

	Contract Name: Monckton Production Facility		Client: Hargreaves Ltd c/o Patrick Parsons Ltd			Borehole ID: WS9
	Contract Number: G151311	Date Started: 06/05/2015	Date Completed: 06/05/2015	Logged: IMC	Checked: AP	
Dynamic Sample Borehole Log	Easting: 437449.2	Northing: 411805.5	Ground Level: 61.93m (OD)	Plant Used: Competitor Dart 351	Print Date: 17/08/2015	Scale: 1:50

Weather:	Rig Crew: K.Done, G.Griffiths	Termination:	SPT Hammer: N/R, Energy Ratio: N/R
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Progress		Samples & In Situ Testing		Strata Details				Groundwater	
Window Run	Depth	Sample ID	Test Result	Level (mAOD)	Depth (m) (Thickness)	Legend	Strata Description	Water Strike	Backfill/ Installation
				61.88	0.05		Vegetation (grass) over light orangish brown sandy gravelly clayey TOPSOIL. Gravel is fine sub-angular of mudstone. Sand is fine to coarse.		
	0.50 0.50	D1 ES2		61.53	0.40		MADE GROUND - Medium, occasionally coarse, sub-angular light grey gravel of mudstone.		
	1.00 1.00	D4 ES5	SPT(S) 1.00m, N=3 (1,1/0,1,1,1)		(1.60)		MADE GROUND - Orangish brown sandy gravelly raworked clay fill with embedded brick, coal and coke fragments. <i>Ceases angular gravel sized brick fragments.</i>	1	
	1.00 - 1.45	SPTLS 3							
	2.00 2.00	D7 ES8	SPT(S) 2.00m, N=4 (1,1/1,1,1,1)	59.93	2.00		Soft becoming firm, orangish brown mottled grey sandy, occasionally gravelly CLAY. Gravel is medium to coarse, sub-angular of mudstone. Sand is fine to coarse.	2	
	2.00 - 2.45	SPTLS 6							
	3.00 3.00	D10 ES11	SPT(S) 3.00m, N=17 (2,4/4,4,5,4)		(3.00)			3	
	3.00 - 3.45	SPTLS 9							
	4.00 - 4.45	SPTLS 12	SPT(S) 4.00m, N=35 (5,6/7,9,9,10)					4	
	5.00 5.00	D14 ES15	SPT(S) 5.00m, 0 (75 for 30mm/,,)	56.93	5.00		End of Borehole at 5.050m	5	
	5.00 - 5.45	SPTLS 13							
								6	
								7	
								8	
								9	
								10	

Progress by Time					Borehole Diameter		Casing Diameter		Remarks:					
Date	Time	Depth (m)	Casing (m)	Water (m)	Depth (m)	Dia (mm)	Depth (m)	Dia (mm)	Backfilled with gravel and bentonite. slotted and plain pipe installed with stand up cover. Groundwater encountered at 2.6m bgl with no rise recorded.					
06-05-2015	00:00	1.00	1.00											
06-05-2015	01:00	2.00	2.00											
06-05-2015	02:00	3.00	2.00											
06-05-2015	03:00	4.00	2.00	3.40										
06-05-2015	04:00	5.00	2.00	3.10										
					Plant Information			Water Strikes						
					Hammer Mass (kg)		Falling Height (mm)		2.60			0 20	2.60	Remarks
					63.5		760							
					SPT String Length (m)		Test Type							
					13.0		DPSH 'B'							



Contract Name:
Monckton Production Facility

Client:
Hargreaves Ltd c/o Patrick Parsons Ltd

Borehole ID:

WS7

Contract Number:
G151311

Date Started:
06/05/2015

Date Completed:
06/05/2015

Logged:
IMC

Checked:
AP

Status:
PRELIM

Sheet 1 of 1

Dynamic Sample
Borehole Log

Easting:
437449.2

Northing:
411838.6

Ground Level:
61.99m (OD)

Plant Used:
Competitor Dart
351

Print Date:
17/08/2015

Scale:
1:50

Weather:

Rig Crew: K.Done,
G.Griffiths

Termination:

SPT Hammer: N/R, Energy Ratio: N/R

Progress

Samples & In Situ Testing

Strata Details

Window Run

Depth

Sample ID

Test Result

Level
(mAOD)

Depth (m)
(Thickness)

Legend

Strata Description

Groundwater

Water
Strike

Backfill/
Installation

MADE GROUND - Crushed, compacted dark
grey/black coal, ash and coke fill.
MADE GROUND - Reworked sandy gravelly
clay fill with embedded brick, coal, coke and
ash.
Orangish brown firm sandy CLAY.

SPT(S) 1.00m, N=25
(5,5/5,6,7,7)

SPT(S) 2.00m, N=29
(6,7/7,7,7,8)

SPT(S) 3.00m, N=41
(8,8/8,10,10,12)

SPT(S) 4.00m, 50 (24 for
95mm/50 for 265mm)

Stiff, orangish brown mottled grey slightly sandy
CLAY.

End of Borehole at 5.000m

Progress by Time

Borehole Diameter

Casing Diameter

Remarks:

Date
06-05-2015
06-05-2015
06-05-2015
11-05-2015

Time
00:00
01:00
02:00
03:00

Depth (m)
1.00
2.00
3.00
4.00

Casing (m)
1.00
1.00
1.00
1.00

Water (m)

3.80

Depth (m)

Dia (mm)

Depth (m)

Dia (mm)

Backfilled with gravel and bentonite. slotted and plain pipe installed with
stand up cover.

Water Strikes

Strike (m) Casing (m) Sealed (m) Time (mins) Rose to (m) Remarks

3.80

0

20

3.80

Hammer Mass (kg)

Falling Height (mm)

63.5

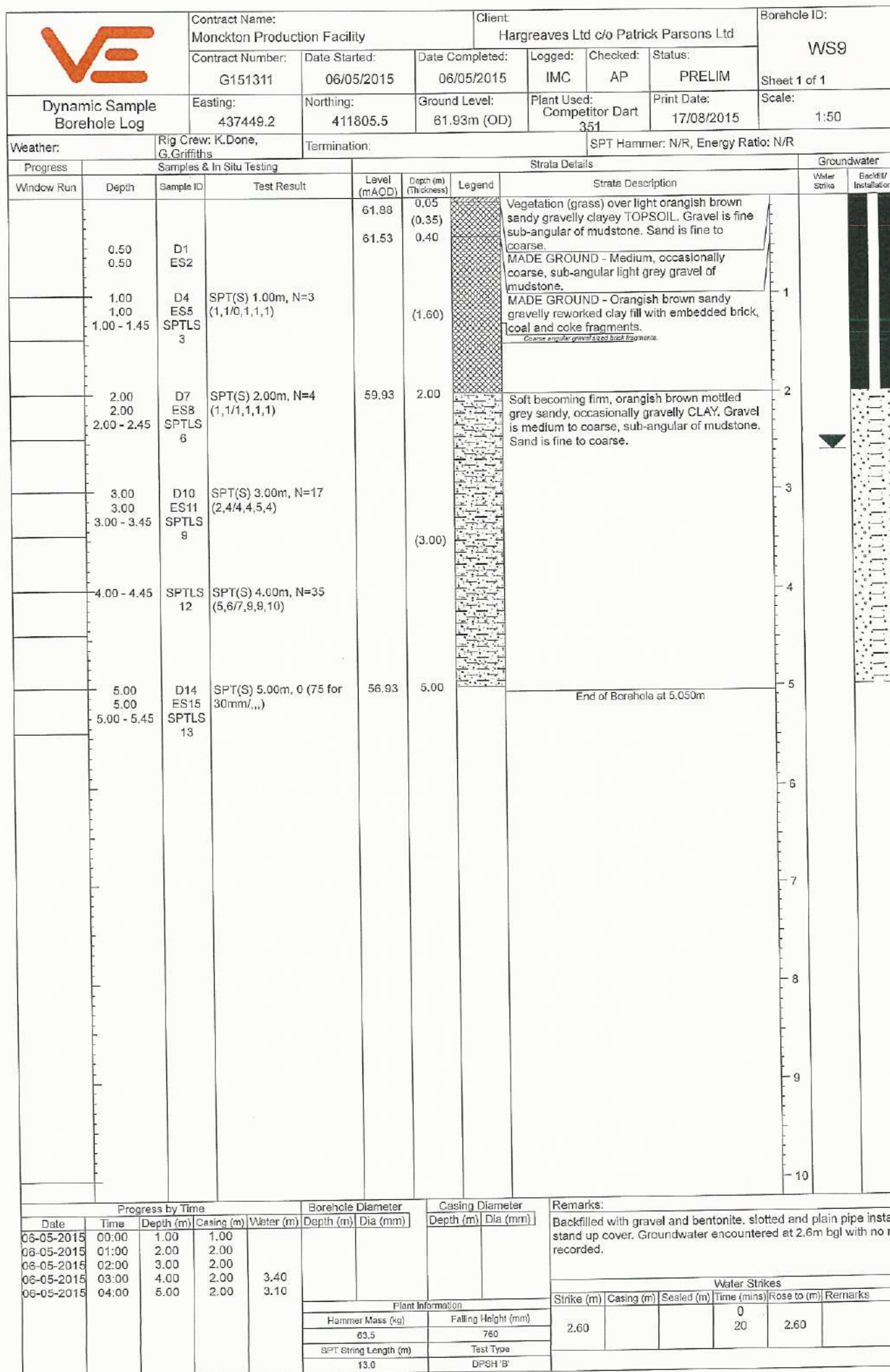
760

SPT String Length (m)

Test Type

13.0

DPSH 'B'



Appendix C

Laboratory Data

FINAL ANALYTICAL TEST REPORT

Envirolab Job Number: 13/03213
Issue Number: 1

Date: 29 July, 2013

Client: RSK STATS Helsby
Spring Lodge
172 Chester Road
Helsby
Cheshire
UK
WA6 0AR

Project Manager: Richard Park / Emily Jones
Project Name: Monckton, Hargreaves
Project Ref: 321453
Order No: Not specified
Date Samples Received: 11/07/13
Date Instructions Received: 11/07/13
Date Analysis Completed: 29/07/13

Prepared by:


Melanie Marshall
Laboratory Coordinator

Approved by:


Liz Oliver
Client Service Manager

Envirolab Job Number: 13/03213

Client Project Name: Monckton, Hargreaves

Client Project Ref: 321453

Lab Sample ID	13/03213/1	13/03213/2	13/03213/3	13/03213/4	13/03213/5	13/03213/6			Units	Method ref
Client Sample No										
Client Sample ID	BH201	BH202	BH203	BH204	BH205	PH108				
Depth to Top										
Depth To Bottom										
Date Sampled	10-Jul-13	10-Jul-13	10-Jul-13	10-Jul-13	10-Jul-13	10-Jul-13				
Sample Type	Water - EW	Water - EW	Liquid - Product / Oil	Water - EW	Water - EW	Water - EW				
Sample Matrix Code										
pH (w) _A [#]	6.80	6.92	-	8.51	6.73	7.37			pH	A-T-031w
Alkalinity (total) (w) _A [#]	254	278	-	-	390	-			mg/l Ca CO ₃	A-T-038
Ammoniacal nitrogen (w) _A [#]	114.77	1.87	-	1189.03	52.16	71.59			mg/l	A-T-033w
Chloride (w) _A [#]	971	1226	-	1756	437	297			mg/l	A-T-026w
Sulphate (w) _A [#]	999	777	-	1757	592	346			mg/l	A-T-026w
Cyanide (free) (w) _A [#]	0.034	0.003	-	0.039	0.051	0.024			mg/l	A-T-942wFCN
Arsenic (dissolved) _A [#]	3	<1	-	42	12	25			µg/l	A-T-025
Cadmium (dissolved) _A [#]	<1	<1	-	<1	<1	<1			µg/l	A-T-025
Copper (dissolved) _A [#]	<1	<1	-	<1	<1	<1			µg/l	A-T-025
Chromium (dissolved) _A [#]	2	12	-	10	2	3			µg/l	A-T-025
Lead (dissolved) _A [#]	<1	<1	-	<1	<1	<1			µg/l	A-T-025
Mercury (dissolved) _A [#]	0.1	0.1	-	0.1	<0.1	<0.1			µg/l	A-T-025
Nickel (dissolved) _A [#]	7	26	-	21	7	7			µg/l	A-T-025
Selenium (dissolved) _A [#]	<1	<1	-	20	1	<1			µg/l	A-T-025
Zinc (dissolved) _A [#]	17	22	-	3	8	3			µg/l	A-T-025
Product (Oil) ID (for FID characterisations) _A	-	-	Possible PAH	-	-	-				A-T-027w
Carbon range _A	-	-	C12-C30	-	-	-				A-T-027w
Product (Oil) Density _A	-	-	N/A	-	-	-				A-T-018

