

Certificate of Analysis

Issuing Laboratory SOCOTEC, Marine Department, Advanced Chemistry and Research, Etwall House, Bretby Business Park, Ashby Road, Burton-upon-Trent DE15 0YZ



Test Report ID MAR02655

Issue Version: 1

Customer: Associated British Ports, Queen Alexandra House, Cargo Road, Cardiff, CF10 4LY

Customer Reference: Port Talbot - MMO Analysis

Date Sampled: 02-May-25

Date Samples Received: 08-May-25

Test Report Date: 11-Jun-25

Condition of samples: Cold Satisfactory

Opinions and Interpretations expressed herein are outside the scope of our UKAS accreditation
The results reported relate only to the sample tested
The results apply to the sample as received

A handwritten signature in black ink, appearing to read 'K. Smith'.

Authorised by: Katherine Smith

Position: Customer Services Co-ordinator



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MAR02655
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Test Report ID MAR02655
Issue Version 1
Customer Reference Port Talbot - MMO Analysis

		Units	% M/M	% (at 0.5phi intervals)	% (at 0.5phi intervals)	% (at 0.5phi intervals)	% (at 0.5phi intervals)	% (at 0.5phi intervals)	% (at 0.5phi intervals)
		Method No	WSLM59*	*SUB_01	*SUB_01	*SUB_01	*SUB_01	*SUB_01	*SUB_01
		Accreditation	UKAS/MMO	MMO	MMO	MMO	MMO	MMO	MMO
			Total Organic Carbon	45mm	31.5mm	22.4mm	16mm	11.2mm	8mm
Client Reference:	SOCOTEC Ref:	Matrix	-	-5.5	-5.0	-4.5	-4.0	-3.5	-3.0
A	MAR02655.001	Sediment	2.43	0.00	0.00	0.00	0.00	0.00	0.00
B	MAR02655.002	Sediment	2.34	0.00	0.00	0.00	0.00	0.00	0.00
C	MAR02655.003	Sediment	2.29	0.00	0.00	0.00	0.00	0.00	0.00
D	MAR02655.004	Sediment	2.35	0.00	0.00	0.00	0.00	0.00	0.00
E	MAR02655.005	Sediment	2.20	0.00	0.00	0.00	0.00	0.00	0.00
F	MAR02655.006	Sediment	2.40	0.00	0.00	0.00	0.00	0.00	0.00
G	MAR02655.007	Sediment	2.33	0.00	0.00	0.00	0.00	0.00	0.00
H	MAR02655.008	Sediment	2.20	0.00	0.00	0.00	0.00	0.00	0.00
I	MAR02655.009	Sediment	2.08	0.00	0.00	0.00	0.00	0.00	0.00
J	MAR02655.010	Sediment	2.25	0.00	0.00	0.00	0.00	0.00	0.00
K	MAR02655.011	Sediment	1.71	0.00	0.00	0.00	0.00	0.00	0.00
L	MAR02655.012	Sediment	1.30	0.00	0.00	0.00	0.00	0.00	0.00
M	MAR02655.013	Sediment	0.39	0.00	0.00	0.00	0.00	0.00	0.00
N	MAR02655.014	Sediment	0.41	0.00	0.00	0.00	0.00	0.00	0.00
O	MAR02655.015	Sediment	4.67	0.00	0.00	0.00	0.00	0.00	0.09
P	MAR02655.016	Sediment	5.00	0.00	0.00	0.00	0.00	0.00	0.00

* See Report Notes

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		Units	% (at 0.5phi intervals)	% (at 0.5phi intervals)	% (at 0.5phi intervals)	% (at 0.5phi intervals)	% (at 0.5phi intervals)	% (at 0.5phi intervals)	% (at 0.5phi intervals)
		Method No	*SUB_01	*SUB_01	*SUB_01	*SUB_01	*SUB_01	*SUB_01	*SUB_01
		Accreditation	MMO	MMO	MMO	MMO	MMO	MMO	MMO
			5.6mm	4mm	2.8mm	2mm	1.4mm	1mm	707µm
Client Reference:	SOCOTEC Ref:	Matrix	-2.5	-2.0	-1.5	-1.0	-0.5	0.0	0.5
A	MAR02655.001	Sediment	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B	MAR02655.002	Sediment	0.00	0.00	0.00	0.00	0.00	0.00	0.00
C	MAR02655.003	Sediment	0.00	0.00	0.00	0.00	0.00	0.00	0.00
D	MAR02655.004	Sediment	0.00	0.00	0.00	0.00	0.00	0.00	0.00
E	MAR02655.005	Sediment	0.00	0.00	0.00	0.00	0.00	0.00	0.00
F	MAR02655.006	Sediment	0.00	0.00	0.00	0.00	0.00	0.00	0.02
G	MAR02655.007	Sediment	0.00	0.00	0.00	0.00	0.00	0.01	0.50
H	MAR02655.008	Sediment	0.00	0.00	0.00	0.00	0.00	0.00	0.00
I	MAR02655.009	Sediment	0.00	0.00	0.00	0.00	0.00	0.00	0.00
J	MAR02655.010	Sediment	0.00	0.00	0.00	0.00	0.00	0.00	0.00
K	MAR02655.011	Sediment	0.00	0.00	0.00	0.00	0.00	0.00	0.00
L	MAR02655.012	Sediment	0.00	0.00	0.00	0.00	0.00	0.00	0.00
M	MAR02655.013	Sediment	0.00	0.00	0.00	0.00	0.00	0.00	0.00
N	MAR02655.014	Sediment	0.01	0.01	0.02	0.05	0.07	0.08	0.00
O	MAR02655.015	Sediment	0.02	0.03	0.01	0.04	0.06	0.07	1.38
P	MAR02655.016	Sediment	0.00	0.00	0.00	0.00	0.00	0.00	0.00

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Test Report ID MAR02655
Issue Version 1
Customer Reference Port Talbot - MMO Analysis

		Units	% (at 0.5phi intervals)	% (at 0.5phi intervals)	% (at 0.5phi intervals)	% (at 0.5phi intervals)	% (at 0.5phi intervals)	% (at 0.5phi intervals)	% (at 0.5phi intervals)
		Method No	*SUB_01	*SUB_01	*SUB_01	*SUB_01	*SUB_01	*SUB_01	*SUB_01
		Accreditation	MMO	MMO	MMO	MMO	MMO	MMO	MMO
			500µm	353.6µm	250µm	176.8µm	125µm	88.39µm	63µm
Client Reference:	SOCOTEC Ref:	Matrix	1.0	1.5	2.0	2.5	3.0	3.5	4.0
A	MAR02655.001	Sediment	0.00	0.00	0.00	0.49	2.50	0.45	0.31
B	MAR02655.002	Sediment	0.00	0.00	0.00	0.40	2.80	0.68	0.10
C	MAR02655.003	Sediment	0.00	0.00	0.00	0.08	1.88	0.92	0.01
D	MAR02655.004	Sediment	0.00	0.00	0.12	0.96	3.57	1.99	0.11
E	MAR02655.005	Sediment	0.00	0.00	0.00	0.60	3.32	0.72	0.48
F	MAR02655.006	Sediment	0.36	0.50	0.11	0.71	1.77	0.21	1.07
G	MAR02655.007	Sediment	0.69	0.82	0.20	1.11	1.49	0.80	3.14
H	MAR02655.008	Sediment	0.00	0.00	0.00	0.03	0.32	0.06	0.01
I	MAR02655.009	Sediment	0.00	0.00	0.00	1.46	4.95	0.59	1.05
J	MAR02655.010	Sediment	0.00	0.00	0.01	1.45	5.38	1.24	0.68
K	MAR02655.011	Sediment	0.00	0.00	0.00	0.93	2.52	0.30	2.78
L	MAR02655.012	Sediment	0.00	0.00	0.00	1.05	3.67	0.52	2.75
M	MAR02655.013	Sediment	0.00	0.00	0.97	11.17	30.87	30.24	10.42
N	MAR02655.014	Sediment	0.00	0.20	0.84	1.79	7.00	1.71	2.69
O	MAR02655.015	Sediment	1.50	2.31	1.13	1.68	6.06	2.02	3.61
P	MAR02655.016	Sediment	0.00	0.00	0.91	11.41	31.20	30.61	10.47

