



Test Certificate

Client: ADM Regeneration Ltd
Warrington Lane, Lymm, WA13 0SA
Site: Glan Gors - Ref 10309 - Soil samples

Date Tested: 09/07/14
Date Reported: 25 July, 2014
Date Received: 8 July, 2014
Sample Type: Solid

Certificate No: 14/2694/RG/S/C2
File No: 14/2694/RG/S
Client Ref: 10309/JR/041

Lab sample ref:	C183371	C183372	C183373	C183374	C183375
Client sample ref:	S1	S2	S3	S4	S5
Date sampled:	03/07/14	03/07/14	03/07/14	03/07/14	03/07/14
Sample matrix:	S	S	S	S	S

Determinand	Method	Units	ISO17025	MCERTS	LOD
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Deviation Assessment

Deviation(s)	C. Review	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
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pH	AN5a	Units	Y	Y	0.1	8.28	8.44	8.38	8.21	8.54
Phenols (screen) _M	AN45d	mg/kg	Y	N	1	<1	<1	<1	<1	<1
Boron (water soluble)	AN03	mg/kg	Y	N	0.1	0.8	0.5	0.6	0.7	0.6
Chromium (VI)	AN7	mg/kg	Y	Y	1	<1	<1	<1	<1	<1

CLEA Metals Suite

Arsenic	AN8b	mg/kg	Y	Y	2	6	3	3	4	5
Barium	AN8b	mg/kg	Y	Y	2	84	100	120	77	66
Beryllium	AN8a	mg/kg	Y	N	1	<1	<1	<1	<1	<1
Cadmium	AN8a	mg/kg	Y	Y	1	<1	<1	<1	<1	<1
Chromium (total)	AN8b	mg/kg	Y	Y	2	13	8	8	10	12
Copper	AN8b	mg/kg	Y	Y	2	8	4	3	6	7
Lead	AN8b	mg/kg	Y	Y	2	23	14	16	17	19
Mercury	AN8a	mg/kg	Y	Y	1	<1	<1	<1	<1	<1
Nickel	AN8b	mg/kg	Y	Y	2	12	6	7	9	11
Selenium	AN8a	mg/kg	Y	Y	1	<1	<1	<1	<1	<1
Vanadium	AN8b	mg/kg	Y	Y	2	13	10	9	10	12
Zinc	AN8b	mg/kg	Y	Y	2	34	18	20	25	31

Sample Prep(C)

EMR	EMR	%	N	N/A	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
% Stones	Stones	%	N	N/A	0.1	35.2	35.6	36.9	20.7	14.9
Moisture Content @ <30°C	AN1	%	Y	N/A	0.1	14.7	8.2	8.6	11.2	12.3
Sample Description	MCERTS ver4.	N/A	N	N/A	N/A	5A	1A	5A	5A	5A

Misc

Cyanide (free) _M	CTP18a	mg/kg	Y	Y	1	<1	<1	<1	<1	<1
Cyanide (complex) _M	AN45e	mg/kg	N	N	1	<1	<1	<1	<1	<1
Cyanide (total) _M	AN45f	mg/kg	Y	Y	1	<1	<1	<1	<1	<1
Thiocyanate _M	AN26a	mg/kg	Y	N	2	<2	<2	<2	<2	<2
TOC	AN48b	%	N	N	0.1	0.81	-	0.45	-	0.59
Sulphate (total)	AN49	% w/w	Y	Y	0.02	0.02	<0.02	<0.02	<0.02	<0.02
Sulphide _{SM}	AN45b	mg/kg	N	N	2	<2	<2	<2	<2	<2
Sulphur (total)	an8i	mg/kg	N	N	10	352	78	93	245	296

PAH (USEPA16)