Envirolab Job Number: 13/03213

Client Project Name: Monckton, Hargreaves

Client Project Ref: 321453

Lab Sample ID	13/03213/1	13/03213/2	13/03213/3	13/03213/4	13/03213/5	13/03213/6			Units	Method ref
Client Sample No										
Client Sample ID	BH201	BH202	BH203	BH204	BH205	PH108				
Depth to Top										
Depth To Bottom										
Date Sampled	10-Jul-13	10-Jul-13	10-Jul-13	10-Jul-13	10-Jul-13	10-Jul-13				
Sample Type	Water - EW	Water - EW	Liquid - Product / Oil	Water - EW	Water - EW	Water - EW				
Sample Matrix Code										
PAH 16MS (w)										
Acenaphthene (w) _A [#]	1.12	1.15	-	334.89	206.36	314.47			µg/l	A-T-019w
Acenaphthylene (w) _A [#]	0.03	0.02	-	17.18	10.06	19.41			µg/l	A-T-019w
Anthracene (w) _A [#]	0.04	0.02	-	14.40	67.43	47.81			µg/l	A-T-019w
Benzo(a)anthracene (w) _A [#]	<0.01	0.01	-	0.72	3.25	5.19			µg/l	A-T-019w
Benzo(a)pyrene (w) _A [#]	<0.01	<0.01	-	0.18	1.14	1.28			µg/l	A-T-019w
Benzo(b)fluoranthene (w) _A [#]	<0.01	0.01	-	0.16	0.98	1.21			µg/l	A-T-019w
Benzo(ghi)perylene (w) _A [#]	<0.01	<0.01	-	0.06	0.50	0.38			µg/l	A-T-019w
Benzo(k)fluoranthene (w) _A [#]	<0.01	<0.01	-	0.12	0.46	0.62			µg/l	A-T-019w
Chrysene (w) _A [#]	<0.01	<0.01	-	0.59	2.56	4.03			µg/l	A-T-019w
Dibenzo(ah)anthracene (w) _A [#]	<0.01	<0.01	-	<0.01	0.16	0.13			µg/l	A-T-019w
Fluoranthene (w) _A [#]	0.03	0.03	-	5.44	31.82	30.28			µg/l	A-T-019w
Fluorene (w) _A [#]	0.42	0.32	-	31.69	77.33	42.17			µg/l	A-T-019w
Indeno(123-cd)pyrene (w) _A [#]	<0.01	<0.01	-	0.05	0.58	0.44			µg/l	A-T-019w
Naphthalene (w) _A [#]	1.39	17.00	-	>400	>400	>400			µg/l	A-T-019w
Phenanthrene (w) _A [#]	0.19	0.12	-	72.58	35.13	137.50			µg/l	A-T-019w
Pyrene (w) _A [#]	0.02	0.02	-	3.40	22.26	20.56			µg/l	A-T-019w
PAH (total 16) (w) _A [#]	3.24	18.70	-	>900	>900	>900			µg/l	A-T-019w

Envirolab Job Number: 13/03213

Client Project Name: Monckton, Hargreaves

Client Project Ref: 321453

Lab Sample ID	13/03213/1	13/03213/2	13/03213/3	13/03213/4	13/03213/5	13/03213/6				
Client Sample No										
Client Sample ID	BH201	BH202	BH203	BH204	BH205	PH108				
Depth to Top										
Depth To Bottom										
Date Sampled	10-Jul-13	10-Jul-13	10-Jul-13	10-Jul-13	10-Jul-13	10-Jul-13				
Sample Type	Water - EW	Water - EW	Liquid - Product / Oil	Water - EW	Water - EW	Water - EW				
Sample Matrix Code										
SVOC (w)										
2,4-Trichlorobenzene _A	<1	<1	-	<1	<1	<1			µg/l	A-T-052
1,2-Dichlorobenzene _A	<1	<1	-	<1	<1	<1			µg/l	A-T-052
1,3-Dichlorobenzene _A	<1	<1	-	<1	<1	<1			µg/l	A-T-052
1,4-Dichlorobenzene _A	<1	<1	-	<1	<1	<1			µg/l	A-T-052
2,4,5-Trichlorophenol _A	<1	<1	-	<1	<1	<1			µg/l	A-T-052
2,4,6-Trichlorophenol _A	<1	<1	-	<1	<1	<1			µg/l	A-T-052
2,4-Dichlorophenol _A	<1	<1	-	<1	<1	<1			µg/l	A-T-052
2,4-Dimethylphenol _A	<1	3	-	5822	1362	<1			µg/l	A-T-052
2,4-Dinitrotoluene _A	<1	<1	-	<1	<1	<1			µg/l	A-T-052
2,6-Dinitrotoluene _A	<1	<1	-	<1	<1	<1			µg/l	A-T-052
2-Chloronaphthalene _A	<1	<1	-	<1	<1	<1			µg/l	A-T-052
2-Chlorophenol _A	<1	<1	-	<1	<1	<1			µg/l	A-T-052
2-Methylnaphthalene _A	<1	<1	-	1582	1094	1545			µg/l	A-T-052
2-Methylphenol _A	9	104	-	11402	1285	187			µg/l	A-T-052
3-Nitrophenol _A	<1	<1	-	<1	<1	<1			µg/l	A-T-052
4-Bromophenyl phenyl ether _A	<1	<1	-	<1	<1	<1			µg/l	A-T-052
4-Chloro-3-methylphenol _A	<1	<1	-	<1	<1	<1			µg/l	A-T-052
4-Methylphenol _A	24	307	-	499	1667	67			µg/l	A-T-052
4-Nitrophenol _A	<1	<1	-	<1	<1	<1			µg/l	A-T-052
Acenaphthene _A	1	<1	-	1477	687	854			µg/l	A-T-052
Acenaphthylene _A	<1	<1	-	31	<1	18			µg/l	A-T-052
Anthracene _A	<1	<1	-	15	68	13			µg/l	A-T-052
Bis(2-chloroethyl)ether _A	<1	<1	-	<1	<1	<1			µg/l	A-T-052
Bis(2-chloroethoxy)methane _A	<1	<1	-	<1	<1	<1			µg/l	A-T-052
Bis(2-ethylhexyl)phthalate _A	<2	<2	-	<2	<2	<2			µg/l	A-T-052
Benzo(a)anthracene _A	<1	<1	-	1	7	7			µg/l	A-T-052
Butylbenzyl phthalate _A	<1	<1	-	<1	<1	<1			µg/l	A-T-052
Benzo(b)fluoranthene _A	<1	<1	-	<1	<1	<1			µg/l	A-T-052
Benzo(k)fluoranthene _A	<1	<1	-	<1	<1	<1			µg/l	A-T-052

Envirolab Job Number: 13/03213

Client Project Name: Monckton, Hargreaves

Client Project Ref: 321453

Lab Sample ID	13/03213/1	13/03213/2	13/03213/3	13/03213/4	13/03213/5	13/03213/6			Units	Method ref
Client Sample No										
Client Sample ID	BH201	BH202	BH203	BH204	BH205	PH108				
Depth to Top										
Depth To Bottom										
Date Sampled	10-Jul-13	10-Jul-13	10-Jul-13	10-Jul-13	10-Jul-13	10-Jul-13				
Sample Type	Water - EW	Water - EW	Liquid - Product / Oil	Water - EW	Water - EW	Water - EW				
Sample Matrix Code										
Benzo(a)pyrene _A	<1	<1	-	<1	<1	<1			µg/l	A-T-052
Benzo(ghi)perylene _A	<1	<1	-	<1	<1	<1			µg/l	A-T-052
Carbazole _A	<1	<1	-	181	70	46			µg/l	A-T-052
Chrysene _A	<1	<1	-	1	9	6			µg/l	A-T-052
Dibenzofuran _A	<1	<1	-	814	569	534			µg/l	A-T-052
n-Dibutylphthalate _A	<1	<1	-	<1	15	7			µg/l	A-T-052
n-Dioctylphthalate _A	<5	<5	-	<5	<5	<5			µg/l	A-T-052
n-Nitroso-n-dipropylamine _A	<1	<1	-	<1	<1	<1			µg/l	A-T-052
Diethyl phthalate _A	<1	<1	-	<1	<1	<1			µg/l	A-T-052
Dimethyl phthalate _A	<1	<1	-	<1	<1	<1			µg/l	A-T-052
Dibenzo(ah)anthracene _A	<1	<1	-	<1	<1	<1			µg/l	A-T-052
Fluorene _A	<1	<1	-	362	256	235			µg/l	A-T-052
Fluoranthene _A	<1	<1	-	5	36	7			µg/l	A-T-052
Hexachlorobutadiene _A	<1	<1	-	<1	<1	<1			µg/l	A-T-052
Hexachlorobenzene _A	<1	<1	-	<1	<1	<1			µg/l	A-T-052
Pentachlorophenol _A	<1	<1	-	<1	<1	<1			µg/l	A-T-052
Phenol _A	44	240	-	749	557	172			µg/l	A-T-052
Hexachloroethane _A	<1	<1	-	<1	<1	<1			µg/l	A-T-052
Nitrobenzene _A	<1	<1	-	<1	<1	<1			µg/l	A-T-052
Naphthalene _A	<1	4	-	7928	3440	4375			µg/l	A-T-052
Isophorone _A	<1	<1	-	<1	<1	<1			µg/l	A-T-052
Hexachlorocyclopentadiene _A	<1	<1	-	<1	<1	<1			µg/l	A-T-052
Phenanthrene _A	<1	<1	-	66	363	51			µg/l	A-T-052
Pyrene _A	<1	<1	-	3	28	7			µg/l	A-T-052
Indeno(1,2,3-cd)pyrene _A	<1	<1	-	<1	<1	<1			µg/l	A-T-052
Bis(2-chloroisopropyl)ether _A	<1	<1	-	<1	<1	<1			µg/l	A-T-052
2,4-Dinitrophenol _A	<1	<1	-	<1	<1	<1			µg/l	A-T-052
4,6-Dinitro-2-methylphenol _A	<1	<1	-	<1	<1	<1			µg/l	A-T-052
Perylene _A	<1	<1	-	<1	<1	<1			µg/l	A-T-052

Envirolab Job Number: 13/03213

Client Project Name: Monckton, Hargreaves

Client Project Ref: 321453

Lab Sample ID	13/03213/1	13/03213/2	13/03213/3	13/03213/4	13/03213/5	13/03213/6			Units	Method ref
Client Sample No										
Client Sample ID	BH201	BH202	BH203	BH204	BH205	PH108				
Depth to Top										
Depth To Bottom										
Date Sampled	10-Jul-13	10-Jul-13	10-Jul-13	10-Jul-13	10-Jul-13	10-Jul-13				
Sample Type	Water - EW	Water - EW	Liquid - Product / Oil	Water - EW	Water - EW	Water - EW				
Sample Matrix Code										
VOC (w)										
1,1-Dichlorodifluoromethane _A [#]	<1	<1	-	<1	<1	<1			µg/l	A-T-005
Chloromethane _A [#]	<1	<1	-	<1	<1	<1			µg/l	A-T-005
Vinyl Chloride _A [#]	<1	<1	-	<1	<1	<1			µg/l	A-T-005
Bromomethane _A [#]	<1	<1	-	<1	<1	<1			µg/l	A-T-005
Chloroethane _A [#]	<1	<1	-	<1	<1	<1			µg/l	A-T-005
Trichlorofluoromethane _A [#]	<1	<1	-	<1	<1	<1			µg/l	A-T-005
trans 1,2-Dichloroethene _A [#]	<1	<1	-	<1	<1	<1			µg/l	A-T-005
Dichloromethane _A	<100	<100	-	<100	<100	<100			µg/l	A-T-005
Carbon Disulphide _A [#]	<1	<1	-	<1	<1	<1			µg/l	A-T-005
1,1-Dichloroethene _A [#]	<1	<1	-	<1	<1	<1			µg/l	A-T-005
1,1-Dichloroethane _A [#]	<1	<1	-	<1	<1	<1			µg/l	A-T-005
cis 1,2-Dichloroethene _A [#]	<1	<1	-	<1	<1	<1			µg/l	A-T-005
Bromochloromethane _A [#]	<5	<5	-	<5	<5	<5			µg/l	A-T-005
Chloroform _A [#]	<25	<25	-	<25	<25	<25			µg/l	A-T-005
1,2-Dichloropropane _A [#]	<1	<1	-	<1	<1	<1			µg/l	A-T-005
1,2-Dichloroethane _A [#]	<2	<2	-	<2	<2	<2			µg/l	A-T-005
1,1,1-Trichloroethane _A [#]	<1	<1	-	<1	<1	<1			µg/l	A-T-005
1,1-Dichloropropene _A [#]	<1	<1	-	<1	<1	<1			µg/l	A-T-005
Benzene VOC _A [#]	<1	<1	-	>4500	>7500	30			µg/l	A-T-005
Carbon Tetrachloride _A [#]	<1	<1	-	<1	<1	<1			µg/l	A-T-005
Dibromomethane _A [#]	<1	<1	-	<1	<1	<1			µg/l	A-T-005
1,2-Dichloropropane _A [#]	<1	<1	-	<1	<1	<1			µg/l	A-T-005
Bromodichloromethane _A [#]	<10	<10	-	<10	<10	<10			µg/l	A-T-005
Trichloroethene _A [#]	<1	<1	-	<1	<1	<1			µg/l	A-T-005
cis 1,3-Dichloropropene _A [#]	<1	<1	-	<1	<1	<1			µg/l	A-T-005
trans 1,3-Dichloropropene _A [#]	<1	<1	-	<1	<1	<1			µg/l	A-T-005
1,1,2-Trichloroethane _A [#]	<1	<1	-	<1	<1	<1			µg/l	A-T-005
Toluene VOC _A [#]	<1	<1	-	334	>3500	25			µg/l	A-T-005
1,3-Dichloropropane _A [#]	<1	<1	-	<1	<1	<1			µg/l	A-T-005

