

APPENDICES

APPENDIX A
Application Site Condition Report Results (2002)

Table 1
Soil Sample Inventory

Borehole	Depth (m)	Metals	DRO & GRO	SVOC + TICs	VOC + TICs	Ammonia	Methanol	PCBs
BH1101	0.2-0.4							
BH1101	1.4-1.5							
BH1102	0.2-0.4							
BH1103	0.05-0.1							
BH1104	0.2-0.4							
BH1105	0.5-0.6							
BH1105	1.0-1.1							
BH1106	0.2-0.35							
BH1107	0.2-0.3							
BH1108	0.3-0.5							

Table 2
Water Sample Inventory

Borehole	Metals	DRO & GRO	SVOC + TICs	VOC + TICs	Acids	Ammonia	Methanol	PCBs
BH1101								
BH1102								
BH1103								
BH1104								
BH1105								
BH1106								
BH1107								
BH1108								
BH105								
BH112								
BH201								
BH202								
BH203								
BH204								
BH207								
BH304								
BH401								
BH404								
BH405								
BHWW								
BH501								
BH504								
BH601B								
BH605								
BH606								
Duplicates								
BH105B								
BH113								
BH1109								

BH105B is a duplicate of BH105

BH113 is a duplicate of BH112

BH1109 is a duplicate of BH1105

Table 3
Well Head Parameters

Borehole	Elevation of top of casing (mASD)	DTW (mbtc)	Groundwater Elevation (mASD)	Temp (°C)	Conductivity (uS/cm)	pH	Redox (mV)
BH1101	9.529	2.700	6.829	13.6	-	6.6	297
BH1102	10	0.447	9.553	13.2	1237	7.8	265
BH1103	10.093	4.357	5.736	14.2	1591	7.7	272
BH1104	11.474	1.862	9.612	12.8	1267	7.7	263
BH1105	11.944	0.799	11.145	23.4	1065	9.8	-278
BH1106	12.076	0.682	11.394	14.2	1369	7.8	24
BH1107	12.885	0.999	11.886	13.1	634	8.2	162
BH1108	13.032	2.258	10.774	14.4	986	7.8	184
BH105	13.231	0.695	12.536	14	351	9.3	-84
BH112	9.393	1.378	8.015	14.9	1350	9.0	36
BH201	Dipmeter use not allowed in KA plant area			24.8	685	7.7	115
BH202				26.9	687	7.6	124
BH203				27.3	591	7.7	122
BH204				25.2	589	7.7	127
BH207				15.5	687	7.8	121
BH304	-	-	-	18.7	920	8.3	-62
BH401	-	-	-	17.1	775	6.9	-67
BH404	12.628	0.584	12.044	16.5	740	8.2	123
BH405	12.607	0.471	12.136	16.1	830	7.9	66
BHWW	-	1.360	-	14.6	-	3.1	555
BH501	9.636	1.350	8.286	18.0	549	8.2	259
BH504	10.196	0.749	9.447	17.5	460	8.5	237
BH601B	10.726	1.134	9.592	16.6	905	7.7	220
BH605	9.645	1.230	8.415	15.2	849	7.7	256
BH606	9.004	0.502	8.502	17.5	325	8.1	28

Table 4
VOCs in Soil (mg/kg)

Compound	BH1101 1.4-1.5m	BH1102 0.2-0.4m	BH1103 0.05-0.1m	BH1104 0.2-0.4m	BH1105 0.5-0.6m	BH1106 0.2-0.35m	BH1107 0.2-0.3m	BH1108 0.2-0.3m
Dichlorodifluoromethane	-	-	-	-	-	-	-	-
Chloromethane	-	-	-	-	-	-	-	-
Vinyl chloride	-	-	-	-	-	-	-	-
Bromomethane	-	-	-	-	-	-	-	-
Chloroethane	-	-	-	-	-	-	-	-
Trichlorofluoromethane	-	-	-	-	-	-	-	-
trans-1,2-Dichloroethene	-	-	-	-	-	-	-	-
Dichloromethane	-	-	-	-	-	-	-	-
Carbon disulphide	-	-	-	-	-	-	-	-
1,1-Dichloroethene	-	-	-	-	-	-	-	-
1,1-Dichloroethane	-	-	-	-	0.003	-	-	-
tert-butyl methyl ether	-	-	-	-	-	-	-	-
cis-1,2-Dichloroethene	-	-	-	-	0.002	-	-	-
Bromochloromethane	-	-	-	-	-	-	-	-
Chloroform	-	-	-	-	-	-	-	-
2,2-Dichloropropane	-	-	-	-	-	-	-	-
1,2-Dichloroethane	-	-	-	-	-	-	-	-
1,1,1-Trichloroethane	-	-	-	-	-	-	-	-
1,1-Dichloropropene	-	-	-	-	-	-	-	-
Benzene	-	-	-	-	0.001	-	-	-
Carbontetrachloride	-	-	-	-	-	-	-	-
Dibromomethane	-	-	-	-	-	-	-	-
1,2-Dichloropropane	-	-	-	-	-	-	-	-
Bromodichloromethane	-	-	-	-	-	-	-	-
Trichloroethene	-	-	-	-	0.006	-	-	-
cis-1,3-Dichloropropene	-	-	-	-	-	-	-	-
trans-1,3-Dichloropropene	-	-	-	-	-	-	-	-
1,1,2-Trichloroethane	-	-	-	-	-	-	-	-
Toluene	0.004	-	-	-	0.003	-	-	-
1,3-Dichloropropane	-	-	-	-	-	-	-	-
Dibromochloromethane	-	-	-	-	-	-	-	-
1,2-Dibromoethane	-	-	-	-	-	-	-	-
Tetrachloroethene	-	-	-	-	-	-	-	-
1,1,1,2-Tetrachloroethane	-	-	-	-	-	-	-	-
Chlorobenzene	-	-	-	-	-	-	-	-
Ethylbenzene	-	-	-	-	0.001	-	-	-
p/m-Xylene	-	-	-	-	0.002	-	-	0.002
Bromoform	-	-	-	-	-	-	-	-
Styrene	-	-	-	-	-	-	-	-
1,1,2,2-Tetrachloroethane	-	-	-	-	-	-	-	-
o-Xylene	-	-	-	-	0.002	-	-	-
1,2,3-Trichloropropane	-	-	-	-	-	-	-	-
Isopropylbenzene	-	-	-	-	-	-	-	-
Bromobenzene	-	-	-	-	-	-	-	-
2-Chlorotoluene	-	-	-	-	-	-	-	-
Propylbenzene	-	-	-	-	-	-	-	-
4-Chlorotoluene	-	-	-	-	-	-	-	-
1,2,4-Trimethylbenzene	-	-	-	-	-	-	-	-
4-Isopropyltoluene	-	-	-	-	-	-	-	-
1,3,5-Trimethylbenzene	-	-	-	-	0.002	-	-	-
1,3-Dichlorobenzene	-	-	-	-	-	-	-	-
1,4-Dichlorobenzene	-	-	-	-	-	-	-	-
sec-Butylbenzene	-	-	-	-	0.001	-	-	-
tert-Butylbenzene	-	-	-	-	-	-	-	-
1,2-Dichlorobenzene	-	-	-	-	-	-	-	-
n-Butylbenzene	-	-	-	-	0.001	-	-	-
1,2-Dibromo-3-chloropropane	-	-	-	-	-	-	-	-
1,2,4-Trichlorobenzene	-	-	-	-	-	-	-	-
Naphthalene	-	-	-	-	0.012	-	-	-
1,2,3-Trichlorobenzene	-	-	-	-	-	-	-	-
Hexachlorobutadiene	-	-	-	-	-	-	-	-

