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SAMPLE DESCRIPTIONS

MCERTS (Soils):

Soil descriptions are only intended to provide a log of sample matrices with respect to MCERTS validation.
They are not intended as full geological descriptions.
MCERTS accreditation applies for sand, clay and loam/topsoil, or combinations of these whether these are derived from naturally occurring soils or from made ground, as long as these materials constitute the major part of the sample.
Other materials such as concrete, gravel and brick are not accredited if they comprise the major part of the sample.

Lab number	Sample id	Depth (m)	Description	Moisture (%)
39022-1	Area 1 TP 101	1.90	Mudstone (Clay)	10.7
39022-2	Area 1 TP 101	4.60	Mudstone (Clay)	12.4
39022-3	Area 1 TP 106	0.50	Mudstone (Clay)	9.7
39022-4	Area 1 TP 106	3.00	Clay	13.1
39022-5	Area 1 TP 115	0.60	Sandy Clay	12.2
39022-6	Area 1 TP 115	6.30	Loamy Clay	13.2
39022-7	Area 1 TP 125	1.80	Loamy Clay	13.8
39022-8	Area 1 TP 125	2.50	Clay	16.7

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SOILS

Lab number			39022-1	39022-2	39022-3	39022-4	39022-5	39022-6
Sample id			Area 1 TP 101	Area 1 TP 101	Area 1 TP 106	Area 1 TP 106	Area 1 TP 115	Area 1 TP 115
Depth (m)			1.90	4.60	0.50	3.00	0.60	6.30
Test	**Method**	**Units**						
Arsenic (total)	CE054 M	mg/kg	17	24	21	7.4	11	20
Cadmium (total)	CE054 M	mg/kg	0.5	0.5	0.6	0.7	0.9	0.6
Chromium (total)	CE054 M	mg/kg	19	18	17	24	26	17
Copper (total)	CE054 M	mg/kg	41	45	38	27	31	50
Lead (total)	CE054 M	mg/kg	30	26	26	17	18	86
Mercury (total)	CE054	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Nickel (total)	CE054 M	mg/kg	20	20	32	42	50	32
Selenium (total)	CE054 M	mg/kg	1.1	1.1	1.5	0.9	1.1	1.1
Zinc (total)	CE054 M	mg/kg	85	74	77	75	85	87
pH	CE004 M	units	3.5	3.6	7.5	7.1	6.3	7.2
Sulphate (2:1 water soluble)	CE049 U	mg/l	765	-	-	-	-	-
Magnesium (2:1 water soluble)	CE056 U	mg/l	71	-	-	-	-	-
Sulphate (total)	CE010 M	mg/kg	5754	4807	4947	700	840	3103
Sulphur (total)	CE061	mg/kg	3998	-	-	-	-	-
Sulphide	CE079	mg/kg	<10	<10	<10	<10	<10	<10
Cyanide (total)	CE077	mg/kg	<2	<2	<2	<2	<2	<2
Phenols (total)	CE078	mg/kg	<0.5	<0.5	1.0	0.7	<0.5	<0.5
Organic matter content	CE005 M	% w/w	3.64	4.38	3.52	1.69	2.34	3.05
Toluene extractable matter	CE031 U	mg/kg	240	240	310	210	200	320
PAH								
PAH (total)	CE087	mg/kg	<5	<5	<5	<5	<5	<5
TPH								
TPH Aromatic EC5-EC7	CE068	mg/kg	-	-	-	<0.01	-	<0.01
TPH Aromatic EC7-EC8	CE068	mg/kg	-	-	-	<0.01	-	<0.01
TPH Aromatic EC8-EC10	CE068	mg/kg	-	-	-	<0.01	-	<0.01
TPH Aromatic EC10-EC12	CE068	mg/kg	-	-	-	<1	-	<1
TPH Aromatic EC12-EC16	CE068	mg/kg	-	-	-	<1	-	<1
TPH Aromatic EC16-EC21	CE068	mg/kg	-	-	-	<1	-	<1
TPH Aromatic EC21-EC35	CE068	mg/kg	-	-	-	<1	-	<1
TPH Aliphatic EC5-EC6	CE068	mg/kg	-	-	-	<0.1	-	<0.1
TPH Aliphatic EC6-EC8	CE068	mg/kg	-	-	-	<0.1	-	<0.1
TPH Aliphatic EC8-EC10	CE068	mg/kg	-	-	-	<0.1	-	<0.1
TPH Aliphatic EC10-EC12	CE068	mg/kg	-	-	-	<1	-	3
TPH Aliphatic EC12-EC16	CE068	mg/kg	-	-	-	<1	-	11
TPH Aliphatic EC16-EC21	CE068	mg/kg	-	-	-	1	-	20
TPH Aliphatic EC21-EC35	CE068	mg/kg	-	-	-	9	-	38
Subcontracted analysis								
Asbestos	$	-	-	-	-	NAF	-	-

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SOILS

Lab number			39022-7	39022-8
Sample id			Area 1 TP 125	Area 1 TP 125
Depth (m)			1.80	2.50
Test	**Method**	**Units**		
Arsenic (total)	CE054 M	mg/kg	16	11
Cadmium (total)	CE054 M	mg/kg	0.5	0.6
Chromium (total)	CE054 M	mg/kg	18	27
Copper (total)	CE054 M	mg/kg	39	28
Lead (total)	CE054 M	mg/kg	20	20
Mercury (total)	CE054	mg/kg	<0.5	<0.5
Nickel (total)	CE054 M	mg/kg	21	52
Selenium (total)	CE054 M	mg/kg	0.9	0.7
Zinc (total)	CE054 M	mg/kg	60	95
pH	CE004 M	units	4.2	6.3
Sulphate (2:1 water soluble)	CE049 U	mg/l	715	-
Magnesium (2:1 water soluble)	CE056 U	mg/l	78	-
Sulphate (total)	CE010 M	mg/kg	6133	132
Sulphur (total)	CE061	mg/kg	2815	-
Sulphide	CE079	mg/kg	<10	<10
Cyanide (total)	CE077	mg/kg	<2	<2
Phenols (total)	CE078	mg/kg	<0.5	<0.5
Organic matter content	CE005 M	% w/w	3.50	1.05
Toluene extractable matter	CE031 U	mg/kg	160	110
PAH				
PAH (total)	CE087	mg/kg	<5	<5
TPH				
TPH Aromatic EC5-EC7	CE068	mg/kg	-	-
TPH Aromatic EC7-EC8	CE068	mg/kg	-	-
TPH Aromatic EC8-EC10	CE068	mg/kg	-	-
TPH Aromatic EC10-EC12	CE068	mg/kg	-	-
TPH Aromatic EC12-EC16	CE068	mg/kg	-	-
TPH Aromatic EC16-EC21	CE068	mg/kg	-	-
TPH Aromatic EC21-EC35	CE068	mg/kg	-	-
TPH Aliphatic EC5-EC6	CE068	mg/kg	-	-
TPH Aliphatic EC6-EC8	CE068	mg/kg	-	-
TPH Aliphatic EC8-EC10	CE068	mg/kg	-	-
TPH Aliphatic EC10-EC12	CE068	mg/kg	-	-
TPH Aliphatic EC12-EC16	CE068	mg/kg	-	-
TPH Aliphatic EC16-EC21	CE068	mg/kg	-	-
TPH Aliphatic EC21-EC35	CE068	mg/kg	-	-
Subcontracted analysis				
Asbestos	$	-	NAF	-

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LEACHATES

Lab number			39022-1L
Sample id			Area 1 TP 101
Depth (m)			1.90
Test	**Method**	**Units**	
Arsenic	CE055	mg/l	<0.001
Boron	CE063	mg/l	<0.03
Cadmium	CE055 U	mg/l	0.002
Chromium	CE055 U	mg/l	<0.003
Copper	CE055 U	mg/l	0.030
Lead	CE055 U	mg/l	<0.009
Mercury	CE055	mg/l	<0.001
Nickel	CE055 U	mg/l	0.153
Selenium	CE055	mg/l	<0.001
Zinc	CE055 U	mg/l	0.284
pH	CE004	units	3.8
Sulphate	CE049 U	mg/l	221
Sulphide	CE079	mg/l	<0.1
Cyanide (total)	CE077	mg/l	<0.02
Phenols (total)	CE073	mg/l	<0.0005
PAHs			
PAH (total)	CE087	mg/l	<0.0001
TPH			
TPH (C10-C40)	CE052	mg/l	<0.01

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METHOD DETAILS

METHOD	SOILS	METHOD SUMMARY	STATUS	LOD	UNITS
CE054	Arsenic (total)	Aqua regia digest, ICP-OES	M	1	mg/kg
CE054	Cadmium (total)	Aqua regia digest, ICP-OES	M	0.2	mg/kg
CE054	Chromium (total)	Aqua regia digest, ICP-OES	M	1	mg/kg
CE054	Copper (total)	Aqua regia digest, ICP-OES	M	1	mg/kg
CE054	Lead (total)	Aqua regia digest, ICP-OES	M	1	mg/kg
CE054	Mercury (total)	Aqua regia digest, ICP-OES		0.5	mg/kg
CE054	Nickel (total)	Aqua regia digest, ICP-OES	M	1	mg/kg
CE054	Selenium (total)	Aqua regia digest, ICP-OES	M	0.3	mg/kg
CE054	Zinc (total)	Aqua regia digest, ICP-OES	M	3	mg/kg
CE004	pH	BS 1377, pH Meter	M	0.1	units
CE049	Sulphate (2:1 water soluble)	Aqueous extraction, IC-COND	U	10	mg/l
CE056	Magnesium (2:1 water soluble)	Aqueous extraction, ICP-OES	U	0.03	mg/l
CE010	Sulphate (total)	Acid extraction, Gravimetry	M	100	mg/kg
CE061	Sulphur (total)	Acid extraction, ICP-OES		100	mg/kg
CE079	Sulphide	Extraction, Continuous Flow Colorimetry		10	mg/kg
CE077	Cyanide (total)	Extraction, Continuous Flow Colorimetry		2	mg/kg
CE078	Phenols (total)	Extraction, Continuous Flow Colorimetry		0.5	mg/kg
CE005	Organic matter content	BS 1377, Colorimetry	M	0.01	% w/w
CE031	Toluene extractable matter	Solvent extraction, Gravimetry	U	50	mg/kg
CE087	PAH (total)	Solvent extraction, GC-MS		5	mg/kg
$	Asbestos (qualitative)	HSG 248, Microscopy	U	-	-

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METHOD DETAILS

METHOD	LEACHATES	METHOD SUMMARY	STATUS	LOD	UNITS
CE055	Arsenic	ICP-OES		0.001	mg/l
CE063	Boron	ICP-OES		0.03	mg/l
CE055	Cadmium	ICP-OES	U	0.001	mg/l
CE055	Chromium	ICP-OES	U	0.003	mg/l
CE055	Copper	ICP-OES	U	0.004	mg/l
CE055	Lead	ICP-OES	U	0.009	mg/l
CE055	Mercury	ICP-OES		0.001	mg/l
CE055	Nickel	ICP-OES	U	0.003	mg/l
CE055	Selenium	ICP-OES		0.001	mg/l
CE055	Zinc	ICP-OES	U	0.02	mg/l
CE004	pH	BS 1377, pH Meter		0.1	units
CE049	Sulphate	Ion Chromatography	U	10	mg/l
CE079	Sulphide	Continuous Flow Colorimetry		0.1	mg/l
CE077	Cyanide (total)	Continuous Flow Colorimetry		0.02	mg/l
CE073	Phenols (total)	HPLC		0.0005	mg/l
CE087	PAH (EPA 16)	Solvent extraction, GC-MS		0.0001	mg/l
CE087	PAH (total)	Solvent extraction, GC-MS		0.0001	mg/l
CE052	TPH (C10-C40)	Solvent extraction, GC-FID		0.01	mg/l

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ANALYTICAL TEST REPORT

Contract no: SDA/39023(1)

Contract name: North Gawber Colliery Site - Area 2

Client reference: -

Clients name: Scott Doherty Associates

Clients address: Consett Business Park
Consett
Co Durham
DH8 6BP

Date received: 23 April 2009

Date started: 07 May 2009

Date of issue: 16 June 2009

This is a supplementary report to report number SDA/39023 issued 18 May 2009.

Notes:
Opinions and interpretations expressed herein are outside the UKAS accreditation scope.
Unless otherwise stated, Chemtech Environmental Ltd were not responsible for sampling.
Methods, procedures and performance data are available on request.
Results reported herein relate only to the material supplied to the laboratory.
All results are reported on a dry basis. Samples dried at no more than 30°C in a drying cabinet.
Analytical results are exclusive of stones.
This report shall not be reproduced except in full, withour prior written approval.
Samples will be disposed of 8 weeks from initial receipt unless otherwise instructed.

