 #	<1 #	<1 #	<1 #		
2-Methylphenol (aq)	<1 µg/l	TM176	<1 #	<1 #	<1 #	<1 #	<1 #		
2-Nitroaniline (aq)	<1 µg/l	TM176	<1 #	<1 #	<1 #	<1 #	<1 #		
2-Nitrophenol (aq)	<1 µg/l	TM176	<1 #	<1 #	<1 #	<1 #	<1 #		
3-Nitroaniline (aq)	<1 µg/l	TM176	<1 #	<1 #	<1 #	<1 #	<1 #		
4-Bromophenylphenylether (aq)	<1 µg/l	TM176	<1 #	<1 #	<1 #	<1 #	<1 #		
4-Chloro-3-methylphenol (aq)	<1 µg/l	TM176	<1 #	<1 #	<1 #	<1 #	<1 #		
4-Chloroaniline (aq)	<1 µg/l	TM176	<1 #	<1 #	<1 #	<1 #	<1 #		
4-Chlorophenylphenylether (aq)	<1 µg/l	TM176	<1 #	<1 #	<1 #	<1 #	<1 #		
4-Methylphenol (aq)	<1 µg/l	TM176	<1 #	<1 #	<1 #	<1 #	<1 #		
4-Nitroaniline (aq)	<1 µg/l	TM176	<1 #	<1 #	<1 #	<1 #	<1 #		
4-Nitrophenol (aq)	<1 µg/l	TM176	<1 #	<1 #	<1 #	<1 #	<1 #		
Azobenzene (aq)	<1 µg/l	TM176	<1 #	<1 #	<1 #	<1 #	<1 #		
Acenaphthylene (aq)	<1 µg/l	TM176	<1 #	<1 #	<1 #	<1 #	<1 #		
Acenaphthene (aq)	<1 µg/l	TM176	<1 #	<1 #	<1 #	<1 #	<1 #		
Anthracene (aq)	<1 µg/l	TM176	<1 #	<1 #	<1 #	<1 #	<1 #		
bis(2-Chloroethyl)ether (aq)	<1 µg/l	TM176	<1 #	<1 #	<1 #	<1 #	<1 #		
bis(2-Chloroethoxy)methane (aq)	<1 µg/l	TM176	<1 #	<1 #	<1 #	<1 #	<1 #		
bis(2-Ethylhexyl) phthalate (aq)	<2 µg/l	TM176	<2 #	<2 #	<2 #	<2 #	<2 #		
Butylbenzyl phthalate (aq)	<1 µg/l	TM176	<1 #	<1 #	<1 #	<1 #	<1 #		



CERTIFICATE OF ANALYSIS

Validated

SDG: 190918-75
Location: Docks Way

Client Reference: GW Sept Part 1
Order Number: 700142918

Report Number: 524499
Superseded Report: 524488

SVOC MS (W) - Aqueous

Results Legend			Customer Sample Ref.	GW09_32	GW09_35	GW12_30	GW12_33			
#	ISO17025 accredited.									
M	mCERTS accredited.									
aq	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									
1-3*5@	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
Benzo(a)anthracene (aq)	<1 µg/l	TM176	0.00 - 0.00	Ground Water (GW)	17/09/2019		17/09/2019	190918-75	20747335	
Benzo(b)fluoranthene (aq)	<1 µg/l	TM176	0.00 - 0.00	Ground Water (GW)	17/09/2019		17/09/2019	190918-75	20747399	
Benzo(k)fluoranthene (aq)	<1 µg/l	TM176	0.00 - 0.00	Ground Water (GW)	17/09/2019		17/09/2019	190918-75	20747306	
Benzo(a)pyrene (aq)	<1 µg/l	TM176	0.00 - 0.00	Ground Water (GW)	17/09/2019		17/09/2019	190918-75	20747366	
Benzo(g,h,i)perylene (aq)	<1 µg/l	TM176	0.00 - 0.00	Ground Water (GW)	17/09/2019		17/09/2019	190918-75	20747366	
Carbazole (aq)	<1 µg/l	TM176								
Chrysene (aq)	<1 µg/l	TM176								
Dibenzofuran (aq)	<1 µg/l	TM176								
n-Dibutyl phthalate (aq)	<1 µg/l	TM176								
Diethyl phthalate (aq)	<1 µg/l	TM176								
Dibenzo(a,h)anthracene (aq)	<1 µg/l	TM176								
Dimethyl phthalate (aq)	<1 µg/l	TM176								
n-Dioctyl phthalate (aq)	<5 µg/l	TM176								
Fluoranthene (aq)	<1 µg/l	TM176								
Fluorene (aq)	<1 µg/l	TM176								
Hexachlorobenzene (aq)	<1 µg/l	TM176								
Hexachlorobutadiene (aq)	<1 µg/l	TM176								
Pentachlorophenol (aq)	<1 µg/l	TM176								
Phenol (aq)	<1 µg/l	TM176								
n-Nitroso-n-dipropylamine (aq)	<1 µg/l	TM176								
Hexachloroethane (aq)	<1 µg/l	TM176								
Nitrobenzene (aq)	<1 µg/l	TM176								
Naphthalene (aq)	<1 µg/l	TM176								
Isophorone (aq)	<1 µg/l	TM176								
Hexachlorocyclopentadiene (aq)	<1 µg/l	TM176								
Phenanthrene (aq)	<1 µg/l	TM176								
Indeno(1,2,3-cd)pyrene (aq)	<1 µg/l	TM176								
Pyrene (aq)	<1 µg/l	TM176								
SVOC TIC (aq)		TM176								
Total SVOC TIC	<10 µg/l	TM176								



CERTIFICATE OF ANALYSIS

Validated

SDG: 190918-75
Location: Docks Way

Client Reference: GW Sept Part 1
Order Number: 700142918

Report Number: 524499
Superseded Report: 524488

VOC MS (W)

Results Legend			Customer Sample Ref.	GW03_09	GW06_34	GW06_36	GW06_39	GW07_40	GW09_31	
#	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.			Ground Water (GW)	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)
aq	Aqueous / settled sample.			17/09/2019	17/09/2019	17/09/2019	17/09/2019	17/09/2019	17/09/2019	17/09/2019
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									
1.3x5@	Sample deviation (see appendix)									
Component	LOD/Units	Method								
Dibromofluoromethane**	%	TM208	118	110	110	113	111	117		
Toluene-d8**	%	TM208	100	99.1	100	99.1	97.7	99.4		
4-Bromofluorobenzene**	%	TM208	97.1	96	96.5	94.6	99.3	99.1		
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 #	<1 #		
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-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	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #		
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	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #		
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: 190918-75	Client Reference: GW Sept Part 1	Report Number: 524499	
Location: Docks Way	Order Number: 700142918	Superseded Report: 524488	

VOC MS (W)

Results Legend			Customer Sample Ref.	GW03_09	GW06_34	GW06_36	GW06_39	GW07_40	GW09_31
#	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.			Ground Water (GW)	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)
aq	Aqueous / settled sample.			17/09/2019	17/09/2019	17/09/2019	17/09/2019	17/09/2019	17/09/2019
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			18/09/2019	18/09/2019	18/09/2019	18/09/2019	18/09/2019	18/09/2019
(F)	Trigger breach confirmed			190918-75	190918-75	190918-75	190918-75	190918-75	190918-75
1-3*5@	Sample deviation (see appendix)			20747350	20747381	20747274	20747260	20747290	20747320
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	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
1,1,1,2-Tetrachloroethane	<1 µg/l	TM208	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
Ethylbenzene	<1 µg/l	TM208	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
m,p-Xylene	<1 µg/l	TM208	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
o-Xylene	<1 µg/l	TM208	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
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	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
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	<1 #	<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	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
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	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
sec-Butylbenzene	<1 µg/l	TM208	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
4-iso-Propyltoluene	<1 µg/l	TM208	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
1,3-Dichlorobenzene	<1 µg/l	TM208	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
1,4-Dichlorobenzene	<1 µg/l	TM208	<1 #	<1 #	<1 #	<1 #	<1 #	<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 #	<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	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #



CERTIFICATE OF ANALYSIS

Validated

SDG: 190918-75
Location: Docks Way

Client Reference: GW Sept Part 1
Order Number: 700142918

Report Number: 524499
Superseded Report: 524488

VOC MS (W)