Values in mg/kg

- ' Less than the method detection limit of 0.001

Table 5
SVOCs in Soils (mg/kg)

Compound	BH1101 1.4-1.5m	BH1102 0.2-0.4m	BH1103 0.05-0.1m	BH1104 0.2-0.4m	BH1105 0.5-0.6m	BH1106 0.2-0.35m	BH1107 0.2-0.3m	BH1108 0.2-0.3m
Phenol	-	-	-	-	-	-	-	-
2-Chlorophenol	-	-	-	-	-	-	-	-
2-Methylphenol	-	-	-	-	-	-	-	-
4-Methylphenol	-	-	-	-	-	-	-	-
2-Nitrophenol	-	-	-	-	-	-	-	-
4-Nitrophenol	-	-	-	-	-	-	-	-
2,4-Dichlorophenol	-	-	-	-	-	-	-	-
2,4-Dimethylphenol	-	-	-	-	-	-	-	-
4-Chloro-3-methylphenol	-	-	-	-	-	-	-	-
2,4,6-Trichlorophenol	-	-	-	-	-	-	-	-
2,4,5-Trichlorophenol	-	-	-	-	-	-	-	-
Pentachlorophenol	-	-	-	-	-	-	-	-
1,3-Dichlorobenzene	-	-	-	-	-	-	-	-
1,4-Dichlorobenzene	-	-	-	-	-	-	-	-
1,2-Dichlorobenzene	-	-	-	-	-	-	-	-
1,2,4-Trichlorobenzene	-	-	-	-	-	-	-	-
Nitrobenzene	-	-	-	-	-	-	-	-
Azobenzene	-	-	-	-	-	-	-	-
Hexachlorobenzene	-	-	-	-	-	-	-	-
Naphthalene	-	-	-	-	-	-	-	-
Acenaphthylene	-	-	-	-	-	-	-	-
Acenaphthene	-	-	-	-	-	-	-	-
Fluorene	-	-	-	-	-	-	-	-
Phenanthrene	-	-	-	-	-	-	-	-
Anthracene	-	-	-	-	-	-	-	-
Fluoranthene	-	-	-	-	-	-	0.105	0.139
Pyrene	-	-	-	-	-	-	0.118	0.117
Benzo(a)anthracene	-	-	-	-	-	-	-	-
Chrysene	-	-	-	-	-	-	-	-
Benzo(b)fluoranthene	-	-	-	-	-	-	-	-
Benzo(k)fluoranthene	-	-	-	-	-	-	-	-
Benzo(a)pyrene	-	-	-	-	-	-	0.103	-
Indeno(1,2,3-cd)pyrene	-	-	-	-	-	-	-	-
Dibenzo(a,h)anthracene	-	-	-	-	-	-	-	-
Benzo(ghi)perylene	-	-	-	-	-	-	-	-
2-Chloronaphthalene	-	-	-	-	-	-	-	-
2-Methylnaphthalene	-	-	-	-	-	-	-	-
Carbazole	-	-	-	-	-	-	-	-
Isophorone	-	-	-	-	-	-	-	-
Dibenzofuran	-	-	-	-	-	-	-	-
Dimethyl phthalate	-	-	-	-	-	-	-	-
Diethyl phthalate	-	-	-	-	-	-	-	-
Di-n-butylphthalate	-	-	-	-	-	-	-	-
Di-n-octylphthalate	-	-	-	-	-	-	-	-
Bis(2-ethylhexyl)phthalate	0.135	-	-	-	-	0.245	0.184	0.368
Butylbenzylphthalate	-	-	-	-	-	-	-	-
4-Chloroaniline	-	-	-	-	-	-	-	-
2-Nitroaniline	-	-	-	-	-	-	-	-
3-Nitroaniline	-	-	-	-	-	-	-	-
4-Nitroaniline	-	-	-	-	-	-	-	-
2,4-Dinitrotoluene	-	-	-	-	-	-	-	-
2,6-Dinitrotoluene	-	-	-	-	-	-	-	-
Bis(2-chloroethyl)ether	-	-	-	-	-	-	-	-
4-Bromophenylphenylether	-	-	-	-	-	-	-	-
4-Chlorophenylphenylether	-	-	-	-	-	-	-	-
Hexachloroethane	-	-	-	-	-	-	-	-
Hexachlorobutadiene	-	-	-	-	-	-	-	-
Hexchlorocyclopentadiene	-	-	-	-	-	-	-	-
Bis(2-chloroethoxy)methane	-	-	-	-	-	-	-	-
N-nitrosodi-n-propylamine	-	-	-	-	-	-	-	-

Values in mg/kg

- ' Less than the method detection limit of 0.1

Table 6
VOCs & SVOCs (Tentatively Identified Compounds) in Soils (µg/kg)

