

Appendix 5 - Groundwater Chemical Analysis Results



Jones Environmental Laboratory

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No.4225

Attention :	Huw Littler-Jones
Date :	11th March, 2013
Your reference :	E0500
Our reference :	Test Report 13/2288 Batch 1
Location :	GLAN GORS
Date samples received :	27th February, 2013
Status :	Final report
Issue :	1

Six samples were received for analysis on 27th February, 2013. Please find attached our Test Report which should be read with notes at the end of the report and should include all sections if reproduced. Interpretations and opinions are outside the scope of any accreditation, and all results relate only to samples supplied.

All analysis is carried out on as received samples and reported on a dry weight basis unless stated otherwise. Results are not surrogate corrected.

Compiled By:

Phil Sommerton B.Sc
Project Manager

Bob Millward B.Sc
Principal Chemist

$$H=H_2SO_4, Z=ZnAc, N=NaOH, HN=HN0_3$$

Please see attached notes for all abbreviations and acronyms

Jones Environmental Laboratory

Client Name: E-Geo Solutions

Report : Liquid

Reference: E0500

Location: GLAN GORS

Contact: Huw Littler-Jones

Liquids/products: V=40ml vial, G=glass bottle, P=plastic bottle

JE Job No.: 13/2288

H=H₂SO₄, Z=ZnAc, N=NaOH, HN=HNO₃

J E Sample No.	1-2	3-4	5-7	8-10	11-12	13-14					Please see attached notes for all abbreviations and acronyms		
Sample ID	BD1 1.50	BD1S 1.20	BD2 1.50	BD2S 1.50	BD3 1.50	BD3S 1.30							
Depth	1.50	1.20	1.50	1.50	1.50	1.30							
COC No / misc													
Containers	P G	P G	V P G	V P G	P G	P G							
Sample Date	27/02/2013	27/02/2013	27/02/2013	27/02/2013	27/02/2013	27/02/2013							
Sample Type	Ground Water	Liquid	Ground Water	Liquid	Ground Water	Liquid							
Batch Number	1	1	1	1	1	1							
Date of Receipt	27/02/2013	27/02/2013	27/02/2013	27/02/2013	27/02/2013	27/02/2013					LOD	Units	Method No.
PAH MS													
Naphthalene	-	0.050	-	0.090	-	0.050					<0.014	ug/l	TM4/PM30
Naphthalene #	0.130	-	<0.014	-	0.200	-					<0.014	ug/l	TM4/PM30
Acenaphthylene	-	<0.013	-	<0.013	-	<0.013					<0.013	ug/l	TM4/PM30
Acenaphthylene #	<0.013	-	<0.013	-	<0.013	-					<0.013	ug/l	TM4/PM30
Acenaphthene	-	<0.013	-	0.090	-	<0.013					<0.013	ug/l	TM4/PM30
Acenaphthene #	0.100	-	<0.013	-	0.060	-					<0.013	ug/l	TM4/PM30
Fluorene	-	<0.014	-	0.060	-	<0.014					<0.014	ug/l	TM4/PM30
Fluorene #	0.020	-	<0.014	-	0.020	-					<0.014	ug/l	TM4/PM30