Results Legend			Customer Sample Ref.	GW09_32	GW09_35	GW12_30	GW12_33			
#	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			
M	mCERTS accredited.			Ground Water (GW)	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)			
aq	Aqueous / settled sample.			17/09/2019	17/09/2019	17/09/2019	17/09/2019			
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			18/09/2019	18/09/2019	18/09/2019	18/09/2019			
(F)	Trigger breach confirmed			190918-75	190918-75	190918-75	190918-75			
1.3x5@	Sample deviation (see appendix)			20747335	20747399	20747306	20747366			
Component	LOD/Units	Method								
Dibromofluoromethane**	%	TM208	107	112	112	117				
Toluene-d8**	%	TM208	99.6	100	99.5	99.3				
4-Bromofluorobenzene**	%	TM208	96.8	96.9	97.6	96.4				
Dichlorodifluoromethane	<1 µg/l	TM208	<1	<1	<1	<1				
Chloromethane	<1 µg/l	TM208	<1	<1	<1	<1	#	#	#	
Vinyl chloride	<1 µg/l	TM208	<1	<1	<1	<1	#	#	#	
Bromomethane	<1 µg/l	TM208	<1	<1	<1	<1	#	#	#	
Chloroethane	<1 µg/l	TM208	<1	<1	<1	<1	#	#	#	
Trichlorofluoromethane	<1 µg/l	TM208	<1	<1	<1	<1	#	#	#	
1,1-Dichloroethene	<1 µg/l	TM208	<1	<1	<1	<1	#	#	#	
Carbon disulphide	<1 µg/l	TM208	<1	<1	<1	<1	#	#	#	
Dichloromethane	<3 µg/l	TM208	<3	<3	<3	<3	#	#	#	
Methyl tertiary butyl ether (MTBE)	<1 µg/l	TM208	<1	<1	<1	<1	#	#	#	
trans-1,2-Dichloroethene	<1 µg/l	TM208	<1	<1	<1	<1	#	#	#	
1,1-Dichloroethane	<1 µg/l	TM208	<1	<1	<1	<1	#	#	#	
cis-1,2-Dichloroethene	<1 µg/l	TM208	<1	<1	<1	<1	#	#	#	
2,2-Dichloropropane	<1 µg/l	TM208	<1	<1	<1	<1	#	#	#	
Bromochloromethane	<1 µg/l	TM208	<1	<1	<1	<1	#	#	#	
Chloroform	<1 µg/l	TM208	<1	<1	<1	<1	#	#	#	
1,1,1-Trichloroethane	<1 µg/l	TM208	<1	<1	<1	<1	#	#	#	
1,1-Dichloropropene	<1 µg/l	TM208	<1	<1	<1	<1	#	#	#	
Carbontetrachloride	<1 µg/l	TM208	<1	<1	<1	<1	#	#	#	
1,2-Dichloroethane	<1 µg/l	TM208	<1	<1	<1	<1	#	#	#	
Benzene	<1 µg/l	TM208	<1	<1	<1	<1	#	#	#	
Trichloroethene	<1 µg/l	TM208	<1	<1	<1	<1	#	#	#	
1,2-Dichloropropane	<1 µg/l	TM208	<1	<1	<1	<1	#	#	#	
Dibromomethane	<1 µg/l	TM208	<1	<1	<1	<1	#	#	#	
Bromodichloromethane	<1 µg/l	TM208	<1	<1	<1	<1	#	#	#	
cis-1,3-Dichloropropene	<1 µg/l	TM208	<1	<1	<1	<1	#	#	#	
Toluene	<1 µg/l	TM208	<1	<1	<1	<1	#	#	#	
trans-1,3-Dichloropropene	<1 µg/l	TM208	<1	<1	<1	<1	#	#	#	
1,1,2-Trichloroethane	<1 µg/l	TM208	<1	<1	<1	<1	#	#	#	



CERTIFICATE OF ANALYSIS

Validated

SDG: 190918-75
Location: Docks Way

Client Reference: GW Sept Part 1
Order Number: 700142918

Report Number: 524499
Superseded Report: 524488

VOC MS (W)

Results Legend			Customer Sample Ref.	GW09_32	GW09_35	GW12_30	GW12_33							
#	ISO17025 accredited.		Depth (m) Sample Type Date Sampled Sampled Time Date Received SDG Ref Lab Sample No.(s) AGS Reference	0.00 - 0.00 Ground Water (GW) 17/09/2019	0.00 - 0.00 Ground Water (GW) 17/09/2019	0.00 - 0.00 Ground Water (GW) 17/09/2019	0.00 - 0.00 Ground Water (GW) 17/09/2019							
M	mCERTS accredited.													
aq	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													
1-3*5@	Sample deviation (see appendix)													
Component	LOD/Units	Method												
1,3-Dichloropropane	<1 µg/l	TM208	<1 #	<1 #	<1 #	<1 #	<1 #							
Tetrachloroethene	<1 µg/l	TM208	<1 #	<1 #	<1 #	<1 #	<1 #							
Dibromochloromethane	<1 µg/l	TM208	<1 #	<1 #	<1 #	<1 #	<1 #							
1,2-Dibromoethane	<1 µg/l	TM208	<1 #	<1 #	<1 #	<1 #	<1 #							
Chlorobenzene	<1 µg/l	TM208	<1 #	<1 #	<1 #	<1 #	<1 #							
1,1,1,2-Tetrachloroethane	<1 µg/l	TM208	<1 #	<1 #	<1 #	<1 #	<1 #							
Ethylbenzene	<1 µg/l	TM208	<1 #	<1 #	<1 #	<1 #	<1 #							
m,p-Xylene	<1 µg/l	TM208	<1 #	<1 #	<1 #	<1 #	<1 #							
o-Xylene	<1 µg/l	TM208	<1 #	<1 #	<1 #	<1 #	<1 #							
Styrene	<1 µg/l	TM208	<1 #	<1 #	<1 #	<1 #	<1 #							
Bromoform	<1 µg/l	TM208	<1 #	<1 #	<1 #	<1 #	<1 #							
Isopropylbenzene	<1 µg/l	TM208	<1 #	<1 #	<1 #	<1 #	<1 #							
1,1,2,2-Tetrachloroethane	<1 µg/l	TM208	<1 #	<1 #	<1 #	<1 #	<1 #							
1,2,3-Trichloropropane	<1 µg/l	TM208	<1 #	<1 #	<1 #	<1 #	<1 #							
Bromobenzene	<1 µg/l	TM208	<1 #	<1 #	<1 #	<1 #	<1 #							
Propylbenzene	<1 µg/l	TM208	<1 #	<1 #	<1 #	<1 #	<1 #							
2-Chlorotoluene	<1 µg/l	TM208	<1 #	<1 #	<1 #	<1 #	<1 #							
1,3,5-Trimethylbenzene	<1 µg/l	TM208	<1 #	<1 #	<1 #	<1 #	<1 #							
4-Chlorotoluene	<1 µg/l	TM208	<1 #	<1 #	<1 #	<1 #	<1 #							
tert-Butylbenzene	<1 µg/l	TM208	<1 #	<1 #	<1 #	<1 #	<1 #							
1,2,4-Trimethylbenzene	<1 µg/l	TM208	<1 #	<1 #	<1 #	<1 #	<1 #							
sec-Butylbenzene	<1 µg/l	TM208	<1 #	<1 #	<1 #	<1 #	<1 #							
4-iso-Propyltoluene	<1 µg/l	TM208	<1 #	<1 #	<1 #	<1 #	<1 #							
1,3-Dichlorobenzene	<1 µg/l	TM208	<1 #	<1 #	<1 #	<1 #	<1 #							
1,4-Dichlorobenzene	<1 µg/l	TM208	<1 #	<1 #	<1 #	<1 #	<1 #							
n-Butylbenzene	<1 µg/l	TM208	<1 #	<1 #	<1 #	<1 #	<1 #							
1,2-Dichlorobenzene	<1 µg/l	TM208	<1 #	<1 #	<1 #	<1 #	<1 #							
1,2-Dibromo-3-chloropropane	<1 µg/l	TM208	<1 #	<1 #	<1 #	<1 #	<1 #							
1,2,4-Trichlorobenzene	<1 µg/l	TM208	<1 #	<1 #	<1 #	<1 #	<1 #							
Hexachlorobutadiene	<1 µg/l	TM208	<1 #	<1 #	<1 #	<1 #	<1 #							
tert-Amyl methyl ether (TAME)	<1 µg/l	TM208	<1 #	<1 #	<1 #	<1 #	<1 #							
Naphthalene	<1 µg/l	TM208	<1 #	<1 #	<1 #	<1 #	<1 #							



