

Chemtech Environmental Limited

SOILS

Lab number Sample id Depth (m) Date sampled			86520-13 WS1 0.12-0.50 02/06/2020	86520-14 WS2 0.30-0.60 02/06/2020	86520-15 WS3 0.30-0.70 02/06/2020	86520-16 WS4 0.40-0.80 02/06/2020	86520-17 WS5 0.70-1.00 02/06/2020	86520-18 WS6 0.50-0.80 02/06/2020
Test	Method	Units						
1,1,2-Trichloroethane	CE174	mg/kg	-	-	-	-	-	-
Tetrachloroethene	CE174	mg/kg	-	-	-	-	-	-
1,3-Dichloropropane	CE174	mg/kg	-	-	-	-	-	-
Dibromochloromethane	CE174	mg/kg	-	-	-	-	-	-
1,2-Dibromoethane	CE174	mg/kg	-	-	-	-	-	-
Chlorobenzene	CE174	mg/kg	-	-	-	-	-	-
1,1,1,2-Tetrachloroethane	CE174	mg/kg	-	-	-	-	-	-
Styrene	CE174	mg/kg	-	-	-	-	-	-
Tribromomethane	CE174	mg/kg	-	-	-	-	-	-
Isopropylbenzene	CE174	mg/kg	-	-	-	-	-	-
Bromobenzene	CE174	mg/kg	-	-	-	-	-	-
1,1,2,2-Tetrachloroethane	CE174	mg/kg	-	-	-	-	-	-
1,2,3-Trichloropropane	CE174	mg/kg	-	-	-	-	-	-
Propylbenzene	CE174	mg/kg	-	-	-	-	-	-
2-Chlorotoluene	CE174	mg/kg	-	-	-	-	-	-
4-Chlorotoluene	CE174	mg/kg	-	-	-	-	-	-
1,3,5-Trimethylbenzene	CE174	mg/kg	-	-	-	-	-	-
tert-Butylbenzene	CE174	mg/kg	-	-	-	-	-	-
1,2,4-Trimethylbenzene	CE174	mg/kg	-	-	-	-	-	-
sec-Butylbenzene	CE174	mg/kg	-	-	-	-	-	-
1,3-Dichlorobenzene	CE174	mg/kg	-	-	-	-	-	-
4-Isopropyltoluene	CE174	mg/kg	-	-	-	-	-	-
1,4-Dichlorobenzene	CE174	mg/kg	-	-	-	-	-	-
1,2-Dichlorobenzene	CE174	mg/kg	-	-	-	-	-	-
Butylbenzene	CE174	mg/kg	-	-	-	-	-	-
1,2-Dibromo-3-chloropropane	CE174	mg/kg	-	-	-	-	-	-
1,2,4-Trichlorobenzene	CE174	mg/kg	-	-	-	-	-	-
Hexachloro-1,3-butadiene	CE174	mg/kg	-	-	-	-	-	-
1,2,3-Trichlorobenzene	CE174	mg/kg	-	-	-	-	-	-
Semi-volatiles								
N-Nitrosodimethylamine	CE189	mg/kg	-	-	-	-	-	-
Phenol	CE189	mg/kg	-	-	-	-	-	-
Bis(2-chloroethyl)ether	CE189	mg/kg	-	-	-	-	-	-
2-Chlorophenol	CE189	mg/kg	-	-	-	-	-	-
1,3-Dichlorobenzene	CE189	mg/kg	-	-	-	-	-	-
1,4-Dichlorobenzene	CE189	mg/kg	-	-	-	-	-	-
2-Methylphenol	CE189	mg/kg	-	-	-	-	-	-
1,2-Dichlorobenzene	CE189	mg/kg	-	-	-	-	-	-
Bis(2-chloroisopropyl)ether	CE189	mg/kg	-	-	-	-	-	-
3&4-Methylphenol	CE189	mg/kg	-	-	-	-	-	-
N-Nitrosodi-n-propylamine	CE189	mg/kg	-	-	-	-	-	-
Hexachloroethane	CE189	mg/kg	-	-	-	-	-	-

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Lab number Sample id Depth (m) Date sampled			86520-13 WS1 0.12-0.50 02/06/2020	86520-14 WS2 0.30-0.60 02/06/2020	86520-15 WS3 0.30-0.70 02/06/2020	86520-16 WS4 0.40.-0.80 02/06/2020	86520-17 WS5 0.70-1.00 02/06/2020	86520-18 WS6 0.50-0.80 02/06/2020
Test	Method	Units						
Nitrobenzene	CE189	mg/kg	-	-	-	-	-	-
Isophorone	CE189	mg/kg	-	-	-	-	-	-
2,4-Dimethylphenol	CE189	mg/kg	-	-	-	-	-	-
2-Nitrophenol	CE189	mg/kg	-	-	-	-	-	-
Bis(2-chloroethoxy)methane	CE189	mg/kg	-	-	-	-	-	-
2,4-Dichlorophenol	CE189	mg/kg	-	-	-	-	-	-
1,2,4-Trichlorobenzene	CE189	mg/kg	-	-	-	-	-	-
4-Chloroaniline	CE189	mg/kg	-	-	-	-	-	-
Hexachlorobutadiene	CE189	mg/kg	-	-	-	-	-	-
4-Chloro-3-methylphenol	CE189	mg/kg	-	-	-	-	-	-
2-Methylnaphthalene	CE189	mg/kg	-	-	-	-	-	-
1-Methylnaphthalene	CE189	mg/kg	-	-	-	-	-	-
Hexachlorocyclopentadiene	CE189	mg/kg	-	-	-	-	-	-
2,4,6-Trichlorophenol	CE189	mg/kg	-	-	-	-	-	-
2,4,5-Trichlorophenol	CE189	mg/kg	-	-	-	-	-	-
2-Chloronaphthalene	CE189	mg/kg	-	-	-	-	-	-
2-Nitroaniline	CE189	mg/kg	-	-	-	-	-	-
Dimethyl phthalate	CE189	mg/kg	-	-	-	-	-	-
2,6-Dinitrotoluene	CE189	mg/kg	-	-	-	-	-	-
3-Nitroaniline	CE189	mg/kg	-	-	-	-	-	-
2,4-Dinitrophenol	CE189	mg/kg	-	-	-	-	-	-
4-Nitrophenol	CE189	mg/kg	-	-	-	-	-	-
2,4-Dinitrotoluene	CE189	mg/kg	-	-	-	-	-	-
Dibenzofuran	CE189	mg/kg	-	-	-	-	-	-
Diethyl phthalate	CE189	mg/kg	-	-	-	-	-	-
4-Chlorophenylphenyl ether	CE189	mg/kg	-	-	-	-	-	-
4-Nitroaniline	CE189	mg/kg	-	-	-	-	-	-
2-Methyl-4,6-dinitrophenol	CE189	mg/kg	-	-	-	-	-	-
Azobenzene	CE189	mg/kg	-	-	-	-	-	-
4-Bromophenylphenyl ether	CE189	mg/kg	-	-	-	-	-	-
Hexachlorobenzene	CE189	mg/kg	-	-	-	-	-	-
Pentachlorophenol	CE189	mg/kg	-	-	-	-	-	-
Carbazole	CE189	mg/kg	-	-	-	-	-	-
Di-n-butyl phthalate	CE189	mg/kg	-	-	-	-	-	-
Butylbenzyl phthalate	CE189	mg/kg	-	-	-	-	-	-
Bis(2-ethylhexyl)phthalate	CE189	mg/kg	-	-	-	-	-	-
Di-n-octyl phthalate	CE189	mg/kg	-	-	-	-	-	-
Subcontracted analysis								
Asbestos (qualitative)	\$	-	NAD	NAD	NAD	NAD	NAD	NAD