Phenanthrene	-	0.020	-	0.100	-	<0.011					<0.011	ug/l	TM4/PM30
Phenanthrene #	0.020	-	<0.011	-	0.020	-					<0.011	ug/l	TM4/PM30
Anthracene	-	<0.013	-	0.030	-	<0.013					<0.013	ug/l	TM4/PM30
Anthracene #	<0.013	-	<0.013	-	<0.013	-					<0.013	ug/l	TM4/PM30
Fluoranthene	-	<0.012	-	0.080	-	<0.012					<0.012	ug/l	TM4/PM30
Fluoranthene #	<0.012	-	<0.012	-	<0.012	-					<0.012	ug/l	TM4/PM30
Pyrene	-	<0.013	-	0.060	-	<0.013					<0.013	ug/l	TM4/PM30
Pyrene #	<0.013	-	<0.013	-	<0.013	-					<0.013	ug/l	TM4/PM30
Benzo(a)anthracene	-	<0.015	-	<0.015	-	<0.015					<0.015	ug/l	TM4/PM30
Benzo(a)anthracene #	<0.015	-	<0.015	-	<0.015	-					<0.015	ug/l	TM4/PM30
Chrysene	-	<0.011	-	0.020	-	<0.011					<0.011	ug/l	TM4/PM30
Chrysene #	<0.011	-	<0.011	-	<0.011	-					<0.011	ug/l	TM4/PM30
Benzo(bk)fluoranthene	-	<0.018	-	<0.018	-	<0.018					<0.018	ug/l	TM4/PM30
Benzo(bk)fluoranthene #	<0.018	-	<0.018	-	<0.018	-					<0.018	ug/l	TM4/PM30
Benzo(a)pyrene	-	<0.016	-	<0.016	-	<0.016					<0.016	ug/l	TM4/PM30
Benzo(a)pyrene #	<0.016	-	<0.016	-	<0.016	-					<0.016	ug/l	TM4/PM30
Indeno(123cd)pyrene	-	<0.011	-	<0.011	-	<0.011					<0.011	ug/l	TM4/PM30
Indeno(123cd)pyrene #	<0.011	-	<0.011	-	<0.011	-					<0.011	ug/l	TM4/PM30
Dibenzo(ah)anthracene	-	<0.01	-	<0.01	-	<0.01					<0.01	ug/l	TM4/PM30
Dibenzo(ah)anthracene #	<0.01	-	<0.01	-	<0.01	-					<0.01	ug/l	TM4/PM30
Benzo(ghi)perylene	-	<0.011	-	<0.011	-	<0.011					<0.011	ug/l	TM4/PM30
Benzo(ghi)perylene #	<0.011	-	<0.011	-	<0.011	-					<0.011	ug/l	TM4/PM30
PAH 16 Total	-	<0.195	-	0.530	-	<0.195					<0.195	ug/l	TM4/PM30
PAH 16 Total #	0.270	-	<0.195	-	0.300	-					<0.195	ug/l	TM4/PM30
Benzo(b)fluoranthene	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01					<0.01	ug/l	TM4/PM30
Benzo(k)fluoranthene	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01					<0.01	ug/l	TM4/PM30
PAH Surrogate % Recovery	109	106	111	108	111	110					<0	%	TM4/PM30
EPH >C8-C10	<10	<10	<10	<10	<10	<10					<10	ug/l	TM5/PM30
EPH >C10-C20	<10	<10	<10	<10	<10	<10					<10	ug/l	TM5/PM30
EPH >C20-C30	<10	<10	<10	<10	<10	<10					<10	ug/l	TM5/PM30
EPH >C30-C40	<10	<10	<10	<10	<10	<10					<10	ug/l	TM5/PM30
EPH >C8-C40	-	<10	-	<10	-	<10					<10	ug/l	TM5/PM30
EPH >C8-C40 #	<10	-	<10	-	<10	-					<10	ug/l	TM5/PM30

$$H=H_2SO_4, Z=ZnAc, N=NaOH, HN=HN0_3$$

Please see attached notes for all abbreviations and acronyms

Client Name: E-Geo Solutions
Reference: E0500
Location: GLAN GORS
Contact: Huw Littler-Jones
JE Job No.: 13/2288

