ATTACHMENT A

LABORATORY RESULTS

REPORT OF ANALYSIS

Laboratory Reference: A05/1238

Client: Patterson Britton & Partners Pty Ltd
Level 4, 104 Mount Street
North Sydney NSW 2060

Contact: Ali Stone

Order No: EN05_099
Project: 4927-07 Port Kembla Sediments
Sample Type: Sediment
No. of Samples: 15
Date Received: 16/08/2005
Date Completed: 29/08/2005

Laboratory Contact Details:

Client Services Manager: Attila Littszer
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Attached Results Approved By:

Ian Eckhard
Technical Director

Comments:
All samples tested as submitted by client.
All attached results have been checked and approved for release.
This is the Final Report and supersedes any reports previously issued with this batch number.
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NATA Accredited Laboratory Accreditation No: 18183

Issue Date: 29 August 2005

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Batch Number: A05/1238 **Project:** 4927-07 Port Kembla Sediments

Laboratory Reference:	-	-	/1	/2	/3	/4
Client Reference:	-	-	SOH-1	SOH-2	SOH-3	SOH-4
Date Sampled:	-	-	12/08/05	12/08/05	12/08/05	12/08/05
Analysis Description	**Method**	**Units**				
Moisture Content						
Moisture Content	04-004	%	22 9	25.0	19.0	46 2
Trace Elements						
Silver	04-001	mg/kg	4 1	0 1	<0 1	0 40
Arsenic	04-001	mg/kg	15	20	27	12
Cadmium	04-001	mg/kg	0 20	0 20	4 1	2 6
Cobalt	04-001	mg/kg	2 0	4 3	2 8	13
Chromium	04-001	mg/kg	18	22	21	130
Copper	04-001	mg/kg	260	310	55	130
Mercury	04-002	mg/kg	0 090	0 070	0 060	0 52
Manganese	04-001	mg/kg	110	170	110	990
Nickel	04-001	mg/kg	4 9	6 6	7 9	27
Lead	04-001	mg/kg	70	73	76	110
Antimony	04-001	mg/kg	0 40	0 70	0 60	<0 1
Selenium	04-001	mg/kg	1 0	2 6	1 5	5 4
Zinc	04-001	mg/kg	220	280	380	760
Vanadium	04-001	mg/kg	28	38	26	140
BTEX						
Benzene	04-021	mg/kg	<0 20	<0 20	<0 20	<0 20
Toluene	04-021	mg/kg	<0 20	<0 20	<0 20	<0 20
Ethyl Benzene	04-021	mg/kg	<0 20	<0 20	<0 20	<0 20
m+p-xylenes	04-021	mg/kg	<0 40	<0 40	<0 40	<0 40
o-xylene	04-021	mg/kg	<0 20	<0 20	<0 20	<0 20
Total BTEX	04-021	mg/kg	<1 2	<1 2	<1 2	<1 2
Surrogate 1 Recovery	04-021	%	90	88	90	88
Surrogate 2 Recovery	04-021	%	91	87	82	83
Surrogate 3 Recovery	04-021	%	97	92	89	80
Date Extracted	04-021	-	17/08/2005	17/08/2005	17/08/2005	17/08/2005
Date Analysed	04-021	-	19/08/2005	19/08/2005	19/08/2005	24/08/2005
Total Petroleum Hydrocarbons						
TPH C6-C9	04-021	mg/kg	<10	<10	<10	<10
TPH C10-14	04-020	mg/kg	<10	<10	<10	55
TPH C15-28	04-020	mg/kg	<50	<50	<50	880

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Laboratory Reference:	-	-	/1	/2	/3	/4
Client Reference:	-	-	SOH-1	SOH-2	SOH-3	SOH-4
Date Sampled:	-	-	12/08/05	12/08/05	12/08/05	12/08/05
Analysis Description	**Method**	**Units**				
TPH C29-36	04-020	mg/kg	<50	<50	<50	540
Surrogate Recovery	04-020	%	109	90	114	98
Date Extracted	04-020	-	17/08/2005	17/08/2005	17/08/2005	17/08/2005
Date Analysed	04-020	-	19/08/2005	19/08/2005	19/08/2005	19/08/2005
Poly Aromatic Hydrocarbons						
Naphthalene	04-022	µg/kg	430	260	37	15,000
1-Methylnaphthalene	04-022	µg/kg	22	14	<5.0	450
2-Methylnaphthalene	04-022	µg/kg	51	31	7.0	1,200
Acenaphthalene	04-022	µg/kg	95	46	8.0	2,100
Acenaphthene	04-022	µg/kg	14	11	<5.0	400
Fluorene	04-022	µg/kg	55	26	<5.0	1,500
Phenanthrene	04-022	µg/kg	310	140	20	7,200
Anthracene	04-022	µg/kg	98	44	7.0	2,900
Fluoranthene	04-022	µg/kg	350	180	21	8,300
Pyrene	04-022	µg/kg	300	160	21	9,400
Benz(a)anthracene	04-022	µg/kg	170	95	9.0	4,800
Chrysene	04-022	µg/kg	160	88	10	5,500
Benzo(b)&(k)fluoranthene	04-022	µg/kg	350	220	25	11,000
Benzo(a)pyrene	04-022	µg/kg	160	100	13	7,000
Indeno(1,2,3-cd)pyrene	04-022	µg/kg	48	32	<5.0	3,800
Dibenz(a,h)anthracene	04-022	µg/kg	16	9.0	<5.0	1,000
Benzo(g,h,i)perylene	04-022	µg/kg	52	33	<5.0	4,200
Coronene	04-022	µg/kg	<10	<10	<10	3,300
Benzo(e)pyrene	04-022	µg/kg	120	83	11	5,100
Total PAHs (as above)	04-022	µg/kg	2,800	1,570	190	94,000
Surrogate 1 Recovery	04-022	%	106	101	112	116
Surrogate 2 Recovery	04-022	%	104	111	117	118
Surrogate 3 Recovery	04-022	%	94	85	93	74
Date Extracted	04-022	-	17/08/2005	17/08/2005	17/08/2005	17/08/2005
Date Analysed	04-022	-	19/08/2005	19/08/2005	19/08/2005	19/08/2005
Organochlorine Pesticides						
Aldrin	04-021	µg/kg	<1.0	<1.0	<1.0	<1.0
alpha-BHC	04-021	µg/kg	<1.0	<1.0	<1.0	<1.0
beta-BHC	04-021	µg/kg	<1.0	<1.0	<1.0	<1.0
gamma-BHC (Lindane)	04-021	µg/kg	<1.0	<1.0	<1.0	<1.0

