



Mouchel
3rd Floor
Station House
Mercury Court
Titheburn Street
Liverpool
L2 2QP

Attention: Neil Balderstone

CERTIFICATE OF ANALYSIS

Date: 28 October 2013
Customer: H_MOUCH_LIV
Sample Delivery Group (SDG): 131018-68
Your Reference: 1049672/004/001
Location: LIMERICK
Report No: 247643

We received 21 samples on Thursday October 17, 2013 and 21 of these samples were scheduled for analysis which was completed on Monday October 28, 2013. Accredited laboratory tests are defined within the report, but opinions, interpretations and on-site data expressed herein are outside the scope of ISO 17025 accreditation.

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

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

Approved By:

Sonia McWhan

Operations Manager





SDG: 131018-68
Job: H_MOUCH_LIV-2
Client Reference: 1049672/004/001

Location: LIMERICK
Customer: Mouchel
Attention: Neil Balderstone

Order Number: 4500117770
Report Number: 247643
Superseded Report:

Received Sample Overview

Lab Sample No(s)	Customer Sample Ref.	AGS Ref.	Depth (m)	Sampled Date
8290537	A1		3.00 - 3.00	16/10/2013
8290538	A3		2.00 - 2.00	16/10/2013
8290540	A4		2.00 - 2.00	16/10/2013
8290529	A9		2.20 - 2.20	16/10/2013
8290541	C2		1.50 - 1.50	16/10/2013
8290532	C7		5.00 - 5.00	16/10/2013
8290522	C11		1.50 - 1.50	16/10/2013
8290542	D1		3.00 - 3.00	16/10/2013
8290533	D5		2.10 - 2.10	16/10/2013
8290535	E8		3.00 - 3.00	16/10/2013
8290525	F11		4.00 - 4.00	16/10/2013
8290544	G2		4.00 - 4.00	16/10/2013
8290549	G3		3.50 - 3.50	16/10/2013
8290550	G4		4.00 - 4.00	16/10/2013
8290551	G5		7.00 - 7.00	16/10/2013
8290536	G8		2.00 - 2.00	16/10/2013
8290527	H12		2.00 - 2.00	16/10/2013
8290515	J10		0.10 - 0.10	16/10/2013
8290517	K1		2.50 - 2.50	16/10/2013
8290519	K5		0.75 - 0.75	16/10/2013
8290520	M3		4.00 - 4.00	16/10/2013

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



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LIQUID Results Legend X Test N No Determination Possible	Lab Sample No(s)		Customer Sample Reference		AGS Reference		Depth (m)		Container	
	8290535		E8				3.00 - 3.00		Vial (ALE297)	
	8290533		D5				2.10 - 2.10		H2SO4 (ALE244)	
	8290542		D1				3.00 - 3.00		11 Glass bottle (ALE)	
	8290522		C11				1.50 - 1.50		H2SO4 (ALE244)	
Ammoniacal Nitrogen	8290532		C7				5.00 - 5.00		Vial (ALE297)	
	8290541		C2				1.50 - 1.50		H2SO4 (ALE244)	
Anions by Kone (w)	8290529		A9				2.20 - 2.20		11 Glass bottle (ALE)	
	8290540		A4				2.00 - 2.00		H2SO4 (ALE244)	
Cyanide Comp/Free/Total/Thiocyanate	8290538		A3				2.00 - 2.00		11 Glass bottle (ALE)	
	8290537		A1				3.00 - 3.00		H2SO4 (ALE244)	
Dissolved Metals by ICP-MS									11 Glass bottle (ALE)	
									H2SO4 (ALE244)	
EPH CWG (Aliphatic) Aqueous GC (W)									11 Glass bottle (ALE)	
									H2SO4 (ALE244)	
EPH CWG (Aromatic) Aqueous GC (W)									11 Glass bottle (ALE)	
									H2SO4 (ALE244)	
GRO by GC-FID (W)									11 Glass bottle (ALE)	
									H2SO4 (ALE244)	
Hexavalent Chromium (w)									11 Glass bottle (ALE)	
									H2SO4 (ALE244)	
Mercury Dissolved									11 Glass bottle (ALE)	
									H2SO4 (ALE244)	
PAH Spec MS - Aqueous (W)									11 Glass bottle (ALE)	
									H2SO4 (ALE244)	
pH Value									11 Glass bottle (ALE)	
									H2SO4 (ALE244)	
Phenols by HPLC (W)									11 Glass bottle (ALE)	
									H2SO4 (ALE244)	
Sulphide									11 Glass bottle (ALE)	
									H2SO4 (ALE244)	
TPH CWG (W)									11 Glass bottle (ALE)	
									H2SO4 (ALE244)	
VOC MS (W)									11 Glass bottle (ALE)	
									H2SO4 (ALE244)	



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LIQUID Results Legend X Test N No Determination Possible	Lab Sample No(s)		Customer Sample Reference		AGS Reference		Depth (m)		Container	
	8290519		K5				0.75 - 0.75		Vial (ALE297)	
	8290517		K1				2.50 - 2.50		H2SO4 (ALE244)	
	8290515		J10				0.10 - 0.10		11 Glass bottle (ALE)	
	8290527		H12				2.00 - 2.00		H2SO4 (ALE244)	
Ammoniacal Nitrogen	All	NDPs: 0 Tests: 21								
Anions by Kone (w)	All	NDPs: 0 Tests: 21								
Cyanide Comp/Free/Total/Thiocyanate	All	NDPs: 0 Tests: 21								
Dissolved Metals by ICP-MS	All	NDPs: 0 Tests: 21								
EPH CWG (Aliphatic) Aqueous GC (W)	All	NDPs: 0 Tests: 21								
EPH CWG (Aromatic) Aqueous GC (W)	All	NDPs: 0 Tests: 21								
GRO by GC-FID (W)	All	NDPs: 0 Tests: 21								
Hexavalent Chromium (w)	All	NDPs: 0 Tests: 21								
Mercury Dissolved	All	NDPs: 0 Tests: 21								
PAH Spec MS - Aqueous (W)	All	NDPs: 0 Tests: 21								
pH Value	All	NDPs: 0 Tests: 21								
Phenols by HPLC (W)	All	NDPs: 0 Tests: 21								
Sulphide	All	NDPs: 1 Tests: 20								
TPH CWG (W)	All	NDPs: 0 Tests: 21								
VOC MS (W)	All	NDPs: 0 Tests: 10								



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LIQUID Results Legend X Test N No Determination Possible	Lab Sample No(s)		8290620			
	Customer Sample Reference		M3			
	AGS Reference					
	Depth (m)		4.00 - 4.00			
	Container		11 Glass bottle (ALE)	H2SO4 (ALE244)	Vial (ALE297)	
Ammoniacal Nitrogen	All	NDPs: 0 Tests: 21				X
Anions by Kone (w)	All	NDPs: 0 Tests: 21		X		
Cyanide Comp/Free/Total/Thiocyanate	All	NDPs: 0 Tests: 21	X			
Dissolved Metals by ICP-MS	All	NDPs: 0 Tests: 21		X		
EPH CWG (Aliphatic) Aqueous GC (W)	All	NDPs: 0 Tests: 21	X			
EPH CWG (Aromatic) Aqueous GC (W)	All	NDPs: 0 Tests: 21	X			
GRO by GC-FID (W)	All	NDPs: 0 Tests: 21				X
Hexavalent Chromium (w)	All	NDPs: 0 Tests: 21		X		
Mercury Dissolved	All	NDPs: 0 Tests: 21	X			
PAH Spec MS - Aqueous (W)	All	NDPs: 0 Tests: 21	X			
pH Value	All	NDPs: 0 Tests: 21		X		
Phenols by HPLC (W)	All	NDPs: 0 Tests: 21			X	
Sulphide	All	NDPs: 1 Tests: 20		X		
TPH CWG (W)	All	NDPs: 0 Tests: 21	X			
VOC MS (W)	All	NDPs: 0 Tests: 10				X