Envirolab Job Number: 13/03213

Client Project Name: Monckton, Hargreaves

Client Project Ref: 321453

Lab Sample ID	13/03213/1	13/03213/2	13/03213/3	13/03213/4	13/03213/5	13/03213/6			Units	Method ref
Client Sample No										
Client Sample ID	BH201	BH202	BH203	BH204	BH205	PH108				
Depth to Top										
Depth To Bottom										
Date Sampled	10-Jul-13	10-Jul-13	10-Jul-13	10-Jul-13	10-Jul-13	10-Jul-13				
Sample Type	Water - EW	Water - EW	Liquid - Product / Oil	Water - EW	Water - EW	Water - EW				
Sample Matrix Code										
Dibromochloromethane _A [#]	<3	<3	-	<3	<3	<3			µg/l	A-T-005
2-Dibromoethane _A [#]	<1	<1	-	<1	<1	<1			µg/l	A-T-005
Tetrachloroethene _A [#]	<1	<1	-	<1	<1	<1			µg/l	A-T-005
1,1,1,2-Tetrachloroethane _A	<1	<1	-	<1	<1	<1			µg/l	A-T-005
Chlorobenzene _A [#]	<1	<1	-	<1	<1	<1			µg/l	A-T-005
Ethylbenzene _A [#]	<1	<1	-	63	174	28			µg/l	A-T-005
m & p Xylene _A [#]	<1	<1	-	901	1894	65			µg/l	A-T-005
Bromoform _A [#]	<1	<1	-	<1	<1	<1			µg/l	A-T-005
Styrene _A [#]	<1	<1	-	<1	185	<1			µg/l	A-T-005
1,1,2,2-Tetrachloroethane _A	<1	<1	-	<1	<1	<1			µg/l	A-T-005
o-Xylene _A [#]	<1	<1	-	364	646	43			µg/l	A-T-005
1,2,3-Trichloropropane _A [#]	<1	<1	-	<1	<1	<1			µg/l	A-T-005
Isopropylbenzene _A [#]	<1	<1	-	<1	12	3			µg/l	A-T-005
Bromobenzene _A [#]	<1	<1	-	<1	<1	<1			µg/l	A-T-005
2-Chlorotoluene _A [#]	<1	<1	-	<1	<1	<1			µg/l	A-T-005
n-propylbenzene _A [#]	<1	<1	-	<1	7	<1			µg/l	A-T-005
4-Chlorotoluene _A [#]	<1	<1	-	<1	<1	<1			µg/l	A-T-005
1,2,4-Trimethylbenzene _A [#]	<1	<1	-	128	470	183			µg/l	A-T-005
4-Isopropyltoluene _A [#]	<1	<1	-	<1	<1	<1			µg/l	A-T-005
1,3,5-Trimethylbenzene _A [#]	<1	<1	-	48	199	54			µg/l	A-T-005
1,2-Dichlorobenzene _A [#]	<1	<1	-	<1	<1	<1			µg/l	A-T-005
1,4-Dichlorobenzene _A [#]	<1	<1	-	<1	<1	<1			µg/l	A-T-005
sec-Butylbenzene _A [#]	<1	<1	-	<1	<1	<1			µg/l	A-T-005
tert-Butylbenzene _A [#]	<2	<2	-	<2	<2	<2			µg/l	A-T-005
1,3-Dichlorobenzene _A [#]	<1	<1	-	<1	<1	<1			µg/l	A-T-005
n-butylbenzene _A [#]	<1	<1	-	<1	<1	<1			µg/l	A-T-005
1,2-Dibromo-3-chloropropane _A [#]	<2	<2	-	<2	<2	<2			µg/l	A-T-005
1,2,4-Trichlorobenzene _A [#]	<3	<3	-	<3	<3	<3			µg/l	A-T-005
1,2,3-Trichlorobenzene _A [#]	<3	<3	-	<3	<3	<3			µg/l	A-T-005
Hexachlorobutadiene _A [#]	<1	<1	-	<1	<1	<1			µg/l	A-T-005

Envirolab Job Number: 13/03213

Client Project Name: Monckton, Hargreaves

Client Project Ref: 321453

Lab Sample ID	13/03213/1	13/03213/2	13/03213/3	13/03213/4	13/03213/5	13/03213/6			Units	Method ref
Client Sample No										
Client Sample ID	BH201	BH202	BH203	BH204	BH205	PH108				
Depth to Top										
Depth To Bottom										
Date Sampled	10-Jul-13	10-Jul-13	10-Jul-13	10-Jul-13	10-Jul-13	10-Jul-13				
Sample Type	Water - EW	Water - EW	Liquid - Product / Oil	Water - EW	Water - EW	Water - EW				
Sample Matrix Code										
PH CWG										
Ali >C5-C6 (w) _A [#]	<1	<1	-	<5	<5	<5			µg/l	A-T-022w
Ali >C6-C8 (w) _A [#]	<1	<1	-	7	95	<5			µg/l	A-T-022w
Ali >C8-C10 (w) _A [#]	<1	<1	-	<5	7	<5			µg/l	A-T-022w
Ali >C10-C12 (w) _A [#]	<5	<5	-	<5	49	25			µg/l	A-T-022w
Ali >C12-C16 (w) _A [#]	<5	<5	-	<5	7	9			µg/l	A-T-022w
Ali >C16-C21 (w) _A [#]	<5	<5	-	<5	<5	<5			µg/l	A-T-022w
Ali >C21-C35 (w) _A [#]	<5	<5	-	<5	<5	<5			µg/l	A-T-022w
Total Aliphatics (w) _A	<5	<5	-	7	159	34			µg/l	A-T-022+23w
Aro >C5-C7 (w) _A [#]	<1	<1	-	5760	>13000	40			µg/l	A-T-022w
Aro >C7-C8 (w) _A [#]	<1	<1	-	342	5410	35			µg/l	A-T-022w
Aro >C8-C9 (w) _A [#]	<1	<1	-	1260	2080	125			µg/l	A-T-022w
Aro >C9-C10 (w) _A [#]	<1	<1	-	270	611	318			µg/l	A-T-022w
Aro >C10-C12 (w) _A [#]	<5	<5	-	5912	7852	3690			µg/l	A-T-023w
Aro >C12-C16 (w) _A [#]	<5	<5	-	3564	6480	4796			µg/l	A-T-023w
Aro >C16-C21 (w) _A [#]	<5	<5	-	191	575	729			µg/l	A-T-023w
Aro >C21-C35 (w) _A [#]	<5	<5	-	<5	23	104			µg/l	A-T-023w
Total Aromatics (w) _A	<5	<5	-	17297	>36000	9837			µg/l	A-T-022+23w
TPH (Ali & Aro) (w) _A	<5	<5	-	17304	>36000	9871			µg/l	A-T-022+23w
Mineral Oil (>C10-C35) (w) _A [#]	<5	<5	-	<5	56	34			µg/l	A-T-023w
BTEX - Benzene (w) _A [#]	<1	<1	-	5760	>13000	40			µg/l	A-T-022w
BTEX - Toluene (w) _A [#]	<1	<1	-	342	5410	35			µg/l	A-T-022w
BTEX - Ethyl Benzene (w) _A [#]	<1	<1	-	60	131	27			µg/l	A-T-022w
BTEX - m & p Xylene (w) _A [#]	<1	<1	-	941	1600	61			µg/l	A-T-022w
BTEX - o Xylene (w) _A [#]	<1	<1	-	342	476	42			µg/l	A-T-022w
MTBE (w) _A [#]	<1	<1	-	<5	<5	<5			µg/l	A-T-022w

SAL Reference: 558017							
Customer Reference: G15C09							
Leachate, Water				Analysed as Water			
Semi-Volatile Organic Compounds (USEPA 625)(EK)							
SAL Reference					558017 008	558017 014	558017 043
Customer Sample Reference					TP1006 2.8m	TP1010 1.0m	SVOC Blank
Date Sampled					Deviating	Deviating	25-MAR-2016
Determinand	Method	Test Sample	LOD	Units			
Phenol	T16	10:1	10	µg/l	<10	<10	-
Phenol	T16	AR	10	µg/l	-	-	<10
Bis (2-chloroethyl) ether	T16	10:1	10	µg/l	<10	<10	-
Bis (2-chloroethyl) ether	T16	AR	10	µg/l	-	-	<10
2-Chlorophenol	T16	10:1	10	µg/l	<10	<10	-
2-Chlorophenol	T16	AR	10	µg/l	-	-	<10
1,3-Dichlorobenzene	T16	10:1	10	µg/l	<10	<10	-
1,3-Dichlorobenzene	T16	AR	10	µg/l	-	-	<10
1,4-Dichlorobenzene	T16	10:1	10	µg/l	<10	<10	-
1,4-Dichlorobenzene	T16	AR	10	µg/l	-	-	<10
1,2-Dichlorobenzene	T16	10:1	10	µg/l	<10	<10	-
1,2-Dichlorobenzene	T16	AR	10	µg/l	-	-	<10
Bis (2-chloroisopropyl) ether	T16	10:1	10	µg/l	<10	<10	-
Bis (2-chloroisopropyl) ether	T16	AR	10	µg/l	-	-	<10
2-methyl phenol	T16	10:1	10	µg/l	<10	<10	-
2-methyl phenol	T16	AR	10	µg/l	-	-	<10
3/4-Methylphenol	T16	10:1	10	µg/l	<10	<10	-
3/4-Methylphenol	T16	AR	10	µg/l	-	-	<10
Hexachloroethane	T16	10:1	10	µg/l	<10	<10	-
Hexachloroethane	T16	AR	10	µg/l	-	-	<10
Nitrobenzene	T16	10:1	10	µg/l	<10	<10	-
Nitrobenzene	T16	AR	10	µg/l	-	-	<10
Isophorone	T16	10:1	10	µg/l	<10	<10	-
Isophorone	T16	AR	10	µg/l	-	-	<10
2-Nitrophenol	T16	10:1	10	µg/l	<10	<10	-
2-Nitrophenol	T16	AR	10	µg/l	-	-	<10
2,4-Dimethylphenol	T16	10:1	10	µg/l	<10	<10	-
2,4-Dimethylphenol	T16	AR	10	µg/l	-	-	<10
Bis (2-chloroethoxy) methane	T16	10:1	10	µg/l	<10	<10	-
Bis (2-chloroethoxy) methane	T16	AR	10	µg/l	-	-	<10
2,4-Dichlorophenol	T16	10:1	10	µg/l	<10	<10	-
2,4-Dichlorophenol	T16	AR	10	µg/l	-	-	<10
1,2,4-Trichlorobenzene	T16	10:1	10	µg/l	<10	<10	-
1,2,4-Trichlorobenzene	T16	AR	10	µg/l	-	-	<10
Naphthalene	T16	10:1	10	µg/l	<10	<10	-
Naphthalene	T16	AR	10	µg/l	-	-	<10
4-Chloroaniline	T16	10:1	10	µg/l	<10	<10	-
4-Chloroaniline	T16	AR	10	µg/l	-	-	<10
Hexachlorobutadiene	T16	10:1	10	µg/l	<10	<10	-
Hexachlorobutadiene	T16	AR	10	µg/l	-	-	<10
4-Chloro-3-methylphenol	T16	10:1	10	µg/l	<10	<10	-
4-Chloro-3-methylphenol	T16	AR	10	µg/l	-	-	<10
2-Methylnaphthalene	T16	10:1	10	µg/l	<10	<10	-
2-Methylnaphthalene	T16	AR	10	µg/l	-	-	<10
Hexachlorocyclopentadiene	T16	10:1	10	µg/l	<10	<10	-
Hexachlorocyclopentadiene	T16	AR	10	µg/l	-	-	<10
2,4,6-Trichlorophenol	T16	10:1	10	µg/l	<10	<10	-
2,4,6-Trichlorophenol	T16	AR	10	µg/l	-	-	<10
2,4,5-Trichlorophenol	T16	10:1	10	µg/l	<10	<10	-
2,4,5-Trichlorophenol	T16	AR	10	µg/l	-	-	<10
2-Chloronaphthalene	T16	10:1	10	µg/l	<10	<10	-
2-Chloronaphthalene	T16	AR	10	µg/l	-	-	<10
2-Nitroaniline	T16	10:1	10	µg/l	<10	<10	-
2-Nitroaniline	T16	AR	10	µg/l	-	-	<10
Dimethyl phthalate	T16	10:1	10	µg/l	<10	<10	-
Dimethyl phthalate	T16	AR	10	µg/l	-	-	<10
2,6-Dinitrotoluene	T16	10:1	10	µg/l	<10	<10	-
2,6-Dinitrotoluene	T16	AR	10	µg/l	-	-	<10
Acenaphthylene	T16	10:1	10	µg/l	<10	<10	-
Acenaphthylene	T16	AR	10	µg/l	-	-	<10
Acenaphthene	T16	10:1	10	µg/l	<10	<10	-