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Laboratory Reference:	-	-	/1	/2	/3	/4
Client Reference:	-	-	SOH-1	SOH-2	SOH-3	SOH-4
Date Sampled:	-	-	12/08/05	12/08/05	12/08/05	12/08/05
Analysis Description	**Method**	**Units**				
delta-BHC	04-023	µg/kg	<1.0	<1.0	<1.0	<1.0
cis-Chlordane	04-023	µg/kg	<1.0	<1.0	<1.0	<1.0
trans-Chlordane	04-023	µg/kg	<1.0	<1.0	<1.0	<1.0
p,p'-DDD	04-023	µg/kg	<1.0	<1.0	<1.0	<1.0
p,p'-DDE	04-023	µg/kg	<1.0	<1.0	<1.0	<1.0
p,p'-DDT	04-023	µg/kg	<1.0	<1.0	<1.0	<1.0
Dieldrin	04-023	µg/kg	<1.0	<1.0	<1.0	<1.0
alpha-Endosulfan	04-023	µg/kg	<1.0	<1.0	<1.0	<1.0
beta-Endosulfan	04-023	µg/kg	<1.0	<1.0	<1.0	<1.0
Endosulfan Sulphate	04-023	µg/kg	<1.0	<1.0	<1.0	<1.0
Endrin	04-023	µg/kg	<1.0	<1.0	<1.0	<1.0
Endrin ketone	04-023	µg/kg	<1.0	<1.0	<1.0	<1.0
Endrin aldehyde	04-023	µg/kg	<1.0	<1.0	<1.0	<1.0
Heptachlor	04-023	µg/kg	<1.0	<1.0	<1.0	<1.0
Heptachlor epoxide	04-023	µg/kg	<1.0	<1.0	<1.0	<1.0
Hexachlorobenzene	04-023	µg/kg	<1.0	<1.0	<1.0	<1.0
Methoxychlor	04-023	µg/kg	<1.0	<1.0	<1.0	<1.0
Surrogate Recovery	04-023	%	109	101	105	102
Date Extracted	04-023	-	17/08/2005	17/08/2005	17/08/2005	17/08/2005
Date Analysed	04-023	-	19/08/2005	19/08/2005	19/08/2005	19/08/2005
Polychlorinated Biphenyls						
Mono-PCB congeners	04-029	µg/kg	<5.0	<5.0	<5.0	<25
Di-PCB congeners	04-029	µg/kg	<5.0	<5.0	<5.0	<25
Tri-PCB congeners	04-029	µg/kg	<5.0	<5.0	<5.0	<25
Tetra-PCB congeners	04-029	µg/kg	<5.0	<5.0	<5.0	<25
Penta-PCB congeners	04-029	µg/kg	<5.0	<5.0	<5.0	<25
Hexa-PCB congeners	04-029	µg/kg	<5.0	<5.0	<5.0	<25
Hepta-PCB congeners	04-029	µg/kg	<5.0	<5.0	<5.0	<25
Octa-PCB congeners	04-029	µg/kg	<5.0	<5.0	<5.0	<25
Nona-PCB congeners	04-029	µg/kg	<5.0	<5.0	<5.0	<25
Deca-PCB congeners	04-029	µg/kg	<5.0	<5.0	<5.0	<25
Total PCB congeners	04-029	µg/kg	<5.0	<5.0	<5.0	<25
Surrogate 1 Recovery	04-029	%	87	82	91	85
Surrogate 2 Recovery	04-029	%	86	81	82	78
Date Extracted	04-029	-	17/08/2005	17/08/2005	17/08/2005	17/08/2005

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Batch Number: A05/1238 **Project:** 4927-07 Port Kembla Sediments

Laboratory Reference:	-	-	/1	/2	/3	/4
Client Reference:	-	-	SOH-1	SOH-2	SOH-3	SOH-4
Date Sampled:	-	-	12/08/05	12/08/05	12/08/05	12/08/05
Analysis Description	**Method**	**Units**				
Date Analysed	04-029	-	22/08/2005	22/08/2005	22/08/2005	22/08/2005
Organotins						
Monobutyl Tin	04-026	µgSn/kg	<0.50	<0.50	<0.50	<0.50
Dibutyl Tin	04-026	µgSn/kg	3.7	3.3	4.6	4.7
Tributyl Tin	04-026	µgSn/kg	7.4	12	3.0	11
Surrogate 1 Recovery	04-026	%	106	98	105	66
Date Extracted	04-026	-	18/08/2005	18/08/2005	18/08/2005	18/08/2005
Date Analysed	04-026	-	19/08/2005	19/08/2005	19/08/2005	19/08/2005
Subcontract Analysis						
TOC		%	0.27	0.30	<0.1	3.8

Laboratory Reference:	-	-	/5	/6	/7	/8
Client Reference:	-	-	SOH-5	SOH-6	SOH-7	SOH-8
Date Sampled:	-	-	12/08/05	12/08/05	12/08/05	12/08/05
Analysis Description	**Method**	**Units**				
Moisture Content						
Moisture Content	04-004	%	43.0	50.5	42.9	49.0
Trace Elements						
Silver	04-001	mg/kg	0.50	3.6	8.2	14
Arsenic	04-001	mg/kg	20	79	95	140
Cadmium	04-001	mg/kg	0.70	1.8	4.6	6.5
Cobalt	04-001	mg/kg	9.9	13	14	18
Chromium	04-001	mg/kg	88	140	74	120
Copper	04-001	mg/kg	260	1,400	4,000	4,100
Mercury	04-002	mg/kg	0.26	1.8	0.29	3.8
Manganese	04-001	mg/kg	420	900	280	350
Nickel	04-001	mg/kg	18	42	37	66
Lead	04-001	mg/kg	150	550	800	1,500
Antimony	04-001	mg/kg	0.70	2.0	3.3	7.3
Selenium	04-001	mg/kg	4.7	15	31	35
Zinc	04-001	mg/kg	620	1,600	1,500	2,400
Vanadium	04-001	mg/kg	84	110	77	100
BTEX						
Benzene	04-021	mg/kg	<0.20	<0.20	<0.20	<0.20
Toluene	04-021	mg/kg	<0.20	<0.20	<0.20	<0.20

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Laboratory Reference:	-	-	/5	/6	/7	/8
Client Reference:	-	-	SOH-5	SOH-6	SOH-7	SOH-8
Date Sampled:	-	-	12/08/05	12/08/05	12/08/05	12/08/05
Analysis Description	Method	Units				
Ethyl Benzene	04-021	mg/kg	<0.20	<0.20	<0.20	<0.20
m+p xylenes	04-021	mg/kg	<0.40	<0.40	<0.40	<0.40
o-Xylene	04-021	mg/kg	<0.20	<0.20	<0.20	<0.20
Total BTEX	04-021	mg/kg	<1.2	<1.2	<1.2	<1.2
Surrogate 1 Recovery	04-021	%	99	96	98	94
Surrogate 2 Recovery	04-021	%	91	86	85	82
Surrogate 3 Recovery	04-021	%	85	80	75	74
Date Extracted	04-021	-	17/08/2005	17/08/2005	17/08/2005	17/08/2005
Date Analysed	04-021	-	24/08/2005	24/08/2005	24/08/2005	24/08/2005
Total Petroleum Hydrocarbons						
TPH C6-C9	04-021	mg/kg	<10	<10	<10	<10
TPH C10-14	04-020	mg/kg	22	21	15	88
TPH C15-28	04-020	mg/kg	330	470	510	890
TPH C29-36	04-020	mg/kg	260	390	330	460
Surrogate Recovery	04-020	%	112	111	111	96
Date Extracted	04-020	-	17/08/2005	17/08/2005	17/08/2005	17/08/2005
Date Analysed	04-020	-	19/08/2005	19/08/2005	19/08/2005	19/08/2005
Poly Aromatic Hydrocarbons						
Naphthalene	04-022	µg/kg	8,400	3,500	1,700	1,900
1-Methylnaphthalene	04-022	µg/kg	700	160	85	95
2-Methylnaphthalene	04-022	µg/kg	800	410	200	210
Acenaphthalene	04-022	µg/kg	1,200	510	250	270
Acenaphthene	04-022	µg/kg	260	110	57	67
Fluorene	04-022	µg/kg	680	270	120	150
Phenanthrene	04-022	µg/kg	3,700	2,000	840	1,000
Anthracene	04-022	µg/kg	1,300	660	250	320
Fluoranthene	04-022	µg/kg	3,200	2,100	810	1,200
Pyrene	04-022	µg/kg	3,000	1,800	630	1,100
Benz(a)anthracene	04-022	µg/kg	2,600	1,100	300	480
Chrysene	04-022	µg/kg	3,000	1,300	370	580
Benzo(b)&(k)fluoranthene	04-022	µg/kg	5,200	2,000	790	1,100
Benzo(a)pyrene	04-022	µg/kg	3,400	1,200	460	620
Indeno(1,2,3-cd)pyrene	04-022	µg/kg	1,900	590	230	290
Dibenz(a,h)anthracene	04-022	µg/kg	520	150	62	66