Please see attached notes for all abbreviations and acronyms

Jones Environmental Laboratory

Client Name: E-Geo Solutions

SVOC Report : Liquid

Reference: E0500

Location: GLAN GORS

Contact: Huw Littler-Jones

JE Job No.: 13/2288

J E Sample No.	5-7	8-10									Please see attached notes for all abbreviations and acronyms		
Sample ID	BD2 1.50	BD2S 1.50											
Depth	1.50	1.50											
COC No / misc													
Containers	V P G	V P G											
Sample Date	27/02/2013	27/02/2013											
Sample Type	Ground Water	Liquid											
Batch Number	1	1											
Date of Receipt	27/02/2013	27/02/2013											
											LOD	Units	Method No.
SVOC MS													
Other SVOCs													
1,2-Dichlorobenzene	-	<1									<1	ug/l	TM16/PM30
1,2-Dichlorobenzene #	<1	-									<1	ug/l	TM16/PM30
1,2,4-Trichlorobenzene	-	<1									<1	ug/l	TM16/PM30
1,2,4-Trichlorobenzene #	<1	-									<1	ug/l	TM16/PM30
1,3-Dichlorobenzene	-	<1									<1	ug/l	TM16/PM30
1,3-Dichlorobenzene #	<1	-									<1	ug/l	TM16/PM30
1,4-Dichlorobenzene	-	<1									<1	ug/l	TM16/PM30
1,4-Dichlorobenzene #	<1	-									<1	ug/l	TM16/PM30
2-Nitroaniline	<10	<10									<10	ug/l	TM16/PM30
2,4-Dinitrotoluene	-	<0.5									<0.5	ug/l	TM16/PM30
2,4-Dinitrotoluene #	<0.5	-									<0.5	ug/l	TM16/PM30
2,6-Dinitrotoluene	<10	<10									<10	ug/l	TM16/PM30
3-Nitroaniline	<10	<10									<10	ug/l	TM16/PM30
4-Bromophenylphenylether	-	<1									<1	ug/l	TM16/PM30
4-Bromophenylphenylether #	<1	-									<1	ug/l	TM16/PM30
4-Chloroaniline	<10	<10									<10	ug/l	TM16/PM30
4-Chlorophenylphenylether	-	<1									<1	ug/l	TM16/PM30
4-Chlorophenylphenylether #	<1	-									<1	ug/l	TM16/PM30
4-Nitroaniline	-	<0.5									<0.5	ug/l	TM16/PM30
4-Nitroaniline #	<0.5	-									<0.5	ug/l	TM16/PM30
Azobenzene	-	<0.5									<0.5	ug/l	TM16/PM30
Azobenzene #	<0.5	-									<0.5	ug/l	TM16/PM30
Bis(2-chloroethoxy)methane	-	<0.5									<0.5	ug/l	TM16/PM30
Bis(2-chloroethoxy)methane #	<0.5	-									<0.5	ug/l	TM16/PM30
Bis(2-chloroethyl)ether	-	<1									<1	ug/l	TM16/PM30
Bis(2-chloroethyl)ether #	<1	-									<1	ug/l	TM16/PM30
Carbazole	-	<0.5									<0.5	ug/l	TM16/PM30
Carbazole #	<0.5	-									<0.5	ug/l	TM16/PM30
Dibenzofuran	-	<0.5									<0.5	ug/l	TM16/PM30
Dibenzofuran #	<0.5	-									<0.5	ug/l	TM16/PM30
Hexachlorobenzene	-	<1									<1	ug/l	TM16/PM30
Hexachlorobenzene #	<1	-									<1	ug/l	TM16/PM30
Hexachlorobutadiene	-	<1									<1	ug/l	TM16/PM30
Hexachlorobutadiene #	<1	-									<1	ug/l	TM16/PM30
Hexachlorocyclopentadiene	<10	<10									<10	ug/l	TM16/PM30
Hexachloroethane	-	<1									<1	ug/l	TM16/PM30
Hexachloroethane #	<1	-									<1	ug/l	TM16/PM30
Isophorone	-	<0.5									<0.5	ug/l	TM16/PM30
Isophorone #	<0.5	-									<0.5	ug/l	TM16/PM30
N-nitrosodi-n-propylamine	-	<0.5									<0.5	ug/l	TM16/PM30
N-nitrosodi-n-propylamine #	<0.5	-									<0.5	ug/l	TM16/PM30
Nitrobenzene	-	<1									<1	ug/l	TM16/PM30
Nitrobenzene #	<1	-									<1	ug/l	TM16/PM30