Compound	BH1101 1.4-1.5m	BH1102 0.2-0.4m	BH1103 0.05-0.1m	BH1104 0.2-0.4m	BH1105 0.5-0.6m	BH1106 0.2 0.35m	BH1107 0.2-0.3m	BH1108 0.2-0.3m
C6-C9 Acids	14.940	-	-	-	-	-	-	-
Adipic Acid	-	-	-	-	-	-	-	-
Biphenyl	-	-	-	-	-	-	-	-
Diphenyl Oxide	-	-	-	-	-	-	-	-
Acetic Acid	-	-	-	-	-	-	-	-

Values in mg/kg

- ' Less than the method detection limit of 0.1

Table 7
TPH in Soils (GRO and DRO)

Borehole	Depth (m)	Total Volatiles C ₄ to C ₁₃	MTBE	Benzene	Toluene	Ethyl Benzene	Total Xylene
BH1101	1.4-1.5	0.256	-	-	-	-	-
BH1102	0.2-0.4	-	-	-	-	-	-
BH1103	0.05-0.1	-	-	-	-	-	-
BH1104	0.2-0.4	0.286	-	-	-	-	-
BH1105	0.5-0.6	3.038	0.139	0.015	-	0.034	0.032
BH1106	0.2-0.35	8.876	0.089	-	-	0.017	0.057
BH1107	0.2-0.3	-	-	-	-	-	-
BH1108	0.2-0.3	-	-	-	-	-	-

Values in mg/kg

- Less than the method detection limit of 0.01.

Borehole	Depth (m)	Diesel Range Hydrocarbons	Interpretation
BH1101	1.4-1.5	181	PAHs
BH1102	0.2-0.4	215	Lube oil/humic acids
BH1103	0.05-0.1	83	Humic acids
BH1104	0.2-0.4	131	Unknown pattern detected
BH1105	0.5-0.6	278	Lube oil
BH1106	0.2-0.35	599	Diesel/heavy n alkanes/possible lube oil
BH1107	0.2-0.3	692	Possible biodegraded diesel/possible PAHs/lube oil
BH1108	0.2-0.3	239	Lube oil

Values in mg/kg

Table 8
Inorganic Compounds in Soil

Borehole	Depth (m)	Arsenic	Cadmium	Chromium	Copper	Lead	Mercury	Nickel	Selenium	Vanadium	Zinc	Ammoniacal Nitrogen as NH4-N
BH1101	0.20-0.40	23	-	69	15	98	-	51	-	71	184	-
BH1101	1.40-1.50	na	na	na	na	na	na	na	na	na	na	5.1
BH1102	0.20-0.40	-	-	37	-	27	-	31	-	34	52	3.2
BH1103	0.05-0.10	-	-	28	6	22	-	25	-	30	138	3.7
BH1104	0.20-0.40	32	-	73	-	40	-	74	-	166	45	2.1
BH1105	1.00-1.10	26	-	94	-	30	-	55	-	140	87	70.9
BH1105	1.15-1.20	na	na	na	na	na	na	na	na	na	na	36.7
BH1106	0.20-0.35	164	-	150	-	60	-	179	-	292	157	8.2
BH1107	0.20-0.30	-	-	106	124	46	-	60	-	43	141	3.3
BH1108	0.20-0.30	-	-	12	137	132	-	16	-	22	183	31.1

Values in mg/kg except TOC which is expressed as a %.

na - not analysed

- ' Less than the method detection limit of 1

Table 9
PCBs in Soil (mg/kg)

Compound	BH1101 1.4-1.5m	BH1102 0.2-0.4m	BH1103 0.05-0.1m	BH1104 0.2-0.4m	BH1105 0.5-0.6m	BH1106 0.2-0.35m	BH1107 0.2-0.3m	BH1108 0.2-0.3m
Aroclor 1016	-	-	-	-	-	-	-	-
Aroclor 1221	-	-	-	-	-	-	-	-
Aroclor 1232	-	-	-	-	-	-	-	-
Aroclor 1242	-	-	-	-	-	-	-	-
Aroclor 1248	-	-	-	-	-	-	-	-
Aroclor 1254	-	-	-	-	-	-	-	-
Aroclor 1260	-	-	-	-	-	-	-	-
TOTAL	-	-	-	-	-	-	-	-

Values in mg/kg

- ' Less than the method detection limit of 1.

Table 10
VOCs in Groundwater (µg/l)

