Total Petroleum Hydrocarbons (TPH) Carbon Ranges

Customer and Site Details:	Soil Mechanics : British Museum
Job Number:	S08_3989M
QC Batch Number:	82483
Directory:	D:\TES\DATA\Y2008\0709TPH_GC3\012F1401.D
Method:	Ultra Sonic
Accreditation code:	U

Matrix:	Soil
Date Booked in:	19-Jun-08
Date Extracted:	05-Jul-08
Date Analysed:	09-Jul-08

		Concentration, (mg/kg) - as dry weight.								
Sample ID	Client ID	>C8 - C10	>C10 - C12	>C12 - C16	>C16 - C21	>C21 - C35				
CL0818467	TP106 ES 6 1.00	<2	<2	<2	10.7	96				
CL0818468	TP112 ES 6 1.20	<2	<2	<2	<2	<5.39				
CL0818469	TP113 ES 3 0.50	<2	<2	3.19	12.7	65.1				
CL0818470	BH103 ES 3 0.50	<2	<2	4.55	31.6	167				
CL0818471	BH103 ES 8 1.00	<2	<2	2.7	7.94	38.7				
CL0818472	BH103 ES 10 1.50	<2	<2	3.1	7.79	18				
CL0818473	BH103 ES 26 5.20	<3	<3	<3	<3	<5.54				



Where individual results are flagged see report notes for for status.

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Results corrected to dry weight at 105℃ where appr opriate, in accordance with the MCERTS standard.



Where individual results are flagged see report notes for for status.

Results corrected to dry weight at 105°C where appr opriate, in accordance with the MCERTS standard.



Where individual results are flagged see report notes for for status.

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Results corrected to dry weight at 105°C where appr opriate, in accordance with the MCERTS standard.



Where individual results are flagged see report notes for for status.

Page 15 of 19

Results corrected to dry weight at 105°C where appr opriate, in accordance with the MCERTS standard.



Where individual results are flagged see report notes for for status.

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Results corrected to dry weight at 105°C where appr opriate, in accordance with the MCERTS standard.



Where individual results are flagged see report notes for for status.

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Results corrected to dry weight at 105°C where appr opriate, in accordance with the MCERTS standard. EFS/08398



Where individual results are flagged see report notes for for status. Results corrected to dry weight at 105℃ where appr opriate, in accordance with the MCERTS standard.

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Report Notes

Soil/Solid analysis specific:

S04 analysis not conducted in accordance with BS1377 unless otherwise stated Water Soluble Sulphate on 2:1 water:soil extract AR denotes analysis conducted on the As Received sample

Water analysis specific:

Results expressed as mg/l unless stated otherwise

Oil analysis specific:

Results expressed as mg/kg unless stated otherwise S.G. expressed as $g/cm^3@ 15^{\circ}C$

Filter analysis specific:

Results expressed as mg on filter unless stated otherwise

VOC analysis specific:

Explanatory notes for data flagging

U = undetected above reporting limit

- J = concentration at instrument was below lowest calibration standard
- E = concentration at instrument was above top calibration standard

B = compound was detected in method blank

Gas (Tedlar bag) analysis specific:

Results expressed as ug/l unless stated otherwise

Air (Carbon tube) analysis specific:

Results expressed as ug on tube unless stated otherwise

Asbestos analysis specific:

CH denotes Chrysotile CR denotes Crocidolite AM denotes Amosite NADIS denotes No Asbestos Detected in Sample NBFO denotes No Bulk fibres Observed

General notes:

^ this analysis was subcontracted to another laboratory

\$ Within laboratory tolerances

\$\$ unable to analyse due to nature of sample

¥ Results for guidance only, possible interference

& Blank corrected

I.S insufficient sample for analysis

Intf Unable to analyse due to interferences

N.D Not determined

N.R Not recorded

N.Det Not detected

 $\ensuremath{\text{Req}}$ Analysis Requested, see attached sheets for results

P Raised detection limit due to nature of sample

* denotes that all accreditation has been removed by the laboratory for this result.

‡ denotes that Mcerts accreditation has been removed by the laboratory for this result.