SAL Reference: 558017
Customer Reference: G15009

Leachate, Water
Semi-Volatile Organic Compounds (USEPA 625)(EK)

Analysed as Water

SAL Reference	558017 008	558017 014	558017 043
Customer Sample Reference	TP1006 2.8m	TP1010 1.0m	SVOC Blank
Date Sampled	Deviating	Deviating	25-MAR-2016

Determinand	Method	Test Sample	LOD	Units			
Acenaphthene	T16	AR	10	µg/l	-	-	<10
3-Nitroaniline	T16	10:1	10	µg/l	<10	<10	-
3-Nitroaniline	T16	AR	10	µg/l	-	-	<10
Dibenzofuran	T16	10:1	10	µg/l	<10	<10	-
Dibenzofuran	T16	AR	10	µg/l	-	-	<10
2,4-Dinitrotoluene	T16	10:1	10	µg/l	<10	<10	-
2,4-Dinitrotoluene	T16	AR	10	µg/l	-	-	<10
Diethyl phthalate	T16	10:1	10	µg/l	<10	<10	-
Diethyl phthalate	T16	AR	10	µg/l	-	-	<10
Fluorene	T16	10:1	10	µg/l	<10	<10	-
Fluorene	T16	AR	10	µg/l	-	-	<10
4-Chlorophenyl phenylether	T16	10:1	10	µg/l	<10	<10	-
4-Chlorophenyl phenylether	T16	AR	10	µg/l	-	-	<10
4-Nitroaniline	T16	10:1	10	µg/l	<10	<10	-
4-Nitroaniline	T16	AR	10	µg/l	-	-	<10
Azobenzene	T16	10:1	10	µg/l	<10	<10	-
Azobenzene	T16	AR	10	µg/l	-	-	<10
4-Bromophenyl phenylether	T16	10:1	10	µg/l	<10	<10	-
4-Bromophenyl phenylether	T16	AR	10	µg/l	-	-	<10
Hexachlorobenzene	T16	10:1	10	µg/l	<10	<10	-
Hexachlorobenzene	T16	AR	10	µg/l	-	-	<10
Pentachlorophenol	T16	10:1	10	µg/l	<10	<10	-
Pentachlorophenol	T16	AR	10	µg/l	-	-	<10
Phenanthrene	T16	10:1	10	µg/l	<10	<10	-
Phenanthrene	T16	AR	10	µg/l	-	-	<10
Anthracene	T16	10:1	10	µg/l	<10	<10	-
Anthracene	T16	AR	10	µg/l	-	-	<10
Carbazole	T16	10:1	10	µg/l	<10	<10	-
Carbazole	T16	AR	10	µg/l	-	-	<10
Di-n-butylphthalate	T16	10:1	10	µg/l	<10	<10	-
Di-n-butylphthalate	T16	AR	10	µg/l	-	-	<10
Fluoranthene	T16	10:1	10	µg/l	<10	<10	-
Fluoranthene	T16	AR	10	µg/l	-	-	<10
Pyrene	T16	10:1	10	µg/l	<10	<10	-
Pyrene	T16	AR	10	µg/l	-	-	<10
Butyl benzylphthalate	T16	10:1	10	µg/l	<10	<10	-
Butyl benzylphthalate	T16	AR	10	µg/l	-	-	<10
Benzo(a)Anthracene	T16	10:1	10	µg/l	<10	<10	-
Benzo(a)Anthracene	T16	AR	10	µg/l	-	-	<10
Chrysene	T16	10:1	10	µg/l	<10	<10	-
Chrysene	T16	AR	10	µg/l	-	-	<10
Bis (2-ethylhexyl)phthalate	T16	10:1	10	µg/l	<10	<10	-
Bis (2-ethylhexyl)phthalate	T16	AR	10	µg/l	-	-	<10
Di-n-octylphthalate	T16	10:1	10	µg/l	<10	<10	-
Di-n-octylphthalate	T16	AR	10	µg/l	-	-	<10
Benzo(b,k)Fluoranthene	T16	10:1	10	µg/l	<10	<10	-
Benzo(b,k)Fluoranthene	T16	AR	10	µg/l	-	-	<10
Benzo(a)Pyrene	T16	10:1	10	µg/l	<10	<10	-
Benzo(a)Pyrene	T16	AR	10	µg/l	-	-	<10
Indeno(123-cd)Pyrene	T16	10:1	10	µg/l	<10	<10	-
Indeno(123-cd)Pyrene	T16	AR	10	µg/l	-	-	<10
Dibenzo(ah)Anthracene	T16	10:1	10	µg/l	<10	<10	-
Dibenzo(ah)Anthracene	T16	AR	10	µg/l	-	-	<10
Benzo(ghi)Perylene	T16	10:1	10	µg/l	<10	<10	-
Benzo(ghi)Perylene	T16	AR	10	µg/l	-	-	<10
2,4-Dinitrophenol	T16	10:1	10	µg/l	<10	<10	-
2,4-Dinitrophenol	T16	AR	10	µg/l	-	-	<10

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SAL Reference: 558017 Customer Reference: G15009 Soil Analysed as Soil Total and Speciated USEPA16 PAH (EK)						
SAL Reference			558017 039	558017 040		
Customer Sample Reference			TP1032 0.5m	TP1033 0.5m		
Date Sampled			Deviating	Deviating		
Determinand	Method	Test Sample	LOD	Units		
Naphthalene	T149	AR	0.01	mg/kg	1.6	0.15
Acenaphthylene	T149	AR	0.01	mg/kg	0.04	0.05
Acenaphthene	T149	AR	0.01	mg/kg	0.06	0.12
Fluorene	T149	AR	0.01	mg/kg	0.10	0.10
Phenanthrene	T149	AR	0.01	mg/kg	1.1	0.46
Anthracene	T149	AR	0.01	mg/kg	0.22	0.17
Fluoranthene	T149	AR	0.01	mg/kg	1.4	0.88
Pyrene	T149	AR	0.01	mg/kg	1.3	0.72
Benzo(a)Anthracene	T149	AR	0.01	mg/kg	(13) 0.41	0.50
Chrysene	T149	AR	0.01	mg/kg	0.43	0.49
Benzo(b)fluoranthene	T149	AR	0.01	mg/kg	0.46	0.63
Benzo(k)fluoranthene	T149	AR	0.01	mg/kg	0.19	0.37
Benzo(a)Pyrene	T149	AR	0.01	mg/kg	0.37	0.51
Indeno(123-cd)Pyrene	T149	AR	0.01	mg/kg	0.16	0.23
Dibenzo(ah)Anthracene	T149	AR	0.01	mg/kg	0.03	0.05
Benzo(ghi)Perylene	T149	AR	0.01	mg/kg	0.21	0.24
PAH(total)	T149	AR	0.01	mg/kg	8.0	5.7

Index to symbols used in 558017-1

Value	Description
A40	Assisted dried < 40C
AR	As Received
10:1	Leachate
13	Results have been blank corrected.
62	LOD was raised due to the method performance of the analytical procedure used
9	LOD raised due to dilution of sample
104	LOD raised due to high levels of hydrocarbon compounds
U	Analysis is UKAS accredited
N	Analysis is not UKAS accredited

Notes

Speciated Phenols by HPLC and elemental sulphur analysis carried out at SAL Braintree.

Method Index

Value	Description
T6	ICP/OES
T8	GC/FID
T17	HPLC
T2	Grav
T54	GC/MS (Headspace)
T149	GC/MS (SIR)
T281	ICP/MS (Filtered)
T61	GC/FID (LV)
T373	ICP/OES (Filtered)
T4	Colorimetry
T7	Probe
T686	Discrete Analyser
T112	ICP/OES (SIM)(Water Extract)
T16	GC/MS
T82	ICP/OES (Sim)

Accreditation Summary

Determinand	Method	Test Sample	LOD	Units	Symbol	SAL References
Ammoniacal nitrogen	T686	10:1	0.05	mg/l	U	002,008,014-016,021,024,027,029,032,035
Chloride	T686	10:1	1	mg/l	U	002,008,014-015,021,024,027,029,032
B (Dissolved)	T373	10:1	0.01	mg/l	N	002,005-006,016,021,024,027,029,032,035,038
Sulphur (total)	T6	10:1	50	mg/l	N	002,005-006,016,021,024,027,029,032,035,038
Cyanide(Total)	T4	10:1	0.05	mg/l	U	002,005-006,016,021,024,027,029,032,035,038
Sulphide	T4	10:1	0.05	mg/l	N	006
TPH (C10-C35)	T81	10:1	0.01	mg/l	U	016
pH	T7	10:1			U	002,005-006,016,021,024,027,029,032,035,038
Boron (water-soluble)	T112	A40	1	mg/kg	U	001-006,010-013,016,021,024,033-035,038-040
SO4(Total)	T82	A40	0.01	%	N	002-003,005-006,010-013,016,020-021,023-024,032-035,038-040
Chloride	T686	AR	1	mg/kg	N	006-010,014,016,020-021,023-024,026-031,033-037,040
Cyanide(Total)	T4	AR	1	mg/kg	U	001-006,009-013,016,021,024,033-035,038-040
Sulphide	T4	AR	10	mg/kg	N	001-006,009-013,016,020-021,023-024,026-029,032-035,038-040
Leach Prep	T2	AR			N	002,005-006,008,013-016,021,024,027,029,032,035,038
Sulphur (elemental)	T17	AR	20	mg/kg	N	001-006,009-013,016,020-021,023-029,032-035,038-040
TPH (C10-C35)	T8	AR	1	mg/kg	U	007-010,013-017,019,022-025,028-029,032-035,037
pH	T7	A40			U	002-003,005-006,010-013,016,020-021,023-024,032-035,038-040
Benzene	T54	10:1	1	µg/l	U	008,013-015,029
EthylBenzene	T54	10:1	1	µg/l	U	008,013-015,029
M/P Xylene	T54	10:1	1	µg/l	U	008,013-015,029
O Xylene	T54	10:1	1	µg/l	U	008,013-015,029
Toluene	T54	10:1	1	µg/l	U	008,013-015,029
Benzene	T54	AR	1	µg/kg	U	007-008,010,013-017,024,030-031,033-035,037,040
EthylBenzene	T54	AR	1	µg/kg	U	007-008,010,013-017,024,030-031,033-035,037,040
M/P Xylene	T54	AR	1	µg/kg	U	007-008,010,013-017,024,030-031,033-035,037,040
O Xylene	T54	AR	1	µg/kg	U	007-008,010,013-017,024,030-031,033-035,037,040
Toluene	T54	AR	1	µg/kg	U	007-008,010,013-017,024,030-031,033-035,037,040
As (Dissolved)	T281	10:1	0.2	µg/l	U	002,005-006,016,021,024,027,029,032,035,038