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SOILS

Lab number Sample id Depth (m) Date sampled			86520-19 WS7 0.50-0.90 02/06/2020	86520-20 WS8 0.50-0.90 02/06/2020	86520-21 WS9 0.40-0.80 02/06/2020	86520-22 WS10 0.20-0.35 02/06/2020
Test	Method	Units				
Arsenic (total)	CE127 ^M	mg/kg As	14	14	13	21
Cadmium (total)	CE127 ^M	mg/kg Cd	0.4	0.6	<0.2	0.2
Chromium (total)	CE127 ^M	mg/kg Cr	14	41	23	21
Chromium (III)	CE208	mg/kg CrIII	14	41	23	21
Chromium (VI)	CE146	mg/kg CrVI	<1	<1	<1	<1
Copper (total)	CE127 ^M	mg/kg Cu	27	43	26	113
Lead (total)	CE127 ^M	mg/kg Pb	39	169	48	62
Mercury (total)	CE127 ^M	mg/kg Hg	<0.5	<0.5	<0.5	<0.5
Nickel (total)	CE127 ^M	mg/kg Ni	21	45	30	23
Selenium (total)	CE127 ^M	mg/kg Se	1.6	2.0	1.8	2.3
Zinc (total)	CE127 ^M	mg/kg Zn	39	164	68	48
pH	CE004 ^M	units	7.0	7.8	8.1	9.0
Sulphate (2:1 water soluble)	CE061 ^M	mg/l SO ₄	59	34	75	41
Sulphate (total)	CE062 ^M	mg/kg SO ₄	369	532	1546	3268
Phenols (total)	CE078	mg/kg PhOH	<0.5	<0.5	<0.5	<0.5
Total Organic Carbon (TOC)	CE072 ^M	% w/w C	1.6	3.1	1.2	0.6
Estimate of OMC (calculated from TOC)	CE072 ^M	% w/w	2.7	5.4	2.0	1.0
PAH						
Naphthalene	CE087 ^M	mg/kg	0.13	0.04	0.02	0.05
Acenaphthylene	CE087 ^M	mg/kg	0.02	0.02	<0.02	<0.02
Acenaphthene	CE087 ^M	mg/kg	0.02	<0.02	<0.02	<0.02
Fluorene	CE087 ^U	mg/kg	<0.02	<0.02	<0.02	<0.02
Phenanthrene	CE087 ^M	mg/kg	0.33	0.27	0.05	0.08
Anthracene	CE087 ^U	mg/kg	0.08	0.33	<0.02	<0.02
Fluoranthene	CE087 ^M	mg/kg	0.63	0.61	0.16	0.26
Pyrene	CE087 ^M	mg/kg	0.55	0.57	0.15	0.24
Benzo(a)anthracene	CE087 ^U	mg/kg	0.41	0.40	0.15	<0.02
Chrysene	CE087 ^M	mg/kg	0.36	0.35	0.12	<0.03
Benzo(b)fluoranthene	CE087 ^M	mg/kg	0.58	0.56	0.19	<0.02
Benzo(k)fluoranthene	CE087 ^M	mg/kg	0.25	0.24	0.10	<0.03
Benzo(a)pyrene	CE087 ^U	mg/kg	0.44	0.42	0.19	<0.02
Indeno(123cd)pyrene	CE087 ^M	mg/kg	0.37	0.35	0.18	0.30
Dibenz(ah)anthracene	CE087 ^M	mg/kg	0.09	<0.02	<0.02	<0.02
Benzo(ghi)perylene	CE087 ^M	mg/kg	0.32	0.30	0.07	0.31
PAH (total of USEPA 16)	CE087	mg/kg	4.57	4.48	1.38	1.25
TPH						
VPH Aromatic (>EC5-EC7)	CE067	mg/kg	-	<0.01	-	-
VPH Aromatic (>EC7-EC8)	CE067	mg/kg	-	<0.01	-	-
VPH Aromatic (>EC8-EC10)	CE067	mg/kg	-	<0.01	-	-
EPH Aromatic (>EC10-EC12)	CE068	mg/kg	-	<1	-	-
EPH Aromatic (>EC12-EC16)	CE068	mg/kg	-	<1	-	-
EPH Aromatic (>EC16-EC21)	CE068	mg/kg	-	3	-	-

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Test	Method	Units				
EPH Aromatic (>EC21-EC35)	CE068	mg/kg	-	4	-	-
EPH Aromatic (>EC35-EC44)	CE068	mg/kg	-	1	-	-
VPH Aliphatic (>C5-C6)	CE067	mg/kg	-	<0.1	-	-
VPH Aliphatic (>C6-C8)	CE067	mg/kg	-	<0.1	-	-
VPH Aliphatic (>C8-C10)	CE067	mg/kg	-	<0.1	-	-
EPH Aliphatic (>C10-C12)	CE068	mg/kg	-	<4	-	-
EPH Aliphatic (>C12-C16)	CE068	mg/kg	-	7	-	-
EPH Aliphatic (>C16-C35)	CE068	mg/kg	-	94	-	-
EPH Aliphatic (>C35-C44)	CE068	mg/kg	-	26	-	-
VPH (>C8-C10)	CE067	mg/kg	<0.1	<0.1	<0.1	<0.1
EPH (>C10-C35)	CE033	mg/kg	43	109	27	43
TPH (>C8-C35)	-	mg/kg	43	109	27	43
Volatiles						
MTBE	CE192 ^U	mg/kg	-	-	<0.02	-
Benzene	CE192 ^U	mg/kg	-	-	<0.01	-
Toluene	CE192 ^U	mg/kg	-	-	<0.01	-
Ethylbenzene	CE192 ^U	mg/kg	-	-	<0.01	-
m & p-Xylene	CE192 ^U	mg/kg	-	-	<0.02	-
o-Xylene	CE192 ^U	mg/kg	-	-	<0.01	-
Dichlorodifluoromethane	CE174	mg/kg	-	-	<0.01	-
Chloromethane	CE174	mg/kg	-	-	<0.01	-
Vinyl chloride	CE174	mg/kg	-	-	<0.01	-
Bromomethane	CE174	mg/kg	-	-	<0.03	-
Chloroethane	CE174	mg/kg	-	-	<0.01	-
Trichlorofluoromethane	CE174	mg/kg	-	-	<0.01	-
1,1-Dichloroethene	CE174	mg/kg	-	-	<0.01	-
Trans-1,2-Dichloroethene	CE174	mg/kg	-	-	<0.01	-
1,1-Dichloroethane	CE174	mg/kg	-	-	<0.01	-
2,2-Dichloropropane	CE174	mg/kg	-	-	<0.01	-
Cis-1,2-Dichloroethene	CE174	mg/kg	-	-	<0.01	-
Bromochloromethane	CE174	mg/kg	-	-	<0.01	-
Chloroform	CE174	mg/kg	-	-	<0.01	-
1,1,1-Trichloroethane	CE174	mg/kg	-	-	<0.01	-
Carbon tetrachloride	CE174	mg/kg	-	-	<0.01	-
1,1-Dichloro-1-propene	CE174	mg/kg	-	-	<0.01	-
1,2-Dichloroethane	CE174	mg/kg	-	-	<0.01	-
Trichloroethene	CE174	mg/kg	-	-	<0.01	-
1,2-Dichloropropane	CE174	mg/kg	-	-	<0.01	-
Dibromomethane	CE174	mg/kg	-	-	<0.01	-
Bromodichloromethane	CE174	mg/kg	-	-	<0.01	-
cis-1,3-Dichloro-1-propene	CE174	mg/kg	-	-	<0.01	-
trans-1,3-Dichloro-1-propene	CE174	mg/kg	-	-	<0.01	-