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		Units	% (at 0.5phi intervals)	% (at 0.5phi intervals)	% (at 0.5phi intervals)	% (at 0.5phi intervals)	% (at 0.5phi intervals)	% (at 0.5phi intervals)	% (at 0.5phi intervals)
		Method No	*SUB_01	*SUB_01	*SUB_01	*SUB_01	*SUB_01	*SUB_01	*SUB_01
		Accreditation	MMO	MMO	MMO	MMO	MMO	MMO	MMO
			44.2µm	31.3µm	22.1µm	15.6µm	11µm	7.8µm	5.5µm
Client Reference:	SOCOTEC Ref:	Matrix	4.5	5.0	5.5	6.0	6.5	7.0	7.5
A	MAR02655.001	Sediment	4.71	6.71	6.39	8.77	9.76	10.97	12.46
B	MAR02655.002	Sediment	3.79	6.65	5.61	8.56	9.03	10.52	12.45
C	MAR02655.003	Sediment	1.50	6.25	5.60	7.31	8.77	11.70	13.88
D	MAR02655.004	Sediment	3.04	6.77	5.82	7.39	8.58	11.02	12.87
E	MAR02655.005	Sediment	6.13	8.07	7.64	9.21	10.20	11.68	12.13
F	MAR02655.006	Sediment	6.23	6.33	7.12	9.96	10.88	11.41	11.84
G	MAR02655.007	Sediment	5.95	7.00	7.87	10.51	11.83	11.15	10.46
H	MAR02655.008	Sediment	1.96	4.93	4.25	8.11	8.31	10.02	13.21
I	MAR02655.009	Sediment	6.48	8.20	9.13	10.37	10.30	10.26	10.18
J	MAR02655.010	Sediment	6.28	8.58	9.20	10.13	10.20	10.49	10.18
K	MAR02655.011	Sediment	8.64	10.01	10.32	10.52	9.78	9.41	9.25
L	MAR02655.012	Sediment	8.47	10.48	10.50	10.11	9.76	9.71	9.17
M	MAR02655.013	Sediment	4.77	1.98	1.21	0.78	0.94	1.41	1.47
N	MAR02655.014	Sediment	8.03	8.84	7.86	7.93	8.54	9.68	9.90
O	MAR02655.015	Sediment	8.00	7.94	7.16	8.17	8.39	8.76	8.98
P	MAR02655.016	Sediment	4.59	1.93	1.06	0.79	0.82	1.23	1.38

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		Units	% (at 0.5phi intervals)	% (at 0.5phi intervals)	% (at 0.5phi intervals)	% (at 0.5phi intervals)	% (at 0.5phi intervals)	% (at 0.5phi intervals)	% (at 0.5phi intervals)
		Method No	*SUB_01	*SUB_01	*SUB_01	*SUB_01	*SUB_01	*SUB_01	*SUB_01
		Accreditation	MMO	MMO	MMO	MMO	MMO	MMO	MMO
			3.9µm	2.75µm	1.95µm	1.38µm	0.98µm	0.69µm	0.49µm
Client Reference:	SOCOTEC Ref:	Matrix	8.0	8.5	9.0	9.5	10.0	10.5	11.0
A	MAR02655.001	Sediment	11.27	7.71	4.16	2.37	1.86	1.79	1.76
B	MAR02655.002	Sediment	11.46	7.96	4.44	2.70	2.20	2.12	2.07
C	MAR02655.003	Sediment	12.55	8.72	4.94	3.00	2.36	2.20	2.10
D	MAR02655.004	Sediment	11.56	7.96	4.34	2.45	1.90	1.86	1.85
E	MAR02655.005	Sediment	9.96	6.40	3.28	1.76	1.36	1.35	1.36
F	MAR02655.006	Sediment	10.12	6.77	3.54	1.85	1.38	1.39	1.44
G	MAR02655.007	Sediment	8.54	5.66	2.95	1.51	1.09	1.11	1.18
H	MAR02655.008	Sediment	13.00	9.31	5.48	3.65	3.00	2.76	2.68
I	MAR02655.009	Sediment	8.38	5.48	2.90	1.64	1.34	1.36	1.37
J	MAR02655.010	Sediment	8.15	5.29	2.85	1.64	1.31	1.31	1.30
K	MAR02655.011	Sediment	7.66	5.09	2.75	1.59	1.30	1.32	1.34
L	MAR02655.012	Sediment	7.29	4.81	2.67	1.55	1.21	1.18	1.17
M	MAR02655.013	Sediment	1.13	0.66	0.39	0.38	0.39	0.33	0.23
N	MAR02655.014	Sediment	8.04	5.15	2.72	1.57	1.26	1.23	1.19
O	MAR02655.015	Sediment	7.45	4.80	2.44	1.30	1.03	1.05	1.07
P	MAR02655.016	Sediment	1.08	0.63	0.38	0.36	0.38	0.31	0.22

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		Units	% (at 0.5phi intervals)	% (at 0.5phi intervals)	% (at 0.5phi intervals)	% (at 0.5phi intervals)	% (at 0.5phi intervals)	% (at 0.5phi intervals)	% (at 0.5phi intervals)
		Method No	*SUB_01	*SUB_01	*SUB_01	*SUB_01	*SUB_01	*SUB_01	*SUB_01
		Accreditation	MMO	MMO	MMO	MMO	MMO	MMO	MMO
			0.34µm	0.24µm	0.17µm	0.12µm	0.09µm	0.06µm	0.04µm
Client Reference:	SOCOTEC Ref:	Matrix	11.5	12.0	12.5	13.0	13.5	14.0	14.5
A	MAR02655.001	Sediment	1.65	1.41	1.06	0.77	0.46	0.18	0.02
B	MAR02655.002	Sediment	1.92	1.64	1.24	0.90	0.55	0.21	0.03
C	MAR02655.003	Sediment	1.91	1.60	1.17	0.83	0.49	0.19	0.02
D	MAR02655.004	Sediment	1.73	1.47	1.11	0.81	0.50	0.20	0.02
E	MAR02655.005	Sediment	1.27	1.09	0.84	0.62	0.39	0.16	0.02
F	MAR02655.006	Sediment	1.39	1.23	0.97	0.73	0.46	0.18	0.02
G	MAR02655.007	Sediment	1.18	1.08	0.88	0.68	0.43	0.17	0.02
H	MAR02655.008	Sediment	2.57	2.27	1.73	1.25	0.75	0.29	0.03
I	MAR02655.009	Sediment	1.29	1.12	0.88	0.66	0.42	0.17	0.02
J	MAR02655.010	Sediment	1.22	1.06	0.83	0.63	0.40	0.17	0.02
K	MAR02655.011	Sediment	1.26	1.10	0.86	0.66	0.42	0.17	0.02
L	MAR02655.012	Sediment	1.09	0.96	0.76	0.58	0.37	0.15	0.02
M	MAR02655.013	Sediment	0.14	0.07	0.03	0.01	0.00	0.00	0.00
N	MAR02655.014	Sediment	1.07	0.90	0.69	0.50	0.31	0.13	0.02
O	MAR02655.015	Sediment	1.00	0.86	0.66	0.50	0.31	0.13	0.02
P	MAR02655.016	Sediment	0.13	0.07	0.03	0.01	0.00	0.00	0.00