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Results Legend		Customer Sample R	A1	A3	A4	A9	C2	C7
#	ISO17025 accredited.	Depth (m) Sample Type Date Sampled Sample Time Date Received SDG Ref Lab Sample No.(s) AGS Reference	A1	A3	A4	A9	C2	C7
M	mCERTS accredited.		3.00 - 3.00	2.00 - 2.00	2.00 - 2.00	2.20 - 2.20	1.50 - 1.50	5.00 - 5.00
aq	Aqueous / settled sample.		Water(GW/SW)	Water(GW/SW)	Water(GW/SW)	Water(GW/SW)	Water(GW/SW)	Water(GW/SW)
diss.filt	Dissolved / filtered sample.		16/10/2013	16/10/2013	16/10/2013	16/10/2013	16/10/2013	16/10/2013
tot.unfilt	Total / unfiltered sample.		17/10/2013	17/10/2013	17/10/2013	17/10/2013	17/10/2013	17/10/2013
*	Subcontracted test.		131018-68	131018-68	131018-68	131018-68	131018-68	131018-68
**	% 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		8290537	8290538	8290540	8290529	8290541	8290532
(F)	Trigger breach confirmed							
1-4&5@	Sample deviation (see appendix)							
Component	LOD/Units	Method						
Ammoniacal Nitrogen as N	<0.2 mg/l	TM099	9.6	9.65	1.36	<0.2	0.298	32.9
			#	#	#	#	#	#
Ammoniacal Nitrogen as NH4	<0.3 mg/l	TM099	12.3	12.4	1.75	<0.3	0.383	42.3
			#	#	#	#	#	#
Sulphide	<0.01 mg/l	TM101	<0.01	<0.01	<0.01	<0.01	<0.01	
			#	#	#	#	#	
Arsenic (diss.filt)	<0.12 µg/l	TM152	7.18	37.2	4.49	0.889	1.91	12
			#	#	#	#	#	#
Cadmium (diss.filt)	<0.1 µg/l	TM152	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
			#	#	#	#	#	#
Chromium (diss.filt)	<0.22 µg/l	TM152	1.65	2.05	1.41	3.89	1.33	2.48
			#	#	#	#	#	#
Copper (diss.filt)	<0.85 µg/l	TM152	1.25	1.16	1.8	2.22	6.53	2.33
			#	#	#	#	#	#
Lead (diss.filt)	<0.02 µg/l	TM152	0.055	0.022	0.028	<0.02	0.111	0.232
			#	#	#	#	#	#
Nickel (diss.filt)	<0.15 µg/l	TM152	4.45	3.16	3.07	1.65	2.83	2.06
			#	#	#	#	#	#
Selenium (diss.filt)	<0.39 µg/l	TM152	1.18	0.572	1.07	1.8	5.1	29.8
			#	#	#	#	#	#
Zinc (diss.filt)	<0.41 µg/l	TM152	0.892	2.02	3.7	0.825	7.56	3.36
			#	#	#	#	#	#
Mercury (diss.filt)	<0.01 µg/l	TM183	<0.01	<0.01	<0.01	<0.01	<0.01	0.084
			#	#	#	#	#	#
Sulphate	<2 mg/l	TM184	334	312	218	499	43.9	16.5
			#	#	#	#	#	#
Cyanide, Total	<0.05 mg/l	TM227	0.795	0.308	0.235	<0.05	0.138	0.181
			♦ #	♦ #	♦ #	♦ #	♦ #	♦ #
Chromium, Hexavalent	<0.03 mg/l	TM241	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
			#	#	#	#	#	#
pH	<1 pH Units	TM256	8.07	8.31	7.92	8.05	8.06	8.34
			#	#	#	#	#	#
Resorcinol	<0.01 mg/l	TM259	<0.01	<0.01	<0.01	<0.01	<0.01	<0.05
Catechol	<0.01 mg/l	TM259	<0.01	<0.01	<0.01	<0.01	<0.01	<0.05
Phenol	<0.002 mg/l	TM259	0.17	0.04	<0.002	<0.002	<0.002	12.5
			#	#	#	#	#	#
Cresols	<0.006 mg/l	TM259	0.05	<0.006	<0.006	<0.006	<0.006	36.8
			#	#	#	#	#	#
Xylenols	<0.008 mg/l	TM259	0.14	0.03	<0.008	<0.008	<0.008	54.1
			#	#	#	#	#	#
1-Naphthol	<0.01 mg/l	TM259	0.03	0.02	<0.01	<0.01	<0.01	<0.05
2,3,5-Trimethylphenol	<0.003 mg/l	TM259	0.07	0.04	<0.003	<0.003	<0.003	<0.015
			#	#	#	#	#	#
2-Isopropylphenol	<0.006 mg/l	TM259	0.4	0.21	<0.006	<0.006	<0.006	31.3
			#	#	#	#	#	#
Phenols, Total Detected 5 speciated	<0.025 mg/l	TM259	0.83	0.32	<0.025	<0.025	<0.025	135



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Order Number: 4500117770
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Superseded Report:

Results Legend		Customer Sample R	C11	D1	D5	E8	F11	G2
#	ISO17025 accredited.	Depth (m) Sample Type Date Sampled Sample Time Date Received SDG Ref Lab Sample No.(s) AGS Reference	1.50 - 1.50	3.00 - 3.00	2.10 - 2.10	3.00 - 3.00	4.00 - 4.00	4.00 - 4.00
M	mCERTS accredited.		Water(GW/SW)	Water(GW/SW)	Water(GW/SW)	Water(GW/SW)	Water(GW/SW)	Water(GW/SW)
aq	Aqueous / settled sample.		16/10/2013	16/10/2013	16/10/2013	16/10/2013	16/10/2013	16/10/2013
diss.filt	Dissolved / filtered sample.							
tot.unfilt	Total / unfiltered sample.							
*	Subcontracted test.							
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery		17/10/2013	17/10/2013	17/10/2013	17/10/2013	17/10/2013	17/10/2013
(F)	Trigger breach confirmed		131018-68	131018-68	131018-68	131018-68	131018-68	131018-68
1-4&5@	Sample deviation (see appendix)		8290522	8290542	8290533	8290535	8290525	8290544
Component	LOD/Units	Method						
Ammoniacal Nitrogen as N	<0.2 mg/l	TM099	7.52	10.2	0.333	33.9	21.5	60.4
			#	#	#	#	#	#
Ammoniacal Nitrogen as NH4	<0.3 mg/l	TM099	9.67	13.1	0.428	43.6	27.6	77.7
			#	#	#	#	#	#
Sulphide	<0.01 mg/l	TM101	<0.01	194	0.038	<0.01	4.5	0.432
			#	#	#	#	#	#
Arsenic (diss.filt)	<0.12 µg/l	TM152	9.05	26.7	5.44	110	8.2	22.8
			#	#	#	#	#	#
Cadmium (diss.filt)	<0.1 µg/l	TM152	<0.1	<0.1	<0.1	0.109	<0.1	<0.1
			#	#	#	#	#	#
Chromium (diss.filt)	<0.22 µg/l	TM152	10.6	2.18	0.627	1.37	2.57	5.26
			#	#	#	#	#	#
Copper (diss.filt)	<0.85 µg/l	TM152	1.15	1.27	1.16	1.59	<0.85	1.9
			#	#	#	#	#	#
Lead (diss.filt)	<0.02 µg/l	TM152	0.083	0.071	0.813	0.057	0.048	<0.02
			#	#	#	#	#	#
Nickel (diss.filt)	<0.15 µg/l	TM152	1.53	2.82	0.884	23.8	3.24	3.27
			#	#	#	#	#	#
Selenium (diss.filt)	<0.39 µg/l	TM152	0.721	1.77	<0.39	10.9	<0.39	7.48
			#	#	#	#	#	#
Zinc (diss.filt)	<0.41 µg/l	TM152	0.878	0.563	1.67	20.6	0.494	1.93
			#	#	#	#	#	#
Mercury (diss.filt)	<0.01 µg/l	TM183	<0.01	<0.01	<0.01	0.0296	<0.01	0.037
			#	#	#	#	#	#
Sulphate	<2 mg/l	TM184	145	359	2.1	289	104	494
			#	#	#	#	#	#
Cyanide, Total	<0.05 mg/l	TM227	<0.05	1.17	<0.05	6.47	<0.05	0.761
			♦ #	♦ #	♦ #	♦ #	♦ #	♦ #
Chromium, Hexavalent	<0.03 mg/l	TM241	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
			#	#	#	#	#	#
pH	<1 pH Units	TM256	7.53	7.94	7.97	8.14	7.53	7.97
			#	#	#	#	#	#
Resorcinol	<0.01 mg/l	TM259	<0.01	<0.01	<0.01	<0.05	0.02	0.1
Catechol	<0.01 mg/l	TM259	<0.01	<0.01	<0.01	0.11	<0.01	<0.01
Phenol	<0.002 mg/l	TM259	0.09	0.04	0.01	21.9	0.18	3.05
			#	#	#	#	#	#
Cresols	<0.006 mg/l	TM259	0.86	0.07	<0.006	39.4	0.38	7.08
			#	#	#	#	#	#
Xylenols	<0.008 mg/l	TM259	0.15	0.49	0.01	32.1	0.66	13.9
			#	#	#	#	#	#
1-Naphthol	<0.01 mg/l	TM259	0.01	0.09	<0.01	<0.05	<0.01	0.24
2,3,5-Trimethylphenol	<0.003 mg/l	TM259	<0.003	<0.003	<0.003	<0.015	<0.003	<0.003
			#	#	#	#	#	#
2-Isopropylphenol	<0.006 mg/l	TM259	0.22	1.06	0.01	10.6	0.57	9.77
			#	#	#	#	#	#
Phenols, Total Detected 5 speciated	<0.025 mg/l	TM259	1.32	1.66	0.03	104	1.79	33.8