Compound	BH1101	BH1102	BH1103	BH1104	BH1105	BH1106	BH1107	BH1108	BH1109
Dichlorodifluoromethane	-	-	-	-	-	-	-	-	-
Chloromethane	-	-	-	-	-	-	-	-	-
Vinyl chloride	-	-	-	-	-	-	-	-	-
Bromomethane	-	-	-	-	-	-	-	-	-
Chloroethane	-	-	-	-	-	-	-	-	-
Trichlorofluoromethane	-	-	-	-	-	-	-	-	-
trans-1,2-Dichloroethene	-	-	-	-	-	-	-	-	-
Dichloromethane	-	-	-	-	-	-	-	-	-
Carbon disulphide	-	-	-	-	-	-	-	-	-
1,1-Dichloroethene	-	-	-	-	-	-	-	-	-
1,1-Dichloroethane	-	-	-	-	-	-	-	-	-
tert-butyl methyl ether	-	-	-	-	-	-	-	-	-
cis-1,2-Dichloroethene	-	-	-	-	-	-	-	-	-
Bromochloromethane	-	-	-	-	-	-	-	-	-
Chloroform	-	-	-	-	-	-	-	-	-
2,2-Dichloropropane	-	-	-	-	-	-	-	-	-
1,2-Dichloroethane	-	-	-	-	-	-	-	-	-
1,1,1-Trichloroethane	-	-	-	-	-	-	-	-	-
1,1-Dichloropropene	-	-	-	-	-	-	-	-	-
Benzene	-	-	-	-	-	-	-	-	-
Carbontetrachloride	-	-	-	-	-	-	-	-	-
Dibromomethane	-	-	-	-	-	-	-	-	-
1,2-Dichloropropane	-	-	-	-	-	-	-	-	-
Bromodichloromethane	-	-	-	-	-	-	-	-	-
Trichloroethene	-	-	-	-	-	-	-	-	1
cis-1,3-Dichloropropene	-	-	-	-	-	-	-	-	-
trans-1,3-Dichloropropene	-	-	-	-	-	-	-	-	-
1,1,2-Trichloroethane	-	-	-	-	-	-	-	-	-
Toluene	-	-	-	-	2	-	-	-	1
1,3-Dichloropropane	-	-	-	-	-	-	-	-	-
Dibromochloromethane	-	-	-	-	-	-	-	-	-
1,2-Dibromoethane	-	-	-	-	-	-	-	-	-
Tetrachloroethene	-	-	-	-	-	-	-	-	-
1,1,1,2-Tetrachloroethane	-	-	-	-	-	-	-	-	-
Chlorobenzene	-	-	-	-	-	-	-	-	-
Ethylbenzene	-	-	-	-	1	-	-	-	1
p/m-Xylene	-	-	-	-	4	-	-	-	3
Bromoform	-	-	-	-	-	-	-	-	-
Styrene	-	-	-	-	-	-	-	-	-
1,1,2,2-Tetrachloroethane	-	-	-	-	-	-	-	-	-
o-Xylene	-	-	-	-	2	-	-	-	2
1,2,3-Trichloropropane	-	-	-	-	-	-	-	-	-
Isopropylbenzene	-	-	-	-	-	-	-	-	-
Bromobenzene	-	-	-	-	-	-	-	-	-
2-Chlorotoluene	-	-	-	-	-	-	-	-	-
Propylbenzene	-	-	-	-	-	-	-	-	-
4-Chlorotoluene	-	-	-	-	-	-	-	-	-
1,2,4-Trimethylbenzene	-	-	-	-	-	-	-	-	-
4-Isopropyltoluene	-	-	-	-	-	-	-	-	-
1,3,5-Trimethylbenzene	-	-	-	-	2	-	-	-	-
1,3-Dichlorobenzene	-	-	-	-	-	-	-	-	-
1,4-Dichlorobenzene	-	-	-	-	-	-	-	-	-
sec-Butylbenzene	-	-	-	-	-	-	-	-	-
tert-Butylbenzene	-	-	-	-	-	-	-	-	-
1,2-Dichlorobenzene	-	-	-	-	-	-	-	-	-
n-Butylbenzene	-	-	-	-	-	-	-	-	-
1,2-Dibromo-3-chloropropane	-	-	-	-	-	-	-	-	-
1,2,4-Trichlorobenzene	-	-	-	-	-	-	-	-	-
Naphthalene	-	-	-	-	3	-	-	-	3
1,2,3-Trichlorobenzene	-	-	-	-	-	-	-	-	-
Hexachlorobutadiene	-	-	-	-	-	-	-	-	-

Tentatively Identified Compounds

Compound	Borehole(s)	Conc (µg/l)
Acetic Acid	BH1102 & BH1104-5	--
Cyclohexane		--
Cyclohexanone		--
Cyclohexanol		--
Diaminocyclohexane		--

--' Less than the method detection limit of 1

--' Less than the method detection limit of 10.

please note: the identification and semi-quantification of these tentatively identified compounds is outside the scope of the UKAS accreditation for this method

Table 10
VOCs in Groundwater (µg/l)

Compound	BH105	BH105B	BH112	BH113		BH201	BH202	BH203	BH204	BH207		BH304
Dichlorodifluoromethane	-	-	-	-		-	-	-	-	-		-
Chloromethane	-	-	-	-		-	-	-	-	-		-
Vinyl chloride	-	-	-	-		-	-	-	-	-		-
Bromomethane	-	-	-	-		-	-	-	-	-		-
Chloroethane	-	-	-	-		-	-	-	-	-		-
Trichlorofluoromethane	-	-	-	-		-	-	-	-	-		-
trans-1,2-Dichloroethene	-	-	-	-		-	-	-	-	-		-
Dichloromethane	-	-	-	-		-	-	-	-	-		-
Carbon disulphide	-	-	-	-		-	-	-	-	-		-
1,1-Dichloroethene	-	-	-	-		-	-	-	-	-		-
1,1-Dichloroethane	-	-	-	-		-	-	-	-	-		-
tert-butyl methyl ether	-	-	-	-		-	-	-	-	-		-
cis-1,2-Dichloroethene	-	-	-	-		-	-	-	-	-		-
Bromochloromethane	-	-	-	-		-	-	-	-	-		-
Chloroform	-	-	-	-		-	-	-	-	-		-
2,2-Dichloropropane	-	-	-	-		-	-	-	-	-		-
1,2-Dichloroethane	-	-	-	-		-	-	-	-	-		-
1,1,1-Trichloroethane	-	-	-	-		-	-	-	-	-		-
1,1-Dichloropropene	-	-	-	-		-	-	-	-	-		-
Benzene	-	-	-	-		-	-	-	-	-		-
Carbontetrachloride	-	-	-	-		-	-	-	-	-		-
Dibromomethane	-	-	-	-		-	-	-	-	-		-
1,2-Dichloropropane	-	-	-	-		-	-	-	-	-		-
Bromodichloromethane	-	-	-	-		-	-	-	-	-		-
Trichloroethene	-	-	-	-		-	-	-	-	-		-
cis-1,3-Dichloropropene	-	-	-	-		-	-	-	-	-		-
trans-1,3-Dichloropropene	-	-	-	-		-	-	-	-	-		-
1,1,2-Trichloroethane	-	-	-	-		-	-	-	-	-		-
Toluene	-	-	-	-		-	-	-	-	-		-
1,3-Dichloropropane	-	-	-	-		-	-	-	-	-		-
Dibromochloromethane	-	-	-	-		-	-	-	-	-		-
1,2-Dibromoethane	-	-	-	-		-	-	-	-	-		-
Tetrachloroethene	-	-	-	-		-	-	-	-	-		-
1,1,1,2-Tetrachloroethane	-	-	-	-		-	-	-	-	-		-
Chlorobenzene	-	-	-	-		-	-	-	-	-		-
Ethylbenzene	-	-	-	-		-	-	-	-	-		-
p/m-Xylene	-	-	-	-		-	-	-	-	-		-
Bromoform	-	-	-	-		-	-	-	-	-		-
Styrene	-	-	-	-		-	-	-	-	-		-
1,1,2,2-Tetrachloroethane	-	-	-	-		-	-	-	-	-		-
o-Xylene	-	-	-	-		-	-	-	-	-		-
1,2,3-Trichloropropane	-	-	-	-		-	-	-	-	-		-
Isopropylbenzene	-	-	-	-		-	-	-	-	-		-
Bromobenzene	-	-	-	-		-	-	-	-	-		-
2-Chlorotoluene	-	-	-	-		-	-	-	-	-		-
Propylbenzene	-	-	-	-		-	-	-	-	-		-
4-Chlorotoluene	-	-	-	-		-	-	-	-	-		-
1,2,4-Trimethylbenzene	-	-	-	-		-	-	-	-	-		-
4-Isopropyltoluene	-	-	-	-		-	-	-	-	-		-
1,3,5-Trimethylbenzene	-	-	-	-		-	-	-	-	-		-
1,3-Dichlorobenzene	-	-	-	-		-	-	-	-	-		-
1,4-Dichlorobenzene	-	-	-	-		-	-	-	-	-		-
sec-Butylbenzene	-	-	-	-		-	-	-	-	-		-
tert-Butylbenzene	-	-	-	-		-	-	-	-	-		-
1,2-Dichlorobenzene	-	-	-	-		-	-	-	-	-		-
n-Butylbenzene	-	-	-	-		-	-	-	-	-		-
1,2-Dibromo-3-chloropropane	-	-	-	-		-	-	-	-	-		-
1,2,4-Trichlorobenzene	-	-	-	-		-	-	-	-	-		-
Naphthalene	-	-	-	-		-	-	-	-	-		7
1,2,3-Trichlorobenzene	-	-	-	-		-	-	-	-	-		-
Hexachlorobutadiene	-	-	-	-		-	-	-	-	-		-