Determinand	Method	Test Sample	LOD	Units	Symbol	SAL References
Cd (Dissolved)	T281	10:1	0.02	µg/l	U	002,005-006,016,021,024,027,029,032,035,038
Cr (Dissolved)	T281	10:1	1	µg/l	U	002,005-006,016,021,024,027,029,032,035,038
Cu (Dissolved)	T281	10:1	0.5	µg/l	U	002,005-006,016,021,024,027,029,032,035,038
Pb (Dissolved)	T281	10:1	0.3	µg/l	U	002,005-006,016,021,024,027,029,032,035,038
Hg (Dissolved)	T281	10:1	0.05	µg/l	U	002,005-006,016,021,024,027,029,032,035,038
Ni (Dissolved)	T281	10:1	1	µg/l	U	002,005-006,016,021,024,027,029,032,035,038
Se (Dissolved)	T281	10:1	0.5	µg/l	U	002,005-006,016,021,024,027,029,032,035,038
Zn (Dissolved)	T281	10:1	2	µg/l	U	002,005-006,016,021,024,027,029,032,035,038
Arsenic	T82	A40	2	mg/kg	U	001-006,010-013,016,021,024,033-035,038-040
Cadmium	T82	A40	1	mg/kg	U	001-006,010-013,016,021,024,033-035,038-040
Chromium	T82	A40	1	mg/kg	U	001-006,010-013,016,021,024,033-035,038-040
Copper	T82	A40	1	mg/kg	U	001-006,010-013,016,021,024,033-035,038-040
Lead	T82	A40	3	mg/kg	U	001-006,010-013,016,021,024,033-035,038-040
Mercury	T82	A40	1	mg/kg	U	001-006,010-013,016,021,024,033-035,038-040
Nickel	T82	A40	1	mg/kg	U	001-006,010-013,016,021,024,033-035,038-040
Selenium	T82	A40	3	mg/kg	U	001-006,010-013,016,021,024,033-035,038-040
Zinc	T82	A40	1	mg/kg	U	001-006,010-013,016,021,024,033-035,038-040
Naphthalene	T149	10:1	0.01	µg/l	U	002,005-006,008,013-016,021,024,027,029,032,035,038
Acenaphthylene	T149	10:1	0.01	µg/l	U	002,005-006,008,013-016,021,024,027,029,032,035,038
Acenaphthene	T149	10:1	0.01	µg/l	U	002,005-006,008,013-016,021,024,027,029,032,035,038
Fluorene	T149	10:1	0.01	µg/l	U	002,005-006,008,013-016,021,024,027,029,032,035,038
Phenanthrene	T149	10:1	0.01	µg/l	U	002,005-006,008,013-016,021,024,027,029,032,035,038
Anthracene	T149	10:1	0.01	µg/l	U	002,005-006,008,013-016,021,024,027,029,032,035,038
Fluoranthene	T149	10:1	0.01	µg/l	U	002,005-006,008,013-016,021,024,027,029,032,035,038
Pyrene	T149	10:1	0.01	µg/l	U	002,005-006,008,013-016,021,024,027,029,032,035,038
Benzo(a)Anthracene	T149	10:1	0.01	µg/l	U	002,005-006,008,013-016,021,024,027,029,032,035,038
Chrysene	T149	10:1	0.01	µg/l	U	002,005-006,008,013-016,021,024,027,029,032,035,038
Benzo(b)fluoranthene	T149	10:1	0.01	µg/l	U	002,005-006,008,013-016,021,024,027,029,032,035,038
Benzo(k)fluoranthene	T149	10:1	0.01	µg/l	U	002,005-006,008,013-016,021,024,027,029,032,035,038
Benzo(a)Pyrene	T149	10:1	0.01	µg/l	U	002,005-006,008,013-016,021,024,027,029,032,035,038
Indeno(123-cd)Pyrene	T149	10:1	0.01	µg/l	U	002,005-006,008,013-016,021,024,027,029,032,035,038
Dibenzo(ah)Anthracene	T149	10:1	0.01	µg/l	U	002,005-006,008,013-016,021,024,027,029,032,035,038
Benzo(ghi)Perylene	T149	10:1	0.01	µg/l	U	002,005-006,008,013-016,021,024,027,029,032,035,038
PAH(total)	T17	AR	0.05	mg/kg	N	001-005,007-016,020-021,023-029,032-035,038-040
Catechol	T17	AR	0.05	mg/kg	N	001-005,007-016,020-021,023-029,032-035,038-040
Cresols	T17	AR	0.05	mg/kg	N	001-005,007-016,020-021,023-029,032-035,038-040
Naphthols	T17	AR	0.1	mg/kg	N	001-005,007-016,020-021,023-029,032-035,038-040
Phenol	T17	AR	0.05	mg/kg	N	001-005,007-016,020-021,023-029,032-035,038-040
Resorcinol	T17	AR	0.1	mg/kg	N	001-005,007-016,020-021,023-029,032-035,038-040
Total Phenols	T17	AR	0.05	mg/kg	N	001-005,007-016,020-021,023-029,032-035,038-040
Trimethyl phenol	T17	AR	0.05	mg/kg	N	001-005,007-016,020-021,023-029,032-035,038-040
Xylenols	T17	AR	0.05	mg/kg	N	002,005-006,008,016,021,024,027,029,032,035,038
Catechol	T17	10:1	0.005	mg/l	N	002,005-006,008,016,021,024,027,029,032,035,038
Cresols	T17	10:1	0.005	mg/l	N	002,005-006,008,016,021,024,027,029,032,035,038
Naphthols	T17	10:1	0.01	mg/l	N	002,005-006,008,016,021,024,027,029,032,035,038
Phenol	T17	10:1	0.005	mg/l	N	002,005-006,008,016,021,024,027,029,032,035,038
Resorcinol	T17	10:1	0.005	mg/l	N	002,005-006,008,016,021,024,027,029,032,035,038
Total Phenols	T17	10:1	0.01	mg/l	N	002,005-006,008,016,021,024,027,029,032,035,038
Trimethyl phenols	T17	10:1	0.01	mg/l	N	002,005-006,008,016,021,024,027,029,032,035,038
Xylenols	T16	AR	0.1	mg/kg	U	007,009-010,014-015,017,022-024,040,042
Phenol	T16	AR	0.1	mg/kg	U	007,009-010,014-015,017,022-024,040,042
Bis (2-chloroethyl) ether	T16	AR	0.1	mg/kg	U	007,009-010,014-015,017,022-024,040,042
2-Chlorophenol	T16	AR	0.1	mg/kg	U	007,009-010,014-015,017,022-024,040,042
1,3-Dichlorobenzene	T16	AR	0.1	mg/kg	U	007,009-010,014-015,017,022-024,040,042
1,4-Dichlorobenzene	T16	AR	0.1	mg/kg	U	007,009-010,014-015,017,022-024,040,042
1,2-Dichlorobenzene	T16	AR	0.1	mg/kg	U	007,009-010,014-015,017,022-024,040,042
Bis (2-chloroisopropyl) ether	T16	AR	0.1	mg/kg	U	007,009-010,014-015,017,022-024,040,042
2-methyl phenol	T16	AR	0.1	mg/kg	U	007,009-010,014-015,017,022-024,040,042
3/4-Methylphenol	T16	AR	0.1	mg/kg	U	007,009-010,014-015,017,022-024,040,042
Hexachloroethane	T16	AR	0.1	mg/kg	U	007,009-010,014-015,017,022-024,040,042
Nitrobenzene	T16	AR	0.1	mg/kg	U	007,009-010,014-015,017,022-024,040,042
Isophorane	T16	AR	0.1	mg/kg	U	007,009-010,014-015,017,022-024,040,042
2,4-Dimethylphenol	T16	AR	0.1	mg/kg	U	007,009-010,014-015,017,022-024,040,042
Bis (2-chloroethoxy) methane	T16	AR	0.1	mg/kg	U	007,009-010,014-015,017,022-024,040,042
2,4-Dichlorophenol	T16	AR	0.1	mg/kg	U	007,009-010,014-015,017,022-024,040,042
1,2,4-Trichlorobenzene	T16	AR	0.1	mg/kg	U	007,009-010,014-015,017,022-024,040,042
Naphthalene	T16	AR	0.1	mg/kg	U	007,009-010,014-015,017,022-024,040,042
4-Chloroaniline	T16	AR	0.1	mg/kg	U	007,009-010,014-015,017,022-024,040,042
Hexachlorobutadiene	T16	AR	0.1	mg/kg	U	007,009-010,014-015,017,022-024,040,042
4-Chloro-3-methylphenol	T16	AR	0.1	mg/kg	U	007,009-010,014-015,017,022-024,040,042

Determinand	Method	Test Sample	LOD	Units	Symbol	SAL References
2-Methylnaphthalene	T16	AR	0.1	mg/kg	U	007,009-010,014-015,017,022-024,040,042
Hexachlorocyclopentadiene	T16	AR	0.1	mg/kg	U	007,009-010,014-015,017,022-024,040,042
2,4,6-Trichlorophenol	T16	AR	0.1	mg/kg	U	007,009-010,014-015,017,022-024,040,042
2,4,5-Trichlorophenol	T16	AR	0.1	mg/kg	U	007,009-010,014-015,017,022-024,040,042
2-Chloronaphthalene	T16	AR	0.1	mg/kg	U	007,009-010,014-015,017,022-024,040,042
2-Nitroaniline	T16	AR	0.1	mg/kg	U	007,009-010,014-015,017,022-024,040,042
Dimethyl phthalate	T16	AR	0.1	mg/kg	U	007,009-010,014-015,017,022-024,040,042
2,6-Dinitrotoluene	T16	AR	0.1	mg/kg	U	007,009-010,014-015,017,022-024,040,042
Acenaphthylene	T16	AR	0.1	mg/kg	U	007,009-010,014-015,017,022-024,040,042
Acenaphthene	T16	AR	0.1	mg/kg	U	007,009-010,014-015,017,022-024,040,042
3-Nitroaniline	T16	AR	0.1	mg/kg	U	007,009-010,014-015,017,022-024,040,042
Dibenzofuran	T16	AR	0.1	mg/kg	U	007,009-010,014-015,017,022-024,040,042
2,4-Dinitrotoluene	T16	AR	0.1	mg/kg	U	007,009-010,014-015,017,022-024,040,042
2-Nitrophenol	T16	AR	0.1	mg/kg	U	007,009-010,014-015,017,022-024,040,042
Diethyl phthalate	T16	AR	0.1	mg/kg	U	007,009-010,014-015,017,022-024,040,042
Fluorene	T16	AR	0.1	mg/kg	U	007,009-010,014-015,017,022-024,040,042
4-Chlorophenyl phenylether	T16	AR	0.1	mg/kg	U	007,009-010,014-015,017,022-024,040,042
4-Nitroaniline	T16	AR	0.1	mg/kg	U	007,009-010,014-015,017,022-024,040,042
Azobenzene	T16	AR	0.1	mg/kg	U	007,009-010,014-015,017,022-024,040,042
4-Bromophenyl phenylether	T16	AR	0.1	mg/kg	U	007,009-010,014-015,017,022-024,040,042
Hexachlorobenzene	T16	AR	0.1	mg/kg	U	007,009-010,014-015,017,022-024,040,042
Pentachlorophenol	T16	AR	0.1	mg/kg	U	007,009-010,014-015,017,022-024,040,042
Phenanthrene	T16	AR	0.1	mg/kg	U	007,009-010,014-015,017,022-024,040,042
Anthracene	T16	AR	0.1	mg/kg	U	007,009-010,014-015,017,022-024,040,042
Carbazole	T16	AR	0.1	mg/kg	U	007,009-010,014-015,017,022-024,040,042
Di-n-butylphthalate	T16	AR	0.1	mg/kg	U	007,009-010,014-015,017,022-024,040,042
Fluoranthene	T16	AR	0.1	mg/kg	U	007,009-010,014-015,017,022-024,040,042
Pyrene	T16	AR	0.1	mg/kg	U	007,009-010,014-015,017,022-024,040,042
Butyl benzylphthalate	T16	AR	0.1	mg/kg	U	007,009-010,014-015,017,022-024,040,042
Benzo(a)Anthracene	T16	AR	0.1	mg/kg	U	007,009-010,014-015,017,022-024,040,042
Chrysene	T16	AR	0.1	mg/kg	U	007,009-010,014-015,017,022-024,040,042
Bis (2-ethylhexyl)phthalate	T16	AR	0.1	mg/kg	U	007,009-010,014-015,017,022-024,040,042
Di-n-octylphthalate	T16	AR	0.1	mg/kg	U	007,009-010,014-015,017,022-024,040,042
Benzo(b,k)Fluoranthene	T16	AR	0.1	mg/kg	U	007,009-010,014-015,017,022-024,040,042
Benzo(a)Pyrene	T16	AR	0.1	mg/kg	U	007,009-010,014-015,017,022-024,040,042
Indeno(123-cd)Pyrene	T16	AR	0.1	mg/kg	U	007,009-010,014-015,017,022-024,040,042
Dibenzo(ah)Anthracene	T16	AR	0.1	mg/kg	U	007,009-010,014-015,017,022-024,040,042
Benzo(ghi)Perylene	T16	AR	0.1	mg/kg	U	007,009-010,014-015,017,022-024,040,042
2,4-Dinitrophenol	T16	AR	0.1	mg/kg	N	007,009-010,014-015,017,022-024,040,042
Phenol	T16	10:1	10	µg/l	U	008,014
Phenol	T16	AR	10	µg/l	U	043
Bis (2-chloroethyl) ether	T16	10:1	10	µg/l	U	008,014
Bis (2-chloroethyl) ether	T16	AR	10	µg/l	U	043
2-Chlorophenol	T16	10:1	10	µg/l	U	008,014
2-Chlorophenol	T16	AR	10	µg/l	U	043
1,3-Dichlorobenzene	T16	10:1	10	µg/l	U	008,014
1,3-Dichlorobenzene	T16	AR	10	µg/l	U	043
1,4-Dichlorobenzene	T16	10:1	10	µg/l	U	008,014
1,4-Dichlorobenzene	T16	AR	10	µg/l	U	043
1,2-Dichlorobenzene	T16	10:1	10	µg/l	U	008,014
1,2-Dichlorobenzene	T16	AR	10	µg/l	U	043
Bis (2-chloroisopropyl) ether	T16	10:1	10	µg/l	U	008,014
Bis (2-chloroisopropyl) ether	T16	AR	10	µg/l	U	043
2-methyl phenol	T16	10:1	10	µg/l	U	008,014
2-methyl phenol	T16	AR	10	µg/l	U	043
3/4-Methylphenol	T16	10:1	10	µg/l	U	008,014
3/4-Methylphenol	T16	AR	10	µg/l	U	043
Hexachloroethane	T16	10:1	10	µg/l	U	008,014
Hexachloroethane	T16	AR	10	µg/l	U	043
Nitrobenzene	T16	10:1	10	µg/l	U	008,014
Nitrobenzene	T16	AR	10	µg/l	U	043
Isophorone	T16	10:1	10	µg/l	U	008,014
Isophorone	T16	AR	10	µg/l	U	043
2-Nitrophenol	T16	10:1	10	µg/l	U	008,014
2-Nitrophenol	T16	AR	10	µg/l	U	043
2,4-Dimethylphenol	T16	10:1	10	µg/l	U	008,014
2,4-Dimethylphenol	T16	AR	10	µg/l	U	043
Bis (2-chloroethoxy) methane	T16	10:1	10	µg/l	U	008,014
Bis (2-chloroethoxy) methane	T16	AR	10	µg/l	U	043
2,4-Dichlorophenol	T16	10:1	10	µg/l	U	008,014