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Results Legend		Customer Sample R	G3	G4	G5	G8	H12	J10
#	ISO17025 accredited.	Depth (m) Sample Type Date Sampled Sample Time Date Received SDG Ref Lab Sample No.(s) AGS Reference	G3	G4	G5	G8	H12	J10
M	mCERTS accredited.		3.50 - 3.50	4.00 - 4.00	7.00 - 7.00	2.00 - 2.00	2.00 - 2.00	0.10 - 0.10
aq	Aqueous / settled sample.		Water(GW/SW)	Water(GW/SW)	Water(GW/SW)	Water(GW/SW)	Water(GW/SW)	Water(GW/SW)
diss.filt	Dissolved / filtered sample.		16/10/2013	16/10/2013	16/10/2013	16/10/2013	16/10/2013	16/10/2013
tot.unfilt	Total / unfiltered sample.		17/10/2013	17/10/2013	17/10/2013	17/10/2013	17/10/2013	17/10/2013
*	Subcontracted test.		131018-68	131018-68	131018-68	131018-68	131018-68	131018-68
**	% 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		8290549	8290550	8290551	8290536	8290527	8290515
(F)	Trigger breach confirmed							
1-4&\$@	Sample deviation (see appendix)							
Component	LOD/Units	Method						
Ammoniacal Nitrogen as N	<0.2 mg/l	TM099	3.2	2.53	3.22	5.46	18.2	0.202
			#	#	#	#	#	#
Ammoniacal Nitrogen as NH4	<0.3 mg/l	TM099	4.11	3.25	4.14	7.02	23.4	<0.3
			#	#	#	#	#	#
Sulphide	<0.01 mg/l	TM101	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
			#	#	#	#	#	#
Arsenic (diss.filt)	<0.12 µg/l	TM152	1.31	6.51	1.83	3.07	4.87	1.01
			#	#	#	#	#	#
Cadmium (diss.filt)	<0.1 µg/l	TM152	<0.1	<0.1	<0.1	<0.1	<0.1	0.108
			#	#	#	#	#	#
Chromium (diss.filt)	<0.22 µg/l	TM152	1.44	1.45	18.1	1.03	3.32	9.47
			#	#	#	#	#	#
Copper (diss.filt)	<0.85 µg/l	TM152	1.73	1.68	7.11	1.42	<0.85	7.88
			#	#	#	#	#	#
Lead (diss.filt)	<0.02 µg/l	TM152	0.179	0.946	0.391	0.107	<0.02	0.162
			#	#	#	#	#	#
Nickel (diss.filt)	<0.15 µg/l	TM152	3.56	3.88	7.14	5.37	1.84	3.35
			#	#	#	#	#	#
Selenium (diss.filt)	<0.39 µg/l	TM152	1.39	2.09	6.82	1.7	0.543	0.904
			#	#	#	#	#	#
Zinc (diss.filt)	<0.41 µg/l	TM152	3.05	5.64	4.66	0.89	1.3	3.08
			#	#	#	#	#	#
Mercury (diss.filt)	<0.01 µg/l	TM183	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
			#	#	#	#	#	#
Sulphate	<2 mg/l	TM184	224	159	820	209	130	146
			#	#	#	#	#	#
Cyanide, Total	<0.05 mg/l	TM227	1.1	0.207	1.26	0.256	<0.05	<0.05
			♦ #	♦ #	♦ #	♦ #	♦ #	♦ #
Chromium, Hexavalent	<0.03 mg/l	TM241	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
			#	#	#	#	#	#
pH	<1 pH Units	TM256	7.49	7.46	7.2	7.75	7.74	7.71
			#	#	#	#	#	#
Resorcinol	<0.01 mg/l	TM259	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Catechol	<0.01 mg/l	TM259	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Phenol	<0.002 mg/l	TM259	0.01	0.01	<0.002	0.61	0.02	<0.002
			#	#	#	#	#	#
Cresols	<0.006 mg/l	TM259	0.04	0.03	<0.006	0.58	<0.006	<0.006
			#	#	#	#	#	#
Xylenols	<0.008 mg/l	TM259	<0.008	0.04	0.02	0.78	<0.008	<0.008
			#	#	#	#	#	#
1-Naphthol	<0.01 mg/l	TM259	<0.01	0.01	<0.01	<0.01	<0.01	<0.01
2,3,5-Trimethylphenol	<0.003 mg/l	TM259	<0.003	<0.003	0.02	<0.003	<0.003	<0.003
			#	#	#	#	#	#
2-Isopropylphenol	<0.006 mg/l	TM259	<0.006	0.13	0.02	0.55	<0.006	<0.006
			#	#	#	#	#	#
Phenols, Total Detected 5 speciated	<0.025 mg/l	TM259	0.05	0.21	0.06	2.52	<0.025	<0.025

Order Number: 4500117770
Report Number: 247643
Superseded Report:

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PAH Spec MS - Aqueous (W)

Order Number: 4500117770
Report Number: 247643
Superseded Report:

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Order Number: 4500117770
Report Number: 247643
Superseded Report:

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Order Number: 4500117770
Report Number: 247643
Superseded Report:

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CERTIFICATE OF ANALYSIS

SDG: 131018-68
Job: H_MOUCH_LIV-2
Client Reference: 1049672/004/001

Location: LIMERICK
Customer: Mouchel
Attention: Neil Balderstone

Order Number: 4500117770
Report Number: 247643
Superseded Report:

TPH CWG (W)

