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## **APPENDIX B**

### **CMP FOR PROPOSED HOMEBUSH BAY BRIDGE CONSTRUCTION**

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**Document Reference:** PB Technical Paper 4, 2002

**Site / Report Reference:** Eastern Shore / Appendix B - 15

**Included Information:** JET 2001 results summary





TABLE II - TPH, BTEX AND MOISTURE CONTENT ANALYSIS RESULTS

	Moisture Content	Total Petroleum Hydrocarbons				Benzene	Toluene	Ethylbenzene	Total Xylene
		C6-C9	C10-C14	C15-C28	C29-C36				
	%	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
<b>Reclamation Area R1 &amp; R2</b>									
<b>Clean cover</b>									
BH6/0.3-1.8	6	<5	<10	<50	<50	<0.2	<1	<1	<3
BH7/0.7-1.9	5	<5	<10	<50	<50	<0.2	<1	<1	<3
<b>Mixed clay, shale, rubble etc above original factory ground level</b>									
BH6/2.6-4.5	3	<5	<10	<50	<50	<0.2	<1	<1	<3
BH6/7.0-7.6	14	<5	100	560	200	<0.2	<1	<1	<3
BH7/1.9-4.2	4	<5	<10	<50	<50	<0.2	<1	<1	<3
BH8/3.0-4.5	13	<5	30	120	<50	<0.2	<1	<1	<3
BH8/6.6-7.5	6	<5	60	70	<50	<0.2	<1	<1	<3
BH9/2.0-4.5	12	<5	60	140	<50	<0.2	<1	<1	<3
TP12/1.5-4.0	13	<5	120	220	<50	<0.2	<1	<1	<3
BH14/4.1-5.2	12	<5	50	140	<50	0.3	<1	<1	<3
BH15/1.5-3.7	19	100	<10	120	<50	0.6	<1	<1	<3
BH15/6.0-7.5	17	<5	300	140	<50	<0.2	<1	<1	<3
BH20/1.8-4.5	10	20	160	400	<50	4	<1	<1	<3
BH22/1.7-4.5	16	10	60	180	<50	0.5	<1	<1	<3
TP29/1.8-3.5	24	52	1300	1200	400	1.2	<1	<1	<3
<b>Mixed clay, shale, rubble etc below original factory ground level</b>									
TP12/4.7-5.8	27	<5	220	240	<50	<0.2	<1	<1	<3
BH14/7.5-9.0	20	120	580	920	280	0.9	<1	<1	<3
BH14/10.3-10.5	13	3100	420	480	<50	15	2	1	13
TP16/1.4-4.2	25	<5	<10	<50	<50	<0.2	<1	<1	<3
TP16/4.2-4.9	19	<5	70	260	<50	<0.2	<1	<1	<3
TP18/1.4-4.2	18	<5	80	740	140	<0.2	<1	<1	<3
BH30/9.4-10.0	31	12	500	1400	320	<0.2	<1	<1	<3
BH31/7.5-8.2	25	390	2400	1300	540	11	36	23	180



TABLE II - TPH, BTEX AND MOISTURE CONTENT ANALYSIS RESULTS

	Moisture Content	Total Petroleum Hydrocarbons				Benzene	Toluene	Ethylbenzene	Total Xylene
		C6-C9	C10-C14	C15-C28	C29-C36				
	%	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
<b>Boiler ash</b>									
BH7/7.0-7.8	14	84	660	1200	320	3.4	1	3	6
BD1-020201 (=BH7/7.0-7.8)	16	25	780	1700	420	1.2	<1	<1	<3
BH9/5.4-5.8	18	16	2100	4100	480	1	1	1	6
TP17/1.4-3.5	9	<5	560	1900	340	<0.2	<1	<1	3
TP17/3.7-4.3	31	550	25000	23000	1900	17	43	28	150
BD2-080201 (=TP17/3.7-4.3)	35	1200	27000	21000	1700	20	56	34	180
BH20/5.0-5.8	13	5	260	120	<50	0.4	1	<1	<3
BH22/8.0-9.0	30	21	30	140	50	<0.2	<1	<1	<3
<b>Spent lime</b>									
BH22/9.0-10.0	37	630	13000	6000	1600	15	25	17	100
BH27/8.3-8.6	27	9	<10	80	<50	<0.2	<1	<1	<3
BH30/10.0-10.5	46	18	120	180	<50	<0.2	<1	<1	<3
<b>Reclamation Area R3</b>									
Mixed clay, shale, rubble etc below original factory ground level									
TP25/3.2-3.3	13	<5	20	<50	<50	<0.2	<1	<1	<3
TP26/4.1-5.0	33	95	1400	1800	260	1.4	<1	<1	<3
TP28/1.0-2.3	17	8	20	200	<50	<0.2	<1	<1	<3
<b>Boiler ash</b>									
TP21/2.2-3.2	24	45	580	2400	600	0.8	<1	<1	<3
TP21/2.9-3.2	IS	**<5	**480	**840	**100	**<0.2	**<1	**<1	**<3
TP23/2.0-3.6	15	10	40	360	160	<0.2	<1	<1	<3



TABLE II - TPH, BTEX AND MOISTURE CONTENT ANALYSIS RESULTS

	Moisture Content	Total Petroleum Hydrocarbons				Benzene	Toluene	Ethylbenzene	Total Xylene
		C6-C9	C10-C14	C15-C28	C29-C36				
	%	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
TP24/2.0-4.3	17	13	920	780	120	<0.2	3	<1	<3
TP24/3.0-3.1	15	<5	640	2000	720	<0.2	<1	<1	<3
TP25/1.8-2.5	10	8	<10	<50	<50	<0.2	<1	<1	<3
TP26/2.2-2.4	17	<5	840	4600	1300	<0.2	<1	<1	<3
TP28/2.3-2.45	17	<5	640	460	260	<0.2	<1	<1	<3
<b>Spent lime</b>									
TP21/3.2-4.4	40	17	40	560	140	2	<1	<1	<3
TP23/3.6-4.6	38	<5	20	<50	<50	<0.2	<1	<1	<3
TP24/4.3-5.0	39	14	<10	720	280	<0.2	<1	<1	<3
TP25/2.5-3.8	45	18	740	280	<50	<0.2	4	<1	<3
TP26/3.0-4.1	37	15	30	320	90	<0.2	<1	<1	<3
TP28/2.3-5.5	38	91	160	2500	680	<0.2	<1	<1	<3
<b>Sediments</b>									
TP21/4.8-5.2	27	<5	<10	80	80	<0.2	<1	<1	<3
TP24/5.0-5.1	24	<5	<10	50	70	<0.2	<1	<1	<3
TP25/5.1-5.3	33	<5	780	580	320	<0.2	<1	<1	<3
<b>Reclamation Area R4</b>									
<b>Clean cover</b>									
TP1/0.0-0.2	20	<5	<10	<50	<50	NT	NT	NT	NT
TP2/0.0-1.9	10	<5	<10	<50	<50	NT	NT	NT	NT
TP3/0.0-1.8	14	<5	<10	<50	<50	NT	NT	NT	NT
TP4/0.0-2.2	11	<5	<10	<50	<50	NT	NT	NT	NT
TP5/0.0-2.4	13	<5	<10	<50	<50	NT	NT	NT	NT



TABLE II - TPH, BTEX AND MOISTURE CONTENT ANALYSIS RESULTS

	Moisture Content	Total Petroleum Hydrocarbons				Benzene	Toluene	Ethylbenzene	Total Xylene
		C6-C9	C10-C14	C15-C28	C29-C36				
	%	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
<b>Mixed clay, shale, rubble etc above original factory ground level</b>									
TP1/2.0-3.8	20	44	60	160	<50	NT	NT	NT	NT
TP2/1.9-4.0	8	<5	180	900	420	NT	NT	NT	NT
TP3/1.8-2.8	17	<5	70	320	120	NT	NT	NT	NT
TP4/2.2-3.9	15	<5	180	780	380	NT	NT	NT	NT
TP5/2.4-4.5	14	49	1600	1900	260	NT	NT	NT	NT
<b>Boiler ash</b>									
TP2/4.0-5.2	28	<5	360	620	300	NT	NT	NT	NT
TP3/2.8-4.2	19	<5	1400	4700	820	NT	NT	NT	NT
TP4/3.9-4.5	19	170	9900	13000	1200	NT	NT	NT	NT
<b>Spent lime</b>									
TP1/4.3-6.4	42	320	480	340	<50	NT	NT	NT	NT
TP1/4.1- 6.8 COMP	34	140	680	860	240	1.2	<1	<1	<3
TP2/5.2-7.8	24	65	440	200	<50	NT	NT	NT	NT
TP3/4.2-6.2	33	<5	160	<50	<50	NT	NT	NT	NT
TP4/4.5-6.4	40	290	920	300	<50	NT	NT	NT	NT
TP5/4.5-6.0	41	81	560	340	<50	NT	NT	NT	NT
BD1-300101 (=TP5/4.5-6.0)	43	60	520	300	<50	NT	NT	NT	NT



