

Our Ref: EXR/241708 (Ver. 1)

Your Ref:

May 31, 2017



Environmental Chemistry

ESG

Bretby Business Park

Ashby Road

Burton-on-Trent

Staffordshire

DE15 0YZ

Telephone: 01283 554400

Facsimile: 01283 554422

A Morris
White Rock Geo Environmental Ltd
EnviroArm Limited
597 Walsall Road
Great Wyrley
Walsall
Staffordshire
WS6 6AE

For the attention of A Morris

Dear A Morris

Sample Analysis - Parrys Quarry

Samples from the above site have been analysed in accordance with the schedule supplied.
The sample details and the results of analyses for these samples are given in the appended report.

An invoice for this work will follow under a separate cover.

Please be aware that our policy for the retention of paper based laboratory records and analysis reports is 6 years.

The work was carried out in accordance with Environmental Scientifics Group Ltd (Multi-Sector Services) Standard Terms and Conditions of Contract.

If I can be of any further assistance please do not hesitate to contact me.

Yours sincerely

for ESG

J Chislett
Project Co-ordinator
01283 554458

TEST REPORT

Report No. EXR/241708 (Ver. 1)

White Rock Geo Environmental Ltd
EnviroArm Limited
597 Walsall Road
Great Wyrley
Walsall
Staffordshire
WS6 6AE

Site: Parrys Quarry

The 14 samples described in this report were registered for analysis by ESG on 20-May-2017. This report supersedes any versions previously issued by the laboratory.

The analysis was completed by: 31-May-2017

The following tables are contained in this report:

Table 1 Main Analysis Results (Pages 2 to 3)
Analytical and Deviating Sample Overview (Pages 4 to 5)
Table of Additional Report Notes (Page 6)
Table of Method Descriptions (Page 7)
Table of Report Notes (Page 8)
Table of Sample Descriptions (Appendix A Page 1 of 1)

On behalf of
ESG :
Tim Barnes



Operations Director
Energy & Waste Services


Date of Issue: 31-May-2017


Tests marked '^' have been subcontracted to another laboratory.

Where samples have been flagged as deviant on the Analytical and Deviating Sample Overview, for any reason, the data may not be representative of the sample at the point of sampling and the validity of the data may be affected.

ESG accepts no responsibility for any sampling not carried out by our personnel.

Where individual results are flagged see report notes for status.