Results Legend		Customer Sample R	A1	A3	A4	A9	C2	C7
#	ISO17025 accredited.	Depth (m) Sample Type Date Sampled Sample Time Date Received SDG Ref Lab Sample No.(s) AGS Reference	A1	A3	A4	A9	C2	C7
M	mCERTS accredited.							
aq	Aqueous / settled sample.							
diss.filt	Dissolved / filtered sample.							
tot.unfilt	Total / unfiltered sample.							
*	Subcontracted test.							
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery							
(F)	Trigger breach confirmed							
1-4&\$@	Sample deviation (see appendix)							
Component		LOD/Units	Method					
GRO Surrogate % recovery**	%	TM245	109	103	105	106	106	91
GRO >C5-C12	<50 µg/l	TM245	2130	1130	<50	<50	<50	48900
			#	#	#	#	#	1 #
Methyl tertiary butyl ether (MTBE)	<3 µg/l	TM245	<3	<3	<3	<3	<3	<15
			#	#	#	#	#	1 #
Benzene	<7 µg/l	TM245	438	<7	<7	<7	<7	11900
			#	#	#	#	#	1 #
Toluene	<4 µg/l	TM245	48	<4	<4	<4	<4	6000
			#	#	#	#	#	1 #
Ethylbenzene	<5 µg/l	TM245	114	<5	<5	<5	<5	298
			#	#	#	#	#	1 #
m,p-Xylene	<8 µg/l	TM245	56	30	<8	<8	<8	2380
			#	#	#	#	#	1 #
o-Xylene	<3 µg/l	TM245	80	6	<3	<3	<3	782
			#	#	#	#	#	1 #
Sum of detected Xylenes	<11 µg/l	TM245	136	36	<11	<11	<11	3160
								1
Sum of detected BTEX	<28 µg/l	TM245	736	36	<28	<28	<28	21400
								1
Aliphatics >C5-C6	<10 µg/l	TM245	<10	<10	<10	<10	<10	67
								1
Aliphatics >C6-C8	<10 µg/l	TM245	51	57	<10	<10	<10	708
								1
Aliphatics >C8-C10	<10 µg/l	TM245	154	109	<10	<10	<10	3020
								1
Aliphatics >C10-C12	<10 µg/l	TM245	643	507	18	<10	<10	13100
								1
Aliphatics >C12-C16 (aq)	<10 µg/l	TM174	<10	<10	118	<10	<10	577
Aliphatics >C16-C21 (aq)	<10 µg/l	TM174	<10	<10	192	<10	<10	365
Aliphatics >C21-C35 (aq)	<10 µg/l	TM174	<10	<10	98	<10	<10	592
Total Aliphatics >C12-C35 (aq)	<10 µg/l	TM174	<10	<10	408	<10	<10	1530
Aromatics >EC5-EC7	<10 µg/l	TM245	438	<10	<10	<10	<10	11900
								1
Aromatics >EC7-EC8	<10 µg/l	TM245	48	<10	<10	<10	<10	6000
								1
Aromatics >EC8-EC10	<10 µg/l	TM245	353	109	<10	<10	<10	5470
								1
Aromatics >EC10-EC12	<10 µg/l	TM245	429	338	12	<10	<10	8710
								1
Aromatics >EC12-EC16 (aq)	<10 µg/l	TM174	391	207	58	<10	24	12600
Aromatics >EC16-EC21 (aq)	<10 µg/l	TM174	166	126	120	<10	50	5060
Aromatics >EC21-EC35 (aq)	<10 µg/l	TM174	52	31	109	<10	123	5060
Total Aromatics >EC12-EC35 (aq)	<10 µg/l	TM174	609	364	287	<10	197	22700
Total Aliphatics & Aromatics >C5-35 (aq)	<10 µg/l	TM174	2730	1490	744	<10	201	73100



CERTIFICATE OF ANALYSIS

SDG: 131018-68
Job: H_MOUCH_LIV-2
Client Reference: 1049672/004/001

Location: LIMERICK
Customer: Mouchel
Attention: Neil Balderstone

Order Number: 4500117770
Report Number: 247643
Superseded Report:

TPH CWG (W)

Results Legend		Customer Sample R	C11	D1	D5	E8	F11	G2
#	ISO17025 accredited.	Depth (m) Sample Type Date Sampled Sample Time Date Received SDG Ref Lab Sample No.(s) AGS Reference	C11	D1	D5	E8	F11	G2
M	mCERTS accredited.		1.50 - 1.50	3.00 - 3.00	2.10 - 2.10	3.00 - 3.00	4.00 - 4.00	4.00 - 4.00
aq	Aqueous / settled sample.		Water(GW/SW)	Water(GW/SW)	Water(GW/SW)	Water(GW/SW)	Water(GW/SW)	Water(GW/SW)
diss.filt	Dissolved / filtered sample.		16/10/2013	16/10/2013	16/10/2013	16/10/2013	16/10/2013	16/10/2013
tot.unfilt	Total / unfiltered sample.		17/10/2013	17/10/2013	17/10/2013	17/10/2013	17/10/2013	17/10/2013
*	Subcontracted test.		131018-68	131018-68	131018-68	131018-68	131018-68	131018-68
**	% 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		8290522	8290542	8290533	8290535	8290525	8290544
(F)	Trigger breach confirmed							
1-4&\$@	Sample deviation (see appendix)							
Component	LOD/Units	Method						
GRO Surrogate % recovery**	%	TM245	109	75	103	100	104	83
GRO >C5-C12	<50 µg/l	TM245	2300 #	13900 #	<50 #	9410 #	805 #	19600 #
Methyl tertiary butyl ether (MTBE)	<3 µg/l	TM245	<3 #	5 #	<3 #	<3 #	<3 #	<6 #
Benzene	<7 µg/l	TM245	28 #	636 #	<7 #	3830 #	181 #	5010 #
Toluene	<4 µg/l	TM245	189 #	492 #	<4 #	1090 #	158 #	3420 #
Ethylbenzene	<5 µg/l	TM245	34 #	223 #	<5 #	50 #	21 #	412 #
m,p-Xylene	<8 µg/l	TM245	94 #	753 #	<8 #	367 #	76 #	1560 #
o-Xylene	<3 µg/l	TM245	77 #	373 #	<3 #	142 #	42 #	864 #
Sum of detected Xylenes	<11 µg/l	TM245	171	1130	<11	509	118	2420
Sum of detected BTEX	<28 µg/l	TM245	422	2480	<28	5480	478	11300
Aliphatics >C5-C6	<10 µg/l	TM245	<10	17	<10	36	<10	39
Aliphatics >C6-C8	<10 µg/l	TM245	22	285	<10	239	14	283
Aliphatics >C8-C10	<10 µg/l	TM245	205	1920	<10	457	48	1210
Aliphatics >C10-C12	<10 µg/l	TM245	906	4750	<10	1740	137	3580
Aliphatics >C12-C16 (aq)	<10 µg/l	TM174	56	16	<10	<10	<10	<10
Aliphatics >C16-C21 (aq)	<10 µg/l	TM174	34	12	26	<10	<10	<10
Aliphatics >C21-C35 (aq)	<10 µg/l	TM174	98	<10	92	<10	49	<10
Total Aliphatics >C12-C35 (aq)	<10 µg/l	TM174	188	28	118	<10	49	<10
Aromatics >EC5-EC7	<10 µg/l	TM245	28	636	<10	3830	181	5010
Aromatics >EC7-EC8	<10 µg/l	TM245	189	492	<10	1090	158	3420
Aromatics >EC8-EC10	<10 µg/l	TM245	341	2630	<10	864	171	3650
Aromatics >EC10-EC12	<10 µg/l	TM245	604	3160	<10	1160	91	2390
Aromatics >EC12-EC16 (aq)	<10 µg/l	TM174	382	1750	29	6060	218	5850
Aromatics >EC16-EC21 (aq)	<10 µg/l	TM174	151	777	81	497	32	458
Aromatics >EC21-EC35 (aq)	<10 µg/l	TM174	110	244	323	185	78	95
Total Aromatics >EC12-EC35 (aq)	<10 µg/l	TM174	643	2770	433	6740	328	6400
Total Aliphatics & Aromatics >C5-35 (aq)	<10 µg/l	TM174	3130	16700	556	16200	1180	26000



CERTIFICATE OF ANALYSIS

SDG: 131018-68
Job: H_MOUCH_LIV-2
Client Reference: 1049672/004/001

Location: LIMERICK
Customer: Mouchel
Attention: Neil Balderstone

Order Number: 4500117770
Report Number: 247643
Superseded Report:

TPH CWG (W)

