

Appendix 4 - Soil Chemical Analysis Results



Jones Environmental Laboratory

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No.4225

Attention :	Huw Littler-Jones
Date :	21st February, 2013
Your reference :	E0500
Our reference :	Test Report 13/1504 Batch 1
Location :	GLAN GORS
Date samples received :	5th February, 2013
Status :	Final report
Issue :	1

Fifteen samples were received for analysis on 5th 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

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

Please see attached notes for all abbreviations and acronyms

Jones Environmental Laboratory

Client Name: E-Geo Solutions

Reference: E0500

Location: GLAN GORS

Contact: Huw Littler-Jones

JE Job No.: 13/1504

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

J E Sample No.	1-2	3-4	5-6	8-9	10-11	12,20	13,18-19	14-15	16-17	21	Please see attached notes for all abbreviations and acronyms		
Sample ID	BS1	BS1	BD1S	BS2	BD2S	BS3	BD2S	BS2	BD2S	BS3			
Depth	0.4	1.5	0.4	0.4	0.4	0.5	0.9	0.8	0.7	1.7			
COC No / misc													
Containers	J T	V	J T	J T	J T	J T	V J T	J T	J T	J			
Sample Date	05/02/2013	05/02/2013	05/02/2013	05/02/2013	05/02/2013	05/02/2013	05/02/2013	05/02/2013	05/02/2013	05/02/2013			
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil			
Batch Number	1	1	1	1	1	1	1	1	1	1			
Date of Receipt	05/02/2013	05/02/2013	05/02/2013	05/02/2013	05/02/2013	05/02/2013	05/02/2013	05/02/2013	05/02/2013	05/02/2013	LOD	Units	Method No.
TPH CWG													
Aliphatics													
>C5-C6 #	<0.1	-	-	<0.1	-	<0.1	-	-	-	-	<0.1	mg/kg	TM36/PM12
>C6-C8 #	0.2	-	-	<0.1	-	<0.1	-	-	-	-	<0.1	mg/kg	TM36/PM12
>C8-C10	0.1	-	-	<0.1	-	<0.1	-	-	-	-	<0.1	mg/kg	TM36/PM12
>C10-C12 #	<0.2	-	-	<0.2	-	<0.2	-	-	-	-	<0.2	mg/kg	TM5/PM16
>C12-C16 #	<4	-	-	<4	-	<4	-	-	-	-	<4	mg/kg	TM5/PM16
>C16-C21 #	<7	-	-	<7	-	<7	-	-	-	-	<7	mg/kg	TM5/PM16
>C21-C35 #	139	-	-	<7	-	<7	-	-	-	-	<7	mg/kg	TM5/PM16
Total aliphatics C5-35	139	-	-	<19	-	<19	-	-	-	-	<19	mg/kg	TM5/PM16/PM18
Aromatics													
>C5-EC7	<0.1	-	-	<0.1	-	<0.1	-	-	-	-	<0.1	mg/kg	TM36/PM12
>EC7-EC8	<0.1	-	-	<0.1	-	<0.1	-	-	-	-	<0.1	mg/kg	TM36/PM12
>EC8-EC10 #	<0.1	-	-	<0.1	-	<0.1	-	-	-	-	<0.1	mg/kg	TM36/PM12
>EC10-EC12 #	<0.2	-	-	<0.2	-	<0.2	-	-	-	-	<0.2	mg/kg	TM5/PM16
>EC12-EC16 #	<4	-	-	<4	-	<4	-	-	-	-	<4	mg/kg	TM5/PM16
>EC16-EC21 #	<7	-	-	<7	-	<7	-	-	-	-	<7	mg/kg	TM5/PM16
>EC21-EC35 #	195	-	-	<7	-	68	-	-	-	-	<7	mg/kg	TM5/PM16
Total aromatics C5-35	195	-	-	<19	-	68	-	-	-	-	<19	mg/kg	TM5/PM16/PM18
Total aliphatics and aromatics(C5-35)	334	-	-	<38	-	68	-	-	-	-	<38	mg/kg	TM5/PM16/PM18
GRO (>C6-C8) #	294	-	<100	<100	229	<100	-	<100	191	279	<100	ug/kg	TM36/PM12
GRO (>C8-C10) #	137	-	<100	<100	145	<100	-	169	184	2021	<100	ug/kg	TM36/PM12
GRO (>C6-C10) #	431	-	<100	<100	374	<100	-	169	375	2300	<100	ug/kg	TM36/PM12
MTBE #	<5	-	-	<5	-	<5	<5	-	-	-	<5	ug/kg	TM31/PM12
Benzene #	<5	-	-	<5	-	<5	<5	-	-	-	<5	ug/kg	TM31/PM12
Toluene #	19	-	-	<5	-	<5	<5	-	-	-	<5	ug/kg	TM31/PM12
Ethylbenzene #	<5	-	-	<5	-	<5	<5	-	-	-	<5	ug/kg	TM31/PM12
m/p-Xylene #	<5	-	-	<5	-	<5	<5	-	-	-	<5	ug/kg	TM31/PM12
o-Xylene #	<5	-	-	<5	-	<5	12	-	-	-	<5	ug/kg	TM31/PM12
PCB 28 #	-	-	-	-	-	-	<5	-	-	-	<5	ug/kg	TM17/PM8
PCB 52 #	-	-	-	-	-	-	<5	-	-	-	<5	ug/kg	TM17/PM8
PCB 101 #	-	-	-	-	-	-	<5	-	-	-	<5	ug/kg	TM17/PM8
PCB 118 #	-	-	-	-	-	-	<5	-	-	-	<5	ug/kg	TM17/PM8
PCB 138 #	-	-	-	-	-	-	<5	-	-	-	<5	ug/kg	TM17/PM8
PCB 153 #	-	-	-	-	-	-	<5	-	-	-	<5	ug/kg	TM17/PM8
PCB 180 #	-	-	-	-	-	-	<5	-	-	-	<5	ug/kg	TM17/PM8
Total 7 PCBs #	-	-	-	-	-	-	<35	-	-	-	<35	ug/kg	TM17/PM8
Phenol #	<0.01	-	<0.01	<0.01	<0.01	<0.01	-	<0.01	<0.01	<0.10	<0.01	mg/kg	TM26/PM21
Natural Moisture Content	23.7	-	7.0	12.0	20.0	18.0	-	21.8	48.1	115.9	<0.1	%	PM4/PM0