Note: The Laboratory may only claim that data is accredited when all of the requirements of our Quality System have been met. Where these requirements have not been met the laboratory

may elect to include the data in its final report and remove the accreditation from individual data items if it believes that the validity of the data has not been affected.

If you require further details of the circumstances leading to the removal of the accreditation from any data item please do not hesitate to contact the laboratory



TEST REPORT SOIL SAMPLE ANALYSIS



TES Report No. EFS/083990M (Ver. 2)

Soil Mechanics Glossop House Hogwood Lane Finchamstead Wokingham RG40 4QW

Site: British Museum

The 4 samples described in this report were logged for analysis by TES Bretby on 19-Jun-2008. The analysis was completed by: 29-Jul-2008

Tests where the accreditation is set to N or No, and any individual data items marked with a * are not UKAS or MCERTS accredited Any opinions or interpretations expressed herein are outside the scope of any UKAS accreditation held by TES Bretby Laboratories.

The following tables are contained in this report:

Table 1 Main Analysis Results (Pages 2 to 3) Table of PAH (MS-SIM) (80) Results (Pages 4 to 7) Table of TPH Texas banding (std) (Page 8) GC-FID Chromatograms (Pages 9 to 12) Table of Report Notes (Page 13)

On behalf of TES Bretby : J Hannah

J. Hannah Project Co-ordinator

Date of Issue: 29-Jul-2008

Accreditation Codes: **N** (Not Accredited), **U** (UKAS), **UM** (UKAS & MCERTS) Tests marked '^' have been subcontracted to another laboratory. (NVM) - denotes the sample matrix is dissimilar to matrices upon which the MCERTS validation was based, and is therefore not accredited for MCERTS. All results are reported on a dry weight basis at 105°C unless otherwise stated. (except QC samples) TES Bretby accepts no responsibility for any sampling not carried out by our personnel.

Sample Descriptions

Client : Soil Mechanics

Site : British Museum

Report Number : S08_3990M

Lab ID Number	Client ID	Description
CL/0818474	BH104A ES 2 0.50	Brown Gravel CLAY
CL/0818475	BH104A ES 6 1.00	Brown CLAY
CL/0818476	BH104A ES 8 1.50	Brown Gravel SILT
CL/0818477	BH104A ES 21 5.70	Brown CLAY

	Units :	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	%	mg/kg	mg/kg	pH Units		
	Method Codes :	ICPMSS	ICPMSS	ICPMSS	ICPMSS	ICPMSS	ICPMSS	ICPMSS	ICPMSS	ICPMSS	PAHSCUV	TMSS	TPHFIDUS	TPHFIDUS	WSLM3		-
	Accreditation Code:	2 	0.1	JIM	3 11M	3.5 UM	0.10	2.5 UM	0.5	19.5 UM	10	0.2	10.0 LIM	10.0	IJ		-
TES ID Number CL/	Client Sample Description	Arsenic (MS)	Cadmium (MS)	Chromium (MS)	Copper (MS)	Lead (MS)	Mercury (MS)	Nickel (MS)	Selenium (MS)	Zinc (MS)	PAH (screening)	Tot.Moisture @ 105C	TPH by GCFID (AR)	TPH Carbon Banding.	pH units		
0818474	BH104A ES 2 0.50	10.1	0.14	20.5‡	51.7	75	0.47	18.2	<0.5	55.6	13	18.4	21	Req	9.5		
0818475	BH104A ES 6 1.00	10.7	0.14	39‡	17.7	14.4	<0.1	39.7	<0.5	51.9	<10	16.1	<11.9	Req	8.3		
0818476	BH104A ES 8 1.50	7.6	<0.1	20‡	8.7	7.8	<0.1	20	<0.5	25.8	<10	11.4	<11.3	Req	8.4		
0818477	BH104A ES 21 5.70	10	0.16	37.9‡	25	15.8	<0.1	36	<0.5	68.5	<10	22.0	32	Req	7.9		
TES Bretby Client Name Soil Mechani											Soils Sample Analysis				S	TE	ES I
	F 5 60x 100, Dielby Busiless Park, Burton-on-Trent, Staffordshire, DE15 0XD Tel +44 (0) 1283 554400 Fax +44 (0) 1283 554422	Internet Contact INTECTITIP n-Trent, Staffordshire, DE15 0XD Date Printed 29-Jul-08 (0) 1283 554420 Report Number EFS/083990M (0) 1283 554422 Table Number 1						29-Jul-08 5/083990M 1	Bre	etby							