Results Legend		Customer Sample R	G3	G4	G5	G8	H12	J10
#	ISO17025 accredited.	Depth (m) Sample Type Date Sampled Sample Time Date Received SDG Ref Lab Sample No.(s) AGS Reference	G3	G4	G5	G8	H12	J10
M	mCERTS accredited.		3.50 - 3.50	4.00 - 4.00	7.00 - 7.00	2.00 - 2.00	2.00 - 2.00	0.10 - 0.10
aq	Aqueous / settled sample.		Water(GW/SW)	Water(GW/SW)	Water(GW/SW)	Water(GW/SW)	Water(GW/SW)	Water(GW/SW)
diss.filt	Dissolved / filtered sample.		16/10/2013	16/10/2013	16/10/2013	16/10/2013	16/10/2013	16/10/2013
tot.unfilt	Total / unfiltered sample.		17/10/2013	17/10/2013	17/10/2013	17/10/2013	17/10/2013	17/10/2013
*	Subcontracted test.		131018-68	131018-68	131018-68	131018-68	131018-68	131018-68
**	% 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		8290549	8290550	8290551	8290536	8290527	8290515
(F)	Trigger breach confirmed							
1-4&\$@	Sample deviation (see appendix)							
Component	LOD/Units	Method						
GRO Surrogate % recovery**	%	TM245	98	107	97	108	107	82
GRO >C5-C12	<50 µg/l	TM245	<50 #	776 #	107 #	304 #	127 #	<50 #
Methyl tertiary butyl ether (MTBE)	<3 µg/l	TM245	<3 #	<3 #	<3 #	<3 #	<3 #	<3 #
Benzene	<7 µg/l	TM245	<7 #	67 #	<7 #	39 #	16 #	<7 #
Toluene	<4 µg/l	TM245	<4 #	30 #	<4 #	27 #	<4 #	<4 #
Ethylbenzene	<5 µg/l	TM245	<5 #	<5 #	<5 #	7 #	<5 #	<5 #
m,p-Xylene	<8 µg/l	TM245	<8 #	86 #	<8 #	48 #	<8 #	<8 #
o-Xylene	<3 µg/l	TM245	<3 #	112 #	3 #	25 #	<3 #	<3 #
Sum of detected Xylenes	<11 µg/l	TM245	<11	198	<11	73	<11	<11
Sum of detected BTEX	<28 µg/l	TM245	<28	295	<28	146	<28	<28
Aliphatics >C5-C6	<10 µg/l	TM245	<10	<10	<10	<10	<10	<10
Aliphatics >C6-C8	<10 µg/l	TM245	<10	39	<10	13	10	<10
Aliphatics >C8-C10	<10 µg/l	TM245	<10	100	16	37	<10	<10
Aliphatics >C10-C12	<10 µg/l	TM245	<10	162	38	48	47	<10
Aliphatics >C12-C16 (aq)	<10 µg/l	TM174	<10	46	12	<10	<10	<10
Aliphatics >C16-C21 (aq)	<10 µg/l	TM174	<10	71	13	<10	<10	<10
Aliphatics >C21-C35 (aq)	<10 µg/l	TM174	51	153	<10	<10	<10	<10
Total Aliphatics >C12-C35 (aq)	<10 µg/l	TM174	51	270	25	<10	<10	<10
Aromatics >EC5-EC7	<10 µg/l	TM245	<10	67	<10	39	16	<10
Aromatics >EC7-EC8	<10 µg/l	TM245	<10	30	<10	27	<10	<10
Aromatics >EC8-EC10	<10 µg/l	TM245	<10	264	16	105	<10	<10
Aromatics >EC10-EC12	<10 µg/l	TM245	<10	108	26	32	31	<10
Aromatics >EC12-EC16 (aq)	<10 µg/l	TM174	22	287	22	78	54	<10
Aromatics >EC16-EC21 (aq)	<10 µg/l	TM174	52	721	74	58	42	<10
Aromatics >EC21-EC35 (aq)	<10 µg/l	TM174	286	3220	358	75	22	<10
Total Aromatics >EC12-EC35 (aq)	<10 µg/l	TM174	360	4230	454	211	118	<10
Total Aliphatics & Aromatics >C5-35 (aq)	<10 µg/l	TM174	412	5270	587	515	245	<10



CERTIFICATE OF ANALYSIS

SDG: 131018-68
Job: H_MOUCH_LIV-2
Client Reference: 1049672/004/001

Location: LIMERICK
Customer: Mouchel
Attention: Neil Balderstone

Order Number: 4500117770
Report Number: 247643
Superseded Report:

TPH CWG (W)

Results Legend		Customer Sample R	K1	K5	M3			
#	ISO17025 accredited.							
M	mCERTS accredited.	Depth (m) Sample Type Date Sampled Sample Time Date Received SDG Ref Lab Sample No.(s) AGS Reference	2.50 - 2.50 Water(GW/SW) 16/10/2013 17/10/2013 131018-68 8290517	0.75 - 0.75 Water(GW/SW) 16/10/2013 17/10/2013 131018-68 8290519	4.00 - 4.00 Water(GW/SW) 16/10/2013 17/10/2013 131018-68 8290520			
aq	Aqueous / settled sample.							
diss.filt	Dissolved / filtered sample.							
tot.unfilt	Total / unfiltered sample.							
*	Subcontracted test.							
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery							
(F)	Trigger breach confirmed							
1-4&\$@	Sample deviation (see appendix)							
Component	LOD/Units	Method						
GRO Surrogate % recovery**	%	TM245	91	123	109			
GRO >C5-C12	<50 µg/l	TM245	<50 #	24500 #	310 #			
Methyl tertiary butyl ether (MTBE)	<3 µg/l	TM245	<3 #	<6 #	<3 #			
Benzene	<7 µg/l	TM245	<7 #	8250 #	<7 #			
Toluene	<4 µg/l	TM245	<4 #	3490 #	<4 #			
Ethylbenzene	<5 µg/l	TM245	<5 #	175 #	<5 #			
m,p-Xylene	<8 µg/l	TM245	<8 #	1130 #	<8 #			
o-Xylene	<3 µg/l	TM245	<3 #	485 #	<3 #			
Sum of detected Xylenes	<11 µg/l	TM245	<11	1620	<11			
Sum of detected BTEX	<28 µg/l	TM245	<28	13500	<28			
Aliphatics >C5-C6	<10 µg/l	TM245	<10	91	<10			
Aliphatics >C6-C8	<10 µg/l	TM245	<10	567	14			
Aliphatics >C8-C10	<10 µg/l	TM245	<10	1370	23			
Aliphatics >C10-C12	<10 µg/l	TM245	<10	4830	150			
Aliphatics >C12-C16 (aq)	<10 µg/l	TM174	<10	42	<10			
Aliphatics >C16-C21 (aq)	<10 µg/l	TM174	<10	34	<10			
Aliphatics >C21-C35 (aq)	<10 µg/l	TM174	<10	54	<10			
Total Aliphatics >C12-C35 (aq)	<10 µg/l	TM174	<10	130	<10			
Aromatics >EC5-EC7	<10 µg/l	TM245	<10	8250	<10			
Aromatics >EC7-EC8	<10 µg/l	TM245	<10	3490	<10			
Aromatics >EC8-EC10	<10 µg/l	TM245	<10	2700	16			
Aromatics >EC10-EC12	<10 µg/l	TM245	<10	3220	100			
Aromatics >EC12-EC16 (aq)	<10 µg/l	TM174	<10	11200	<10			
Aromatics >EC16-EC21 (aq)	<10 µg/l	TM174	22	1090	<10			
Aromatics >EC21-EC35 (aq)	<10 µg/l	TM174	74	476	<10			
Total Aromatics >EC12-EC35 (aq)	<10 µg/l	TM174	96	12800	<10			
Total Aliphatics & Aromatics >C5-35 (aq)	<10 µg/l	TM174	96	37400	308			



CERTIFICATE OF ANALYSIS

SDG: 131018-68
Job: H_MOUCH_LIV-2
Client Reference: 1049672/004/001

Location: LIMERICK
Customer: Mouchel
Attention: Neil Balderstone

Order Number: 4500117770
Report Number: 247643
Superseded Report:

VOC MS (W)

Results Legend		Customer Sample R	A1		A3		A4		C7		D1		G2	
#	ISO17025 accredited.		3.00 - 3.00		2.00 - 2.00		2.00 - 2.00		5.00 - 5.00		3.00 - 3.00		4.00 - 4.00	
M	mCERTS accredited.	Depth (m) Sample Type Date Sampled Sample Time Date Received SDG Ref Lab Sample No.(s) AGS Reference	Water(GW/SW) 16/10/2013		Water(GW/SW) 16/10/2013		Water(GW/SW) 16/10/2013		Water(GW/SW) 16/10/2013		Water(GW/SW) 16/10/2013		Water(GW/SW) 16/10/2013	
aq	Aqueous / settled sample.		17/10/2013		17/10/2013		17/10/2013		17/10/2013		17/10/2013		17/10/2013	
diss.filt	Dissolved / filtered sample.		131018-68		131018-68		131018-68		131018-68		131018-68		131018-68	
tot.unfilt	Total / unfiltered sample.		8290537		8290538		8290540		8290532		8290542		8290544	
*	Subcontracted test.													
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery													
(F)	Trigger breach confirmed													
1-4&*\$@	Sample deviation (see appendix)													
Component	LOD/Units	Method												
Dibromofluoromethane**	%	TM208	108		107		106		108		108		104	
Toluene-d8**	%	TM208	97.7		98.2		99.3		92.2		95.3		98.4	
4-Bromofluorobenzene**	%	TM208	102		99.1		98.8		80.2		92.2		98.2	
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		4.11		4.87	
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	480		<1		<1		15700		737		5290	
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	49.5		<1		<1		7400		555		3480	
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