JE Job No.: 13/1504

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

Please see attached notes for all abbreviations and acronyms

JE Job No.: 13/1504

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

Please see attached notes for all abbreviations and acronyms

Jones Environmental Laboratory

Client Name: E-Geo Solutions

Report : Solid

Reference: E0500

Location: GLAN GORS

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

Contact: Huw Littler-Jones

JE Job No.: 13/1504

J E Sample No.	22-23	24-26	29-30								Please see attached notes for all abbreviations and acronyms		
Sample ID	BD3S	BD3S	BD3S										
Depth	0.4	0.5	0.9										
COC No / misc													
Containers	J T	V J T	J T										
Sample Date	05/02/2013	05/02/2013	05/02/2013										
Sample Type	Soil	Soil	Soil										
Batch Number	1	1	1										
Date of Receipt	05/02/2013	05/02/2013	05/02/2013								LOD	Units	Method No.
TPH CWG													
Aliphatics													
>C5-C6 #	-	-	-								<0.1	mg/kg	TM36/PM12
>C6-C8 #	-	-	-								<0.1	mg/kg	TM36/PM12
>C8-C10	-	-	-								<0.1	mg/kg	TM36/PM12
>C10-C12 #	-	-	-								<0.2	mg/kg	TM5/PM16
>C12-C16 #	-	-	-								<4	mg/kg	TM5/PM16
>C16-C21 #	-	-	-								<7	mg/kg	TM5/PM16
>C21-C35 #	-	-	-								<7	mg/kg	TM5/PM16
Total aliphatics C5-35	-	-	-								<19	mg/kg	TM5/PM16/PM21
Aromatics													
>C5-EC7	-	-	-								<0.1	mg/kg	TM36/PM12
>EC7-EC8	-	-	-								<0.1	mg/kg	TM36/PM12
>EC8-EC10 #	-	-	-								<0.1	mg/kg	TM36/PM12
>EC10-EC12 #	-	-	-								<0.2	mg/kg	TM5/PM16
>EC12-EC16 #	-	-	-								<4	mg/kg	TM5/PM16
>EC16-EC21 #	-	-	-								<7	mg/kg	TM5/PM16
>EC21-EC35 #	-	-	-								<7	mg/kg	TM5/PM16
Total aromatics C5-35	-	-	-								<19	mg/kg	TM5/PM16/PM21
Total aliphatics and aromatics(C5-35)	-	-	-								<38	mg/kg	TM5/PM16/PM21
GRO (>C6-C8) #	133	-	<100								<100	ug/kg	TM36/PM12
GRO (>C8-C10) #	122	-	<100								<100	ug/kg	TM36/PM12
GRO (>C6-C10) #	255	-	<100								<100	ug/kg	TM36/PM12
MTBE #	-	<5	-								<5	ug/kg	TM31/PM12
Benzene #	-	<5	-								<5	ug/kg	TM31/PM12
Toluene #	-	<5	-								<5	ug/kg	TM31/PM12
Ethylbenzene #	-	<5	-								<5	ug/kg	TM31/PM12
m/p-Xylene #	-	<5	-								<5	ug/kg	TM31/PM12
o-Xylene #	-	<5	-								<5	ug/kg	TM31/PM12
PCB 28 #	-	7	-								<5	ug/kg	TM17/PM8
PCB 52 #	-	7	-								<5	ug/kg	TM17/PM8
PCB 101 #	-	<5	-								<5	ug/kg	TM17/PM8
PCB 118 #	-	<5	-								<5	ug/kg	TM17/PM8
PCB 138 #	-	<5	-								<5	ug/kg	TM17/PM8
PCB 153 #	-	<5	-								<5	ug/kg	TM17/PM8
PCB 180 #	-	<5	-								<5	ug/kg	TM17/PM8
Total 7 PCBs #	-	<35	-								<35	ug/kg	TM17/PM8
Phenol #	<0.01	-	<0.01								<0.01	mg/kg	TM26/PM21
Natural Moisture Content	16.6	-	18.1								<0.1	%	PM4/PM0

JE Job No.: 13/1504

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

Please see attached notes for all abbreviations and acronyms

Please see attached notes for all abbreviations and acronyms										
J E Sample No.	22-23	24-26	29-30							
Sample ID	BD3S	BD3S	BD3S							
Depth	0.4	0.5	0.9							
COC No / misc										
Containers	J T	V J T	J T							
Sample Date	05/02/2013	05/02/2013	05/02/2013							
Sample Type	Soil	Soil	Soil							
Batch Number	1	1	1							
Date of Receipt	05/02/2013	05/02/2013	05/02/2013							
Sulphate as SO4 (2:1 Ext) #	-	-	-							
Total Cyanide #	<0.5	-	<0.5							
Total Organic Carbon #	-	4.6	-							
Organic Matter	-	-	-							
Sulphide	<10	-	<10							
ANC at pH4	-	0.51	-							
ANC at pH7	-	0.24	-							
Loss on Ignition #	-	8.3	-							
pH #	8.47	8.35	8.23							

Jones Environmental Laboratory

Client Name: E-Geo Solutions
Reference: E0500
Location: GLAN GORS
Contact: Huw Littler-Jones
JE Job No.: 13/1504