CERTIFICATE OF ANALYSIS

Validated

SDG: 190918-75
Location: Docks Way

Client Reference: GW Sept Part 1
Order Number: 700142918

Report Number: 524499
Superseded Report: 524488

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

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:	190918-75	Client Reference:	GW Sept Part 1	Report Number:	524499
Location:	Docks Way	Order Number:	700142918	Superseded Report:	524488

Test Completion Dates

	20747350	20747381	20747274	20747260	20747290	20747320	20747335	20747399	20747306	20747366
Lab Sample No(s)	GW03_09	GW06_34	GW06_36	GW06_39	GW07_40	GW09_31	GW09_32	GW09_35	GW12_30	GW12_33
Customer Sample Ref.										
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	0.00 - 0.00	0.00 - 0.00
Type	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water
Alkalinity as CaCO3	25-Sep-2019	25-Sep-2019	24-Sep-2019	25-Sep-2019	25-Sep-2019	25-Sep-2019	25-Sep-2019	24-Sep-2019	24-Sep-2019	24-Sep-2019
Alkalinity Filtered as CaCO3	23-Sep-2019	23-Sep-2019	23-Sep-2019	23-Sep-2019	23-Sep-2019	23-Sep-2019	23-Sep-2019	23-Sep-2019	23-Sep-2019	23-Sep-2019
Ammoniacal Nitrogen	24-Sep-2019	24-Sep-2019	24-Sep-2019	24-Sep-2019	24-Sep-2019	24-Sep-2019	24-Sep-2019	24-Sep-2019	24-Sep-2019	24-Sep-2019
Anions by Kone (w)	25-Sep-2019	25-Sep-2019	25-Sep-2019	25-Sep-2019	25-Sep-2019	25-Sep-2019	25-Sep-2019	25-Sep-2019	25-Sep-2019	25-Sep-2019
BOD True Total	24-Sep-2019	24-Sep-2019	24-Sep-2019	25-Sep-2019	25-Sep-2019	25-Sep-2019	24-Sep-2019	24-Sep-2019	25-Sep-2019	25-Sep-2019
COD Unfiltered	20-Sep-2019	20-Sep-2019	20-Sep-2019	20-Sep-2019	20-Sep-2019	20-Sep-2019	20-Sep-2019	20-Sep-2019	20-Sep-2019	20-Sep-2019
Conductivity (at 20 deg.C)	24-Sep-2019	24-Sep-2019	24-Sep-2019	24-Sep-2019	24-Sep-2019	24-Sep-2019	24-Sep-2019	24-Sep-2019	24-Sep-2019	24-Sep-2019
Cyanide Comp/Free/Total/Thiocyanate	23-Sep-2019	24-Sep-2019	25-Sep-2019	24-Sep-2019	23-Sep-2019	23-Sep-2019	24-Sep-2019	24-Sep-2019	24-Sep-2019	24-Sep-2019
Dissolved Metals by ICP-MS	01-Oct-2019	26-Sep-2019	26-Sep-2019	01-Oct-2019	01-Oct-2019	01-Oct-2019	01-Oct-2019	26-Sep-2019	03-Oct-2019	26-Sep-2019
Dissolved Organic/Inorganic Carbon	24-Sep-2019	24-Sep-2019	24-Sep-2019	23-Sep-2019	20-Sep-2019	20-Sep-2019	23-Sep-2019	23-Sep-2019	20-Sep-2019	23-Sep-2019
EPH (DRO) (C10-C40) Aqueous (W)	28-Sep-2019	30-Sep-2019	01-Oct-2019	28-Sep-2019	30-Sep-2019	30-Sep-2019	30-Sep-2019	28-Sep-2019	30-Sep-2019	30-Sep-2019
Ionic Balance	01-Oct-2019	26-Sep-2019	26-Sep-2019	01-Oct-2019	01-Oct-2019	01-Oct-2019	01-Oct-2019	26-Sep-2019	03-Oct-2019	26-Sep-2019
Mercury Dissolved	26-Sep-2019	23-Sep-2019	23-Sep-2019	27-Sep-2019	26-Sep-2019	26-Sep-2019	26-Sep-2019	23-Sep-2019	26-Sep-2019	23-Sep-2019
Nitrite by Kone (w)	19-Sep-2019	23-Sep-2019	23-Sep-2019	23-Sep-2019	19-Sep-2019	19-Sep-2019	23-Sep-2019	23-Sep-2019	19-Sep-2019	23-Sep-2019
Organotins in Aqueous Samples	25-Sep-2019	25-Sep-2019	25-Sep-2019	25-Sep-2019	25-Sep-2019	25-Sep-2019	25-Sep-2019	25-Sep-2019	25-Sep-2019	25-Sep-2019
Pesticides (Suite I) by GCMS	26-Sep-2019	26-Sep-2019	26-Sep-2019	27-Sep-2019	26-Sep-2019	26-Sep-2019	26-Sep-2019	26-Sep-2019	26-Sep-2019	26-Sep-2019
Pesticides (Suite II) by GCMS	27-Sep-2019	27-Sep-2019	27-Sep-2019	27-Sep-2019	25-Sep-2019	25-Sep-2019	25-Sep-2019	27-Sep-2019	25-Sep-2019	27-Sep-2019
Pesticides (Suite III) by GCMS	27-Sep-2019	27-Sep-2019	27-Sep-2019	27-Sep-2019	30-Sep-2019	30-Sep-2019	30-Sep-2019	27-Sep-2019	30-Sep-2019	27-Sep-2019
pH Value	23-Sep-2019	24-Sep-2019	24-Sep-2019	23-Sep-2019	25-Sep-2019	23-Sep-2019	24-Sep-2019	24-Sep-2019	23-Sep-2019	24-Sep-2019
Phenols by HPLC (W)	23-Sep-2019	24-Sep-2019	25-Sep-2019	24-Sep-2019	24-Sep-2019	23-Sep-2019	25-Sep-2019	23-Sep-2019	24-Sep-2019	25-Sep-2019
Phosphate by Kone (w)	19-Sep-2019	23-Sep-2019	23-Sep-2019	19-Sep-2019	19-Sep-2019	19-Sep-2019	19-Sep-2019	23-Sep-2019	19-Sep-2019	23-Sep-2019
Sulphide	20-Sep-2019	25-Sep-2019	20-Sep-2019	20-Sep-2019	20-Sep-2019	20-Sep-2019	20-Sep-2019	25-Sep-2019	20-Sep-2019	25-Sep-2019
SVOC MS (W) - Aqueous	25-Sep-2019	25-Sep-2019	25-Sep-2019	25-Sep-2019	25-Sep-2019	25-Sep-2019	25-Sep-2019	25-Sep-2019	25-Sep-2019	25-Sep-2019
VOC MS (W)	24-Sep-2019	24-Sep-2019	24-Sep-2019	24-Sep-2019	25-Sep-2019	25-Sep-2019	24-Sep-2019	24-Sep-2019	24-Sep-2019	24-Sep-2019



CERTIFICATE OF ANALYSIS

Validated

SDG:	190918-75	Client Reference:	GW Sept Part 1	Report Number:	524499
Location:	Docks Way	Order Number:	700142918	Superseded Report:	524488