Acenaphthene _M	GCM501	mg/kg	Y	Y	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene _M	GCM501a	mg/kg	Y	Y	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Anthracene _M	GCM501	mg/kg	Y	Y	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benz(a)anthracene _M	GCM501	mg/kg	Y	Y	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)pyrene _M	GCM501	mg/kg	Y	Y	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(b)fluoranthene _M	GCM501	mg/kg	Y	Y	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(ghi)perylene _M	GCM501	mg/kg	Y	Y	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(k)fluoranthene _M	GCM501	mg/kg	Y	Y	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Chrysene _M	GCM501	mg/kg	Y	Y	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenz(a,h)anthracene _M	GCM501	mg/kg	Y	Y	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene _M	GCM501	mg/kg	Y	Y	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene _M	GCM501	mg/kg	Y	Y	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Indeno(1,2,3-cd)pyrene _M	GCM501a	mg/kg	Y	Y	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Naphthalene (PAH) _M	GCM501	mg/kg	Y	Y	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene _M	GCM501	mg/kg	Y	Y	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Pyrene _M	GCM501	mg/kg	Y	Y	0.1	<0.1	<0.1	<0.1	<0.1	<0.1

PAH (USEPA16) Total _M	GCM501	mg/kg	Y	Y	1	<1	<1	<1	<1	<1
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Date Received: 8 July, 2014
Sample Type: Solid

Certificate No: 14/2694/RG/S/C2
File No: 14/2694/RG/S
Client Ref: 10309/JR/041

Lab sample ref:	C183371	C183372	C183373	C183374	C183375
Client sample ref:	S1	S2	S3	S4	S5
Date sampled:	03/07/14	03/07/14	03/07/14	03/07/14	03/07/14
Sample matrix:	S	S	S	S	S

Determinand	Method	Units	ISO17025	MCERTS	LOD					
TPH Banded(Alk/Aro) 1										
EC>5-6 Aliphatic _M	SOP05	µg/kg	Y	N	10	<10	<10	<10	<10	<10
EC>6-8 Aliphatic _M	SOP05	µg/kg	Y	N	10	<10	<10	<10	<10	<10
EC>8-10 Aliphatic _M	SOP05a	µg/kg	Y	N	1000	<1000	<1000	<1000	<1000	<1000
EC>10-12 Aliphatic _M	SOP05a	µg/kg	Y	N	1000	<1000	<1000	<1000	<1000	<1000
EC>12-16 Aliphatic _M	SOP05a	µg/kg	Y	N	1000	<1000	<1000	<1000	<1000	<1000
EC>16-35 Aliphatic _M	SOP05a	µg/kg	Y	N	1000	1993	<1000	1422	6757	3421
EC>35-44 Aliphatic _M	SOP05a	µg/kg	Y	N	1000	<1000	<1000	<1000	<1000	<1000
Total Aliphatics (1) _M	SOP05a	µg/kg	Y	N	1000	1993	<1000	1422	6757	3421
EC>5-7 Aromatic _M	SOP05	µg/kg	Y	N	10	<10	<10	<10	<10	<10
EC>7-8 Aromatic _M	SOP05	µg/kg	Y	N	10	<10	<10	<10	<10	<10
EC>8-10 Aromatic _M	SOP05a	µg/kg	Y	N	1000	<1000	<1000	<1000	<1000	<1000
EC>10-12 Aromatic _M	SOP05a	µg/kg	Y	N	1000	<1000	<1000	<1000	<1000	<1000
EC>12-16 Aromatic _M	SOP05a	µg/kg	Y	N	1000	<1000	<1000	<1000	<1000	<1000
EC>16-21 Aromatic _M	SOP05a	µg/kg	Y	N	1000	<1000	<1000	<1000	<1000	<1000
EC>21-35 Aromatic _M	SOP05a	µg/kg	Y	N	1000	4338	<1000	<1000	1802	2166
EC>35-44 Aromatic _M	SOP05a	µg/kg	Y	N	1000	<1000	<1000	<1000	<1000	<1000
Total Aromatics (1) _M	SOP05a	µg/kg	Y	N	1000	4338	<1000	<1000	1802	2166
Methyl t-butyl ether _M	SOP05	µg/kg	Y	N	10	<10	<10	<10	<10	<10
Benzene (VPH) _M	SOP05	µg/kg	Y	N	10	<10	<10	<10	<10	<10
Toluene (VPH) _M	SOP05	µg/kg	Y	N	10	<10	<10	<10	<10	<10
Ethylbenzene (VPH) _M	SOP05	µg/kg	Y	N	10	<10	<10	<10	<10	<10
m&p-Xylene (VPH) _M	SOP05	µg/kg	Y	N	10	<10	<10	<10	<10	<10
o-Xylene (VPH) _M	SOP05	µg/kg	Y	N	10	<10	<10	<10	<10	<10
Total VPH _M	SOP05	µg/kg	Y	N	10	<10	<10	<10	<10	<10
TPH _M	SOP05a	µg/kg	Y	N	1000	6331	<1000	1422	8559	5587



