Gareth Ffoulkes
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Lamby way
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Certificate of Analysis Number: 1947 A Interim

Project/Site name:	Lamby Way		Samples Taken:	05-07-2017
Job Number:	76-01-03		Samples Received:	05-07-2017
Order Number:	-		Date Instructed:	06-07-2017
Sample Matrix:	Surface, Effluent and Groundwater		Analysis Complete:	-
			Report Issued:	24-08-2017
			Sampled By:	Client

Disposal Times:

All water samples will be retained for a period of two weeks and all soil samples retained for a period of one month following the date of the issued certificate.

Approved by: Adam Whitehouse
Signature:
Title: Quality Manager

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FAO: Conor Gray

CERTIFICATE OF ANALYSIS
1947 A Interim

Results of analysis of 1 samples received on the 05/07/17

Report Date
24th August 2017

Code	Determinand	Units	*	Sample Identification			
Laboratory Sample Number:				**060717028**	-	-	-
Client Sample Reference:				SW 7	-	-	-
Sample Date:				05/07/17	-	-	-
Sample Matrix:				Surface Water	-	-	-
INORG-L01	pH	pH units	A	8.2	-	-	-
INORG-L02	Conductivity	$\mu S.cm^{-1}$	A	2,340	-	-	-
INORG-L02.2	Total Dissolved Solids	$mg.l^{-1}$	A	1,560	-	-	-
INORG-L05	COD	$mg.l^{-1}$ O_2	A	208	-	-	-
INORG-L06.1	BOD	$mg.l^{-1}$ O_2	A	9.2	-	-	-
INORG-L06.1	BOD ATU	$mg.l^{-1}$ O_2	A	9.2	-	-	-
INORG-L07	Permanganate Value	$mg.l^{-1}$ O_2	A	28	-	-	-
INORG-L08	DO	$mg.l^{-1}$ O_2	A	8.7	-	-	-
INORG-L09	Alkalinity	$mg.l^{-1}$ $CaCO_3$	A	478	-	-	-
INORG-L10	Suspended Solids	$mg.l^{-1}$	A	95.2	-	-	-
INORG-L11	Nitrate	$mg.l^{-1}$ N	N	12.69	-	-	-
INORG-L12	Ammonia	$mg.l^{-1}$ N	A	46	-	-	-
INORG-L13	Chloride	$mg.l^{-1}$	A	19.7	-	-	-
INORG-L14	Nitrite	$mg.l^{-1}$ N	A	0.473	-	-	-
INORGL-15	Fluoride	$mg.l^{-1}$	A	0.64	-	-	-
INORG-L17	TON	$mg.l^{-1}$ N	N	13.16	-	-	-
INORG-L18	TOC	$mg.l^{-1}$ C	A	176	-	-	-
INORG-L19	DOC	$mg.l^{-1}$ C	A	100	-	-	-
INORG-L21.1	Ortho-phosphate	$mg.l^{-1}$	A	1.1	-	-	-
INORG-L24	Total Nitrogen	$mg.l^{-1}$ N	N	59.2	-	-	-
INORG-L25	Sulphate	$mg.l^{-1}$	A	54.8	-	-	-
INORG-L37	Sulphide	$mg.l^{-1}$	N	<0.1	-	-	-
GAMC	Legionella	-	S-A	See attached	-	-	-
-	Radiochemistry	$mg.l^{-1}$	-	*[AR]*	-	-	-
-	Tritium	$mg.l^{-1}$	-	*[AR]*	-	-	-
1780	Kjeldahl Nitrogen	$mg.l^{-1}$	S-N	54.0	-	-	-