Key:
U UKAS accredited test
M MCERTS & UKAS accredited test
$ Test carried out by an approved subcontractor
NAF Non asbestos fibres

Approved by: K Campbell

Karan Campbell Director

John Campbell Director

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SAMPLE DESCRIPTIONS

MCERTS (Soils):

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Other materials such as concrete, gravel and brick are not accredited if they comprise the major part of the sample.

Lab number	Sample id	Depth (m)	Description	Moisture (%)
39023-1	Area 2 107	3.40	Sandy Clay	18.4
39023-2	Area 2 108	0.50	Gravelly Sand	18.3
39023-3	Area 2 109	0.60	Mudstone (Clay)	8.8
39023-4	Area 2 109	2.80	Mudstone (Clay)	11.5
39023-5	Area 2 109	5.30	Loamy Clay	30.0
39023-6	Area 2 116	1.80	Gravelly Sandy Clay	13.3
39023-7	Area 2 116	3.60	Gravelly Sandy Clay	16.4
39023-8	Area 2 117	1.20	Clay Loam	19.4
39023-9	Area 2 117	2.20	Clay	24.6
39023-10	Area 2 118	0.50	Ashy Sand	10.0
39023-11	Area 2 118	2.30	Clay	17.4
39023-12	Area 2 118	5.00	Clay	13.2
39023-13	Area 2 119	0.50	Clay	16.0
39023-14	Area 2 119	1.50	Clay	16.2
39023-15	Area 2 119	5.50	Clay	18.8
39023-16	Area 2 127	1.80	Mudstone (Clay)	16.3
39023-17	Area 2 134	0.40	Clay Loam	15.4
39023-18	Area 2 134	2.00	Clay	15.1
39023-19	Area 2 135	1.20	Ashy Clay	26.1
39023-20	Area 2 135	3.80	Clay	20.6

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SOILS

Lab number			39023-1	39023-2	39023-3	39023-4	39023-5	39023-6
Sample id			Area 2	Area 2	Area 2	Area 2	Area 2	Area 2
			107	108	109	109	109	116
Depth (m)			3.40	0.50	0.60	2.80	5.30	1.80
Test	**Method**	**Units**						
Arsenic (total)	CE054 M	mg/kg	41	37	50	24	42	64
Cadmium (total)	CE054 M	mg/kg	0.9	0.6	0.5	2.0	0.9	0.8
Chromium (total)	CE054 M	mg/kg	24	10	24	21	24	20
Copper (total)	CE054 M	mg/kg	25	62	2.6	29	142	63
Lead (total)	CE054 M	mg/kg	56	21	18	25	260	35
Mercury (total)	CE054	mg/kg	<0.5	<0.5	<0.5	0.9	1.0	<0.5
Nickel (total)	CE054 M	mg/kg	36	27	37	54	41	31
Selenium (total)	CE054 M	mg/kg	0.9	1.7	0.8	1.8	2.3	1.6
Zinc (total)	CE054 M	mg/kg	63	31	96	109	182	78
pH	CE004 M	units	7.1	7.0	5.5	5.3	7.6	7.6
Sulphate (2:1 water soluble)	CE049 U	mg/l	-	-	-	-	-	-
Magnesium (2:1 water soluble)	CE056 U	mg/l	-	-	-	-	-	-
Sulphate (total)	CE010 M	mg/kg	4297	181	255	790	338	181
Sulphur (total)	CE061	mg/kg	-	-	-	-	-	-
Sulphide	CE079	mg/kg	<10	<10	<10	<10	<10	<10
Cyanide (total)	CE077	mg/kg	<2	<2	<2	<2	<2	<2
Phenols (total)	CE078	mg/kg	<0.5	<0.5	<0.5	0.6	<0.5	<0.5
Organic matter content	CE005 M	% w/w	0.95	9.52	0.85	4.51	8.86	2.33
Toluene extractable matter	CE031 U	mg/kg	<50	540	<50	<50	1180	620
PAH								
Naphthalene	CE087	mg/kg	-	-	-	-	-	-
Acenaphthylene	CE087	mg/kg	-	-	-	-	-	-
Acenaphthene	CE087	mg/kg	-	-	-	-	-	-
Fluorene	CE087	mg/kg	-	-	-	-	-	-
Phenanthrene	CE087	mg/kg	-	-	-	-	-	-
Anthracene	CE087	mg/kg	-	-	-	-	-	-
Fluoranthene	CE087	mg/kg	-	-	-	-	-	-
Pyrene	CE087	mg/kg	-	-	-	-	-	-
Benzo(a)anthracene	CE087	mg/kg	-	-	-	-	-	-
Chrysene	CE087	mg/kg	-	-	-	-	-	-
Benzo(b)fluoranthene	CE087	mg/kg	-	-	-	-	-	-
Benzo(k)fluoranthene	CE087	mg/kg	-	-	-	-	-	-
Benzo(a)pyrene	CE087	mg/kg	-	-	-	-	-	-
Indeno(123cd)pyrene	CE087	mg/kg	-	-	-	-	-	-
Dibenz(ah)anthracene	CE087	mg/kg	-	-	-	-	-	-
Benzo(ghi)perylene	CE087	mg/kg	-	-	-	-	-	-
PAH (total)	CE087	mg/kg	<5	<5	<5	<5	7.9	<5

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SOILS

Lab number			39023-1	39023-2	39023-3	39023-4	39023-5	39023-6
Sample id			Area 2	Area 2	Area 2	Area 2	Area 2	Area 2
			107	108	109	109	109	116
Depth (m)			3.40	0.50	0.60	2.80	5.30	1.80
Test	**Method**	**Units**						
TPH								
TPH Aromatic EC5-EC7	CE068	mg/kg	-	0.02	-	-	<0.01	0.01
TPH Aromatic EC7-EC8	CE068	mg/kg	-	<0.01	-	-	<0.01	<0.01
TPH Aromatic EC8-EC10	CE068	mg/kg	-	<0.01	-	-	<0.01	<0.01
TPH Aromatic EC10-EC12	CE068	mg/kg	-	<1	-	-	<1	<1
TPH Aromatic EC12-EC16	CE068	mg/kg	-	<1	-	-	<1	<1
TPH Aromatic EC16-EC21	CE068	mg/kg	-	2	-	-	4	2
TPH Aromatic EC21-EC35	CE068	mg/kg	-	<1	-	-	4	<1
TPH Aliphatic EC5-EC6	CE068	mg/kg	-	<0.1	-	-	<0.1	<0.1
TPH Aliphatic EC6-EC8	CE068	mg/kg	-	<0.1	-	-	<0.1	<0.1
TPH Aliphatic EC8-EC10	CE068	mg/kg	-	<0.1	-	-	<0.1	<0.1
TPH Aliphatic EC10-EC12	CE068	mg/kg	-	10	-	-	5	6
TPH Aliphatic EC12-EC16	CE068	mg/kg	-	51	-	-	30	31
TPH Aliphatic EC16-EC21	CE068	mg/kg	-	97	-	-	65	56
TPH Aliphatic EC21-EC35	CE068	mg/kg	-	214	-	-	243	214
Subcontracted analysis								
Asbestos	$	-	-	-	-	NAF	-	-

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SOILS

Lab number			39023-7	39023-8	39023-9	39023-10	39023-11	39023-12
Sample id			Area 2	Area 2	Area 2	Area 2	Area 2	Area 2
			116	117	117	118	118	118
Depth (m)			3.60	1.20	2.20	0.50	2.30	5.00
Test	**Method**	**Units**						
Arsenic (total)	CE054 M	mg/kg	30	11	12	37	6.1	2.1
Cadmium (total)	CE054 M	mg/kg	0.6	0.7	0.9	0.8	0.5	0.4
Chromium (total)	CE054 M	mg/kg	18	15	26	12	23	23
Copper (total)	CE054 M	mg/kg	36	24	20	101	18	29
Lead (total)	CE054 M	mg/kg	34	30	28	35	14	19
Mercury (total)	CE054	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Nickel (total)	CE054 M	mg/kg	30	23	17	31	21	36
Selenium (total)	CE054 M	mg/kg	1.3	0.9	0.9	1.7	0.9	0.5
Zinc (total)	CE054 M	mg/kg	70	43	58	39	62	105
pH	CE004 M	units	7.2	6.1	5.8	4.8	4.8	6.3
Sulphate (2:1 water soluble)	CE049 U	mg/l	-	-	-	-	-	-
Magnesium (2:1 water soluble)	CE056 U	mg/l	-	-	-	-	-	-
Sulphate (total)	CE010 M	mg/kg	74	189	288	1605	296	173
Sulphur (total)	CE061	mg/kg	-	-	-	-	-	-
Sulphide	CE079	mg/kg	<10	<10	<10	<10	<10	<10
Cyanide (total)	CE077	mg/kg	<2	<2	<2	<2	<2	<2
Phenols (total)	CE078	mg/kg	<0.5	<0.5	1.6	<0.5	<0.5	<0.5
Organic matter content	CE005 M	% w/w	4.98	5.55	2.11	7.37	1.04	0.59
Toluene extractable matter	CE031 U	mg/kg	530	340	<50	1240	60	<50
PAH								
Naphthalene	CE087	mg/kg	-	-	-	-	-	-
Acenaphthylene	CE087	mg/kg	-	-	-	-	-	-
Acenaphthene	CE087	mg/kg	-	-	-	-	-	-
Fluorene	CE087	mg/kg	-	-	-	-	-	-
Phenanthrene	CE087	mg/kg	-	-	-	-	-	-
Anthracene	CE087	mg/kg	-	-	-	-	-	-
Fluoranthene	CE087	mg/kg	-	-	-	-	-	-
Pyrene	CE087	mg/kg	-	-	-	-	-	-
Benzo(a)anthracene	CE087	mg/kg	-	-	-	-	-	-
Chrysene	CE087	mg/kg	-	-	-	-	-	-
Benzo(b)fluoranthene	CE087	mg/kg	-	-	-	-	-	-
Benzo(k)fluoranthene	CE087	mg/kg	-	-	-	-	-	-
Benzo(a)pyrene	CE087	mg/kg	-	-	-	-	-	-
Indeno(123cd)pyrene	CE087	mg/kg	-	-	-	-	-	-
Dibenz(ah)anthracene	CE087	mg/kg	-	-	-	-	-	-
Benzo(ghi)perylene	CE087	mg/kg	-	-	-	-	-	-
PAH (total)	CE087	mg/kg	5.9	<5	<5	8.0	<5	<5

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SOILS

Lab number			39023-7	39023-8	39023-9	39023-10	39023-11	39023-12
Sample id			Area 2	Area 2	Area 2	Area 2	Area 2	Area 2
			116	117	117	118	118	118
Depth (m)			3.60	1.20	2.20	0.50	2.30	5.00
Test	**Method**	**Units**						
TPH								
TPH Aromatic EC5-EC7	CE068	mg/kg	0.01	0.01	-	0.02	-	-
TPH Aromatic EC7-EC8	CE068	mg/kg	<0.01	<0.01	-	<0.01	-	-
TPH Aromatic EC8-EC10	CE068	mg/kg	<0.01	<0.01	-	<0.01	-	-
TPH Aromatic EC10-EC12	CE068	mg/kg	2	<1	-	1	-	-
TPH Aromatic EC12-EC16	CE068	mg/kg	1	<1	-	1	-	-
TPH Aromatic EC16-EC21	CE068	mg/kg	3	<1	-	7	-	-
TPH Aromatic EC21-EC35	CE068	mg/kg	1	<1	-	1	-	-
TPH Aliphatic EC5-EC6	CE068	mg/kg	<0.1	<0.1	-	<0.1	-	-
TPH Aliphatic EC6-EC8	CE068	mg/kg	<0.1	<0.1	-	<0.1	-	-
TPH Aliphatic EC8-EC10	CE068	mg/kg	<0.1	<0.1	-	<0.1	-	-
TPH Aliphatic EC10-EC12	CE068	mg/kg	11	3	-	29	-	-
TPH Aliphatic EC12-EC16	CE068	mg/kg	58	25	-	104	-	-
TPH Aliphatic EC16-EC21	CE068	mg/kg	107	43	-	235	-	-
TPH Aliphatic EC21-EC35	CE068	mg/kg	175	200	-	712	-	-
Subcontracted analysis								
Asbestos	$	-	-	-	-	-	-	-