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Certificate No: 14/2694/RG/S/C2
File No: 14/2694/RG/S
Client Ref: 10309/JR/041

Lab sample ref: C183376
Client sample ref: S6
Date sampled: 03/07/14
Sample matrix: S

Determinand	Method	Units	ISO17025	MCERTS	LOD
Deviation Assessment					
Deviation(s)	C. Review	N/A	N/A	N/A	N/A

ADM Subsoil+PAH

pH	AN5a	Units	Y	Y	0.1	8.38
Phenols (screen) _M	AN45d	mg/kg	Y	N	1	<1
Boron (water soluble)	AN03	mg/kg	Y	N	0.1	0.6
Chromium (VI)	AN7	mg/kg	Y	Y	1	<1

CLEA Metals Suite

Arsenic	AN8b	mg/kg	Y	Y	2	6
Barium	AN8b	mg/kg	Y	Y	2	88
Beryllium	AN8a	mg/kg	Y	N	1	<1
Cadmium	AN8a	mg/kg	Y	Y	1	<1
Chromium (total)	AN8b	mg/kg	Y	Y	2	15
Copper	AN8b	mg/kg	Y	Y	2	6
Lead	AN8b	mg/kg	Y	Y	2	17
Mercury	AN8a	mg/kg	Y	Y	1	<1
Nickel	AN8b	mg/kg	Y	Y	2	11
Selenium	AN8a	mg/kg	Y	Y	1	<1
Vanadium	AN8b	mg/kg	Y	Y	2	14
Zinc	AN8b	mg/kg	Y	Y	2	24

Sample Prep(C)

EMR	EMR	%	N	N/A	0.1	<0.1
% Stones	Stones	%	N	N/A	0.1	23.3
Moisture Content @ <30 °C	AN1	%	Y	N/A	0.1	10.4
Sample Description	MCERTS ver4.	N/A	N	N/A	N/A	5A

Misc

Cyanide (free) _M	CTP18a	mg/kg	Y	Y	1	<1
Cyanide (complex) _M	AN45e	mg/kg	N	N	1	<1
Cyanide (total) _M	AN45f	mg/kg	Y	Y	1	<1
Thiocyanate _M	AN26a	mg/kg	Y	N	2	<2
Sulphate (total)	AN49	% w/w	Y	Y	0.02	<0.02
Sulphide _{SM}	AN45b	mg/kg	N	N	2	<2
Sulphur (total)	an8i	mg/kg	N	N	10	233

PAH (USEPA16)

Acenaphthene _M	GCM501	mg/kg	Y	Y	0.1	<0.1
Acenaphthylene _M	GCM501a	mg/kg	Y	Y	0.1	<0.1
Anthracene _M	GCM501	mg/kg	Y	Y	0.1	<0.1
Benz(a)anthracene _M	GCM501	mg/kg	Y	Y	0.1	<0.1
Benzo(a)pyrene _M	GCM501	mg/kg	Y	Y	0.1	<0.1
Benzo(b)fluoranthene _M	GCM501	mg/kg	Y	Y	0.1	<0.1
Benzo(ghi)perylene _M	GCM501	mg/kg	Y	Y	0.1	<0.1
Benzo(k)fluoranthene _M	GCM501	mg/kg	Y	Y	0.1	<0.1
Chrysene _M	GCM501	mg/kg	Y	Y	0.1	<0.1
Dibenz(a,h)anthracene _M	GCM501	mg/kg	Y	Y	0.1	<0.1
Fluoranthene _M	GCM501	mg/kg	Y	Y	0.1	<0.1
Fluorene _M	GCM501	mg/kg	Y	Y	0.1	<0.1
Indeno(1,2,3-cd)pyrene _M	GCM501a	mg/kg	Y	Y	0.1	<0.1
Naphthalene (PAH) _M	GCM501	mg/kg	Y	Y	0.1	<0.1
Phenanthrene _M	GCM501	mg/kg	Y	Y	0.1	<0.1
Pyrene _M	GCM501	mg/kg	Y	Y	0.1	<0.1