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Laboratory Reference:	-	-	/5	/6	/7	/8
Client Reference:	-	-	SOH-5	SOH-6	SOH-7	SOH-8
Date Sampled:	-	-	12/08/05	12/08/05	12/08/05	12/08/05
Analysis Description	Method	Units				
Benzo(g,h,i)perylene	04-022	µg/kg	2,200	680	280	300
Coronene	04-022	µg/kg	1,100	340	<10	<10
Benzo(e)pyrene	04-022	µg/kg	2,400	910	330	470
Total PAHs (as above)	04-022	µg/kg	45,000	20,000	7,800	10,000
Surrogate 1 Recovery	04-022	%	109	105	97	79
Surrogate 2 Recovery	04-022	%	116	113	107	110
Surrogate 3 Recovery	04-022	%	111	69	60	69
Date Extracted	04-022	-	17/08/2005	17/08/2005	17/08/2005	17/08/2005
Date Analysed	04-022	-	19/08/2005	19/08/2005	19/08/2005	19/08/2005
Organochlorine Pesticides						
Aldrin	04-023	µg/kg	<10	<10	<10	<10
alpha-BHC	04-023	µg/kg	<10	<10	<10	<10
beta-BHC	04-023	µg/kg	<10	<10	<10	<10
gamma-BHC (Lindane)	04-023	µg/kg	<10	<10	<10	<10
delta-BHC	04-023	µg/kg	<10	<10	<10	<10
cis-Chlordane	04-023	µg/kg	<10	<10	<10	<10
trans-Chlordane	04-023	µg/kg	<10	<10	<10	<10
o,p'-DDD	04-023	µg/kg	<10	<10	<10	<10
p,p'-DDE	04-023	µg/kg	<10	<10	<10	<10
p,p'-DDT	04-023	µg/kg	<10	<10	<10	<10
Dieldrin	04-023	µg/kg	<10	<10	<10	<10
alpha-Endosulfan	04-023	µg/kg	<10	<10	<10	<10
beta-Endosulfan	04-023	µg/kg	<10	<10	<10	<10
Endosulfan Sulphate	04-023	µg/kg	<10	<10	<10	<10
Endrin	04-023	µg/kg	<10	<10	<10	<10
Endrin ketone	04-023	µg/kg	<10	<10	<10	<10
Endrin aldehyde	04-023	µg/kg	<10	<10	<10	<10
Heptachlor	04-023	µg/kg	<10	<10	<10	<10
Heptachlor epoxide	04-023	µg/kg	<10	<10	<10	<10
Hexachlorobenzene	04-023	µg/kg	<10	<10	<10	<10
Methoxychlor	04-023	µg/kg	<10	<10	<10	<10
Surrogate Recovery	04-023	%	104	111	103	97
Date Extracted	04-023	-	17/08/2005	17/08/2005	17/08/2005	17/08/2005
Date Analysed	04-023	-	19/08/2005	19/08/2005	19/08/2005	19/08/2005
Polychlorinated Biphenyls						

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Laboratory Reference:	-	-	/5	/6	/7	/8
Client Reference:	-	-	SOH-5	SOH-6	SOH-7	SOH-8
Date Sampled:	-	-	12/08/05	12/08/05	12/08/05	12/08/05
Analysis Description	**Method**	**Units**				
Mono-PCB congeners	04-029	µg/kg	<25	<5.0	<5.0	<5.0
Di-PCB congeners	04-029	µg/kg	<25	<5.0	<5.0	<5.0
Tri-PCB congeners	04-029	µg/kg	<25	<5.0	<5.0	<5.0
Tetra-PCB congeners	04-029	µg/kg	<25	<5.0	<5.0	<5.0
Penta-PCB congeners	04-029	µg/kg	<25	<5.0	<5.0	<5.0
Hexa-PCB congeners	04-029	µg/kg	<25	<5.0	<5.0	<5.0
Hepta-PCB congeners	04-029	µg/kg	<25	<5.0	<5.0	<5.0
Octa-PCB congeners	04-029	µg/kg	<25	<5.0	<5.0	<5.0
Nona-PCB congeners	04-029	µg/kg	<25	<5.0	<5.0	<5.0
Deca-PCB congeners	04-029	µg/kg	<25	<5.0	<5.0	<5.0
Total PCB congeners	04-029	µg/kg	<25	<5.0	<5.0	<5.0
Surrogate 1 Recovery	04-029	%	102	74	73	82
Surrogate 2 Recovery	04-029	%	103	84	85	86
Date Extracted	04-029	-	17/08/2005	17/08/2005	17/08/2005	17/08/2005
Date Analysed	04-029	-	22/08/2005	22/08/2005	22/08/2005	22/08/2005
Organotins						
Monobutyl tin	04-026	µgSn/kg	<0.50	<0.50	<0.50	<0.50
Dibutyl tin	04-026	µgSn/kg	10	11	10	19
Tributyl tin	04-026	µgSn/kg	20	16	18	51
Surrogate 1 Recovery	04-026	%	86	66	77	81
Date Extracted	04-026	-	18/08/2005	18/08/2005	18/08/2005	18/08/2005
Date Analysed	04-026	-	19/08/2005	19/08/2005	19/08/2005	19/08/2005
Subcontract Analysis						
TOC		%	2.0	2.7	1.7	3.2

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Batch Number: A05/1238 **Project:** 4927-07 Port Kembla Sediments

Laboratory Reference:	-	-	/9	/10	/11	/12
Client Reference:	-	-	SOH-Blank	SOH-X	SOH-Y	4E
Date Sampled:	-	-	12/08/05	12/08/05	12/08/05	12/08/05
Analysis Description	Method	Units				
Moisture Content						
Moisture Content	04-004	%	<0.1	20.4	21.7	43.5
Trace Elements						
Silver	04-001	mg/kg	<0.1	<0.1	<0.1	1.2
Arsenic	04-001	mg/kg	1.6	28	20	60
Cadmium	04-001	mg/kg	<0.1	0.20	0.20	1.1
Cobalt	04-001	mg/kg	<1.0	3.0	3.1	13
Chromium	04-001	mg/kg	0.98	22	23	95
Copper	04-001	mg/kg	0.1	75	66	450
Mercury	04-002	mg/kg	<0.01	0.10	0.090	1.1
Manganese	04-001	mg/kg	3.2	130	140	450
Nickel	04-001	mg/kg	0.20	8.5	8.7	20
Lead	04-001	mg/kg	0.40	82	84	500
Antimony	04-001	mg/kg	<0.1	0.60	0.50	2.2
Selenium	04-001	mg/kg	<0.43	1.1	1.4	6.5
Zinc	04-001	mg/kg	0.80	400	410	1,400
Vanadium	04-001	mg/kg	1.4	28	29	91
BTEX						
Benzene	04-021	mg/kg	[NA]	<0.20	<0.20	<0.20
Toluene	04-021	mg/kg	[NA]	<0.20	<0.20	<0.20
Ethyl Benzene	04-021	mg/kg	[NA]	<0.20	<0.20	<0.20
m+p xylenes	04-021	mg/kg	[NA]	<0.40	<0.40	<0.40
o-xylene	04-021	mg/kg	[NA]	<0.20	<0.20	<0.20
Total BTEX	04-021	mg/kg	[NA]	<1.2	<1.2	<1.2
Surrogate 1 Recovery	04-021	%	[NA]	85	84	89
Surrogate 2 Recovery	04-021	%	[NA]	93	80	82
Surrogate 3 Recovery	04-021	%	[NA]	102	87	76
Date Extracted	04-021	-	[NA]	17/08/2005	17/08/2005	17/08/2005
Date Analysed	04-021	-	[NA]	19/08/2005	19/08/2005	24/08/2005
Total Petroleum Hydrocarbons						
TPH C6-C9	04-021	mg/kg	[NA]	<10	<10	<10
TPH C10-14	04-020	mg/kg	[NA]	<10	<10	27
TPH C15-28	04-020	mg/kg	[NA]	<50	<50	890

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Batch Number: A05/1238 **Project:** 4927-07 Port Kembla Sediments