Chemtech Environmental Limited

SOILS

Lab number			39023-13	39023-14	39023-15	39023-16	39023-17	39023-18
Sample id			Area 2 119	Area 2 119	Area 2 119	Area 2 127	Area 2 134	Area 2 134
Depth (m)			0.50	1.50	5.50	1.80	0.40	2.00
Test	**Method**	**Units**						
Arsenic (total)	CE054 M	mg/kg	72	113	7.8	116	59	6.9
Cadmium (total)	CE054 M	mg/kg	0.5	0.6	0.6	0.6	0.7	0.6
Chromium (total)	CE054 M	mg/kg	13	14	23	6.0	17	19
Copper (total)	CE054 M	mg/kg	23	36	11	24	47	20
Lead (total)	CE054 M	mg/kg	27	27	13	28	40	19
Mercury (total)	CE054	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Nickel (total)	CE054 M	mg/kg	11	7.7	23	2.0	30	23
Selenium (total)	CE054 M	mg/kg	1.2	1.3	0.6	3.0	1.4	0.7
Zinc (total)	CE054 M	mg/kg	34	25	55	7.4	123	54
pH	CE004 M	units	6.5	4.3	4.0	3.0	6.6	8.1
Sulphate (2:1 water soluble)	CE049 U	mg/l	251	426	1586	973	1488	-
Magnesium (2:1 water soluble)	CE056 U	mg/l	72	92	105	42	104	-
Sulphate (total)	CE010 M	mg/kg	9985	15221	11764	35488	25684	576
Sulphur (total)	CE061	mg/kg	5669	7350	4036	14440	8216	-
Sulphide	CE079	mg/kg	<10	<10	<10	<10	<10	<10
Cyanide (total)	CE077	mg/kg	<2	<2	<2	<2	<2	<2
Phenols (total)	CE078	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Organic matter content	CE005 M	% w/w	4.97	3.75	1.00	5.89	11.13	1.12
Toluene extractable matter	CE031 U	mg/kg	510	280	<50	260	520	580
PAH								
Naphthalene	CE087	mg/kg	-	-	-	-	-	0.2
Acenaphthylene	CE087	mg/kg	-	-	-	-	-	<0.1
Acenaphthene	CE087	mg/kg	-	-	-	-	-	0.8
Fluorene	CE087	mg/kg	-	-	-	-	-	0.8
Phenanthrene	CE087	mg/kg	-	-	-	-	-	7.3
Anthracene	CE087	mg/kg	-	-	-	-	-	2.4
Fluoranthene	CE087	mg/kg	-	-	-	-	-	12.0
Pyrene	CE087	mg/kg	-	-	-	-	-	10.7
Benzo(a)anthracene	CE087	mg/kg	-	-	-	-	-	6.3
Chrysene	CE087	mg/kg	-	-	-	-	-	4.8
Benzo(b)fluoranthene	CE087	mg/kg	-	-	-	-	-	9.3
Benzo(k)fluoranthene	CE087	mg/kg	-	-	-	-	-	9.0
Benzo(a)pyrene	CE087	mg/kg	-	-	-	-	-	6.1
Indeno(123cd)pyrene	CE087	mg/kg	-	-	-	-	-	2.4
Dibenz(ah)anthracene	CE087	mg/kg	-	-	-	-	-	1.0
Benzo(ghi)perylene	CE087	mg/kg	-	-	-	-	-	3.4
PAH (total)	CE087	mg/kg	<5	<5	<5	<5	<5	77

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SOILS

Lab number			39023-13	39023-14	39023-15	39023-16	39023-17	39023-18
Sample id			Area 2 119	Area 2 119	Area 2 119	Area 2 127	Area 2 134	Area 2 134
Depth (m)			0.50	1.50	5.50	1.80	0.40	2.00
Test	**Method**	**Units**						
TPH								
TPH Aromatic EC5-EC7	CE068	mg/kg	<0.01	-	-	-	<0.01	<0.01
TPH Aromatic EC7-EC8	CE068	mg/kg	<0.01	-	-	-	<0.01	<0.01
TPH Aromatic EC8-EC10	CE068	mg/kg	<0.01	-	-	-	<0.01	<0.01
TPH Aromatic EC10-EC12	CE068	mg/kg	1	-	-	-	1	<1
TPH Aromatic EC12-EC16	CE068	mg/kg	1	-	-	-	2	2
TPH Aromatic EC16-EC21	CE068	mg/kg	2	-	-	-	1	36
TPH Aromatic EC21-EC35	CE068	mg/kg	<1	-	-	-	<1	45
TPH Aliphatic EC5-EC6	CE068	mg/kg	<0.1	-	-	-	<0.1	<0.1
TPH Aliphatic EC6-EC8	CE068	mg/kg	<0.1	-	-	-	<0.1	<0.1
TPH Aliphatic EC8-EC10	CE068	mg/kg	<0.1	-	-	-	0.1	<0.1
TPH Aliphatic EC10-EC12	CE068	mg/kg	7	-	-	-	11	7
TPH Aliphatic EC12-EC16	CE068	mg/kg	21	-	-	-	41	20
TPH Aliphatic EC16-EC21	CE068	mg/kg	37	-	-	-	72	48
TPH Aliphatic EC21-EC35	CE068	mg/kg	324	-	-	-	240	414
Subcontracted analysis								
Asbestos	$	-	NAF	-	-	-	NAF	-

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SOILS

Lab number			39023-19	39023-20
Sample id			Area 2	Area 2
			135	135
Depth (m)			1.20	3.80
Test	**Method**	**Units**		
Arsenic (total)	CE054 M	mg/kg	38	6.1
Cadmium (total)	CE054 M	mg/kg	1.1	1.4
Chromium (total)	CE054 M	mg/kg	11	23
Copper (total)	CE054 M	mg/kg	106	5.7
Lead (total)	CE054 M	mg/kg	70	23
Mercury (total)	CE054	mg/kg	<0.5	<0.5
Nickel (total)	CE054 M	mg/kg	13	15
Selenium (total)	CE054 M	mg/kg	1.1	0.9
Zinc (total)	CE054 M	mg/kg	124	50
pH	CE004 M	units	6.6	5.3
Sulphate (2:1 water soluble)	CE049 U	mg/l	-	-
Magnesium (2:1 water soluble)	CE056 U	mg/l	-	-
Sulphate (total)	CE010 M	mg/kg	1457	1399
Sulphur (total)	CE061	mg/kg	-	-
Sulphide	CE079	mg/kg	<10	<10
Cyanide (total)	CE077	mg/kg	<2	<2
Phenols (total)	CE078	mg/kg	<0.5	<0.5
Organic matter content	CE005 M	% w/w	2.12	1.89
Toluene extractable matter	CE031 U	mg/kg	840	60
PAH				
Naphthalene	CE087	mg/kg	-	-
Acenaphthylene	CE087	mg/kg	-	-
Acenaphthene	CE087	mg/kg	-	-
Fluorene	CE087	mg/kg	-	-
Phenanthrene	CE087	mg/kg	-	-
Anthracene	CE087	mg/kg	-	-
Fluoranthene	CE087	mg/kg	-	-
Pyrene	CE087	mg/kg	-	-
Benzo(a)anthracene	CE087	mg/kg	-	-
Chrysene	CE087	mg/kg	-	-
Benzo(b)fluoranthene	CE087	mg/kg	-	-
Benzo(k)fluoranthene	CE087	mg/kg	-	-
Benzo(a)pyrene	CE087	mg/kg	-	-
Indeno(123cd)pyrene	CE087	mg/kg	-	-
Dibenz(ah)anthracene	CE087	mg/kg	-	-
Benzo(ghi)perylene	CE087	mg/kg	-	-
PAH (total)	CE087	mg/kg	9.1	<5

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SOILS

Lab number			39023-19	39023-20
Sample id			Area 2 135	Area 2 135
Depth (m)			1.20	3.80
Test	**Method**	**Units**		
TPH				
TPH Aromatic EC5-EC7	CE068	mg/kg	0.24	-
TPH Aromatic EC7-EC8	CE068	mg/kg	0.08	-
TPH Aromatic EC8-EC10	CE068	mg/kg	0.04	-
TPH Aromatic EC10-EC12	CE068	mg/kg	2	-
TPH Aromatic EC12-EC16	CE068	mg/kg	1	-
TPH Aromatic EC16-EC21	CE068	mg/kg	7	-
TPH Aromatic EC21-EC35	CE068	mg/kg	1	-
TPH Aliphatic EC5-EC6	CE068	mg/kg	0.3	-
TPH Aliphatic EC6-EC8	CE068	mg/kg	0.3	-
TPH Aliphatic EC8-EC10	CE068	mg/kg	0.3	-
TPH Aliphatic EC10-EC12	CE068	mg/kg	17	-
TPH Aliphatic EC12-EC16	CE068	mg/kg	61	-
TPH Aliphatic EC16-EC21	CE068	mg/kg	107	-
TPH Aliphatic EC21-EC35	CE068	mg/kg	402	-
Subcontracted analysis				
Asbestos	$	-	-	-

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LEACHATES

Lab number			39023-4L	39023-14L	39023-19L
Sample id			Area 2	Area 2	Area 2
			109	119	135
Depth (m)			2.80	1.50	1.20
Test	**Method**	**Units**			
Arsenic	CE055	mg/l	<0.001	0.001	<0.001
Boron	CE063	mg/l	<0.03	<0.03	<0.03
Cadmium	CE055 U	mg/l	<0.001	<0.001	0.003
Chromium	CE055 U	mg/l	<0.003	<0.003	<0.003
Copper	CE055 U	mg/l	0.012	0.006	0.007
Lead	CE055 U	mg/l	<0.009	<0.009	<0.009
Mercury	CE055	mg/l	<0.001	<0.001	<0.001
Nickel	CE055 U	mg/l	0.004	0.009	0.015
Selenium	CE055	mg/l	<0.001	<0.001	0.001
Zinc	CE055 U	mg/l	0.058	<0.020	0.077
pH	CE004	units	6.4	5.3	6.1
Sulphate	CE049 U	mg/l	<10	126	75
Sulphide	CE079	mg/l	<0.1	<0.1	<0.1
Cyanide (total)	CE077	mg/l	<0.02	<0.02	<0.02
Phenols (total)	CE073	mg/l	<0.0005	<0.0005	<0.0005
PAHs					
PAH (total)	CE087	mg/l	<0.0001	<0.0001	<0.0001
TPH					
TPH (C10-C40)	CE052	mg/l	<0.01	<0.01	<0.01

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METHOD DETAILS

METHOD	SOILS	METHOD SUMMARY	STATUS	LOD	UNITS
CE054	Arsenic (total)	Aqua regia digest, ICP-OES	M	1	mg/kg
CE054	Cadmium (total)	Aqua regia digest, ICP-OES	M	0.2	mg/kg
CE054	Chromium (total)	Aqua regia digest, ICP-OES	M	1	mg/kg
CE054	Copper (total)	Aqua regia digest, ICP-OES	M	1	mg/kg
CE054	Lead (total)	Aqua regia digest, ICP-OES	M	1	mg/kg
CE054	Mercury (total)	Aqua regia digest, ICP-OES		0.5	mg/kg
CE054	Nickel (total)	Aqua regia digest, ICP-OES	M	1	mg/kg
CE054	Selenium (total)	Aqua regia digest, ICP-OES	M	0.3	mg/kg
CE054	Zinc (total)	Aqua regia digest, ICP-OES	M	3	mg/kg
CE004	pH	BS 1377, pH Meter	M	0.1	units
CE049	Sulphate (2:1 water soluble)	Aqueous extraction, IC-COND	U	10	mg/l
CE056	Magnesium (2:1 water soluble)	Aqueous extraction, ICP-OES	U	0.03	mg/l
CE010	Sulphate (total)	Acid extraction, Gravimetry	M	100	mg/kg
CE061	Sulphur (total)	Acid extraction, ICP-OES		100	mg/kg
CE079	Sulphide	Extraction, Continuous Flow Colorimetry		10	mg/kg
CE077	Cyanide (total)	Extraction, Continuous Flow Colorimetry		2	mg/kg
CE078	Phenols (total)	Extraction, Continuous Flow Colorimetry		0.5	mg/kg
CE005	Organic matter content	BS 1377, Colorimetry	M	0.01	% w/w
CE031	Toluene extractable matter	Solvent extraction, Gravimetry	U	50	mg/kg
CE087	PAH (EPA 16)	Solvent extraction, GC-MS		0.1	mg/kg
CE087	PAH (total)	Solvent extraction, GC-MS		5	mg/kg
CE068	TPH Aliphatic/Aromatic fractions (C5-C10)	Headspace GC-FID		0.01-0.1	mg/kg
CE068	TPH Aliphatic/Aromatic fractions (C10-C44)	Solvent extraction, GC-FID		1	mg/kg
$	Asbestos (qualitative)	HSG 248, Microscopy	U	-	-

Chemtech Environmental Limited

METHOD DETAILS

METHOD	LEACHATES	METHOD SUMMARY	STATUS	LOD	UNITS
CE055	Arsenic	ICP-OES		0.001	mg/l
CE063	Boron	ICP-OES		0.03	mg/l
CE055	Cadmium	ICP-OES	U	0.001	mg/l
CE055	Chromium	ICP-OES	U	0.003	mg/l
CE055	Copper	ICP-OES	U	0.004	mg/l
CE055	Lead	ICP-OES	U	0.009	mg/l
CE055	Mercury	ICP-OES		0.001	mg/l
CE055	Nickel	ICP-OES	U	0.003	mg/l
CE055	Selenium	ICP-OES		0.001	mg/l
CE055	Zinc	ICP-OES	U	0.02	mg/l
CE004	pH	BS 1377, pH Meter		0.1	units
CE049	Sulphate	Ion Chromatography	U	10	mg/l
CE079	Sulphide	Continuous Flow Colorimetry		0.1	mg/l
CE077	Cyanide (total)	Continuous Flow Colorimetry		0.02	mg/l
CE073	Phenols (total)	HPLC		0.0005	mg/l
CE087	PAH (EPA 16)	Solvent extraction, GC-MS		0.0001	mg/l
CE087	PAH (total)	Solvent extraction, GC-MS		0.0001	mg/l
CE052	TPH (C10-C40)	Solvent extraction, GC-FID		0.01	mg/l

UKAS TESTING
2531

mCERTS
THE ENVIRONMENT AGENCY'S MONITORING CERTIFICATION SCHEME

chemtech environmental

ANALYTICAL TEST REPORT

Contract no: SDA/39024(1)

Contract name: North Gawber Colliery Site - Area 3

Client reference: -

Clients name: Scott Doherty Associates

Clients address: Consett Business Park
Consett
Co Durham
DH8 6BP

Date received: 23 April 2009

Date started: 07 May 2009

Date of issue: 16 June 2009

This is a supplementary report to report number SDA/39024 issued 18 May 2009.