Values in µg/l

Tentatively Identified Compounds

Compound	Borehole(s)	Conc (µg/l)
Acetic Acid		--
Cyclohexane	BH105, BH105B, BH112-3,	--
Cyclohexanone	BH201-4 and BH207	--
Cyclohexanol		--
Diaminocyclohexane		--

-- Less than the method detection limit of 1

-- Less than the method detection limit of 10.

please note: the identification and semi-quantification of these tentatively identified compounds is outside the scope of the UKAS accreditation for this method

Table 10
VOCs in Groundwater (µg/l)

Compound	BH401	BH404	BH405	BHWW	BH501	BH504	BH601B	BH605	BH606
Dichlorodifluoromethane	-	-	-	-	-	-	-	-	-
Chloromethane	-	-	-	-	-	-	-	-	-
Vinyl chloride	-	-	-	-	-	-	-	-	-
Bromomethane	-	-	-	-	-	-	-	-	-
Chloroethane	-	-	-	-	-	-	-	-	-
Trichlorofluoromethane	-	-	-	-	-	-	-	-	-
trans-1,2-Dichloroethene	-	-	-	-	-	-	-	-	-
Dichloromethane	-	-	-	-	-	-	-	-	-
Carbon disulphide	-	-	-	-	-	-	-	-	-
1,1-Dichloroethene	-	-	-	-	-	-	-	-	-
1,1-Dichloroethane	-	-	-	-	-	-	-	-	-
tert-butyl methyl ether	-	-	-	-	-	-	-	-	-
cis-1,2-Dichloroethene	-	-	2	-	-	-	-	-	-
Bromochloromethane	-	-	-	-	-	-	-	-	-
Chloroform	-	-	-	-	-	-	-	-	-
2,2-Dichloropropane	-	-	-	-	-	-	-	-	-
1,2-Dichloroethane	-	-	-	-	-	-	-	-	-
1,1,1-Trichloroethane	-	-	-	-	-	-	-	-	-
1,1-Dichloropropene	-	-	-	-	-	-	-	-	-
Benzene	-	-	-	-	-	-	-	-	-
Carbontetrachloride	-	-	-	-	-	-	-	-	-
Dibromomethane	-	-	-	-	-	-	-	-	-
1,2-Dichloropropane	-	-	-	-	-	-	-	-	-
Bromodichloromethane	-	-	-	-	-	-	-	-	-
Trichloroethene	-	-	-	-	-	-	-	-	-
cis-1,3-Dichloropropene	-	-	-	-	-	-	-	-	-
trans-1,3-Dichloropropene	-	-	-	-	-	-	-	-	-
1,1,2-Trichloroethane	-	-	-	-	-	-	-	-	-
Toluene	-	-	-	1	-	-	-	-	-
1,3-Dichloropropane	-	-	-	-	-	-	-	-	-
Dibromochloromethane	-	-	-	-	-	-	-	-	-
1,2-Dibromoethane	-	-	-	-	-	-	-	-	-
Tetrachloroethene	-	-	-	-	-	-	-	-	-
1,1,1,2-Tetrachloroethane	-	-	-	-	-	-	-	-	-
Chlorobenzene	-	-	-	-	-	-	-	-	-
Ethylbenzene	-	-	-	-	-	-	-	-	-
p/m-Xylene	-	-	-	-	-	-	-	-	-
Bromoform	-	-	-	-	-	-	-	-	-
Styrene	-	-	-	-	-	-	-	-	-
1,1,2,2-Tetrachloroethane	-	-	-	-	-	-	-	-	-
o-Xylene	-	-	-	-	-	-	-	-	-
1,2,3-Trichloropropane	-	-	-	-	-	-	-	-	-
Isopropylbenzene	-	-	-	-	-	-	-	-	-
Bromobenzene	-	-	-	-	-	-	-	-	-
2-Chlorotoluene	-	-	-	-	-	-	-	-	-
Propylbenzene	-	-	-	-	-	-	-	-	-
4-Chlorotoluene	-	-	-	-	-	-	-	-	-
1,2,4-Trimethylbenzene	-	-	-	-	-	-	-	-	-
4-Isopropyltoluene	-	-	-	-	-	-	-	-	-
1,3,5-Trimethylbenzene	-	-	-	-	-	-	-	-	-
1,3-Dichlorobenzene	-	-	-	-	-	-	-	-	-
1,4-Dichlorobenzene	-	-	-	-	-	-	-	-	-
sec-Butylbenzene	-	-	-	-	-	-	-	-	-
tert-Butylbenzene	-	-	-	-	-	-	-	-	-
1,2-Dichlorobenzene	-	-	-	-	-	-	-	-	-
n-Butylbenzene	-	-	-	-	-	-	-	-	-
1,2-Dibromo-3-chloropropane	-	-	-	-	-	-	-	-	-
1,2,4-Trichlorobenzene	-	-	-	-	-	-	-	-	-
Naphthalene	-	-	-	-	-	-	-	-	-
1,2,3-Trichlorobenzene	-	-	-	-	-	-	-	-	-
Hexachlorobutadiene	-	-	-	-	-	-	-	-	-