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		Units	% (at 0.5phi intervals)
		Method No	*SUB_01
		Accreditation	MMO
			<0.04µm
Client Reference:	SOCOTEC Ref:	Matrix	>14.5
A	MAR02655.001	Sediment	0.00
B	MAR02655.002	Sediment	0.00
C	MAR02655.003	Sediment	0.00
D	MAR02655.004	Sediment	0.00
E	MAR02655.005	Sediment	0.00
F	MAR02655.006	Sediment	0.00
G	MAR02655.007	Sediment	0.00
H	MAR02655.008	Sediment	0.00
I	MAR02655.009	Sediment	0.00
J	MAR02655.010	Sediment	0.00
K	MAR02655.011	Sediment	0.00
L	MAR02655.012	Sediment	0.00
M	MAR02655.013	Sediment	0.00
N	MAR02655.014	Sediment	0.00
O	MAR02655.015	Sediment	0.00
P	MAR02655.016	Sediment	0.00

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		Units	mg/Kg (Dry Weight)							
		Method No	ICPMSS*							
		Limit of Detection	0.5	0.04	0.5	0.5	0.01	0.5	0.5	2
		Accreditation	UKAS/MMO	UKAS/MMO	UKAS/MMO	UKAS/MMO	UKAS/MMO	UKAS/MMO	UKAS/MMO	UKAS/MMO
Client Reference:	SOCOTEC Ref:	Matrix	Arsenic (As)	Cadmium (Cd)	Chromium (Cr)	Copper (Cu)	Mercury (Hg)	Nickel (Ni)	Lead (Pb)	Zinc (Zn)
A	MAR02655.001	Sediment	15.9	0.22	33.3	21.7	0.14	25.9	53.2	167
B	MAR02655.002	Sediment	16.2	0.22	35.1	22.8	0.13	27.4	52.5	170
C	MAR02655.003	Sediment	16.1	0.21	34.2	22.1	0.12	26.6	53.2	172
D	MAR02655.004	Sediment	16.4	0.21	39.0	24.1	0.14	29.2	55.8	179
E	MAR02655.005	Sediment	15.6	0.22	32.8	22.0	0.12	25.9	51.3	166
F	MAR02655.006	Sediment	16.1	0.24	35.0	23.9	0.16	32.6	54.3	178
G	MAR02655.007	Sediment	16.1	0.18	38.2	22.1	0.23	27.3	54.2	170
H	MAR02655.008	Sediment	15.6	0.16	38.1	21.8	0.12	31.6	54.7	180
I	MAR02655.009	Sediment	13.7	0.19	28.6	17.8	0.14	25.6	41.5	130
J	MAR02655.010	Sediment	13.6	0.20	27.4	18.3	0.12	25.9	42.0	131
K	MAR02655.011	Sediment	11.3	0.16	28.4	16.5	0.14	23.0	38.6	128
L	MAR02655.012	Sediment	11.2	0.18	27.0	15.7	0.12	21.8	36.1	124
M	MAR02655.013	Sediment	8.20	0.09	11.3	5.30	0.05	9.00	16.5	69.9
N	MAR02655.014	Sediment	8.20	0.09	11.4	5.50	0.05	10.0	17.2	70.7
O	MAR02655.015	Sediment	13.6	0.21	21.1	17.3	0.13	17.5	34.2	116
P	MAR02655.016	Sediment	14.1	0.22	23.8	18.0	0.15	19.2	35.5	123
Certified Reference Material SETOC 768 (% Recovery)			98	117	103	103	104	105	99	106
QC Blank			<0.5	<0.04	<0.5	<0.5	<0.01	<0.5	<0.5	<2

* See Report Notes

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		Units	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)
		Method No	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304
		Limit of Detection	1	1	1	1	1	1	1	1
		Accreditation	UKAS/MMO	UKAS/MMO	UKAS/MMO	UKAS/MMO	UKAS/MMO	UKAS/MMO	UKAS/MMO	UKAS/MMO
Client Reference:	SOCOTEC Ref:	Matrix	ACENAPTH	ACENAPHY	ANTHRACN	BAA	BAP	BBF	BENZGHIP	BEP
A	MAR02655.001	Sediment	37.4	38.4	71.5	230	284	352	256	263
B	MAR02655.002	Sediment	34.7	32.2	71.8	196	250	335	239	243
C	MAR02655.003	Sediment	37.8	34.8	72.7	199	257	349	248	255
D	MAR02655.004	Sediment	36.9	39.4	77.5	234	286	361	255	265
Certified Reference Material Nist 1941b (% Recovery)			66	120	70	69	64	86	77	91
QC Blank			<1	<1	<1	<1	<1	<1	<1	<1

~ Indicates result is for an In-house Reference Material as no Certified Reference Materials are available.

For full analyte name see method summaries.

*See report notes

MAR02655

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Certificate of Analysis



Issuing Laboratory SOCOTEC, Marine Department, Advanced Chemistry and Research, Etwall House, Bretby Business Park, Ashby Road, Burton-upon-Trent DE15 0YZ

Test Report ID MAR02655
Issue Version 1
Customer Reference Port Talbot - MMO Analysis

		Units	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)
		Method No	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304
		Limit of Detection	1	1	1	1	1	1	1	1
		Accreditation	UKAS/MMO	MMO	MMO	MMO	MMO	MMO	UKAS/MMO	UKAS/MMO
Client Reference:	SOCOTEC Ref:	Matrix	BKF*	C1N	C1PHEN	C2N	C3N	CHRYSENE*	DBENZAH	FLUORANT
A	MAR02655.001	Sediment	260	279	286	229	147	330	61.4	440
B	MAR02655.002	Sediment	235	282	281	231	155	304	55.7	405
C	MAR02655.003	Sediment	246	329	298	261	180	315	59.5	402
D	MAR02655.004	Sediment	262	272	264	219	145	336	61.9	461
Certified Reference Material Nist 1941b (% Recovery)			78	70	80	100	108	91	110	77
QC Blank			<1	<1	<1	<1	<1	<1	<1	<1

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Test Report ID MAR02655
Issue Version 1
Customer Reference Port Talbot - MMO Analysis

		Units	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)
		Method No	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304
		Limit of Detection	1	1	1	1	1	1
		Accreditation	UKAS/MMO	UKAS/MMO	UKAS/MMO	MMO	UKAS/MMO	UKAS/MMO
Client Reference:	SOCOTEC Ref:	Matrix	FLUORENE	INDPYR	NAPTH	PERYLENE	PHENANT	PYRENE
A	MAR02655.001	Sediment	90.2	275	155	100	315	351
B	MAR02655.002	Sediment	87.7	268	169	88.5	299	318
C	MAR02655.003	Sediment	97.4	276	177	90.4	314	312
D	MAR02655.004	Sediment	86.6	286	164	100	301	360
Certified Reference Material Nist 1941b (% Recovery)			50	79	57	59	74	70
QC Blank			<1	<1	<1	<1	<1	<1

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Test Report ID MAR02655
Issue Version 1
Customer Reference Port Talbot - MMO Analysis

		Units	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)
		Method No	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304
		Limit of Detection	1	1	1	1	1	1	1	1
		Accreditation	UKAS/MMO	UKAS/MMO	UKAS/MMO	UKAS/MMO	UKAS/MMO	UKAS/MMO	UKAS/MMO	UKAS/MMO
Client Reference:	SOCOTEC Ref:	Matrix	ACENAPTH	ACENAPHY	ANTHRACN	BAA	BAP	BBF	BENZGHIP	BEP
E	MAR02655.005	Sediment	28.1	21.7	55.1	159	193	255	175	190
F	MAR02655.006	Sediment	37.1	27.2	68.0	195	243	331	227	240
G	MAR02655.007	Sediment	32.3	25.1	50.3	158	203	284	201	207
H	MAR02655.008	Sediment	34.8	28.5	64.0	185	230	314	222	233
I	MAR02655.009	Sediment	25.0	18.9	48.6	157	180	220	148	160
J	MAR02655.010	Sediment	32.1	28.7	66.2	216	241	298	197	216
K	MAR02655.011	Sediment	22.2	20.8	49.1	146	169	225	154	163
L	MAR02655.012	Sediment	15.9	13.4	29.2	87.2	105	137	93.7	100
M	MAR02655.013	Sediment	5.19	2.43	8.78	15.2	16.7	21.7	13.4	15.2
N	MAR02655.014	Sediment	5.31	2.86	9.68	17.6	19.5	25.3	15.8	17.4
Certified Reference Material Nist 1941b (% Recovery)			60	93	64	65	56	81	63	86
QC Blank			<1	<1	<1	<1	<1	<1	<1	<1