Notes:
Opinions and interpretations expressed herein are outside the UKAS accreditation scope.
Unless otherwise stated, Chemtech Environmental Ltd were not responsible for sampling.
Methods, procedures and performance data are available on request.
Results reported herein relate only to the material supplied to the laboratory.
All results are reported on a dry basis. Samples dried at no more than 30°C in a drying cabinet.
Analytical results are exclusive of stones.
This report shall not be reproduced except in full, withour prior written approval.
Samples will be disposed of 8 weeks from initial receipt unless otherwise instructed.

Key:
U UKAS accredited test
M MCERTS & UKAS accredited test
$ Test carried out by an approved subcontractor
NAF Non asbestos fibres

Approved by: KCampbell

Karan Campbell, Director
John Campbell, Director

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Chemtech Environmental Limited

SAMPLE DESCRIPTIONS

MCERTS (Soils):

Soil descriptions are only intended to provide a log of sample matrices with respect to MCERTS validation.
They are not intended as full geological descriptions.
MCERTS accreditation applies for sand, clay and loam/topsoil, or combinations of these whether these are derived from naturally occurring soils or from made ground, as long as these materials constitute the major part of the sample.
Other materials such as concrete, gravel and brick are not accredited if they comprise the major part of the sample.

Lab number	Sample id	Depth (m)	Description	Moisture (%)
39024-1	Area 3 136	0.80	Gravelly Sand	15.6
39024-2	Area 3 136	3.40	Gravelly Sand	27.4
39024-3	Area 3 136	4.00	Clay	17.6
39024-4	Area 3 137	0.50	Clay	17.0
39024-5	Area 3 137	3.00	Gravelly Sand	15.0
39024-6	Area 3 138	1.00	Mudstone (Clay)	6.0
39024-7	Area 3 138	3.00	Sandy Clay	24.3
39024-8	Area 3 140	0.50	Gravelly Sand	10.2
39024-9	Area 3 141	2.00	Gravelly Sand	14.3
39024-10	Area 3 141	4.30	Clay	19.0
39024-11	Area 3 142	1.00	Mudstone (Clay)	11.2
39024-12	Area 3 142	3.00	Sand & Shale	12.6
39024-13	Area 3 143	0.40	Clay	15.2
39024-14	Area 3 143	2.10	Ashy Clay	18.2
39024-15	Area 3 144	1.20	Clay	20.9
39024-16	Area 3 145	0.40	Gravelly Sand	8.5
39024-17	Area 3 145	2.80	Gravelly Sand	19.1

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SOILS

Lab number			39024-1	39024-2	39024-3	39024-4	39024-5	39024-6
Sample id			Area 3	Area 3	Area 3	Area 3	Area 3	Area 3
			136	136	136	137	137	138
Depth (m)			0.80	3.40	4.00	0.50	3.00	1.00
Test	**Method**	***Units***						
Arsenic (total)	CE054 M	mg/kg	108	17	7.6	180	35	11
Cadmium (total)	CE054 M	mg/kg	0.6	0.4	0.8	0.9	0.6	0.4
Chromium (total)	CE054 M	mg/kg	28	14	24	14	13	21
Copper (total)	CE054 M	mg/kg	42	40	24	26	59	29
Lead (total)	CE054 M	mg/kg	26	17	19	32	17	17
Mercury (total)	CE054	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Nickel (total)	CE054 M	mg/kg	33	31	30	8.5	31	34
Selenium (total)	CE054 M	mg/kg	0.9	2.2	0.7	3.1	1.6	0.5
Zinc (total)	CE054 M	mg/kg	58	27	71	34	23	70
pH	CE004 M	units	3.9	3.7	6.0	4.2	5.6	8.0
Sulphate (2:1 water soluble)	CE049 U	mg/l	923	1326	-	287	1488	-
Magnesium (2:1 water soluble)	CE056 U	mg/l	10	100	-	50	89	-
Sulphate (total)	CE010 M	mg/kg	16637	17559	3515	14052	22646	634
Sulphur (total)	CE061	mg/kg	27260	8362	-	8307	10860	-
Sulphide	CE079	mg/kg	<10	<10	<10	<10	<10	<10
Cyanide (total)	CE077	mg/kg	<2	<2	<2	<2	<2	<2
Phenols (total)	CE078	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Organic matter content	CE005 M	% w/w	0.93	3.18	1.09	3.20	2.35	4.14
Toluene extractable matter	CE031 U	mg/kg	80	140	<50	50	70	60
PAH								
PAH (total)	CE087	mg/kg	<5	<5	<5	<5	<5	<5
TPH								
TPH Aromatic EC5-EC7	CE068	mg/kg	-	-	-	-	-	-
TPH Aromatic EC7-EC8	CE068	mg/kg	-	-	-	-	-	-
TPH Aromatic EC8-EC10	CE068	mg/kg	-	-	-	-	-	-
TPH Aromatic EC10-EC12	CE068	mg/kg	-	-	-	-	-	-
TPH Aromatic EC12-EC16	CE068	mg/kg	-	-	-	-	-	-
TPH Aromatic EC16-EC21	CE068	mg/kg	-	-	-	-	-	-
TPH Aromatic EC21-EC35	CE068	mg/kg	-	-	-	-	-	-
TPH Aliphatic EC5-EC6	CE068	mg/kg	-	-	-	-	-	-
TPH Aliphatic EC6-EC8	CE068	mg/kg	-	-	-	-	-	-
TPH Aliphatic EC8-EC10	CE068	mg/kg	-	-	-	-	-	-
TPH Aliphatic EC10-EC12	CE068	mg/kg	-	-	-	-	-	-
TPH Aliphatic EC12-EC16	CE068	mg/kg	-	-	-	-	-	-
TPH Aliphatic EC16-EC21	CE068	mg/kg	-	-	-	-	-	-
TPH Aliphatic EC21-EC35	CE068	mg/kg	-	-	-	-	-	-
Subcontracted analysis								
Asbestos	$	-	NAF	-	-	-	-	NAF

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SOILS

Lab number			39024-7	39024-8	39024-9	39024-10	39024-11	39024-12
Sample id			Area 3	Area 3	Area 3	Area 3	Area 3	Area 3
			138	140	141	141	142	142
Depth (m)			3.00	0.50	2.00	4.30	1.00	3.00
Test	***Method***	***Units***						
Arsenic (total)	CE054 M	mg/kg	6.4	101	52	9.9	150	57
Cadmium (total)	CE054 M	mg/kg	0.7	2.2	0.7	0.4	0.5	2.0
Chromium (total)	CE054 M	mg/kg	16	11	16	23	14	12
Copper (total)	CE054 M	mg/kg	5.0	<1	50	28	23	3.5
Lead (total)	CE054 M	mg/kg	19	31	30	16	25	16
Mercury (total)	CE054	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Nickel (total)	CE054 M	mg/kg	30	17	27	24	13	14
Selenium (total)	CE054 M	mg/kg	0.9	<0.3	1.5	0.5	1.6	2.2
Zinc (total)	CE054 M	mg/kg	80	5.1	31	59	33	16
pH	CE004 M	units	6.9	4.7	3.5	5.4	3.2	4.2
Sulphate (2:1 water soluble)	CE049 U	mg/l	-	1639	422	-	413	1269
Magnesium (2:1 water soluble)	CE056 U	mg/l	-	20	28	-	38	44
Sulphate (total)	CE010 M	mg/kg	560	32698	14472	1589	8010	11607
Sulphur (total)	CE061	mg/kg	-	8666	9327	-	6969	5364
Sulphide	CE079	mg/kg	<10	<10	<10	<10	<10	<10
Cyanide (total)	CE077	mg/kg	<2	<2	<2	<2	<2	<2
Phenols (total)	CE078	mg/kg	<0.5	<0.5	0.9	<0.5	<0.5	<0.5
Organic matter content	CE005 M	% w/w	2.47	0.92	8.07	2.98	3.48	0.54
Toluene extractable matter	CE031 U	mg/kg	<50	140	<50	250	90	160
PAH								
PAH (total)	CE087	mg/kg	<5	<5	<5	<5	<5	<5
TPH								
TPH Aromatic EC5-EC7	CE068	mg/kg	-	-	-	-	-	-
TPH Aromatic EC7-EC8	CE068	mg/kg	-	-	-	-	-	-
TPH Aromatic EC8-EC10	CE068	mg/kg	-	-	-	-	-	-
TPH Aromatic EC10-EC12	CE068	mg/kg	-	-	-	-	-	-
TPH Aromatic EC12-EC16	CE068	mg/kg	-	-	-	-	-	-
TPH Aromatic EC16-EC21	CE068	mg/kg	-	-	-	-	-	-
TPH Aromatic EC21-EC35	CE068	mg/kg	-	-	-	-	-	-
TPH Aliphatic EC5-EC6	CE068	mg/kg	-	-	-	-	-	-
TPH Aliphatic EC6-EC8	CE068	mg/kg	-	-	-	-	-	-
TPH Aliphatic EC8-EC10	CE068	mg/kg	-	-	-	-	-	-
TPH Aliphatic EC10-EC12	CE068	mg/kg	-	-	-	-	-	-
TPH Aliphatic EC12-EC16	CE068	mg/kg	-	-	-	-	-	-
TPH Aliphatic EC16-EC21	CE068	mg/kg	-	-	-	-	-	-
TPH Aliphatic EC21-EC35	CE068	mg/kg	-	-	-	-	-	-
Subcontracted analysis								
Asbestos	$	-	-	NAF	-	-	NAF	-

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SOILS

Lab number			39024-13	39024-14	39024-15	39024-16	39024-17
Sample id			Area 3	Area 3	Area 3	Area 3	Area 3
			143	143	144	145	145
Depth (m)			0.40	2.10	1.20	0.40	2.80
Test	**Method**	**Units**					
Arsenic (total)	CE054 M	mg/kg	134	42	14	28	49
Cadmium (total)	CE054 M	mg/kg	0.6	0.6	0.7	0.5	0.9
Chromium (total)	CE054 M	mg/kg	15	8.4	22	11	18
Copper (total)	CE054 M	mg/kg	32	58	19	28	102
Lead (total)	CE054 M	mg/kg	30	53	35	12	19
Mercury (total)	CE054	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Nickel (total)	CE054 M	mg/kg	13	36	21	17	28
Selenium (total)	CE054 M	mg/kg	2.6	2.1	0.9	0.5	2.2
Zinc (total)	CE054 M	mg/kg	33	98	91	40	17
pH	CE004 M	units	3.7	6.5	4.8	6.2	4.0
Sulphate (2:1 water soluble)	CE049 U	mg/l	1148	1919	-	-	1739
Magnesium (2:1 water soluble)	CE056 U	mg/l	78	92	-	-	56
Sulphate (total)	CE010 M	mg/kg	17691	17427	1860	2675	48519
Sulphur (total)	CE061	mg/kg	16980	17570	-	-	26840
Sulphide	CE079	mg/kg	<10	<10	<10	<10	<10
Cyanide (total)	CE077	mg/kg	<2	<2	<2	<2	<2
Phenols (total)	CE078	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Organic matter content	CE005 M	% w/w	2.39	5.02	4.19	3.59	2.91
Toluene extractable matter	CE031 U	mg/kg	140	260	400	400	400
PAH							
PAH (total)	CE087	mg/kg	<5	<5	<5	<5	<5
TPH							
TPH Aromatic EC5-EC7	CE068	mg/kg	-	0.03	<0.01	<0.01	<0.01
TPH Aromatic EC7-EC8	CE068	mg/kg	-	0.01	<0.01	<0.01	<0.01
TPH Aromatic EC8-EC10	CE068	mg/kg	-	<0.01	<0.01	<0.01	<0.01
TPH Aromatic EC10-EC12	CE068	mg/kg	-	2	<1	<1	<1
TPH Aromatic EC12-EC16	CE068	mg/kg	-	<1	<1	<1	<1
TPH Aromatic EC16-EC21	CE068	mg/kg	-	3	<1	<1	<1
TPH Aromatic EC21-EC35	CE068	mg/kg	-	<1	<1	<1	<1
TPH Aliphatic EC5-EC6	CE068	mg/kg	-	0.1	<0.1	<0.1	<0.1
TPH Aliphatic EC6-EC8	CE068	mg/kg	-	0.1	<0.1	<0.1	<0.1
TPH Aliphatic EC8-EC10	CE068	mg/kg	-	0.1	<0.1	<0.1	<0.1
TPH Aliphatic EC10-EC12	CE068	mg/kg	-	4	<1	<1	1
TPH Aliphatic EC12-EC16	CE068	mg/kg	-	42	<1	<1	2
TPH Aliphatic EC16-EC21	CE068	mg/kg	-	96	4	<1	6
TPH Aliphatic EC21-EC35	CE068	mg/kg	-	173	116	3	14
Subcontracted analysis							
Asbestos	$	-	-	-	-	-	-