TABLE II - TPH, BTEX AND MOISTURE CONTENT ANALYSIS RESULTS

	Moisture Content	Total Petroleum Hydrocarbons				Benzene	Toluene	Ethylbenzene	Total Xylene
		C6-C9	C10-C14	C15-C28	C29-C36				
	%	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
<b>Seawall Area</b>									
<b>Clean cover</b>									
TP11/0.0-1.2	22	<5	<10	<50	<50	<0.2	<1	<1	<3
<b>Boiler ash</b>									
TP11/1.2-3.0	10	<5	20	90	60	0.6	<1	<1	<3
BD1-070201 (=TP11/1.2-3.0)	24	<5	50	420	160	<0.2	<1	<1	<3
TP11/4.5-4.7	18	3400	28000	13000	2300	11	10	150	420
TP19/1.4-3.0	20	<5	90	520	120	<0.2	<1	<1	<3
TP19/4.0-5.1	35	120	1500	3800	540	0.6	4	10	44
<b>Spent lime</b>									
TP11/3.0-4.5	45	<5	<10	300	<50	<0.2	<1	<1	<3
<b>Sediments</b>									
BH32/9-11.0	48	*>20000	148000	18000	2800	*>1000	120	57	420
BH32/OFFAUGER	27	*>10000	35000	4100	600	*>350	30	15	120



TABLE II - TPH, BTEX AND MOISTURE CONTENT ANALYSIS RESULTS

	Moisture Content	Total Petroleum Hydrocarbons				Benzene	Toluene	Ethylbenzene	Total Xylene
		C6-C9	C10-C14	C15-C28	C29-C36				
		µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
<b>Leachate Samples above original factory ground level</b>									
TP4/2.2-3.9	NT	<20	<20	<100	<100	<0.5	1	<1	<3
TP5/2.4-4.5	NT	<20	3400	826	<100	<0.5	2	1	4
BH6/5.8-7.0	NT	<20	<20	212	<100	<0.5	<1	<1	<3
TP12/1.5-4.0	NT	<20	<20	<100	<100	<0.5	<1	<1	<3
BH14/1.8-5.2 COMP	NT	180	<20	<100	<100	<0.5	<1	<1	7
BH14/4.1-5.2	NT	26	<20	<100	<100	<0.5	<1	<1	<3
BH14/5.2-7.5	NT	<2000	9200	1220	<100	<0.5	<1	<1	<3
BH22/1.7-4.5	NT	<20	<20	<100	<100	<0.5	<1	<1	<3
TP29/1.8-4.8 COMP	NT	<20	<20	<100	<100	<0.5	<1	<1	<3
TP29/1.8-3.5	NT	670	1600	<100	<100	7.4	<1	2	5
<b>Leachate Samples below original factory ground level</b>									
BH7/7.0-7.8	NT	100	<20	<100	<100	1.0	<1	<1	<3
TP11/1.2-3.0	NT	70	<20	<100	<100	<0.5	<1	<1	<3
TP11/4.5-4.7	NT	6000	26000	2960	<100	<50	<100	160	720
BH14/7.5-10.5 COMP	NT	70	1000	<100	<100	<0.5	<1	<1	<3
TP17/1.4-3.5	NT	<20	<20	<100	<100	<0.5	<1	<1	<3
TP19/1.4-5.1 COMP	NT	80	240	221	<100	<0.5	<1	3	5
TP24/3.0-3.1	NT	<20	<20	<100	<100	<0.5	<1	<1	<3
TP28/2.3-5.5	NT	<20	70	166	<100	<0.5	<1	<1	<3
<b>Rinsate Blanks</b>									
FB1-020201	NT	<20	<20	<100	<100	<0.5	<1	<1	<3
FB1-050201	NT	<20	<20	<100	<100	<0.5	<1	<1	<3
FB1-210201	NT	<20	<20	<100	<100	<0.5	<1	<1	<3
EB1-100201	NT	<20	<20	†250	<100	<0.5	<0.1	<0.1	<3



TABLE II - TPH, BTEX AND MOISTURE CONTENT ANALYSIS RESULTS

	Moisture Content	Total Petroleum Hydrocarbons				Benzene	Toluene	Ethylbenzene	Total Xylene
		C6-C9	C10-C14	C15-C28	C29-C36				
		µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
<b>Groundwater samples</b>									
BH10	NT	4600	12000	1640	<100	350	95	18	120
BH13	NT	<20	20	<100	<100	<0.5	<1	<1	<3
BH14	NT	402000	9900	344	<100	860	*<100	*<100	*<300
BD1-210201	NT	409000	8900	462	<100	970	*<100	*<100	*<300
BH20	NT	540	10000	6830	<100	52	33	72	93
BH22	NT	2500	9800	855	<100	140	160	64	370

NT - not tested

IS - insufficient sample

\* - tentatively quantified, approximate concentration

\*\* - result reported on wet weight basis

† - single peak



TABLE III - POLYCYCLIC AROMATIC HYDROCARBONS ANALYSIS RESULTS

	Naphthalene	Ace-naphthylene	Ace-naphthene	Fluorene	Phenanthrene	Anthracene	Fluoranthene	Pyrene	Benzo-(a)anthracene	Chrysene	Benzo-(b)&(k)-fluoranthene	Benzo-(a)-pyrene	Indeno-(123-cd)-pyrene	Dibenz-(ah)anthracene	Benzo-(ghi)-perylene	Total PAHs
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
<b>Reclamation Area R1 &amp; R2</b>																
<b>Clean cover</b>																
BH6/0.3-1.8	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
BH7/0.7-1.9	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
<b>Mixed clay, shale, rubble etc above original factory ground level</b>																
BH6/2.6-4.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
BH6/7.0-7.6	4	<0.5	1.6	0.7	2.6	0.8	4.4	4.8	1.4	1.4	2	1.4	0.8	<0.5	0.9	27
BH7/1.9-4.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
BH8/3.0-4.5	1.2	<0.5	<0.5	<0.5	1.2	<0.5	1.2	1.2	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
BH8/6.6-7.5	4.8	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	4.8
BH9/2.0-4.5	7.4	<0.5	<0.5	<0.5	1.4	<0.5	1.6	1.6	0.6	0.5	<1	<0.5	<0.5	<0.5	<0.5	4.8
TP12/1.5-4.0	10	<0.5	<0.5	<0.5	1.2	<0.5	0.6	0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	14
BH14/4.1-5.2	4.4	<0.5	0.6	<0.5	1.2	<0.5	0.9	0.8	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	12
BH15/1.5-3.7	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	7.8
BH15/6.0-7.5	22	<0.5	0.6	<0.5	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
BH20/1.8-4.5	2	<0.5	1.2	0.6	2.4	0.7	1.6	1.4	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	23
BH22/1.7-4.5	2.8	<0.5	0.7	<0.5	1.6	<0.5	1.4	1.2	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	9.8
TP29/1.8-3.5	36	<0.5	6.8	3	7.4	1.8	4	3.2	0.5	0.7	<1	<0.5	<0.5	<0.5	<0.5	7.6
<b>Mixed clay, shale, rubble etc below original factory ground level</b>																
TP12/4.7-5.8	3.8	<0.5	2	0.7	0.9	0.6	1.8	1.6	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
BH14/7.5-9.0	18	<0.5	1	<0.5	2.4	<0.5	2.2	2.6	0.6	0.5	<1	<0.5	<0.5	<0.5	<0.5	11
BH14/10.3-10.5	3.2	<0.5	<0.5	<0.5	1.2	<0.5	1	1	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	29
TP16/1.4-4.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	6.4
TP16/4.2-4.9	1.6	<0.5	2.6	1.4	4.4	1.2	2.2	2	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
TP18/1.4-4.2	3	<0.5	0.9	0.6	5.8	1.2	7.2	6	1.6	1.8	2	0.8	<0.5	<0.5	<0.5	15
BH30/9.4-10.0	64	0.5	14	6.8	11	2.8	3	2	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	30
BH31/7.5-8.2	330	0.7	6	3	5.2	1.2	2.2	2	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	100
<b>Boiler ash</b>																
BH7/7.0-7.8	100	0.5	6.4	2.8	5	1.2	2.4	2.2	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
BD1-020201 (=BH7/7.0-7.8)	79	0.7	7	3.4	7.4	1.6	3.4	3	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	120
BH9/5.4-5.8	61	3	75	33	86	21	42	31	5.4	4.2	4	1.6	0.5	<0.5	<0.5	110
TP17/1.4-3.5	160	0.7	7.2	4	13	4.2	14	14	3.4	2.6	6	2.6	1.4	<0.5	1.2	370
TP17/3.7-4.3	6600	21	420	270	590	140	260	220	64	53	80	48	28	2.6	21	230
BD2-080201 (=TP17/3.7-4.3)	5800	18	390	250	490	130	220	190	55	45	67	39	24	4.2	17	8800
BH20/5.0-5.8	2	<0.5	0.5	<0.5	0.9	<0.5	0.5	0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	4.4
BH22/8.0-9.0	0.7	<0.5	<0.5	<0.5	0.7	<0.5	0.7	0.7	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	2.8
<b>Spent lime</b>																
BH22/9.0-10.0	3100	7.6	62	35	52	13	13	8.2	1.6	1.4	1	<0.5	<0.5	<0.5	<0.5	3300
BH27/8.3-8.6	0.7	<0.5	<0.5	<0.5	<0.5	<0.5	1	1.2	0.6	0.6	1	0.8	<0.5	<0.5	<0.5	6.2
BH30/10.0-10.5	40	<0.5	1.6	1	2	0.5	1.2	0.9	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	47



