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THE ENVIRONMENTAL LABORATORY LTD

Analytical Report Number: 16-06483

Issue: 1

Date of Issue: 20/04/2016

Contact: Stuart Guy

Customer Details: Stuart Guy Consulting
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Quotation No: Q14-00070

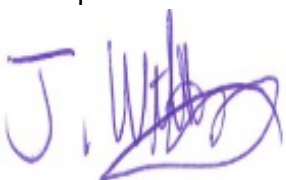
Order No: 16-04-01

Customer Reference: 16-04-01

Date Received: 15/04/2016

Date Approved: 20/04/2016

Details: Whaplode

Approved by: 

John Wilson, Operations Manager

Any comments, opinions or interpretations expressed herein are outside the scope of UKAS accreditation (Accreditation Number 2683)



Sample Summary

Report No.: 16-06483

Elab No.	Client's Ref.	Date Sampled	Date Scheduled	Description	Deviations
59825	TP1 0.30 - 0.40	14/04/2016	15/04/2016	Silty loam	
59826	TP1 1.20 - 1.40	14/04/2016	15/04/2016	Silty loam	
59827	TP2 0.25 - 0.45	14/04/2016	15/04/2016	Sandy loam	
59828	TP2 0.90 - 1.10	14/04/2016	15/04/2016	Loamy sand	
59829	TP3 0.35 - 0.55	14/04/2016	15/04/2016	Sandy loam	
59830	TP3 1.10 - 1.30	14/04/2016	15/04/2016	Loamy sand	
59831	TP4 0.40 - 0.60	14/04/2016	15/04/2016	Sandy loam	
59832	TP4 0.70 - 0.90	14/04/2016	15/04/2016	Sandy loam	
59833	TP5 0.25 - 0.45	14/04/2016	15/04/2016	Silty loam	
59834	TP5 0.90 - 1.10	14/04/2016	15/04/2016	Sandy loam	
59835	TP6 0.35 - 0.55	14/04/2016	15/04/2016	Sandy loam	
59836	TP6 1.30 - 1.50	14/04/2016	15/04/2016	Sandy loam	