Jones Environmental Laboratory

Client Name: E-Geo Solutions

VOC Report : Liquid

Reference: E0500

Location: GLAN GORS

Contact: Huw Littler-Jones

JE Job No.: 13/2288

J E Sample No.	5-7	8-10									Please see attached notes for all abbreviations and acronyms		
Sample ID	BD2 1.50	BD2S 1.50											
Depth	1.50	1.50											
COC No / misc													
Containers	V P G	V P G											
Sample Date	27/02/2013	27/02/2013											
Sample Type	Ground Water	Liquid											
Batch Number	1	1											
Date of Receipt	27/02/2013	27/02/2013											
VOC MS											LOD	Units	Method No.
Dichlorodifluoromethane	<2	<2									<2	ug/l	TM15/PM10
Methyl Tertiary Butyl Ether	-	<1									<1	ug/l	TM15/PM10
Methyl Tertiary Butyl Ether #	<1	-									<1	ug/l	TM15/PM10
Chloromethane	-	<3									<3	ug/l	TM15/PM10
Chloromethane #	<3	-									<3	ug/l	TM15/PM10
Vinyl Chloride	<2	<2									<2	ug/l	TM15/PM10
Bromomethane	<1	<1									<1	ug/l	TM15/PM10
Chloroethane	-	<3									<3	ug/l	TM15/PM10
Chloroethane #	<3	-									<3	ug/l	TM15/PM10
Trichlorofluoromethane	-	<3									<3	ug/l	TM15/PM10
Trichlorofluoromethane #	<3	-									<3	ug/l	TM15/PM10
1,1-Dichloroethene (1,1 DCE)	-	<3									<3	ug/l	TM15/PM10
1,1-Dichloroethene (1,1 DCE) #	<3	-									<3	ug/l	TM15/PM10
Dichloromethane (DCM)	-	<3									<3	ug/l	TM15/PM10
Dichloromethane (DCM) #	<3	-									<3	ug/l	TM15/PM10
trans-1-2-Dichloroethene	-	<3									<3	ug/l	TM15/PM10
trans-1-2-Dichloroethene #	<3	-									<3	ug/l	TM15/PM10
1,1-Dichloroethane	-	<3									<3	ug/l	TM15/PM10
1,1-Dichloroethane #	<3	-									<3	ug/l	TM15/PM10
cis-1-2-Dichloroethene	-	<3									<3	ug/l	TM15/PM10
cis-1-2-Dichloroethene #	<3	-									<3	ug/l	TM15/PM10
2,2-Dichloropropane	<1	<1									<1	ug/l	TM15/PM10
Bromochloromethane	-	<2									<2	ug/l	TM15/PM10
Bromochloromethane #	<2	-									<2	ug/l	TM15/PM10
Chloroform	-	<2									<2	ug/l	TM15/PM10
Chloroform #	<2	-									<2	ug/l	TM15/PM10
1,1,1-Trichloroethane	-	<2									<2	ug/l	TM15/PM10
1,1,1-Trichloroethane #	<2	-									<2	ug/l	TM15/PM10
1,1-Dichloropropene	-	<3									<3	ug/l	TM15/PM10
1,1-Dichloropropene #	<3	-									<3	ug/l	TM15/PM10
Carbon tetrachloride	-	<2									<2	ug/l	TM15/PM10
Carbon tetrachloride #	<2	-									<2	ug/l	TM15/PM10
1,2-Dichloroethane	-	<2									<2	ug/l	TM15/PM10
1,2-Dichloroethane #	<2	-									<2	ug/l	TM15/PM10
Benzene	-	<1									<1	ug/l	TM15/PM10
Benzene #	<1	-									<1	ug/l	TM15/PM10
Trichloroethene (TCE)	-	<3									<3	ug/l	TM15/PM10
Trichloroethene (TCE) #	<3	-									<3	ug/l	TM15/PM10
1,2-Dichloropropane	-	<2									<2	ug/l	TM15/PM10
1,2-Dichloropropane #	<2	-									<2	ug/l	TM15/PM10
Dibromomethane	-	<3									<3	ug/l	TM15/PM10
Dibromomethane #	<3	-									<3	ug/l	TM15/PM10
Bromodichloromethane	-	<2									<2	ug/l	TM15/PM10
Bromodichloromethane #	<2	-									<2	ug/l	TM15/PM10
cis-1-3-Dichloropropene	<2	<2									<2	ug/l	TM15/PM10
Toluene	-	<2									<2	ug/l	TM15/PM10
Toluene #	<2	-									<2	ug/l	TM15/PM10
trans-1-3-Dichloropropene	<2	<2									<2	ug/l	TM15/PM10
1,1,2-Trichloroethane	-	<2									<2	ug/l	TM15/PM10
1,1,2-Trichloroethane #	<2	-									<2	ug/l	TM15/PM10
Tetrachloroethene (PCE)	-	<3									<3	ug/l	TM15/PM10
Tetrachloroethene (PCE) #	<3	-									<3	ug/l	TM15/PM10
1,3-Dichloropropane	-	<2									<2	ug/l	TM15/PM10
1,3-Dichloropropane #	<2	-									<2	ug/l	TM15/PM10
Dibromochloromethane	-	<2									<2	ug/l	TM15/PM10
Dibromochloromethane #	<2	-									<2	ug/l	TM15/PM10
1,2-Dibromoethane	-	<2									<2	ug/l	TM15/PM10
1,2-Dibromoethane #	<2	-									<2	ug/l	TM15/PM10
Chlorobenzene	-	<2									<2	ug/l	TM15/PM10
Chlorobenzene #	<2	-									<2	ug/l	TM15/PM10
1,1,1,2-Tetrachloroethane	-	<2									<2	ug/l	TM15/PM10
1,1,1,2-Tetrachloroethane #	<2	-									<2	ug/l	TM15/PM10