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LEACHATES

Lab number			39024-6L	39024-8L	39024-12L
Sample id			Area 3	Area 3	Area 3
			138	140	142
Depth (m)			1.00	0.50	3.00
Test	**Method**	**Units**			
Arsenic	CE055	mg/l	0.002	0.004	0.004
Boron	CE063	mg/l	0.03	<0.03	<0.03
Cadmium	CE055 U	mg/l	<0.001	<0.001	<0.001
Chromium	CE055 U	mg/l	<0.003	<0.003	<0.003
Copper	CE055 U	mg/l	0.006	0.007	0.015
Lead	CE055 U	mg/l	<0.009	<0.009	<0.009
Mercury	CE055	mg/l	<0.001	<0.001	<0.001
Nickel	CE055 U	mg/l	0.003	0.004	0.048
Selenium	CE055	mg/l	<0.001	<0.001	<0.001
Zinc	CE055 U	mg/l	<0.020	<0.020	0.068
pH	CE004	units	7.4	5.1	4.6
Sulphate	CE049 U	mg/l	74	686	611
Sulphide	CE079	mg/l	<0.1	<0.1	<0.1
Cyanide (total)	CE077	mg/l	<0.02	<0.02	<0.02
Phenols (total)	CE073	mg/l	<0.0005	<0.0005	<0.0005
PAHs					
PAH (total)	CE087	mg/l	<0.0001	<0.0001	<0.0001
TPH					
TPH (C10-C40)	CE052	mg/l	<0.01	<0.01	<0.01

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METHOD DETAILS

METHOD	SOILS	METHOD SUMMARY	STATUS	LOD	UNITS
CE054	Arsenic (total)	Aqua regia digest, ICP-OES	M	1	mg/kg
CE054	Cadmium (total)	Aqua regia digest, ICP-OES	M	0.2	mg/kg
CE054	Chromium (total)	Aqua regia digest, ICP-OES	M	1	mg/kg
CE054	Copper (total)	Aqua regia digest, ICP-OES	M	1	mg/kg
CE054	Lead (total)	Aqua regia digest, ICP-OES	M	1	mg/kg
CE054	Mercury (total)	Aqua regia digest, ICP-OES		0.5	mg/kg
CE054	Nickel (total)	Aqua regia digest, ICP-OES	M	1	mg/kg
CE054	Selenium (total)	Aqua regia digest, ICP-OES	M	0.3	mg/kg
CE054	Zinc (total)	Aqua regia digest, ICP-OES	M	3	mg/kg
CE004	pH	BS 1377, pH Meter	M	0.1	units
CE049	Sulphate (2:1 water soluble)	Aqueous extraction, IC-COND	U	10	mg/l
CE056	Magnesium (2:1 water soluble)	Aqueous extraction, ICP-OES	U	0.03	mg/l
CE010	Sulphate (total)	Acid extraction, Gravimetry	M	100	mg/kg
CE061	Sulphur (total)	Acid extraction, ICP-OES		100	mg/kg
CE079	Sulphide	Extraction, Continuous Flow Colorimetry		10	mg/kg
CE077	Cyanide (total)	Extraction, Continuous Flow Colorimetry		2	mg/kg
CE078	Phenols (total)	Extraction, Continuous Flow Colorimetry		0.5	mg/kg
CE005	Organic matter content	BS 1377, Colorimetry	M	0.01	% w/w
CE031	Toluene extractable matter	Solvent extraction, Gravimetry	U	50	mg/kg
CE087	PAH (total)	Solvent extraction, GC-MS		5	mg/kg
CE068	TPH Aliphatic/Aromatic fractions (C5-C10)	Headspace GC-FID		0.01-0.1	mg/kg
CE068	TPH Aliphatic/Aromatic fractions (C10-C44)	Solvent extraction, GC-FID		1	mg/kg
$	Asbestos (qualitative)	HSG 248, Microscopy	U	-	-

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METHOD DETAILS

METHOD	LEACHATES	METHOD SUMMARY	STATUS	LOD	UNITS
CE055	Arsenic	ICP-OES		0.001	mg/l
CE063	Boron	ICP-OES		0.03	mg/l
CE055	Cadmium	ICP-OES	U	0.001	mg/l
CE055	*Chromium*	*ICP-OES*	*U*	*0.003*	mg/l
CE055	Copper	ICP-OES	U	0.004	mg/l
CE055	Lead	ICP-OES	U	0.009	mg/l
CE055	Mercury	ICP-OES		0.001	mg/l
CE055	Nickel	ICP-OES	U	0.003	mg/l
CE055	Selenium	ICP-OES		0.001	mg/l
CE055	Zinc	ICP-OES	U	0.02	mg/l
CE004	pH	BS 1377, pH Meter		0.1	units
CE049	Sulphate	Ion Chromatography	U	10	mg/l
CE079	Sulphide	Continuous Flow Colorimetry		0.1	mg/l
CE077	Cyanide (total)	Continuous Flow Colorimetry		0.02	mg/l
CE073	Phenols (total)	HPLC		0.0005	mg/l
CE087	PAH (EPA 16)	Solvent extraction, GC-MS		0.0001	mg/l
CE087	PAH (total)	Solvent extraction, GC-MS		0.0001	mg/l
CE052	TPH (C10-C40)	Solvent extraction, GC-FID		0.01	mg/l

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UKAS TESTING 2531

mCERTS THE ENVIRONMENT AGENCY'S MONITORING CERTIFICATION SCHEME

ANALYTICAL TEST REPORT

Contract no: SDA/39025(1)

Contract name: North Gawber Colliery Site - Area 4

Client reference: -

Clients name: Scott Doherty Associates

Clients address: Consett Business Park
Consett
Co Durham
DH8 6BP

RECEIVED
22 JUN 2009

Date received: 23 April 2009

Date started: 07 May 2009

Date of issue: 16 June 2009

This is a supplementary report to report number SDA/39025 issued 19 May 2009.

Notes:

Opinions and interpretations expressed herein are outside the UKAS accreditation scope.
Unless otherwise stated, Chemtech Environmental Ltd were not responsible for sampling.
Methods, procedures and performance data are available on request.
Results reported herein relate only to the material supplied to the laboratory.
All results are reported on a dry basis. Samples dried at no more than 30°C in a drying cabinet.
Analytical results are exclusive of stones.
This report shall not be reproduced except in full, withour prior written approval.
Samples will be disposed of 8 weeks from initial receipt unless otherwise instructed.

Key:

U UKAS accredited test
M MCERTS & UKAS accredited test
$ Test carried out by an approved subcontractor
NAF Non asbestos fibres

Approved by: KCampbell

Karan Campbell, Director
John Campbell, Director

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Chemtech Environmental Limited

SAMPLE DESCRIPTIONS

MCERTS (Soils):

Soil descriptions are only intended to provide a log of sample matrices with respect to MCERTS validation.
They are not intended as full geological descriptions.
MCERTS accreditation applies for sand, clay and loam/topsoil, or combinations of these whether these are derived from naturally occurring soils or from made ground, as long as these materials constitute the major part of the sample.
Other materials such as concrete, gravel and brick are not accredited if they comprise the major part of the sample.

Lab number	Sample id	Depth (m)	Description	Moisture (%)
39025-1	Area 4 139	0.60	Gravelly Sand	16.2
39025-2	Area 4 139	1.30	Sandy Clay	20.5
39025-3	Area 4 146	0.50	Loamy Clay	15.4
39025-4	Area 4 147	0.40	Loamy Clay	15.4
39025-5	Area 4 148	0.50	Loamy Clay	17.1
39025-6	Area 4 148	1.60	Ashy Clay	16.9
39025-7	Area 4 148	2.80	Clay	13.8
39025-8	*Area 4 149*	*1.70*	*Clay*	*20.0*
39025-9	Area 4 150	0.50	Clay	16.2
39025-10	Area 4 150	1.50	Clay	15.6
39025-11	Area 4 151	0.80	Sandy Clay	20.3
39025-12	Area 4 152	0.50	Clay	16.5
39025-13	Area 4 152	3.20	Clay	14.8
39025-14	Area 4 153	0.50	Clay	10.9
39025-15	Area 4 153	2.50	Clay	14.3
39025-16	Area 4 154	0.50	Clay	13.5
39025-17	Area 4 154	4.00	Clay	14.4
39025-18	Area 4 155	1.80	Clay	24.1
39025-19	Area 4 156	2.20	Clay	11.0
39025-20	Area 4 156	2.60	Clay	10.8

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SOILS

Lab number			39025-1	39025-2	39025-3	39025-4	39025-5	39025-6
Sample id			Area 4 139	Area 4 139	Area 4 146	Area 4 147	Area 4 148	Area 4 148
Depth (m)			0.60	1.30	0.50	0.40	0.50	1.60
Test	**Method**	**Units**						
Arsenic (total)	CE054 M	mg/kg	34	4.8	14	35	19	7.4
Cadmium (total)	CE054 M	mg/kg	0.9	0.8	0.5	0.7	0.5	0.3
Chromium (total)	CE054 M	mg/kg	20	23	17	19	20	10
Copper (total)	CE054 M	mg/kg	71	14	40	36	31	33
Lead (total)	CE054 M	mg/kg	35	19	32	36	28	21
Mercury (total)	CE054	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Nickel (total)	CE054 M	mg/kg	30	11	28	28	32	22
Selenium (total)	CE054 M	mg/kg	1.1	1.1	1.1	1.4	0.9	0.8
Zinc (total)	CE054 M	mg/kg	45	67	84	77	65	43
pH	CE004 M	units	6.5	5.7	7.7	5.4	7.0	7.5
Sulphate (2:1 water soluble)	CE049 U	mg/l	-	-	-	1384	699	-
Magnesium (2:1 water soluble)	CE056 U	mg/l	-	-	-	91	76	-
Sulphate (total)	CE010 M	mg/kg	3243	263	1128	9607	5869	1276
Sulphur (total)	CE061	mg/kg	-	-	-	4538	1998	-
Sulphide	CE079	mg/kg	<10	<10	<10	<10	<10	<10
Cyanide (total)	CE077	mg/kg	<2	<2	<2	<2	<2	<2
Phenols (total)	CE078	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	0.7
Organic matter content	CE005 M	% w/w	2.94	2.11	4.03	3.59	2.61	4.11
Toluene extractable matter	CE031 U	mg/kg	600	260	340	300	100	60
PAH								
PAH (total)	CE087	mg/kg	6.5	<5	<5	<5	<5	<5
TPH								
TPH Aromatic EC5-EC7	CE068	mg/kg	<0.01	-	0.02	0.02	-	-
TPH Aromatic EC7-EC8	CE068	mg/kg	<0.01	-	<0.01	<0.01	-	-
TPH Aromatic EC8-EC10	CE068	mg/kg	<0.01	-	<0.01	<0.01	-	-
TPH Aromatic EC10-EC12	CE068	mg/kg	<1	-	<1	<1	-	-
TPH Aromatic EC12-EC16	CE068	mg/kg	<1	-	<1	<1	-	-
TPH Aromatic EC16-EC21	CE068	mg/kg	4	-	2	3	-	-
TPH Aromatic EC21-EC35	CE068	mg/kg	3	-	<1	<1	-	-
TPH Aliphatic EC5-EC6	CE068	mg/kg	<0.1	-	<0.1	<0.1	-	-
TPH Aliphatic EC6-EC8	CE068	mg/kg	<0.1	-	<0.1	<0.1	-	-
TPH Aliphatic EC8-EC10	CE068	mg/kg	<0.1	-	0.3	0.2	-	-
TPH Aliphatic EC10-EC12	CE068	mg/kg	6	-	5	3	-	-
TPH Aliphatic EC12-EC16	CE068	mg/kg	21	-	21	20	-	-
TPH Aliphatic EC16-EC21	CE068	mg/kg	50	-	27	44	-	-
TPH Aliphatic EC21-EC35	CE068	mg/kg	182	-	57	213	-	-
Subcontracted analysis								
Asbestos	$	-	-	-	NAF	-	NAF	-