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Lab number Sample id Depth (m) Date sampled			86520-19 WS7 0.50-0.90 02/06/2020	86520-20 WS8 0.50-0.90 02/06/2020	86520-21 WS9 0.40-0.80 02/06/2020	86520-22 WS10 0.20-0.35 02/06/2020
Test	Method	Units				
1,1,2-Trichloroethane	CE174	mg/kg	-	-	<0.01	-
Tetrachloroethene	CE174	mg/kg	-	-	<0.01	-
1,3-Dichloropropane	CE174	mg/kg	-	-	<0.01	-
Dibromochloromethane	CE174	mg/kg	-	-	<0.01	-
1,2-Dibromoethane	CE174	mg/kg	-	-	<0.01	-
Chlorobenzene	CE174	mg/kg	-	-	<0.01	-
1,1,1,2-Tetrachloroethane	CE174	mg/kg	-	-	<0.01	-
Styrene	CE174	mg/kg	-	-	<0.01	-
Tribromomethane	CE174	mg/kg	-	-	<0.01	-
Isopropylbenzene	CE174	mg/kg	-	-	<0.01	-
Bromobenzene	CE174	mg/kg	-	-	<0.01	-
1,1,2,2-Tetrachloroethane	CE174	mg/kg	-	-	<0.01	-
1,2,3-Trichloropropane	CE174	mg/kg	-	-	<0.01	-
Propylbenzene	CE174	mg/kg	-	-	<0.01	-
2-Chlorotoluene	CE174	mg/kg	-	-	<0.01	-
4-Chlorotoluene	CE174	mg/kg	-	-	<0.01	-
1,3,5-Trimethylbenzene	CE174	mg/kg	-	-	<0.01	-
tert-Butylbenzene	CE174	mg/kg	-	-	<0.01	-
1,2,4-Trimethylbenzene	CE174	mg/kg	-	-	<0.01	-
sec-Butylbenzene	CE174	mg/kg	-	-	<0.01	-
1,3-Dichlorobenzene	CE174	mg/kg	-	-	<0.01	-
4-Isopropyltoluene	CE174	mg/kg	-	-	<0.01	-
1,4-Dichlorobenzene	CE174	mg/kg	-	-	<0.01	-
1,2-Dichlorobenzene	CE174	mg/kg	-	-	<0.01	-
Butylbenzene	CE174	mg/kg	-	-	<0.01	-
1,2-Dibromo-3-chloropropane	CE174	mg/kg	-	-	<0.01	-
1,2,4-Trichlorobenzene	CE174	mg/kg	-	-	<0.01	-
Hexachloro-1,3-butadiene	CE174	mg/kg	-	-	<0.01	-
1,2,3-Trichlorobenzene	CE174	mg/kg	-	-	<0.01	-
Semi-volatiles						
N-Nitrosodimethylamine	CE189	mg/kg	-	-	<0.1	-
Phenol	CE189	mg/kg	-	-	<0.1	-
Bis(2-chloroethyl)ether	CE189	mg/kg	-	-	<0.1	-
2-Chlorophenol	CE189	mg/kg	-	-	<0.1	-
1,3-Dichlorobenzene	CE189	mg/kg	-	-	<0.1	-
1,4-Dichlorobenzene	CE189	mg/kg	-	-	<0.1	-
2-Methylphenol	CE189	mg/kg	-	-	<0.1	-
1,2-Dichlorobenzene	CE189	mg/kg	-	-	<0.1	-
Bis(2-chloroisopropyl)ether	CE189	mg/kg	-	-	<0.1	-
3&4-Methylphenol	CE189	mg/kg	-	-	<0.1	-
N-Nitrosodi-n-propylamine	CE189	mg/kg	-	-	<0.1	-
Hexachloroethane	CE189	mg/kg	-	-	<0.1	-

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Lab number Sample id Depth (m) Date sampled			86520-19 WS7 0.50-0.90 02/06/2020	86520-20 WS8 0.50-0.90 02/06/2020	86520-21 WS9 0.40-0.80 02/06/2020	86520-22 WS10 0.20-0.35 02/06/2020
Test	Method	Units				
Nitrobenzene	CE189	mg/kg	-	-	<0.1	-
Isophorone	CE189	mg/kg	-	-	<0.1	-
2,4-Dimethylphenol	CE189	mg/kg	-	-	<0.1	-
2-Nitrophenol	CE189	mg/kg	-	-	<0.1	-
Bis(2-chloroethoxy)methane	CE189	mg/kg	-	-	<0.1	-
2,4-Dichlorophenol	CE189	mg/kg	-	-	<0.1	-
1,2,4-Trichlorobenzene	CE189	mg/kg	-	-	<0.1	-
4-Chloroaniline	CE189	mg/kg	-	-	<0.1	-
Hexachlorobutadiene	CE189	mg/kg	-	-	<0.1	-
4-Chloro-3-methylphenol	CE189	mg/kg	-	-	<0.1	-
2-Methylnaphthalene	CE189	mg/kg	-	-	<0.1	-
1-Methylnaphthalene	CE189	mg/kg	-	-	<0.1	-
Hexachlorocyclopentadiene	CE189	mg/kg	-	-	<0.1	-
2,4,6-Trichlorophenol	CE189	mg/kg	-	-	<0.1	-
2,4,5-Trichlorophenol	CE189	mg/kg	-	-	<0.1	-
2-Chloronaphthalene	CE189	mg/kg	-	-	<0.1	-
2-Nitroaniline	CE189	mg/kg	-	-	<0.1	-
Dimethyl phthalate	CE189	mg/kg	-	-	<0.1	-
2,6-Dinitrotoluene	CE189	mg/kg	-	-	<0.1	-
3-Nitroaniline	CE189	mg/kg	-	-	<0.1	-
2,4-Dinitrophenol	CE189	mg/kg	-	-	<0.1	-
4-Nitrophenol	CE189	mg/kg	-	-	<0.1	-
2,4-Dinitrotoluene	CE189	mg/kg	-	-	<0.1	-
Dibenzofuran	CE189	mg/kg	-	-	<0.1	-
Diethyl phthalate	CE189	mg/kg	-	-	<0.1	-
4-Chlorophenylphenyl ether	CE189	mg/kg	-	-	<0.1	-
4-Nitroaniline	CE189	mg/kg	-	-	<0.1	-
2-Methyl-4,6-dinitrophenol	CE189	mg/kg	-	-	<0.1	-
Azobenzene	CE189	mg/kg	-	-	<0.1	-
4-Bromophenylphenyl ether	CE189	mg/kg	-	-	<0.1	-
Hexachlorobenzene	CE189	mg/kg	-	-	<0.1	-
Pentachlorophenol	CE189	mg/kg	-	-	<0.1	-
Carbazole	CE189	mg/kg	-	-	<0.1	-
Di-n-butyl phthalate	CE189	mg/kg	-	-	<0.1	-
Butylbenzyl phthalate	CE189	mg/kg	-	-	<0.1	-
Bis(2-ethylhexyl)phthalate	CE189	mg/kg	-	-	<0.1	-
Di-n-octyl phthalate	CE189	mg/kg	-	-	<0.1	-
Subcontracted analysis						
Asbestos (qualitative)	\$	-	NAD	NAD	NAD	NAD