SVOC Report : Solid

J E Sample No.	3-4	27-28									Please see attached notes for all abbreviations and acronyms			
Sample ID	BS1	BD3S												
Depth	1.5	1.8												
COC No / misc														
Containers	V	V												
Sample Date	05/02/2013	05/02/2013												
Sample Type	Soil	Soil												
Batch Number	1	1									LOD	Units	Method No.	
Date of Receipt	05/02/2013	05/02/2013												
SVOC MS														
Phenols														
2-Chlorophenol	<10	<10									<10	ug/kg	TM16/PM8	
2-Methylphenol	<10	<10									<10	ug/kg	TM16/PM8	
2-Nitrophenol	<10	<10									<10	ug/kg	TM16/PM8	
2,4-Dichlorophenol	<10	<10									<10	ug/kg	TM16/PM8	
2,4-Dimethylphenol	<10	<10									<10	ug/kg	TM16/PM8	
2,4,5-Trichlorophenol	<10	<10									<10	ug/kg	TM16/PM8	
2,4,6-Trichlorophenol	<10	<10									<10	ug/kg	TM16/PM8	
4-Chloro-3-methylphenol	<10	<10									<10	ug/kg	TM16/PM8	
4-Methylphenol	83	<10									<10	ug/kg	TM16/PM8	
4-Nitrophenol	<10	<10									<10	ug/kg	TM16/PM8	
Pentachlorophenol	<10	<10									<10	ug/kg	TM16/PM8	
Phenol	<10	<10									<10	ug/kg	TM16/PM8	
PAHs														
2-Chloronaphthalene	<10	<10									<10	ug/kg	TM16/PM8	
2-Methylnaphthalene	21	<10									<10	ug/kg	TM16/PM8	
Naphthalene	25	<10									<10	ug/kg	TM16/PM8	
Acenaphthylene	<10	<10									<10	ug/kg	TM16/PM8	
Acenaphthene	<10	<10									<10	ug/kg	TM16/PM8	
Fluorene	<10	<10									<10	ug/kg	TM16/PM8	
Phenanthrene	29	<10									<10	ug/kg	TM16/PM8	
Anthracene	<10	<10									<10	ug/kg	TM16/PM8	
Fluoranthene	62	<10									<10	ug/kg	TM16/PM8	
Pyrene	50	<10									<10	ug/kg	TM16/PM8	
Benzo(a)anthracene	<10	<10									<10	ug/kg	TM16/PM8	
Chrysene	21	<10									<10	ug/kg	TM16/PM8	
Benzo(bk)fluoranthene	<10	<10									<10	ug/kg	TM16/PM8	
Benzo(a)pyrene	20	<10									<10	ug/kg	TM16/PM8	
Indeno(123cd)pyrene	<10	<10									<10	ug/kg	TM16/PM8	
Dibenzo(ah)anthracene	<10	<10									<10	ug/kg	TM16/PM8	
Benzo(ghi)perylene	<10	<10									<10	ug/kg	TM16/PM8	
Phthalates														
Bis(2-ethylhexyl) phthalate	<10	<10									<10	ug/kg	TM16/PM8	
Butylbenzyl phthalate	<10	<10									<10	ug/kg	TM16/PM8	
Di-n-butyl phthalate	<10	<10									<10	ug/kg	TM16/PM8	
Di-n-Octyl phthalate	<10	<10									<10	ug/kg	TM16/PM8	
Diethyl phthalate	<10	<10									<10	ug/kg	TM16/PM8	
Dimethyl phthalate	<10	<10									<10	ug/kg	TM16/PM8	
				</										

Client Name: E-Geo Solutions
Reference: E0500
Location: GLAN GORS
Contact: Huw Littler-Jones
JE Job No.: 13/1504