Results Summary

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2683

ELAB Reference				59825	59826	59827	59828	59829	59830
Customer Reference									
Sample ID									
Sample Type				SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Sample Location				TP1	TP1	TP2	TP2	TP3	TP3
Sample Depth (m)				0.30 - 0.40	1.20 - 1.40	0.25 - 0.45	0.90 - 1.10	0.35 - 0.55	1.10 - 1.30
Sampling Date				14/04/2016	14/04/2016	14/04/2016	14/04/2016	14/04/2016	14/04/2016
Determinand	Codes	Units	LOD						
Metals									
Arsenic	M	mg/kg	1	27.1	8.3	21.7	4.3	24.1	5.0
Cadmium	M	mg/kg	0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Chromium	M	mg/kg	5	22.2	20.1	19.9	11.6	17.5	9.6
Copper	M	mg/kg	5	79.5	34.0	46.9	8.2	45.6	7.1
Lead	M	mg/kg	5	222	55.5	113	17.7	95.9	14.0
Mercury	M	mg/kg	0.5	0.7	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Nickel	M	mg/kg	5	23.9	17.3	18.0	10.7	17.5	9.1
Selenium	M	mg/kg	1	< 1.0	< 1.0	< 1.0	< 1.0	1.2	< 1.0
Zinc	M	mg/kg	5	203	84.1	255	41.9	224	97.8
Inorganics									
Hexavalent Chromium	N	mg/kg	0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8
Organics									
>C8-C10 BCB	N	mg/kg	1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
>C10-C12 BCB	N	mg/kg	1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
>C12-C16 BCB	N	mg/kg	1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
>C16-C21 BCB	N	mg/kg	1	3.0	< 1.0	2.0	< 1.0	< 1.0	< 1.0
>C21-C35 BCB	N	mg/kg	1	16.4	< 1.0	9.8	< 1.0	10.0	< 1.0
>C35-C40 BCB	N	mg/kg	1	< 1.0	< 1.0	< 1.0	< 1.0	2.7	< 1.0
Total (>C8-C40) BCB	N	mg/kg	1	19.4	< 1.0	11.8	< 1.0	12.7	< 1.0
Polyaromatic hydrocarbons									
Naphthalene	M	mg/kg	0.1	< 0.1	< 0.1	0.1	< 0.1	< 0.1	< 0.1
Acenaphthylene	M	mg/kg	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Acenaphthene	M	mg/kg	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Fluorene	M	mg/kg	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Phenanthrene	M	mg/kg	0.1	1.0	< 0.1	0.6	< 0.1	0.5	< 0.1
Anthracene	M	mg/kg	0.1	0.2	< 0.1	0.1	< 0.1	0.1	< 0.1
Fluoranthene	M	mg/kg	0.1	2.6	< 0.1	1.6	< 0.1	1.3	< 0.1
Pyrene	M	mg/kg	0.1	2.2	< 0.1	1.3	< 0.1	1.1	< 0.1
Benzo(a)anthracene	M	mg/kg	0.1	1.1	< 0.1	0.7	< 0.1	0.7	< 0.1
Chrysene	M	mg/kg	0.1	1.4	< 0.1	0.9	< 0.1	0.8	< 0.1
Benzo (b) fluoranthene	M	mg/kg	0.1	1.2	0.1	0.7	< 0.1	0.6	< 0.1
Benzo(k)fluoranthene	M	mg/kg	0.1	1.3	< 0.1	0.8	< 0.1	0.8	< 0.1
Benzo (a) pyrene	M	mg/kg	0.1	1.3	< 0.1	0.8	< 0.1	0.7	< 0.1
Indeno (1,2,3-cd) pyrene	M	mg/kg	0.1	1.0	0.2	0.6	< 0.1	0.6	< 0.1
Dibenzo(a,h)anthracene	M	mg/kg	0.1	0.3	< 0.1	0.1	< 0.1	0.2	< 0.1
Benzo[g,h,i]perylene	M	mg/kg	0.1	1.3	< 0.1	0.5	< 0.1	0.5	< 0.1
Total PAH(16)	M	mg/kg	0.4	15.1	< 0.4	8.9	< 0.4	7.9	< 0.4