Chromatogram

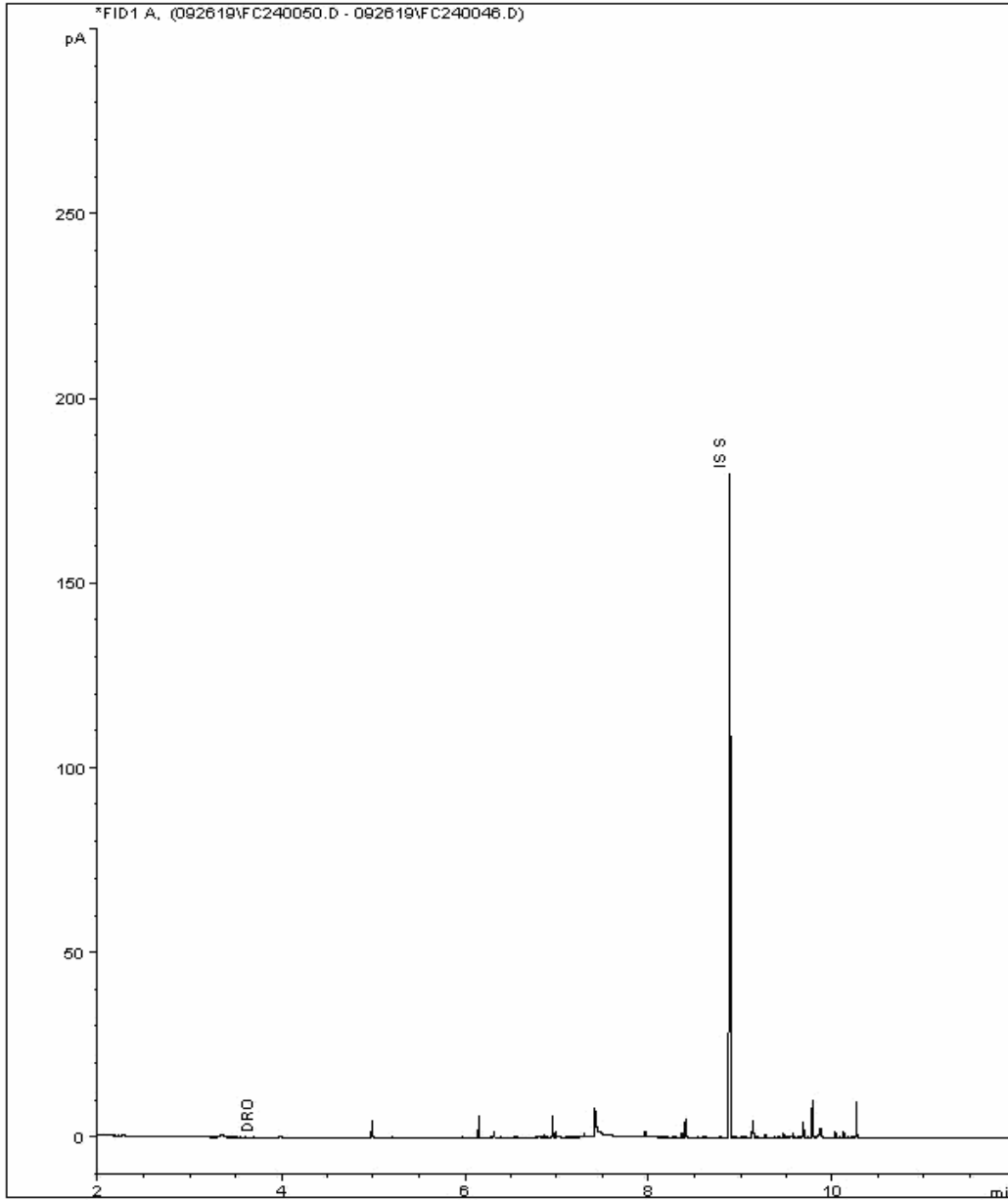
Analysis: EPH (DRO) (C10-C40) Aqueous (W)

Sample No : 20748286
Sample ID : GW09_32

Depth : 0.00 - 0.00

EPH Range Organics (C10 - C40)

Sample Identity: 19495181-
Date Acquired : 27/09/2019 12:10:04 PM
Units : ppm





CERTIFICATE OF ANALYSIS

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SDG: 190918-75
Location: Docks Way

Client Reference: GW Sept Part 1
Order Number: 700142918

Report Number: 524499
Superseded Report: 524488

Chromatogram

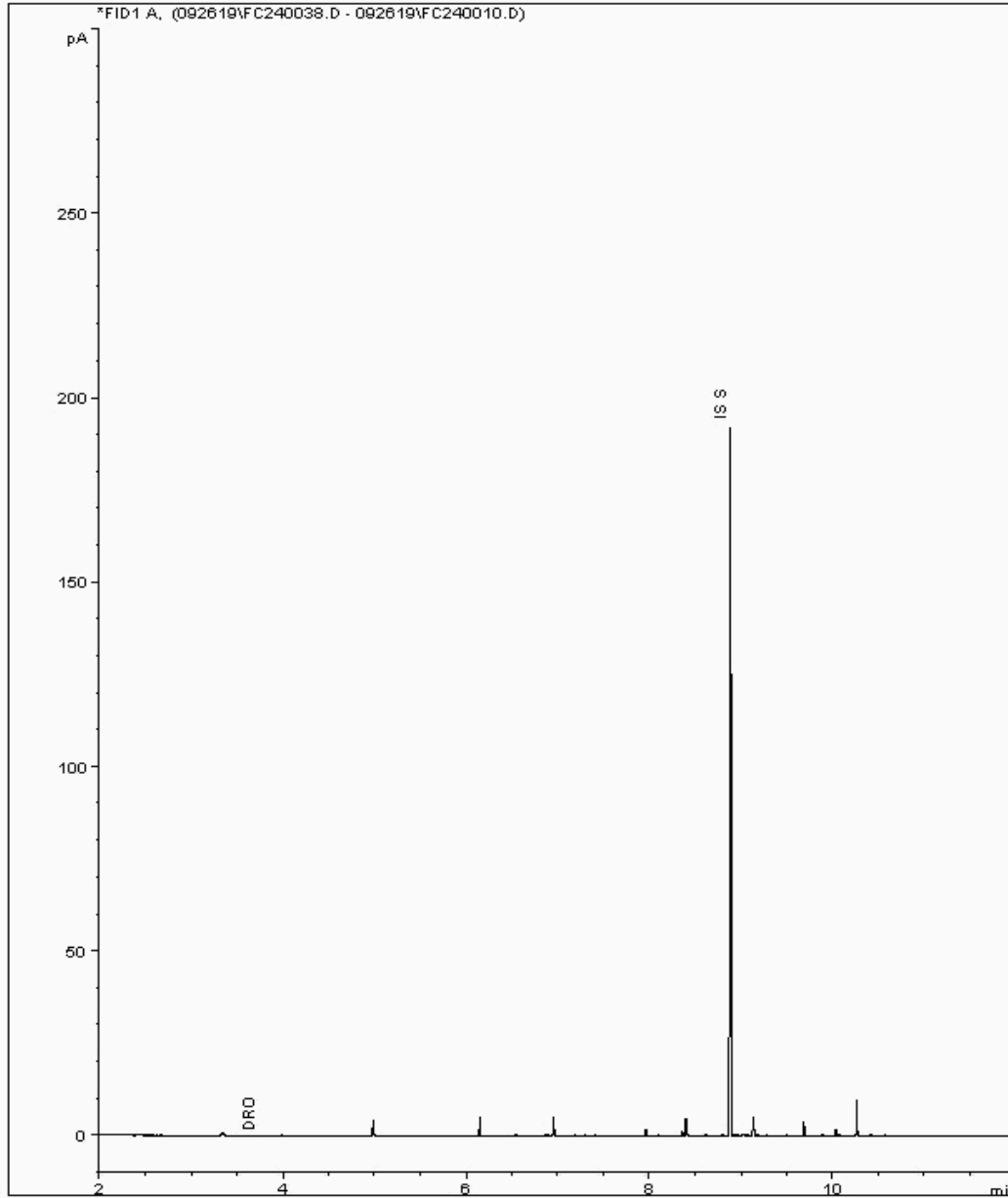
Analysis: EPH (DRO) (C10-C40) Aqueous (W)

Sample No : 20750491
Sample ID : GW12_30

Depth : 0.00 - 0.00

EPH Range Organics (C10 - C40)

Sample Identity: 19495133-
Date Acquired : 27/09/2019 07:17:29 PM
Units : ppm





CERTIFICATE OF ANALYSIS

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SDG: 190918-75
Location: Docks Way