Reference: E0500

Location: GLAN GORS

Contact: Huw Littler-Jones

JE Job No.: 13/1504

Please see attached notes for all abbreviations and acronyms

Jones Environmental Laboratory

Client Name: E-Geo Solutions

VOC Report : Solid

Reference: E0500

Location: GLAN GORS

Contact: Huw Littler-Jones

JE Job No.: 13/1504

J E Sample No.	3-4	27-28									Please see attached notes for all abbreviations and acronyms		
Sample ID	BS1	BD3S											
Depth	1.5	1.8											
COC No / misc													
Containers	V	V											
Sample Date	05/02/2013	05/02/2013											
Sample Type	Soil	Soil											
Batch Number	1	1											
Date of Receipt	05/02/2013	05/02/2013									LOD	Units	Method No.
VOC MS													
Dichlorodifluoromethane	<2	<2									<2	ug/kg	TM15/PM10
Methyl Tertiary Butyl Ether #	<2	<2									<2	ug/kg	TM15/PM10
Chloromethane #	<3	<3									<3	ug/kg	TM15/PM10
Vinyl Chloride	<2	<2									<2	ug/kg	TM15/PM10
Bromomethane	<1	<1									<1	ug/kg	TM15/PM10
Chloroethane #	<2	<2									<2	ug/kg	TM15/PM10
Trichlorofluoromethane #	<2	<2									<2	ug/kg	TM15/PM10
1,1-Dichloroethene (1,1 DCE) #	<6	<6									<6	ug/kg	TM15/PM10
Dichloromethane (DCM) #	<7	<7									<7	ug/kg	TM15/PM10
trans-1-2-Dichloroethene #	<3	<3									<3	ug/kg	TM15/PM10
1,1-Dichloroethane #	<3	<3									<3	ug/kg	TM15/PM10
cis-1-2-Dichloroethene #	<3	<3									<3	ug/kg	TM15/PM10
2,2-Dichloropropane	<4	<4									<4	ug/kg	TM15/PM10
Bromochloromethane #	<3	<3									<3	ug/kg	TM15/PM10
Chloroform #	<3	<3									<3	ug/kg	TM15/PM10
1,1,1-Trichloroethane #	<3	<3									<3	ug/kg	TM15/PM10
1,1-Dichloropropene #	<3	<3									<3	ug/kg	TM15/PM10
Carbon tetrachloride #	<4	<4									<4	ug/kg	TM15/PM10
1,2-Dichloroethane #	<4	<4									<4	ug/kg	TM15/PM10
Benzene #	<3	<3									<3	ug/kg	TM15/PM10
Trichloroethene (TCE) #	<3	<3									<3	ug/kg	TM15/PM10
1,2-Dichloropropane #	<6	<6									<6	ug/kg	TM15/PM10
Dibromomethane #	<3	<3									<3	ug/kg	TM15/PM10
Bromodichloromethane #	<3	<3									<3	ug/kg	TM15/PM10
cis-1-3-Dichloropropene	<4	<4									<4	ug/kg	TM15/PM10
Toluene #	12	<3									<3	ug/kg	TM15/PM10
trans-1-3-Dichloropropene	<3	<3									<3	ug/kg	TM15/PM10
1,1,2-Trichloroethane #	<3	<3									<3	ug/kg	TM15/PM10
Tetrachloroethene (PCE) #	<3	<3									<3	ug/kg	TM15/PM10
1,3-Dichloropropane #	<3	<3									<3	ug/kg	TM15/PM10
Dibromochloromethane #	<3	<3									<3	ug/kg	TM15/PM10
1,2-Dibromoethane #	<3	<3									<3	ug/kg	TM15/PM10
Chlorobenzene #	<3	<3									<3	ug/kg	TM15/PM10
1,1,1,2-Tetrachloroethane	<3	<3									<3	ug/kg	TM15/PM10
Ethylbenzene #	<3	<3									<3	ug/kg	TM15/PM10
p/m-Xylene #	<6	<6									<6	ug/kg	TM15/PM10
o-Xylene #	<3	<3									<3	ug/kg	TM15/PM10
Styrene	<3	<3									<3	ug/kg	TM15/PM10
Bromoform #	<3	<3									<3	ug/kg	TM15/PM10
Isopropylbenzene #	<3	<3									<3	ug/kg	TM15/PM10
1,1,2,2-Tetrachloroethane #	<3	<3									<3	ug/kg	TM15/PM10
Bromobenzene	<2	<2									<2	ug/kg	TM15/PM10
1,2,3-Trichloropropane #	<4	<4									<4	ug/kg	TM15/PM10
Propylbenzene #	<4	<4									<4	ug/kg	TM15/PM10
2-Chlorotoluene	<3	<3									<3	ug/kg	TM15/PM10
1,3,5-Trimethylbenzene #	<3	<3									<3	ug/kg	TM15/PM10
4-Chlorotoluene	<3	<3									<3	ug/kg	TM15/PM10
tert-Butylbenzene #	<5	<5									<5	ug/kg	TM15/PM10
1,2,4-Trimethylbenzene #	<6	<6									<6	ug/kg	TM15/PM10
sec-Butylbenzene #	<4	<4									<4	ug/kg	TM15/PM10
4-Isopropyltoluene #	<4	<4									<4	ug/kg	TM15/PM10
1,3-Dichlorobenzene #	<4	<4									<4	ug/kg	TM15/PM10
1,4-Dichlorobenzene #	53	<4									<4	ug/kg	TM15/PM10
n-Butylbenzene #	<4	<4									<4	ug/kg	TM15/PM10
1,2-Dichlorobenzene #	<4	<4									<4	ug/kg	TM15/PM10
1,2-Dibromo-3-chloropropane #	<4	<4									<4	ug/kg	TM15/PM10
1,2,4-Trichlorobenzene #	<7	<7									<7	ug/kg	TM15/PM10
Hexachlorobutadiene #	<4	<4									<4	ug/kg	TM15/PM10
1,2,3-Trichlorobenzene #	<7	<7									<7	ug/kg	TM15/PM10
Surrogate Recovery Toluene D8	82	106									<0	%	TM15/PM10
Surrogate Recovery 4-Bromofluorobenzene	69	164									<0	%	TM15/PM10

Please include all sections of this report if it is reproduced

CEN 2 BATCH LEACHATE RESULTS

Mass of sample taken (kg) = 0.221		Moisture Content Ratio (%) = 26.1							
Mass of dry sample (kg) = 0.175		Dry Matter Content Ratio (%) = 79.3							
Particle Size <4mm = >95%									
JEFL Job No	13/1504			Landfill Waste Acceptance Criteria Limits					
Sample No	19								
Client Sample No	BD2S			Inert Waste Landfill	Stable Non-reactive Hazardous Waste in Non-Hazardous Landfill	Hazardous Waste Landfill			
Depth/Other	0.9								
Sample Date	05/02/2013								
Batch No	1								
Solid Waste Analysis									
Total Organic Carbon (%)	4.4						3	5	6
Loss on Ignition (%)	5.8						-	-	10
Sum of BTEX (mg/kg)	<0.025						6	-	-
Sum of 7 PCBs (mg/kg)	<0.035						1	-	-
Mineral Oil (mg/kg)	<30						500	-	-
PAH Sum of 17(mg/kg)	25.46			100	-	-			
pH (pH Units)	8.04			-	>6	-			
ANC to pH 7 (mol/kg)	0.29			-	to be evaluated	to be evaluated			
ANC to pH 4 (mol/kg)	0.44			-	to be evaluated	to be evaluated			
Eluate Analysis	Conc ⁿ in 2:1 eluate	Conc ⁿ in 8:1 eluate	2:1 conc ⁿ leached	Cumulative 10:1 conc ⁿ leached	Limit values for compliance leaching test using BS EN 12457-3 at L/S 10 l/kg				
	C ₂	C ₈	A ₂	A ₂₋₁₀					
		mg/l		mg/kg		mg/kg			
Arsenic	0.0068	<0.0025	0.014	<0.025	0.5	2	25		
Barium	0.060	0.043	0.120	0.45	20	100	300		
Cadmium	<0.0005	<0.0005	<0.001	<0.005	0.04	1	5		
Chromium	<0.0015	<0.0015	<0.003	<0.015	0.5	10	70		
Copper	<0.007	<0.007	<0.014	<0.07	2	50	100		
Mercury	<0.0006	<0.0006	<0.0012	<0.006	0.01	0.2	2		
Molybdenum	0.080	0.014	0.160	0.23	0.5	10	30		
Nickel	<0.002	<0.002	<0.004	<0.02	0.4	10	40		
Lead	<0.005	<0.005	<0.01	<0.05	0.5	10	50		
Antimony	0.003	<0.002	0.006	<0.02	0.06	0.7	5		
Selenium	<0.003	<0.003	<0.006	<0.03	0.1	0.5	7		
Zinc	0.004	0.005	0.008	0.05	4	50	200		
Chloride	4.1	0.8	8.2	12	800	15000	25000		
Fluoride	0.7	0.5	1.4	5	10	150	500		
Sulphate as SO4	88.07	7.17	176.0	178.0	1000	20000	50000		
Total Dissolved Solids	300	56	599	881	4000	60000	100000		
Phenol	<0.01	<0.01	<0.02	<0.1	1	-	-		
Dissolved Organic Carbon	13	4	26	52	500	800	1000		
Leachate Information									
Date Prepared	12/02/2013	12/02/2013							
pH (pH Units)	8.21	8.21							
Conductivity (µS/cm)	454	142							
Temperature (°C)	17.4	17.6							
Volume Leachant (Litres)	0.304	1.4							
Volume of Eluate VE1 (Litres)	0.230								