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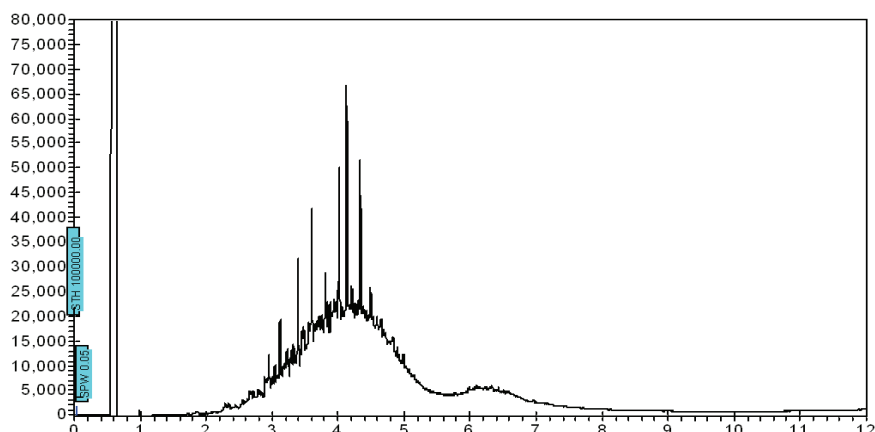
PREPARED LEACHATES

Lab number Sample id Depth (m)			86520-12L TP12 0.80-1.00	86520-20L WS8 0.50-0.90
Test	Method	Units		
PAH				
Naphthalene	CE051	µg/l	13.1	<0.1
Acenaphthylene	CE051	µg/l	<0.1	<0.1
Acenaphthene	CE051	µg/l	2.9	1.6
Fluorene	CE051	µg/l	1.9	1.1
Phenanthrene	CE051	µg/l	3.7	0.1
Anthracene	CE051	µg/l	0.6	0.4
Fluoranthene	CE051	µg/l	0.6	1.1
Pyrene	CE051	µg/l	0.4	0.7
Benzo(a)anthracene	CE051	µg/l	0.1	<0.1
Chrysene	CE051	µg/l	0.1	<0.1
Benzo(b)fluoranthene	CE051	µg/l	0.3	0.1
Benzo(k)fluoranthene	CE051	µg/l	<0.1	<0.1
Benzo(a)pyrene	CE051	µg/l	0.2	<0.1
Indeno(123cd)pyrene	CE051	µg/l	<0.1	<0.1
Dibenz(ah)anthracene	CE051	µg/l	<0.1	<0.1
Benzo(ghi)perylene	CE051	µg/l	<0.1	<0.1
PAH (total of USEPA 16)	CE051	µg/l	23.9	5.1

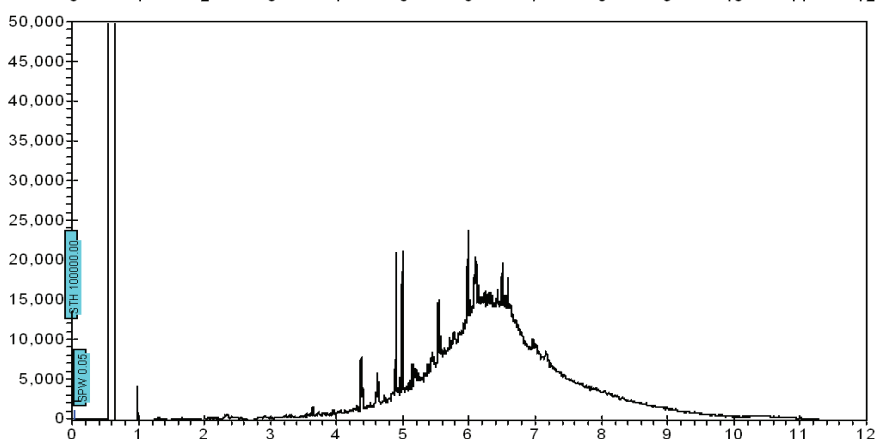
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CHROMATOGRAMS

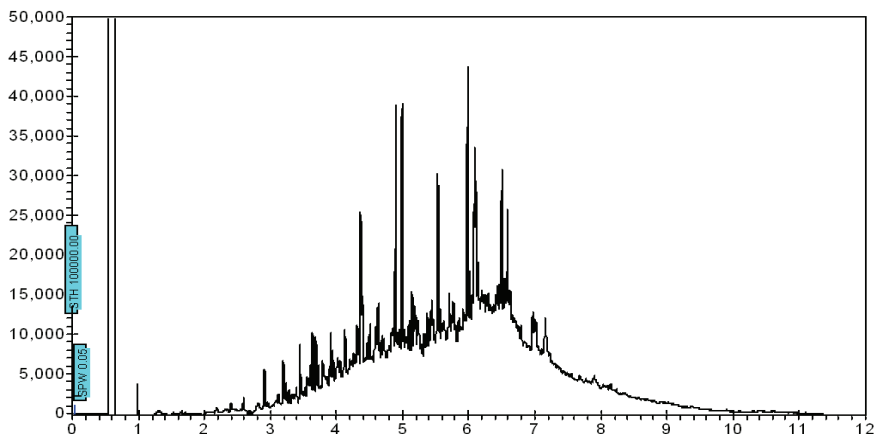
Lab number	86520-9
Sample id	TP9
Depth (m)	0.80-1.20
Date sampled	02/06/2020
TPH C5-C40 (mg/kg)	7500
Hydrocarbon range(s)	C10-C28, C25-C40
Characteristic	Diesel, Heavy Oil