TABLE III - POLYCYCLIC AROMATIC HYDROCARBONS ANALYSIS RESULTS

	Naphthalene	Acenaphthylene	Acenaphthene	Fluorene	Phenanthrene	Anthracene	Fluoranthene	Pyrene	Benzo(a)anthracene	Chrysene	Benzo(b)&(k)fluoranthene	Benzo(a)pyrene	Indeno(123-cd)pyrene	Dibenz(ah)anthracene	Benzo(ghi)perylene	Total PAHs
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
<b>Reclamation Area R3</b>																
Mixed clay, shale, rubble etc below original factory ground level																
TP25/3.2-3.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
TP26/4.1-5.0	38	0.5	21	9.4	19	4.6	11	7.8	1.4	1.4	<1	<0.5	<0.5	<0.5	<0.5	110
TP28/1.0-2.3	<0.5	<0.5	<0.5	<0.5	0.6	<0.5	0.5	0.6	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	1.8
<b>Boiler ash</b>																
TP21/2.2-3.2	20	2	5.8	1.6	17	6	15	11	3.6	3.4	4	1.4	0.5	<0.5	<0.5	91
TP21/2.9-3.2	**5.5	**<0.5	**6.2	**2.1	**3.6	**0.9	**3.2	**2.3	**<0.5	**<0.5	**<1	**<0.5	**<0.5	**<0.5	**<0.5	**25
TP23/2.0-3.6	2.8	<0.5	<0.5	<0.5	1.6	<0.5	2.2	2	0.6	0.6	1	<0.5	<0.5	<0.5	<0.5	11
TP24/2.0-4.3	11	<0.5	1.2	0.6	3.6	0.6	3.2	2.6	0.5	0.6	<1	<0.5	<0.5	<0.5	<0.5	24
TP24/3.0-3.1	<0.5	<0.5	<0.5	<0.5	1.6	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	1.6
TP25/1.8-2.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
TP26/2.2-2.4	64	2.8	4.4	1.4	11	3	13	11	2	2	2	0.8	0.5	<0.5	<0.5	120
TP28/2.3-2.45	7.4	<0.5	0.6	<0.5	6.2	1.4	8.4	7.4	1.6	1.4	2	0.7	<0.5	<0.5	<0.5	37
<b>Spent lime</b>																
TP21/3.2-4.4	27	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	27
TP23/3.6-4.6	6.6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	6.6
TP24/4.3-5.0	2.4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	2.4
TP25/2.5-3.8	36	0.5	8.4	4	6.6	1.6	1.6	1.4	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	60
TP26/3.0-4.1	2	<0.5	<0.5	<0.5	3.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	2.6
TP28/2.3-5.5	48	<0.5	3.2	2.2	3	<0.5	0.6	0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	57
<b>Sediments</b>																
TP21/4.8-5.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1	1.4	0.6	0.5	2	1	0.8	<0.5	0.7	7.6
TP24/5.0-5.1	<1	<0.5	<0.5	<0.5	<0.5	<0.5	0.8	0.8	<0.5	<0.5	2	0.9	0.7	<0.5	0.6	5.4
TP25/5.1-5.3	1.4	<0.5	<0.5	<0.5	0.8	<0.5	2.2	3	1.2	1	5	3.4	3	<0.5	2.2	23
<b>Reclamation Area R4</b>																
<b>Clean cover</b>																
TP1/0.0-0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
TP2/0.0-1.9	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
TP3/0.0-1.8	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
TP4/0.0-2.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
TP5/0.0-2.4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
Mixed clay, shale, rubble etc above original factory ground level																
TP1/2.0-3.8	0.9	<0.5	<0.5	<0.5	0.5	<0.5	0.6	0.8	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	2.8
TP2/1.9-4.0	8	<0.5	3	1.2	4.2	0.9	2.8	2.4	0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	23
TP3/1.8-2.8	3.8	<0.5	<0.5	<0.5	2.6	0.5	3.2	3.2	1.6	1.2	2	2	1.8	<0.5	0.8	23
TP4/2.2-3.9	6.6	<0.5	2.8	1.4	4.4	0.9	2.8	2.4	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	21
TP5/2.4-4.5	20	0.9	6.8	3.4	16	3.4	11	9	2.4	1.8	3	1.6	1.6	<0.5	0.8	81



TABLE III - POLYCYCLIC AROMATIC HYDROCARBONS ANALYSIS RESULTS

	Naphthalene	Acenaphthylene	Acenaphthene	Fluorene	Phenanthrene	Anthracene	Fluoranthene	Pyrene	Benzo(a)anthracene	Chrysene	Benzo(b)&(k)fluoranthene	Benzo(a)pyrene	Indeno(123-cd)pyrene	Dibenz(ah)anthracene	Benzo(ghi)perylene	Total PAHs
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
<b>Boiler ash</b>																
TP2/4.0-5.2	22	<0.5	1.2	<0.5	1	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	24
TP3/2.8-4.2	28	2.8	34	11	20	7.8	32	33	3.8	2.6	4	1.6	0.5	<0.5	<0.5	180
TP4/3.9-4.5	590	1.2	9.2	3.2	13	3.6	4	3	0.7	0.5	<1	<0.5	<0.5	<0.5	<0.5	630
<b>Spent lime</b>																
TP1/4.3-6.4	35	<0.5	1.6	0.6	1.8	<0.5	0.6	0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	40
TP1/4.1- 6.8 COMP	4.6	<0.5	1.2	<0.5	1.4	1.2	7.2	6.6	1.6	1.4	2	1.2	0.7	<0.5	0.6	29
TP2/5.2-7.8	7.4	<0.5	<0.5	<0.5	0.8	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	8.2
TP3/4.2-6.2	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	1.2
TP4/4.5-6.4	29	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	29
TP5/4.5-6.0	8.4	<0.5	1.2	0.7	2.6	0.5	1.2	0.9	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	15
BD1-300101 (=TP5/4.5-6.0)	8.2	<0.5	0.9	0.5	1.8	<0.5	0.8	0.7	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	13
<b>Seawall Area</b>																
<b>Clean cover</b>																
TP11/0.0-1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
<b>Boiler ash</b>																
TP11/1.2-3.0	<0.5	<0.5	<0.5	<0.5	0.8	<0.5	0.5	0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	1.8
BD1-070201 (=TP11/1 2-3.0)	0.8	<0.5	0.5	<0.5	3.8	1.2	4.4	4	1.2	1	2	0.9	0.5	<0.5	<0.5	20
TP11/4.5-4.7	5700	15	500	140	270	64	83	62	8.8	7.8	4	2.2	0.9	<0.5	0.7	6900
TP19/1.4-3.0	3.4	<0.5	<0.5	<0.5	2.4	0.9	2.6	2.4	0.5	0.7	<1	<0.5	<0.5	<0.5	<0.5	13
TP19/4.0-5.1	120	3	37	22	65	17	32	33	4.6	4.2	4	2	0.9	<0.5	0.6	350
<b>Spent lime</b>																
TP11/3.0-4.5	3	<0.5	<0.5	<0.5	0.6	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	3.6
<b>Sediments</b>																
BH32/9-11.0	3200	5.2	130	56	140	19	38	30	7	4.6	4	1.6	1.2	<0.5	0.6	3600
BH32/OFFAUGER	770	1.4	30	13	30	4.6	8.8	7	1.4	1.2	1	<0.5	<0.5	<0.5	<0.5	870



TABLE III - POLYCYCLIC AROMATIC HYDROCARBONS ANALYSIS RESULTS

	Naphthalene	Ace-naphthylene	Ace-naphthene	Fluorene	Phenanthrene	Anthracene	Fluoranthene	Pyrene	Benzo-(a)anthracene	Chrysene	Benzo-(b)&(k)-fluoranthene	Benzo-(a)-pyrene	Indeno-(123-cd)-pyrene	Dibenz-(ah)anthracene	Benzo-(ghi)-perylene	Total PAHs
	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
<b>Leachate Samples above original factory ground level</b>																
TP4/2.2-3.9	4	<1	4	1	5	2	7	6	1	1	<2	<1	<1	<1	<1	31
TP5/2.4-4.5	100	<1	10	4	8	1	<1	<1	<1	<1	<2	<1	<1	<1	<1	120
BH6/5.8-7.0	<1	<1	1	<1	<1	<1	<1	<1	<1	<1	<2	<1	<1	<1	<1	1
TP12/1.5-4.0	1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<2	<1	<1	<1	<1	1
BH14/1.8-5.2 COMP	3	<1	<1	<1	<1	<1	<1	<1	<1	<1	<2	<1	<1	<1	<1	3
BH14/4.1-5.2	2	<1	1	<1	<1	<1	<1	<1	<1	<1	<2	<1	<1	<1	<1	3
BH14/5.2-7.5	1100	12	55	26	47	10	13	10	2	1	<2	<1	<1	<1	<1	1300
BH22/1.7-4.5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<2	<1	<1	<1	<1	<1
TP29/1.8-4.8 COMP	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<2	<1	<1	<1	<1	<1
TP29/1.8-3.5	63	<1	7	1	2	<1	<1	<1	<1	<1	<2	<1	<1	<1	<1	73
<b>Leachate Samples below original factory ground level</b>																
BH7/7.0-7.8	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<2	<1	<1	<1	<1	<1
TP11/1.2-3.0	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<2	<1	<1	<1	<1	<1
TP11/4.5-4.7	8700	9	140	30	20	4	2	<1	<1	<1	<2	<1	<1	<1	<1	8900
BH14/7.5-10.5 COMP	92	<1	2	<1	3	<1	<1	<1	<1	<1	<2	<1	<1	<1	<1	97
TP17/1.4-3.5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<2	<1	<1	<1	<1	<1
TP19/1.4-5.1 COMP	240	3	42	17	20	4	5	4	<1	<1	<2	<1	<1	<1	<1	330
TP24/3.0-3.1	IS	IS	IS	IS	IS	IS	IS	IS	IS	IS	IS	IS	IS	IS	IS	IS
TP28/2.3-5.5	6	<1	3	2	1	<1	<1	<1	<1	<1	<2	<1	<1	<1	<1	11
<b>Rinsate Blanks</b>																
FB1-020201	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
FB1-050201	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<2	<1	<1	<1	<1	<1
FB1-210201	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<2	<1	<1	<1	<1	<1
EB1-100201	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<2	<1	<1	<1	<1	<1
<b>Groundwater samples</b>																
BH10	5000	*<100	*<100	*<100	*<100	*<100	*<100	*<100	*<100	*<100	*<200	*<100	*<100	*<100	*<100	5000
BH13	2	<1	<1	<1	<1	<1	<1	<1	<1	<1	<2	<1	<1	<1	<1	2
BH14	<500	*<10	*<10	*<10	*<10	*<10	*<10	*<10	*<10	*<10	*<20	*<10	*<10	*<10	*<10	<1
BD1-210201	<200	*<10	*<10	*<10	*<10	*<10	*<10	*<10	*<10	*<10	*<20	*<10	*<10	*<10	*<10	4
BH20	1700	*<100	*<100	*<100	*<100	*<100	*<100	*<100	*<100	*<100	*<200	*<100	*<100	*<100	*<100	1700
BH22	4700	7	36	13	7	2	<1	<1	<1	<1	<2	<1	<1	<1	<1	4800