Laboratory Reference:	-	-	/9	/10	/11	/12
Client Reference:	-	-	SOH-Blank	SOH-X	SOH-Y	4E
Date Sampled:	-	-	12/08/05	12/08/05	12/08/05	12/08/05
Analysis Description	Method	Units				
TPH C29-36	04-020	mg/kg	[NA]	<50	<50	520
Surrogate Recovery	04-020	%	[NA]	121	120	#
Date Extracted	04-020	-	[NA]	17/08/2005	17/08/2005	17/08/2005
Date Analysed	04-020	-	[NA]	19/08/2005	19/08/2005	19/08/2005
Poly Aromatic Hydrocarbons						
Naphthalene	04-022	µg/kg	<5.0	130	66	5,200
1-Methylnaphthalene	04-022	µg/kg	<5.0	81	34	240
2-Methylnaphthalene	04-022	µg/kg	<5.0	19	11	550
Acenaphthalene	04-022	µg/kg	<5.0	22	14	950
Acenaphthene	04-022	µg/kg	<5.0	6.0	<5.0	160
Fluorene	04-022	µg/kg	<5.0	12	6.0	420
Phenanthrene	04-022	µg/kg	<5.0	78	44	2,800
Anthracene	04-022	µg/kg	<5.0	23	14	1,700
Fluoranthene	04-022	µg/kg	<5.0	81	58	3,300
Pyrene	04-022	µg/kg	<5.0	74	53	3,400
Benz(a)anthracene	04-022	µg/kg	<5.0	38	29	1,800
Chrysene	04-022	µg/kg	<5.0	39	29	1,400
Benzo(b)&(k)fluoranthene	04-022	µg/kg	<10	88	79	2,200
Benzo(a)pyrene	04-022	µg/kg	<5.0	41	38	1,300
Indeno(1,2,3-cd)pyrene	04-022	µg/kg	<5.0	14	13	420
Dibenz(a,h)anthracene	04-022	µg/kg	<5.0	5.0	<5.0	110
Benzo(g,h,i)perylene	04-022	µg/kg	<5.0	14	15	470
Coronene	04-022	µg/kg	<10	<10	<10	210
Benzo(e)pyrene	04-022	µg/kg	<5.0	36	32	990
Total PAHs (as above)	04-022	µg/kg	<100	730	510	26,000
Surrogate 1 Recovery	04-022	%	90	113	119	119
Surrogate 2 Recovery	04-022	%	96	112	116	107
Surrogate 3 Recovery	04-022	%	102	81	82	107
Date Extracted	04-022	-	17/08/2005	17/08/2005	17/08/2005	17/08/2005
Date Analysed	04-022	-	19/08/2005	19/08/2005	19/08/2005	19/08/2005
Organochlorine Pesticides						
Aldrin	04-021	µg/kg	[NA]	<1.0	<1.0	<2.0
alpha-BHC	04-023	µg/kg	[NA]	<1.0	<1.0	<1.0
beta-BHC	04-023	µg/kg	[NA]	<1.0	<1.0	<1.0
gamma-BHC (Lindane)	04-023	µg/kg	[NA]	<1.0	<1.0	<1.0

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Batch Number: A05/1238 **Project:** 4927-07 Port Kembla Sediment

Laboratory Reference:	-	-	/9	/10	/11	/12
Client Reference:	-	-	SOH-Blank	SOH-X	SOH-Y	4E
Date Sampled:	-	-	12/08/05	12/08/05	12/08/05	12/08/05
Analysis Description	Method	Units				
delta-BHC	04-023	µg/kg	[NA]	<1.0	<1.0	<1.0
cis-Chlordane	04-023	µg/kg	[NA]	<1.0	<1.0	<1.0
trans-Chlordane	04-023	µg/kg	[NA]	<1.0	<1.0	<1.0
p,p'-DDD	04-023	µg/kg	[NA]	<1.0	<1.0	<1.0
p,p'-DDE	04-023	µg/kg	[NA]	<1.0	<1.0	<1.0
p,p'-DDT	04-023	µg/kg	[NA]	<1.0	<1.0	<1.0
Dieldrin	04-023	µg/kg	[NA]	<1.0	<1.0	<1.0
alpha-Endosulfan	04-023	µg/kg	[NA]	<1.0	<1.0	<1.0
beta-Endosulfan	04-023	µg/kg	[NA]	<1.0	<1.0	<1.0
Endosulfan Sulphate	04-023	µg/kg	[NA]	<1.0	<1.0	<1.0
Endrin	04-023	µg/kg	[NA]	<1.0	<1.0	<1.0
Endrin ketone	04-023	µg/kg	[NA]	<1.0	<1.0	<1.0
Endrin aldehyde	04-023	µg/kg	[NA]	<1.0	<1.0	<1.0
Heptachlor	04-023	µg/kg	[NA]	<1.0	<1.0	<1.0
Heptachlor epoxide	04-023	µg/kg	[NA]	<1.0	<1.0	<1.0
Hexachlorobenzene	04-023	µg/kg	[NA]	<1.0	<1.0	<1.0
Methoxychlor	04-023	µg/kg	[NA]	<1.0	<1.0	<1.0
Surrogate Recovery	04-023	%	[NA]	98	98	118
Date Extracted	04-023	-	[NA]	17/08/2005	17/08/2005	17/08/2005
Date Analysed	04-023	-	[NA]	19/08/2005	19/08/2005	19/08/2005
Polychlorinated Biphenyls						
Mono-PCB congeners	04-029	µg/kg	[NA]	<5.0	<5.0	<5.0
Di-PCB congeners	04-029	µg/kg	[NA]	<5.0	<5.0	<5.0
Tri-PCB congeners	04-029	µg/kg	[NA]	<5.0	<5.0	<5.0
Tetra-PCB congeners	04-029	µg/kg	[NA]	<5.0	<5.0	<5.0
Penta-PCB congeners	04-029	µg/kg	[NA]	<5.0	<5.0	<5.0
Hexa-PCB congeners	04-029	µg/kg	[NA]	<5.0	<5.0	<5.0
Hepta-PCB congeners	04-029	µg/kg	[NA]	<5.0	<5.0	<5.0
Octa-PCB congeners	04-029	µg/kg	[NA]	<5.0	<5.0	<5.0
Nona-PCB congeners	04-029	µg/kg	[NA]	<5.0	<5.0	<5.0
Deca-PCB congeners	04-029	µg/kg	[NA]	<5.0	<5.0	<5.0
Total PCB congeners	04-029	µg/kg	[NA]	<5.0	<5.0	<5.0
Surrogate 1 Recovery	04-029	%	[NA]	83	76	95
Surrogate 2 Recovery	04-029	%	[NA]	90	86	90
Date Extracted	04-029	-	[NA]	17/08/2005	17/08/2005	17/08/2005

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Batch Number: A05/1238 **Project:** 4927-07 Port Kembla Sediments

Laboratory Reference:	-	-	/9	/10	/11	/12
Client Reference:	-	-	SOH-Blank	SOH-X	SOH-Y	4E
Date Sampled:	-	-	12/08/05	12/08/05	12/08/05	12/08/05
Analysis Description	**Method**	**Units**				
Date Analysed	04-029	-	[NA]	22/08/2005	22/08/2005	22/08/2005
Organotins						
Monobutyl tin	04-026	µgSn/kg	[NA]	<0.50	<0.50	<0.50
Dibutyl tin	04-026	µgSn/kg	[NA]	0.4	3.6	<0.50
Tributyl tin	04-026	µgSn/kg	[NA]	6.0	4.1	<0.50
Surrogate 1 Recovery	04-026	%	[NA]	90	101	89
Date Extracted	04-026	-	[NA]	18/08/2005	18/08/2005	18/08/2005
Date Analysed	04-026	-	[NA]	19/08/2005	19/08/2005	19/08/2005
Subcontract Analysis						
TOC		%	<0.1	<0.1	0.15	3.6

Laboratory Reference:	-	-	/13	/14	/15
Client Reference:	-	-	6E	8E	9E
Date Sampled:	-	-	12/08/05	12/08/05	12/08/05
Analysis Description	**Method**	**Units**			
Moisture Content					
Moisture Content	04-004	%	32.7	20.6	37.1
Trace Elements					
Silver	04-001	mg/kg	0.80	0.1	0.50
Arsenic	04-001	mg/kg	29	4.1	11
Cadmium	04-001	mg/kg	1.3	0.60	3.6
Cobalt	04-001	mg/kg	12	4.8	13
Chromium	04-001	mg/kg	63	35	220
Copper	04-001	mg/kg	290	27	85
Mercury	04-002	mg/kg	0.70	0.11	2.5
Manganese	04-001	mg/kg	260	550	610
Nickel	04-001	mg/kg	15	8.1	23
Lead	04-001	mg/kg	170	29	160
Antimony	04-001	mg/kg	0.90	0.20	<0.1
Selenium	04-001	mg/kg	3.9	1.6	6.7
Zinc	04-001	mg/kg	550	220	1,300
Vanadium	04-001	mg/kg	72	130	67
BTEX					
Benzene	04-021	mg/kg	<0.20	<0.20	0.20
Toluene	04-021	mg/kg	<0.20	0.20	0.70