Units : Method Codes : Method Reporting Limits :			pH units	uS/cm	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	
			WSLM3	WSLM2	WSLM12	KONENS	ICPWATVAR	ICPWATVAR	ICPWATVAR	ICPWATVAR	ICPWATVAR	ICPMSW	ICPMSW	ICPMSW	ICPMSW	ICPMSW	ICPMSW	ICPMSW	ICPMSW
				100		1	3	1	1	1	1	0.001	0.001	0.0001	0.001	0.001	0.002	0.01	
LAB ID Number EX/	Client Sample Description	Sample Date	pH units w	Conductivity uS/cm @ 25C w	Total Alkalinity as CaCO3 w	Chloride as Cl w	Total Sulphur as SO4 (Dissolved) a	Calcium as Ca (Dissolved) a	Magnesium as Mg (Dissolved) a	Sodium as Na (Dissolved) a	Potassium as K (Dissolved) a	Nickel as Ni (Dissolved)	Chromium as Cr (Dissolved)	Cadmium as Cd (Dissolved)	Copper as Cu (Dissolved)	Lead as Pb (Dissolved)	Zinc as Zn (Dissolved)	Manganese as MN (Dissolved) a	
1797204	BHA	18-May-17	6.6	832	156	76	133	73	33	42	11	0.011	0.002	0.0001	0.002	<0.001	0.02	2	
1797205	BHB	18-May-17	7.2	215	32	12	39	16	3	20	1	0.001	<0.001	<0.0001	0.002	<0.001	0.003	<0.01	
1797206	BHC	18-May-17	7.4	846	226	80	67	65	25	79	6	0.002	0.003	<0.0001	0.001	<0.001	0.006	0.1	
1797207	BHC1	18-May-17	7.2	895	195	36	211	104	36	41	4	0.002	0.002	0.0002	<0.001	<0.001	0.047	0.83	
1797208	BHD	18-May-17	7.4	852	230	37	154	113	36	29	3	0.002	0.003	0.0002	0.004	<0.001	0.012	0.68	
1797209	BHE	18-May-17	7.4	680	175	53	72	49	18	59	16	0.005	0.003	<0.0001	0.005	<0.001	0.064	0.14	
1797210	BHF	18-May-17	7.5	574	208	21	50	67	29	17	2	0.002	0.003	<0.0001	0.006	0.002	0.016	0.33	
1797211	BHF1	18-May-17	6.6	655	102	40	154	75	23	26	3	0.028	0.002	0.0001	0.01	<0.001	0.012	3	
1797212	BHG	18-May-17	7.2	824	207	32	172	108	35	27	3	0.006	0.003	<0.0001	0.002	<0.001	0.006	1.08	
1797213	BHH	18-May-17	7.2	2270	359	264	421	252	58	167	20	0.02	0.006	<0.0001	0.006	<0.001	0.006	5.9	
1797214	BHI	18-May-17	6.8	2510	391	430	229	187	79	241	18	0.017	0.007	0.0003	0.001	<0.001	0.005	2.16	
1797215	BHJ	18-May-17	6.8	1450	248	123	354	151	56	95	12	0.024	0.004	0.0001	0.002	<0.001	0.279	5.68	
1797216	BHK	18-May-17	6.9	2460	291	252	749	208	117	198	11	0.013	0.005	<0.0001	0.002	<0.001	0.017	6.02	
1797217	BHK1	18-May-17	7	1030	306	60	170	122	53	37	6	0.008	0.004	<0.0001	<0.001	<0.001	0.021	2.45	
<div></div> <div>Bretby Business Park, Ashby Road</div> <div>Burton-on-Trent, Staffordshire, DE15 0YZ</div> <div>Tel +44 (0) 1283 554400</div> <div>Fax +44 (0) 1283 554422</div>			Client Name		White Rock Geo Environmental Ltd						Sample Analysis								
			Contact		A Morris														
			Parrys Quarry						Date Printed		31-May-2017								
									Report Number		EXR/241708								
Table Number		1																	

Units : Method Codes : Method Reporting Limits :			mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l										
			ICPWATVAR	ICPMSW	KONENS	SFAPI	WSLM20	WSLM13	SFAPI										
			0.01	0.0001	0.01	0.02	1	0.2	0.05										
LAB ID Number EX/	Client Sample Description	Sample Date	Iron as Fe (Dissolved) a	Mercury as Hg (Dissolved)	Ammoniacal Nitrogen as N	Cyanide (Total) as CN	Biochemical Oxygen Demand w	Total Organic Carbon w	Phenol Index as C6H5OH										
1797204	BHA	18-May-17	0.14	<0.0001	0.4	<0.02	<1.0	2.5	<0.05										
1797205	BHB	18-May-17	0.04	<0.0001	0.01	<0.02	<2.0	1.5	<0.05										
1797206	BHC	18-May-17	0.12	<0.0001	0.10	<0.02	<2.0	0.91	<0.05										
1797207	BHC1	18-May-17	0.15	<0.0001	0.07	<0.02	<2.0	1.6	<0.05										
1797208	BHD	18-May-17	0.16	<0.0001	0.02	<0.02	<2.0	1.8	<0.05										
1797209	BHE	18-May-17	0.09	<0.0001	<0.01	<0.02	<1.0	1.3	<0.05										
1797210	BHF	18-May-17	0.12	<0.0001	0.03	<0.02	<1.0	0.70	<0.05										
1797211	BHF1	18-May-17	0.13	<0.0001	0.02	<0.02	<1.0	1.0	<0.05										
1797212	BHG	18-May-17	0.15	<0.0001	0.06	<0.02	<1.0	0.98	<0.05										
1797213	BHH	18-May-17	0.23	<0.0001	2.0	<0.02	<2.0	8.8	<0.05										
1797214	BHI	18-May-17	0.47	<0.0001	0.4	<0.02	<2.0	5.8	<0.05										
1797215	BHJ	18-May-17	0.18	<0.0001	0.4	<0.02	<2.0	1.7	<0.05										
1797216	BHK	18-May-17	0.2	<0.0001	0.3	<0.02	<1.0	1.6	<0.05										
1797217	BHK1	18-May-17	0.22	<0.0001	0.15	<0.02	<2.0	1.3	<0.05										
<div></div> <div>Bretby Business Park, Ashby Road</div> <div>Burton-on-Trent, Staffordshire, DE15 0YZ</div> <div>Tel +44 (0) 1283 554400</div> <div>Fax +44 (0) 1283 554422</div>			Client Name		White Rock Geo Environmental Ltd						Sample Analysis								
			Contact		A Morris						Date Printed		31-May-2017						
			Parrys Quarry								Report Number		EXR/241708						
											Table Number		1						