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SOILS

Lab number			39025-7	39025-8	39025-9	39025-10	39025-11	39025-12
Sample id			Area 4	Area 4	Area 4	Area 4	Area 4	Area 4
			148	149	150	150	151	152
Depth (m)			2.80	1.70	0.50	1.50	0.80	0.50
Test	**Method**	**Units**						
Arsenic (total)	CE054 M	mg/kg	16	16	9.3	6.0	15	41
Cadmium (total)	CE054 M	mg/kg	0.6	0.4	0.6	0.8	0.8	0.5
Chromium (total)	CE054 M	mg/kg	25	15	25	23	22	22
Copper (total)	CE054 M	mg/kg	30	35	32	11	30	38
Lead (total)	CE054 M	mg/kg	20	21	19	18	46	36
Mercury (total)	CE054	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Nickel (total)	CE054 M	mg/kg	40	25	50	19	26	16
Selenium (total)	CE054 M	mg/kg	0.7	0.9	0.8	0.5	1.0	0.9
Zinc (total)	CE054 M	mg/kg	73	52	86	53	97	47
pH	CE004 M	units	6.9	6.8	5.4	5.5	5.6	3.4
Sulphate (2:1 water soluble)	CE049 U	mg/l	-	-	-	-	-	878
Magnesium (2:1 water soluble)	CE056 U	mg/l	-	-	-	-	-	76
Sulphate (total)	CE010 M	mg/kg	1103	3490	906	642	823	9105
Sulphur (total)	CE061	mg/kg	-	-	-	-	-	2996
Sulphide	CE079	mg/kg	<10	<10	<10	<10	<10	<10
Cyanide (total)	CE077	mg/kg	<2	<2	<2	<2	<2	<2
Phenols (total)	CE078	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Organic matter content	CE005 M	% w/w	2.55	5.86	7.09	1.82	4.12	4.00
Toluene extractable matter	CE031 U	mg/kg	<50	80	40	<50	160	40
PAH								
PAH (total)	CE087	mg/kg	<5	<5	<5	<5	<5	<5
TPH								
TPH Aromatic EC5-EC7	CE068	mg/kg	-	-	-	-	-	-
TPH Aromatic EC7-EC8	CE068	mg/kg	-	-	-	-	-	-
TPH Aromatic EC8-EC10	CE068	mg/kg	-	-	-	-	-	-
TPH Aromatic EC10-EC12	CE068	mg/kg	-	-	-	-	-	-
TPH Aromatic EC12-EC16	CE068	mg/kg	-	-	-	-	-	-
TPH Aromatic EC16-EC21	CE068	mg/kg	-	-	-	-	-	-
TPH Aromatic EC21-EC35	CE068	mg/kg	-	-	-	-	-	-
TPH Aliphatic EC5-EC6	CE068	mg/kg	-	-	-	-	-	-
TPH Aliphatic EC6-EC8	CE068	mg/kg	-	-	-	-	-	-
TPH Aliphatic EC8-EC10	CE068	mg/kg	-	-	-	-	-	-
TPH Aliphatic EC10-EC12	CE068	mg/kg	-	-	-	-	-	-
TPH Aliphatic EC12-EC16	CE068	mg/kg	-	-	-	-	-	-
TPH Aliphatic EC16-EC21	CE068	mg/kg	-	-	-	-	-	-
TPH Aliphatic EC21-EC35	CE068	mg/kg	-	-	-	-	-	-
Subcontracted analysis								
Asbestos	$	-	-	-	NAF	-	-	NAF

Chemtech Environmental Limited

SOILS

Lab number			39025-13	39025-14	39025-15	39025-16	39025-17	39025-18
Sample id			Area 4	Area 4	Area 4	Area 4	Area 4	Area 4
			152	153	153	154	154	155
Depth (m)			3.20	0.50	2.50	0.50	4.00	1.80
Test	**Method**	**Units**						
Arsenic (total)	CE054 M	mg/kg	11	160	88	28	31	16
Cadmium (total)	CE054 M	mg/kg	0.6	0.7	0.6	0.5	0.5	0.4
Chromium (total)	CE054 M	mg/kg	25	17	18	17	15	16
Copper (total)	CE054 M	mg/kg	18	39	42	34	33	40
Lead (total)	CE054 M	mg/kg	13	48	33	27	24	71
Mercury (total)	CE054	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Nickel (total)	CE054 M	mg/kg	21	23	25	30	27	30
Selenium (total)	CE054 M	mg/kg	0.3	1.6	1.9	1.7	1.1	1.6
Zinc (total)	CE054 M	mg/kg	58	56	58	71	87	52
pH	CE004 M	units	7.1	8.9	5.2	4.7	6.6	7.1
Sulphate (2:1 water soluble)	CE049 U	mg/l	-	1912	1462	948	693	-
Magnesium (2:1 water soluble)	CE056 U	mg/l	-	322	167	65	70	-
Sulphate (total)	CE010 M	mg/kg	387	36254	21255	8849	5878	1836
Sulphur (total)	CE061	mg/kg	-	19980	9553	4360	5584	-
Sulphide	CE079	mg/kg	<10	<10	<10	<10	<10	<10
Cyanide (total)	CE077	mg/kg	<2	<2	<2	<2	<2	<2
Phenols (total)	CE078	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Organic matter content	CE005 M	% w/w	1.12	2.15	3.57	3.89	4.24	2.30
Toluene extractable matter	CE031 U	mg/kg	160	140	140	220	270	180
PAH								
PAH (total)	CE087	mg/kg	<5	<5	<5	<5	<5	<5
TPH								
TPH Aromatic EC5-EC7	CE068	mg/kg	-	-	-	-	0.01	-
TPH Aromatic EC7-EC8	CE068	mg/kg	-	-	-	-	<0.01	-
TPH Aromatic EC8-EC10	CE068	mg/kg	-	-	-	-	<0.01	-
TPH Aromatic EC10-EC12	CE068	mg/kg	-	-	-	-	<1	-
TPH Aromatic EC12-EC16	CE068	mg/kg	-	-	-	-	<1	-
TPH Aromatic EC16-EC21	CE068	mg/kg	-	-	-	-	<1	-
TPH Aromatic EC21-EC35	CE068	mg/kg	-	-	-	-	<1	-
TPH Aliphatic EC5-EC6	CE068	mg/kg	-	-	-	-	<0.1	-
TPH Aliphatic EC6-EC8	CE068	mg/kg	-	-	-	-	<0.1	-
TPH Aliphatic EC8-EC10	CE068	mg/kg	-	-	-	-	0.2	-
TPH Aliphatic EC10-EC12	CE068	mg/kg	-	-	-	-	8	-
TPH Aliphatic EC12-EC16	CE068	mg/kg	-	-	-	-	34	-
TPH Aliphatic EC16-EC21	CE068	mg/kg	-	-	-	-	76	-
TPH Aliphatic EC21-EC35	CE068	mg/kg	-	-	-	-	587	-
Subcontracted analysis								
Asbestos	$	-	-	-	-	-	-	-

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SOILS

Lab number			39025-19	39025-20
Sample id			Area 4	Area 4
			156	156
Depth (m)			2.20	2.60
Test	**Method**	**Units**		
Arsenic (total)	CE054 M	mg/kg	44	54
Cadmium (total)	CE054 M	mg/kg	0.5	0.6
Chromium (total)	CE054 M	mg/kg	17	20
Copper (total)	CE054 M	mg/kg	37	35
Lead (total)	CE054 M	mg/kg	22	26
Mercury (total)	CE054	mg/kg	<0.5	<0.5
Nickel (total)	CE054 M	mg/kg	33	31
Selenium (total)	CE054 M	mg/kg	1.4	1.6
Zinc (total)	CE054 M	mg/kg	66	54
pH	CE004 M	units	7.0	7.1
Sulphate (2:1 water soluble)	CE049 U	mg/l	1516	1972
Magnesium (2:1 water soluble)	CE056 U	mg/l	188	149
Sulphate (total)	CE010 M	mg/kg	13994	8512
Sulphur (total)	CE061	mg/kg	5590	9967
Sulphide	CE079	mg/kg	<10	<10
Cyanide (total)	CE077	mg/kg	<2	<2
Phenols (total)	CE078	mg/kg	<0.5	<0.5
Organic matter content	CE005 M	% w/w	6.67	1.79
Toluene extractable matter	CE031 U	mg/kg	50	110
PAH				
PAH (total)	CE087	mg/kg	<5	<5
TPH				
TPH Aromatic EC5-EC7	CE068	mg/kg	-	-
TPH Aromatic EC7-EC8	CE068	mg/kg	-	-
TPH Aromatic EC8-EC10	CE068	mg/kg	-	-
TPH Aromatic EC10-EC12	CE068	mg/kg	-	-
TPH Aromatic EC12-EC16	CE068	mg/kg	-	-
TPH Aromatic EC16-EC21	CE068	mg/kg	-	-
TPH Aromatic EC21-EC35	CE068	mg/kg	-	-
TPH Aliphatic EC5-EC6	CE068	mg/kg	-	-
TPH Aliphatic EC6-EC8	CE068	mg/kg	-	-
TPH Aliphatic EC8-EC10	*CE068*	*mg/kg*	-	-
TPH Aliphatic EC10-EC12	CE068	mg/kg	-	-
TPH Aliphatic EC12-EC16	CE068	mg/kg	-	-
TPH Aliphatic EC16-EC21	CE068	mg/kg	-	-
TPH Aliphatic EC21-EC35	CE068	mg/kg	-	-
Subcontracted analysis				
Asbestos	$	-	NAF	-

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LEACHATES

Lab number			39025-1L
Sample id			Area 4 139
Depth (m)			0.60
Test	**Method**	**Units**	
Arsenic	CE055	mg/l	0.004
Boron	CE063	mg/l	<0.03
Cadmium	CE055 U	mg/l	<0.001
Chromium	CE055 U	mg/l	<0.003
Copper	CE055 U	mg/l	0.012
Lead	CE055 U	mg/l	<0.009
Mercury	CE055	mg/l	<0.001
Nickel	CE055 U	mg/l	<0.003
Selenium	CE055	mg/l	<0.001
Zinc	CE055 U	mg/l	<0.020
pH	CE004	units	6.9
Sulphate	CE049 U	mg/l	52
Sulphide	CE079	mg/l	<0.1
Cyanide (total)	CE077	mg/l	<0.02
Phenols (total)	CE073	mg/l	<0.0005
PAHs			
PAH (total)	CE087	mg/l	<0.0001
TPH			
TPH (C10-C40)	CE052	mg/l	<0.01

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METHOD DETAILS

METHOD	SOILS	METHOD SUMMARY	STATUS	LOD	UNITS
CE054	Arsenic (total)	Aqua regia digest, ICP-OES	M	1	mg/kg
CE054	Cadmium (total)	Aqua regia digest, ICP-OES	M	0.2	mg/kg
CE054	Chromium (total)	Aqua regia digest, ICP-OES	M	1	mg/kg
CE054	Copper (total)	Aqua regia digest, ICP-OES	M	1	mg/kg
CE054	Lead (total)	Aqua regia digest, ICP-OES	M	1	mg/kg
CE054	Mercury (total)	Aqua regia digest, ICP-OES		0.5	mg/kg
CE054	Nickel (total)	Aqua regia digest, ICP-OES	M	1	mg/kg
CE054	Selenium (total)	Aqua regia digest, ICP-OES	M	0.3	mg/kg
CE054	Zinc (total)	Aqua regia digest, ICP-OES	M	3	mg/kg
CE004	pH	BS 1377, pH Meter	M	0.1	units
CE049	Sulphate (2:1 water soluble)	Aqueous extraction, IC-COND	U	10	mg/l
CE056	Magnesium (2:1 water soluble)	Aqueous extraction, ICP-OES	U	0.03	mg/l
CE010	Sulphate (total)	Acid extraction, Gravimetry	M	100	mg/kg
CE061	Sulphur (total)	Acid extraction, ICP-OES		100	mg/kg
CE079	Sulphide	Extraction, Continuous Flow Colorimetry		10	mg/kg
CE077	Cyanide (total)	Extraction, Continuous Flow Colorimetry		2	mg/kg
CE078	Phenols (total)	Extraction, Continuous Flow Colorimetry		0.5	mg/kg
CE005	Organic matter content	BS 1377, Colorimetry	M	0.01	% w/w
CE031	Toluene extractable matter	Solvent extraction, Gravimetry	U	50	mg/kg
CE087	PAH (total)	Solvent extraction, GC-MS		5	mg/kg
CE068	TPH Aliphatic/Aromatic fractions (C5-C10)	Headspace GC-FID		0.01-0.1	mg/kg
CE068	TPH Aliphatic/Aromatic fractions (C10-C44)	Solvent extraction, GC-FID		1	mg/kg
$	Asbestos (qualitative)	HSG 248, Microscopy	U	-	-