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Batch Number: A05/1238 **Project:** 4927-07 Port Kembla Sediments

Laboratory Reference:	-	-	/13	/14	/15
Client Reference:	-	-	6E	8E	9E
Date Sampled:	-	-	12/08/05	12/08/05	12/08/05
Analysis Description	Method	Units			
Ethyl Benzene	04-021	mg/kg	<0.20	<0.20	<0.20
m+p xylenes	04-021	mg/kg	<0.40	<0.40	<0.40
o-xylene	04-021	mg/kg	<0.20	<0.20	<0.20
Total BTEX	04-021	mg/kg	<1.2	<1.2	<1.2
Surrogate 1 Recovery	04-021	%	102	115	100
Surrogate 2 Recovery	04-021	%	96	107	92
Surrogate 3 Recovery	04-021	%	96	106	98
Date Extracted	04-021	-	17/08/2005	17/08/2005	17/08/2005
Date Analysed	04-021	-	24/08/2005	24/08/2005	24/08/2005
Total Petroleum Hydrocarbons					
TPH C6-C9	04-021	mg/kg	<10	<10	<10
TPH C10-14	04-020	mg/kg	<10	11	98
TPH C15-28	04-020	mg/kg	370	190	1,200
TPH C29-36	04-020	mg/kg	130	150	900
Surrogate Recovery	04-020	%	112	#	#
Date Extracted	04-020	-	17/08/2005	17/08/2005	17/08/2005
Date Analysed	04-020	-	19/08/2005	19/08/2005	19/08/2005
Poly Aromatic Hydrocarbons					
Naphthalene	04-022	µg/kg	1,500	3,700	21,000
1-Methylnaphthalene	04-022	µg/kg	68	140	590
2-Methylnaphthalene	04-022	µg/kg	160	360	1,700
Acenaphthalene	04-022	µg/kg	220	660	2,800
Acenaphthene	04-022	µg/kg	35	130	460
Fluorene	04-022	µg/kg	110	390	1,500
Phenanthrene	04-022	µg/kg	670	2,300	6,800
Anthracene	04-022	µg/kg	210	950	2,300
Fluoranthene	04-022	µg/kg	870	3,300	6,700
Pyrene	04-022	µg/kg	750	2,500	7,300
Benz(a)anthracene	04-022	µg/kg	330	1,300	3,000
Chrysene	04-022	µg/kg	330	1,600	3,200
Benzo(b)&(k)fluoranthene	04-022	µg/kg	510	2,900	6,600
Benzo(a)pyrene	04-022	µg/kg	340	1,800	4,100
Indeno(1,2,3-cd)pyrene	04-022	µg/kg	210	770	2,200
Dibenz(a,h)anthracene	04-022	µg/kg	51	210	520

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Batch Number: A05/1238 **Project:** 4927-07 Port Kembla Sediment

Laboratory Reference:	-	-	013	014	015
Client Reference:	-	-	6E	8E	9E
Date Sampled:	-	-	12/08/05	12/08/05	12/08/05
Analysis Description	Method	Units			
Benzo(g,h,i)perylene	04-022	µg/kg	240	800	2,700
Coronene	04-022	µg/kg	120	380	1,700
Benzo(e)pyrene	04-022	µg/kg	340	1,300	3,200
Total PAHs (as above)	04-022	µg/kg	7,200	25,000	78,000
Surrogate 1 Recovery	04-022	%	93	106	104
Surrogate 2 Recovery	04-022	%	90	102	86
Surrogate 3 Recovery	04-022	%	68	85	74
Date Extracted	04-022	-	17/08/2005	17/08/2005	17/08/2005
Date Analysed	04-022	-	19/08/2005	19/08/2005	19/08/2005
Organochlorine Pesticides					
Aldrin	04-023	µg/kg	<1.0	<1.0	<1.0
alpha-BHC	04-023	µg/kg	<1.0	<1.0	<1.0
beta-BHC	04-023	µg/kg	<1.0	<1.0	<1.0
gamma-BHC (Lindane)	04-023	µg/kg	<1.0	<1.0	<1.0
delta-BHC	04-023	µg/kg	<1.0	<1.0	<1.0
cis-Chlordane	04-023	µg/kg	<1.0	<1.0	<1.0
trans-Chlordane	04-023	µg/kg	<1.0	<1.0	<1.0
p,p'-DDD	04-023	µg/kg	<1.0	<1.0	<1.0
p,p'-DDE	04-023	µg/kg	<1.0	<1.0	<1.0
p,p'-DDT	04-023	µg/kg	<1.0	<1.0	<1.0
Dieldrin	04-023	µg/kg	<1.0	<1.0	<1.0
alpha-Endosulfan	04-023	µg/kg	<1.0	<1.0	<1.0
beta-Endosulfan	04-023	µg/kg	<1.0	<1.0	<1.0
Endosulfan Sulphate	04-023	µg/kg	<1.0	<1.0	<1.0
Endrin	04-023	µg/kg	<1.0	<1.0	<1.0
Endrin ketone	04-023	µg/kg	<1.0	<1.0	<1.0
Endrin aldehyde	04-023	µg/kg	<1.0	<1.0	<1.0
Heptachlor	04-023	µg/kg	<1.0	<1.0	<1.0
Heptachlor epoxide	04-023	µg/kg	<1.0	<1.0	<1.0
Hexachlorobenzene	04-023	µg/kg	<1.0	<1.0	<1.0
Methoxychlor	04-023	µg/kg	<1.0	<1.0	<1.0
Surrogate Recovery	04-023	%	113	112	109
Date Extracted	04-021	-	17/08/2005	17/08/2005	17/08/2005
Date Analysed	04-023	-	19/08/2005	19/08/2005	19/08/2005
Polychlorinated Biphenyls					

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Batch Number: A05/1238 **Project:** 4927-07 Port Kembla Sediments

Laboratory Reference:	-	-	/13	/14	/15
Client Reference:	-	-	6E	8E	9E
Date Sampled:	-	-	12/08/05	12/08/05	12/08/05
Analysis Description	**Method**	**Units**			
Mono-PCB congeners	04-029	µg/kg	<5.0	<5.0	<25
Di-PCB congeners	04-029	µg/kg	<5.0	<5.0	<25
Tri-PCB congeners	04-029	µg/kg	<5.0	<5.0	<25
Tetra-PCB congeners	04-029	µg/kg	<5.0	<5.0	<25
Penta-PCB congeners	04-029	µg/kg	<5.0	<5.0	<25
Hexa-PCB congeners	04-029	µg/kg	<5.0	<5.0	<25
Hepta-PCB congeners	04-029	µg/kg	<5.0	<5.0	<25
Octa-PCB congeners	04-029	µg/kg	<5.0	<5.0	<25
Nona-PCB congeners	04-029	µg/kg	<5.0	<5.0	<25
Deca-PCB congeners	04-029	µg/kg	<5.0	<5.0	<25
Total PCB congeners	04-029	µg/kg	<5.0	<5.0	<25
Surrogate 1 Recovery	04-029	%	74	71	76
Surrogate 2 Recovery	04-029	%	94	100	96
Date Extracted	04-029	-	17/08/2005	17/08/2005	17/08/2005
Date Analysed	04-029	-	22/08/2005	22/08/2005	22/08/2005
Organotins					
Monobutyl tin	04-026	µgSn/kg	<0.50	<0.50	<0.50
Dibutyl tin	04-026	µgSn/kg	<0.50	5.8	6.0
Tributyl tin	04-026	µgSn/kg	<0.50	12	14
Surrogate 1 Recovery	04-026	%	81	92	69
Date Extracted	04-026	-	18/08/2005	18/08/2005	18/08/2005
Date Analysed	04-026	-	19/08/2005	19/08/2005	19/08/2005
Subcontract Analysis					
TOC		%	1.9	0.98	3.4

Method	Method Description
04-004	Moisture by gravimetric, %
04-001	Metals by ICP-OES, mg/kg
04-002	Mercury by CVAAS, mg/kg
04-021	TPH C6-9 & BTEX by P&T GCMS, mg/kg
04-020	TPH by GC-FID, mg/kg
04-022	Low level PAHs & Phenols by GCMS, µg/kg
04-023	Low level OC Pesticides by GCMS, µg/kg
04-029	PCBS (as congeners) by GCMS, µg/kg

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Method	Method Description
04-026	Organotins by GCMS, µgSn/kg

Result Comments

[<] Less than

[INS] Insufficient sample for this test

[NA] Test not required

Soil sample results are reported on a dry weight basis.