* Accreditation Status
Tests marked 'A' hold UKAS accreditation
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Laboratory Sample Number:				**060717028**	-	-	-
Client Sample Reference:				SW 7	-	-	-
Sample Date:				05/07/17	-	-	-
Sample Matrix:				Surface Water	-	-	-
1450	Cadmium	µg.l^{-1}	S-A	14.51	-	-	-
1450	Barium	µg.l^{-1}	S-A	470	-	-	-
6030	Yttrium	µg.l^{-1}	S-N	<1.0	-	-	-
METAL-L	Lead	µg.l^{-1}	A	<4.10	-	-	-
1415	Sodium	mg.l^{-1}	S-N	1400	-	-	-
1415	Magnesium	mg.l^{-1}	S-N	250	-	-	-
1450	Aluminium	µg.l^{-1}	S-N	17	-	-	-
1415	Potassium	mg.l^{-1}	S-A	80	-	-	-
1415	Calcium	mg.l^{-1}	S-A	180	-	-	-
6030	Scandium	µg.l^{-1}	S-N	<1.0	-	-	-
1450	Titanium	µg.l^{-1}	S-A	88	-	-	-
1450	Chromium	µg.l^{-1}	S-A	25.12	-	-	-
1450	Manganese	µg.l^{-1}	S-A	550	-	-	-
1450	Iron	µg.l^{-1}	S-N	380	-	-	-
1450	Cobalt	µg.l^{-1}	S-A	1.2	-	-	-
1450	Nickel	µg.l^{-1}	S-A	30.50	-	-	-
1450	Copper	µg.l^{-1}	S-A	14.51	-	-	-
1450	Zinc	µg.l^{-1}	S-A	31.84	-	-	-
-	Bromide	µg.l^{-1}	S-N	<0.10	-	-	-
1450	Selenium	µg.l^{-1}	S-A	8.3	-	-	-
1450	Zirconium	µg.l^{-1}	S-N	<1.0	-	-	-
1450	Molybdenum	µg.l^{-1}	S-A	<1.0	-	-	-
ORG-L01	Total TPH	mg.l^{-1}	A	<1.0	-	-	-
ORG-L02	Total PAH	mg.l^{-1}	N	<1.0	-	-	-
1815	Total PCB's *(7 congeners)*	µg.l^{-1}	S-N	<0.010	-	-	-
1760	BTEX	µg.l^{-1}	S-A	<1.0	-	-	-
1790	SVOC's	µg.l^{-1}	S-N	<50	-	-	-
1760	VOC's	µg.l^{-1}	S-A	<50	-	-	-
-	Glycols	mg.l^{-1}	S-N	<0.10	-	-	-
ORG-L17	Mecoprop	µg.l^{-1}	A	<0.05			

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Code	Determinand	Units	*	Sample Identification			
Laboratory Sample Number:				**060717028**	-	-	-
Client Sample Reference:				SW 7	-	-	-
Sample Date:				05/07/17	-	-	-
Sample Matrix:				Surface Water	-	-	-
1820	Organophosphorous Pesticides	µg.l^{-1}	S-N	<0.20	-	-	-
1830	Organonitrogen Pesticides	µg.l^{-1}	S-N	<0.20	-	-	-
1840	Organochlorine Pesticide	µg.l^{-1}	S-N	<0.20	-	-	-
1890	Acid Herbicides	µg.l^{-1}	S-N	<0.50	-	-	-
1790	Acrylamide	µg.l^{-1}	S-N	<0.50	-	-	-
1840	Dalapon	µg.l^{-1}	S-N	<0.20	-	-	-
1760	Epichlohydrin	µg.l^{-1}	S-N	<10	-	-	-
1920	Phenols	mg.l^{-1}	S-A	0.090	-	-	-
1770	Surfactants as MBAS	mg.l^{-1}	S-N	0.31	-	-	-
1760	Triethylamine	µg.l^{-1}	S-N	<10	-	-	-
1630	Dissolved Methane	mg.l^{-1}	S-N	0.060	-	-	-
-	Carbetamide	µg.l^{-1}	S-N	<0.1000	-	-	-
-	Chlorufam	µg.l^{-1}	S-N	<0.1000	-	-	-
-	Chlorpropham	µg.l^{-1}	S-N	<0.1000	-	-	-
-	Ethiofencarb	µg.l^{-1}	S-N	<0.1000	-	-	-
-	Phenmediphan	µg.l^{-1}	S-N	<0.1000	-	-	-
-	Pirimicarb	µg.l^{-1}	S-N	<0.1000	-	-	-
-	Propham	µg.l^{-1}	S-N	<0.1000	-	-	-
1220	Total Phosphorous	mg.l^{-1}	S-N	0.026			
1300	Cyanide	mg.l^{-1}	S-N	<0.05			
1450	Antimony	µg.l^{-1}	S-N	2.3			
1760	m&p Xylene	µg.l^{-1}	S-A	<1.0			
1760	o-Xylene	µg.l^{-1}	S-A	<1.0			