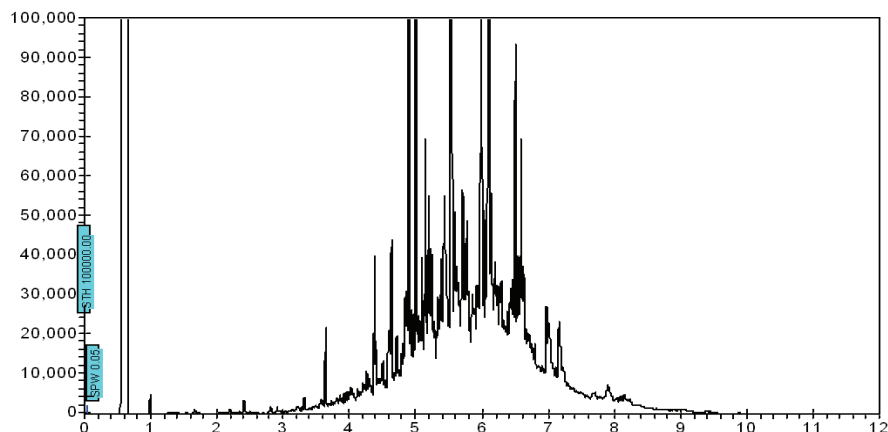
Lab number	86520-11
Sample id	TP11
Depth (m)	0.80-1.20
Date sampled	02/06/2020
TPH C5-C40 (mg/kg)	767
Hydrocarbon range(s)	C16-C40+
Characteristic	Motor Oil



Lab number	86520-12
Sample id	TP12
Depth (m)	0.80-1.00
Date sampled	02/06/2020
TPH C5-C40 (mg/kg)	1182
Hydrocarbon range(s)	C12-C40+
Characteristic	Unknown Oil



Lab number	86520-17
Sample id	WS5
Depth (m)	0.70-1.00
Date sampled	02/06/2020
TPH C5-C40 (mg/kg)	2827
Hydrocarbon range(s)	C14-C40+
Characteristic	Unknown Oil



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METHOD DETAILS

METHOD	SOILS	METHOD SUMMARY	SAMPLE	STATUS	LOD	UNITS
CE127	Arsenic (total)	Aqua regia digest, ICP-MS	Dry	M	1	mg/kg As
CE127	Cadmium (total)	Aqua regia digest, ICP-MS	Dry	M	0.2	mg/kg Cd
CE127	Chromium (total)	Aqua regia digest, ICP-MS	Dry	M	1	mg/kg Cr
CE208	Chromium (III)	Calculation: Cr (total) - Cr (VI)	Dry		1	mg/kg CrIII
CE146	Chromium (VI)	Acid extraction, Colorimetry	Dry		1	mg/kg CrVI
CE127	Copper (total)	Aqua regia digest, ICP-MS	Dry	M	1	mg/kg Cu
CE127	Lead (total)	Aqua regia digest, ICP-MS	Dry	M	1	mg/kg Pb
CE127	Mercury (total)	Aqua regia digest, ICP-MS	Dry	M	0.5	mg/kg Hg
CE127	Nickel (total)	Aqua regia digest, ICP-MS	Dry	M	1	mg/kg Ni
CE127	Selenium (total)	Aqua regia digest, ICP-MS	Dry	M	0.3	mg/kg Se
CE127	Zinc (total)	Aqua regia digest, ICP-MS	Dry	M	5	mg/kg Zn
CE004	pH	Based on BS 1377, pH Meter	As received	M	-	units
CE061	Sulphate (2:1 water soluble)	Aqueous extraction, ICP-OES	Dry	M	10	mg/l SO ₄
CE062	Sulphate (total)	Acid extraction, ICP-OES	Dry	M	100	mg/kg SO ₄
CE078	Phenols (total)	Extraction, Continuous Flow Colorimetry	As received		0.5	mg/kg PhOH
CE072	Total Organic Carbon (TOC)	Removal of IC by acidification, Carbon Analyser	Dry	M	0.1	% w/w C
CE072	Estimate of OMC (calculated from TOC)	Calculation from Total Organic Carbon	Dry	M	0.1	% w/w
CE087	Naphthalene	Solvent extraction, GC-MS	As received	M	0.02	mg/kg
CE087	Acenaphthylene	Solvent extraction, GC-MS	As received	M	0.02	mg/kg
CE087	Acenaphthene	Solvent extraction, GC-MS	As received	M	0.02	mg/kg
CE087	Fluorene	Solvent extraction, GC-MS	As received	U	0.02	mg/kg
CE087	Phenanthrene	Solvent extraction, GC-MS	As received	M	0.02	mg/kg
CE087	Anthracene	Solvent extraction, GC-MS	As received	U	0.02	mg/kg
CE087	Fluoranthene	Solvent extraction, GC-MS	As received	M	0.02	mg/kg
CE087	Pyrene	Solvent extraction, GC-MS	As received	M	0.02	mg/kg
CE087	Benzo(a)anthracene	Solvent extraction, GC-MS	As received	U	0.02	mg/kg
CE087	Chrysene	Solvent extraction, GC-MS	As received	M	0.03	mg/kg
CE087	Benzo(b)fluoranthene	Solvent extraction, GC-MS	As received	M	0.02	mg/kg
CE087	Benzo(k)fluoranthene	Solvent extraction, GC-MS	As received	M	0.03	mg/kg
CE087	Benzo(a)pyrene	Solvent extraction, GC-MS	As received	U	0.02	mg/kg
CE087	Indeno(123cd)pyrene	Solvent extraction, GC-MS	As received	M	0.02	mg/kg
CE087	Dibenz(ah)anthracene	Solvent extraction, GC-MS	As received	M	0.02	mg/kg
CE087	Benzo(ghi)perylene	Solvent extraction, GC-MS	As received	M	0.02	mg/kg
CE087	PAH (total of USEPA 16)	Solvent extraction, GC-MS	As received		0.34	mg/kg
CE067	VPH Aromatic (>EC5-EC7)	Headspace GC-FID	As received		0.01	mg/kg
CE067	VPH Aromatic (>EC7-EC8)	Headspace GC-FID	As received		0.01	mg/kg
CE067	VPH Aromatic (>EC8-EC10)	Headspace GC-FID	As received		0.01	mg/kg
CE068	EPH Aromatic (>EC10-EC12)	Solvent extraction, GC-FID	As received		1	mg/kg
CE068	EPH Aromatic (>EC12-EC16)	Solvent extraction, GC-FID	As received		1	mg/kg
CE068	EPH Aromatic (>EC16-EC21)	Solvent extraction, GC-FID	As received		1	mg/kg
CE068	EPH Aromatic (>EC21-EC35)	Solvent extraction, GC-FID	As received		1	mg/kg
CE068	EPH Aromatic (>EC35-EC44)	Solvent extraction, GC-FID	As received		1	mg/kg
CE067	VPH Aliphatic (>C5-C6)	Headspace GC-FID	As received		0.1	mg/kg
CE067	VPH Aliphatic (>C6-C8)	Headspace GC-FID	As received		0.1	mg/kg