	Units :	Mol/ka	%	ma/ka		ma/ka	ma/ka	% M/M							
	Method Codes :	ANC	LOI450	PAHMSUS	SEN9	SFAPI	SFAPI	WSLM59							
	Method Reporting Limits :	0.01	0.2	0.08		0.5	0.5	0.02							
	Accreditation Code:	N	N		N	N	N	N							
TES ID Number CL/	Client Sample Description	Acid Neut. Capacity	LOI % @ 450C	PAH by MS.16(0.08)	Asbestos (screening)	Cyanide(Total) (AR)	Phenol Index.(AR)	F.O.C. %							
0818474	BH104A ES 2 0.50	1.49	5.7	Req	NBFO	<0.6	<0.6	1.88							
0818475	BH104A ES 6 1.00			Req	NBFO	<0.6	<0.6								
0818476	BH104A ES 8 1.50			Req	NBFO	<0.6	<0.6								
0818477	BH104A ES 21 5.70			Req	NBFO	<0.6	<0.6								
															<u> </u>
	TES Bretby	Client N	nt Name Soil Mechanics Soils Sample Analysis							s	TE	ES I			
	C Dox 100, Dictory Dualitiess Fdirk,	Contact			ιh					Data D-	ntad		20 101 00		
1	Surton-on-I rent, Stattordshire, DE15 0XD Fel +44 (0) 1283 554400	British Museum Date Printed 29- Report Number EFS/083 Table Number						29-Jul-08 S/083990M	Bre	tby					
'															

Customer and Site Details:
Sample Details:
LIMS ID Number:
QC Batch Number:
Quantitation File:
Directory:
Dilution:

Soil Mechanics: British MuseumBH104A ES 2 0.50Job ICL0818474Date2657DateInitial CalibrationDate0721PAH.GC5\Matri1.0Ext M

Job Number: Date Booked in: Date Extracted: Date Analysed: Matrix: Ext Method:

S08_3990M 19-Jun-08 18-Jul-08 22-Jul-08 Soil Ultrasonic

Accredited?: No

Target Compounds	CAS #	R.T.	Concentration	% Fit	Accr.
		(min)	mg/kg		code
Naphthalene	91-20-3	-	< 0.10	-	Ν
Acenaphthylene	208-96-8	-	< 0.10	-	Ν
Acenaphthene	83-32-9	-	< 0.10	-	Ν
Fluorene	86-73-7	-	< 0.10	-	Ν
Phenanthrene	85-01-8	-	< 0.10	-	Ν
Anthracene	120-12-7	-	< 0.10	-	Ν
Fluoranthene	206-44-0	-	< 0.10	-	Ν
Pyrene	129-00-0	-	< 0.10	-	Ν
Benzo[a]anthracene	56-55-3	-	< 0.10	-	Ν
Chrysene	218-01-9	-	< 0.10	-	Ν
Benzo[b]fluoranthene	205-99-2	-	< 0.10	-	Ν
Benzo[k]fluoranthene	207-08-9	-	< 0.10	-	Ν
Benzo[a]pyrene	50-32-8	-	< 0.10	-	Ν
Indeno[1,2,3-cd]pyrene	193-39-5	-	< 0.10	-	Ν
Dibenzo[a,h]anthracene	53-70-3	-	< 0.10	-	Ν
Benzo[g,h,i]perylene	191-24-2	-	< 0.10	_	N
Total (USEPA16) PAHs	-	-	< 1.57	-	N

"M" denotes that % fit has been manually interpreted

Internal Standards	% Area
1,4-Dichlorobenzene-d4	NA
Naphthalene-d8	110
Acenaphthene-d10	110
Phenanthrene-d10	119
Chrysene-d12	135
Perylene-d12	135

Surrogates	% Rec
Nitrobenzene-d5	N.D
2-Fluorobiphenyl	98
Terphenyl-d14	121

Concentrations are reported on a dry weight basis.