Sample Analysis

ESG Environmental Chemistry
Analytical and Deviating Sample Overview

W241708

Customer White Rock Geo Environmental Ltd
Site Parrys Quarry
Report No W241708

Consignment No W120707
Date Logged 20-May-2017
In-House Report Due 30-May-2017

Please note the results for any subcontracted analysis (identified with a '^') is likely to take up to an additional five working

SFAP1	Cyanide (Total) as CN SFA																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														
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Note: We will endeavour to prioritise samples to complete analysis within holding time; however any delay could result in samples becoming deviant whilst being processed in the laboratory.

If sampling dates are missing or matrices unclassified then results will not be ISO 17025 accredited. Please contact us as soon as possible to provide missing information in order to reinstate accreditation.

Deviating Sample Key	
A	The sample was received in an inappropriate container for this analysis
B	The sample was received without the correct preservation for this analysis
C	Headspace present in the sample container
D	The sampling date was not supplied so holding time may be compromised - applicable to all analysis
E	Sample processing did not commence within the appropriate holding time
F	Sample processing did not commence within the appropriate handling time
Requested Analysis Key	
	Analysis Required
	Analysis dependant upon trigger result - Note: due date may be affected if triggered
	No analysis scheduled
^	Analysis Subcontracted - Note: due date may vary

The integrity of data for samples/analysis that have been categorised as Deviating may be compromised. Data may not be representative of the sample at the time of sampling.
Where individual results are flagged see report notes for status.

Customer White Rock Geo Environmental Ltd
Site Parrys Quarry
Report No W241708

Consignment No W120707
Date Logged 20-May-2017
In-House Report Due 30-May-2017

Please note the results for any subcontracted analysis (identified with a '^') is likely to take up to an additional five working

ID Number	Description	MethodID		SFAPI	WSLM12	WSLM13	WSLM2	WSLM20	WSLM3
		Matrix Type	Sampled	Phenol Index SFA	Total Alkalinity as CaCO3	Total Organic Carbon	Conductivity uS/cm @ 25C	Biochemical Oxygen Demand	pH units
EX/1797204	BHA	Unclassified	18/05/17					E	
EX/1797205	BHB	Unclassified	18/05/17					E	
EX/1797206	BHC	Unclassified	18/05/17					E	
EX/1797207	BHC1	Unclassified	18/05/17					E	
EX/1797208	BHD	Unclassified	18/05/17					E	
EX/1797209	BHE	Unclassified	18/05/17					E	
EX/1797210	BHF	Unclassified	18/05/17					E	
EX/1797211	BHF1	Unclassified	18/05/17					E	
EX/1797212	BHG	Unclassified	18/05/17					E	
EX/1797213	BHH	Unclassified	18/05/17					E	
EX/1797214	BHI	Unclassified	18/05/17					E	
EX/1797215	BHJ	Unclassified	18/05/17					E	
EX/1797216	BHK	Unclassified	18/05/17					E	
EX/1797217	BHK1	Unclassified	18/05/17					E	

Note: We will endeavour to prioritise samples to complete analysis within holding time; however any delay could result in samples becoming deviant whilst being processed in the laboratory.

If sampling dates are missing or matrices unclassified then results will not be ISO 17025 accredited. Please contact us as soon as possible to provide missing information in order to reinstate accreditation.

Deviating Sample Key

A	The sample was received in an inappropriate container for this analysis
B	The sample was received without the correct preservation for this analysis
C	Headspace present in the sample container
D	The sampling date was not supplied so holding time may be compromised - applicable to all analysis
E	Sample processing did not commence within the appropriate holding time
F	Sample processing did not commence within the appropriate handling time

Requested Analysis Key

	Analysis Required
	Analysis dependant upon trigger result - Note: due date may be affected if triggered
	No analysis scheduled
^	Analysis Subcontracted - Note: due date may vary

The integrity of data for samples/analysis that have been categorised as Deviating may be compromised. Data may not be representative of the sample at the time of sampling. Where individual results are flagged see report notes for status.