CEN 2 BATCH LEACHATE RESULTS

Mass of sample taken (kg) =		0.214		Moisture Content Ratio (%) =		21.9	
Mass of dry sample (kg) =		0.175		Dry Matter Content Ratio (%) =		82.0	
Particle Size <4mm =		>95%					
JEFL Job No		13/1504			Landfill Waste Acceptance Criteria Limits		
Sample No		26					
Client Sample No		BD3S			Inert Waste Landfill	Stable Non-reactive Hazardous Waste in Non-Hazardous Landfill	Hazardous Waste Landfill
Depth/Other		0.5					
Sample Date		05/02/2013					
Batch No		1					
Solid Waste Analysis							
Total Organic Carbon (%)	4.6				3	5	6
Loss on Ignition (%)	8.3				-	-	10
Sum of BTEX (mg/kg)	<0.025				6	-	-
Sum of 7 PCBs (mg/kg)	<0.035				1	-	-
Mineral Oil (mg/kg)	<30				500	-	-
PAH Sum of 17(mg/kg)	5.95				100	-	-
pH (pH Units)	8.35				-	>6	-
ANC to pH 7 (mol/kg)	0.24				-	to be evaluated	to be evaluated
ANC to pH 4 (mol/kg)	0.51				-	to be evaluated	to be evaluated
Eluate Analysis	Conc ⁿ in 2:1 eluate				Conc ⁿ in 8:1 eluate	2:1 conc ⁿ leached	Cumulative 10:1 conc ⁿ leached
	C ₂	C ₈	A ₂	A ₂₋₁₀			
		mg/l		mg/kg		mg/kg	
Arsenic	0.0047	<0.0025	0.009	<0.025	0.5	2	25
Barium	0.047	0.041	0.094	0.42	20	100	300
Cadmium	<0.0005	<0.0005	<0.001	<0.005	0.04	1	5
Chromium	0.0023	0.0028	0.005	0.027	0.5	10	70
Copper	<0.007	<0.007	<0.014	<0.07	2	50	100
Mercury	<0.0006	<0.0006	<0.0012	<0.006	0.01	0.2	2
Molybdenum	0.006	0.005	0.012	0.05	0.5	10	30
Nickel	<0.002	<0.002	<0.004	<0.02	0.4	10	40
Lead	0.008	0.007	0.02	0.07	0.5	10	50
Antimony	<0.002	<0.002	<0.004	<0.02	0.06	0.7	5
Selenium	<0.003	<0.003	<0.006	<0.03	0.1	0.5	7
Zinc	0.004	0.004	0.008	0.04	4	50	200
Chloride	1.1	<0.3	2.2	<3	800	15000	25000
Fluoride	1.3	1.2	2.6	12	10	150	500
Sulphate as SO4	12.07	6.81	24.2	76.8	1000	20000	50000
Total Dissolved Solids	92	<35	184	<350	4000	60000	100000
Phenol	<0.01	<0.01	<0.02	<0.1	1	-	-
Dissolved Organic Carbon	12	12	24	120	500	800	1000
Leachate Information							
Date Prepared	12/02/2013	12/02/2013					
pH (pH Units)	8.17	8.16					
Conductivity (µS/cm)	203	121					
Temperature (°C)	15.9	17.3					
Volume Leachant (Litres)	0.312	1.4					
Volume of Eluate VE1 (Litres)	0.290						

Asbestos Analysis

Client Name: E-Geo Solutions

Reference: E0500

Location: GLAN GORS

Contact: Huw Littler-Jones

Note:

Analysis was carried out in accordance with our documented in-house methods PM042 and TM065 and HSG 248 by Stereo and Polarised Light Microscopy using Dispersion Staining Techniques and is covered by our UKAS accreditation. Samples are retained for not less than 6 months from the date of analysis unless specifically requested.

Opinions lie outside the scope of our UKAS accreditation.

Where the sample is not taken by a Jones Environmental Laboratory consultant, Jones Environmental Laboratory cannot be responsible for inaccurate or unrepresentative sampling.

Signed on behalf of Jones Environmental Laboratory:

[Signature]

Gemma Newsome
Asbestos Team Leader

[illegible]