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METHOD DETAILS

METHOD	SOILS	METHOD SUMMARY	SAMPLE	STATUS	LOD	UNITS
CE067	VPH Aliphatic (>C8-C10)	Headspace GC-FID	As received		0.1	mg/kg
CE068	EPH Aliphatic (>C10-C12)	Solvent extraction, GC-FID	As received		4	mg/kg
CE068	EPH Aliphatic (>C12-C16)	Solvent extraction, GC-FID	As received		4	mg/kg
CE068	EPH Aliphatic (>C16-C35)	Solvent extraction, GC-FID	As received		4	mg/kg
CE068	EPH Aliphatic (>C35-C44)	Solvent extraction, GC-FID	As received		10	mg/kg
CE067	VPH (>C8-C10)	Headspace GC-FID	As received		0.1	mg/kg
CE033	EPH (>C10-C35)	Solvent extraction, GC-FID	As received		7	mg/kg
-	TPH (>C8-C35)	Sum of VPH (>C8-C10) & EPH (>C10-C35)	As received		10	mg/kg
CE192	MTBE	Headspace GC-FID	As received	U	0.02	mg/kg
CE192	Benzene	Headspace GC-FID	As received	U	0.01	mg/kg
CE192	Toluene	Headspace GC-FID	As received	U	0.01	mg/kg
CE192	Ethylbenzene	Headspace GC-FID	As received	U	0.01	mg/kg
CE192	m & p-Xylene	Headspace GC-FID	As received	U	0.02	mg/kg
CE192	o-Xylene	Headspace GC-FID	As received	U	0.01	mg/kg
CE174	Dichlorodifluoromethane	Headspace GC-MS	As received		0.01	mg/kg
CE174	Chloromethane	Headspace GC-MS	As received		0.01	mg/kg
CE174	Vinyl chloride	Headspace GC-MS	As received		0.01	mg/kg
CE174	Bromomethane	Headspace GC-MS	As received		0.03	mg/kg
CE174	Chloroethane	Headspace GC-MS	As received		0.01	mg/kg
CE174	Trichlorofluoromethane	Headspace GC-MS	As received		0.01	mg/kg
CE174	1,1-Dichloroethene	Headspace GC-MS	As received		0.01	mg/kg
CE174	Trans-1,2-Dichloroethene	Headspace GC-MS	As received		0.01	mg/kg
CE174	1,1-Dichloroethane	Headspace GC-MS	As received		0.01	mg/kg
CE174	2,2-Dichloropropane	Headspace GC-MS	As received		0.01	mg/kg
CE174	Cis-1,2-Dichloroethene	Headspace GC-MS	As received		0.01	mg/kg
CE174	Bromochloromethane	Headspace GC-MS	As received		0.01	mg/kg
CE174	Chloroform	Headspace GC-MS	As received		0.01	mg/kg
CE174	1,1,1-Trichloroethane	Headspace GC-MS	As received		0.01	mg/kg
CE174	Carbon tetrachloride	Headspace GC-MS	As received		0.01	mg/kg
CE174	1,1-Dichloro-1-propene	Headspace GC-MS	As received		0.01	mg/kg
CE174	1,2-Dichloroethane	Headspace GC-MS	As received		0.01	mg/kg
CE174	Trichloroethene	Headspace GC-MS	As received		0.01	mg/kg
CE174	1,2-Dichloropropane	Headspace GC-MS	As received		0.01	mg/kg
CE174	Dibromomethane	Headspace GC-MS	As received		0.01	mg/kg
CE174	Bromodichloromethane	Headspace GC-MS	As received		0.01	mg/kg
CE174	cis-1,3-Dichloro-1-propene	Headspace GC-MS	As received		0.01	mg/kg
CE174	trans-1,3-Dichloro-1-propene	Headspace GC-MS	As received		0.01	mg/kg
CE174	1,1,2-Trichloroethane	Headspace GC-MS	As received		0.01	mg/kg
CE174	Tetrachloroethene	Headspace GC-MS	As received		0.01	mg/kg
CE174	1,3-Dichloropropane	Headspace GC-MS	As received		0.01	mg/kg
CE174	Dibromochloromethane	Headspace GC-MS	As received		0.01	mg/kg
CE174	1,2-Dibromoethane	Headspace GC-MS	As received		0.01	mg/kg
CE174	Chlorobenzene	Headspace GC-MS	As received		0.01	mg/kg
CE174	1,1,1,2-Tetrachloroethane	Headspace GC-MS	As received		0.01	mg/kg

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METHOD DETAILS

METHOD	SOILS	METHOD SUMMARY	SAMPLE	STATUS	LOD	UNITS
CE174	Styrene	Headspace GC-MS	As received		0.01	mg/kg
CE174	Tribromomethane	Headspace GC-MS	As received		0.01	mg/kg
CE174	Isopropylbenzene	Headspace GC-MS	As received		0.01	mg/kg
CE174	Bromobenzene	Headspace GC-MS	As received		0.01	mg/kg
CE174	1,1,2,2-Tetrachloroethane	Headspace GC-MS	As received		0.01	mg/kg
CE174	1,2,3-Trichloropropane	Headspace GC-MS	As received		0.01	mg/kg
CE174	Propylbenzene	Headspace GC-MS	As received		0.01	mg/kg
CE174	2-Chlorotoluene	Headspace GC-MS	As received		0.01	mg/kg
CE174	4-Chlorotoluene	Headspace GC-MS	As received		0.01	mg/kg
CE174	1,3,5-Trimethylbenzene	Headspace GC-MS	As received		0.01	mg/kg
CE174	tert-Butylbenzene	Headspace GC-MS	As received		0.01	mg/kg
CE174	1,2,4-Trimethylbenzene	Headspace GC-MS	As received		0.01	mg/kg
CE174	sec-Butylbenzene	Headspace GC-MS	As received		0.01	mg/kg
CE174	1,3-Dichlorobenzene	Headspace GC-MS	As received		0.01	mg/kg
CE174	4-Isopropyltoluene	Headspace GC-MS	As received		0.01	mg/kg
CE174	1,4-Dichlorobenzene	Headspace GC-MS	As received		0.01	mg/kg
CE174	1,2-Dichlorobenzene	Headspace GC-MS	As received		0.01	mg/kg
CE174	Butylbenzene	Headspace GC-MS	As received		0.01	mg/kg
CE174	1,2-Dibromo-3-chloropropane	Headspace GC-MS	As received		0.01	mg/kg
CE174	1,2,4-Trichlorobenzene	Headspace GC-MS	As received		0.01	mg/kg
CE174	Hexachloro-1,3-butadiene	Headspace GC-MS	As received		0.01	mg/kg
CE174	1,2,3-Trichlorobenzene	Headspace GC-MS	As received		0.01	mg/kg
CE189	N-Nitrosodimethylamine	Solvent extraction, GC-MS	As received		0.1	mg/kg
CE189	Phenol	Solvent extraction, GC-MS	As received		0.1	mg/kg
CE189	Bis(2-chloroethyl)ether	Solvent extraction, GC-MS	As received		0.1	mg/kg
CE189	2-Chlorophenol	Solvent extraction, GC-MS	As received		0.1	mg/kg
CE189	1,3-Dichlorobenzene	Solvent extraction, GC-MS	As received		0.1	mg/kg
CE189	1,4-Dichlorobenzene	Solvent extraction, GC-MS	As received		0.1	mg/kg
CE189	2-Methylphenol	Solvent extraction, GC-MS	As received		0.1	mg/kg
CE189	1,2-Dichlorobenzene	Solvent extraction, GC-MS	As received		0.1	mg/kg
CE189	Bis(2-chloroisopropyl)ether	Solvent extraction, GC-MS	As received		0.1	mg/kg
CE189	3&4-Methylphenol	Solvent extraction, GC-MS	As received		0.1	mg/kg
CE189	N-Nitrosodi-n-propylamine	Solvent extraction, GC-MS	As received		0.1	mg/kg
CE189	Hexachloroethane	Solvent extraction, GC-MS	As received		0.1	mg/kg
CE189	Nitrobenzene	Solvent extraction, GC-MS	As received		0.1	mg/kg
CE189	Isophorone	Solvent extraction, GC-MS	As received		0.1	mg/kg
CE189	2,4-Dimethylphenol	Solvent extraction, GC-MS	As received		0.1	mg/kg
CE189	2-Nitrophenol	Solvent extraction, GC-MS	As received		0.1	mg/kg
CE189	Bis(2-chloroethoxy)methane	Solvent extraction, GC-MS	As received		0.1	mg/kg
CE189	2,4-Dichlorophenol	Solvent extraction, GC-MS	As received		0.1	mg/kg
CE189	1,2,4-Trichlorobenzene	Solvent extraction, GC-MS	As received		0.1	mg/kg
CE189	4-Chloroaniline	Solvent extraction, GC-MS	As received		0.1	mg/kg
CE189	Hexachlorobutadiene	Solvent extraction, GC-MS	As received		0.1	mg/kg
CE189	4-Chloro-3-methylphenol	Solvent extraction, GC-MS	As received		0.1	mg/kg