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Issue Version 1
Customer Reference Port Talbot - MMO Analysis

		Units	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)
		Method No	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304
		Limit of Detection	1	1	1	1	1	1	1	1
		Accreditation	UKAS/MMO	MMO	MMO	MMO	MMO	MMO	UKAS/MMO	UKAS/MMO
Client Reference:	SOCOTEC Ref:	Matrix	BKF*	C1N	C1PHEN	C2N	C3N	CHRYSENE*	DBENZAH	FLUORANT
E	MAR02655.005	Sediment	189	230	245	200	134	243	37.5	340
F	MAR02655.006	Sediment	230	292	295	250	186	304	49.8	400
G	MAR02655.007	Sediment	195	280	254	241	166	256	45.4	325
H	MAR02655.008	Sediment	223	294	295	249	171	286	51.7	375
I	MAR02655.009	Sediment	160	165	180	145	108	215	35.4	312
J	MAR02655.010	Sediment	217	222	221	190	139	289	49.3	400
K	MAR02655.011	Sediment	158	182	206	158	108	217	37.0	273
L	MAR02655.012	Sediment	98.2	116	112	98	75.8	124	22.1	177
M	MAR02655.013	Sediment	15.9	24.2	18.9	17.3	11.3	21.4	3.55	34.2
N	MAR02655.014	Sediment	17.9	31.2	24.8	21.5	15.1	24.0	3.87	40.5
Certified Reference Material Nist 1941b (% Recovery)			74	73	82	105	106	88	86	80
QC Blank			<1	<1	<1	<1	<1	<1	<1	<1

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Test Report ID MAR02655
Issue Version 1
Customer Reference Port Talbot - MMO Analysis

		Units	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)
		Method No	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304
		Limit of Detection	1	1	1	1	1	1
		Accreditation	UKAS/MMO	UKAS/MMO	UKAS/MMO	MMO	UKAS/MMO	UKAS/MMO
Client Reference:	SOCOTEC Ref:	Matrix	FLUORENE	INDPYR	NAPTH	PERYLENE	PHENANT	PYRENE
E	MAR02655.005	Sediment	70.1	183	136	71.2	257	256
F	MAR02655.006	Sediment	91.4	247	160	85.3	309	310
G	MAR02655.007	Sediment	84.1	220	145	72.8	257	246
H	MAR02655.008	Sediment	88.9	238	160	77.1	299	283
I	MAR02655.009	Sediment	54.0	162	91.0	60.7	199	246
J	MAR02655.010	Sediment	70.8	219	126	78.4	257	312
K	MAR02655.011	Sediment	57.3	171	98.6	58.8	179	212
L	MAR02655.012	Sediment	37.8	103	67.9	35.3	122	140
M	MAR02655.013	Sediment	8.85	15.1	17.8	5.69	24.8	27.6
N	MAR02655.014	Sediment	9.51	17.6	26.5	6.80	28.5	32.7
Certified Reference Material Nist 1941b (% Recovery)			50	68	57	58	78	71
QC Blank			<1	<1	<1	<1	<1	<1

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Test Report ID MAR02655
Issue Version 1
Customer Reference Port Talbot - MMO Analysis

		Units	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)
		Method No	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304
		Limit of Detection	1	1	1	1	1	1	1	1
		Accreditation	UKAS/MMO	UKAS/MMO	UKAS/MMO	UKAS/MMO	UKAS/MMO	UKAS/MMO	UKAS/MMO	UKAS/MMO
Client Reference:	SOCOTEC Ref:	Matrix	ACENAPTH	ACENAPHY	ANTHRACN	BAA	BAP	BBF	BENZGHIP	BEP
O	MAR02655.015	Sediment	239	50.9	231	739	771	775	483	566
P	MAR02655.016	Sediment	93.6	32.0	127	371	394	417	261	302
Certified Reference Material Nist 1941b (% Recovery)			66	93	63	65	57	88	65	88
QC Blank			<1	<1	<1	<1	<1	<1	<1	<1

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Customer Reference Port Talbot - MMO Analysis

		Units	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)
		Method No	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304
		Limit of Detection	1	1	1	1	1	1	1	1
		Accreditation	UKAS/MMO	MMO	MMO	MMO	MMO	MMO	UKAS/MMO	UKAS/MMO
Client Reference:	SOCOTEC Ref:	Matrix	BKF*	C1N	C1PHEN	C2N	C3N	CHRYSENE*	DBENZAH	FLUORANT
O	MAR02655.015	Sediment	629	387	602	322	230	880	129	1410
P	MAR02655.016	Sediment	320	267	330	228	179	449	64.9	735
Certified Reference Material Nist 1941b (% Recovery)			71	74	82	107	109	87	100	80
QC Blank			<1	<1	<1	<1	<1	<1	<1	<1

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Test Report ID MAR02655
Issue Version 1
Customer Reference Port Talbot - MMO Analysis

		Units	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)
		Method No	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304
		Limit of Detection	1	1	1	1	1	1
		Accreditation	UKAS/MMO	UKAS/MMO	UKAS/MMO	MMO	UKAS/MMO	UKAS/MMO
Client Reference:	SOCOTEC Ref:	Matrix	FLUORENE	INDPYR	NAPTH	PERYLENE	PHENANT	PYRENE
O	MAR02655.015	Sediment	243	545	293	218	1050	1140
P	MAR02655.016	Sediment	106	292	201	120	503	609
Certified Reference Material Nist 1941b (% Recovery)			51	74	57	59	78	70
QC Blank			<1	<1	<1	<1	<1	<1

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*See report notes

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Customer Reference Port Talbot - MMO Analysis

		Units	mg/Kg (Dry Weight)	mg/Kg (Dry Weight)	mg/Kg (Dry Weight)	mg/Kg (Dry Weight)	mg/Kg (Dry Weight)	mg/Kg (Dry Weight)	mg/Kg (Dry Weight)
		Method No	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302
		Limit of Detection	0.00008	0.00008	0.00008	0.00008	0.00008	0.00008	0.00008
		Accreditation	UKAS/MMO	UKAS/MMO	UKAS/MMO	UKAS/MMO	UKAS/MMO	UKAS/MMO	UKAS/MMO
Client Reference:	SOCOTEC Ref:	Matrix	PCB 101	PCB 105	PCB 110	PCB 118	PCB 128	PCB 138	PCB 141
A	MAR02655.001	Sediment	0.00142	0.00070	0.00206	0.00170	0.00047	0.00250	0.00049
B	MAR02655.002	Sediment	0.00119	0.00065	0.00203	0.00210	0.00053	0.00240	0.00039
C	MAR02655.003	Sediment	0.00117	0.00069	0.00181	0.00162	0.00041	0.00207	0.00048
D	MAR02655.004	Sediment	0.00107	0.00053	0.00159	0.00167	0.00033	0.00172	0.00019
E	MAR02655.005	Sediment	0.00111	0.00062	0.00194	0.00158	0.00041	0.00209	0.00044
F	MAR02655.006	Sediment	0.00135	0.00073	0.00210	0.00173	0.00042	0.00206	0.00030
Certified Reference Material Nist 1941b (% Recovery)			88	78	101	96	112	109	111~
QC Blank			<0.00008	<0.00008	<0.00008	<0.00008	<0.00008	<0.00008	<0.00008

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Test Report ID MAR02655
Issue Version 1
Customer Reference Port Talbot - MMO Analysis