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Analytical Method	Method Code	Accreditation Status
Determination on pH in water by pH probe (In-house method)	INORG-L01	ISO 17025
Determination of conductivity in water by conductivity meter (In-house method)	INORG-L02	ISO 17025
Determination of COD in water by colorimetric analysis (In-house method)	INORG-L05	ISO 17025
Determination of BOD and BOD ATU in water by titration (In-house method)	INORG-L06.1	ISO 17025
Determination of permanganate in water by titration (In-house method)	INORG-L06.1	ISO 17025
Determination of DO in water by titration (In-house method)	INORG-L08	ISO 17025
Determination of alkalinity in water by colorimetric analysis (In-house method)	INORG-L09	ISO 17025
Determination of suspended solids in water by gravimetric analysis (In-house method)	INORG-L10	ISO 17025
Determination of nitrate in water by colorimetric analysis (In-house method)	INORG-L11	None
Determination of ammonia in water by colorimetric analysis (In-house method)	INORG-L12	ISO 17025
Determination of chloride in water by colorimetric analysis (In-house method)	INORG-L13	ISO 17025
Determination of nitrite in water by colorimetric analysis (In-house method)	INORG-L14	ISO 17025
Determination of fluoride in water by ion selective electrode (In-house method)	INORG-L15	ISO 17025
Determination of TON in water by calculation (In-house method)	INORG-L17	None
Determination of TOC/DOC in water by colorimetric analysis (In-house method)	INORG-L18	ISO 17025
Determination of Ortho-phosphate in water by colorimetric analysis (In-house method)	INORG-L21.1	ISO 17025

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Analytical Method	Method Code	Accreditation Status
Determination of total nitrogen in water by calculation (In-house method)	INORG-L24	None
Determination of Sulphate in water by calculation (In-house method)	INORG-L25	ISO 17025
Determination of Sulphide in water by colorimetric analysis (In-house method)	INORG-L37	None
Determination of Legionella in water (Sub-contracted)	GAMC	ISO 17025
Determination of Kjeldahl Nitrogen in water by GCMS (Sub-contracted)	1815	None
Determination of metals in water by ICP-OES (In-house method)	METALS-L	ISO 17025
Determination of metals in water by ICP-MS (Sub-contracted)	1415	None
Determination of metals in water by ICP MS (Sub-contracted)	1450	ISO 17025
Determination of metals in water by ICP-MS (Sub-contracted)	1220	ISO 17025
Determination of Yttrium and Scandium in water (Sub-contracted)	6030	None
Determination of TPH in water by GC-MS (In-house method)	ORG-L01	ISO 17025
Determination of PAH in water by GC-MS (In-house method)	ORG-L02	None
Determination of PCB's in water by GC-MS (Sub-contracted)	1815	None
Determination of VOC's in water by GC-MS (Sub-contracted)	1760	ISO 17025
Determination of SVOC's in water by GC-MS (Sub-contracted)	1790	None
Determination of Glycols in water (Sub-contracted)	-	None

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Analytical Method	Method Code	Accreditation Status
Determination of mecoprop in water by GC-MS (In-house method)	ORG-L17	ISO 17025
Determination of Organophosphorous in water by GC-MS (Sub-contracted)	1820	None
Determination of Organonitrogen in water by GC-MS (Sub-contracted)	1830	None
Determination of Organochlorine in water by GC-MS (Sub-contracted)	1840	None
Determination of Acid Herbicides in water by GC-MS (Sub-contracted)	1890	None
Determination of Phenols in water by HPLC (Sub-contracted)	1920	ISO 17025
Determination of surfactants in water by spectrophotometry (Sub-contracted)	1770	None
Determination of Dissolved methane in water by GC-MS (Sub-contracted)	1630	None
Determination of cyanide in water by colorimetric analysis (Sub-contracted)	1300	None

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All results only relate to the items tested.
This report supersedes any previous versions issued by the laboratory.
A full list of determinants relating to abbreviations such as PAHs, VOCs, SVOCs, PCBs etc. is available upon request.
Where results have been labelled as deviating for any reason, the data may not be representative of the sample at the point of sampling:

[A/R]: Awaiting Results
[I/S]: Insufficient Sample
[U/S]: Unsuitable Sample
[A]: Date of Sampling not supplied
[B]: Sample age exceeds recommended storage time
[C]: Samples not received in appropriate containers
[D]: Broken Container
< "Less Than"
> "Greater Than"

Where any sub-contracted results have been noted as deviating by the laboratory in question, their deviations codes will be applied and detailed.
Accreditation statements are correct at the time of issue.
This report shall not be reproduced in part without the approval of Decus Research Ltd, nor used in any way as to lead to misrepresentation of the results or their implications.

**********END OF REPORT**********

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