Client Reference: GW Sept Part 1
Order Number: 700142918

Report Number: 524499
Superseded Report: 524488

Chromatogram

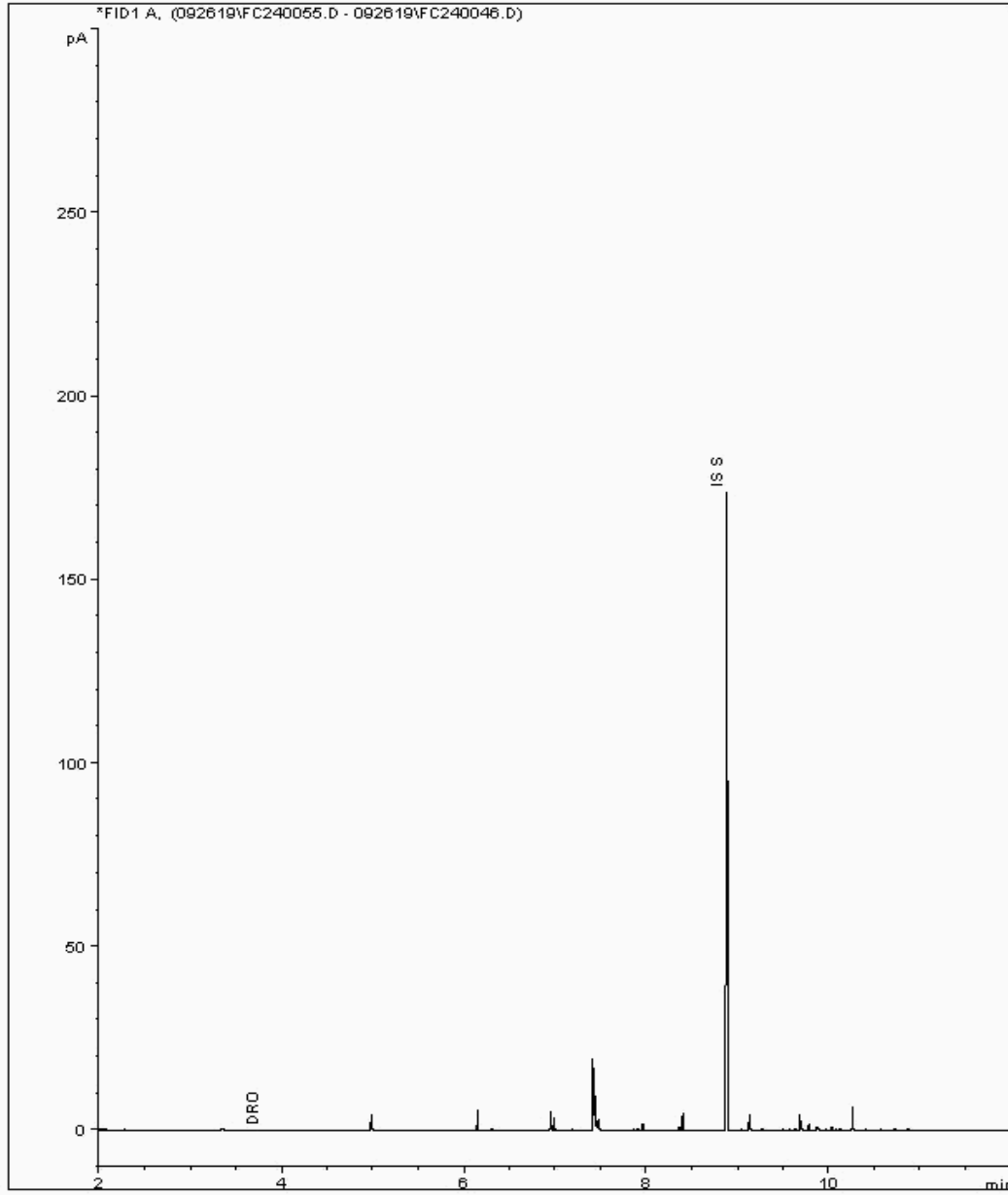
Analysis: EPH (DRO) (C10-C40) Aqueous (W)

Sample No : 20750594
Sample ID : GW07_40

Depth : 0.00 - 0.00

EPH Range Organics (C10 - C40)

Sample Identity: 19495109-
Date Acquired : 27/09/2019 14:12:41 PM
Units : ppm





CERTIFICATE OF ANALYSIS

Validated

SDG: 190918-75
Location: Docks Way

Client Reference: GW Sept Part 1
Order Number: 700142918

Report Number: 524499
Superseded Report: 524488

Chromatogram

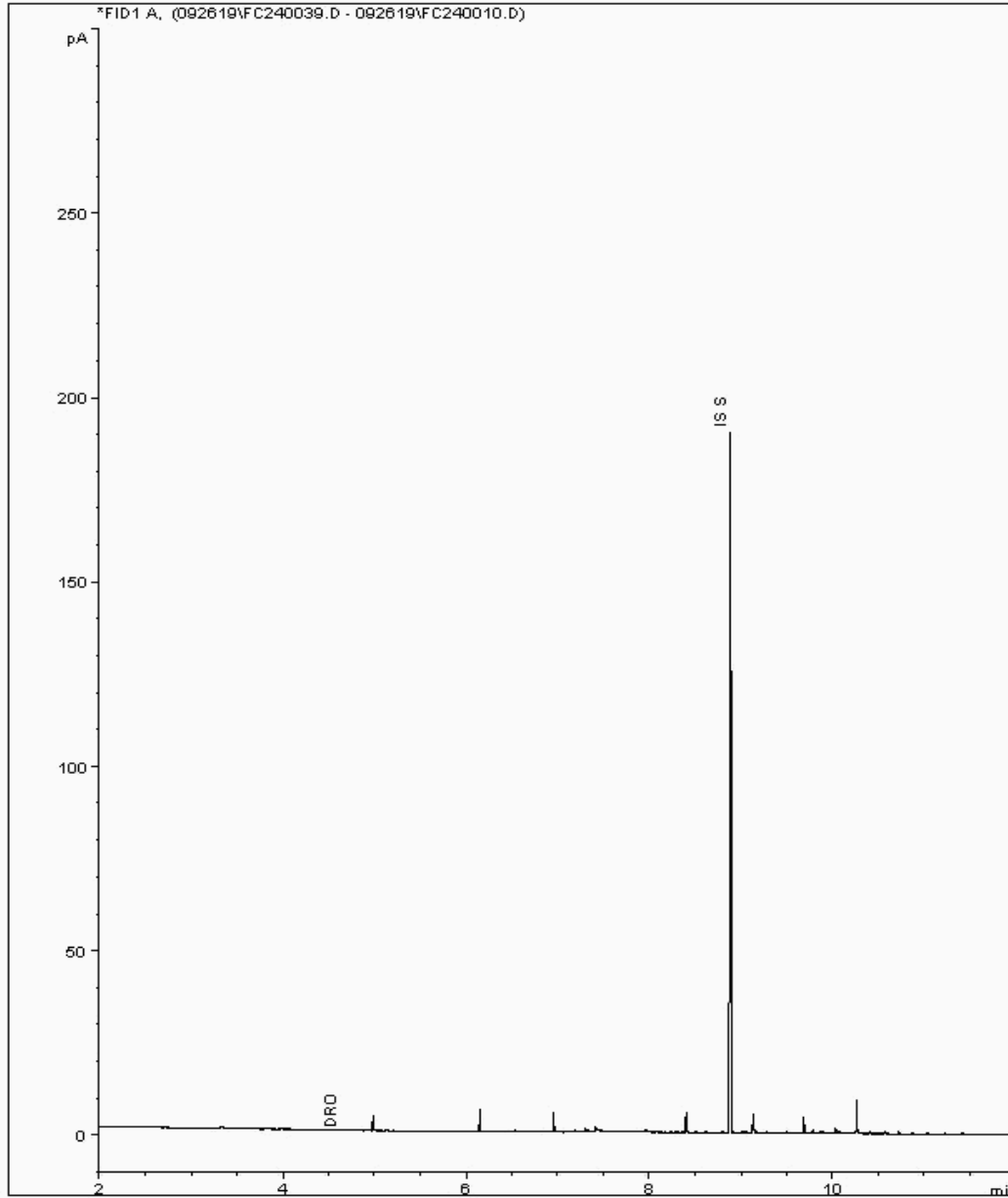
Analysis: EPH (DRO) (C10-C40) Aqueous (W)

Sample No : 20750609
Sample ID : GW09_31

Depth : 0.00 - 0.00

EPH Range Organics (C10 - C40)

Sample Identity: 19495157-
Date Acquired : 27/09/2019 07:41:57 PM
Units : ppm





CERTIFICATE OF ANALYSIS

Validated

SDG:	190918-75	Client Reference:	GW Sept Part 1	Report Number:	524499
Location:	Docks Way	Order Number:	700142918	Superseded Report:	524488

