



Jones Environmental Laboratory

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

Ground Gas Solutions
Williams House
Manchester Science Park
Lloyd St North
Manchester
M15 6SE

Tel: +44 (0) 1244 833780

Fax: +44 (0) 1244 833781



No.4225

Attention : Richard Lavery
Date : 22nd July, 2013
Your reference : GGS222-06
Our reference : Test Report 13/6393 Batch 1
Location : BALCOMBE
Date samples received : 12th July, 2013
Status : Final report
Issue : 1

One sample was received for analysis on 12th July, 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:

Kim Mills
Project Co-ordinator

Bob Millward B.Sc FRSC
Principal Chemist

Jones Environmental Laboratory

Client Name: Ground Gas Solutions
Reference: GGS222-06
Location: BALCOMBE
Contact: Richard Lavery
JE Job No.: 13/6393

Report : Liquid

Liquids/products: V=40ml vial, G=glass bottle, P=plastic bottle
 H=H₂SO₄, Z=ZnAc, N=NaOH, HN=HN₃

J E Sample No.	1-6														LOD	Units	Method No.
Sample ID	BALMW01																
Depth																	
COC No / misc																	
Containers	V HCL P BOD G																
Sample Date	11/07/2013																
Sample Type	Ground Water																
Batch Number	1																
Date of Receipt	12/07/2013																
Dissolved Arsenic #	<2.5														<2.5	ug/l	TM30/PM14
Dissolved Barium #	637														<3	ug/l	TM30/PM14
Dissolved Boron	847														<12	ug/l	TM30/PM14
Dissolved Cadmium #	<0.5														<0.5	ug/l	TM30/PM14
Dissolved Calcium #	8.1														<0.2	mg/l	TM30/PM14
Total Dissolved Chromium #	2.7														<1.5	ug/l	TM30/PM14
Dissolved Copper #	<7														<7	ug/l	TM30/PM14
Total Dissolved Iron #	631														<20	ug/l	TM30/PM14
Dissolved Lead #	<5														<5	ug/l	TM30/PM14
Dissolved Magnesium #	1.1														<0.1	mg/l	TM30/PM14
Dissolved Mercury #	<1														<1	ug/l	TM30/PM14
Dissolved Nickel #	<2														<2	ug/l	TM30/PM14
Dissolved Potassium #	2.3														<0.1	mg/l	TM30/PM14
Dissolved Selenium #	<3														<3	ug/l	TM30/PM14
Dissolved Sodium #	310.7														<0.1	mg/l	TM30/PM14
Dissolved Strontium	149														<5	ug/l	TM30/PM14
Dissolved Vanadium #	3.8														<1.5	ug/l	TM30/PM14
Dissolved Zinc #	12														<3	ug/l	TM30/PM14
TPH CWG																	
Aliphatics																	
>C5-C6 #	<5														<5	ug/l	TM36/PM12
>C6-C8 #	<5														<5	ug/l	TM36/PM12
>C8-C10 #	<5														<5	ug/l	TM36/PM12
>C10-C12 #	<5														<5	ug/l	TM5/PM30
>C12-C16 #	<10														<10	ug/l	TM5/PM30
>C16-C21 #	<10														<10	ug/l	TM5/PM30
>C21-C35 #	<10														<10	ug/l	TM5/PM30
Total aliphatics C5-35 #	<10														<10	ug/l	TM5/TM36/PM30
Aromatics																	
>C5-EC7 #	<5														<5	ug/l	TM36/PM12
>EC7-EC8 #	<5														<5	ug/l	TM36/PM12
>EC8-EC10 #	<5														<5	ug/l	TM36/PM12
>EC10-EC12 #	<5														<5	ug/l	TM5/PM30
>EC12-EC16 #	<10														<10	ug/l	TM5/PM30
>EC16-EC21 #	<10														<10	ug/l	TM5/PM30
>EC21-EC35 #	<10														<10	ug/l	TM5/PM30
Total aromatics C5-35 #	<10														<10	ug/l	TM5/PM30
Total aliphatics and aromatics(C5-35) #	<10														<10	ug/l	TM5/TM36/PM30
MTBE #	<5														<5	ug/l	TM36/PM12
Benzene #	<5														<5	ug/l	TM36/PM12
Toluene #	<5														<5	ug/l	TM36/PM12
Ethylbenzene #	<5														<5	ug/l	TM36/PM12

Please see attached notes for all abbreviations and acronyms

NOTES TO ACCOMPANY ALL SCHEDULES AND REPORTS

JE Job No.: 13/6393

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.

Where a CEN 10:1 ZERO Headspace VOC test has been carried out, a 10:1 ratio of water to wet (as received) soil has been used.

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

JE Job No 13/6393

Test Method No.	Description	Prep Method No. (if appropriate)	Description	UKAS	MCERTS (soils only)	Analysis done on As Received (AR) or Air Dried (AD)	Reported on dry weight basis
TM0	Not available	PM0	No Preparation				
TM5	EPH by GC-FID, modified USEPA 8015	PM30	Magnetic stirrer extraction	Yes			
TM5/TM36	TPH CWG by GC-FID	PM30	Magnetic stirrer extraction	Yes			
TM20	TDS, TSS and TS - gravimetric	PM0	No Preparation	Yes			
TM27	SO4,Cl,NO3,NO2,F,PO4 by Dionex	PM0	No Preparation				
TM30	Metals by ICP-OES	PM14	Metals by ICP (Waters)				
TM30	Metals by ICP-OES	PM14	Metals by ICP (Waters)	Yes			
TM36	GRO by Headspace GC-FID	PM12	GRO GC-FID	Yes			
TM38	SO4,Cl,NO3,NO2,F,PO4, Amm N2,ThioCN, Hex Cr by Aquakem	PM0	No Preparation	Yes			
TM57	COD by Colourimetric measurement	PM0	No Preparation	Yes			
TM58	BOD using DO meter	PM0	No Preparation	Yes			
TM64	Salinity by meter	PM0	No Preparation				
TM73	pH in by Metrohm	PM0	No Preparation	Yes			
TM75	Alkalinity by Metrohm	PM0	No Preparation	Yes			
TM76	Electrical Conductivity by Metrohm	PM0	No Preparation	Yes			