CONCEPT LIFE SCIENCES
DELIVERING SCIENCE

Concept Life Sciences is a trading name of Concept Life Sciences Analytical & Development Services Limited registered in England and Wales (No 2514788)

Concept Life Sciences

Certificate of Analysis

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Report Number: 673057-1

Date of Report: 09-Aug-2017

Customer: Sirius Environmental
Office Suite 2
The Beacon Centre for Enterprise
Dafen
Llanelli
SA14 8LQ

Customer Contact: Mr Dylan Thomas

Customer Job Reference: TA1037
Customer Purchase Order: 1487/TA1037/D.Thomas
Customer Site Reference: Tarmac A
Date Job Received at Concept: 03-Aug-2017
Date Analysis Started: 04-Aug-2017
Date Analysis Completed: 09-Aug-2017

The results reported relate to samples received in the laboratory and may not be representative of a whole batch.

Opinions and interpretations expressed herein are outside the scope of UKAS accreditation

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Tests covered by this certificate were conducted in accordance with Concept Life Sciences SOPs

All results have been reviewed in accordance with Section 25 of the Concept Life Sciences, Analytical Services Quality Manual

UKAS TESTING
1549

Report checked
and authorised by :
Claire Brown Crociquia
Customer Service Manager

Issued by :
Claire Brown Crociquia
Customer Service Manager

Concept Reference: 673057
Project Site: Tarmac A
Customer Reference: TA1037

Water Analysed as Water
Water Suite

Concept Reference	**673057 001**
Customer Sample Reference	**W1 Surface Water**
Date Sampled	**02-AUG-2017**

Determinand	Method	Test Sample	LOD	Units	
Cd (Dissolved)	T281	F	0.00002	mg/l	**0.00009**
Pb (Dissolved)	T281	F	0.0003	mg/l	<0.0003
Mn (Dissolved)	T281	F	0.001	mg/l	**0.030**
Hg (Dissolved)	T281	F	0.00005	mg/l	<0.00005
Ni (Dissolved)	T281	F	0.001	mg/l	**0.003**
Total Hardness expressed as CaCO3	T649	F	10	mg/l	**400**
Electrical Conductivity	T7	F	1	µS/cm	**1400**
pH	T7	F			**7.80**

Concept Reference: 673057
Project Site: Tarmac A
Customer Reference: TA1037

Water Analysed as Water
Total and Speciated USEPA16 PAH (SE)

Concept Reference	**673057 001**
Customer Sample Reference	**W1 Surface Water**
Date Sampled	**02-AUG-2017**

Determinand	Method	Test Sample	LOD	Units	
Naphthalene	T149	AR	0.01	µg/l	**0.02**
Acenaphthylene	T149	AR	0.01	µg/l	<0.01
Acenaphthene	T149	AR	0.01	µg/l	**0.02**
Fluorene	T149	AR	0.01	µg/l	<0.01
Phenanthrene	T149	AR	0.01	µg/l	**0.02**
Anthracene	T149	AR	0.01	µg/l	<0.01
Fluoranthene	T149	AR	0.01	µg/l	<0.01
Pyrene	T149	AR	0.01	µg/l	<0.01
Benzo(a)Anthracene	T149	AR	0.01	µg/l	<0.01
Chrysene	T149	AR	0.01	µg/l	<0.01
Benzo(b)fluoranthene	T149	AR	0.01	µg/l	<0.01
Benzo(k)fluoranthene	T149	AR	0.01	µg/l	<0.01
Benzo(a)Pyrene	T149	AR	0.01	µg/l	<0.01
Indeno(123-cd)Pyrene	T149	AR	0.01	µg/l	<0.01
Dibenzo(ah)Anthracene	T149	AR	0.01	µg/l	<0.01
Benzo(ghi)Perylene	T149	AR	0.01	µg/l	<0.01
PAH(total)	T149	AR	0.01	µg/l	**0.05**

Concept Reference: 673057
Project Site: Tarmac A
Customer Reference: TA1037

Water Analysed as Water
Total Petroleum Hydrocarbons CWG (SE)

Concept Reference	**673057 001**
Customer Sample Reference	**W1 Surface Water**
Date Sampled	**02-AUG-2017**