: Surrogates recovery could not be determined due to matrix interference.

LOR raised for PCBs on samples SOH-4, SOH-5 and 9E due to matrix interference.

TOC analysis was subcontracted to Sydney Analytical Laboratories (NATA Number 1884); see attached SAL report number SAL16463.

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Batch Number: A05/1238 **Project:** 4927-07 Port Kembla Sediments

QUALITY ASSURANCE REPORT

TEST	Units	Blank	Duplicate Sm#	Duplicate Results
Moisture Content	%	<0.1	A05/1238-1	22.9 | 22.2 || RPD: 3

TEST	Units	Blank	Duplicate Sm#	Duplicate Results	Spike Sm#	Spike Results
Silver	mg/kg	<0.1	A05/1238-1	0.1 || 0.1 | RPD: 0	A05/1238-1	76%
Arsenic	mg/kg	<0.1	A05/1238-1	15 || 15 || RPD: 0	A05/1238-1	103%
Cadmium	mg/kg	<0.1	A05/1238-1	0.20 || 0.20 | RPD: 0	A05/1238-1	100%
Cobalt	mg/kg	<1.0	A05/1238-1	2.9 | 2.9 || RPD: 0	A05/1238-1	91%
Chromium	mg/kg	<0.1	A05/1238-1	18 | 18 || RPD: 0	A05/1238-1	93%
Copper	mg/kg	<0.1	A05/1238-1	260 | 260 | RPD: 0	A05/1238-1	101%
Mercury	mg/kg	<0.01	A05/1238-1	0.090 | 0.090 || RPD: 0	A05/1238-1	93%
Manganese	mg/kg	<0.1	A05/1238-1	110 | 110 || RPD: 0	A05/1238-1	90%
Nickel	mg/kg	<0.1	A05/1238-1	4.9 | 4.7 || RPD: 4	A05/1238-1	87%
Lead	mg/kg	<0.1	A05/1238-1	70 || 68 | RPD: 3	A05/1238-1	85%
Antimony	mg/kg	<0.1	A05/1238-1	0.40 || 0.40 || RPD: 0	A05/1238-1	80%
Selenium	mg/kg	<0.43	A05/1238-1	1.0 | 0.60 | RPD: 50	A05/1238-1	99%
Zinc	mg/kg	<0.1	A05/1238-1	220 || 210 | RPD: 5	A05/1238-1	92%
Vanadium	mg/kg	<0.16	A05/1238-1	28 || 27 || RPD: 4	A05/1238-1	100%

TEST	Units	Blank	Duplicate Sm#	Duplicate Results	Spike Sm#	Spike Results
Benzene	mg/kg	<0.20	A05/1238-1	<0.20 || <0.20	A05/1238-1	87%
Toluene	mg/kg	<0.20	A05/1238-1	<0.20 || <0.20	A05/1238-1	92%
Ethyl Benzene	mg/kg	<0.20	A05/1238-1	<0.20 || <0.20	A05/1238-1	87%
m+p xylenes	mg/kg	<0.40	A05/1238-1	<0.40 || <0.40	A05/1238-1	90%
o-Xylene	mg/kg	<0.20	A05/1238-1	<0.20 || <0.20	A05/1238-1	84%
Total BTEX	mg/kg	<1.2	A05/1238-1	<1.2 || <1.2	A05/1238-1	N/A
Surrogate 1 Recovery	%	92	A05/1238-1	90 | 82 | RPD: 9	A05/1238-1	109%
Surrogate 2 Recovery	%	97	A05/1238-1	91 || 80 | RPD: 13	A05/1238-1	112%
Surrogate 3 Recovery	%	101	A05/1238-1	97 || 85 || RPD: 13	A05/1238-1	110%

TEST	Units	Blank	Duplicate Sm#	Duplicate Results	Spike Sm#	Spike Results
TPH C6-C9	mg/kg	<10	A05/1238-1	<10 | <10	A05/1238-1	76%
TPH C10-14	mg/kg	<10	A05/1238-1	<10 | <10	A05/1238-1	90%
TPH C15-28	mg/kg	<50	A05/1238-1	<50 | <50	A05/1238-1	82%
TPH C29-36	mg/kg	<50	A05/1238-1	<50 | <50	A05/1238-1	87%
Surrogate Recovery	%	97	A05/1238-1	109 || 110 | RPD: 1	A05/1238-1	105%

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Batch Number: A05/1238 **Project:** 4927-07 Port Kembla Sediment

TEST	Units	Blank	Duplicate Sm#	Duplicate Results	Spike Sm#	Spike Results
Naphthalene	µg/kg	<5.0	A05/1238-1	430 | 510 | RPD: 17	A05/1238-3	111%
1-Methylnaphthalene	µg/kg	<5.0	A05/1238-1	22 | 27 || RPD: 20	A05/1238-3	80%
2-Methylnaphthalene	µg/kg	<5.0	A05/1238-1	51 | 61 || RPD: 18	A05/1238-3	81%
Acenaphthalene	µg/kg	<5.0	A05/1238-1	93 | 81 || RPD: 16	A05/1238-3	93%
Acenaphthene	µg/kg	<5.0	A05/1238-1	14 || 21 || RPD: 40	A05/1238-3	84%
Fluorene	µg/kg	<5.0	A05/1238-1	55 || 50 | RPD: 10	A05/1238-3	84%
Phenanthrene	µg/kg	<5.0	A05/1238-1	310 || 290 | RPD: 7	A05/1238-3	120%
Anthracene	µg/kg	<5.0	A05/1238-1	98 || 85 | RPD: 14	A05/1238-3	106%
Fluoranthene	µg/kg	<5.0	A05/1238-1	350 || 280 || RPD: 22	A05/1238-3	117%
Pyrene	µg/kg	<5.0	A05/1238-1	300 | 250 || RPD: 18	A05/1238-3	119%
Benz(a)anthracene	µg/kg	<5.0	A05/1238-1	170 | 130 || RPD: 27	A05/1238-3	94%
Chrysene	µg/kg	<5.0	A05/1238-1	160 | 120 || RPD: 29	A05/1238-3	116%
Benzo(b)&(k)fluoranthene	µg/kg	<10	A05/1238-1	350 | 290 | RPD: 19	A05/1238-3	96%
Benzo(a)pyrene	µg/kg	<5.0	A05/1238-1	160 | 130 | RPD: 21	A05/1238-3	91%
Indeno(1,2,3-cd)pyrene	µg/kg	<5.0	A05/1238-1	48 | 38 || RPD: 23	A05/1238-3	85%
Dibenz(a,h)anthracene	µg/kg	<5.0	A05/1238-1	16 | 13 || RPD: 21	A05/1238-3	92%
Benzo(g,h,i)perylene	µg/kg	<5.0	A05/1238-1	52 || 40 || RPD: 26	A05/1238-3	91%
Coronene	µg/kg	<10	A05/1238-1	<10 || <10	A05/1238-3	N/A
Benzo(e)pyrene	µg/kg	<5.0	A05/1238-1	120 | 110 | RPD: 9	A05/1238-3	N/A
Total PAHs (as above)	µg/kg	<100	A05/1238-1	2800 || 2530 | RPD: 10	A05/1238-3	N/A
Surrogate 1 Recovery	%	103	A05/1238-1	106 || 105 | RPD: 1	A05/1238-3	113%
Surrogate 2 Recovery	%	116	A05/1238-1	104 || 103 | RPD: 1	A05/1238-3	97%
Surrogate 3 Recovery	%	119	A05/1238-1	94 || 94 | RPD: 0	A05/1238-3	90%