SDG: 131018-68
Job: H_MOUCH_LIV-2
Client Reference: 1049672/004/001

Location: LIMERICK
Customer: Mouchel
Attention: Neil Balderstone

Order Number: 4500117770
Report Number: 247643
Superseded Report:

VOC MS (W)

Results Legend			Customer Sample R Depth (m) Sample Type Date Sampled Sample Time Date Received SDG Ref Lab Sample No.(s) AGS Reference	A1	A3	A4	C7	D1	G2
#	ISO17025 accredited.			3.00 - 3.00	2.00 - 2.00	2.00 - 2.00	5.00 - 5.00	3.00 - 3.00	4.00 - 4.00
M	mCERTS accredited.			Water(GW/SW)	Water(GW/SW)	Water(GW/SW)	Water(GW/SW)	Water(GW/SW)	Water(GW/SW)
aq	Aqueous / settled sample.			16/10/2013	16/10/2013	16/10/2013	16/10/2013	16/10/2013	16/10/2013
diss.filt	Dissolved / filtered sample.								
tot.unfilt	Total / unfiltered sample.			17/10/2013	17/10/2013	17/10/2013	17/10/2013	17/10/2013	17/10/2013
*	Subcontracted test.			131018-68	131018-68	131018-68	131018-68	131018-68	131018-68
**	% 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			8290537	8290538	8290540	8290532	8290542	8290544
(F)	Trigger breach confirmed								
1-4&5@	Sample deviation (see appendix)								
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	113 #	<1 #	<1 #	515 #	301 #	470 #	
m,p-Xylene	<1 µg/l	TM208	56.7 #	26.7 #	<1 #	2650 #	1030 #	1390 #	
o-Xylene	<1 µg/l	TM208	80.7 #	4.53 #	<1 #	990 #	540 #	712 #	
Styrene	<1 µg/l	TM208	<1 #	<1 #	<1 #	449 #	<1 #	<1 #	
Bromoform	<1 µg/l	TM208	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #	
Isopropylbenzene	<1 µg/l	TM208	11.2 #	<1 #	<1 #	29.2 #	28.1 #	25.6 #	
1,1,2,2-Tetrachloroethane	<1 µg/l	TM208	<1	<1	<1	<1	<1	<1	
1,2,3-Trichloropropane	<1 µg/l	TM208	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
Bromobenzene	<1 µg/l	TM208	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
Propylbenzene	<1 µg/l	TM208	14 #	<1 #	<1 #	59.7 #	46.5 #	31.5 #	
2-Chlorotoluene	<1 µg/l	TM208	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
1,3,5-Trimethylbenzene	<1 µg/l	TM208	5.71 #	2.44 #	<1 #	325 #	151 #	94.3 #	
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	29 #	10 #	<1 #	602 #	449 #	379 #	
sec-Butylbenzene	<1 µg/l	TM208	<1 #	<1 #	<1 #	<1 #	10.5 #	<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	
1,2-Dibromo-3-chloroprop ane	<1 µg/l	TM208	<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	276 #	88.9 #	<1 #	24100 #	4440 #	2680 #	

Order Number: 4500117770
Report Number: 247643
Superseded Report:

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CERTIFICATE OF ANALYSIS

SDG: 131018-68
Job: H_MOUCH_LIV-2
Client Reference: 1049672/004/001

Location: LIMERICK
Customer: Mouchel
Attention: Neil Balderstone

Order Number: 4500117770
Report Number: 247643
Superseded Report:

VOC MS (W)

Results Legend		Customer Sample R	G4	G5	K5	M3		
#	ISO17025 accredited.							
M	mCERTS accredited.	Depth (m) Sample Type Date Sampled Sample Time Date Received SDG Ref Lab Sample No.(s) AGS Reference	4.00 - 4.00 Water(GW/SW) 16/10/2013 17/10/2013 131018-68 8290550	7.00 - 7.00 Water(GW/SW) 16/10/2013 17/10/2013 131018-68 8290551	0.75 - 0.75 Water(GW/SW) 16/10/2013 17/10/2013 131018-68 8290519	4.00 - 4.00 Water(GW/SW) 16/10/2013 17/10/2013 131018-68 8290520		
aq	Aqueous / settled sample.							
diss.filt	Dissolved / filtered sample.							
tot.unfilt	Total / unfiltered sample.							
*	Subcontracted test.							
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery							
(F)	Trigger breach confirmed							
1-4	@	Sample deviation (see appendix)							
Component	LOD/Units	Method						
Dibromofluoromethane**	%	TM208	105	118	116	115		
Toluene-d8**	%	TM208	93.7	98.1	97.6	95.4		
4-Bromofluorobenzene**	%	TM208	108	94.2	88.5	96.7		
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	2.96	<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	62.1	<1	6500	1.55		
Trichloroethene	<1 µg/l	TM208	<1	<1	4.45	<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	26	<1	2710	<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

SDG: 131018-68
Job: H_MOUCH_LIV-2
Client Reference: 1049672/004/001

Location: LIMERICK
Customer: Mouchel
Attention: Neil Balderstone

Order Number: 4500117770
Report Number: 247643
Superseded Report:

VOC MS (W)