Customer and Site Details:
Sample Details:
LIMS ID Number:
QC Batch Number:
Quantitation File:
Directory:
Dilution:

Soil Mechanics: British MuseumBH104A ES 6 1.00Job ICL0818475Date2657DateInitial CalibrationDate0721PAH.GC5\Matri1.0Ext M

Job Number: Date Booked in: Date Extracted: Date Analysed: Matrix: Ext Method:

S08_3990M 19-Jun-08 18-Jul-08 22-Jul-08 Soil Ultrasonic

Accredited?: No

Target Compounds	CAS #	R.T.	Concentration	% Fit	Accr.
		(min)	mg/kg		code
Naphthalene	91-20-3	-	< 0.10	-	Ν
Acenaphthylene	208-96-8	-	< 0.10	-	Ν
Acenaphthene	83-32-9	-	< 0.10	-	Ν
Fluorene	86-73-7	-	< 0.10	-	Ν
Phenanthrene	85-01-8	-	< 0.10	-	Ν
Anthracene	120-12-7	-	< 0.10	-	Ν
Fluoranthene	206-44-0	-	< 0.10	-	Ν
Pyrene	129-00-0	-	< 0.10	-	Ν
Benzo[a]anthracene	56-55-3	-	< 0.10	-	Ν
Chrysene	218-01-9	-	< 0.10	-	Ν
Benzo[b]fluoranthene	205-99-2	-	< 0.10	-	Ν
Benzo[k]fluoranthene	207-08-9	-	< 0.10	-	Ν
Benzo[a]pyrene	50-32-8	-	< 0.10	-	Ν
Indeno[1,2,3-cd]pyrene	193-39-5	-	< 0.10	-	Ν
Dibenzo[a,h]anthracene	53-70-3	-	< 0.10	-	Ν
Benzo[g,h,i]perylene	191-24-2	-	< 0.10	_	N
Total (USEPA16) PAHs	-	-	< 1.53	-	N

"M" denotes that % fit has been manually interpreted

Internal Standards	% Area
1,4-Dichlorobenzene-d4	NA
Naphthalene-d8	111
Acenaphthene-d10	110
Phenanthrene-d10	119
Chrysene-d12	139
Perylene-d12	138

Surrogates	% Rec
Nitrobenzene-d5	N.D
2-Fluorobiphenyl	96
Terphenyl-d14	115

Concentrations are reported on a dry weight basis.

Customer and Site Det	ails:
Sample Details:	
LIMS ID Number:	
QC Batch Number:	
Quantitation File:	
Directory:	
Dilution:	

Soil Mechanics: British MuseumBH104A ES 8 1.50Job ICL0818476Date2657DateInitial CalibrationDate0721PAH.GC5\Matri1.0Ext M

Job Number: Date Booked in: Date Extracted: Date Analysed: Matrix: Ext Method:

S08_3990M 19-Jun-08 18-Jul-08 22-Jul-08 Soil Ultrasonic

Accredited?: No

Target Compounds	CAS #	R.T.	Concentration	% Fit	Accr.
		(min)	mg/kg		code
Naphthalene	91-20-3	-	< 0.09	-	Ν
Acenaphthylene	208-96-8	-	< 0.09	-	Ν
Acenaphthene	83-32-9	-	< 0.09	-	Ν
Fluorene	86-73-7	-	< 0.09	-	Ν
Phenanthrene	85-01-8	-	< 0.09	-	Ν
Anthracene	120-12-7	-	< 0.09	-	Ν
Fluoranthene	206-44-0	-	< 0.09	-	Ν
Pyrene	129-00-0	-	< 0.09	-	Ν
Benzo[a]anthracene	56-55-3	-	< 0.09	-	Ν
Chrysene	218-01-9	-	< 0.09	-	Ν
Benzo[b]fluoranthene	205-99-2	-	< 0.09	-	Ν
Benzo[k]fluoranthene	207-08-9	-	< 0.09	-	Ν
Benzo[a]pyrene	50-32-8	-	< 0.09	-	Ν
Indeno[1,2,3-cd]pyrene	193-39-5	-	< 0.09	-	Ν
Dibenzo[a,h]anthracene	53-70-3	-	< 0.09	-	Ν
Benzo[g,h,i]perylene	191-24-2	-	< 0.09	-	N
Total (USEPA16) PAHs	-	-	< 1.44	-	N

"M" denotes that % fit has been manually interpreted

Internal Standards	% Area
1,4-Dichlorobenzene-d4	NA
Naphthalene-d8	113
Acenaphthene-d10	110
Phenanthrene-d10	115
Chrysene-d12	114
Perylene-d12	110

Surrogates	% Rec
Nitrobenzene-d5	N.D
2-Fluorobiphenyl	101
Terphenyl-d14	130

Concentrations are reported on a dry weight basis.