		Units	mg/Kg (Dry Weight)	mg/Kg (Dry Weight)	mg/Kg (Dry Weight)	mg/Kg (Dry Weight)	mg/Kg (Dry Weight)	mg/Kg (Dry Weight)	mg/Kg (Dry Weight)
		Method No	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302
		Limit of Detection	0.00008	0.00008	0.00008	0.00008	0.00008	0.00008	0.00008
		Accreditation	UKAS/MMO	UKAS/MMO	UKAS/MMO	UKAS/MMO	UKAS/MMO	MMO*	UKAS/MMO
Client Reference:	SOCOTEC Ref:	Matrix	PCB 149	PCB 151	PCB 153	PCB 156	PCB 158	PCB 170	PCB 18
A	MAR02655.001	Sediment	0.00168	0.00060	0.00288	0.00027	0.00031	0.00074	0.00123
B	MAR02655.002	Sediment	0.00153	0.00045	0.00232	0.00023	0.00030	0.00079	0.00136
C	MAR02655.003	Sediment	0.00134	0.00046	0.00237	0.00023	0.00031	0.00073	0.00141
D	MAR02655.004	Sediment	0.00122	0.00043	0.00224	0.00017	0.00034	0.00067	0.00118
E	MAR02655.005	Sediment	0.00136	0.00038	0.00226	0.00022	0.00026	0.00080	0.00118
F	MAR02655.006	Sediment	0.00149	0.00039	0.00277	0.00024	0.00031	0.00076	0.00168
Certified Reference Material Nist 1941b (% Recovery)			100	113~	100	106	88	98	87
QC Blank			<0.00008	<0.00008	<0.00008	<0.00008	<0.00008	<0.00008	<0.00008

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Customer Reference Port Talbot - MMO Analysis

		Units	mg/Kg (Dry Weight)	mg/Kg (Dry Weight)	mg/Kg (Dry Weight)	mg/Kg (Dry Weight)	mg/Kg (Dry Weight)	mg/Kg (Dry Weight)	mg/Kg (Dry Weight)
		Method No	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302
		Limit of Detection	0.00008	0.00008	0.00008	0.00008	0.00008	0.00008	0.00008
		Accreditation	UKAS/MMO	UKAS/MMO	UKAS/MMO	UKAS/MMO	MMO*	MMO*	UKAS/MMO
Client Reference:	SOCOTEC Ref:	Matrix	PCB 180	PCB 183	PCB 187	PCB 194	PCB 28	PCB 31	PCB 44
A	MAR02655.001	Sediment	0.00206	0.00038	0.00104	0.00054	0.00314	0.00226	0.00130
B	MAR02655.002	Sediment	0.00172	0.00041	0.00110	0.00049	0.00337	0.00263	0.00130
C	MAR02655.003	Sediment	0.00181	0.00035	0.00096	0.00043	0.00338	0.00249	0.00138
D	MAR02655.004	Sediment	0.00153	0.00032	0.00082	0.00041	0.00283	0.00217	0.00119
E	MAR02655.005	Sediment	0.00160	0.00034	0.00096	0.00038	0.00316	0.00230	0.00112
F	MAR02655.006	Sediment	0.00174	0.00040	0.00098	0.00040	0.00354	0.00269	0.00134
Certified Reference Material Nist 1941b (% Recovery)			97	105	94	95	73	94	88
QC Blank			<0.00008	<0.00008	<0.00008	<0.00008	<0.00008	<0.00008	<0.00008

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Issue Version 1
Customer Reference Port Talbot - MMO Analysis

		Units	mg/Kg (Dry Weight)	mg/Kg (Dry Weight)	mg/Kg (Dry Weight)	mg/Kg (Dry Weight)
		Method No	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302
		Limit of Detection	0.00008	0.00008	0.00008	0.00008
		Accreditation	UKAS/MMO	UKAS/MMO	UKAS/MMO	MMO*
Client Reference:	SOCOTEC Ref:	Matrix	PCB 47	PCB 49	PCB 52	PCB 66
A	MAR02655.001	Sediment	0.00049	0.00121	0.00152	0.00284
B	MAR02655.002	Sediment	0.00054	0.00114	0.00141	0.00280
C	MAR02655.003	Sediment	0.00050	0.00117	0.00143	0.00293
D	MAR02655.004	Sediment	0.00047	0.00104	0.00120	0.00252
E	MAR02655.005	Sediment	0.00049	0.00111	0.00125	0.00270
F	MAR02655.006	Sediment	0.00055	0.00136	0.00157	0.00304
Certified Reference Material Nist 1941b (% Recovery)			121~	108	100	109
QC Blank			<0.00008	<0.00008	<0.00008	<0.00008

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Issue Version 1
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		Units	mg/Kg (Dry Weight)	mg/Kg (Dry Weight)	mg/Kg (Dry Weight)	mg/Kg (Dry Weight)	mg/Kg (Dry Weight)	mg/Kg (Dry Weight)	mg/Kg (Dry Weight)
		Method No	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302
		Limit of Detection	0.00008	0.00008	0.00008	0.00008	0.00008	0.00008	0.00008
		Accreditation	UKAS/MMO	UKAS/MMO	UKAS/MMO	UKAS/MMO	UKAS/MMO	UKAS/MMO	UKAS/MMO
Client Reference:	SOCOTEC Ref:	Matrix	PCB 101	PCB 105	PCB 110	PCB 118	PCB 128	PCB 138	PCB 141
G	MAR02655.007	Sediment	0.00153	0.00072	0.00225	0.00206	0.00044	0.00212	0.00038
H	MAR02655.008	Sediment	0.00129	0.00069	0.00213	0.00212	0.00046	0.00228	0.00042
I	MAR02655.009	Sediment	0.00077	0.00047	0.00129	0.00142	0.00029	0.00125	0.00022
J	MAR02655.010	Sediment	0.00086	0.00049	0.00139	0.00129	0.00032	0.00164	0.00030
K	MAR02655.011	Sediment	0.00161	0.00064	0.00205	0.00214	0.00050	0.00229	0.00035
L	MAR02655.012	Sediment	0.00063	0.00031	0.00092	0.00083	0.00018	0.00112	0.00016
M	MAR02655.013	Sediment	<0.00008	<0.00008	0.00010	0.00009	<0.00008	0.00012	<0.00008
N	MAR02655.014	Sediment	<0.00008	<0.00008	0.00010	0.00009	<0.00008	0.00014	<0.00008
O	MAR02655.015	Sediment	0.00072	0.00034	0.00121	0.00118	0.00017	0.00107	0.00020
P	MAR02655.016	Sediment	0.00083	0.00042	0.00126	0.00132	0.00029	0.00155	0.00040
Certified Reference Material Nist 1941b (% Recovery)			88	91	112	94	100	95	106~
QC Blank			<0.00008	<0.00008	<0.00008	<0.00008	<0.00008	<0.00008	<0.00008

~ Indicates result is for an In-house Reference Material as no Certified Reference Materials are available.

*See report notes

MAR02655

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Test Report ID MAR02655
Issue Version 1
Customer Reference Port Talbot - MMO Analysis

		Units	mg/Kg (Dry Weight)	mg/Kg (Dry Weight)	mg/Kg (Dry Weight)	mg/Kg (Dry Weight)	mg/Kg (Dry Weight)	mg/Kg (Dry Weight)	mg/Kg (Dry Weight)
		Method No	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302
		Limit of Detection	0.00008	0.00008	0.00008	0.00008	0.00008	0.00008	0.00008
		Accreditation	UKAS/MMO	UKAS/MMO	UKAS/MMO	UKAS/MMO	UKAS/MMO	UKAS/MMO	UKAS/MMO
Client Reference:	SOCOTEC Ref:	Matrix	PCB 149	PCB 151	PCB 153	PCB 156	PCB 158	PCB 170	PCB 18
G	MAR02655.007	Sediment	0.00168	0.00054	0.00265	0.00019	0.00040	0.00087	0.00183
H	MAR02655.008	Sediment	0.00169	0.00045	0.00259	0.00023	0.00033	0.00081	0.00121
I	MAR02655.009	Sediment	0.00098	0.00037	0.00160	0.00012	0.00025	0.00045	0.00076
J	MAR02655.010	Sediment	0.00111	0.00037	0.00177	0.00015	0.00014	0.00051	0.00089
K	MAR02655.011	Sediment	0.00135	0.00038	0.00221	0.00027	0.00031	0.00057	0.00061
L	MAR02655.012	Sediment	0.00059	0.00017	0.00109	<0.00008	0.00016	0.00032	0.00054
M	MAR02655.013	Sediment	0.00008	<0.00008	0.00014	<0.00008	<0.00008	<0.00008	<0.00008
N	MAR02655.014	Sediment	<0.00008	<0.00008	0.00013	<0.00008	<0.00008	<0.00008	<0.00008
O	MAR02655.015	Sediment	0.00086	0.00030	0.00129	0.00010	0.00018	0.00043	0.00070
P	MAR02655.016	Sediment	0.00106	0.00032	0.00179	0.00020	0.00019	0.00051	0.00080
Certified Reference Material Nist 1941b (% Recovery)			92	115~	98	97	83	105	82
QC Blank			<0.00008	<0.00008	<0.00008	<0.00008	<0.00008	<0.00008	<0.00008