NOTES TO ACCOMPANY ALL SCHEDULES AND REPORTS

JE Job No.: 13/1504

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 13/1504

Test Method No.	Description	Prep Method No. (if appropriate)	Description	UKAS	MCERTS (soils only)	Analysis done on As Received (AR) or Air Dried (AD)	Solid Results expressed on Dry/Wet basis
PM4	Moisture Content	PM0	No Preparation				
TM4	16 PAH by GC-MS, modified USEPA 8270	PM8	End Over End extraction			AR	DRY
TM4	16 PAH by GC-MS, modified USEPA 8270	PM8	End Over End extraction	Yes		AR	DRY
TM4	16 PAH by GC-MS, modified USEPA 8270	PM8	End Over End extraction			AR	
TM5	EPH by GC-FID, modified USEPA 8015	PM16	Aliphatic/Aromatic fractionation			AR	DRY
TM5	EPH by GC-FID, modified USEPA 8015	PM16	Aliphatic/Aromatic fractionation	Yes		AR	DRY
TM5	EPH by GC-FID, modified USEPA 8015	PM8	End Over End extraction	Yes		AR	DRY
TM5/TM36	TPH CWG by GC-FID	PM12/PM16	CWG GC-FID			AR	DRY
TM15	VOC - Target by GC-MS, modified USEPA 8260	PM10	VOC GC-MS			AR	DRY
TM15	VOC - Target by GC-MS, modified USEPA 8260	PM10	VOC GC-MS	Yes		AR	DRY
TM15	VOC - Target by GC-MS, modified USEPA 8260	PM10	VOC GC-MS			AR	
TM16	SVOC - Target by GC-MS, modified USEPA 8270	PM8	End Over End extraction			AR	DRY
TM17	PCB 7 Congeners and WHO 12 PCBs by GC-MS	PM8	End Over End extraction	Yes		AR	DRY
TM20	TDS, TSS and TS - gravimetric	PM0	No Preparation			AR	DRY
TM21	TOC and TC by Combustion	PM24	Eltra preparation			AD	DRY
TM21	TOC and TC by Combustion	PM24	Eltra preparation	Yes		AD	DRY
TM22	Loss on Ignition (LOI) - gravimetric	PM0	No Preparation	Yes		AD	DRY
TM26	Phenols by HPLC	PM0	No Preparation			AR	DRY
TM26	Phenols by HPLC	PM21	Methanol : NaOH extraction	Yes		AR	DRY
TM27	SO ₄ ,Cl,NO ₃ ,NO ₂ ,F,PO ₄ by Dionex	PM0	No Preparation			AR	DRY
TM30	Metals by ICP-OES	PM14	Metals by ICP (Waters)			AR	DRY
TM30	Metals by ICP-OES	PM15	Aqua Regia extraction (Soils)	Yes		AD	DRY
TM31	BTEX/MTBE by GC-FID, modified USEPA 8015	PM12	GRO GC-FID			AR	DRY
TM31	BTEX/MTBE by GC-FID, modified USEPA 8015	PM12	GRO GC-FID	Yes		AR	DRY
TM36	GRO by Headspace GC-FID	PM12	GRO GC-FID			AR	DRY
TM36	GRO by Headspace GC-FID	PM12	GRO GC-FID	Yes		AR	DRY
TM38	SO ₄ ,Cl,NO ₃ ,NO ₂ ,F,PO ₄ , Amm N ₂ ,ThioCN, Hex Cr by Aquakem	PM0	No Preparation			AR	DRY
TM38	SO ₄ ,Cl,NO ₃ ,NO ₂ ,F,PO ₄ , Amm N ₂ ,ThioCN, Hex Cr by Aquakem	PM20	1:2 soil to water extraction	Yes		AD	DRY
TM50	Total Sulphate by ICP-OES	PM15	Aqua Regia extraction (Soils)			AD	DRY
TM60	TOC/DOC by NDIR	PM0	No Preparation			AR	DRY
TM65	Asbestos Bulk Identification	PM42	Screening of soils for fibres			AR	
TM65	Asbestos Bulk Identification	PM42	Screening of soils for fibres	Yes		AR	
TM73	pH in by Metrohm	PM11	1:2.5 soil/water extraction	Yes		AR	WET
TM77	ANC at pH4 and pH7 by Metrohm	PM0	No Preparation			AR	WET
TM89	Cyanide by FIA	PM45	Cyanide & Thiocyanate prep for soils	Yes		AR	DRY
TM106	Sulphide by CFA	PM45	Cyanide & Thiocyanate prep for soils			AR	DRY
NONE	No Method Code	PM18	CEN PR12457-3 10:1 2 batch leach			AR	DRY
NONE	No Method Code	PM4	Moisture Content			AR	



Jones Environmental Laboratory

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No.4225

Attention : Huw Littler-Jones
Date : 18th March, 2013
Your reference : EO500
Our reference : Test Report 13/1754 Batch 1
Location : GLAN GORS
Date samples received : 12th February, 2013
Status : Final report
Issue : 2

Seven samples were received for analysis on 12th 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

Jones Environmental Laboratory

Client Name: E-Geo Solutions

Reference: EO500

Location: GLAN GORS

Contact: Huw Littler-Jones

JE Job No.: 13/1754

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

J E Sample No.	1	2	3	4	5	6	7-8				Please see attached notes for all abbreviations and acronyms		
Sample ID	CBR1	TPSS3	TPSS2	TPSS2	TPSS1	TPSS4	TPSS4						
Depth	0.40	0.50	0.40	1.00	0.50	0.50	1.20						
COC No / misc													
Containers	J	J	J	J	J	J	V J						
Sample Date	12/02/2013	12/02/2013	12/02/2013	12/02/2013	12/02/2013	12/02/2013	12/02/2013						
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil						
Batch Number	1	1	1	1	1	1	1						
Date of Receipt	12/02/2013	12/02/2013	12/02/2013	12/02/2013	12/02/2013	12/02/2013	12/02/2013				LOD	Units	Method No.
TPH CWG													
Aliphatics													
>C5-C6 #	-	<0.1	-	-	<0.1	-	-				<0.1	mg/kg	TM36/PM12
>C6-C8 #	-	<0.1	-	-	<0.1	-	-				<0.1	mg/kg	TM36/PM12
>C8-C10	-	<0.1	-	-	<0.1	-	-				<0.1	mg/kg	TM36/PM12
>C10-C12 #	-	<0.2	-	-	<0.2	-	-				<0.2	mg/kg	TM5/PM16
>C12-C16 #	-	<4	-	-	<4	-	-				<4	mg/kg	TM5/PM16
>C16-C21 #	-	<7	-	-	<7	-	-				<7	mg/kg	TM5/PM16
>C21-C35 #	-	41	-	-	17	-	-				<7	mg/kg	TM5/PM16
Total aliphatics C5-35	-	41	-	-	<19	-	-				<19	mg/kg	TM5/PM16/PM15
Aromatics													
>C5-EC7	-	<0.1	-	-	<0.1	-	-				<0.1	mg/kg	TM36/PM12
>EC7-EC8	-	<0.1	-	-	<0.1	-	-				<0.1	mg/kg	TM36/PM12
>EC8-EC10 #	-	<0.1	-	-	<0.1	-	-				<0.1	mg/kg	TM36/PM12
>EC10-EC12 #	-	<0.2	-	-	<0.2	-	-				<0.2	mg/kg	TM5/PM16
>EC12-EC16 #	-	<4	-	-	<4	-	-				<4	mg/kg	TM5/PM16
>EC16-EC21 #	-	<7	-	-	<7	-	-				<7	mg/kg	TM5/PM16
>EC21-EC35 #	-	<7	-	-	107	-	-				<7	mg/kg	TM5/PM16
Total aromatics C5-35	-	<19	-	-	107	-	-				<19	mg/kg	TM5/PM16/PM15
Total aliphatics and aromatics(C5-35)	-	41	-	-	107	-	-				<38	mg/kg	TM5/PM16/PM15
GRO (>C6-C8) #	<100	<100	<100	-	<100	<100	-				<100	ug/kg	TM36/PM12
GRO (>C8-C10) #	<100	<100	<100	-	<100	<100	-				<100	ug/kg	TM36/PM12
GRO (>C6-C10) #	<100	<100	<100	-	<100	<100	-				<100	ug/kg	TM36/PM12
MTBE #	-	<5	-	-	<5	-	-				<5	ug/kg	TM31/PM12
Benzene #	-	<5	-	-	<5	-	-				<5	ug/kg	TM31/PM12
Toluene #	-	<5	-	-	<5	-	-				<5	ug/kg	TM31/PM12
Ethylbenzene #	-	<5	-	-	<5	-	-				<5	ug/kg	TM31/PM12
m/p-Xylene #	-	<5	-	-	<5	-	-				<5	ug/kg	TM31/PM12
o-Xylene #	-	<5	-	-	<5	-	-				<5	ug/kg	TM31/PM12
Total Phenols HPLC	<1.50	<0.15	<0.15	-	0.55	<0.15	-				<0.15	mg/kg	TM26/PM21
Natural Moisture Content	19.4	16.6	NDP	-	24.9	NDP	-				<0.1	%	PM4/PM0
Sulphate as SO4 (2:1 Ext) #	-	-	-	0.2131	0.0678	-	0.0123				<0.0015	g/l	TM38/PM20
Total Cyanide #	<0.5	<0.5	1.1	-	1.5	1.5	-				<0.5	mg/kg	TM89/PM45
Organic Matter	-	7.1	-	-	15.9	-	-				<0.2	%	TM21/PM24
Sulphide	<10	<10	<10	-	<10	<10	-				<10	mg/kg	TM106/PM45
Asbestos PCOM Quantification*	-	-	<0.001	-	-	<0.001	-				<0.001	mass %	Subcontracted