Results Legend			Customer Sample R		G4	G5	K5	M3		
#	ISO17025 accredited.		Depth (m) Sample Type Date Sampled Sample Time Date Received SDG Ref Lab Sample No.(s) AGS Reference		4.00 - 4.00	7.00 - 7.00	0.75 - 0.75	4.00 - 4.00		
M	mCERTS accredited.				Water(GW/SW)	Water(GW/SW)	Water(GW/SW)	Water(GW/SW)		
aq	Aqueous / settled sample.				16/10/2013	16/10/2013	16/10/2013	16/10/2013		
dis.filt	Dissolved / filtered sample.									
tot.unfilt	Total / unfiltered sample.				17/10/2013	17/10/2013	17/10/2013	17/10/2013		
*	Subcontracted test.				131018-68	131018-68	131018-68	131018-68		
**	% 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				8290550	8290551	8290519	8290520		
(F)	Trigger breach confirmed									
1-4&5@	Sample deviation (see appendix)									
Component	LOD/Units	Method								
1,3-Dichloropropane	<1 µg/l	TM208			<1	<1	<1	<1		
					#	#	#	#		
Tetrachloroethene	<1 µg/l	TM208			<1	<1	1.71	<1		
					#	#	#	#		
Dibromochloromethane	<1 µg/l	TM208			<1	<1	<1	<1		
					#	#	#	#		
1,2-Dibromoethane	<1 µg/l	TM208			<1	<1	<1	<1		
					#	#	#	#		
Chlorobenzene	<1 µg/l	TM208			<1	<1	<1	<1		
					#	#	#	#		
1,1,1,2-Tetrachloroethane	<1 µg/l	TM208			<1	<1	<1	<1		
					#	#	#	#		
Ethylbenzene	<1 µg/l	TM208			<1	<1	106	<1		
					#	#	#	#		
m,p-Xylene	<1 µg/l	TM208			51.7	1.91	694	<1		
					#	#	#	#		
o-Xylene	<1 µg/l	TM208			105	3.82	302	<1		
					#	#	#	#		
Styrene	<1 µg/l	TM208			<1	<1	177	<1		
					#	#	#	#		
Bromoform	<1 µg/l	TM208			<1	<1	<1	<1		
					#	#	#	#		
Isopropylbenzene	<1 µg/l	TM208			<1	<1	5.18	<1		
					#	#	#	#		
1,1,2,2-Tetrachloroethane	<1 µg/l	TM208			<1	<1	<1	<1		
1,2,3-Trichloropropane	<1 µg/l	TM208			<1	<1	<1	<1		
					#	#	#	#		
Bromobenzene	<1 µg/l	TM208			<1	<1	<1	<1		
					#	#	#	#		
Propylbenzene	<1 µg/l	TM208			<1	<1	8.4	<1		
					#	#	#	#		
2-Chlorotoluene	<1 µg/l	TM208			<1	<1	<1	<1		
					#	#	#	#		
1,3,5-Trimethylbenzene	<1 µg/l	TM208			36.2	<1	40.6	<1		
					#	#	#	#		
4-Chlorotoluene	<1 µg/l	TM208			<1	<1	<1	<1		
					#	#	#	#		
tert-Butylbenzene	<1 µg/l	TM208			<1	<1	<1	<1		
					#	#	#	#		
1,2,4-Trimethylbenzene	<1 µg/l	TM208			2.39	1.59	115	<1		
					#	#	#	#		
sec-Butylbenzene	<1 µg/l	TM208			<1	<1	<1	<1		
					#	#	#	#		
4-iso-Propyltoluene	<1 µg/l	TM208			<1	<1	<1	<1		
					#	#	#	#		
1,3-Dichlorobenzene	<1 µg/l	TM208			<1	<1	<1	<1		
					#	#	#	#		
1,4-Dichlorobenzene	<1 µg/l	TM208			<1	<1	<1	<1		
					#	#	#	#		
n-Butylbenzene	<1 µg/l	TM208			<1	<1	<1	<1		
					#	#	#	#		
1,2-Dichlorobenzene	<1 µg/l	TM208			<1	<1	<1	<1		
1,2-Dibromo-3-chloroprop ane	<1 µg/l	TM208			<1	<1	<1	<1		
1,2,4-Trichlorobenzene	<1 µg/l	TM208			<1	<1	<1	<1		
					#	#	#	#		
Hexachlorobutadiene	<1 µg/l	TM208			<1	<1	<1	<1		
					#	#	#	#		
tert-Amyl methyl ether (TAME)	<1 µg/l	TM208			<1	<1	<1	<1		
					#	#	#	#		
Naphthalene	<1 µg/l	TM208			<1	5.39	3590	<1		
					#	#	#	#		

Order Number: 4500117770
Report Number: 247643
Superseded Report:

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CERTIFICATE OF ANALYSIS

Validated

SDG:	131018-68	Location:	LIMERICK	Order Number:	4500117770
Job:	H_MOUCH_LIV-2	Customer:	Mouchel	Report Number:	247643
Client Reference:	1049672/004/001	Attention:	Neil Balderstone	Superseded Report:	

Notification of NDPs (No determination possible)

Date Received : 18/10/2013 11:38:14

Sample No	Customer Sample Ref.	Depth (m)	Test	Comment
8290532	C7	5.00 - 5.00	Sulphide	Sample contains oil / product



SDG: 131018-68
Job: H_MOUCH_LIV-2
Client Reference: 1049672/004/001

Location: LIMERICK
Customer: Mouchel
Attention: Neil Balderstone

Order Number: 4500117770
Report Number: 247643
Superseded Report:

Table of Results - Appendix

Method No	Reference	Description	Wet/Dry Sample ¹	Surrogate Corrected
TM061	Method for the Determination of EPH, Massachusetts Dept. of EP, 1998	Determination of Extractable Petroleum Hydrocarbons by GC-FID (C10-C40)		
TM099	BS 2690: Part 7:1968 / BS 6068: Part 2.11:1984	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		
TM152	Method 3125B, AWWA/APHA, 20th Ed., 1999	Analysis of Aqueous Samples by ICP-MS		
TM174	Analysis of Petroleum Hydrocarbons in Environmental Media – Total Petroleum Hydrocarbon Criteria	Determination of Speciated Extractable Petroleum Hydrocarbons in Waters by GC-FID		
TM178	Modified: US EPA Method 8100	Determination of Polynuclear Aromatic Hydrocarbons (PAH) by GC-MS in Waters		
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		
TM241	Methods for the Examination of Waters and Associated Materials; Chromium in Raw and Potable Waters and Sewage Effluents 1980.	The Determination of Hexavalent Chromium in Waters and Leachates using the Kone Analyser		
TM245	By GC-FID	Determination of GRO by Headspace in waters		
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		

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



CERTIFICATE OF ANALYSIS

SDG:	131018-68	Location:	LIMERICK	Order Number:	4500117770
Job:	H_MOUCH_LIV-2	Customer:	Mouchel	Report Number:	247643
Client Reference:	1049672/004/001	Attention:	Neil Balderstone	Superseded Report:	

Test Completion Dates

Lab Sample No(s)	8290537	8290538	8290540	8290529	8290541	8290532	8290522	8290542	8290533	8290535
Customer Sample Ref.	A1	A3	A4	A9	C2	C7	C11	D1	D5	E8
AGS Ref.										
Depth	3.00 - 3.00	2.00 - 2.00	2.00 - 2.00	2.20 - 2.20	1.50 - 1.50	5.00 - 5.00	1.50 - 1.50	3.00 - 3.00	2.10 - 2.10	3.00 - 3.00
Type	LIQUID	LIQUID	LIQUID	LIQUID	LIQUID	LIQUID	LIQUID	LIQUID	LIQUID	LIQUID
Ammoniacal Nitrogen	22-Oct-2013	22-Oct-2013	22-Oct-2013	22-Oct-2013	22-Oct-2013	22-Oct-2013	22-Oct-2013	22-Oct-2013	22-Oct-2013	22-Oct-2013
Anions by Kone (w)	26-Oct-2013	26-Oct-2013	26-Oct-2013	26-Oct-2013	23-Oct-2013	26-Oct-2013	26-Oct-2013	23-Oct-2013	26-Oct-2013	26-Oct-2013
Cyanide Comp/Free/Total/Thiocyanate	24-Oct-2013	24-Oct-2013	24-Oct-2013	24-Oct-2013	24-Oct-2013	24-Oct-2013	24-Oct-2013	24-Oct-2013	24-Oct-2013	24-Oct-2013
Dissolved Metals by ICP-MS	25-Oct-2013	23-Oct-2013	23-Oct-2013	24-Oct-2013	23-Oct-2013	24-Oct-2013	23-Oct-2013	23-Oct-2013	25-Oct-2013	23-Oct-2013
EPH CWG (Aliphatic) Aqueous GC (W)	25-Oct-2013	25-Oct-2013	25-Oct-2013	25-Oct-2013	25-Oct-2013	25-Oct-2013	24-Oct-2013	24-Oct-2013	25-Oct-2013	25-Oct-2013
EPH CWG (Aromatic) Aqueous GC (W)	25-Oct-2013	25-Oct-2013	25-Oct-2013	25-Oct-2013	25-Oct-2013	25-Oct-2013	24-Oct-2013	24-Oct-2013	25-Oct-2013	25-Oct-2013
GRO by GC-FID (W)	22-Oct-2013	22-Oct-2013	22-Oct-2013	22-Oct-2013	22-Oct-2013	28-Oct-2013	22-Oct-2013	23-Oct-2013	22-Oct-2013	22-Oct-2013
Hexavalent Chromium (w)	22-Oct-2013	22-Oct-2013	22-Oct-2013	22-Oct-2013	22-Oct-2013	22-Oct-2013	22-Oct-2013	22-Oct-2013	22-Oct-2013	22-Oct-2013
Mercury Dissolved	23-Oct-2013	23-Oct-2013	23-Oct-2013	23-Oct-2013	23-Oct-2013	23-Oct-2013	23-Oct-2013	23-Oct-2013	23-Oct-2013	23-Oct-2013
PAH Spec MS - Aqueous (W)	25-Oct-2013	28-Oct-2013	28-Oct-2013	25-Oct-2013	28-Oct-2013	28-Oct-2013	28-Oct-2013	28-Oct-2013	28-Oct-2013	25-Oct-2013
pH Value	22-Oct-2013	23-Oct-2013	22-Oct-2013	22-Oct-2013	22-Oct-2013	22-Oct-2013	23-Oct-2013	22-Oct-2013	22-Oct-2013	23-Oct-2013
Phenols by HPLC (W)	26-Oct-2013	26-Oct-2013	28-Oct-2013	28-Oct-2013	28-Oct-2013	28-Oct-2013	26-Oct-2013	26-Oct-2013	28-Oct-2013	28-Oct-2013
Sulphide	25-Oct-2013	23-Oct-2013	23-Oct-2013	25-Oct-2013	23-Oct-2013		25-Oct-2013	25-Oct-2013	25-Oct-2013	23-Oct-2013
TPH CWG (W)	25-Oct-2013	25-Oct-2013	25-Oct-2013	25-Oct-2013	25-Oct-2013	28-Oct-2013	24-Oct-2013	24-Oct-2013	25-Oct-2013	25-Oct-2013
VOC MS (W)	22-Oct-2013	22-Oct-2013	22-Oct-2013			23-Oct-2013		23-Oct-2013		