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*See report notes

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Test Report ID MAR02655
Issue Version 1
Customer Reference Port Talbot - MMO Analysis

		Units	mg/Kg (Dry Weight)	mg/Kg (Dry Weight)	mg/Kg (Dry Weight)	mg/Kg (Dry Weight)	mg/Kg (Dry Weight)	mg/Kg (Dry Weight)	mg/Kg (Dry Weight)
		Method No	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302
		Limit of Detection	0.00008	0.00008	0.00008	0.00008	0.00008	0.00008	0.00008
		Accreditation	UKAS/MMO	UKAS/MMO	UKAS/MMO	UKAS/MMO	UKAS/MMO	MMO*	UKAS/MMO
Client Reference:	SOCOTEC Ref:	Matrix	PCB 180	PCB 183	PCB 187	PCB 194	PCB 28	PCB 31	PCB 44
G	MAR02655.007	Sediment	0.00182	0.00033	0.00084	0.00051	0.00394	0.00296	0.00141
H	MAR02655.008	Sediment	0.00173	0.00030	0.00081	0.00046	0.00367	0.00277	0.00143
I	MAR02655.009	Sediment	0.00100	0.00018	0.00050	0.00029	0.00219	0.00171	0.00085
J	MAR02655.010	Sediment	0.00122	0.00017	0.00063	0.00030	0.00232	0.00177	0.00092
K	MAR02655.011	Sediment	0.00126	0.00025	0.00071	0.00026	0.00189	0.00140	0.00083
L	MAR02655.012	Sediment	0.00072	0.00014	0.00047	0.00019	0.00155	0.00108	0.00056
M	MAR02655.013	Sediment	0.00010	<0.00008	<0.00008	<0.00008	0.00019	0.00012	<0.00008
N	MAR02655.014	Sediment	<0.00008	<0.00008	<0.00008	<0.00008	0.00021	0.00013	0.00008
O	MAR02655.015	Sediment	0.00087	0.00017	0.00055	0.00021	0.00197	0.00145	0.00072
P	MAR02655.016	Sediment	0.00123	0.00026	0.00067	0.00029	0.00216	0.00162	0.00082
Certified Reference Material Nist 1941b (% Recovery)			99	77	88	86	75	99	96
QC Blank			<0.00008	<0.00008	<0.00008	<0.00008	<0.00008	<0.00008	<0.00008

~ Indicates result is for an In-house Reference Material as no Certified Reference Materials are available.

*See report notes

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Test Report ID MAR02655
Issue Version 1
Customer Reference Port Talbot - MMO Analysis

		Units	mg/Kg (Dry Weight)	mg/Kg (Dry Weight)	mg/Kg (Dry Weight)	mg/Kg (Dry Weight)
		Method No	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302
		Limit of Detection	0.00008	0.00008	0.00008	0.00008
		Accreditation	MMO*	UKAS/MMO	MMO*	MMO*
Client Reference:	SOCOTEC Ref:	Matrix	PCB 47	PCB 49	PCB 52	PCB 66
G	MAR02655.007	Sediment	0.00069	0.00158	0.00180	0.00351
H	MAR02655.008	Sediment	0.00061	0.00135	0.00143	0.00330
I	MAR02655.009	Sediment	0.00035	0.00079	0.00083	0.00200
J	MAR02655.010	Sediment	0.00041	0.00087	0.00095	0.00217
K	MAR02655.011	Sediment	0.00034	0.00076	0.00120	0.00182
L	MAR02655.012	Sediment	0.00026	0.00058	0.00061	0.00151
M	MAR02655.013	Sediment	<0.00008	<0.00008	<0.00008	0.00019
N	MAR02655.014	Sediment	<0.00008	0.00008	<0.00008	0.00019
O	MAR02655.015	Sediment	0.00031	0.00071	0.00077	0.00165
P	MAR02655.016	Sediment	0.00034	0.00080	0.00097	0.00189
Certified Reference Material Nist 1941b (% Recovery)			117~	107	107	116
QC Blank			<0.00008	<0.00008	<0.00008	<0.00008

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*See report notes

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Test Report ID MAR02655
Issue Version 1
Customer Reference Port Talbot - MMO Analysis

		Units	mg/Kg (Dry Weight)							
		Method No	ASC/SOP/302							
		Limit of Detection	0.0001							
		Accreditation	UKAS/MMO	UKAS/MMO	UKAS/MMO	UKAS/MMO	UKAS/MMO	MMO*	UKAS/MMO	UKAS/MMO
Client Reference:	SOCOTEC Ref:	Matrix	AHCH	BHCH	GHCH	DIELDRIN	HCB	PPTDE	PPDDE	PPDDT
A	MAR02655.001	Sediment	<0.0001	<0.0001	<0.0001	0.0001	0.0002	0.0007	0.0002	<0.0001
B	MAR02655.002	Sediment	<0.0001	<0.0001	<0.0001	<0.0001	0.0003	0.0007	0.0002	0.0002
C	MAR02655.003	Sediment	<0.0001	<0.0001	<0.0001	<0.0001	0.0003	0.0007	0.0003	<0.0001
D	MAR02655.004	Sediment	<0.0001	<0.0001	<0.0001	<0.0001	0.0002	0.0007	0.0002	<0.0001
E	MAR02655.005	Sediment	<0.0001	<0.0001	<0.0001	0.0001	0.0003	0.0008	0.0002	0.0001
F	MAR02655.006	Sediment	<0.0001	<0.0001	<0.0001	0.0002	0.0003	0.0006	0.0002	<0.0001
Certified Reference Material Nist 1941b (% Recovery)			130~	98~	133~	121~	144	77	88	78~
QC Blank			<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001

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For full analyte name see method summaries.

*See report notes

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Test Report ID MAR02655
Issue Version 1
Customer Reference Port Talbot - MMO Analysis

		Units	mg/Kg (Dry Weight)							
		Method No	ASC/SOP/302							
		Limit of Detection	0.0001							
		Accreditation	UKAS/MMO	UKAS/MMO	UKAS/MMO	UKAS/MMO	UKAS/MMO	MMO*	MMO*	UKAS/MMO
Client Reference:	SOCOTEC Ref:	Matrix	AHCH	BHCH	GHCH	DIELDRIN	HCb	PPTDE	PPDDE	PPDDT
G	MAR02655.007	Sediment	<0.0001	<0.0001	<0.0001	0.0001	0.0002	0.0006	0.0002	<0.0001
H	MAR02655.008	Sediment	<0.0001	<0.0001	<0.0001	0.0004	0.0003	0.0008	0.0003	<0.0001
I	MAR02655.009	Sediment	<0.0001	<0.0001	<0.0001	0.0002	0.0002	0.0004	0.0002	<0.0001
J	MAR02655.010	Sediment	<0.0001	<0.0001	<0.0001	<0.0001	0.0002	0.0005	0.0002	<0.0001
K	MAR02655.011	Sediment	<0.0001	<0.0001	<0.0001	<0.0001	0.0002	0.0004	0.0002	<0.0001
L	MAR02655.012	Sediment	<0.0001	<0.0001	<0.0001	<0.0001	0.0001	0.0003	0.0001	<0.0001
M	MAR02655.013	Sediment	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
N	MAR02655.014	Sediment	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
O	MAR02655.015	Sediment	<0.0001	<0.0001	<0.0001	0.0002	0.0003	0.0119	0.0003	0.0138
P	MAR02655.016	Sediment	<0.0001	<0.0001	<0.0001	<0.0001	0.0002	0.0026	0.0002	0.0020
Certified Reference Material Nist 1941b (% Recovery)			136~	106~	141~	137~	137	96	84	107~
QC Blank			<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001

~ Indicates result is for an In-house Reference Material as no Certified Reference Materials are available.