Client Name: E-Geo Solutions
Reference: EO500
Location: GLAN GORS
Contact: Huw Littler-Jones
JE Job No.: 13/1754

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

[illegible]

Client Name: E-Geo Solutions

SVOC Report : Solid

Reference: EO500

Location: GLAN GORS

Contact: Huw Littler-Jones

JE Job No.: 13/1754

J E Sample No.	7-8										Please see attached notes for all abbreviations and acronyms		
Sample ID	TPSS4												
Depth	1.20												
COC No / misc													
Containers	V J												
Sample Date	12/02/2013												
Sample Type	Soil												
Batch Number	1												
Date of Receipt	12/02/2013										LOD	Units	Method No.
SVOC MS													
Phenols													
2-Chlorophenol	<10										<10	ug/kg	TM16/PM8
2-Methylphenol	<10										<10	ug/kg	TM16/PM8
2-Nitrophenol	<10										<10	ug/kg	TM16/PM8
2,4-Dichlorophenol	<10										<10	ug/kg	TM16/PM8
2,4-Dimethylphenol	<10										<10	ug/kg	TM16/PM8
2,4,5-Trichlorophenol	<10										<10	ug/kg	TM16/PM8
2,4,6-Trichlorophenol	<10										<10	ug/kg	TM16/PM8
4-Chloro-3-methylphenol	<10										<10	ug/kg	TM16/PM8
4-Methylphenol	<10										<10	ug/kg	TM16/PM8
4-Nitrophenol	<10										<10	ug/kg	TM16/PM8
Pentachlorophenol	<10										<10	ug/kg	TM16/PM8
Phenol	<10										<10	ug/kg	TM16/PM8
PAHs													
2-Chloronaphthalene	<10										<10	ug/kg	TM16/PM8
2-Methylnaphthalene	<10										<10	ug/kg	TM16/PM8
Naphthalene	<10										<10	ug/kg	TM16/PM8
Acenaphthylene	<10										<10	ug/kg	TM16/PM8
Acenaphthene	<10										<10	ug/kg	TM16/PM8
Fluorene	<10										<10	ug/kg	TM16/PM8
Phenanthrene	<10										<10	ug/kg	TM16/PM8
Anthracene	<10										<10	ug/kg	TM16/PM8
Fluoranthene	<10										<10	ug/kg	TM16/PM8
Pyrene	<10										<10	ug/kg	TM16/PM8
Benzo(a)anthracene	<10										<10	ug/kg	TM16/PM8
Chrysene	<10										<10	ug/kg	TM16/PM8
Benzo(bk)fluoranthene	<10										<10	ug/kg	TM16/PM8
Benzo(a)pyrene	<10										<10	ug/kg	TM16/PM8
Indeno(123cd)pyrene	<10										<10	ug/kg	TM16/PM8
Dibenzo(ah)anthracene	<10										<10	ug/kg	TM16/PM8
Benzo(ghi)perylene	<10										<10	ug/kg	TM16/PM8
Phthalates													
Bis(2-ethylhexyl) phthalate	<10										<10	ug/kg	TM16/PM8
Butylbenzyl phthalate	<10										<10	ug/kg	TM16/PM8
Di-n-butyl phthalate	<10										<10	ug/kg	TM16/PM8
Di-n-Octyl phthalate	<10										<10	ug/kg	TM16/PM8
Diethyl phthalate	<10										<10	ug/kg	TM16/PM8
Dimethyl phthalate	<10										<10	ug/kg	TM16/PM8

Client Name: E-Geo Solutions
Reference: EO500
Location: GLAN GORS
Contact: Huw Littler-Jones
JE Job No.: 13/1754

Reference: EO500

Location: GLAN GORS

Contact: Huw Littler-Jones

JE Job No.: 13/1754

Please see attached notes for all abbreviations and acronyms

Jones Environmental Laboratory

Client Name: E-Geo Solutions
Reference: EO500
Location: GLAN GORS
Contact: Huw Littler-Jones
JE Job No.: 13/1754