Determinand	Method	Test Sample	LOD	Units	Symbol	SAL References
2,4-Dichlorophenol	T16	AR	10	µg/l	U	043
1,2,4-Trichlorobenzene	T16	10:1	10	µg/l	U	008,014
1,2,4-Trichlorobenzene	T16	AR	10	µg/l	U	043
Naphthalene	T16	10:1	10	µg/l	U	008,014
Naphthalene	T16	AR	10	µg/l	U	043
4-Chloroaniline	T16	10:1	10	µg/l	U	008,014
4-Chloroaniline	T16	AR	10	µg/l	U	043
Hexachlorobutadiene	T16	10:1	10	µg/l	U	008,014
Hexachlorobutadiene	T16	AR	10	µg/l	U	043
4-Chloro-3-methylphenol	T16	10:1	10	µg/l	U	008,014
4-Chloro-3-methylphenol	T16	AR	10	µg/l	U	043
2-Methylnaphthalene	T16	10:1	10	µg/l	U	008,014
2-Methylnaphthalene	T16	AR	10	µg/l	U	043
Hexachlorocyclopentadiene	T16	10:1	10	µg/l	U	008,014
Hexachlorocyclopentadiene	T16	AR	10	µg/l	U	043
2,4,6-Trichlorophenol	T16	10:1	10	µg/l	U	008,014
2,4,6-Trichlorophenol	T16	AR	10	µg/l	U	043
2,4,5-Trichlorophenol	T16	10:1	10	µg/l	U	008,014
2,4,5-Trichlorophenol	T16	AR	10	µg/l	U	043
2-Chloronaphthalene	T16	10:1	10	µg/l	U	008,014
2-Chloronaphthalene	T16	AR	10	µg/l	U	043
2-Nitroaniline	T16	10:1	10	µg/l	U	008,014
2-Nitroaniline	T16	AR	10	µg/l	U	043
Dimethyl phthalate	T16	10:1	10	µg/l	U	008,014
Dimethyl phthalate	T16	AR	10	µg/l	U	043
2,6-Dinitrotoluene	T16	10:1	10	µg/l	U	008,014
2,6-Dinitrotoluene	T16	AR	10	µg/l	U	043
Acenaphthylene	T16	10:1	10	µg/l	U	008,014
Acenaphthylene	T16	AR	10	µg/l	U	043
Acenaphthene	T16	10:1	10	µg/l	U	008,014
Acenaphthene	T16	AR	10	µg/l	U	043
3-Nitroaniline	T16	10:1	10	µg/l	U	008,014
3-Nitroaniline	T16	AR	10	µg/l	U	043
Dibenzofuran	T16	10:1	10	µg/l	U	008,014
Dibenzofuran	T16	AR	10	µg/l	U	043
2,4-Dinitrotoluene	T16	10:1	10	µg/l	U	008,014
2,4-Dinitrotoluene	T16	AR	10	µg/l	U	043
Diethyl phthalate	T16	10:1	10	µg/l	U	008,014
Diethyl phthalate	T16	AR	10	µg/l	U	043
Fluorene	T16	10:1	10	µg/l	U	008,014
Fluorene	T16	AR	10	µg/l	U	043
4-Chlorophenyl phenylether	T16	10:1	10	µg/l	U	008,014
4-Chlorophenyl phenylether	T16	AR	10	µg/l	U	043
4-Nitroaniline	T16	10:1	10	µg/l	U	008,014
4-Nitroaniline	T16	AR	10	µg/l	U	043
Azobenzene	T16	10:1	10	µg/l	U	008,014
Azobenzene	T16	AR	10	µg/l	U	043
4-Bromophenyl phenylether	T16	10:1	10	µg/l	U	008,014
4-Bromophenyl phenylether	T16	AR	10	µg/l	U	043
Hexachlorobenzene	T16	10:1	10	µg/l	U	008,014
Hexachlorobenzene	T16	AR	10	µg/l	U	043
Pentachlorophenol	T16	10:1	10	µg/l	U	008,014
Pentachlorophenol	T16	AR	10	µg/l	U	043
Phenanthrene	T16	10:1	10	µg/l	U	008,014
Phenanthrene	T16	AR	10	µg/l	U	043
Anthracene	T16	10:1	10	µg/l	U	008,014
Anthracene	T16	AR	10	µg/l	U	043
Carbazole	T16	10:1	10	µg/l	U	008,014
Carbazole	T16	AR	10	µg/l	U	043
Di-n-butylphthalate	T16	10:1	10	µg/l	U	008,014
Di-n-butylphthalate	T16	AR	10	µg/l	U	043
Fluoranthene	T16	10:1	10	µg/l	U	008,014
Fluoranthene	T16	AR	10	µg/l	U	043
Pyrene	T16	10:1	10	µg/l	U	008,014
Pyrene	T16	AR	10	µg/l	U	043
Butyl benzylphthalate	T16	10:1	10	µg/l	U	008,014
Butyl benzylphthalate	T16	AR	10	µg/l	U	043
Benzo(a)Anthracene	T16	10:1	10	µg/l	U	008,014
Benzo(a)Anthracene	T16	AR	10	µg/l	U	043
Chrysene	T16	10:1	10	µg/l	U	008,014

Determinand	Method	Test Sample	LOD	Units	Symbol	SAL References
Chrysene	T16	AR	10	µg/l	U	043
Bis (2-ethylhexyl)phthalate	T16	10:1	10	µg/l	U	008,014
Bis (2-ethylhexyl)phthalate	T16	AR	10	µg/l	U	043
Di-n-octylphthalate	T16	10:1	10	µg/l	U	008,014
Di-n-octylphthalate	T16	AR	10	µg/l	U	043
Benzo(b/k)Fluoranthene	T16	10:1	10	µg/l	U	008,014
Benzo(b/k)Fluoranthene	T16	AR	10	µg/l	U	043
Benzo(a)Pyrene	T16	10:1	10	µg/l	U	008,014
Benzo(a)Pyrene	T16	AR	10	µg/l	U	043
Indeno(123-cd)Pyrene	T16	10:1	10	µg/l	U	008,014
Indeno(123-cd)Pyrene	T16	AR	10	µg/l	U	043
Dibenzo(ah)Anthracene	T16	10:1	10	µg/l	U	008,014
Dibenzo(ah)Anthracene	T16	AR	10	µg/l	U	043
Benzo(ghi)Perylene	T16	10:1	10	µg/l	U	008,014
Benzo(ghi)Perylene	T16	AR	10	µg/l	U	043
2,4-Dinitrophenol	T16	10:1	10	µg/l	N	008,014
2,4-Dinitrophenol	T16	AR	10	µg/l	N	043
TPH (C8-C10)	T8	AR	1	mg/kg	N	007-008,010,012-015,017-019,022,024-025,032,035
TPH (C10-C12)	T8	AR	1	mg/kg	U	007-008,010,012-015,017-019,022,024-025,032,035
TPH (C12-C16)	T8	AR	1	mg/kg	U	007-008,010,012-015,017-019,022,024-025,032,035
TPH (C16-C21)	T8	AR	1	mg/kg	U	007-008,010,012-015,017-019,022,024-025,032,035
TPH (C21-C35)	T8	AR	1	mg/kg	U	007-008,010,012-015,017-019,022,024-025,032,035
Naphthalene	T149	AR	0.01	mg/kg	U	002-008,010-016,019-021,023-025,028-035,037-040
Acenaphthylene	T149	AR	0.01	mg/kg	U	002-008,010-016,019-021,023-025,028-035,037-040
Acenaphthene	T149	AR	0.01	mg/kg	U	002-008,010-016,019-021,023-025,028-035,037-040
Fluorene	T149	AR	0.01	mg/kg	U	002-008,010-016,019-021,023-025,028-035,037-040
Phenanthrene	T149	AR	0.01	mg/kg	U	002-008,010-016,019-021,023-025,028-035,037-040
Anthracene	T149	AR	0.01	mg/kg	U	002-008,010-016,019-021,023-025,028-035,037-040
Fluoranthene	T149	AR	0.01	mg/kg	U	002-008,010-016,019-021,023-025,028-035,037-040
Pyrene	T149	AR	0.01	mg/kg	U	002-008,010-016,019-021,023-025,028-035,037-040
Benzo(a)Anthracene	T149	AR	0.01	mg/kg	U	002-008,010-016,019-021,023-025,028-035,037-040
Chrysene	T149	AR	0.01	mg/kg	U	002-008,010-016,019-021,023-025,028-035,037-040
Benzo(b)fluoranthene	T149	AR	0.01	mg/kg	U	002-008,010-016,019-021,023-025,028-035,037-040
Benzo(k)fluoranthene	T149	AR	0.01	mg/kg	U	002-008,010-016,019-021,023-025,028-035,037-040
Benzo(a)Pyrene	T149	AR	0.01	mg/kg	U	002-008,010-016,019-021,023-025,028-035,037-040
Indeno(123-cd)Pyrene	T149	AR	0.01	mg/kg	U	002-008,010-016,019-021,023-025,028-035,037-040
Dibenzo(ah)Anthracene	T149	AR	0.01	mg/kg	U	002-008,010-016,019-021,023-025,028-035,037-040
Benzo(ghi)Perylene	T149	AR	0.01	mg/kg	U	002-008,010-016,019-021,023-025,028-035,037-040
PAH(total)	T149	AR	0.01	mg/kg	U	002-008,010-016,019-021,023-025,028-035,037-040



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limited company registered in England and
Wales (No 2514788) whose address is at
Hadfield House, Hadfield Street, Manchester M16 9FE

Scientific Analysis Laboratories Ltd

Certificate of Analysis

16 Langlands Place
Kelvin South Business
Park
East Kilbride
G75 0YF
Tel : 01355 573340
Fax : 01355 573341

Report Number: 560719-2

Date of Report: 20-Apr-2016

Customer: Patrick Parsons Ltd
Orient House
16 McPhater St
Glasgow
G4 0HW

Customer Contact: Mr Jim Heather

Customer Job Reference:

Customer Site Reference: Monckton, Barnsley

Date Job Received at SAL: 07-Apr-2016

Date Analysis Started: 07-Apr-2016

Date Analysis Completed: 20-Apr-2016

The results reported relate to samples received in the laboratory and may not be representative of a whole batch.