IS - insufficient sample

\* - raised PQL due to matrix interferences

\*\* - wet weight result reported due to lack of sample for moisture correction



TABLE IV - ORGANOCHLORINE PESTICIDES ANALYSIS RESULTS

	HCB	a-BHC	g-BHC	Heptachlor	Aldrin	b-BHC	d-BHC	Oxy-chlordane	Heptachlor epoxide	Endosulfan I	Chlordane-Trans	Chlordane-Cis	trans-Nonachlor	DDE	Dieldrin	Endrin	DDD	Endosulfan II	DDT	Endosulfan sulfate	Methoxy-chlor
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
<b>Reclamation Area R1 &amp; R2</b>																					
Clean cover																					
BH6/0.3-1.8	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH7/0.7-1.9	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Mixed clay, shale, rubble etc above original factory ground level																					
BH6/2.6-4.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH6/7.0-7.6	1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.6	<0.1	<0.1	2.8	<0.1	0.7	<0.1	<0.1
BH7/1.9-4.2	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.2	<0.1	0.5	<0.1	<0.1
BH8/3.0-4.5	NT	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.6	<0.1	0.3	<0.1	<0.1
BH8/6.6-7.5	NT	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.6	<0.1	4.8	<0.1	<0.1
BH9/2.0-4.5	NT	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.6	<0.1	0.2	<0.1	<0.1
TP12/1.5-4.0	NT	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	1.2	<0.1	<0.1	2.4	<0.1	1.6	<0.1	<0.1
BH14/4.1-5.2	NT	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.3	<0.1	<0.1	7.6	<0.1	0.9	<0.1	<0.1
BH15/1.5-3.7	NT	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.6	<0.1	0.4	<0.1	<0.1
BH15/6.0-7.5	NT	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.1	<0.1	<0.1	0.5	<0.1	<0.1	<0.1	<0.1
BH20/1.8-4.5	NT	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.3	<0.1	<0.1	3	<0.1	1.4	<0.1	<0.1
BH22/1.7-4.5	NT	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.5	<0.1	<0.1	4.6	<0.1	0.4	<0.1	<0.1
TP29/1.8-3.5	NT	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	5.4	<0.1	<0.1	37	<0.1	5.4	<0.1	<0.1
Mixed clay, shale, rubble etc below original factory ground level																					
TP12/4.7-5.8	NT	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.2	<0.1	<0.1	1	<0.1	0.6	<0.1	<0.1
BH14/7.5-9.0	NT	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	3.4	<0.1	<0.1	82	<0.1	89	<0.1	<0.1
BH14/10.3-10.5	NT	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	3.4	<0.1	<0.1	280	<0.1	690	<0.1	<0.1
TP16/1.4-4.2	NT	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
TP16/4.2-4.9	NT	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.2	<0.1	<0.1	<0.1	<0.1
TP18/1.4-4.2	NT	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.4	<0.1	0.3	<0.1	<0.1
BH30/9.4-10.0	NT	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH31/7.5-8.2	NT	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	3	<0.1	<0.1	25	<0.1	2	<0.1	<0.1
Boiler ash																					
BH7/7.0-7.8	0.7	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.6	0.2	<0.1	6	<0.1	1	<0.1	<0.1
BD1-020201 (=BH7/7.0-7.8)	0.4	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.8	0.2	<0.1	7.6	<0.1	1.2	<0.1	<0.1
BH9/5.4-5.8	NT	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.9	<0.1	<0.1	3	<0.1	1.4	<0.1	<0.1
TP17/1.4-3.5	NT	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.2	<0.1	<0.1	2.4	<0.1	0.3	<0.1	<0.1
TP17/3.7-4.3	NT	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BD2-080201 (=TP17/3.7-4.3)	NT	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH20/5.0-5.9	NT	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.1	<0.1	<0.1	0.5	<0.1	0.1	<0.1	<0.1
BH22/8.0-9.0	NT	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.3	<0.1	0.1	<0.1	<0.1
Spent lime																					
BH22/9.0-10.0	NT	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH27/8.3-8.6	NT	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH30/10.0-10.5	NT	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
<b>Reclamation Area R3</b>																					
Mixed clay, shale, rubble etc below original factory ground level																					
TP25/3.2-3.3	NT	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.1	<0.1	0.1	<0.1	<0.1
TP26/4.1-5.0	NT	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	5.8	<0.1	<0.1	4.4	<0.1	<0.1	<0.1	<0.1
TP28/1.0-2.3	NT	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.2	<0.1	<0.1	<0.1	<0.1
Boiler ash																					
TP21/2.2-3.2	NT	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.2	<0.1	<0.1	0.3	<0.1	0.9	<0.1	<0.1
TP21/2.9-3.2	NT	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
TP23/2.0-3.6	NT	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.8	<0.1	<0.1	4.2	<0.1	3.8	<0.1	<0.1
TP24/2.0-4.3	NT	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	3.2	<0.1	<0.1	10	<0.1	7.8	<0.1	<0.1



TABLE IV - ORGANOCHLORINE PESTICIDES ANALYSIS RESULTS

	HCB	a-BHC	g-BHC	Heptachlor	Aldrin	b-BHC	d-BHC	Oxy-chlordane	Heptachlor epoxide	Endosulfan I	Chlordane-Trans	Chlordane-Cis	trans-Nonachlor	DDE	Dieldrin	Endrin	DDD	Endosulfan II	DDT	Endosulfan sulfate	Methoxy-chlor
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
TP24/3.0-3.1	NT	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
TP25/1.8-2.5	NT	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
TP26/2.2-2.4	NT	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.2	<0.1	<0.1	0.8	<0.1	0.5	<0.1	<0.1
TP28/2.3-2.45	NT	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.3	<0.1	<0.1	1.6	<0.1	0.9	<0.1	<0.1
<b>Spent lime</b>																					
TP21/3.2-4.4	NT	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.2	<0.1	<0.1	0.7	<0.1	<0.1	<0.1	<0.1
TP23/3.6-4.6	NT	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
TP24/4.3-5.0	NT	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
TP25/2.5-3.8	NT	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
TP26/3.0-4.1	NT	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
TP28/2.3-5.5	NT	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	60	<0.1	<0.1	56	<0.1	1.4	<0.1	<0.1
<b>Sediments</b>																					
TP21/4.8-5.2	NT	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
TP24/5.0-5.1	NT	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
TP25/5.1-5.3	NT	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
<b>Reclamation Area R4</b>																					
<b>Clean cover</b>																					
TP1/0.0-0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
TP2/0.0-1.9	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.1	<0.1	<0.1
TP3/0.0-1.8	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
TP4/0.0-2.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
TP5/0.0-2.4	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
<b>Mixed clay, shales, rubble etc above original factory ground level</b>																					
TP1/2.0-3.8	2.6	*<10	*<10	*<10	*<10	*<10	*<10	*<10	*<10	*<10	*<10	*<10	*<10	*<10	*<10	*<10	35	*<10	24	*<10	*<10
TP2/1.9-4.0	5.2	*<1	*<1	*<1	*<1	*<1	*<1	*<1	*<1	*<1	*<1	*<1	*<1	8.6	*<1	*<1	14	*<1	9.8	*<1	*<1
TP3/1.8-2.8	0.4	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.6	<0.1	<0.1	6.6	<0.1	1.4	<0.1	<0.1
TP4/2.2-3.9	5.6	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	5.4	<0.1	<0.1	15	<0.1	8.2	<0.1	<0.1
TP5/2.4-4.5	6.8	*<1	*<1	*<1	*<1	*<1	*<1	*<1	*<1	*<1	*<1	*<1	*<1	1.2	*<1	*<1	9	*<1	2.8	*<1	*<1
<b>Boiler ash</b>																					
TP2/4.0-5.2	1.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	2.2	<0.1	<0.1	5.6	<0.1	10	<0.1	<0.1
TP3/2.8-4.2	2.2	*<1	*<1	*<1	*<1	*<1	*<1	*<1	*<1	*<1	*<1	*<1	*<1	*<1	*<1	*<1	19	*<1	3.2	*<1	*<1
TP4/3.9-4.5	2.2	*<1	*<1	*<1	*<1	*<1	*<1	*<1	*<1	*<1	*<1	*<1	*<1	1.8	*<1	*<1	3.6	*<1	2.2	*<1	*<1
<b>Spent lime</b>																					
TP1/4.3-6.4	35	*<10	*<10	*<10	*<10	*<10	*<10	*<10	*<10	*<10	*<10	*<10	*<10	*<10	*<10	*<10	120	*<10	55	*<10	*<10
TP1/4.1- 6.8 COMP	NT	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	1	<0.1	<0.1	7.4	<0.1	2	<0.1	<0.1
TP2/5.2-7.8	22	*<10	*<10	*<10	*<10	*<10	*<10	*<10	*<10	*<10	*<10	*<10	*<10	*<10	*<10	*<10	27	*<10	*<10	*<10	*<10
TP3/4.2-6.2	0.4	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	7.4	<0.1	<0.1	1.2	<0.1	0.4	<0.1	<0.1
TP4/4.5-6.4	8.8	*<1	*<1	*<1	*<1	*<1	*<1	*<1	*<1	*<1	*<1	*<1	*<1	6.8	*<1	*<1	9	*<1	1.2	*<1	*<1
TP5/4.5-6.0	29	*<10	*<10	*<10	*<10	*<10	*<10	*<10	*<10	*<10	*<10	*<10	*<10	*<10	*<10	*<10	13	*<10	*<10	*<10	*<10
BD1-300101 (=TP5/4.5-6.0)	19	*<10	*<10	*<10	*<10	*<10	*<10	*<10	*<10	*<10	*<10	*<10	*<10	*<10	*<10	*<10	12	*<10	*<10	*<10	*<10