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METHOD DETAILS

METHOD	LEACHATES	METHOD SUMMARY	STATUS	LOD	UNITS
CE055	Arsenic	ICP-OES		0.001	mg/l
CE063	Boron	ICP-OES		0.03	mg/l
CE055	Cadmium	ICP-OES	U	0.001	mg/l
CE055	Chromium	ICP-OES	U	0.003	mg/l
CE055	Copper	ICP-OES	U	0.004	mg/l
CE055	Lead	ICP-OES	U	0.009	mg/l
CE055	Mercury	ICP-OES		0.001	mg/l
CE055	Nickel	ICP-OES	U	0.003	mg/l
CE055	Selenium	ICP-OES		0.001	mg/l
CE055	Zinc	ICP-OES	U	0.02	mg/l
CE004	pH	BS 1377, pH Meter		0.1	units
CE049	Sulphate	Ion Chromatography	U	10	mg/l
CE079	Sulphide	Continuous Flow Colorimetry		0.1	mg/l
CE077	Cyanide (total)	Continuous Flow Colorimetry		0.02	mg/l
CE073	Phenols (total)	HPLC		0.0005	mg/l
CE087	PAH (EPA 16)	Solvent extraction, GC-MS		0.0001	mg/l
CE087	PAH (total)	Solvent extraction, GC-MS		0.0001	mg/l
CE052	TPH (C10-C40)	Solvent extraction, GC-FID		0.01	mg/l

chemtech environmental

UKAS TESTING 2531

mCERTS THE ENVIRONMENT AGENCY'S MONITORING CERTIFICATION SCHEME

ANALYTICAL TEST REPORT

Contract no: SDA/39026(1)

Contract name: North Gawber Colliery Site - Area 5

Client reference: -

RECEIVED 22 JUN 2009

Clients name: Scott Doherty Associates

Clients address: Consett Business Park
Consett
Co Durham
DH8 6BP

Date received: 23 April 2009

Date started: 07 May 2009

Date of issue: 16 June 2009

This is a supplementary report to report number SDA/39026 issued 18 May 2009.

Notes:

Opinions and interpretations expressed herein are outside the UKAS accreditation scope.
Unless otherwise stated, Chemtech Environmental Ltd were not responsible for sampling.
Methods, procedures and performance data are available on request.
Results reported herein relate only to the material supplied to the laboratory.
All results are reported on a dry basis. Samples dried at no more than 30°C in a drying cabinet.
Analytical results are exclusive of stones.
This report shall not be reproduced except in full, withour prior written approval.
Samples will be disposed of 8 weeks from initial receipt unless otherwise instructed.

Key:

U UKAS accredited test
M MCERTS & UKAS accredited test
$ Test carried out by an approved subcontractor
NAF Non asbestos fibres

Approved by:

K Campbell

Karan Campbell — Director
John Campbell — Director

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Chemtech Environmental Limited

SAMPLE DESCRIPTIONS

MCERTS (Soils):

Soil descriptions are only intended to provide a log of sample matrices with respect to MCERTS validation.
They are not intended as full geological descriptions.
MCERTS accreditation applies for sand, clay and loam/topsoil, or combinations of these whether these are derived from naturally occurring soils or from made ground, as long as these materials constitute the major part of the sample.
Other materials such as concrete, gravel and brick are not accredited if they comprise the major part of the sample.

Lab number	Sample id	Depth (m)	Description	Moisture (%)
39026-1	Area 5 102	0.60	Sandy Clay	17.8
39026-2	Area 5 102	3.00	Mudstone (Clay)	7.0
39026-3	Area 5 103	0.20	Gravelly Sand	13.0
39026-4	Area 5 103	1.50	Clay	15.2
39026-5	Area 5 104	1.80	Sandy Clay	11.1
39026-6	Area 5 105	0.40	Gravelly Sand	13.3
39026-7	Area 5 105	1.10	Sandy Clay	10.4
39026-8	Area 5 110	1.40	Mudstone (Clay)	9.6
39026-9	Area 5 110	4.80	Clay	14.8
39026-10	Area 5 111	2.00	Gravelly Sand	9.9
39026-11	Area 5 111	4.70	Clay	14.6
39026-12	Area 5 112	0.60	Gravelly Sand	9.8
39026-13	Area 5 112	3.90	Ashy Clay	14.5
39026-14	Area 5 113	0.60	Gravelly Sand	14.5
39026-15	Area 5 113	3.30	Clay	12.7
39026-16	Area 5 114	1.80	Gravelly Sand	17.8
39026-17	Area 5 120	0.60	Ashy Clay	11.5
39026-18	Area 5 120	6.00	Gravelly Sand	15.2
39026-19	Area 5 121	0.50	Ashy Clay	8.4
39026-20	Area 5 121	4.50	Mudstone (Clay)	17.5
39026-21	Area 5 122	1.40	Clay	13.7
39026-22	Area 5 122	4.10	Clay	12.7
39026-23	Area 5 123	0.60	Gravelly Sand	16.3
39026-24	Area 5 123	2.60	Ashy Clay	11.7
39026-25	Area 5 124	1.70	Gravelly Clay	19.7
39026-26	Area 5 128	0.50	Gravelly Sand	9.7
39026-27	Area 5 128	1.20	Gravelly Sand	7.9
39026-28	Area 5 128	3.80	Gravelly Sand	8.2
39026-29	Area 5 129	1.00	Gravelly Clay	10.8
39026-30	Area 5 129	5.20	Clay	19.6
39026-31	Area 5 130	1.70	Gravelly Sand	18.7
39026-32	Area 5 130	5.50	Gravelly Sand	16.5

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Other materials such as concrete, gravel and brick are not accredited if they comprise the major part of the sample.

Lab number	Sample id	Depth (m)	Description	Moisture (%)
39026-33	Area 5 131	1.60	Mudstone (Clay)	13.2
39026-34	Area 5 131	3.60	Gravelly Sand	15.0
39026-35	Area 5 132	0.60	Clay	14.1
39026-36	Area 5 133	1.50	Mudstone (Clay)	6.7
39026-37	Area 5 133	3.00	Clay	16.6

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SOILS

Lab number			39026-1	39026-2	39026-3	39026-4	39026-5	39026-6
Sample id			Area 5 102	Area 5 102	Area 5 103	Area 5 103	Area 5 104	Area 5 105
Depth (m)			0.60	3.00	0.20	1.50	1.80	0.40
Test	**Method**	**Units**						
Arsenic (total)	CE054 M	mg/kg	80	3.8	28	5.8	9.7	32
Cadmium (total)	CE054 M	mg/kg	0.8	0.6	1.1	0.6	0.8	1.2
Chromium (total)	CE054 M	mg/kg	29	20	17	14	140	21
Copper (total)	CE054 M	mg/kg	34	38	74	12	24	81
Lead (total)	CE054 M	mg/kg	51	20	36	21	29	37
Mercury (total)	CE054	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Nickel (total)	CE054 M	mg/kg	33	45	30	16	39	34
Selenium (total)	CE054 M	mg/kg	1.6	0.6	1.3	0.7	1.4	1.4
Zinc (total)	CE054 M	mg/kg	48	94	71	61	113	85
pH	CE004 M	units	5.4	8.7	8.2	8.4	8.4	7.9
Sulphate (2:1 water soluble)	CE049 U	mg/l	116	-	-	-	-	73
Magnesium (2:1 water soluble)	CE056 U	mg/l	11	-	-	-	-	18
Sulphate (total)	CE010 M	mg/kg	23255	1408	1852	239	1663	5293
Sulphur (total)	CE061	mg/kg	10460	-	-	-	-	2722
Sulphide	CE079	mg/kg	<10	<10	<10	<10	<10	<10
Cyanide (total)	CE077	mg/kg	<2	<2	<2	<2	<2	<2
Phenols (total)	CE078	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Organic matter content	CE005 M	% w/w	1.07	1.76	7.56	1.75	3.56	9.52
Toluene extractable matter	CE031 U	mg/kg	120	50	820	<50	2810	830
PAH								
Naphthalene	CE087	mg/kg	-	-	-	-	1.7	1.9
Acenaphthylene	CE087	mg/kg	-	-	-	-	0.5	<0.1
Acenaphthene	CE087	mg/kg	-	-	-	-	5.9	0.5
Fluorene	CE087	mg/kg	-	-	-	-	6.3	0.6
Phenanthrene	CE087	mg/kg	-	-	-	-	51.6	5.2
Anthracene	CE087	mg/kg	-	-	-	-	15.1	1.2
Fluoranthene	CE087	mg/kg	-	-	-	-	51.6	6.5
Pyrene	CE087	mg/kg	-	-	-	-	42.4	5.3
Benzo(a)anthracene	CE087	mg/kg	-	-	-	-	24.1	2.5
Chrysene	CE087	mg/kg	-	-	-	-	19.5	2.7
Benzo(b)fluoranthene	CE087	mg/kg	-	-	-	-	27.7	2.9
Benzo(k)fluoranthene	CE087	mg/kg	-	-	-	-	15.2	2.2
Benzo(a)pyrene	CE087	mg/kg	-	-	-	-	28.0	3.1
Indeno(123cd)pyrene	CE087	mg/kg	-	-	-	-	11.4	0.9
Dibenz(ah)anthracene	CE087	mg/kg	-	-	-	-	3.9	0.8
Benzo(ghi)perylene	CE087	mg/kg	-	-	-	-	12.9	1.9
PAH (total)	CE087	mg/kg	<5	<5	11	<5	318	38

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SOILS

Lab number			39026-1	39026-2	39026-3	39026-4	39026-5	39026-6
Sample id			Area 5	Area 5	Area 5	Area 5	Area 5	Area 5
			102	102	103	103	104	105
Depth (m)			0.60	3.00	0.20	1.50	1.80	0.40
Test	**Method**	**Units**						
TPH								
TPH Aromatic EC5-EC7	CE068	mg/kg	-	-	0.02	-	<0.01	0.02
TPH Aromatic EC7-EC8	CE068	mg/kg	-	-	<0.01	-	<0.01	<0.01
TPH Aromatic EC8-EC10	CE068	mg/kg	-	-	<0.01	-	<0.01	<0.01
TPH Aromatic EC10-EC12	CE068	mg/kg	-	-	2	-	2	2
TPH Aromatic EC12-EC16	CE068	mg/kg	-	-	<1	-	7	2
TPH Aromatic EC16-EC21	CE068	mg/kg	-	-	7	-	167	20
TPH Aromatic EC21-EC35	CE068	mg/kg	-	-	2	-	151	17
TPH Aliphatic EC5-EC6	CE068	mg/kg	-	-	<0.1	-	<0.1	<0.1
TPH Aliphatic EC6-EC8	CE068	mg/kg	-	-	<0.1	-	<0.1	<0.1
TPH Aliphatic EC8-EC10	CE068	mg/kg	-	-	<0.1	-	<0.1	<0.1
TPH Aliphatic EC10-EC12	CE068	mg/kg	-	-	12	-	5	19
TPH Aliphatic EC12-EC16	CE068	mg/kg	-	-	62	-	21	66
TPH Aliphatic EC16-EC21	CE068	mg/kg	-	-	153	-	127	138
TPH Aliphatic EC21-EC35	CE068	mg/kg	-	-	804	-	1945	879
Subcontracted analysis								
Asbestos	$	-	NAF	-	-	-	-	-