VOC Report : Solid

J E Sample No.	7-8										Please see attached notes for all abbreviations and acronyms				
Sample ID	TPSS4														
Depth	1.20														
COC No / misc															
Containers	V J														
Sample Date	12/02/2013														
Sample Type	Soil														
Batch Number	1														
Date of Receipt	12/02/2013										LOD	Units	Method No.		
VOC MS															
Dichlorodifluoromethane	<2										<2	ug/kg	TM15/PM10		
Methyl Tertiary Butyl Ether #	<2										<2	ug/kg	TM15/PM10		
Chloromethane #	<3										<3	ug/kg	TM15/PM10		
Vinyl Chloride	<2										<2	ug/kg	TM15/PM10		
Bromomethane	<1										<1	ug/kg	TM15/PM10		
Chloroethane #	<2										<2	ug/kg	TM15/PM10		
Trichlorofluoromethane #	<2										<2	ug/kg	TM15/PM10		
1,1-Dichloroethene (1,1 DCE) #	<6										<6	ug/kg	TM15/PM10		
Dichloromethane (DCM) #	<7										<7	ug/kg	TM15/PM10		
trans-1-2-Dichloroethene #	<3										<3	ug/kg	TM15/PM10		
1,1-Dichloroethane #	<3										<3	ug/kg	TM15/PM10		
cis-1-2-Dichloroethene #	<3										<3	ug/kg	TM15/PM10		
2,2-Dichloropropane	<4										<4	ug/kg	TM15/PM10		
Bromochloromethane #	<3										<3	ug/kg	TM15/PM10		
Chloroform #	<3										<3	ug/kg	TM15/PM10		
1,1,1-Trichloroethane #	<3										<3	ug/kg	TM15/PM10		
1,1-Dichloropropene #	<3										<3	ug/kg	TM15/PM10		
Carbon tetrachloride #	<4										<4	ug/kg	TM15/PM10		
1,2-Dichloroethane #	<4										<4	ug/kg	TM15/PM10		
Benzene #	<3										<3	ug/kg	TM15/PM10		
Trichloroethene (TCE) #	<3										<3	ug/kg	TM15/PM10		
1,2-Dichloropropane #	<6										<6	ug/kg	TM15/PM10		
Dibromomethane #	<3										<3	ug/kg	TM15/PM10		
Bromodichloromethane #	<3										<3	ug/kg	TM15/PM10		
cis-1-3-Dichloropropene	<4										<4	ug/kg	TM15/PM10		
Toluene #	<3										<3	ug/kg	TM15/PM10		
trans-1-3-Dichloropropene	<3										<3	ug/kg	TM15/PM10		
1,1,2-Trichloroethane #	<3										<3	ug/kg	TM15/PM10		
Tetrachloroethene (PCE) #	<3										<3	ug/kg	TM15/PM10		
1,3-Dichloropropane #	<3										<3	ug/kg	TM15/PM10		
Dibromochloromethane #	<3										<3	ug/kg	TM15/PM10		
1,2-Dibromoethane #	<3										<3	ug/kg	TM15/PM10		
Chlorobenzene #	<3										<3	ug/kg	TM15/PM10		
1,1,1,2-Tetrachloroethane	<3										<3	ug/kg	TM15/PM10		
Ethylbenzene #	<3										<3	ug/kg	TM15/PM10		
p/m-Xylene #	<6										<6	ug/kg	TM15/PM10		
o-Xylene #	<3										<3	ug/kg	TM15/PM10		
Styrene	<3										<3	ug/kg	TM15/PM10		
Bromoform #	<3										<3	ug/kg	TM15/PM10		
Isopropylbenzene #	<3										<3	ug/kg	TM15/PM10		
1,1,2,2-Tetrachloroethane #	<3										<3	ug/kg	TM15/PM10		
Bromobenzene	<2										<2	ug/kg	TM15/PM10		
1,2,3-Trichloropropane #	<4										<4	ug/kg	TM15/PM10		
Propylbenzene #	<4										<4	ug/kg	TM15/PM10		
2-Chlorotoluene	<3										<3	ug/kg	TM15/PM10		
1,3,5-Trimethylbenzene #	<3										<3	ug/kg	TM15/PM10		
4-Chlorotoluene	<3										<3	ug/kg	TM15/PM10		
tert-Butylbenzene #	<5										<5	ug/kg	TM15/PM10		
1,2,4-Trimethylbenzene #	<6										<6	ug/kg	TM15/PM10		
sec-Butylbenzene #	<4										<4	ug/kg	TM15/PM10		
4-Isopropyltoluene #	<4										<4	ug/kg	TM15/PM10		
1,3-Dichlorobenzene #	<4										<4	ug/kg	TM15/PM10		
1,4-Dichlorobenzene #	<4										<4	ug/kg	TM15/PM10		
n-Butylbenzene #	<4										<4	ug/kg	TM15/PM10		
1,2-Dichlorobenzene #	<4										<4	ug/kg	TM15/PM10		
1,2-Dibromo-3-chloropropane #	<4										<4	ug/kg	TM15/PM10		
1,2,4-Trichlorobenzene #	<7										<7	ug/kg	TM15/PM10		
Hexachlorobutadiene	<4										<4	ug/kg	TM15/PM10		
1,2,3-Trichlorobenzene #	<7										<7	ug/kg	TM15/PM10		
Surrogate Recovery Toluene D8	67										<0	%	TM15/PM10		
Surrogate Recovery 4-Bromofluorobenzene	112										<0	%	TM15/PM10		

Asbestos Analysis

Contact: Huw Littler-Jones

Analysis was carried out in accordance with our documented in-house methods PM042 and TM065 and HSG 248 by Stereo and Polarised Light Microscopy using Dispersion Staining Techniques and is covered by our UKAS accreditation. Samples are retained for not less than 6 months from the date of analysis unless specifically requested.

Where the sample is not taken by a Jones Environmental Laboratory consultant, Jones Environmental Laboratory cannot be responsible for inaccurate or unrepresentative sampling.

Baker

[illegible]

Jones Environmental Laboratory

Client Name: E-Geo Solutions

Reference: EO500

Location: GLAN GORS

Contact: Huw Littler-Jones

NDP Reason Report

Matrix : Solid

[illegible]

NOTES TO ACCOMPANY ALL SCHEDULES AND REPORTS

JE Job No.: 13/1754

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 13/1754

[illegible]