TABLE IV - ORGANOCHLORINE PESTICIDES ANALYSIS RESULTS

	HCB	a-BHC	g-BHC	Heptachlor	Aldrin	b-BHC	d-BHC	Oxy-chlordane	Heptachlor epoxide	Endosulfan I	Chlordane-Trans	Chlordane-Cis	trans-Nonachlor	DDE	Dieldrin	Endrin	DDD	Endosulfan II	DDT	Endosulfan sulfate	Methoxy-chlor
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
<b>Seawall Area</b>																					
<b>Clean cover</b>																					
TP11/0.0-1.2	NT	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
<b>Boiler ash</b>																					
TP11/1.2-3.0	NT	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	1.2	<0.1	<0.1	1.6	<0.1	1.8	<0.1	<0.1
BD1-070201 (=TP11/1.2-3.0)	NT	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	1.6	<0.1	<0.1	1.6	<0.1	3.4	<0.1	<0.1
TP11/4.5-4.7	NT	*<1	*<1	*<1	*<1	*<1	*<1	*<1	*<1	*<1	*<1	*<1	*<1	6.6	*<1	*<1	64	*<1	*<1	*<1	*<1
TP19/1.4-3.0	NT	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.5	<0.1	<0.1	1.2	<0.1	1.6	<0.1	<0.1
TP19/4.0-5.1	NT	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.5	<0.1	<0.1	2.4	<0.1	1	<0.1	<0.1
<b>Spent lime</b>																					
TP11/3.0-4.5	NT	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
<b>Sediments</b>																					
BH32/9-11.0	NT	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	370	<0.1	<0.1	6200	<0.1	<0.1	<0.1	<0.1
BH32/OFFAUGER	NT	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	78	<0.1	<0.1	1300	<0.1	<0.1	<0.1	<0.1



TABLE IV - ORGANOCHLORINE PESTICIDES ANALYSIS RESULTS

	HCB	a-BHC	g-BHC	Heptachlor	Aldrin	b-BHC	d-BHC	Oxy-chlordane	Heptachlor epoxide	Endosulfan I	Chlordane-Trans	Chlordane-Cis	trans-Nonachlor	DDE	Dieldrin	Endrin	DDD	Endosulfan II	DDT	Endosulfan sulfate	Methoxy-chlor
	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
<b>Leachate Samples above original factory ground level</b>																					
TP4/2.2-3.9	8	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	14	<1	<1	44	<1	8	<1	<1
TP5/2.4-4.5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
BH6/5.8-7.0	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	2	<1	<1	<1	<1
TP12/1.5-4.0	1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
BH14/1.8-5.2 COMP	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
BH14/4.1-5.2	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
BH14/5.2-7.5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
BH22/1.7-4.5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
TP29/1.8-4.8 COMP	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
TP29/1.8-3.5	1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	3	<1	<1	<1	<1
<b>Leachate Samples below original factory ground level</b>																					
BH7/7.0-7.8	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
TP11/1.2-3.0	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
TP11/4.5-4.7	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
BH14/7.5-10.5 COMP	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	24	<1	4	<1	<1
TP17/1.4-3.5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
TP19/1.4-5.1 COMP	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
TP24/3.0-3.1	IS	IS	IS	IS	IS	IS	IS	IS	IS	IS	IS	IS	IS	IS	IS	IS	IS	IS	IS	IS	IS
TP28/2.3-5.5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	2	<1	<1	<1	<1
<b>Rinsate Blanks</b>																					
FB1-300101	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
FB1-020201	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
FB1-050201	NT	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
FB1-210201	NT	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
EB1-100201	NT	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
<b>Groundwater samples</b>																					
BH10	NT	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
BH13	NT	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
BH14	NT	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	2	<1	3	<1	<1
BD1-210201	NT	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	7	<1	15	<1	<1
BH20	NT	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
BH22	NT	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1

NT - not tested  
 \* - raised PQL due to matrix interferences  
 IS - insufficient sample



TABLE V - CHLOROBENZENE ANALYSIS RESULTS

	Chloro- benzene	1,3-Dichloro- benzene	1,4-Dichloro- benzene	1,2-Dichloro- benzene	1,2,3-Tri- chloro- benzene	1,2,4-Tri- chloro- benzene	1,3,5-Tri- chloro- benzene	1,2,3,5- & 1,2,4,5- tetrachloro- benzene	1,2,3,4- tetrachloro- benzene	Penta- chloro- benzene	Hexa- chloro- benzene
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
<b>Reclamation Area R1 &amp; R2</b>											
<b>Clean cover</b>											
BH6/0.3-1.8	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
BH7/0.7-1.9	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
<b>Mixed clay, shale, rubble etc above original factory ground level</b>											
BH6/2.6-4.5	<0.1	<0.1	<0.1	<0.1	<0.1	1.8	<0.1	0.5	<0.1	<0.05	<0.05
BH6/7.0-7.6	<0.1	<0.1	0.6	<0.1	<0.1	1.2	<0.1	3.4	1.8	0.8	1
BH7/1.9-4.2	<0.1	<0.1	<0.1	<0.1	<0.1	2	<0.1	0.4	<0.1	<0.05	0.1
BH8/3.0-4.5	<0.1	<0.1	0.2	<0.1	<0.1	1.4	<0.1	0.7	1.2	0.4	0.2
BH8/6.6-7.5	<0.1	<0.1	0.2	0.1	<0.1	3.8	<0.1	0.6	0.2	4.7	<0.5
BH9/2.0-4.5	<0.1	<0.1	0.5	0.1	<0.1	2.2	<0.1	0.4	1.2	0.3	0.4
TP12/1.5-4.0	<0.1	<0.1	3.4	0.2	0.1	1.8	0.6	1.4	2.4	1.6	12
BH14/4.1-5.2	0.3	<0.1	0.7	<0.1	<0.1	3.6	<0.1	1.6	0.9	0.9	0.5
BH15/1.5-3.7	<0.1	<0.1	<0.1	<0.1	<0.1	0.7	<0.1	0.3	0.5	0.3	<0.05
BH15/6.0-7.5	<0.1	<0.1	0.2	<0.1	<0.1	1.2	<0.1	0.4	0.5	0.1	<0.05
BH20/1.8-4.5	1.8	0.1	5.6	2.8	*<1	10	*<1	5.6	12	3.1	1.2
BH22/1.7-4.5	0.3	0.2	5.8	0.4	<0.1	4.6	<0.1	1.8	2.8	0.9	0.5
TP29/1.8-3.5	11	4.2	84	63	*<100	180	*<100	430	1300	330	*<500
<b>Mixed clay, shale, rubble etc below original factory ground level</b>											
TP12/4.7-5.8	0.3	0.4	1.2	0.4	<0.1	0.6	0.6	0.6	0.3	0.3	1.8
BH14/7.5-9.0	36	<0.1	6.2	20	*<1	89	1	37	190	32	3.9
BH14/10.3-10.5	310	*<1	25	54	*<10	230	*<10	50	380	46	*<10
TP16/1.4-4.2	<0.1	<0.1	<0.1	<0.1	<0.1	0.2	<0.1	<0.1	<0.1	0.1	<0.5
TP16/4.2-4.9	<0.1	<0.1	<0.1	<0.1	<0.1	0.6	<0.1	0.4	0.9	1	0.1
TP18/1.4-4.2	<0.1	<0.1	0.5	0.2	<0.1	0.4	<0.1	0.1	0.1	0.1	1.3
BH30/9.4-10.0	0.2	<0.1	0.2	<0.1	<0.1	<0.1	<0.1	<0.1	0.2	<0.05	<0.05
BH31/7.5-8.2	1.4	<0.1	3.4	2	*<1	6.4	*<1	27	16	5.8	1.9