Please include all sections of this report if it is reproduced

NOTES TO ACCOMPANY ALL SCHEDULES AND REPORTS

JE Job No.: 13/2288

SOILS

Please note we are only MCERTS accredited for sand, loam and clay and any other matrix is outside our scope of accreditation.

Where an MCERTS report has been requested, you will be notified within 48 hours of any samples that have been identified as being outside our MCERTS scope. As validation has been performed on clay, sand and loam, only samples that are predominantly these matrices, or combinations of them will be within our MCERTS scope. If samples are not one of a combination of the above matrices they will not be marked as MCERTS accredited.

It is assumed that you have taken representative samples on site and require analysis on a representative subsample. Stones will generally be included unless we are requested to remove them.

All samples will be discarded one month after the date of reporting, unless we are instructed to the contrary. If we are instructed to keep samples, a storage charge of £1 (1.5 Euros) per sample per month will be applied until we are asked to dispose of them.

If you have not already done so, please send us a purchase order if this is required by your company.

Where appropriate please make sure that our detection limits are suitable for your needs, if they are not, please notify us immediately.

All analysis is reported on a dry weight basis unless stated otherwise. Results are not surrogate corrected. Samples are dried at 35°C ±5°C unless otherwise stated. Moisture content for CEN Leachate tests are dried at 105°C ±5°C.

WATERS

Please note we are not a Drinking Water Inspectorate (DWI) Approved Laboratory. It is important that detection limits are carefully considered when requesting water analysis.

UKAS accreditation applies to surface water and groundwater and one other matrix which is analysis specific, any other liquids are outside our scope of accreditation

As surface waters require different sample preparation to groundwaters the laboratory must be informed of the water type when submitting samples.

DEVIATING SAMPLES

Samples must be received in a condition appropriate to the requested analyses. All samples should be submitted to the laboratory in suitable containers with sufficient ice packs to sustain an appropriate temperature for the requested analysis. If this is not the case you will be informed and any test results that may be compromised highlighted on your deviating samples report.

SURROGATES

Surrogate compounds are added during the preparation process to monitor recovery of analytes. However low recovery in soils is often due to peat, clay or other organic rich matrices. For waters this can be due to oxidants, surfactants, organic rich sediments or remediation fluids. Acceptable limits for most organic methods are 70 - 130% and for VOCs are 50 - 150%. When surrogate recoveries are outside the performance criteria but the associated AQC passes this is assumed to be due to matrix effect. Results are not surrogate corrected.