For full analyte name see method summaries.

*See report notes

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Test Report ID MAR02655
Issue Version 1
Customer Reference Port Talbot - MMO Analysis

		Units	mg/Kg (Dry Weight)	mg/Kg (Dry Weight)	mg/Kg (Dry Weight)	mg/Kg (Dry Weight)	mg/Kg (Dry Weight)	mg/Kg (Dry Weight)	mg/Kg (Dry Weight)	mg/Kg (Dry Weight)
		Method No	ASC/SOP/308	ASC/SOP/308	ASC/SOP/308	ASC/SOP/308	ASC/SOP/308	ASC/SOP/308	ASC/SOP/308	ASC/SOP/308
		Limit of Detection	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005
		Accreditation	UKAS/MMO	UKAS/MMO	UKAS/MMO	UKAS/MMO	UKAS/MMO	MMO*	MMO*	UKAS/MMO
Client Reference:	SOCOTEC Ref:	Matrix	BDE17	BDE28	BDE47	BDE66	BDE85	BDE99	BDE100	BDE138
A	MAR02655.001	Sediment	<0.00005	<0.00005	0.00022	<0.00005	<0.00005	0.00027	<0.00005	<0.00005
B	MAR02655.002	Sediment	<0.00005	<0.00005	0.00024	<0.00005	<0.00005	0.00027	0.00005	<0.00005
C	MAR02655.003	Sediment	<0.00005	<0.00005	0.00024	<0.00005	<0.00005	0.00034	0.00007	<0.00005
D	MAR02655.004	Sediment	<0.00005	<0.00005	0.00029	<0.00005	<0.00005	0.00067	0.00010	<0.00005
E	MAR02655.005	Sediment	<0.00005	<0.00005	0.00028	0.00006	<0.00005	0.00051	0.00007	<0.00005
F	MAR02655.006	Sediment	<0.00005	<0.00005	0.00023	<0.00005	<0.00005	0.00032	0.00005	<0.00005
G	MAR02655.007	Sediment	<0.00005	<0.00005	0.00022	<0.00005	<0.00005	0.00028	0.00005	<0.00005
Certified Reference Material QBC069MS (% Recovery)			99~	110	93	86~	122~	187	142	97~
QC Blank			<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005

* See Report Notes

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Test Report ID MAR02655
Issue Version 1
Customer Reference Port Talbot - MMO Analysis

		Units	mg/Kg (Dry Weight)	mg/Kg (Dry Weight)	mg/Kg (Dry Weight)	mg/Kg (Dry Weight)
		Method No	ASC/SOP/308	ASC/SOP/308	ASC/SOP/308	ASC/SOP/308
		Limit of Detection	0.00005	0.00005	0.00005	0.0001
		Accreditation	MMO*	UKAS/MMO	UKAS/MMO	UKAS/MMO
Client Reference:	SOCOTEC Ref:	Matrix	BDE153	BDE154	BDE183	BDE209
A	MAR02655.001	Sediment	0.00006	0.00005	<0.00005	0.0185
B	MAR02655.002	Sediment	0.00007	0.00006	<0.00005	0.0288
C	MAR02655.003	Sediment	0.00008	0.00006	<0.00005	0.0271
D	MAR02655.004	Sediment	0.00008	0.00007	0.00006	0.0705
E	MAR02655.005	Sediment	0.00011	0.00007	0.00005	0.0240
F	MAR02655.006	Sediment	<0.00005	0.00005	<0.00005	0.0220
G	MAR02655.007	Sediment	0.00007	0.00006	<0.00005	0.0193
Certified Reference Material QBC069MS (% Recovery)			84~	90~	139	78
QC Blank			<0.00005	<0.00005	<0.00005	<0.0009*

* See Report Notes

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Issue Version 1
Customer Reference Port Talbot - MMO Analysis

		Units	mg/Kg (Dry Weight)	mg/Kg (Dry Weight)	mg/Kg (Dry Weight)	mg/Kg (Dry Weight)	mg/Kg (Dry Weight)	mg/Kg (Dry Weight)	mg/Kg (Dry Weight)	mg/Kg (Dry Weight)
		Method No	ASC/SOP/308	ASC/SOP/308	ASC/SOP/308	ASC/SOP/308	ASC/SOP/308	ASC/SOP/308	ASC/SOP/308	ASC/SOP/308
		Limit of Detection	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005
		Accreditation	UKAS/MMO	UKAS/MMO	UKAS/MMO	UKAS/MMO	UKAS/MMO	MMO*	MMO*	UKAS/MMO
Client Reference:	SOCOTEC Ref:	Matrix	BDE17	BDE28	BDE47	BDE66	BDE85	BDE99	BDE100	BDE138
H	MAR02655.008	Sediment	0.00005	0.00007	0.00027	0.00009	0.00011	0.00034	0.00012	0.00015
I	MAR02655.009	Sediment	<0.00005	<0.00005	0.00018	<0.00005	<0.00005	0.00023	<0.00005	<0.00005
J	MAR02655.010	Sediment	<0.00005	<0.00005	0.00019	0.00005	<0.00005	0.00021	<0.00005	<0.00005
K	MAR02655.011	Sediment	<0.00005	<0.00005	0.00014	<0.00005	<0.00005	0.00022	<0.00005	<0.00005
L	MAR02655.012	Sediment	<0.00005	<0.00005	0.00014	<0.00005	<0.00005	0.00025	<0.00005	<0.00005
M	MAR02655.013	Sediment	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
N	MAR02655.014	Sediment	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
O	MAR02655.015	Sediment	<0.00005	<0.00005	0.00015	<0.00005	<0.00005	0.00015	<0.00005	<0.00005
P	MAR02655.016	Sediment	<0.00005	<0.00005	0.00026	<0.00005	<0.00005	0.00029	0.00006	<0.00005
Certified Reference Material QBC069MS (% Recovery)			98~	108	94	83~	121~	162	133	115~
QC Blank			<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005

* See Report Notes

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Test Report ID MAR02655
Issue Version 1
Customer Reference Port Talbot - MMO Analysis

		Units	mg/Kg (Dry Weight)	mg/Kg (Dry Weight)	mg/Kg (Dry Weight)	mg/Kg (Dry Weight)
		Method No	ASC/SOP/308	ASC/SOP/308	ASC/SOP/308	ASC/SOP/308
		Limit of Detection	0.00005	0.00005	0.00005	0.0001
		Accreditation	MMO*	UKAS/MMO	UKAS/MMO	UKAS/MMO
Client Reference:	SOCOTEC Ref:	Matrix	BDE153	BDE154	BDE183	BDE209
H	MAR02655.008	Sediment	0.00019	0.00015	0.00015	0.0201
I	MAR02655.009	Sediment	0.00006	0.00006	0.00007	0.0228
J	MAR02655.010	Sediment	0.00007	0.00007	0.00007	0.0258
K	MAR02655.011	Sediment	0.00005	<0.00005	<0.00005	0.0201
L	MAR02655.012	Sediment	<0.00005	<0.00005	<0.00005	0.0172
M	MAR02655.013	Sediment	<0.00005	<0.00005	<0.00005	0.0055
N	MAR02655.014	Sediment	<0.00005	<0.00005	<0.00005	0.0029
O	MAR02655.015	Sediment	<0.00005	<0.00005	<0.00005	0.0163
P	MAR02655.016	Sediment	0.00007	<0.00005	<0.00005	0.0173
Certified Reference Material QBC069MS (% Recovery)			113~	91~	173	76
QC Blank			<0.00005	<0.00005	<0.00005	<0.001*