Chromatogram

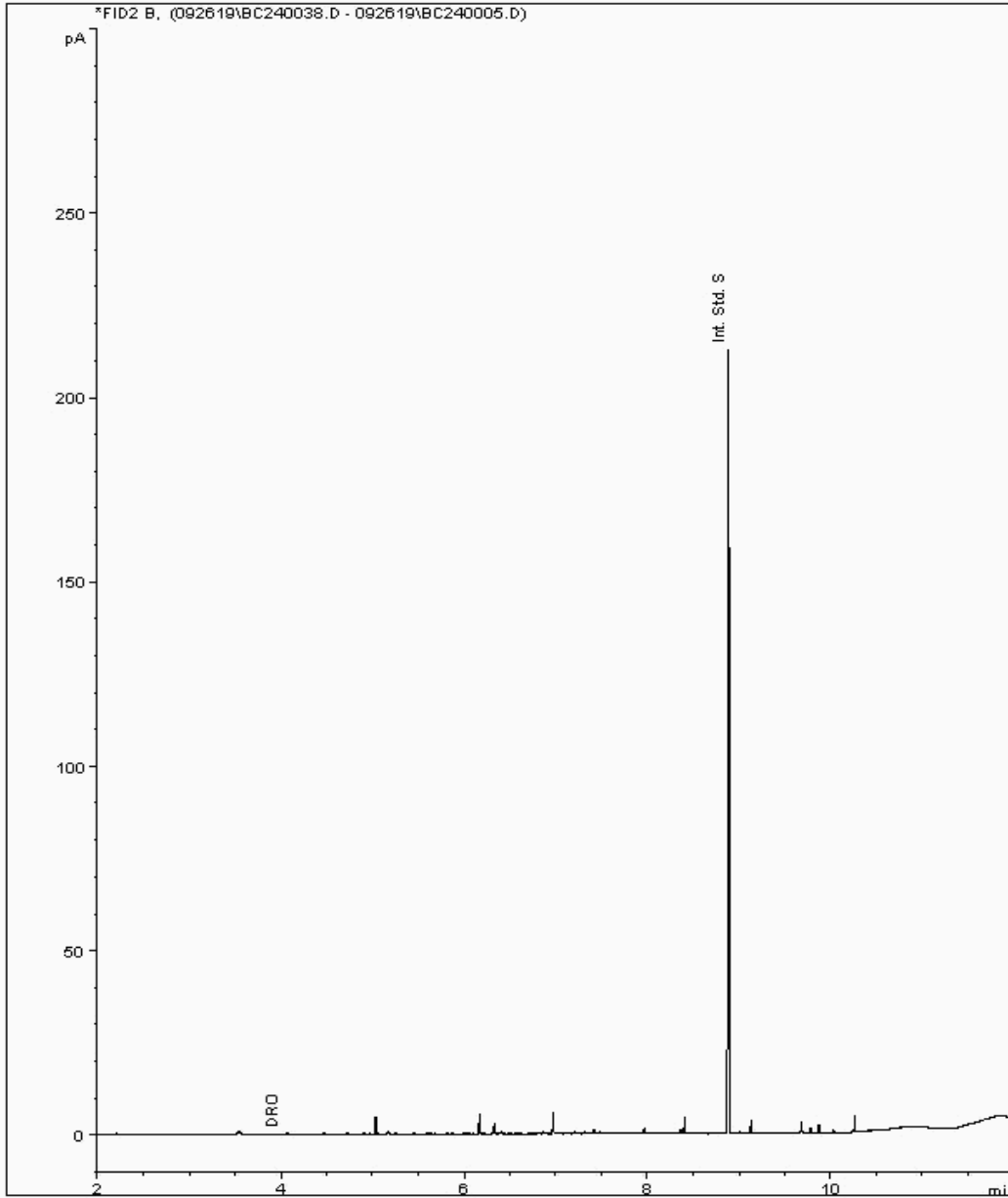
Analysis: EPH (DRO) (C10-C40) Aqueous (W)

Sample No : 20764841
Sample ID : GW06_39

Depth : 0.00 - 0.00

EPH Range Organics (C10 - C40)

Sample Identity: 19495056-
Date Acquired : 27/09/2019 07:17:29 PM
Units : mg/l





CERTIFICATE OF ANALYSIS

Validated

SDG:	190918-75	Client Reference:	GW Sept Part 1	Report Number:	524499
Location:	Docks Way	Order Number:	700142918	Superseded Report:	524488

Chromatogram

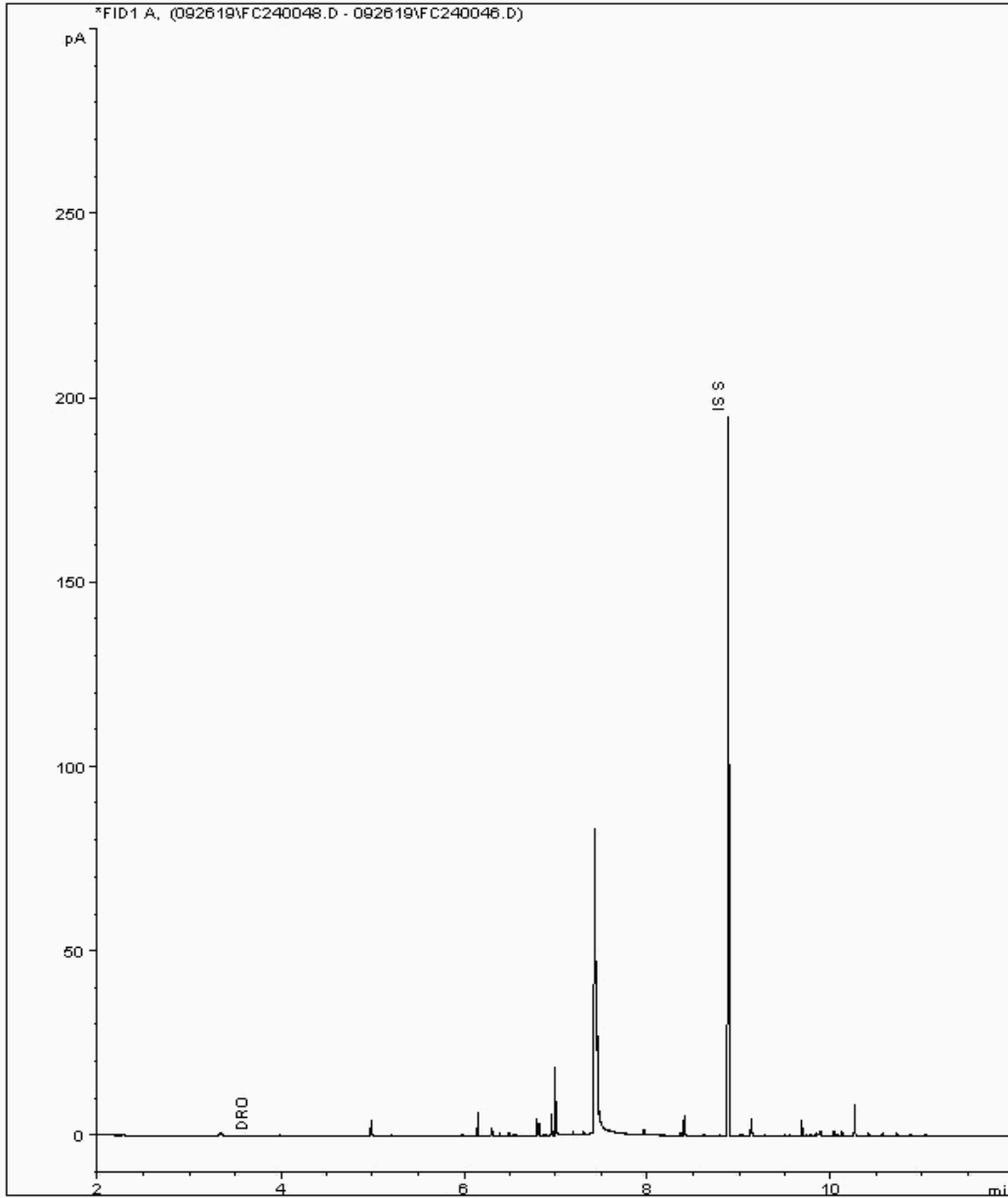
Analysis: EPH (DRO) (C10-C40) Aqueous (W)

Sample No : 20764974
Sample ID : GW12_33

Depth : 0.00 - 0.00

EPH Range Organics (C10 - C40)