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METHOD DETAILS

METHOD	SOILS	METHOD SUMMARY	SAMPLE	STATUS	LOD	UNITS
CE189	2-Methylnaphthalene	Solvent extraction, GC-MS	As received		0.1	mg/kg
CE189	1-Methylnaphthalene	Solvent extraction, GC-MS	As received		0.1	mg/kg
CE189	Hexachlorocyclopentadiene	Solvent extraction, GC-MS	As received		0.1	mg/kg
CE189	2,4,6-Trichlorophenol	Solvent extraction, GC-MS	As received		0.1	mg/kg
CE189	2,4,5-Trichlorophenol	Solvent extraction, GC-MS	As received		0.1	mg/kg
CE189	2-Chloronaphthalene	Solvent extraction, GC-MS	As received		0.1	mg/kg
CE189	2-Nitroaniline	Solvent extraction, GC-MS	As received		0.1	mg/kg
CE189	Dimethyl phthalate	Solvent extraction, GC-MS	As received		0.1	mg/kg
CE189	2,6-Dinitrotoluene	Solvent extraction, GC-MS	As received		0.1	mg/kg
CE189	3-Nitroaniline	Solvent extraction, GC-MS	As received		0.1	mg/kg
CE189	2,4-Dinitrophenol	Solvent extraction, GC-MS	As received		0.1	mg/kg
CE189	4-Nitrophenol	Solvent extraction, GC-MS	As received		0.1	mg/kg
CE189	2,4-Dinitrotoluene	Solvent extraction, GC-MS	As received		0.1	mg/kg
CE189	Dibenzofuran	Solvent extraction, GC-MS	As received		0.1	mg/kg
CE189	Diethyl phthalate	Solvent extraction, GC-MS	As received		0.1	mg/kg
CE189	4-Chlorophenylphenyl ether	Solvent extraction, GC-MS	As received		0.1	mg/kg
CE189	4-Nitroaniline	Solvent extraction, GC-MS	As received		0.1	mg/kg
CE189	2-Methyl-4,6-dinitrophenol	Solvent extraction, GC-MS	As received		0.1	mg/kg
CE189	Azobenzene	Solvent extraction, GC-MS	As received		0.1	mg/kg
CE189	4-Bromophenylphenyl ether	Solvent extraction, GC-MS	As received		0.1	mg/kg
CE189	Hexachlorobenzene	Solvent extraction, GC-MS	As received		0.1	mg/kg
CE189	Pentachlorophenol	Solvent extraction, GC-MS	As received		0.1	mg/kg
CE189	Carbazole	Solvent extraction, GC-MS	As received		0.1	mg/kg
CE189	Di-n-butyl phthalate	Solvent extraction, GC-MS	As received		0.1	mg/kg
CE189	Butylbenzyl phthalate	Solvent extraction, GC-MS	As received		0.1	mg/kg
CE189	Bis(2-ethylhexyl)phthalate	Solvent extraction, GC-MS	As received		0.1	mg/kg
CE189	Di-n-octyl phthalate	Solvent extraction, GC-MS	As received		0.1	mg/kg
\$	Asbestos (qualitative)	HSG 248, Microscopy	Dry	U	-	-

Chemtech Environmental Limited

METHOD DETAILS

METHOD	PREPARED LEACHATES	METHOD SUMMARY	STATUS	LOD	UNITS
CE002	Leachate preparation (EA)	L:S 10:1		-	-
CE051	Naphthalene	Solvent extraction, GC-MS		0.1	µg/l
CE051	Acenaphthylene	Solvent extraction, GC-MS		0.1	µg/l
CE051	Acenaphthene	Solvent extraction, GC-MS		0.1	µg/l
CE051	Fluorene	Solvent extraction, GC-MS		0.1	µg/l
CE051	Phenanthrene	Solvent extraction, GC-MS		0.1	µg/l
CE051	Anthracene	Solvent extraction, GC-MS		0.1	µg/l
CE051	Fluoranthene	Solvent extraction, GC-MS		0.1	µg/l
CE051	Pyrene	Solvent extraction, GC-MS		0.1	µg/l
CE051	Benzo(a)anthracene	Solvent extraction, GC-MS		0.1	µg/l
CE051	Chrysene	Solvent extraction, GC-MS		0.1	µg/l
CE051	Benzo(b)fluoranthene	Solvent extraction, GC-MS		0.1	µg/l
CE051	Benzo(k)fluoranthene	Solvent extraction, GC-MS		0.1	µg/l
CE051	Benzo(a)pyrene	Solvent extraction, GC-MS		0.1	µg/l
CE051	Indeno(123cd)pyrene	Solvent extraction, GC-MS		0.1	µg/l
CE051	Dibenz(ah)anthracene	Solvent extraction, GC-MS		0.1	µg/l
CE051	Benzo(ghi)perylene	Solvent extraction, GC-MS		0.1	µg/l
CE051	PAH (total of USEPA 16)	Solvent extraction, GC-MS		1.6	µg/l

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DEVIATING SAMPLE INFORMATION

Comments

Sample deviation is determined in accordance with the UKAS note "Guidance on Deviating Samples" and based on reference standards and laboratory trials.

For samples identified as deviating, test result(s) may be compromised and may not be representative of the sample at the time of sampling.