* See Report Notes

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Customer Reference Port Talbot - MMO Analysis

REPORT NOTES

Method Code	Sample ID	The following information should be taken into consideration when using the data contained within this report
*SUB_01	MAR02655.001-016	Analysis was conducted by an approved subcontracted laboratory.
WSLM59*	MAR02655.001-016	Analysis was conducted by an internal SOCOTEC laboratory. UKAS accredited analysis by this laboratory is under UKAS number 1252.
ICPMSS*	MAR02655.001-016	Analysis was conducted by an internal SOCOTEC laboratory. UKAS accredited analysis by this laboratory is under UKAS number 1252.
ASC/SOP/302	MAR02655.001-006	The Primary process control data associated with this Test has not wholly met the requirements of the Laboratory Quality Management System QMS with one or more target analytes falling outside acceptable limits. The remaining data gives the Laboratory confidence that the test has performed satisfactorily and that the validity of the data may not have been significantly affected. However in line with our QMS policy we have removed accreditation, where applicable, from the affected analytes (PCB28, PCB31, PCB66, PCB170, PPTDE) . These circumstances should be taken into consideration when utilising the data.
ASC/SOP/302	MAR02655.007-016	The Primary process control data associated with this Test has not wholly met the requirements of the Laboratory Quality Management System QMS with one or more target analytes falling outside acceptable limits. The remaining data gives the Laboratory confidence that the test has performed satisfactorily and that the validity of the data may not have been significantly affected. However in line with our QMS policy we have removed accreditation, where applicable, from the affected analytes (PCB31, PCB47, PCB52, PCB66, PPDDE) . These circumstances should be taken into consideration when utilising the data.
ASC/SOP/303/304	MAR02655.001-016	Benzo[k]fluoranthene is known to coelute with Benzo[j]fluoranthene and these peaks can not be resolved. It is believed Benzo[j]fluoranthene is present in these samples therefore it is suggested that the Benzo[k]fluoranthene results should be taken as a Benzo[k]fluoranthene (inc. Benzo[j]fluoranthene). Benzo[j]fluoranthene is not UKAS accredited. This should be taken into consideration when utilising the data.
ASC/SOP/303/304	MAR02655.001-016	Chrysene is known to coelute with Triphenylene and these peaks can not be resolved in the PAHSED UKAS accredited method. Chrysene and Triphenylene are resolved for MMO but this is currently not UKAS accredited therefore Chrysene is reported without this accreditation.
ASC/SOP/308	MAR02655.001-016	The Primary process control data associated with this Test has not wholly met the requirements of the Laboratory Quality Management System QMS with one or more target analytes falling outside acceptable limits. The remaining data gives the Laboratory confidence that the test has performed satisfactorily and that the validity of the data may not have been significantly affected. However in line with our QMS policy we have removed accreditation, where applicable, from the affected analytes (BDE100, BDE99, BDE153) . These circumstances should be taken into consideration when utilising the data.
ASC/SOP/308	MAR02655.001-016	The Primary process control data associated with this Test has not wholly met the requirements of the Laboratory Quality Management System QMS with one or more target analytes falling outside acceptable limits. The remaining data gives the Laboratory confidence that the test has performed satisfactorily and that the validity of the data may not have been significantly affected. However in line with our QMS policy we have removed accreditation, where applicable, from the affected analytes (BDE100, BDE99, BDE153) . These circumstances should be taken into consideration when utilising the data.
ASC/SOP/308	MAR02655.001-016	The Primary process control blank data associated with this Test has not wholly met the requirements of the Laboratory Quality Management System QMS with BDE209 falling above acceptable reporting limits. The remaining data gives the Laboratory confidence that the test has performed satisfactorily and that the validity of the data may not have been significantly affected. However in line with our QMS policy the report limit for this compound has been raised and samples have been blank subtracted.

DEVIATING SAMPLE STATEMENT

Deviation Code	Deviation Definition	Sample ID	Deviation Details. The following information should be taken into consideration when using the data contained within this report
D1	Holding Time Exceeded	N/A	N/A
D2	Sample Contaminated through Damaged Packaging	N/A	N/A
D3	Sample Contaminated through Sampling	N/A	N/A
D4	Inappropriate Container/Packaging	N/A	N/A
D5	Damaged in Transit	N/A	N/A
D6	Insufficient Quantity of Sample	N/A	N/A
D7	Inappropriate Headspace	N/A	N/A
D8	Retained at Incorrect Temperature	N/A	N/A
D9	Lack of Date & Time of Sampling	N/A	N/A
D10	Insufficient Sample Details	N/A	N/A
D11	Sample integrity compromised or not suitable for analysis	N/A	N/A

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Certificate of Analysis

Issuing Laboratory SOCOTEC, Marine Department, Advanced Chemistry and Research, Etwall House, Bretby Business Park, Ashby Road, Burton-upon-Trent DE15 0YZ



Test Report ID MAR02655
Issue Version 1
Customer Reference Port Talbot - MMO Analysis

Method	Sample and Fraction Size	Method Summary
Particle Size Analysis	Wet Sediment	Wet and dry sieving followed by laser diffraction analysis.
Total Organic Carbon (TOC)	Air dried	Carbonate removal and sulphurous acid/combustion at 1600°C/NDIR.
Metals	Air dried	Aqua-regia extraction followed by ICP analysis.
Organotins	Wet Sediment	Solvent extraction and derivatisation followed by GC-MS analysis.
Polyaromatic Hydrocarbons (PAH)	Wet Sediment	Solvent extraction and clean up followed by GC-MS analysis.
Total Hydrocarbon Content (THC)	Wet Sediment	Ultra-violet fluorescence spectroscopy
Polychlorinated Biphenyls (PCBs)	Air dried and sieved to <2mm	Solvent extraction and clean up followed by GC-MS-MS analysis.
Organochlorine Pesticides (OCPs)	Air dried and sieved to <2mm	Solvent extraction and clean up followed by GC-MS-MS analysis.
Brominated Flame Retardants (PBDEs)	Air dried and sieved to <2mm	Solvent extraction and clean up followed by GC-MS-MS analysis.

Analyte Definitions					
Analyte Abbreviation	Full Analyte name	Analyte Abbreviation	Full Analyte name	Analyte Abbreviation	Full Analyte name
ACENAPTH	Acenaphthene	C2N	C2-naphthalenes	THC	Total Hydrocarbon Content
ACENAPHY	Acenaphthylene	C3N	C3-naphthalenes	AHCH	alpha-Hexachlorocyclohexane
ANTHRACN	Anthracene	CHRYSENE	Chrysene	BHCH	beta-Hexachlorocyclohexane
BAA	Benzo[a]anthracene	DBENZAH	Dibenzo[ah]anthracene	GHCH	gamma-Hexachlorocyclohexane
BAP	Benzo[a]pyrene	FLUORANT	Fluoranthene	DIELDRIN	Dieldrin
BBF	Benzo[b]fluoranthene	FLUORENE	Fluorene	HCB	Hexachlorobenzene
BEP	Benzo[e]pyrene	INDPYR	Indeno[1,2,3-cd]pyrene	PPDDE	p,p'-Dichlorodiphenyldichloroethylene
BENZGHIP	Benzo[ghi]perylene	NAPTH	Naphthalene	PPDDT	p,p'-Dichlorodiphenyltrichloroethane
BKF	Benzo[k]fluoranthene	PERYLENE	Perylene	PPTDE	p,p'-Dichlorodiphenyldichloroethane
C1N	C1-naphthalenes	PHENANT	Phenanthrene		
C1PHEN	C1-phenanthrene	PYRENE	Pyrene		

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