PAH (USEPA16) Total _M	GCM501	mg/kg	Y	Y	1	<1
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Date sampled: 03/07/14
Sample matrix: S

Determinand	Method	Units	ISO17025	MCERTS	LOD
TPH Banded(Al/Aro) 1					
EC>5-6 Aliphatic _M	SOP05	µg/kg	Y	N	10
EC>6-8 Aliphatic _M	SOP05	µg/kg	Y	N	10
EC>8-10 Aliphatic _M	SOP05a	µg/kg	Y	N	1000
EC>10-12 Aliphatic _M	SOP05a	µg/kg	Y	N	1000
EC>12-16 Aliphatic _M	SOP05a	µg/kg	Y	N	1000
EC>16-35 Aliphatic _M	SOP05a	µg/kg	Y	N	1000
EC>35-44 Aliphatic _M	SOP05a	µg/kg	Y	N	1000
Total Aliphatics (1) _M	SOP05a	µg/kg	Y	N	1000
EC>5-7 Aromatic _M	SOP05	µg/kg	Y	N	10
EC>7-8 Aromatic _M	SOP05	µg/kg	Y	N	10
EC>8-10 Aromatic _M	SOP05a	µg/kg	Y	N	1000
EC>10-12 Aromatic _M	SOP05a	µg/kg	Y	N	1000
EC>12-16 Aromatic _M	SOP05a	µg/kg	Y	N	1000
EC>16-21 Aromatic _M	SOP05a	µg/kg	Y	N	1000
EC>21-35 Aromatic _M	SOP05a	µg/kg	Y	N	1000
EC>35-44 Aromatic _M	SOP05a	µg/kg	Y	N	1000
Total Aromatics (1) _M	SOP05a	µg/kg	Y	N	1000
Methyl t-butyl ether _M	SOP05	µg/kg	Y	N	10
Benzene (VPH) _M	SOP05	µg/kg	Y	N	10
Toluene (VPH) _M	SOP05	µg/kg	Y	N	10
Ethylbenzene (VPH) _M	SOP05	µg/kg	Y	N	10
m&p-Xylene (VPH) _M	SOP05	µg/kg	Y	N	10
o-Xylene (VPH) _M	SOP05	µg/kg	Y	N	10
Total VPH _M	SOP05	µg/kg	Y	N	10
TPH _M	SOP05a	µg/kg	Y	N	1000

Notes

- All analyses performed on the sample dried at <30°C, except analyses suffixed with 'M'.
- Analyses suffixed 'M' were performed on the sample as received and corrected for % moisture at <30°C where applicable.
- All results are expressed as dry weight.
- MCERTS accreditation applicable to Sample Matrix 'S' only.
- Natural stones (pebbles, gravels etc.) which do not pass a 2mm sieve are excluded from dried analyses.
- Tests marked * indicate subcontracted analyses.
- The laboratory has tested the material/items supplied by the client as sampled in accordance with the client's own requirements.
- *Sample Description key: 1. - Sand, 2. Loam, 3. Clay, 4. Sand/loam mix, 5. Sand/clay mix, 6. Clay/loam mix, 7. Other.
suffixed with: A - Stones, B - Construction rubble, C - Visible Hydrocarbons, D - Vegetation, E - Glass/metal, F - Strong odour, G - Other.
- Leachate preparation is not included in our UKAS accreditation.
- Dates of testing for all parameters are available upon request.
- Issue 2 to include additional analysis at client's request.

Signed for, and on behalf of Exova (UK) Ltd.

Prepared by:

Claire McLaughlin

C McLaughlin
Administrator

Approved by:

Julie McElroy

J McElroy
Laboratory Manager



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