Chemtech Environmental Ltd cannot be held responsible for the integrity of sample(s) received if Chemtech Environmental Ltd did not undertake the sampling. Such samples may be deviating.

Key

N	No (not deviating sample)
Y	Yes (deviating sample)
NSD	Sampling date not provided
NST	Sampling time not provided (waters only)
EHT	Sample exceeded holding time(s)
IC	Sample not received in appropriate containers
HP	Headspace present in sample container
NCF	Sample not chemically fixed (where appropriate)
OR	Other (specify)

Lab ref	Sample id	Depth (m)	Deviating	Tests (Reason for deviation)
86520-1	TP1	0.50-0.90	N	
86520-2	TP1	1.00-1.30	N	
86520-3	TP3	0.30-0.60	N	
86520-4	TP4	0.00-0.20	N	
86520-5	TP5	1.20-1.40	N	
86520-6	TP6	1.20-1.60	N	
86520-7	TP7	0.50-0.70	N	
86520-8	TP8	0.40-0.80	N	
86520-9	TP9	0.80-1.20	N	
86520-10	TP10	0.70-1.00	N	
86520-11	TP11	0.80-1.20	N	
86520-12	TP12	0.80-1.00	N	
86520-13	WS1	0.12-0.50	N	
86520-14	WS2	0.30-0.60	N	
86520-15	WS3	0.30-0.70	N	
86520-16	WS4	0.40.-0.80	N	
86520-17	WS5	0.70-1.00	N	
86520-18	WS6	0.50-0.80	N	
86520-19	WS7	0.50-0.90	N	
86520-20	WS8	0.50-0.90	N	
86520-21	WS9	0.40-0.80	N	
86520-22	WS10	0.20-0.35	N	

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TEST REPORT REVISIONS

The table below identifies ammendments that have been made to this test report for each revision.

Test Report Reference	Details of amendments to test report	Issue Date
86520	Original report issued	16 June 2020
86520(1)	Aliphatic/Aromatic C5-C44 added for 86520-9, 86520-12, & 86520-20 Prepared leachates added	25 June 2020



LABORATORY REPORT



4043

Contract Number: PSL20/2823

Report Date: 22 June 2020

Client's Reference: HOO/01

Client Name: ARP Associates
Northwest House
5/6 Northwest Business Park
Servia Hill
Leeds
LS6 2QH

For the attention of: Andrew Jones

Contract Title: Hough Lane, Wombwell, Barnsley

Date Received: 10/6/2020

Date Commenced: 10/6/2020

Date Completed: 22/6/2020

Notes: Opinions and Interpretations are outside the UKAS Accreditation

A copy of the Laboratory Schedule of accredited tests as issued by UKAS is attached to this report. This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service. The results reported herein relate only to the material supplied to the laboratory. This certificate shall not be reproduced other than in full, without the prior written approval of the laboratory.

Checked and Approved Signatories:

R Gunson
(Director)

S Royle
(Laboratory Manager)

A Watkins
(Director)

S Eyre
(Senior Technician)

R Berriman
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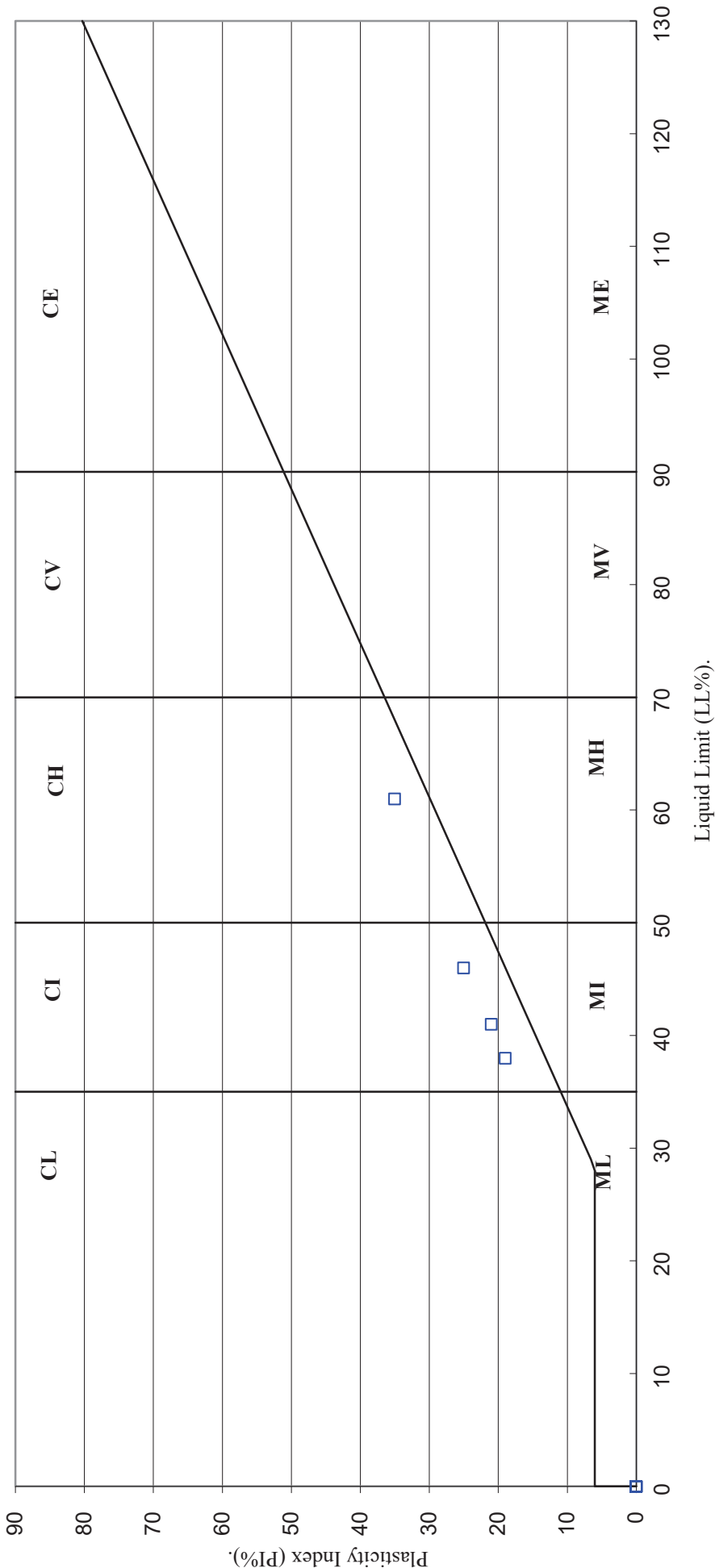
(BS1377 : PART 2 : 1990)

SYMBOLS: NP : Non Plastic

* : Liquid Limit and Plastic Limit Wet Sieved.

Hough Lane, Wombwell, Barnsley	Contract No:
	PSL20/2823
	Client Ref:
	HOO/01

PLASTICITY CHART FOR CASAGRANDE CLASSIFICATION.



4043

PSL

Professional Soils Laboratory

Hough Lane, Wombwell, Barnsley

Contract No:

PSL20/2823

Client Ref:

HOO/01

23 20