NOTE

Data is only accredited when all the requirements of our Quality System have been met. In certain circumstances where the requirements have not been met, the laboratory may issue the data in an interim report but will remove the accreditation, in this instance results should be considered indicative only. Where possible samples will be re-extracted and a final report issued with accredited results. Please do not hesitate to contact the laboratory if further details are required of the circumstances which have led to the removal of accreditation.

ABBREVIATIONS and ACRONYMS USED

#	UKAS accredited.
B	Indicates analyte found in associated method blank.
DR	Dilution required.
M	MCERTS accredited.
NA	Not applicable
NAD	No Asbestos Detected.
ND	None Detected (usually refers to VOC and/SVOC TICs).
NDP	No Determination Possible
SS	Calibrated against a single substance.
SV	Surrogate recovery outside performance criteria. This may be due to a matrix effect.
W	Results expressed on as received basis.
+	AQC failure, accreditation has been removed from this result, if appropriate, see 'Note' on previous page.
++	Result outside calibration range, results should be considered as indicative only and are not accredited.
*	Analysis subcontracted to a Jones Environmental approved laboratory.
CO	Suspected carry over
NFD	No Fibres Detected

JE Job No 13/2288

[illegible]



Jones Environmental Laboratory

Unit 3 Deeside Point
Zone 3
Deeside Industrial Park
Deeside
CH5 2UA

E-Geo Solutions
Oak House
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Abergele
LL22 7SU

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Fax: +44 (0) 1244 833781



No.4225

Attention :	Huw Littler-Jones
Date :	11th April, 2013
Your reference :	E0500
Our reference :	Test Report 13/3322 Batch 1
Location :	Glan Gors
Date samples received :	4th April, 2013
Status :	Final report
Issue :	1

Six samples were received for analysis on 4th April, 2013. Please find attached our Test Report which should be read with notes at the end of the report and should include all sections if reproduced. Interpretations and opinions are outside the scope of any accreditation, and all results relate only to samples supplied.

All analysis is carried out on as received samples and reported on a dry weight basis unless stated otherwise. Results are not surrogate corrected.

Compiled By:

Phil Sommerton B.Sc
Project Manager

Bob Millward B.Sc
Principal Chemist

Jones Environmental Laboratory

Client Name: E-Geo Solutions

Report : Liquid

Reference: E0500

Location: Glan Gors

Contact: Huw Littler-Jones

Liquids/products: V=40ml vial, G=glass bottle, P=plastic bottle

JE Job No.: 13/3322

H=H₂SO₄, Z=ZnAc, N=NaOH, HN=HNO₃

J E Sample No.	1-2	3-4	5-6	7-8	9-10	11-12					Please see attached notes for all abbreviations and acronyms		
Sample ID	BH BD1	BH BD1S	BH BD2	BH BD2S	BH BD3	BH BD3S							
Depth	1.5	1.25	1.5	1.3	1.75	1.25							
COC No / misc													
Containers	P G	P G	T P	P G	P G	P G							
Sample Date	03/04/2013	03/04/2013	03/04/2013	03/04/2013	03/04/2013	03/04/2013							
Sample Type	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water							
Batch Number	1	1	1	1	1	1							
Date of Receipt	04/04/2013	04/04/2013	04/04/2013	04/04/2013	04/04/2013	04/04/2013					LOD	Units	Method No.
Dissolved Arsenic #	13.8	9.5	4.8	7.0	10.7	5.8					<2.5	ug/l	TM30/PM14
Dissolved Cadmium #	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5					<0.5	ug/l	TM30/PM14
Dissolved Calcium #	239.7	196.9	146.8	137.8	286.1	289.1					<0.2	mg/l	TM30/PM14
Total Dissolved Chromium #	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5					<1.5	ug/l	TM30/PM14
Dissolved Copper #	<7	<7	<7	<7	<7	<7					<7	ug/l	TM30/PM14
Total Dissolved Iron #	21	<20	<20	129	<20	<20					<20	ug/l	TM30/PM14
Dissolved Lead #	11	9	7	8	10	5					<5	ug/l	TM30/PM14
Dissolved Magnesium #	22.4	13.2	20.1	16.4	28.8	17.0					<0.1	mg/l	TM30/PM14
Dissolved Manganese #	1484	59	265	92	1981	170					<2	ug/l	TM30/PM14
Dissolved Mercury #	<1	<1	<1	<1	<1	<1					<1	ug/l	TM30/PM14
Dissolved Nickel #	<2	6	<2	<2	4	7					<2	ug/l	TM30/PM14
Dissolved Potassium #	11.5	6.5	2.0	11.3	17.2	8.1					<0.1	mg/l	TM30/PM14
Dissolved Sodium #	26.4	12.4	26.4	24.2	38.8	20.0					<0.1	mg/l	TM30/PM14
Dissolved Zinc #	5	83	<3	5	9	32					<3	ug/l	TM30/PM14
PAH MS													
Naphthalene #	<0.014	<0.014	0.240	<0.014	<0.014	<0.014					<0.014	ug/l	TM4/PM30
Acenaphthylene #	<0.013	<0.013	<0.013	<0.013	<0.013	<0.013					<0.013	ug/l	TM4/PM30
Acenaphthene #	<0.013	<0.013	<0.013	<0.013	<0.013	<0.013					<0.013	ug/l	TM4/PM30
Fluorene #	<0.014	<0.014	<0.014	<0.014	<0.014	<0.014					<0.014	ug/l	TM4/PM30
Phenanthrene #	<0.011	<0.011	0.060	<0.011	<0.011	<0.011					<0.011	ug/l	TM4/PM30
Anthracene #	<0.013	<0.013	0.030	<0.013	<0.013	<0.013					<0.013	ug/l	TM4/PM30
Fluoranthene #	<0.012	<0.012	0.180	<0.012	<0.012	<0.012					<0.012	ug/l	TM4/PM30
Pyrene #	<0.013	<0.013	0.170	<0.013	<0.013	<0.013					<0.013	ug/l	TM4/PM30
Benzo(a)anthracene #	<0.015	<0.015	0.150	<0.015	<0.015	<0.015					<0.015	ug/l	TM4/PM30
Chrysene #	<0.011	<0.011	0.140	<0.011	<0.011	<0.011					<0.011	ug/l	TM4/PM30
Benzo(bk)fluoranthene #	<0.018	<0.018	0.380	<0.018	<0.018	<0.018					<0.018	ug/l	TM4/PM30
Benzo(a)pyrene #	<0.016	<0.016	0.200	<0.016	<0.016	<0.016					<0.016	ug/l	TM4/PM30
Indeno(123cd)pyrene #	<0.011	<0.011	0.260	<0.011	<0.011	<0.011					<0.011	ug/l	TM4/PM30
Dibenzo(ah)anthracene #	<0.01	<0.01	0.03	<0.01	<0.01	<0.01					<0.01	ug/l	TM4/PM30
Benzo(ghi)perylene #	<0.011	<0.011	0.150	<0.011	<0.011	<0.011					<0.011	ug/l	TM4/PM30
PAH 16 Total #	<0.195	<0.195	1.990	<0.195	<0.195	<0.195					<0.195	ug/l	TM4/PM30
Benzo(b)fluoranthene	<0.01	<0.01	0.27	<0.01	<0.01	<0.01					<0.01	ug/l	TM4/PM30
Benzo(k)fluoranthene	<0.01	<0.01	0.11	<0.01	<0.01	<0.01					<0.01	ug/l	TM4/PM30
PAH Surrogate % Recovery	99	94	94	98	87	95					<0	%	TM4/PM30
EPH >C8-C10	<10	<10	<10	<10	<10	<10					<10	ug/l	TM5/PM30
EPH >C10-C20	<10	<10	<10	<10	<10	<10					<10	ug/l	TM5/PM30
EPH >C20-C30	<10	<10	<10	<10	<10	<10					<10	ug/l	TM5/PM30
EPH >C30-C40	<10	<10	<10	<10	<10	<10					<10	ug/l	TM5/PM30
EPH >C8-C40 #	<10	<10	<10	<10	<10	<10					<10	ug/l	TM5/PM30
GRO (>C6-C8)	<100	<100	<100	<100	<100	<100					<100	ug/l	TM36/PM12
GRO (>C8-C10)	<100	<100	<100	<100	<100	<100					<100	ug/l	TM36/PM12