Sample Identity: 19495233-
Date Acquired : 27/09/2019 11:21:15 PM
Units : ppm





CERTIFICATE OF ANALYSIS

Validated

SDG: 190918-75
Location: Docks Way

Client Reference: GW Sept Part 1
Order Number: 700142918

Report Number: 524499
Superseded Report: 524488

Chromatogram

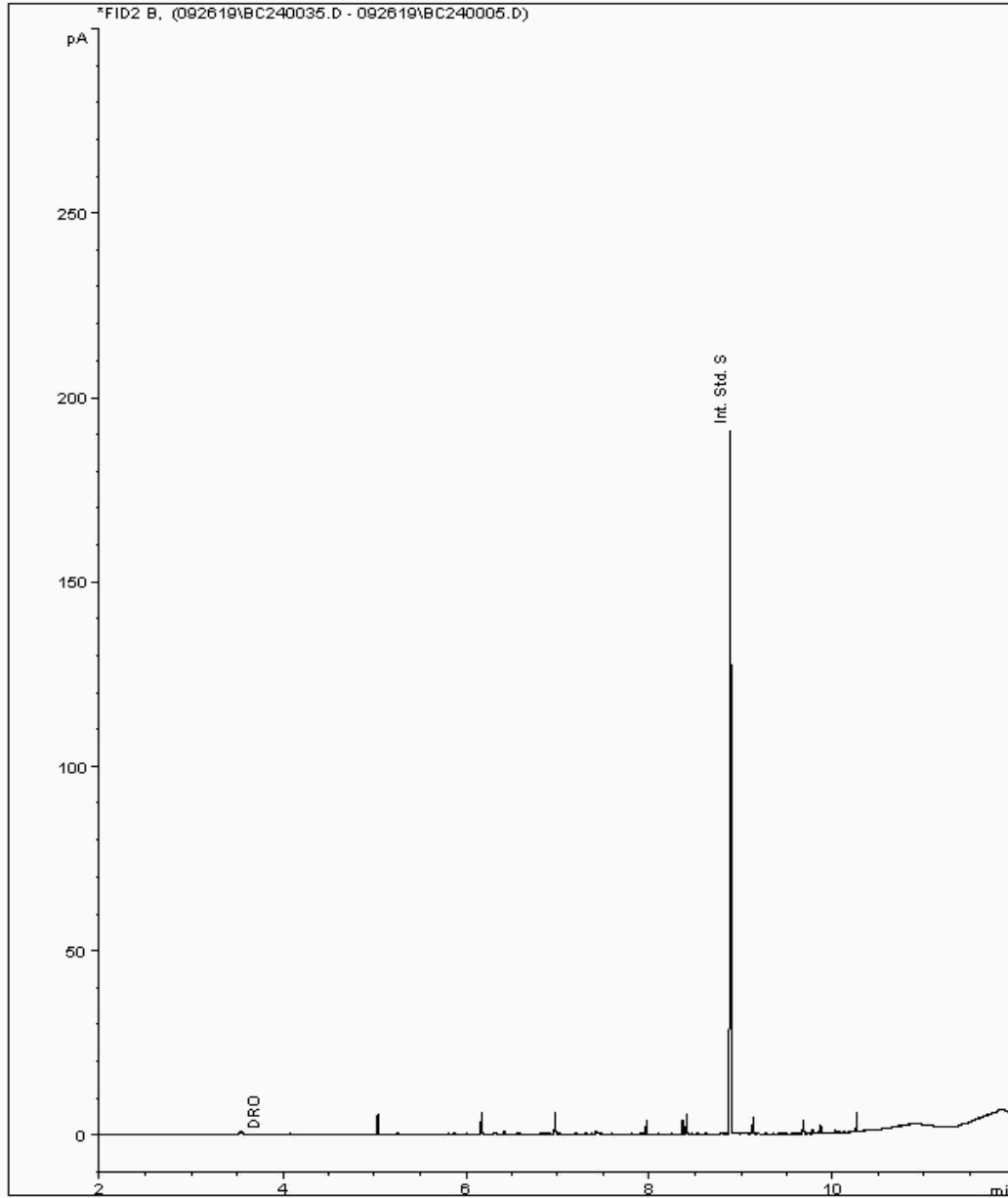
Analysis: EPH (DRO) (C10-C40) Aqueous (W)

Sample No : 20765988
Sample ID : GW09_35

Depth : 0.00 - 0.00

EPH Range Organics (C10 - C40)

Sample Identity: 19495281-
Date Acquired : 27/09/2019 06:04:30 PM
Units : mg/l





CERTIFICATE OF ANALYSIS

Validated

SDG: 190918-75
Location: Docks Way

Client Reference: GW Sept Part 1
Order Number: 700142918

Report Number: 524499
Superseded Report: 524488

Chromatogram

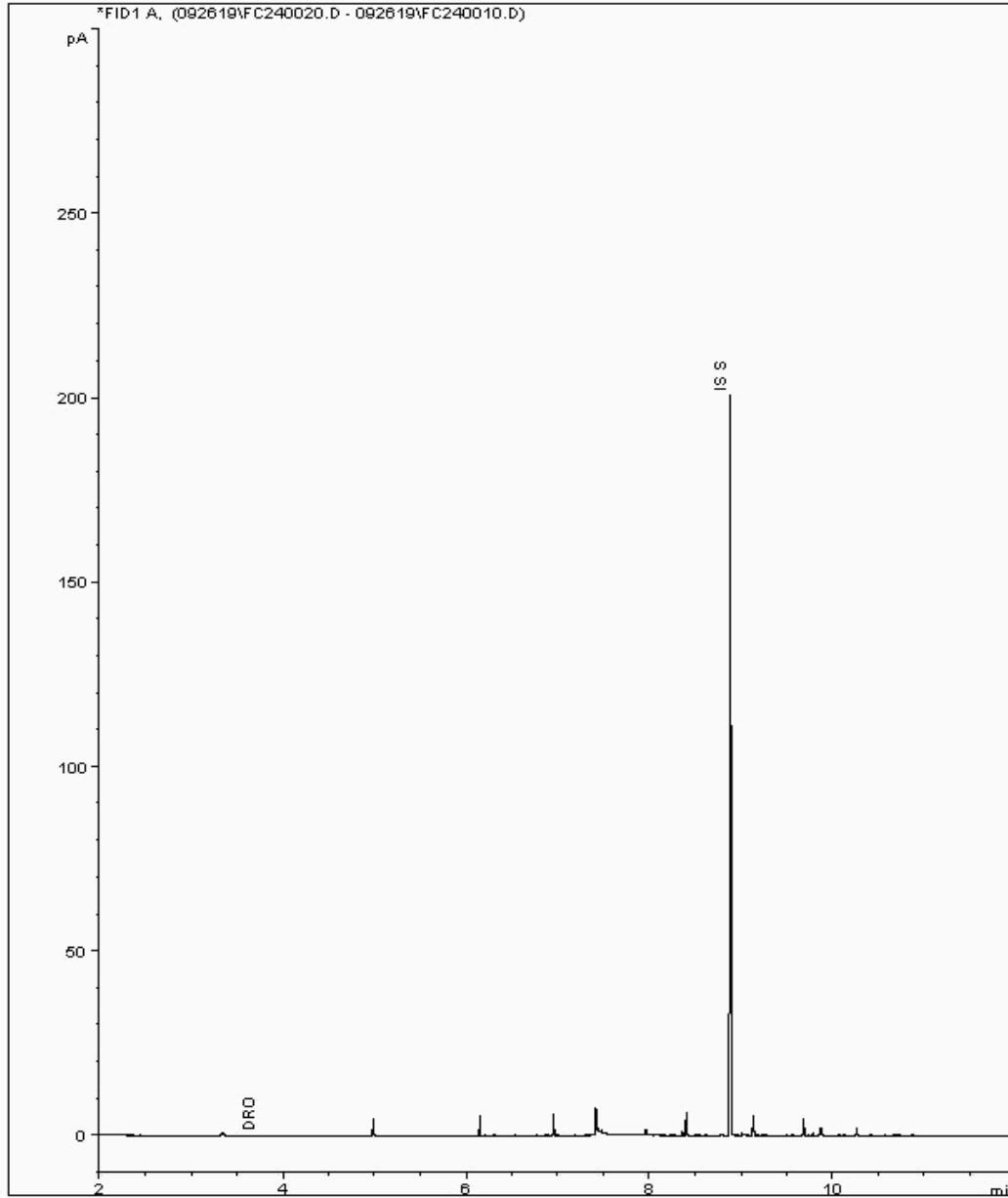
Analysis: EPH (DRO) (C10-C40) Aqueous (W)

Sample No : 20765998
Sample ID : GW06_34

Depth : 0.00 - 0.00

EPH Range Organics (C10 - C40)

Sample Identity: 19495257-
Date Acquired : 26/09/2019 23:59:27 PM
Units : ppm





CERTIFICATE OF ANALYSIS

Validated

SDG:	190918-75	Client Reference:	GW Sept Part 1	Report Number:	524499
Location:	Docks Way	Order Number:	700142918	Superseded Report:	524488