Lab Sample No(s)	8290525	8290544	8290549	8290550	8290551	8290536	8290527	8290515	8290517	8290519
Customer Sample Ref.	F11	G2	G3	G4	G5	G8	H12	J10	K1	K5
AGS Ref.										
Depth	4.00 - 4.00	4.00 - 4.00	3.50 - 3.50	4.00 - 4.00	7.00 - 7.00	2.00 - 2.00	2.00 - 2.00	0.10 - 0.10	2.50 - 2.50	0.75 - 0.75
Type	LIQUID	LIQUID	LIQUID	LIQUID	LIQUID	LIQUID	LIQUID	LIQUID	LIQUID	LIQUID
Ammoniacal Nitrogen	22-Oct-2013	22-Oct-2013	22-Oct-2013	22-Oct-2013	22-Oct-2013	22-Oct-2013	22-Oct-2013	22-Oct-2013	22-Oct-2013	22-Oct-2013
Anions by Kone (w)	26-Oct-2013	26-Oct-2013	26-Oct-2013	26-Oct-2013	26-Oct-2013	26-Oct-2013	26-Oct-2013	26-Oct-2013	26-Oct-2013	26-Oct-2013
Cyanide Comp/Free/Total/Thiocyanate	24-Oct-2013	24-Oct-2013	24-Oct-2013	24-Oct-2013	24-Oct-2013	24-Oct-2013	24-Oct-2013	24-Oct-2013	24-Oct-2013	24-Oct-2013
Dissolved Metals by ICP-MS	24-Oct-2013	24-Oct-2013	24-Oct-2013	24-Oct-2013	23-Oct-2013	25-Oct-2013	24-Oct-2013	23-Oct-2013	23-Oct-2013	23-Oct-2013
EPH CWG (Aliphatic) Aqueous GC (W)	25-Oct-2013	25-Oct-2013	25-Oct-2013	24-Oct-2013	24-Oct-2013	25-Oct-2013	25-Oct-2013	24-Oct-2013	24-Oct-2013	24-Oct-2013
EPH CWG (Aromatic) Aqueous GC (W)	25-Oct-2013	25-Oct-2013	25-Oct-2013	24-Oct-2013	24-Oct-2013	25-Oct-2013	25-Oct-2013	24-Oct-2013	24-Oct-2013	24-Oct-2013
GRO by GC-FID (W)	22-Oct-2013	23-Oct-2013	22-Oct-2013	22-Oct-2013	19-Oct-2013	22-Oct-2013	22-Oct-2013	19-Oct-2013	19-Oct-2013	22-Oct-2013
Hexavalent Chromium (w)	22-Oct-2013	22-Oct-2013	22-Oct-2013	22-Oct-2013	22-Oct-2013	22-Oct-2013	22-Oct-2013	22-Oct-2013	22-Oct-2013	22-Oct-2013
Mercury Dissolved	23-Oct-2013	23-Oct-2013	23-Oct-2013	23-Oct-2013	23-Oct-2013	23-Oct-2013	23-Oct-2013	23-Oct-2013	23-Oct-2013	23-Oct-2013
PAH Spec MS - Aqueous (W)	28-Oct-2013	28-Oct-2013	28-Oct-2013	28-Oct-2013	25-Oct-2013	28-Oct-2013	28-Oct-2013	28-Oct-2013	28-Oct-2013	28-Oct-2013
pH Value	22-Oct-2013	22-Oct-2013	22-Oct-2013	22-Oct-2013	22-Oct-2013	23-Oct-2013	22-Oct-2013	23-Oct-2013	23-Oct-2013	23-Oct-2013
Phenols by HPLC (W)	28-Oct-2013	26-Oct-2013	26-Oct-2013	28-Oct-2013	26-Oct-2013	28-Oct-2013	28-Oct-2013	28-Oct-2013	28-Oct-2013	28-Oct-2013
Sulphide	28-Oct-2013	23-Oct-2013	23-Oct-2013	25-Oct-2013	25-Oct-2013	23-Oct-2013	25-Oct-2013	25-Oct-2013	25-Oct-2013	25-Oct-2013
TPH CWG (W)	25-Oct-2013	25-Oct-2013	25-Oct-2013	24-Oct-2013	24-Oct-2013	25-Oct-2013	25-Oct-2013	24-Oct-2013	24-Oct-2013	24-Oct-2013
VOC MS (W)		23-Oct-2013		22-Oct-2013	21-Oct-2013					21-Oct-2013

Lab Sample No(s)	8290520
Customer Sample Ref.	M3
AGS Ref.	
Depth	4.00 - 4.00
Type	LIQUID
Ammoniacal Nitrogen	22-Oct-2013
Anions by Kone (w)	26-Oct-2013
Cyanide Comp/Free/Total/Thiocyanate	23-Oct-2013
Dissolved Metals by ICP-MS	23-Oct-2013
EPH CWG (Aliphatic) Aqueous GC (W)	24-Oct-2013
EPH CWG (Aromatic) Aqueous GC (W)	24-Oct-2013
GRO by GC-FID (W)	21-Oct-2013
Hexavalent Chromium (w)	22-Oct-2013
Mercury Dissolved	23-Oct-2013
PAH Spec MS - Aqueous (W)	28-Oct-2013
pH Value	23-Oct-2013
Phenols by HPLC (W)	26-Oct-2013
Sulphide	25-Oct-2013
TPH CWG (W)	24-Oct-2013
VOC MS (W)	21-Oct-2013



SDG: 131018-68
Job: H_MOUCH_LIV-2
Client Reference: 1049672/004/001

Location: LIMERICK
Customer: Mouchel
Attention: Neil Balderstone

Order Number: 4500117770
Report Number: 247643
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. Samples will be run in duplicate upon request, but an additional charge may be incurred.

3. If sufficient sample is received a sub sample will be retained free of charge for 30 days after analysis is completed (e-mailed) for 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. ALcontrol Laboratories reserve the right to charge for samples received and stored but not analysed.

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

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

6. When requested, the individual sub sample scheduled will be 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. The quantity of asbestos present is not determined unless specifically requested.

7. 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.

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

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

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

11. Results relate only to the items tested.

12. LODs for wet tests reported on a dry weight basis are not corrected for moisture content.

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

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

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

16. Total of 5 speciated phenols by HPLC includes Phenol, 2,3,5-Trimethyl Phenol, 2-Isopropylphenol, Cresols and Xylenols (as detailed in 15).

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

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

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

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

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

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

23. Analysis and identification of specific compounds using GCFID is by retention time only, and we routinely calibrate and quantify for benzene, toluene, ethylbenzenes and xylenes (BTEX). For total volatiles in the 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.

Sample Deviations

1	Container with Headspace provided for volatiles analysis
2	Incorrect container received
3	Deviation from method
4	Holding time exceeded before sample received
§	Sampled on date not provided
+	Sample holding time exceeded in laboratory
@	Sample holding time exceeded due to sampled on date
&	Sample Holding Time exceeded - Late arrival of instructions.

Asbestos

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 Alcontrol Laboratories (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 Alcontrol Laboratories (Hawarden) in-house method of transmitted/polarised light microscopy and central stop dispersion staining, based on HSG 248 (2005).

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

Visual Estimation Of Fibre Content

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

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

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