$$H=H_2SO_4, Z=ZnAc, N=NaOH, HN=HNO_3$$

Please see attached notes for all abbreviations and acronyms

NOTES TO ACCOMPANY ALL SCHEDULES AND REPORTS

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SOILS

Please note we are only MCERTS accredited for sand, loam and clay and any other matrix is outside our scope of accreditation.

Where an MCERTS report has been requested, you will be notified within 48 hours of any samples that have been identified as being outside our MCERTS scope. As validation has been performed on clay, sand and loam, only samples that are predominantly these matrices, or combinations of them will be within our MCERTS scope. If samples are not one of a combination of the above matrices they will not be marked as MCERTS accredited.

It is assumed that you have taken representative samples on site and require analysis on a representative subsample. Stones will generally be included unless we are requested to remove them.

All samples will be discarded one month after the date of reporting, unless we are instructed to the contrary. If we are instructed to keep samples, a storage charge of £1 (1.5 Euros) per sample per month will be applied until we are asked to dispose of them.

If you have not already done so, please send us a purchase order if this is required by your company.

Where appropriate please make sure that our detection limits are suitable for your needs, if they are not, please notify us immediately.

All analysis is reported on a dry weight basis unless stated otherwise. Results are not surrogate corrected. Samples are dried at 35°C ±5°C unless otherwise stated. Moisture content for CEN Leachate tests are dried at 105°C ±5°C.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

WATERS

Please note we are not a Drinking Water Inspectorate (DWI) Approved Laboratory. It is important that detection limits are carefully considered when requesting water analysis.

UKAS accreditation applies to surface water and groundwater and one other matrix which is analysis specific, any other liquids are outside our scope of accreditation

As surface waters require different sample preparation to groundwaters the laboratory must be informed of the water type when submitting samples.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

DEVIATING SAMPLES

Samples must be received in a condition appropriate to the requested analyses. All samples should be submitted to the laboratory in suitable containers with sufficient ice packs to sustain an appropriate temperature for the requested analysis. If this is not the case you will be informed and any test results that may be compromised highlighted on your deviating samples report.

SURROGATES

Surrogate compounds are added during the preparation process to monitor recovery of analytes. However low recovery in soils is often due to peat, clay or other organic rich matrices. For waters this can be due to oxidants, surfactants, organic rich sediments or remediation fluids. Acceptable limits for most organic methods are 70 - 130% and for VOCs are 50 - 150%. When surrogate recoveries are outside the performance criteria but the associated AQC passes this is assumed to be due to matrix effect. Results are not surrogate corrected.

NOTE

Data is only accredited when all the requirements of our Quality System have been met. In certain circumstances where the requirements have not been met, the laboratory may issue the data in an interim report but will remove the accreditation, in this instance results should be considered indicative only. Where possible samples will be re-extracted and a final report issued with accredited results. Please do not hesitate to contact the laboratory if further details are required of the circumstances which have led to the removal of accreditation.

ABBREVIATIONS and ACRONYMS USED

#	UKAS accredited.
B	Indicates analyte found in associated method blank.
DR	Dilution required.
M	MCERTS accredited.
NA	Not applicable
NAD	No Asbestos Detected.
ND	None Detected (usually refers to VOC and/SVOC TICs).
NDP	No Determination Possible
SS	Calibrated against a single substance.
SV	Surrogate recovery outside performance criteria. This may be due to a matrix effect.
W	Results expressed on as received basis.
+	AQC failure, accreditation has been removed from this result, if appropriate, see 'Note' on previous page.
++	Result outside calibration range, results should be considered as indicative only and are not accredited.
*	Analysis subcontracted to a Jones Environmental approved laboratory.
CO	Suspected carry over
OC	Outside Calibration Range
NFD	No Fibres Detected

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[illegible]