**TABLE V - CHLOROBENZENE ANALYSIS RESULTS**

	Chloro- benzene	1.3-Dichloro- benzene	1.4-Dichloro- benzene	1.2-Dichloro- benzene	1.2.3-Tri- chloro- benzene	1.2.4-Tri- chloro- benzene	1.3.5-Tri- chloro- benzene	1.2.3.5- & 1.2.4.5- tetrachloro- benzene	1.2.3.4- tetrachloro- benzene	Penta- chloro- benzene	Hexa- chloro- benzene
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
<b>Boiler ash</b>											
BH7/7.0-7.8	9.6	1.6	26	1.6	0.4	16	2.6	12	13	3.2	0.8
BD1-020201 (=BH7/7.0-7.8)	11	2.2	34	1.8	0.2	21	3.4	13	10	1.8	0.5
BH09/5.4-5.8	*<1	*<1	3.6	3.4	*<1	7	*<1	3.6	6	1.6	1.2
TP17/1.4-3.5	0.3	<0.1	0.6	0.1	<0.1	2.2	0.2	2	0.5	5	26
TP17/3.7-4.3	3.8	<0.1	1.4	1.2	<0.1	<0.1	<0.1	<0.1	<0.1	0.8	1.8
BD2-080201 (=TP17/3.7-4.3)	4.6	<0.1	1.8	1.4	<0.1	0.1	<0.1	<0.1	<0.1	0.8	1.8
BH20/5.0-5.8	0.3	<0.1	2	0.2	<0.1	6	<0.1	1.2	0.5	0.7	0.2
BH22/8.0-9.0	5	1	29	3.6	<0.1	3.4	0.1	0.8	1.6	<0.05	0.3
<b>Spent lime</b>											
BH22/9.0-10.0	31	0.5	51	19	*<10	180	*<10	64	330	101	*<5
BH27/8.3-8.6	0.2	<0.1	0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
BH30/10.0-10.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
<b>Reclamation Area R3</b>											
<b>Mixed clay, shale, rubble etc below original factory ground level</b>											
TP25/3.2-3.3	<0.1	<0.1	0.4	<0.1	<0.1	<0.1	<0.1	0.1	0.2	<0.05	<0.05
TP26/4.1-5.0	16	2.4	53	18	1.2	64	6.8	39	29	8.2	2.2
TP28/1.0-2.3	<0.1	<0.1	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.1	<0.05	0.5
<b>Boiler ash</b>											
TP21/2.2-3.2	5.8	2.6	17	1.2	<0.1	3	0.4	6.2	7.2	0.5	0.7
TP21/2.9-3.2	<0.1	<0.1	0.1	<0.1	<0.1	<0.1	<0.1	**0.1	<0.1	**0.1	<0.05
TP23/2.0-3.6	0.1	<0.1	0.3	0.5	<0.1	1.6	<0.1	0.8	1	0.7	3.5
TP24/2.0-4.3	0.3	<0.1	1	2.4	<0.1	7	<0.1	5.6	6.4	1.7	1.4
TP24/3.0-3.1	<0.1	<0.1	0.4	<0.1	<0.1	<0.1	<0.1	0.1	<0.1	<0.05	<0.05



TABLE V - CHLOROBENZENE ANALYSIS RESULTS

	Chloro- benzene	1.3-Dichloro- benzene	1.4-Dichloro- benzene	1.2-Dichloro- benzene	1.2.3-Tri- chloro- benzene	1.2.4-Tri- chloro- benzene	1.3.5-Tri- chloro- benzene	1.2.3.5- & 1.2.4.5- tetrachloro- benzene	1.2.3.4- tetrachloro- benzene	Penta- chloro- benzene	Hexa- chloro- benzene
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
TP25/1.8-2.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
TP26/2.2-2.4	0.2	<0.1	0.3	0.2	0.1	0.1	<0.1	1.8	3.2	1	0.4
TP28/2.3-2.45	0.1	<0.1	0.2	<0.1	<0.1	<0.1	<0.1	1.4	1	0.3	0.9
<b>Spent lime</b>											
TP21/3.2-4.4	1.2	<0.1	0.4	<0.1	<0.1	0.6	0.7	2.2	0.3	<0.05	<0.05
TP23/3.6-4.6	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
TP24/4.3-5.0	0.5	<0.1	1.4	0.8	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
TP25/2.5-3.8	<0.1	<0.1	1.4	0.2	<0.1	5.6	<0.1	8.2	<0.1	1	<0.05
TP26/3.0-4.1	0.8	<0.1	0.7	0.5	<0.1	<0.1	<0.1	0.3	0.6	0.3	0.1
TP28/2.3-5.5	1.6	<0.1	1.4	0.3	<0.1	0.2	<0.1	<0.1	0.6	0.2	0.1
<b>Sediments</b>											
TP21/4.8-5.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
TP24/5.0-5.1	<0.1	<0.1	0.4	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
TP25/5.1-5.3	0.2	<0.1	3.4	<0.1	<0.1	<0.1	0.1	0.2	1.4	<0.05	<0.05
<b>Reclamation Area R4</b>											
<b>Clean cover</b>											
TP1/0.0-0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
TP2/0.0-1.9	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
TP3/0.0-1.8	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
TP4/0.0-2.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
TP5/0.0-2.4	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05



**TABLE V - CHLOROBENZENE ANALYSIS RESULTS**

	Chloro- benzene	1.3-Dichloro- benzene	1.4-Dichloro- benzene	1.2-Dichloro- benzene	1.2.3-Tri- chloro- benzene	1.2.4-Tri- chloro- benzene	1.3.5-Tri- chloro- benzene	1.2.3.5- & 1.2.4.5- tetrachloro- benzene	1.2.3.4- tetrachloro- benzene	Penta- chloro- benzene	Hexa- chloro- benzene
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
<b>Mixed clay, shale, rubble etc above original factory ground level</b>											
TP1/2.0-3.8	6.6	0.2	4.6	2.4	*<10	13	*<10	*<10	23	*<10	*<10
TP2/1.9-4.0	0.3	<0.1	0.5	1.6	*<1	2.8	*<1	8.2	14	5.4	3.6
TP3/1.8-2.8	0.9	<0.1	0.9	1	<0.1	0.4	<0.1	1.2	1.4	0.6	0.3
TP4/2.2-3.9	0.2	<0.1	0.7	2.2	0.2	1.8	<0.1	6	6.6	3.9	3.5
TP5/2.4-4.5	16	<0.1	9.6	5.4	*<1	13	*<1	7.8	6.2	6.3	4.1
<b>Boiler ash</b>											
TP2/4.0-5.2	1.4	0.5	9.2	1.6	0.5	27	1.2	25	25	2.3	0.8
TP3/2.8-4.2	0.1	<0.1	1.6	0.3	*<1	16	1	6.2	5	1.6	1.2
TP4/3.9-4.5	60	*<1	21	9.2	<0.1	4.4	<0.1	31	3.4	2	1.6
<b>Spent lime</b>											
TP1/4.3-6.4	110	0.6	0.5	34	0.6	7.2	<0.1	31	31	10	32
TP1/4.1- 6.8 COMP	29	1.8	63	26	*<10	110	*<10	40	230	48	6.6
TP2/5.2-7.8	16	<0.1	31	11	*<10	16	*<10	19	20	18	21
TP3/4.2-6.2	1.4	<0.1	3.2	1	<0.1	0.6	<0.1	0.7	1.4	0.3	0.3
TP4/4.5-6.4	50	<0.1	45	19	*<1	35	*<1	6.8	13	3.4	8.1
TP5/4.5-6.0	30	<0.1	36	21	*<10	42	*<10	22	*<10	*<10	23
BD1-300101 (=TP5/4.5-6.0)	27	<0.1	32	19	*<10	32	*<10	18	*<10	*<10	20



TABLE V - CHLOROBENZENE ANALYSIS RESULTS

	Chloro- benzene	1.3-Dichloro- benzene	1.4-Dichloro- benzene	1.2-Dichloro- benzene	1.2.3-Tri- chloro- benzene	1.2.4-Tri- chloro- benzene	1.3.5-Tri- chloro- benzene	1.2.3.5- & 1.2.4.5- tetrachloro- benzene	1.2.3.4- tetrachloro- benzene	Penta- chloro- benzene	Hexa- chloro- benzene
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
<b>Seawall Area</b>											
<b>Clean cover</b>											
TP11/0.0-1.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5
<b>Boiler ash</b>											
TP11/1.2-3.0	0.3	<0.1	5.4	6.2	1.2	6	<0.1	4.6	36	30	10
BD1-070201 (=TP11/1.2-3.0)	0.2	<0.1	6.2	4	2.2	40	*<1	14	74	67	37
TP11/4.5-4.7	300	10	580	270	31	280	*<10	580	660	75	10
TP19/1.4-3.0	<0.1	<0.1	0.6	<0.1	<0.1	1.8	<0.1	1.8	4.6	2.2	5
TP19/4.0-5.1	0.9	0.5	3.6	1.2	<0.1	3.6	0.4	3.2	4	3.4	3
<b>Spent lime</b>											
TP11/3.0-4.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
<b>Sediments</b>											
BH32/9-11.0	30000	620	67000	34000	*<1000	35000	*<1000	30000	57000	9000	1360
BH32/OFFAUGER	9400	140	23000	9800	*<1000	8100	3200	13000	1900	*<500	*<500