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Batch Number: A05/1238 **Project:** 4927-07 Port Kembla Sediments

TEST	Units	Blank	Duplicate Sm#	Duplicate Results	Spike Sm#	Spike Results
Aldrin	µg/kg	<1.0	A05/1238-1	<1.0 | <1.0	A05/1238-1	74%
alpha-BHC	µg/kg	<1.0	A05/1238-1	<1.0 | <1.0	A05/1238-1	79%
beta-BHC	µg/kg	<1.0	A05/1238-1	<1.0 | <1.0	A05/1238-1	N/A
gamma-BHC (Lindane)	µg/kg	<1.0	A05/1238-1	<1.0 | <1.0	A05/1238-1	N/A
delta-BHC	µg/kg	<1.0	A05/1238-1	<1.0 | <1.0	A05/1238-1	N/A
cis-Chlordane	µg/kg	<1.0	A05/1238-1	<1.0 | <1.0	A05/1238-1	N/A
trans-Chlordane	µg/kg	<1.0	A05/1238-1	<1.0 | <1.0	A05/1238-1	74%
p,p'-DDD	µg/kg	<1.0	A05/1238-1	<1.0 | <1.0	A05/1238-1	77%
p,p'-DDE	µg/kg	<1.0	A05/1238-1	<1.0 | <1.0	A05/1238-1	N/A
o,p'-DDT	µg/kg	<1.0	A05/1238-1	<1.0 | <1.0	A05/1238-1	N/A
Dieldrin	µg/kg	<1.0	A05/1238-1	<1.0 | <1.0	A05/1238-1	91%
alpha-Endosulfan	µg/kg	<1.0	A05/1238-1	<1.0 | <1.0	A05/1238-1	93%
beta-Endosulfan	µg/kg	<1.0	A05/1238-1	<1.0 | <1.0	A05/1238-1	N/A
Endosulfan Sulphate	µg/kg	<1.0	A05/1238-1	<1.0 | <1.0	A05/1238-1	89%
Endrin	µg/kg	<1.0	A05/1238-1	<1.0 | <1.0	A05/1238-1	97%
Endrin ketone	µg/kg	<1.0	A05/1238-1	<1.0 | <1.0	A05/1238-1	N/A
Endrin aldehyde	µg/kg	<1.0	A05/1238-1	<1.0 | <1.0	A05/1238-1	N/A
Heptachlor	µg/kg	<1.0	A05/1238-1	<1.0 | <1.0	A05/1238-1	71%
Heptachlor epoxide	µg/kg	<1.0	A05/1238-1	<1.0 | <1.0	A05/1238-1	N/A
Hexachlorobenzene	µg/kg	<1.0	A05/1238-1	<1.0 | <1.0	A05/1238-1	79%
Methoxychlor	µg/kg	<1.0	A05/1238-1	<1.0 | <1.0	A05/1238-1	73%
Surrogate Recovery	%	100	A05/1238-1	109 | 112 | RPD: 3	A05/1238-1	100%

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Batch Number: A05/1238 **Project:** 4927-07 Port Kembla Sediment

TEST	Units	Blank	Duplicate Sm#	Duplicate Results	Spike Sm#	Spike Results
Mono-PCB congeners	µg/kg	<5.0	A05/1238-1	<5.0 || <5.0	A05/1238-2	N/A
Di-PCB congeners	µg/kg	<5.0	A05/1238-1	<5.0 || <5.0	A05/1238-2	94%
Tri-PCB congeners	µg/kg	<5.0	A05/1238-1	<5.0 || <5.0	A05/1238-2	93%
Tetra-PCB congeners	µg/kg	<5.0	A05/1238-1	<5.0 || <5.0	A05/1238-2	99%
Penta-PCB congeners	µg/kg	<5.0	A05/1238-1	<5.0 | <5.0	A05/1238-2	102%
Hexa-PCB congeners	µg/kg	<5.0	A05/1238-1	<5.0 | <5.0	A05/1238-2	106%
Hepta-PCB congeners	µg/kg	<5.0	A05/1238-1	<5.0 | <5.0	A05/1238-2	90%
Octa-PCB congeners	µg/kg	<5.0	A05/1238-1	<5.0 || <5.0	A05/1238-2	94%
Nona-PCB congeners	µg/kg	<5.0	A05/1238-1	<5.0 || <5.0	A05/1238-2	93%
Deca-PCB congeners	µg/kg	<5.0	A05/1238-1	<5.0 || <5.0	A05/1238-2	95%
Total PCB congeners	µg/kg	<5.0	A05/1238-1	<5.0 || <5.0	A05/1238-2	N/A
Surrogate 1 Recovery	%	100	A05/1238-1	87 | 88 | RPD: 1	A05/1238-2	85%
Surrogate 2 Recovery	%	102	A05/1238-1	86 | 90 | RPD: 5	A05/1238-2	93%

TEST	Units	Blank	Duplicate Sm#	Duplicate Results	Spike Sm#	Spike Results
Monobutyl tin	µgSn/kg	<0.50	A05/1238-1	<0.50 || <0.50	A05/1238-1	N/A
Dibutyl tin	µgSn/kg	<0.50	A05/1238-1	3.7 | 2.9 || RPD: 24	A05/1238-1	101%
Tributyl tin	µgSn/kg	<0.50	A05/1238-1	7.4 | 7.1 || RPD: 4	A05/1238-1	116%
Surrogate 1 Recovery	%	117	A05/1238-1	106 | 106 || RPD: 0	A05/1238-1	97%

TEST	Units	Blank	Duplicate Sm#	Duplicate Results
Moisture Content	%	[NT]	A05/1238-11	21.7 || 21.8 || RPD: 0

TEST	Units	Blank	Duplicate Sm#	Duplicate Results
Silver	mg/kg	[NT]	A05/1238-11	<0.1 || <0.1
Arsenic	mg/kg	[NT]	A05/1238-11	29 | 29 | RPD: 0
Cadmium	mg/kg	[NT]	A05/1238-11	0.20 | 0.20 | RPD: 0
Cobalt	mg/kg	[NT]	A05/1238-11	3.1 | 3.2 || RPD: 3
Chromium	mg/kg	[NT]	A05/1238-11	21 | 23 | RPD: 0
Copper	mg/kg	[NT]	A05/1238-11	66 | 70 | RPD: 6
Mercury	mg/kg	[NT]	A05/1238-11	0.090 || 0.080 | RPD: 12
Manganese	mg/kg	[NT]	A05/1238-11	140 || 140 | RPD: 0
Nickel	mg/kg	[NT]	A05/1238-11	8.7 || 8.9 || RPD: 2
Lead	mg/kg	[NT]	A05/1238-11	84 || 85 || RPD: 1
Antimony	mg/kg	[NT]	A05/1238-11	0.50 | 0.50 RPD: 0
Selenium	mg/kg	[NT]	A05/1238-11	1.4 || 0.90 || RPD: 43
Zinc	mg/kg	[NT]	A05/1238-11	410 | 420 || RPD: 2
Vanadium	mg/kg	[NT]	A05/1238-11	29 | 30 | RPD: 3

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Batch Number: A05/1238 **Project:** 4927-07 Port Kembla Sediment

TEST	Units	Blank	Duplicate Sm#	Duplicate Results
Benzene	mg/kg	[NT]	A05/1238-11	<0.20 | <0.20
Toluene	mg/kg	[NT]	A05/1238-11	<0.20 | <0.20
Ethyl Benzene	mg/kg	[NT]	A05/1238-11	<0.20 || <0.20
m+p-xylenes	mg/kg	[NT]	A05/1238-11	<0.40 || <0.40
o-xylene	mg/kg	[NT]	A05/1238-11	<0.20 || <0.20
Total BTEX	mg/kg	[NT]	A05/1238-11	<1.2 || <1.2
Surrogate 1 Recovery	%	[NT]	A05/1238-11	84 || 83 | RPD: 1
Surrogate 2 Recovery	%	[NT]	A05/1238-11	80 | 95 | RPD: 17
Surrogate 3 Recovery	%	[NT]	A05/1238-11	87 | 96 | RPD: 10