Customer and Site Details:
Sample Details:
LIMS ID Number:
QC Batch Number:
Quantitation File:
Directory:
Dilution:

Soil Mechanics: British MuseumBH104A ES 21 5.70Job ICL0818477Date2657DateInitial CalibrationDate0721PAH.GC5\Matri1.0Ext M

Job Number: Date Booked in: Date Extracted: Date Analysed: Matrix: Ext Method:

S08_3990M 19-Jun-08 18-Jul-08 22-Jul-08 Soil Ultrasonic

Accredited?: No

Target Compounds	CAS #	R.T.	Concentration	% Fit	Accr.
		(min)	mg/kg		code
Naphthalene	91-20-3	-	< 0.10	-	Ν
Acenaphthylene	208-96-8	-	< 0.10	-	Ν
Acenaphthene	83-32-9	-	< 0.10	-	Ν
Fluorene	86-73-7	-	< 0.10	-	Ν
Phenanthrene	85-01-8	-	< 0.10	-	Ν
Anthracene	120-12-7	-	< 0.10	-	Ν
Fluoranthene	206-44-0	-	< 0.10	-	Ν
Pyrene	129-00-0	-	< 0.10	-	Ν
Benzo[a]anthracene	56-55-3	-	< 0.10	-	Ν
Chrysene	218-01-9	-	< 0.10	-	Ν
Benzo[b]fluoranthene	205-99-2	-	< 0.10	-	Ν
Benzo[k]fluoranthene	207-08-9	-	< 0.10	-	Ν
Benzo[a]pyrene	50-32-8	-	< 0.10	-	Ν
Indeno[1,2,3-cd]pyrene	193-39-5	-	< 0.10	-	Ν
Dibenzo[a,h]anthracene	53-70-3	-	< 0.10	-	Ν
Benzo[g,h,i]perylene	191-24-2	-	< 0.10	_	N
Total (USEPA16) PAHs	-	-	< 1.64	-	N

"M" denotes that % fit has been manually interpreted

Internal Standards	% Area
1,4-Dichlorobenzene-d4	NA
Naphthalene-d8	108
Acenaphthene-d10	105
Phenanthrene-d10	113
Chrysene-d12	117
Perylene-d12	114

Surrogates	% Rec
Nitrobenzene-d5	N.D
2-Fluorobiphenyl	106
Terphenyl-d14	134

Concentrations are reported on a dry weight basis.

Total Petroleum Hydrocarbons (TPH) Carbon Ranges

Customer and Site Details:	Soil Mechanics : British Museum
Job Number:	S08_3990M
QC Batch Number:	82483
Directory:	D:\TES\DATA\Y2008\0709TPH_GC3\016F1901.D
Method:	Ultra Sonic
Accreditation code:	U

Matrix:	Soil
Date Booked in:	19-Jun-08
Date Extracted:	05-Jul-08
Date Analysed:	09-Jul-08

		Concentration, (mg/kg) - as dry weight.				
Sample ID	Client ID	>C8 - C10	>C10 - C12	>C12 - C16	>C16 - C21	>C21 - C35
CL0818474	BH104A ES 2 0.50	<2	<2	<2	4.46	13
CL0818475	BH104A ES 6 1.00	<2	<2	<2	<2	<5.22
CL0818476	BH104A ES 8 1.50	<2	<2	<2	<2	5.8
CL0818477	BH104A ES 21 5.70	<3	<3	<3	4.56	24.2



Where individual results are flagged see report notes for for status.

Results corrected to dry weight at 105°C where appr opriate, in accordance with the MCERTS standard.



Where individual results are flagged see report notes for for status.