TABLE V - CHLOROBENZENE ANALYSIS RESULTS

	Chloro- benzene	1.3-Dichloro- benzene	1.4-Dichloro- benzene	1.2-Dichloro- benzene	1.2.3-Tri- chloro- benzene	1.2.4-Tri- chloro- benzene	1.3.5-Tri- chloro- benzene	1.2.3.5- & 1.2.4.5- tetrachloro- benzene	1.2.3.4- tetrachloro- benzene	Penta- chloro- benzene	Hexa- chloro- benzene
	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
<b>Leachate Samples above original factory ground level</b>											
TP4/2.2-3.9	<1	<1	<1	3	<4	<4	<2	<4	<2	<1	<1
TP5/2.4-4.5	4	<1	14	10	<4	7	<2	<4	<2	<1	<1
BH6/5.8-7.0	<1	<1	<1	<1	<4	<4	<2	<4	<2	<1	<1
TP12/1.5-4.0	<1	<1	<1	<1	<4	<4	<2	<4	<2	<1	1
BH14/1.8-5.2 COMP	<1	<1	12	4	<4	<4	<2	<4	<2	<1	<1
BH14/4.1-5.2	2	<1	6	<1	<4	<4	<2	<4	<2	<1	<1
BH14/5.2-7.5	<1	<1	2	<1	<4	20	<2	<4	3	<1	<1
BH22/1.7-4.5	<1	<1	4	<1	<4	5	<2	<4	4	<1	<1
TP29/1.8-4.8 COMP	<1	<1	<1	<1	<4	<4	<2	<4	<2	<1	<1
TP29/1.8-3.5	100	17	280	180	40	260	18	76	1200	74	2
<b>Leachate Samples below original factory ground level</b>											
BH7/7.0-7.8	14	5	86	1	<4	9	3	<4	2	<1	<1
TP11/1.2-3.0	<1	<1	5	<1	<4	<4	<2	<4	<2	1	1
TP11/4.5-4.7	660	*<100	1400	670	13	98	<2	18	57	1	<1
BH14/7.5-10.5 COMP	11	<1	8	27	7	120	<2	53	300	23	1
TP17/1.4-3.5	1	<1	1	<1	<4	<4	<2	<4	<2	<1	<1
TP19/1.4-5.1 COMP	1	<1	5	2	<4	5	<2	<4	2	<1	<1
TP24/3.0-3.1	<1	<1	<1	<1	IS	IS	IS	IS	IS	IS	IS
TP28/2.3-5.5	<1	<1	<1	<1	<4	<4	<2	<4	<2	<1	<1
<b>Rinsate Blanks</b>											
FB1-300101	<1	<1	<1	<1	<4	<4	<2	<4	<2	<1	<1
FB1-020201	<1	<1	<1	<1	<4	<4	<2	<4	<2	<1	<1
FB1-050201	<1	<1	<1	<1	<4	<4	<2	<4	<2	<1	<1
FB1-210201	<1	<1	<1	<1	<4	<4	<2	<4	<2	<1	<1
EB1-100201	5	<1	17	6	<4	<4	<2	<4	<2	<1	<1



TABLE V - CHLOROBENZENE ANALYSIS RESULTS

	Chloro- benzene	1.3-Dichloro- benzene	1.4-Dichloro- benzene	1.2-Dichloro- benzene	1.2.3-Tri- chloro- benzene	1.2.4-Tri- chloro- benzene	1.3.5-Tri- chloro- benzene	1.2.3.5- & 1.2.4.5- tetrachloro- benzene	1.2.3.4- tetrachloro- benzene	Penta- chloro- benzene	Hexa- chloro- benzene
<b>Groundwater samples</b>	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
BH10	1200	*<100	*<100	*<100	<4	<4	<2	<4	<2	<1	<1
BH13	<1	<1	<1	<1	<4	<4	<2	<4	<2	<1	<1
BH14	47000	*<100	890	1700	*<40	260	*<20	*<40	100	*<10	*<10
BD1-210201	47000	*<100	860	1600	*<40	380	*<20	44	210	*<10	*<10
BH20	1	<1	<1	<1	<4	<4	<2	<4	<2	<1	<1
BH22	230	18	290	75	<4	86	2	<4	33	2	<1

\* - raised PQL due to matrix interferences



**TABLE VI - PHENOLS AND CHLORINATED PHENOLS ANALYSIS RESULTS**

	Phenol	2-Chloro-phenol	2-Methyl-phenol	3&4-Methyl-phenol	2,4-Dimethyl-phenol	2,4,5-trichloro-phenol	2,4,6-trichloro-phenol	2,3,4,6-tetrachloro-phenol	Penta-chloro-phenol
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
<b>Reclamation Area R1 &amp; R2</b>									
<b>Clean cover</b>									
BH6/0.3-1.8	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH7/0.7-1.9	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
<b>Mixed clay, shale, rubble etc above original factory ground level</b>									
BH6/2.6-4.5	<0.1	<0.1	<0.1	<0.1	<0.1	2.2	<0.1	<0.1	<0.1
BH6/7.0-7.6	0.2	<0.1	0.1	0.2	<0.1	0.6	<0.1	<0.1	<0.1
BH7/1.9-4.2	7.4	<0.1	<0.1	0.1	<0.1	2.6	0.2	0.1	2.2
BH8/3.0-4.5	0.1	<0.1	<0.1	0.1	<0.1	0.7	<0.1	<0.1	<0.1
BH8/6.6-7.5	0.4	0.2	<0.1	0.3	<0.1	100	2.8	0.2	0.2
BH9/2.0-4.5	0.4	<0.1	0.3	0.4	0.1	1	0.1	<0.1	0.4
TP12/1.5-4.0	1.2	<0.1	0.5	1.2	0.4	7.6	0.3	<0.1	0.6
BH14/4.1-5.2	*<10	*<10	*<10	*<10	*<10	*<10	*<10	*<10	*<10
BH15/1.5-3.7	0.6	<0.1	0.1	0.1	<0.1	<0.1	0.8	<0.1	0.1
BH15/6.0-7.5	*<10	*<10	*<10	*<10	*<10	*<10	*<10	*<10	*<10
BH20/1.8-4.5	2	*<1	*<1	*<1	*<1	9.2	*<1	*<1	*<1
BH22/1.7-4.5	*<1	*<1	*<1	*<1	*<1	2.4	*<1	*<1	*<1
TP29/1.8-3.5	1.4	*<1	*<1	*<1	*<1	12	4.4	1.4	13
<b>Mixed clay, shale, rubble etc below original factory ground level</b>									
TP12/4.7-5.8	<0.1	<0.1	<0.1	<0.1	<0.1	0.1	<0.1	<0.1	<0.1
BH14/7.5-9.0	7.8	8.4	1.8	2.6	1.2	3.4	32	2.8	0.5
BH14/10.3-10.5	1.2	3	0.2	0.5	0.5	0.5	3.2	0.3	<0.1
TP16/1.4-4.2	<0.1	<0.1	<0.1	<0.1	<0.1	0.3	<0.1	<0.1	<0.1



TABLE VI - PHENOLS AND CHLORINATED PHENOLS ANALYSIS RESULTS

	Phenol	2-Chloro-phenol	2-Methyl-phenol	3&4-Methyl-phenol	2,4-Dimethyl-phenol	2,4,5-trichloro-phenol	2,4,6-trichloro-phenol	2,3,4,6-tetrachloro-phenol	Penta-chloro-phenol
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
TP16/4.2-4.9	0.1	<0.1	<0.1	0.1	<0.1	10	0.3	<0.1	0.5
TP18/1.4-4.2	0.4	<0.1	0.2	0.5	0.2	0.3	<0.1	<0.1	<0.1
BH30/9.4-10.0	0.9	<0.1	0.1	<0.1	0.1	<0.1	<0.1	<0.1	<0.1
BH31/7.5-8.2	*<1	*<1	*<1	*<1	*<1	*<1	*<1	*<1	*<1
<b>Boiler ash</b>									
BH7/7.0-7.8	*<1	*<1	*<1	*<1	*<1	4.8	1.2	*<1	*<1
BD1-020201 (=BH7/7.0-7.8)	*<1	*<1	*<1	*<1	*<1	5.2	1.2	*<1	*<1
BH9/5.4-5.8	2.4	0.4	2.8	3.2	1.8	54	3.2	0.5	3
TP17/1.4-3.5	7.2	0.1	1.4	2.6	0.7	1.2	0.4	<0.1	<0.1
TP17/3.7-4.3	57	*<10	28	38	81	*<10	*<10	*<10	*<10
BD2-080201 (=TP17/3.7-4.3)	41	<0.1	8.6	16	26	<0.1	<0.1	<0.1	<0.1
BH20/5.0-5.8	1.8	<0.1	2.8	7	3	5	<0.1	<0.1	<0.1
BH22/8.0-9.0	<0.1	<0.1	<0.1	0.1	<0.1	0.2	0.1	<0.1	<0.1
<b>Spent lime</b>									
BH22/9.0-10.0	2.8	*<1	*<1	3.6	8.6	*<1	*<1	*<1	*<1
BH27/8.3-8.6	0.1	<0.1	<0.1	0.2	0.2	<0.1	<0.1	<0.1	<0.1
BH30/10.0-10.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
<b>Reclamation Area R3</b>									
<b>Mixed clay, shale, rubble etc below original factory ground level</b>									
TP25/3.2-3.3	6	*<1	*<1	1.4	*<1	3.6	13	*<1	*<1
TP26/4.1-5.0	3	*<1	*<1	1.8	2.8	5.6	1.4	*<1	*<1
TP28/1.0-2.3	*<1	*<1	*<1	*<1	*<1	*<1	*<1	*<1	*<1



TABLE VI - PHENOLS AND CHLORINATED PHENOLS ANALYSIS RESULTS

	Phenol	2-Chloro-phenol	2-Methyl-phenol	3&4-Methyl-phenol	2,4-Dimethyl-phenol	2,4,5-trichloro-phenol	2,4,6-trichloro-phenol	2,3,4,6-tetrachloro-phenol	Penta-chloro-phenol
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
<b>Boiler ash</b>									
TP21/2.2-3.2	1.8	*<1	1	1.8	*<1	*<1	*<1	*<1	*<1
TP21/2.9-3.2	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
TP23/2.0-3.6	*<1	*<1	*<1	*<1	*<1	1.2	1	*<1	*<1
TP24/2.0-4.3	14	*<10	*<10	*<10	*<10	880	78	*<10	*<10
TP24/3.0-3.1	1.4	*<1	3	5.4	7.8	*<1	2.2	*<1	*<1
TP25/1.8-2.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
TP26/2.2-2.4	*<1	*<1	*<1	*<1	*<1	16	3	*<1	*<1
TP28/2.3-2.45	2	*<1	*<1	2.2	1	53	2.4	*<1	*<1
<b>Spent lime</b>									
TP21/3.2-4.4	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
TP23/3.6-4.6	6.2	<0.1	1.2	2.6	<0.1	<0.1	<0.1	<0.1	<0.1
TP24/4.3-5.0	0.1	<0.1	<0.1	<0.1	<0.1	1.4	1.4	<0.1	<0.1
TP25/2.5-3.8	27	*<10	*<10	*<10	*<10	96	79	*<10	*<10
TP26/3.0-4.1	0.7	0.2	0.1	2	0.2	4.6	4	0.2	<0.1
TP28/2.3-5.5	<0.1	<0.1	<0.1	<0.1	<0.1	1.6	0.3	<0.1	1.6
<b>Sediments</b>									
TP21/4.8-5.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
TP24/5.0-5.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
TP25/5.1-5.3	45	17	13	21	6	74	150	*<1	*<1