Opinions and interpretations expressed herein are outside the scope of UKAS accreditation

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Tests covered by this certificate were conducted in accordance with SAL SOPs

All results have been reviewed in accordance with Section 25 of the SAL Quality Manual



Report checked
and authorised by :
Miss Ashleigh Hanna
Project Manager

Issued by :
Miss Ashleigh Hanna
Project Manager

SAL Reference: 560719 Project Site: Monckton, Barnsley Customer Reference:									
Water Miscellaneous		Analysed as Water							
SAL Reference					560719 001	560719 002	560719 003	560719 004	560719 005
Customer Sample Reference					WS9	BH301	BH302	BH305	SP3
Date Sampled					06-APR-2016	06-APR-2016	06-APR-2016	06-APR-2016	06-APR-2016
Determinand	Method	Test Sample	LOD	Units					
Ammonia expressed as N	T688	F	0.05	mg/l	<0.05	0.30	0.24	2.3	21
Chloride	T685	F	1	mg/l	-	520	150	1800	200
NO3 expressed as N	T688	F	0.5	mg/l	2.0	15	<0.5	4.7	-
Cyanide(Total)	T4	AR	0.05	mg/l	0.62	-	-	-	-
pH	T7	AR			-	-	-	-	6.2
Alkalinity expressed as CaCO3	T22	AR	10	mg/l	(64) 340	-	-	-	(64) 47
B (Dissolved)	T373	AR	0.01	mg/l	-	-	-	-	0.14
Ca (Dissolved)	T373	AR	1	mg/l	58	-	-	-	160
Dissolved Mg	T285	AR	0.1	mg/l	24	-	-	-	39
Dissolved K	T285	AR	0.1	mg/l	8.5	18	13	29	12
Dissolved Na	T285	AR	0.05	mg/l	130	340	120	1100	190
Sulphur (total)	T6	AR	50	mg/l	-	-	-	-	170

SAL Reference: 560719							
Project Site: Monckton, Barnsley							
Customer Reference:							
Water		Analysed as Water					
BTEx							
SAL Reference				560719 001	560719 005	560719 006	
Customer Sample Reference				WS9	SP3	SP4	
Date Sampled				06-APR-2016	06-APR-2016	06-APR-2016	
Determinand	Method	Test Sample	LOD	Units			
Benzene	T54	AR	1	µg/l	(13) <1	(13) <1	1000
EthylBenzene	T54	AR	1	µg/l	<1	<1	(9) <5
M/P Xylene	T54	AR	1	µg/l	<1	<1	110
O Xylene	T54	AR	1	µg/l	<1	<1	45
Toluene	T54	AR	1	µg/l	<1	<1	270

SAL Reference: 560719							
Project Site: Monckton, Barnsley							
Customer Reference:							
Water		Analysed as Water					
Heavy Metals(9)							
SAL Reference				560719 001	560719 005	560719 006	
Customer Sample Reference				WS9	SP3	SP4	
Date Sampled				06-APR-2016	06-APR-2016	06-APR-2016	
Determinand	Method	Test Sample	LOD	Units			
As (Dissolved)	T281	AR	0.2	µg/l	1.5	2.2	2.4
Cd (Dissolved)	T281	AR	0.02	µg/l	0.03	0.74	0.81
Cr (Dissolved)	T281	AR	1	µg/l	22	4	4
Cu (Dissolved)	T281	AR	0.5	µg/l	12	11	4.9
Pb (Dissolved)	T281	AR	0.3	µg/l	0.4	2.3	0.8
Hg (Dissolved)	T281	AR	0.05	µg/l	<0.05	<0.05	<0.05
Ni (Dissolved)	T281	AR	1	µg/l	4	28	83
Se (Dissolved)	T281	AR	0.5	µg/l	47	13	9.3
Zn (Dissolved)	T281	AR	2	µg/l	<2	10	85

SAL Reference: 560719 Project Site: Monckton, Bamsley Customer Reference: Water Analysed as Water PAH US EPA 16 (B and K split)						
SAL Reference			560719 005		560719 006	
Customer Sample Reference			SP3		SP4	
Date Sampled			06-APR-2016		06-APR-2016	
Determinand	Method	Test Sample	LOD	Units		
Naphthalene	T149	AR	0.01	µg/l	7.5	890
Acenaphthylene	T149	AR	0.01	µg/l	1.7	⁽⁹⁾ <10
Acenaphthene	T149	AR	0.01	µg/l	9.8	120
Fluorene	T149	AR	0.01	µg/l	2.1	32
Phenanthrene	T149	AR	0.01	µg/l	1.5	10
Anthracene	T149	AR	0.01	µg/l	1.1	⁽⁹⁾ <10
Fluoranthene	T149	AR	0.01	µg/l	4.5	⁽⁹⁾ <10
Pyrene	T149	AR	0.01	µg/l	4.0	⁽⁹⁾ <10
Benzo(a)Anthracene	T149	AR	0.01	µg/l	1.9	⁽⁹⁾ <10
Chrysene	T149	AR	0.01	µg/l	2.3	⁽⁹⁾ <10
Benzo(b)fluoranthene	T149	AR	0.01	µg/l	3.9	⁽⁹⁾ <10
Benzo(k)fluoranthene	T149	AR	0.01	µg/l	1.4	⁽⁹⁾ <10
Benzo(a)Pyrene	T149	AR	0.01	µg/l	2.8	⁽⁹⁾ <10
Indeno(123-cd)Pyrene	T149	AR	0.01	µg/l	1.6	⁽⁹⁾ <10
Dibenzo(ah)Anthracene	T149	AR	0.01	µg/l	⁽⁹⁾ <0.50	⁽⁹⁾ <10
Benzo(ghi)Perylene	T149	AR	0.01	µg/l	1.8	⁽⁹⁾ <10
PAH(total)	T149	AR	0.01	µg/l	48	1100

SAL Reference: 560719 Project Site: Monckton, Barnsley Customer Reference: Water Analysed as Water TPH (CWG)									
SAL Reference				560719 001	560719 002	560719 003	560719 004	560719 005	
Customer Sample Reference				WS9	BH301	BH302	BH305	SP3	
Date Sampled				06-APR-2016	06-APR-2016	06-APR-2016	06-APR-2016	06-APR-2016	
Determinand	Method	Test Sample	LOD	Units					
TPH (C5-C6 aliphatic)	T215	AR	10	µg/l	<10	<10	<10	<10	<10
TPH (C6-C8 aliphatic)	T215	AR	10	µg/l	<10	<10	<10	<10	<10
TPH (C8-C10 aliphatic)	T215	AR	10	µg/l	<10	<10	<10	<10	<10
TPH DW(C10-C12 aliphatic)	T81	AR	0.01	mg/l	0.04	<0.01	<0.01	0.01	<0.01
TPH DW(C12-C16 aliphatic)	T81	AR	0.01	mg/l	0.14	<0.01	<0.01	0.07	0.02
TPH DW(C16-C21 aliphatic)	T81	AR	0.01	mg/l	0.09	(13) <0.01	<0.01	0.03	0.03
TPH DW(C21-C35 aliphatic)	T81	AR	0.01	mg/l	0.38	(13) <0.01	(13) <0.01	0.03	0.04
TPH (C6-C7 aromatic)	T215	AR	10	µg/l	<10	<10	<10	270	<10
TPH (C7-C8 aromatic)	T215	AR	10	µg/l	<10	<10	<10	<10	<10
TPH (C8-C10 aromatic)	T215	AR	10	µg/l	<10	<10	<10	110	<10
TPH DW(C10-C12 aromatic)	T81	AR	0.01	mg/l	<0.01	<0.01	<0.01	0.50	<0.01
TPH DW(C12-C16 aromatic)	T81	AR	0.01	mg/l	<0.01	<0.01	(13) <0.01	0.56	0.05
TPH DW(C16-C21 aromatic)	T81	AR	0.01	mg/l	<0.01	<0.01	<0.01	0.24	0.11
TPH DW(C21-C35 aromatic)	T81	AR	0.01	mg/l	<0.01	<0.01	<0.01	0.02	0.04

SAL Reference: 560719 Project Site: Monckton, Barnsley Customer Reference: Water Analysed as Water TPH (CWG)					
SAL Reference				560719 006	
Customer Sample Reference				SP4	
Date Sampled				06-APR-2016	
Determinand	Method	Test Sample	LOD	Units	
TPH (C5-C8 aliphatic)	T215	AR	10	µg/l	(9) <50
TPH (C6-C8 aliphatic)	T215	AR	10	µg/l	(9) <50
TPH (C8-C10 aliphatic)	T215	AR	10	µg/l	(9) <50
TPH DW(C10-C12 aliphatic)	T81	AR	0.01	mg/l	0.05
TPH DW(C12-C16 aliphatic)	T81	AR	0.01	mg/l	0.15
TPH DW(C16-C21 aliphatic)	T81	AR	0.01	mg/l	0.03
TPH DW(C21-C35 aliphatic)	T81	AR	0.01	mg/l	0.04
TPH (C6-C7 aromatic)	T215	AR	10	µg/l	1000
TPH (C7-C8 aromatic)	T215	AR	10	µg/l	270
TPH (C8-C10 aromatic)	T215	AR	10	µg/l	230
TPH DW(C10-C12 aromatic)	T81	AR	0.01	mg/l	1.9
TPH DW(C12-C16 aromatic)	T81	AR	0.01	mg/l	5.1
TPH DW(C16-C21 aromatic)	T81	AR	0.01	mg/l	<0.01
TPH DW(C21-C35 aromatic)	T81	AR	0.01	mg/l	<0.01

Index to symbols used in 560719-2

Value	Description
F	Filtered
AR	As Received
64	Analysis was performed by an alternative technique
9	LOD raised due to dilution of sample
13	Results have been blank corrected.
U	Analysis is UKAS accredited
N	Analysis is not UKAS accredited

Notes

TPH (H/S): These samples have been analysed exceeding recommended holding times. It is possible therefore that the results provided may be compromised.
Phenols were analysed at SAL Baintree.

Method Index

Value	Description
T22	Titration
T54	GC/MS (Headspace)
T285	ICP/OES (SIM) (Filtered)
T281	ICP/MS (Filtered)
T6	ICP/OES
T17	HPLC
T7	Probe
T149	GC/MS (SIR)
T215	GC/MS (Headspace)(LV)
T686	Discrete Analyser
T61	GC/FID (LV)
T373	ICP/OES (Filtered)
T4	Colorimetry

Accreditation Summary

Determinand	Method	Test Sample	LOD	Units	Symbol	SAL References
Ammonia expressed as N	T686	F	0.05	mg/l	U	001-006
Chloride	T686	F	1	mg/l	U	002-006
NO3 expressed as N	T686	F	0.5	mg/l	U	001-004
Cyanide(Total)	T4	AR	0.05	mg/l	U	001
pH	T7	AR			U	005-006
Alkalinity expressed as CaCO3	T22	AR	10	mg/l	N	001,005-006
B (Dissolved)	T373	AR	0.01	mg/l	N	005-006
Ca (Dissolved)	T373	AR	1	mg/l	N	001,005-006
Dissolved Mg	T285	AR	0.1	mg/l	N	001,005-006
Dissolved K	T285	AR	0.1	mg/l	N	001-006
Dissolved Na	T285	AR	0.05	mg/l	N	001-006
Sulphur (total)	T6	AR	50	mg/l	N	005-006
Benzene	T54	AR	1	µg/l	U	001,005-006
EthylBenzene	T54	AR	1	µg/l	U	001,005-006
M/P Xylene	T54	AR	1	µg/l	U	001,005-006
O Xylene	T54	AR	1	µg/l	U	001,005-006
Toluene	T54	AR	1	µg/l	U	001,005-006
As (Dissolved)	T281	AR	0.2	µg/l	U	001,005-006
Cd (Dissolved)	T281	AR	0.02	µg/l	U	001,005-006
Cr (Dissolved)	T281	AR	1	µg/l	U	001,005-006
Cu (Dissolved)	T281	AR	0.5	µg/l	U	001,005-006
Pb (Dissolved)	T281	AR	0.3	µg/l	U	001,005-006
Hg (Dissolved)	T281	AR	0.05	µg/l	U	001,005-006
Ni (Dissolved)	T281	AR	1	µg/l	U	001,005-006
Se (Dissolved)	T281	AR	0.5	µg/l	U	001,005-006
Zn (Dissolved)	T281	AR	2	µg/l	U	001,005-006
Naphthalene	T149	AR	0.01	µg/l	U	005-006
Acenaphthylene	T149	AR	0.01	µg/l	U	005-006
Acenaphthene	T149	AR	0.01	µg/l	U	005-006
Fluorene	T149	AR	0.01	µg/l	U	005-006
Phenanthrene	T149	AR	0.01	µg/l	U	005-006