Chromatogram

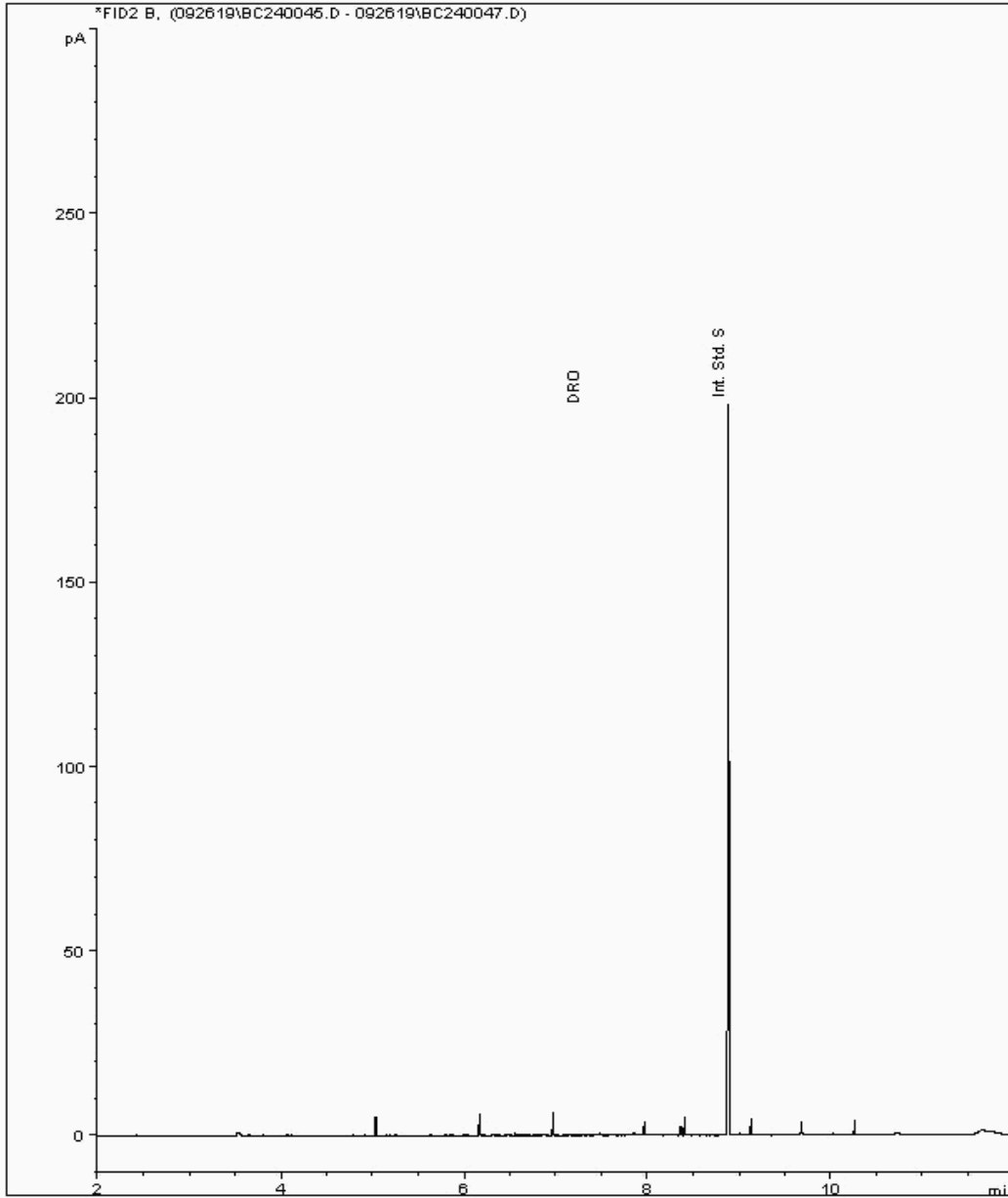
Analysis: EPH (DRO) (C10-C40) Aqueous (W)

Sample No : 20766015
Sample ID : GW03_09

Depth : 0.00 - 0.00

EPH Range Organics (C10 - C40)

Sample Identity: 19495208-
Date Acquired : 27/09/2019 10:08:43 PM
Units : mg/l





CERTIFICATE OF ANALYSIS

Validated

SDG:	190918-75	Client Reference:	GW Sept Part 1	Report Number:	524499
Location:	Docks Way	Order Number:	700142918	Superseded Report:	524488

Chromatogram

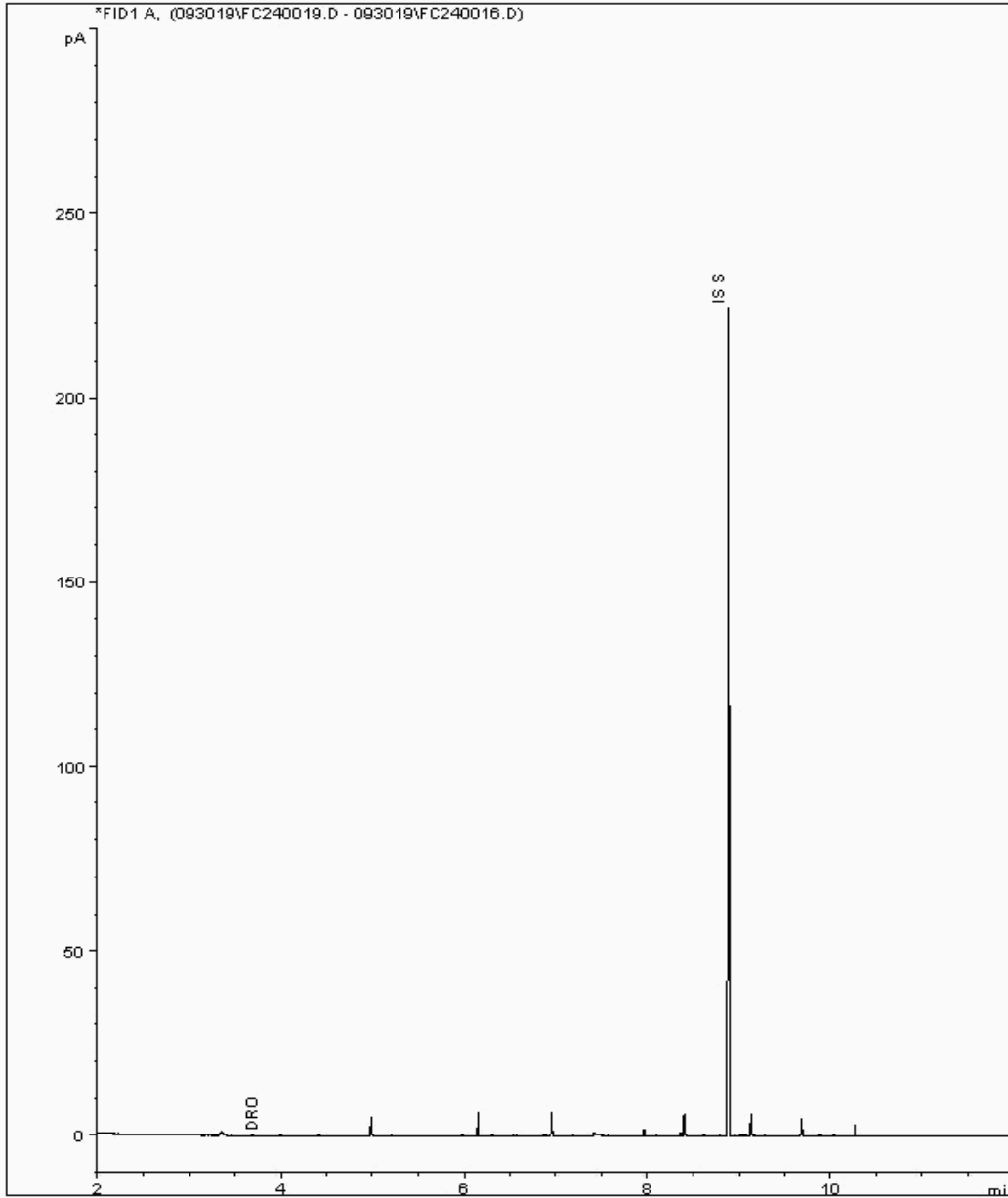
Analysis: EPH (DRO) (C10-C40) Aqueous (W)

Sample No : 20833790
Sample ID : GW06_36

Depth : 0.00 - 0.00

EPH Range Organics (C10 - C40)

Sample Identity: 19572753-
Date Acquired : 30/09/2019 21:39:43 PM
Units : ppm





CERTIFICATE OF ANALYSIS

SDG:	190918-75	Client Reference:	GW Sept Part 1	Report Number:	524499
Location:	Docks Way	Order Number:	700142918	Superseded Report:	524488

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 (2107)*.

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.