Report Number : W/EXR/241708

Additional Report Notes

Method Code	Sample ID	The following information should be taken into consideration when using the data contained within this report
WSLM20		The BOD results for all samples on this job were associated with Quality Control failure regarding blank samples. This failure may suggest that there is slight contamination within the process, which may result in slightly elevated results. The results have been provided for information purposes because the labile nature of the samples mean that repeat analysis could not be undertaken.
WSLM20	EX/1797205, 206, 207, 208, 213, 214, 215 + 217	Based on the sample history/appearance/smell, a dilution was applied prior to testing. Unfortunately the result is below our lower range for this sample volume, therefore the detection limit has been raised.

Method Descriptions

Matrix	MethodID	Analysis Basis	Method Description
Water	ICPMSW	As Received	Direct quantitative determination of Metals in water samples using ICPMS
Water	ICPWATVAR	As Received	Direct determination of Metals and Sulphate in water samples using ICPOES
Water	KONENS	As Received	Direct analysis using discrete colorimetric analysis
Water	SFAPI	As Received	Segmented flow analysis with colorimetric detection
Water	WSLM12	As Received	Titration with Sulphuric Acid to required pH
Water	WSLM13	As Received	Instrumental analysis using acid/persulphate digestion and non-dispersive IR detection
Water	WSLM2	As Received	Determination of the Electrical Conductivity ($\mu\text{S}/\text{cm}$) by electrical conductivity probe.
Water	WSLM20	As Received	Determination of Biological Oxygen Demand using 5 day incubation and dissolved oxygen probe
Water	WSLM3	As Received	Determination of the pH of water samples by pH probe

Where individual results are flagged see report notes for status.

Report Notes

Generic Notes

Soil/Solid Analysis

Unless stated otherwise,

- Results expressed as mg/kg have been calculated on the basis indicated in the Method Description table.
All results on MCERTS reports are reported on a 105°C dry weight basis with the exception of pH and conductivity.
- Sulphate analysis not conducted in accordance with BS1377
- Water Soluble Sulphate is on a 2:1 water:soil extract

Waters Analysis

Unless stated otherwise results are expressed as mg/l

Nil: Where "Nil" has been entered against Total Alkalinity or Total Acidity this indicates that a measurement was not required due to the inherent pH of the sample.

Oil analysis specific

Unless stated otherwise,

- Results are expressed as mg/kg
- SG is expressed as g/cm³@ 15°C

Gas (Tedlar bag) Analysis

Unless stated otherwise, results are expressed as ug/l

Asbestos Analysis

CH Denotes Chrysotile

TR Denotes Tremolite

CR Denotes Crocidolite

AC Denotes Actinolite

AM Denotes Amosite

AN Denotes Anthophyllite

NAIIS No Asbestos Identified in Sample

NADIS No Asbestos Detected In Sample

Symbol Reference

^ Sub-contracted analysis.

\$\$ Unable to analyse due to the nature of the sample

¶ Samples submitted for this analyte were not preserved on site in accordance with laboratory protocols.

This may have resulted in deterioration of the sample(s) during transit to the laboratory.

Consequently the reported data may not represent the concentration of the target analyte present in the sample at the time of sampling

¥ Results for guidance only due to possible interference

& Blank corrected result

I.S Insufficient sample to complete requested analysis

I.S(g) Insufficient sample to re-analyse, results for guidance only

Intf Unable to analyse due to interferences

N.D Not determined

N.Det Not detected

N.F No Flow

NS Information Not Supplied

Req Analysis requested, see attached sheets for results

▯ Raised detection limit due to nature of the sample

* All accreditation has been removed by the laboratory for this result

‡ MCERTS accreditation has been removed for this result

§ accreditation has been removed for this result as it is a non-accredited matrix

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 further details are required of the circumstances which have led to the removal of accreditation then please do not hesitate to contact the laboratory.

Sample Descriptions

Client : White Rock Geo Environmental Ltd
Site : Parrys Quarry
Report Number : W24_1708

[illegible]