Determinand	Method	Test Sample	LOD	Units	Symbol	SAL References
Anthracene	T149	AR	0.01	µg/l	U	005-006
Fluoranthene	T149	AR	0.01	µg/l	U	005-006
Pyrene	T149	AR	0.01	µg/l	U	005-006
Benzo(a)Anthracene	T149	AR	0.01	µg/l	U	005-006
Chrysene	T149	AR	0.01	µg/l	U	005-006
Benzo(b)fluoranthene	T149	AR	0.01	µg/l	U	005-006
Benzo(k)fluoranthene	T149	AR	0.01	µg/l	U	005-006
Benzo(a)Pyrene	T149	AR	0.01	µg/l	U	005-006
Indeno(123-cd)Pyrene	T149	AR	0.01	µg/l	U	005-006
Dibenzo(ah)Anthracene	T149	AR	0.01	µg/l	U	005-006
Benzo(ghi)Perylene	T149	AR	0.01	µg/l	U	005-006
PAH(total)	T149	AR	0.01	µg/l	U	005-006
Catechol	T17	AR	0.005	mg/l	N	001-006
Cresols	T17	AR	0.005	mg/l	N	001-006
Naphthols	T17	AR	0.01	mg/l	N	001-006
Phenol	T17	AR	0.005	mg/l	N	001-006
Resorcinol	T17	AR	0.005	mg/l	N	001-006
Total Phenols	T17	AR	0.01	mg/l	N	001-006
Trimethyl phenols	T17	AR	0.01	mg/l	N	001-006
Xylenols	T17	AR	0.01	mg/l	N	001-006
TPH (C5-C6 aliphatic)	T215	AR	10	µg/l	N	001-006
TPH (C6-C8 aliphatic)	T215	AR	10	µg/l	N	001-006
TPH (C8-C10 aliphatic)	T215	AR	10	µg/l	N	001-006
TPH DW(C10-C12 aliphatic)	T81	AR	0.01	mg/l	N	001-006
TPH DW(C12-C16 aliphatic)	T81	AR	0.01	mg/l	N	001-006
TPH DW(C16-C21 aliphatic)	T81	AR	0.01	mg/l	N	001-006
TPH DW(C21-C35 aliphatic)	T81	AR	0.01	mg/l	N	001-006
TPH (C6-C7 aromatic)	T215	AR	10	µg/l	N	001-006
TPH (C7-C8 aromatic)	T215	AR	10	µg/l	N	001-006
TPH (C8-C10 aromatic)	T215	AR	10	µg/l	N	001-006
TPH DW(C10-C12 aromatic)	T81	AR	0.01	mg/l	N	001-006
TPH DW(C12-C16 aromatic)	T81	AR	0.01	mg/l	N	001-006
TPH DW(C16-C21 aromatic)	T81	AR	0.01	mg/l	N	001-006
TPH DW(C21-C35 aromatic)	T81	AR	0.01	mg/l	N	001-006



Ian Calloway
Van Elle
Kirgby Lane
Pinxton
Notts
NG16 6JA

t: 01773 580 580

e: ian.calloway@van-elle.co.uk

i2 Analytical Ltd.
7 Woodshots Meadow,
Croxley Green
Business Park,
Watford,
Herts,
WD18 8YS

t: 01923 225404

f: 01923 237404

e: reception@i2analytical.com

Analytical Report Number : 15-75496

Project / Site name:	Moncton Phase I	Samples received on:	07/05/2015
Your job number:	G151311	Samples instructed on:	16/07/2015
Your order number:		Analysis completed by:	06/08/2015
Report Issue Number:	1	Report issued on:	06/08/2015
Samples Analysed:	5 leachate samples - 12 soil samples		

Signed:


Rexona Rahman
Reporting Manager
For & on behalf of i2 Analytical Ltd.

Signed:


Emma Winter
Assistant Reporting Manager
For & on behalf of i2 Analytical Ltd.

Other office located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

soils	- 4 weeks from reporting
leachates	- 2 weeks from reporting
waters	- 2 weeks from reporting
asbestos	- 6 months from reporting

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SAL Reference: 558017									
Customer Reference: G15009									
Soil		Analysed as Soil							
Miscellaneous									
SAL Reference		558017 001	558017 002	558017 003	558017 004	558017 005			
Customer Sample Reference		TP1104 1.0m	TP1103 1.3m	TP1102 0.75m	TP1105 1.3m	TP1105 2.9m			
Date Sampled		Deviating	Deviating	Deviating	Deviating	Deviating			
Determinand	Method	Test Sample	LOD	Units					
Boron (water-soluble)	T112	A40	1	mg/kg	<1	<1	<1	<1	<1
SO4(Total)	T82	A40	0.01	%	-	0.28	1.3	-	1.2
Cyanide(Total)	T4	AR	1	mg/kg	<1	<1	<1	<1	<1
Sulphide	T4	AR	10	mg/kg	<10	<10	<10	<10	<10
Leach Prep	T2	AR			-	Extracted	-	-	Extracted
Sulphur (elemental)	T17	AR	20	mg/kg	1550	49	625	40	<20
pH	T7	A40			-	6.9	7.5	-	4.5

SAL Reference: 558017
Customer Reference: G15009

Soil
Miscellaneous

Analysed as Soil

SAL Reference					558017 006	558017 007	558017 008	558017 009	558017 010
Customer Sample Reference					TP1005 0.8m	TP1006 1.1m	TP1006 2.8m	TP1101 1.0m	TP1101 2.5m
Date Sampled					Deviating	Deviating	Deviating	Deviating	Deviating
Determinand	Method	Test Sample	LOD	Units					
Boron (water-soluble)	T112	A40	1	mg/kg	<1	-	-	-	<1
SO4(Total)	T82	A40	0.01	%	0.39	-	-	-	0.05
Chloride	T686	AR	1	mg/kg	4	90	84	80	52
Cyanide(Total)	T4	AR	1	mg/kg	<1	-	-	<1	<1
Sulphide	T4	AR	10	mg/kg	<10	-	-	<10	<10
Leach Prep	T2	AR			Extracted	-	Extracted	-	-
Sulphur (elemental)	T17	AR	20	mg/kg	673	-	-	77	<20
TPH (C10-C35)	T8	AR	1	mg/kg	-	76	670	480	<1
pH	T7	A40			6.7	-	-	-	3.7

SAL Reference: 558017									
Customer Reference: G15009									
Soil		Analysed as Soil							
Miscellaneous									
SAL Reference					558017 011	558017 012	558017 013	558017 014	558017 015
Customer Sample Reference					TP1008 1.0m	TP1009 0.7m	TP1009 1.9m	TP1010 1.0m	TP1011 1.9m
Date Sampled					Deviating	Deviating	Deviating	Deviating	Deviating
Determinand	Method	Test Sample	LOD	Units					
Boron (water-soluble)	T112	A40	1	mg/kg	<1	<1	<1	-	-
SO4(Total)	T82	A40	0.01	%	0.48	0.08	0.60	-	-
Chloride	T688	AR	1	mg/kg	-	-	-	53	-
Cyanide(Total)	T4	AR	1	mg/kg	<1	<1	<1	-	-
Sulphide	T4	AR	10	mg/kg	<10	<10	<10	-	-
Leach Prep	T2	AR			-	-	Extracted	Extracted	Extracted
Sulphur (elemental)	T17	AR	20	mg/kg	46	<20	<20	-	-
TPH (C10-C35)	T8	AR	1	mg/kg	-	-	40	<1	<1
pH	T7	A40			7.5	7.7	7.1	-	-

SAL Reference: 558017													
Customer Reference: G15009													
Soil		Analysed as Soil											
Miscellaneous													
		SAL Reference		558017 016		558017 017		558017 019		558017 020		558017 021	
		Customer Sample Reference		TP1012 2.0m		TP1013 0.5m		TP1013 2.1m		TP1014 0.8m		TP1014 1.7m	
		Date Sampled		Deviating		Deviating		Deviating		Deviating		Deviating	
Determinand		Method	Test Sample	LOD	Units								
Boron (water-soluble)	T112	A40	1	mg/kg	<1	-	-	-	-	-	-	<1	
SO4(Total)	T82	A40	0.01	%	0.47	-	-	-	2.5	-	-	0.07	
Chloride	T686	AR	1	mg/kg	10	-	-	-	13	-	-	21	
Cyanide(Total)	T4	AR	1	mg/kg	<1	-	-	-	-	-	-	<1	
Sulphide	T4	AR	10	mg/kg	<10	-	-	-	<10	-	-	<10	
Leach Prep	T2	AR			Extracted	-	-	-	-	-	-	Extracted	
Sulphur (elemental)	T17	AR	20	mg/kg	<20	-	-	-	432	-	-	<20	
TPH (C10-C35)	T8	AR	1	mg/kg	38	6700	11000	-	-	-	-	-	
pH	T7	A40			6.9	-	-	-	7.5	-	-	7.4	

SAL Reference: 558017													
Customer Reference: G15009													
Soil		Analysed as Soil											
Miscellaneous													
		SAL Reference		558017 022		558017 023		558017 024		558017 025		558017 026	
		Customer Sample Reference		TP1017 0.1m		TP1017 0.8m		TP1017 1.0m		TP1018 0.45m		TP1020 0.6m	
		Date Sampled		Deviating		Deviating		Deviating		Deviating		Deviating	
Determinand		Method	Test Sample	LOD	Units								
Boron (water-soluble)		T112	A40	1	mg/kg	-	-	<1	-	-			
SO4(Total)		T82	A40	0.01	%	-	0.03	0.04	-	-			
Chloride		T686	AR	1	mg/kg	-	24	75	-	13			
Cyanide(Total)		T4	AR	1	mg/kg	-	-	<1	-	-			
Sulphide		T4	AR	10	mg/kg	-	<10	<10	-	<10			
Leach Prep		T2	AR			-	-	Extracted	-	-			
Sulphur (elemental)		T17	AR	20	mg/kg	-	578	214	215	687			
TPH (C10-C35)		T8	AR	1	mg/kg	2400	2600	1300	1000	-			
pH		T7	A40			-	7.4	7.6	-	-			

SAL Reference: 558017									
Customer Reference: G15009									
Soil		Analysed as Soil							
Miscellaneous									
		SAL Reference		558017 027	558017 028	558017 029	558017 030	558017 031	
		Customer Sample Reference		TP1020 1.2m	TP1021 0.6m	TP1021 1.4m	TP1023 0.25m	TP1023 1.5m	
		Date Sampled		Deviating	Deviating	Deviating	Deviating	Deviating	
Determinand	Method	Test Sample	LOD	Units					
Chloride	T686	AR	1	mg/kg	15	36	33	82	40
Sulphide	T4	AR	10	mg/kg	<10	<10	<10	-	-
Leach Prep	T2	AR			Extracted	-	Extracted	-	-
Sulphur (elemental)	T17	AR	20	mg/kg	248	373	391	-	-
TPH (C10-C35)	T8	AR	1	mg/kg	-	15000	5600	-	-

SAL Reference: 558017											
Customer Reference: G15009											
Soil		Analysed as Soil									
Miscellaneous											
SAL Reference		558017 032		558017 033		558017 034		558017 035		558017 036	
Customer Sample Reference		TP1024 0.4m		TP1025 0.4m		TP1025 2.0m		TP1026 0.7m		TP1027 1.0m	
Date Sampled		Deviating		Deviating		Deviating		Deviating		Deviating	
Determinand	Method	Test Sample	LOD	Units							
Boron (water-soluble)	T112	A40	1	mg/kg	-	<1	<1	<1	<1	-	
SO4(Total)	T82	A40	0.01	%	0.25	0.14	0.19	0.18	0.18	-	
Chloride	T686	AR	1	mg/kg	-	12	23	27	27	9	
Cyanide(Total)	T4	AR	1	mg/kg	-	<1	<1	<1	<1	-	
Sulphide	T4	AR	10	mg/kg	<10	<10	<10	<10	<10	-	
Leach Prep	T2	AR			Extracted	-	-	-	Extracted	-	
Sulphur (elemental)	T17	AR	20	mg/kg	115	374	221	<20	<20	-	
TPH (C10-C35)	T8	AR	1	mg/kg	220	2500	950	370	370	-	
pH	T7	A40			6.3	7.7	7.6	7.2	7.2	-	

SAL Reference: 558017									
Customer Reference: G15009									
Soil		Analysed as Soil							
Miscellaneous									
SAL Reference				558017 037	558017 038	558017 039	558017 040		
Customer Sample Reference				TP1030 1.5m	TP1031 1.6m	TP1032 0.5m	TP1033 0.5m		
Date Sampled				Deviating	Deviating	Deviating	Deviating		
Determinand	Method	Test Sample	LOD	Units					
Boron (water-soluble)	T112	A40	1	mg/kg	-	<1	<1	<1	
SO4(Total)	T82	A40	0.01	%	-	0.87	0.68	0.35	
Chloride	T686	AR	1	mg/kg	160	-	-	260	
Cyanide(Total)	T4	AR	1	mg/kg	-	<1	<1	<1	
Sulphide	T4	AR	10	mg/kg	-	<10	<10	<10	
Leach Prep	T2	AR			-	Extracted	-	-	
Sulphur (elemental)	T17	AR	20	mg/kg	-	<20	<20	<20	
TPH (C10-C35)	T8	AR	1	mg/kg	<1	-	-	-	
pH	T7	A40			-	7.6	7.6	7.8	

SAL Reference: 558017									
Customer Reference: G15009									
Leachate		Analysed as Water							
BTEX									
SAL Reference				558017 008	558017 013	558017 014	558017 015	558017 029	
Customer Sample Reference				TP1006 2.8m	TP1009 1.9m	TP1010 1.0m	TP1011 1.9m	TP1021 1.4m	
Date Sampled				Deviating	Deviating	Deviating	Deviating	Deviating	
Determinand	Method	Test Sample	LOD	Units					
Benzene	T54	10:1	1	µg/l	(13) <1	(13) <1	(13) <1	(13) <1	(13) <1
EthylBenzene	T54	10:1	1	µg/l	<1	<1	<1	<1	3
M/P Xylene	T54	10:1	1	µg/l	<1	<1	<1	<1	4
O Xylene	T54	10:1	1	µg/l	<1	<1	<1	<1	4
Toluene	T54	10:1	1	µg/l	<1	<1	<1	<1	<1