Values in µg/l

Tentatively Identified Compounds

Compound	Borehole(s)	Conc (µg/l)
Acetic Acid		--
Cyclohexane	BH404-5, BHWW	--
Cyclohexanone	04, BH601B, BH606	--
Cyclohexanol	BH606	--
Diaminocyclohexane		--

-- Less than the method detection limit of 1

--- Less than the method detection limit of 10.

please note: the identification and semi-quantification of these tentatively identified compounds is outside the scope of the UKAS accreditation for this method

Table 11
SVOCs in Groundwater (µg/l)

Compound	BH1101	BH1102	BH1103	BH1104	BH1105	BH1106	BH1107	BH1108	BH1109
Phenol	-	-	-	-	-	-	-	-	-
2-Chlorophenol	-	-	-	-	-	-	-	-	-
2-Methylphenol	-	-	-	-	-	-	-	-	-
4-Methylphenol	-	-	-	-	-	-	-	-	-
2-Nitrophenol	-	-	-	-	-	-	-	-	-
4-Nitrophenol	-	-	-	-	-	-	-	-	-
2,4-Dichlorophenol	-	-	-	-	-	-	-	-	-
2,4-Dimethylphenol	-	-	-	-	-	-	-	-	-
4-Chloro-3-methylphenol	-	-	-	-	-	-	-	-	-
2,4,6-Trichlorophenol	-	-	-	-	-	-	-	-	-
2,4,5-Trichlorophenol	-	-	-	-	-	-	-	-	-
Pentachlorophenol	-	-	-	-	-	-	-	-	-
1,3-Dichlorobenzene	-	-	-	-	-	-	-	-	-
1,4-Dichlorobenzene	-	-	-	-	-	-	-	-	-
1,2-Dichlorobenzene	-	-	-	-	-	-	-	-	-
1,2,4-Trichlorobenzene	-	-	-	-	-	-	-	-	-
Nitrobenzene	-	-	-	-	-	-	-	-	-
Azobenzene	-	-	-	-	-	-	-	-	-
Hexachlorobenzene	-	-	-	-	-	-	-	-	-
Naphthalene	-	-	-	-	-	-	-	-	-
Acenaphthylene	-	-	-	-	-	-	-	-	-
Acenaphthene	-	-	-	-	-	-	-	-	-
Fluorene	-	-	-	-	-	-	-	-	-
Phenanthrene	-	-	-	-	-	-	-	-	-
Anthracene	-	-	-	-	-	-	-	-	-
Fluoranthene	-	-	-	-	-	-	-	-	-
Pyrene	-	-	-	-	-	-	-	-	-
Benzo(a)anthracene	-	-	-	-	-	-	-	-	-
Chrysene	-	-	-	-	-	-	-	-	-
Benzo(b)fluoranthene	-	-	-	-	-	-	-	-	-
Benzo(k)fluoranthene	-	-	-	-	-	-	-	-	-
Benzo(a)pyrene	-	-	-	-	-	-	-	-	-
Indeno(1,2,3-cd)pyrene	-	-	-	-	-	-	-	-	-
Dibenzo(a,h)anthracene	-	-	-	-	-	-	-	-	-
Benzo(ghi)perylene	-	-	-	-	-	-	-	-	-
2-Chloronaphthalene	-	-	-	-	-	-	-	-	-
2-Methylnaphthalene	-	-	-	-	-	-	-	-	-
Carbazole	-	-	-	-	-	-	-	-	-
Isophorone	-	-	-	-	-	-	-	-	-
Dibenzofuran	-	-	-	-	-	-	-	-	-
Dimethyl phthalate	-	-	-	-	-	-	-	-	-
Diethyl phthalate	-	-	-	-	-	-	-	-	-
Di-n-butylphthalate	-	-	-	-	-	-	-	-	-
Di-n-octylphthalate	-	-	-	-	-	-	-	-	-
Bis(2-ethylhexyl)phthalate	-	-	-	-	-	-	-	-	-
Butylbenzylphthalate	-	-	-	-	-	-	-	-	-
4-Chloroaniline	-	-	-	-	-	-	-	-	-
2-Nitroaniline	-	-	-	-	-	-	-	-	-
3-Nitroaniline	-	-	-	-	-	-	-	-	-
4-Nitroaniline	-	-	-	-	-	-	-	-	-
2,4-Dinitrotoluene	-	-	-	-	-	-	-	-	-

Values in µg/l

- ' Less than the method detection limit of 1

Table 11
SVOCs in Groundwater (µg/l)