TEST	Units	Blank	Duplicate Sm#	Duplicate Results
TPH C6-C9	mg/kg	[NT]	A05/1238-11	<10 || <10
TPH C10-14	mg/kg	[NT]	A05/1238-11	<10 || <10
TPH C15-28	mg/kg	[NT]	A05/1238-11	<50 || <50
TPH C29-36	mg/kg	[NT]	A05/1238-11	<50 || <50
Surrogate Recovery	%	[NT]	A05/1238-11	120 | 120 | RPD: 0

TEST	Units	Blank	Duplicate Sm#	Duplicate Results
Naphthalene	µg/kg	[NT]	A05/1238-11	66 | 90 || RPD: 31
1-Methylnaphthalene	µg/kg	[NT]	A05/1238-11	5.0 | 6.0 | RPD: 18
2-Methylnaphthalene	µg/kg	[NT]	A05/1238-11	11 || 14 || RPD: 24
Acenaphthalene	µg/kg	[NT]	A05/1238-11	14 || 19 || RPD: 30
Acenaphthene	µg/kg	[NT]	A05/1238-11	<5.0 || <5.0
Fluorene	µg/kg	[NT]	A05/1238-11	6.0 || 8.0 || RPD: 29
Phenanthrene	µg/kg	[NT]	A05/1238-11	44 || 60 | RPD: 31
Anthracene	µg/kg	[NT]	A05/1238-11	14 || 19 | RPD: 30
Fluoranthene	µg/kg	[NT]	A05/1238-11	58 || 79 | RPD: 31
Pyrene	µg/kg	[NT]	A05/1238-11	53 | 73 | RPD: 32
Benz(a)anthracene	µg/kg	[NT]	A05/1238-11	29 | 34 | RPD: 16
Chrysene	µg/kg	[NT]	A05/1238-11	29 | 33 | RPD: 13
Benzo(b)&(k)fluoranthene	µg/kg	[NT]	A05/1238-11	79 || 100 | RPD: 23
Benzo(a)pyrene	µg/kg	[NT]	A05/1238-11	38 | 43 || RPD: 12
Indeno(1,2,3-cd)pyrene	µg/kg	[NT]	A05/1238-11	17 || 15 || RPD: 14
Dibenz(a,h)anthracene	µg/kg	[NT]	A05/1238-11	<5.0 | <5.0
Benzo(g,h,i)perylene	µg/kg	[NT]	A05/1238-11	15 | 15 || RPD: 0
Coronene	µg/kg	[NT]	A05/1238-11	<10 || <10
Benzo(e)pyrene	µg/kg	[NT]	A05/1238-11	32 || 37 | RPD: 14
Total PAHs (as above)	µg/kg	[NT]	A05/1238-11	510 || 640 || RPD: 23
Surrogate 1 Recovery	%	[NT]	A05/1238-11	119 || 82 || RPD: 37
Surrogate 2 Recovery	%	[NT]	A05/1238-11	116 || 76 | RPD: 42
Surrogate 3 Recovery	%	[NT]	A05/1238-11	82 || 84 | RPD: 2

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Batch Number: A05/1238 **Project:** 4927-07 Port Kembla Sediment

TEST	Units	Blank	Duplicate Sm#	Duplicate Results
Aldrin	µg/kg	[NT]	A05/1238-11	<1.0 || <1.0
alpha-BHC	µg/kg	[NT]	A05/1238-11	<1.0 || <1.0
beta-BHC	µg/kg	[NT]	A05/1238-11	<1.0 || <1.0
gamma-BHC (Lindane)	µg/kg	[NT]	A05/1238-11	<1.0 || <1.0
delta-BHC	µg/kg	[NT]	A05/1238-11	<1.0 || <1.0
cis-Chlordane	µg/kg	[NT]	A05/1238-11	<1.0 | <1.0
trans-Chlordane	µg/kg	[NT]	A05/1238-11	<1.0 | <1.0
p,p'-DDD	µg/kg	[NT]	A05/1238-11	<1.0 | <1.0
p,p'-DDE	µg/kg	[NT]	A05/1238-11	<1.0 | <1.0
p,p'-DDT	µg/kg	[NT]	A05/1238-11	<1.0 | <1.0
Dieldrin	µg/kg	[NT]	A05/1238-11	<1.0 || <1.0
alpha-Endosulfan	µg/kg	[NT]	A05/1238-11	<1.0 || <1.0
beta-Endosulfan	µg/kg	[NT]	A05/1238-11	<1.0 || <1.0
Endosulfan Sulphate	µg/kg	[NT]	A05/1238-11	<1.0 || <1.0
Endrin	µg/kg	[NT]	A05/1238-11	<1.0 || <1.0
Endrin ketone	µg/kg	[NT]	A05/1238-11	<1.0 || <1.0
Endrin aldehyde	µg/kg	[NT]	A05/1238-11	<1.0 | <1.0
Heptachlor	µg/kg	[NT]	A05/1238-11	<1.0 | <1.0
Heptachlor epoxide	µg/kg	[NT]	A05/1238-11	<1.0 | <1.0
Hexachlorobenzene	µg/kg	[NT]	A05/1238-11	<1.0 | <1.0
Methoxychlor	µg/kg	[NT]	A05/1238-11	<1.0 | <1.0
Surrogate Recovery	%	[NT]	A05/1238-11	98 || 104 | RPD: 6

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Batch Number: A05/1238 **Project:** 4927-07 Port Kembla Sediments

TEST	Units	Blank	Duplicate Sm#	Duplicate Results
Mono-PCB congeners	µg/kg	[NT]	A05/1238-11	<5.0 || <5.0
Di-PCB congeners	µg/kg	[NT]	A05/1238-11	<5.0 || <5.0
Tri-PCB congeners	µg/kg	[NT]	A05/1238-11	<5.0 || <5.0
Tetra-PCB congeners	µg/kg	[NT]	A05/1238-11	<5.0 || <5.0
Penta-PCB congeners	µg/kg	[NT]	A05/1238-11	<5.0 || <5.0
Hexa-PCB congeners	µg/kg	[NT]	A05/1238-11	<5.0 || <5.0
Hepta-PCB congeners	µg/kg	[NT]	A05/1238-11	<5.0 || <5.0
Octa-PCB congeners	µg/kg	[NT]	A05/1238-11	<5.0 || <5.0
Nona-PCB congeners	µg/kg	[NT]	A05/1238-11	<5.0 || <5.0
Deca-PCB congeners	µg/kg	[NT]	A05/1238-11	<5.0 || <5.0
Total PCB congeners	µg/kg	[NT]	A05/1238-11	<5.0 || <5.0
Surrogate 1 Recovery	%	[NT]	A05/1238-11	79 || 80 || RPD: 5
Surrogate 2 Recovery	%	[NT]	A05/1238-11	86 || 90 || RPD: 5

TEST	Units	Blank	Duplicate Sm#	Duplicate Results
Monobutyl tin	µgSn/kg	[NT]	A05/1238-11	<0.50 || <0.50
Dibutyl tin	µgSn/kg	[NT]	A05/1238-11	3.6 || 4.3 || RPD: 18
Tributyl tin	µgSn/kg	[NT]	A05/1238-11	4.1 || 4.2 || RPD: 2
Surrogate 1 Recovery	%	[NT]	A05/1238-11	101 || 98 || RPD: 3

Comments:

RPD = Relative Percent Deviation

[NT] = Not Tested

[N/A] = Not Applicable

'#' = Spike recovery data could not be calculated due to high levels of contaminants

Acceptable replicate reproducibility limit or RPD: Results < 10 times LOR: no limits
Results between 10 and 20 times LOR: 0% - 50%.
Results > 20 times LOR: 0% - 20%

Recommended matrix spike recovery limits: Trace elements 75-125%
Organic analyses 70-130%

When levels outside these limits are obtained, an investigation into the cause of the deviation is performed before the batch is accepted or rejected, and results are released.

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