Results Summary

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ELAB Reference				59831	59832	59833	59834	59835	59836
Customer Reference									
Sample ID									
Sample Type				SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Sample Location				TP4	TP4	TP5	TP5	TP6	TP6
Sample Depth (m)				0.40 - 0.60	0.70 - 0.90	0.25 - 0.45	0.90 - 1.10	0.35 - 0.55	1.30 - 1.50
Sampling Date				14/04/2016	14/04/2016	14/04/2016	14/04/2016	14/04/2016	14/04/2016
Determinand	Codes	Units	LOD						
Metals									
Arsenic	M	mg/kg	1	8.2	6.1	12.1	5.5	16.4	4.3
Cadmium	M	mg/kg	0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Chromium	M	mg/kg	5	12.9	12.9	17.2	14.6	18.5	10.9
Copper	M	mg/kg	5	28.3	8.0	81.3	14.8	43.1	15.0
Lead	M	mg/kg	5	107	17.6	246	27.5	151	47.0
Mercury	M	mg/kg	0.5	< 0.5	< 0.5	< 0.5	< 0.5	0.7	< 0.5
Nickel	M	mg/kg	5	11.6	11.5	15.1	11.8	20.0	9.7
Selenium	M	mg/kg	1	< 1.0	< 1.0	1.0	< 1.0	1.2	< 1.0
Zinc	M	mg/kg	5	62.9	38.7	76.4	41.3	105	40.6
Inorganics									
Hexavalent Chromium	N	mg/kg	0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8
Organics									
>C8-C10 BCB	N	mg/kg	1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
>C10-C12 BCB	N	mg/kg	1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
>C12-C16 BCB	N	mg/kg	1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
>C16-C21 BCB	N	mg/kg	1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
>C21-C35 BCB	N	mg/kg	1	2.7	< 1.0	1.7	< 1.0	1.8	< 1.0
>C35-C40 BCB	N	mg/kg	1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total (>C8-C40) BCB	N	mg/kg	1	2.7	< 1.0	1.7	< 1.0	1.8	< 1.0
Polyaromatic hydrocarbons									
Naphthalene	M	mg/kg	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Acenaphthylene	M	mg/kg	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Acenaphthene	M	mg/kg	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Fluorene	M	mg/kg	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Phenanthrene	M	mg/kg	0.1	0.4	< 0.1	0.3	< 0.1	0.2	< 0.1
Anthracene	M	mg/kg	0.1	0.2	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Fluoranthene	M	mg/kg	0.1	1.7	< 0.1	0.8	< 0.1	0.6	< 0.1
Pyrene	M	mg/kg	0.1	1.4	< 0.1	0.6	< 0.1	0.6	< 0.1
Benzo(a)anthracene	M	mg/kg	0.1	1.1	< 0.1	0.4	< 0.1	0.3	< 0.1
Chrysene	M	mg/kg	0.1	1.1	< 0.1	0.5	< 0.1	0.4	< 0.1
Benzo (b) fluoranthene	M	mg/kg	0.1	0.8	0.2	0.4	< 0.1	0.4	< 0.1
Benzo(k)fluoranthene	M	mg/kg	0.1	1.0	< 0.1	0.5	< 0.1	0.5	< 0.1
Benzo (a) pyrene	M	mg/kg	0.1	1.0	< 0.1	0.4	< 0.1	0.4	< 0.1
Indeno (1,2,3-cd) pyrene	M	mg/kg	0.1	0.7	< 0.1	0.3	< 0.1	0.3	< 0.1
Dibenzo(a,h)anthracene	M	mg/kg	0.1	0.2	< 0.1	0.2	< 0.1	0.1	< 0.1
Benzo[g,h,i]perylene	M	mg/kg	0.1	0.4	< 0.1	0.2	< 0.1	0.2	< 0.1
Total PAH(16)	M	mg/kg	0.4	10.1	< 0.4	4.8	< 0.4	4.2	< 0.4



Method Summary

Report No.: 16-06483

Parameter	Codes	Analysis Undertaken On	Date Tested	Method Number	Technique
Soil					
Hexavalent chromium	N	As submitted sample	18/04/2016	110	Colorimetry
Aqua regia extractable metals	M	Air dried sample	19/04/2016	118	ICPMS
PAH (GC-FID)	M	As submitted sample	18/04/2016	133	GC-FID
Basic carbon banding in soil	N	As submitted sample	18/04/2016	218	GC-FID

Tests marked N are not UKAS accredited

Report Information

Report No.: 16-06483

Key

U	hold UKAS accreditation
M	hold MCERTS and UKAS accreditation
N	do not currently hold UKAS accreditation
^	MCERTS accreditation not applicable for sample matrix
*	UKAS accreditation not applicable for sample matrix
S	Subcontracted to approved laboratory UKAS Accredited for the test
SM	Subcontracted to approved laboratory MCERTS/UKAS Accredited for the test
I/S	Insufficient Sample
U/S	Unsuitable sample
n/t	Not tested
<	means "less than"
>	means "greater than"

Soil sample results are expressed on an air dried basis

Comments or interpretations are beyond the scope of UKAS accreditation

The results relate only to the items tested

PCB congener results may include any coeluting PCBs

Uncertainty of measurement for the determinands tested are available upon request

Deviation Codes

-
- | | |
|---|--|
| a | No date of sampling supplied |
| b | No time of sampling supplied (Waters Only) |
| c | Sample not received in appropriate containers |
| d | Sample not received in cooled condition |
| e | The container has been incorrectly filled |
| f | Sample age exceeds stability time (sampling to receipt) |
| g | Sample age exceeds stability time (sampling to analysis) |

Where a sample has a deviation code, the applicable test result may be invalid.

Sample Retention and Disposal

All soil samples will be retained for a period of one month

All water samples will be retained for 7 days following the date of the test report

Charges may apply to extended sample storage