Compound	BH105	BH105B	BH112	BH113		BH201	BH202	BH203	BH204	BH207		BH304
Phenol	-	-	-	-		-	-	-	-	-		-
2-Chlorophenol	-	-	-	-		-	-	-	-	-		-
2-Methylphenol	-	-	-	-		-	-	-	-	-		-
4-Methylphenol	-	-	-	-		-	-	-	-	-		-
2-Nitrophenol	-	-	-	-		-	-	-	-	-		-
4-Nitrophenol	-	-	-	-		-	-	-	-	-		-
2,4-Dichlorophenol	-	-	-	-		-	-	-	-	-		-
2,4-Dimethylphenol	-	-	-	-		-	-	-	-	-		-
4-Chloro-3-methylphenol	-	-	-	-		-	-	-	-	-		-
2,4,6-Trichlorophenol	-	-	-	-		-	-	-	-	-		-
2,4,5-Trichlorophenol	-	-	-	-		-	-	-	-	-		-
Pentachlorophenol	-	-	-	-		-	-	-	-	-		-
1,3-Dichlorobenzene	-	-	-	-		-	-	-	-	-		-
1,4-Dichlorobenzene	-	-	-	-		-	-	-	-	-		-
1,2-Dichlorobenzene	-	-	-	-		-	-	-	-	-		-
1,2,4-Trichlorobenzene	-	-	-	-		-	-	-	-	-		-
Nitrobenzene	-	-	-	-		-	-	-	-	-		-
Azobenzene	-	-	-	-		-	-	-	-	-		-
Hexachlorobenzene	-	-	-	-		-	-	-	-	-		-
Naphthalene	-	-	-	-		-	-	-	-	-		-
Acenaphthylene	-	-	-	-		-	-	-	-	-		-
Acenaphthene	-	-	-	-		-	-	-	-	-		-
Fluorene	-	-	-	-		-	-	-	-	-		-
Phenanthrene	-	-	-	-		-	-	-	-	-		-
Anthracene	-	-	-	-		-	-	-	-	-		-
Fluoranthene	-	-	-	-		-	-	-	-	-		-
Pyrene	-	-	-	-		-	-	-	-	-		-
Benzo(a)anthracene	-	-	-	-		-	-	-	-	-		-
Chrysene	-	-	-	-		-	-	-	-	-		-
Benzo(b)fluoranthene	-	-	-	-		-	-	-	-	-		-
Benzo(k)fluoranthene	-	-	-	-		-	-	-	-	-		-
Benzo(a)pyrene	-	-	-	-		-	-	-	-	-		-
Indeno(1,2,3-cd)pyrene	-	-	-	-		-	-	-	-	-		-
Dibenzo(a,h)anthracene	-	-	-	-		-	-	-	-	-		-
Benzo(ghi)perylene	-	-	-	-		-	-	-	-	-		-
2-Chloronaphthalene	-	-	-	-		-	-	-	-	-		-
2-Methylnaphthalene	-	-	-	-		-	-	-	-	-		-
Carbazole	-	-	-	-		-	-	-	-	-		-
Isophorone	-	-	-	-		-	-	-	-	-		-
Dibenzofuran	-	-	-	-		-	-	-	-	-		-
Dimethyl phthalate	-	-	-	-		-	-	-	-	-		-
Diethyl phthalate	-	-	-	-		-	-	-	-	-		-
Di-n-butylphthalate	-	-	-	-		-	-	-	-	-		-
Di-n-octylphthalate	-	-	-	-		-	-	-	-	-		-
Bis(2-ethylhexyl)phthalate	-	-	-	-		-	-	-	-	-		-
Butylbenzylphthalate	-	-	-	-		-	-	-	-	-		-
4-Chloroaniline	-	-	-	-		-	-	-	-	-		-
2-Nitroaniline	-	-	-	-		-	-	-	-	-		-
3-Nitroaniline	-	-	-	-		-	-	-	-	-		-
4-Nitroaniline	-	-	-	-		-	-	-	-	-		-
2,4-Dinitrotoluene	-	-	-	-		-	-	-	-	-		-

Values in µg/l

- Less than the method detection limit of 1

Table 11
SVOCs in Groundwater (µg/l)

Compound	BH401	BH404	BH405	BHWW		BH501	BH504		BH601B	BH605	BH606
Phenol	-	-	-	-		-	-		-	-	-
2-Chlorophenol	-	-	-	-		-	-		-	-	-
2-Methylphenol	-	-	-	-		-	-		-	-	-
4-Methylphenol	-	-	-	-		-	-		-	-	-
2-Nitrophenol	-	-	-	-		-	-		-	-	-
4-Nitrophenol	-	-	-	-		-	-		-	-	-
2,4-Dichlorophenol	-	-	-	-		-	-		-	-	-
2,4-Dimethylphenol	-	-	-	-		-	-		-	-	-
4-Chloro-3-methylphenol	-	-	-	-		-	-		-	-	-
2,4,6-Trichlorophenol	-	-	-	-		-	-		-	-	-
2,4,5-Trichlorophenol	-	-	-	-		-	-		-	-	-
Pentachlorophenol	-	-	-	-		-	-		-	-	-
1,3-Dichlorobenzene	-	-	-	-		-	-		-	-	-
1,4-Dichlorobenzene	-	-	-	-		-	-		-	-	-
1,2-Dichlorobenzene	-	-	-	-		-	-		-	-	-
1,2,4-Trichlorobenzene	-	-	-	-		-	-		-	-	-
Nitrobenzene	-	-	-	-		-	-		-	-	-
Azobenzene	-	-	-	-		-	-		-	-	-
Hexachlorobenzene	-	-	-	-		-	-		-	-	-
Naphthalene	-	-	-	-		-	-		-	-	-
Acenaphthylene	-	-	-	-		-	-		-	-	-
Acenaphthene	-	-	-	-		-	-		-	-	-
Fluorene	-	-	-	-		-	-		-	-	-
Phenanthrene	-	-	-	-		-	-		-	-	-
Anthracene	-	-	-	-		-	-		-	-	-
Fluoranthene	-	-	-	-		-	-		-	-	-
Pyrene	-	-	-	-		-	-		-	-	-
Benzo(a)anthracene	-	-	-	-		-	-		-	-	-
Chrysene	-	-	-	-		-	-		-	-	-
Benzo(b)fluoranthene	-	-	-	-		-	-		-	-	-
Benzo(k)fluoranthene	-	-	-	-		-	-		-	-	-
Benzo(a)pyrene	-	-	-	-		-	-		-	-	-
Indeno(1,2,3-cd)pyrene	-	-	-	-		-	-		-	-	-
Dibenzo(a,h)anthracene	-	-	-	-		-	-		-	-	-
Benzo(ghi)perylene	-	-	-	-		-	-		-	-	-
2-Chloronaphthalene	-	-	-	-		-	-		-	-	-
2-Methylnaphthalene	-	-	-	-		-	-		-	-	-
Carbazole	-	-	-	-		-	-		-	-	-
Isophorone	-	-	-	-		-	-		-	-	-
Dibenzofuran	-	-	-	-		-	-		-	-	-
Dimethyl phthalate	-	-	-	-		-	-		-	-	-
Diethyl phthalate	-	-	-	-		-	-		-	-	-
Di-n-butylphthalate	-	-	-	-		-	-		-	-	-
Di-n-octylphthalate	-	-	-	-		-	-		-	-	-
Bis(2-ethylhexyl)phthalate	-	-	-	-		-	-		-	-	-
Butylbenzylphthalate	-	-	-	-		-	-		-	-	-
4-Chloroaniline	-	-	-	-		-	-		-	-	-
2-Nitroaniline	-	-	-	-		-	-		-	-	-
3-Nitroaniline	-	-	-	-		-	-		-	-	-
4-Nitroaniline	-	-	-	-		-	-		-	-	-
2,4-Dinitrotoluene	-	-	-	-		-	-		-	-	-