Determinand	Method	Test Sample	LOD	Units	
Benzene	T54	AR	1	µg/l	<1
Toluene	T54	AR	1	µg/l	<1
EthylBenzene	T54	AR	1	µg/l	<1
M/P Xylene	T54	AR	1	µg/l	<1
O Xylene	T54	AR	1	µg/l	<1
TPH (C5-C6 aliphatic)	T54	AR	0.020	mg/l	<0.020
TPH (C6-C7 aromatic)	T54	AR	0.020	mg/l	<0.020
TPH (C6-C8 aliphatic)	T54	AR	0.020	mg/l	<0.020
TPH (C7-C8 aromatic)	T54	AR	0.020	mg/l	<0.020
TPH (C8-C10 aliphatic)	T54	AR	0.020	mg/l	<0.020
TPH (C8-C10 aromatic)	T54	AR	0.020	mg/l	<0.020
TPH (C10-C12 aliphatic)	T219	AR	0.01	mg/l	<0.01
TPH (C10-C12 aromatic)	T219	AR	0.01	mg/l	<0.01
TPH (C12-C16 aliphatic)	T219	AR	0.01	mg/l	<0.01
TPH (C12-C16 aromatic)	T219	AR	0.01	mg/l	**0.01**
TPH (C16-C21 aliphatic)	T219	AR	0.01	mg/l	**0.01**
TPH (C16-C21 aromatic)	T219	AR	0.01	mg/l	**0.01**
TPH (C21-C35 aliphatic)	T219	AR	0.01	mg/l	<0.01
TPH (C21-C35 aromatic)	T219	AR	0.01	mg/l	**0.01**

Index to symbols used in 673057-1

Value	Description
F	Filtered
AR	As Received
U	Analysis is UKAS accredited
N	Analysis is not UKAS accredited

Method Index

Value	Description
T7	Probe
T54	GC/MS (Headspace)
T649	ICP/OES (Calc)
T149	GC/MS (SIR)
T219	GC/FID (SE)
T281	ICP/MS (Filtered)

Accreditation Summary

Determinand	Method	Test Sample	LOD	Units	Symbol	Concept References
Cd (Dissolved)	T281	F	0.00002	mg/l	U	001
Pb (Dissolved)	T281	F	0.0003	mg/l	U	001
Mn (Dissolved)	T281	F	0.001	mg/l	U	001
Hg (Dissolved)	T281	F	0.00005	mg/l	U	001
Ni (Dissolved)	T281	F	0.001	mg/l	U	001
Total Hardness expressed as CaCO3	T649	F	10	mg/l	U	001
Electrical Conductivity	T7	F	1	µS/cm	U	001
pH	T7	F			U	001
Benzene	T54	AR	1	µg/l	U	001
Toluene	T54	AR	1	µg/l	U	001
EthylBenzene	T54	AR	1	µg/l	U	001
M/P Xylene	T54	AR	1	µg/l	U	001
O Xylene	T54	AR	1	µg/l	U	001
TPH (C5-C6 aliphatic)	T54	AR	0.020	mg/l	N	001

Determinand	Method	Test Sample	LOD	Units	Symbol	Concept References
TPH (C6-C7 aromatic)	T54	AR	0.020	mg/l	N	001
TPH (C6-C8 aliphatic)	T54	AR	0.020	mg/l	N	001
TPH (C7-C8 aromatic)	T54	AR	0.020	mg/l	N	001
TPH (C8-C10 aliphatic)	T54	AR	0.020	mg/l	N	001
TPH (C8-C10 aromatic)	T54	AR	0.020	mg/l	N	001
TPH (C10-C12 aliphatic)	T219	AR	0.01	mg/l	N	001
TPH (C10-C12 aromatic)	T219	AR	0.01	mg/l	N	001
TPH (C12-C16 aliphatic)	T219	AR	0.01	mg/l	N	001
TPH (C12-C16 aromatic)	T219	AR	0.01	mg/l	N	001
TPH (C16-C21 aliphatic)	T219	AR	0.01	mg/l	N	001
TPH (C16-C21 aromatic)	T219	AR	0.01	mg/l	N	001
TPH (C21-C35 aliphatic)	T219	AR	0.01	mg/l	N	001
TPH (C21-C35 aromatic)	T219	AR	0.01	mg/l	N	001
Naphthalene	T149	AR	0.01	µg/l	U	001
Acenaphthylene	T149	AR	0.01	µg/l	U	001
Acenaphthene	T149	AR	0.01	µg/l	U	001
Fluorene	T149	AR	0.01	µg/l	U	001
Phenanthrene	T149	AR	0.01	µg/l	U	001
Anthracene	T149	AR	0.01	µg/l	U	001
Fluoranthene	T149	AR	0.01	µg/l	U	001
Pyrene	T149	AR	0.01	µg/l	U	001
Benzo(a)Anthracene	T149	AR	0.01	µg/l	U	001
Chrysene	T149	AR	0.01	µg/l	U	001
Benzo(b)fluoranthene	T149	AR	0.01	µg/l	N	001
Benzo(k)fluoranthene	T149	AR	0.01	µg/l	U	001
Benzo(a)Pyrene	T149	AR	0.01	µg/l	U	001
Indeno(123-cd)Pyrene	T149	AR	0.01	µg/l	U	001
Dibenzo(ah)Anthracene	T149	AR	0.01	µg/l	U	001
Benzo(ghi)Perylene	T149	AR	0.01	µg/l	U	001
PAH(total)	T149	AR	0.01	µg/l	N	001