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SOILS

Lab number			39026-7	39026-8	39026-9	39026-10	39026-11	39026-12
Sample id			Area 5	Area 5	Area 5	Area 5	Area 5	Area 5
			105	110	110	111	111	112
Depth (m)			1.10	1.40	4.80	2.00	4.70	0.60
Test	**Method**	**Units**						
Arsenic (total)	CE054 M	mg/kg	3.6	13	6.2	6.1	19	6.0
Cadmium (total)	CE054 M	mg/kg	0.6	0.6	0.6	0.6	0.8	0.6
Chromium (total)	CE054 M	mg/kg	15	21	15	48	18	52
Copper (total)	CE054 M	mg/kg	3.9	42	19	23	43	25
Lead (total)	CE054 M	mg/kg	16	33	19	47	33	46
Mercury (total)	CE054	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Nickel (total)	CE054 M	mg/kg	15	43	22	15	32	13
Selenium (total)	CE054 M	mg/kg	0.6	0.6	0.7	1.1	0.9	0.9
Zinc (total)	CE054 M	mg/kg	68	92	59	53	91	92
pH	CE004 M	units	4.8	8.3	8.1	8.4	8.1	8.2
Sulphate (2:1 water soluble)	CE049 U	mg/l	-	-	-	-	-	-
Magnesium (2:1 water soluble)	CE056 U	mg/l	-	-	-	-	-	-
Sulphate (total)	CE010 M	mg/kg	1515	774	230	1169	1704	2107
Sulphur (total)	CE061	mg/kg	-	-	-	-	-	-
Sulphide	CE079	mg/kg	<10	<10	<10	<10	<10	<10
Cyanide (total)	CE077	mg/kg	<2	<2	<2	<2	<2	<2
Phenols (total)	CE078	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Organic matter content	CE005 M	% w/w	2.63	0.77	3.51	2.74	7.67	3.53
Toluene extractable matter	CE031 U	mg/kg	190	230	240	4110	430	3830
PAH								
Naphthalene	CE087	mg/kg	-	-	-	1.6	-	0.9
Acenaphthylene	CE087	mg/kg	-	-	-	0.4	-	0.3
Acenaphthene	CE087	mg/kg	-	-	-	8.6	-	2.5
Fluorene	CE087	mg/kg	-	-	-	5.4	-	2.5
Phenanthrene	CE087	mg/kg	-	-	-	27.0	-	25.3
Anthracene	CE087	mg/kg	-	-	-	10.0	-	8.0
Fluoranthene	CE087	mg/kg	-	-	-	30.6	-	35.6
Pyrene	CE087	mg/kg	-	-	-	23.9	-	30.9
Benzo(a)anthracene	CE087	mg/kg	-	-	-	12.9	-	17.1
Chrysene	CE087	mg/kg	-	-	-	11.6	-	14.9
Benzo(b)fluoranthene	CE087	mg/kg	-	-	-	14.7	-	22.1
Benzo(k)fluoranthene	CE087	mg/kg	-	-	-	11.1	-	10.7
Benzo(a)pyrene	CE087	mg/kg	-	-	-	15.0	-	27.0
Indeno(123cd)pyrene	CE087	mg/kg	-	-	-	6.8	-	11.5
Dibenz(ah)anthracene	CE087	mg/kg	-	-	-	2.9	-	4.2
Benzo(ghi)perylene	CE087	mg/kg	-	-	-	8.1	-	12.6
PAH (total)	CE087	mg/kg	<5	<5	<5	191	<5	226

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SOILS

Lab number			39026-7	39026-8	39026-9	39026-10	39026-11	39026-12
Sample id			Area 5 105	Area 5 110	Area 5 110	Area 5 111	Area 5 111	Area 5 112
Depth (m)			1.10	1.40	4.80	2.00	4.70	0.60
Test	**Method**	**Units**						
TPH								
TPH Aromatic EC5-EC7	CE068	mg/kg	-	-	-	<0.01	0.01	<0.01
TPH Aromatic EC7-EC8	CE068	mg/kg	-	-	-	<0.01	<0.01	<0.01
TPH Aromatic EC8-EC10	CE068	mg/kg	-	-	-	<0.01	<0.01	<0.01
TPH Aromatic EC10-EC12	CE068	mg/kg	-	-	-	2	<1	1
TPH Aromatic EC12-EC16	CE068	mg/kg	-	-	-	10	<1	3
TPH Aromatic EC16-EC21	CE068	mg/kg	-	-	-	102	<1	105
TPH Aromatic EC21-EC35	CE068	mg/kg	-	-	-	86	<1	124
TPH Aliphatic EC5-EC6	CE068	mg/kg	-	-	-	<0.1	<0.1	<0.1
TPH Aliphatic EC6-EC8	CE068	mg/kg	-	-	-	<0.1	<0.1	<0.1
TPH Aliphatic EC8-EC10	CE068	mg/kg	-	-	-	<0.1	<0.1	<0.1
TPH Aliphatic EC10-EC12	CE068	mg/kg	-	-	-	7	12	6
TPH Aliphatic EC12-EC16	CE068	mg/kg	-	-	-	48	39	29
TPH Aliphatic EC16-EC21	CE068	mg/kg	-	-	-	218	69	102
TPH Aliphatic EC21-EC35	CE068	mg/kg	-	-	-	1876	413	1846
Subcontracted analysis								
Asbestos	$	-	-	-	-	-	-	-

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SOILS

Lab number			39026-13	39026-14	39026-15	39026-16	39026-17	39026-18
Sample id			Area 5	Area 5	Area 5	Area 5	Area 5	Area 5
			112	113	113	114	120	120
Depth (m)			3.90	0.60	3.30	1.80	0.60	6.00
Test	**Method**	**Units**						
Arsenic (total)	CE054 M	mg/kg	22	30	4.8	47	7.0	85
Cadmium (total)	CE054 M	mg/kg	1.7	0.5	0.5	0.5	0.3	0.6
Chromium (total)	CE054 M	mg/kg	29	14	12	4.6	11	15
Copper (total)	CE054 M	mg/kg	59	67	8.5	37	42	40
Lead (total)	CE054 M	mg/kg	43	22	13	20	29	25
Mercury (total)	CE054	mg/kg	<0.5	0.5	<0.5	0.7	<0.5	<0.5
Nickel (total)	CE054 M	mg/kg	37	15	18	6.9	25	9.5
Selenium (total)	CE054 M	mg/kg	1.1	1.6	0.5	2.1	0.9	1.2
Zinc (total)	CE054 M	mg/kg	129	77	73	9.1	64	24
pH	CE004 M	units	7.3	3.2	3.8	4.6	7.2	4.1
Sulphate (2:1 water soluble)	CE049 U	mg/l	-	1116	-	53	-	1172
Magnesium (2:1 water soluble)	CE056 U	mg/l	-	51	-	3	-	85
Sulphate (total)	CE010 M	mg/kg	2791	20242	4618	10842	1120	15888
Sulphur (total)	CE061	mg/kg	-	9185	-	5292	-	13770
Sulphide	CE079	mg/kg	<10	<10	<10	<10	<10	<10
Cyanide (total)	CE077	mg/kg	<2	<2	<2	<2	<2	<2
Phenols (total)	CE078	mg/kg	1.0	1.2	<0.5	1.1	1.0	<0.5
Organic matter content	CE005 M	% w/w	6.95	10.66	5.83	15.73	5.5	3.98
Toluene extractable matter	CE031 U	mg/kg	2990	130	120	<50	80	140
PAH								
Naphthalene	CE087	mg/kg	-	-	-	-	-	-
Acenaphthylene	CE087	mg/kg	-	-	-	-	-	-
Acenaphthene	CE087	mg/kg	-	-	-	-	-	-
Fluorene	CE087	mg/kg	-	-	-	-	-	-
Phenanthrene	CE087	mg/kg	-	-	-	-	-	-
Anthracene	CE087	mg/kg	-	-	-	-	-	-
Fluoranthene	CE087	mg/kg	-	-	-	-	-	-
Pyrene	CE087	mg/kg	-	-	-	-	-	-
Benzo(a)anthracene	CE087	mg/kg	-	-	-	-	-	-
Chrysene	CE087	mg/kg	-	-	-	-	-	-
Benzo(b)fluoranthene	CE087	mg/kg	-	-	-	-	-	-
Benzo(k)fluoranthene	CE087	mg/kg	-	-	-	-	-	-
Benzo(a)pyrene	CE087	mg/kg	-	-	-	-	-	-
Indeno(123cd)pyrene	CE087	mg/kg	-	-	-	-	-	-
Dibenz(ah)anthracene	CE087	mg/kg	-	-	-	-	-	-
Benzo(ghi)perylene	CE087	mg/kg	-	-	-	-	-	-
PAH (total)	CE087	mg/kg	13	<5	<5	<5	<5	<5

Chemtech Environmental Limited

SOILS

Lab number			39026-13	39026-14	39026-15	39026-16	39026-17	39026-18
Sample id			Area 5	Area 5	Area 5	Area 5	Area 5	Area 5
			112	113	113	114	120	120
Depth (m)			3.90	0.60	3.30	1.80	0.60	6.00
Test	**Method**	**Units**						
TPH								
TPH Aromatic EC5-EC7	CE068	mg/kg	<0.01	-	-	-	-	-
TPH Aromatic EC7-EC8	CE068	mg/kg	<0.01	-	-	-	-	-
TPH Aromatic EC8-EC10	CE068	mg/kg	<0.01	-	-	-	-	-
TPH Aromatic EC10-EC12	CE068	mg/kg	2	-	-	-	-	-
TPH Aromatic EC12-EC16	CE068	mg/kg	1	-	-	-	-	-
TPH Aromatic EC16-EC21	CE068	mg/kg	8	-	-	-	-	-
TPH Aromatic EC21-EC35	CE068	mg/kg	3	-	-	-	-	-
TPH Aliphatic EC5-EC6	CE068	mg/kg	<0.1	-	-	-	-	-
TPH Aliphatic EC6-EC8	CE068	mg/kg	<0.1	-	-	-	-	-
TPH Aliphatic EC8-EC10	CE068	mg/kg	<0.1	-	-	-	-	-
TPH Aliphatic EC10-EC12	CE068	mg/kg	27	-	-	-	-	-
TPH Aliphatic EC12-EC16	CE068	mg/kg	134	-	-	-	-	-
TPH Aliphatic EC16-EC21	CE068	mg/kg	408	-	-	-	-	-
TPH Aliphatic EC21-EC35	CE068	mg/kg	2177	-	-	-	-	-
Subcontracted analysis								
Asbestos	$	-	-	-	-	-	-	-

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SOILS

Lab number			39026-19	39026-20	39026-21	39026-22	39026-23	39026-24
Sample id			Area 5	Area 5	Area 5	Area 5	Area 5	Area 5
			121	121	122	122	123	123
Depth (m)			0.50	4.50	1.40	4.10	0.60	2.60
Test	**Method**	**Units**						
Arsenic (total)	CE054 M	mg/kg	19	91	9.8	17	34	13
Cadmium (total)	CE054 M	mg/kg	0.5	3.0	0.5	0.5	0.9	0.6
Chromium (total)	CE054 M	mg/kg	11	11	17	14	19	19
Copper (total)	CE054 M	mg/kg	36	22	36	33	69	39
Lead (total)	CE054 M	mg/kg	26	21	26	32	54	33
Mercury (total)	CE054	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Nickel (total)	CE054 M	mg/kg	30	4.6	29	27	29	38
Selenium (total)	CE054 M	mg/kg	1.5	1.2	1.5	1.5	1.6	0.9
Zinc (total)	CE054 M	mg/kg	49	29	60	60	127	107
pH	CE004 M	units	6.9	6.6	7.7	8.3	7.8	8.0
Sulphate (2:1 water soluble)	CE049 U	mg/l	-	251	-	-	44	-
Magnesium (2:1 water soluble)	CE056 U	mg/l	-	23	-	-	10	-
Sulphate (total)	CE010 M	mg/kg	2766	17147	848	1120	5499	140
Sulphur (total)	CE061	mg/kg	-	7733	-	-	3188	-
Sulphide	CE079	mg/kg	<10	<10	<10	<10	<10	<10
Cyanide (total)	CE077	mg/kg	<2	<2	<2	<2	<2	<2
Phenols (total)	CE078	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Organic matter content	CE005 M	% w/w	4.13	3.53	4.13	6.12	7.63	1.8
Toluene extractable matter	CE031 U	mg/kg	200	130	160	120	650	<50
PAH								
Naphthalene	CE087	mg/kg	-	-	-	-	-	-
Acenaphthylene	CE087	mg/kg	-	-	-	-	-	-
Acenaphthene	CE087	mg/kg	-	-	-	-	-	-
Fluorene	CE087	mg/kg	-	-	-	-	-	-
Phenanthrene	CE087	mg/kg	-	-	-	-	-	-
Anthracene	CE087	mg/kg	-	-	-	-	-	-
Fluoranthene	CE087	mg/kg	-	-	-	-	-	-
Pyrene	CE087	mg/kg	-	-	-	-	-	-
Benzo(a)anthracene	CE087	mg/kg	-	-	-	-	-	-
Chrysene	CE087	mg/kg	-	-	-	-	-	-
Benzo(b)fluoranthene	CE087	mg/kg	-	-	-	-	-	-
Benzo(k)fluoranthene	CE087	mg/kg	-	-	-	-	-	-
Benzo(a)pyrene	CE087	mg/kg	-	-	-	-	-	-
Indeno(123cd)pyrene	CE087	mg/kg	-	-	-	-	-	-
Dibenz(ah)anthracene	CE087	mg/kg	-	-	-	-	-	-
Benzo(ghi)perylene	CE087	mg/kg	-	-	-	-	-	-
PAH (total)	CE087	mg/kg	<5	<5	<5	<5	11	<5