Values in µg/l

- ' Less than the method detection limit of 1

Table 12
SVOC TICs in Groundwater (µg/l)

Compound	KA/Solvents					Inters 2	Acids 2				Acids 1		Inters 1/HMD Services		
	BH201	BH202	BH203	BH204	BH207	BH304	BH401	BH404	BH405	BHWW	BH501	BH504	BH601B	BH605	BH606
C6-C8 Acids	-	-	-	-	-	-	-	-	-	45	-	-	-	-	-
C9 - 22hydrocarbons: 20% aromatic	-	-	-	-	-	-	-	-	250	-	-	-	-	-	-
Unresolved complex matter inc. some terpene	-	-	-	-	-	940	-	-	-	-	-	-	-	-	-
Dichlorophenyl isocyanate	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-
Adipic Acid	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Biphenyl	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Diphenyl oxide	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Molecular sulphur	-	-	-	-	-	-	6	-	-	-	-	-	-	-	-
Unknown	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-

Values in µg/l

- ' Less than the method detection limit of 1

Table 13
Water PRO and DRO (µg/l)

Borehole	Total Volatiles C4 to C13	MTBE	Benzene	Toluene	Ethyl Benzene	Total Xylene
BH1101	-	-	-	-	-	-
BH1102	-	-	-	-	-	-
BH1103	-	-	-	-	-	-
BH1104	-	-	-	-	-	-
BH1105	292	-	-	-	-	-
BH1106	-	-	-	-	-	-
BH1107	-	-	-	-	-	-
BH1108	-	-	-	-	-	-
BH201	-	-	-	-	-	-
BH203	-	-	-	-	-	-
BH304	770	-	-	-	-	-
BH401	-	-	-	-	-	-
BHWW	-	-	-	-	-	-

Borehole	Diesel Range Hydrocarbons	Interpretation
BH1101	10016	Unknown pattern detected
BH1102	-	No identification possible
BH1103	1151	Unknown pattern detected
BH1104	-	No identification possible
BH1105	568	Lube oil
BH1106	-	No identification possible
BH1107	-	No identification possible
BH1108	-	No identification possible
BH201	-	No identification possible
BH203	-	No identification possible
BH304	2026	Unknown pattern detected
BH401	292	Possible biodegraded diesel/possible lube oil
BHWW	148	Possible gasoline residues

Values in µg/l

- ' Less than the method detection limit of 10.

Table 14
Inorganics in Groundwater

Borehole	Arsenic	Boron (Water Soluble)	Cadmium	Chromium	Copper	Mercury	Nickel	Lead	Selenium	Vanadium	Zinc	Ammoniacal Nitrogen as NH4-N
BH1101	5	1000	x	-----	---	xx	19	---	-	-	70	1
BH1102	----	220	x	-----	---	xx	--	---	-	-	-	0.8
BH1103	2	1010	x	-----	5	xx	--	---	-	-	-	0.4
BH1104	----	590	x	1	---	xx	--	---	-	-	-	0.3
BH1105	12	240	x	-----	---	xx	--	---	-	-	-	87.6
BH1106	----	370	x	-----	16	xx	--	---	-	-	-	0.3
BH1107		350	x	1	---	xx	--	---	-	-	80	1.0
BH1108	----	260	x	-----	---	xx	--	---	-	-	-	0.3
BH105	----	-	x	3	---	xx	--	---	-	-	-	0.9
BH105B	-	-	-	-	-	-	-	-	-	-	-	0.7
BH112	----	100	x	-----	---	xx	--	---	-	-	-	3.5
BH113	-	-	-	-	-	-	-	-	-	-	-	3.6
BH201	----	400	x	-----	---	xx	--	---	-	-	-	0.3
BH202	-	-	-	-	-	-	-	-	-	-	-	0.2
BH203	----	-	x	-----	---	xx	--	---	-	-	-	0.8
BH204	-	-	-	-	-	-	-	-	-	-	-	0.3
BH207	----	850	x	-----	---	xx	--	---	-	-	-	1.1
BH304	3	430	x	-----	---	xx	--	---	-	-	-	1.2
BH401												11.7
BH404	----	-	x	3	9	xx	--	---	-	-	-	0.3
BH405	-	-	-	-	-	-	-	-	-	-	-	0.9
BHWW	-	-	-	-	-	-	-	-	-	-	-	15.8
BH501	----	250	x	3	---	xx	--	---	-	-	-	0.0
BH504	----	360	x	19	---	xx	--	---	-	-	-	0.2
BH601B	-	-	-	-	-	-	-	-	-	-	-	0.7
BH605	----	50	x	1	---	xx	--	---	-	-	-	0.2
BH606	-	-	-	-	-	-	-	-	-	-	-	0.6

Values in µg/l except ammoniacal nitrogen as mg/l

-' Less than the method detection limit of 50.

--' Less than the method detection limit of 10.

---' Less than the method detection limit of 5.

----' Less than the method detection limit of 2.

-----' Less than the method detection limit of 1.

x Less than the method detection limit of 0.4.

xx Less than the method detection limit of 0.05.

Table 15
PCBs in Water (µg/l)

Compound	BH1101	BH1104	BH207	BH401	BH404	BH501	BH504	BH601B	BH605
Aroclor 1016	-	-	-	-	-	-	-	-	-
Aroclor 1221	-	-	-	-	-	-	-	-	-
Aroclor 1232	-	-	-	-	-	-	-	-	-
Aroclor 1242	-	-	-	-	-	-	-	-	-
Aroclor 1248	-	-	-	-	-	-	-	-	-
Aroclor 1254	-	-	-	-	-	-	-	-	-
Aroclor 1260	-	-	-	-	-	-	-	-	-
TOTAL	-	-	-	-	-	-	-	-	-

Values in µg/l

- ' Less than the method detection limit of 1.

Table 16
Methanol in Water (µg/l)

Borehole	Methanol
BH1101	-
BH1102	-
BH1103	NDP
BH1104	-
BH1105	-
BH1106	-
BH1107	NDP
BH1108	-
BH1109	-

Values in µg/l

NDP = No Determination Possible

-' Less than the method detection limit of 100.