**TABLE VI - PHENOLS AND CHLORINATED PHENOLS ANALYSIS RESULTS**

	Phenol	2-Chloro-phenol	2-Methyl-phenol	3&4-Methyl-phenol	2,4-Dimethyl-phenol	2,4,5-trichloro-phenol	2,4,6-trichloro-phenol	2,3,4,6-tetrachloro-phenol	Penta-chloro-phenol
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
<b>Reclamation Area R4</b>									
<b>Clean cover</b>									
TP1/0.0-0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
TP2/0.0-1.9	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
TP3/0.0-1.8	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
TP4/0.0-2.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
TP5/0.0-2.4	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
<b>Mixed clay, shale, rubble etc above original factory ground level</b>									
TP1/2.0-3.8	0.3	0.2	0.2	0.1	0.1	1.4	2.6	0.5	1.2
TP2/1.9-4.0	4.6	0.2	2.8	3	1.8	3.2	4.8	0.6	4.4
TP3/1.8-2.8	0.6	<0.1	0.6	0.5	0.2	0.4	2	0.2	0.2
TP4/2.2-3.9	1.8	<0.1	1.8	1.6	1.2	*<10	*<10	*<10	*<10
TP5/2.4-4.5	9	1.2	7.6	5.8	11	740	17	2.8	19
<b>Boiler ash</b>									
TP2/4.0-5.2	2.6	0.4	0.9	0.8	0.9	6.6	5.8	0.3	1
TP3/2.8-4.2	5.8	0.1	11	8	9	*<10	*<10	*<10	*<10
TP4/3.9-4.5	52	5.6	49	36	63	130	21	5.6	11
<b>Spent lime</b>									
TP1/4.3-6.4	21	3.2	4.8	4.8	5.4	87	82	1.4	8.4
TP1/4.1- 6.8 COMP	*<1	*<1	*<1	*<1	1.4	25	10	*<1	1.8
TP2/5.2-7.8	82	2	8.6	9.8	5.6	34	61	2.2	2.6



TABLE VI - PHENOLS AND CHLORINATED PHENOLS ANALYSIS RESULTS

	Phenol	2-Chloro-phenol	2-Methyl-phenol	3&4-Methyl-phenol	2,4-Dimethyl-phenol	2,4,5-trichloro-phenol	2,4,6-trichloro-phenol	2,3,4,6-tetrachloro-phenol	Penta-chloro-phenol
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
TP3/4.2-6.2	10	0.8	1.8	1.6	0.7	71	45	3.8	3.6
TP4/4.5-6.4	61	1.6	7.2	6.6	5.6	240	140	7.6	2.8
TP5/4.5-6.0	17	0.5	4	3.4	4.4	330	71	7.6	15
BD1-300101 (=TP5/4.5-6.0)	12	0.4	3.8	4	3.6	270	46	6	15
<b>Seawall Area</b>									
<b>Clean cover</b>									
TP11/0.0-1.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
<b>Boiler ash</b>									
TP11/1.2-3.0	*<1	*<1	*<1	*<1	*<1	*<1	*<1	<0.1	1.2
BD1-070201 (=TP11/1.2-3.0)	*<1	*<1	*<1	*<1	*<1	*<1	*<1	<0.1	1.6
TP11/4.5-4.7	*<10	*<10	*<10	*<10	*<10	*<10	*<10	*<10	*<10
TP19/1.4-3.0	*<1	*<1	*<1	*<1	*<1	26	*<1	*<1	*<1
TP19/4.0-5.1	*<10	*<10	*<10	*<10	*<10	34	*<10	*<10	*<10
<b>Spent lime</b>									
TP11/3.0-4.5	<0.1	<0.1	0.1	0.2	<0.1	0.4	0.1	<0.1	<0.1
<b>Sediments</b>									
BH32/9-11.0	*<10	*<10	*<10	*<10	*<10	*<10	*<10	*<10	*<10
BH32/OFFAUGER	*<10	*<10	*<10	*<10	*<10	*<10	*<10	*<10	*<10



**TABLE VI - PHENOLS AND CHLORINATED PHENOLS ANALYSIS RESULTS**

	Phenol	2-Chloro-phenol	2-Methyl-phenol	3&4-Methyl-phenol	2,4-Dimethyl-phenol	2,4,5-trichloro-phenol	2,4,6-trichloro-phenol	2,3,4,6-tetrachloro-phenol	Penta-chloro-phenol
	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
<b>Leachate Samples above original factory ground level</b>									
TP4/2.2-3.9	*<50	*<50	*<50	*<50	*<50	*<50	*<50	*<100	*<100
TP5/2.4-4.5	*<50	*<50	*<50	*<50	*<50	*<50	*<50	*<100	*<100
BH6/5.8-7.0	*<50	*<50	*<50	*<50	*<50	*<50	*<50	*<100	*<100
TP12/1.5-4.0	*<50	*<50	*<50	*<50	*<50	*<50	*<50	*<100	*<100
BH14/1.8-5.2 COMP	*<50	*<50	*<50	*<50	*<50	*<50	*<50	*<100	*<100
BH14/4.1-5.2	*<50	*<50	*<50	*<50	*<50	*<50	*<50	*<100	*<100
BH14/5.2-7.5	120	*<50	*<50	*<50	*<50	*<50	93	*<100	*<100
BH22/1.7-4.5	*<50	*<50	*<50	*<50	*<50	*<50	*<50	*<100	*<100
TP29/1.8-4.8 COMP	IS	IS	IS	IS	IS	IS	IS	IS	IS
TP29/1.8-3.5	*<50	*<50	*<50	*<50	*<50	*<50	*<50	*<100	*<100
<b>Leachate Samples below original factory ground level</b>									
BH7/7.0-7.8	*<50	*<50	*<50	*<50	*<50	*<50	*<50	*<100	*<100
TP11/1.2-3.0	*<50	*<50	*<50	*<50	*<50	*<50	*<50	*<100	*<100
TP11/4.5-4.7	*<50	*<50	*<50	*<50	*<50	*<50	*<50	*<100	*<100
BH14/7.5-10.5 COMP	IS	IS	IS	IS	IS	IS	IS	IS	IS
TP17/1.4-3.5	*<50	*<50	*<50	*<50	*<50	*<50	*<50	*<100	*<100
TP19/1.4-5.1 COMP	*<50	*<50	*<50	*<50	*<50	*<50	*<50	*<100	*<100
TP24/3.0-3.1	IS	IS	IS	IS	IS	IS	IS	IS	IS
TP28/2.3-5.5	*<50	*<50	*<50	*<50	*<50	*<50	*<50	*<100	*<100



**TABLE VI - PHENOLS AND CHLORINATED PHENOLS ANALYSIS RESULTS**

	Phenol	2-Chloro-phenol	2-Methyl-phenol	3&4-Methyl-phenol	2,4-Dimethyl-phenol	2,4,5-trichloro-phenol	2,4,6-trichloro-phenol	2,3,4,6-tetrachloro-phenol	Penta-chloro-phenol
	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
<b>Rinsate Blanks</b>									
FB1-020201	<5	<5	<5	<5	NA	<5	<5	<10	<10
FB1-050201	<5	<5	<5	<5	<5	<5	<5	<10	<10
FB1-210201	<5	<5	<5	<5	<5	<5	<5	<10	<10
EB1-100201	<5	<5	<5	<5	<5	<5	<5	<10	<10
<b>Groundwater samples</b>									
BH10	180	5	<5	<5	250	260	34	<10	<10
BH13	<5	<5	<5	<5	<5	<5	<5	<10	<10
BH14	*<5	*<5	*<5	*<5	*<5	*<5	*<5	*<5	*<5
BD1-210201	<5	<5	<5	<5	<5	<5	<5	<10	<10
BH20	*<5	*<5	*<5	*<5	*<5	*<5	*<5	*<5	*<5
BH22	35	<5	36	33	110	<5	<5	<10	<10

IS - insufficient sample

NA - not analysed

\* - raised PQL due to matrix interferences



**TABLE VII - SULFUR, TOC & CALORIFIC VALUE  
ANALYSIS RESULTS**

	Sulphur %	TOC %	Calorific value	
			MJ/kg	kcal/kg
<b>Reclamation Area R1 &amp; R2</b>				
<b>Clean cover</b>				
BH6/0.3-1.8	NT	NT	<0.50	<120
BH7/0.7-1.9	NT	NT	<0.50	<120
<b>Mixed clay, shale, rubble etc above original factory ground level</b>				
BH6/2.6-4.5	NT	NT	<0.50	<120
BH6/7.0-7.6	NT	NT	<0.50	<120
BH7/1.9-4.2	NT	NT	<0.50	<120
BH8/3.0-4.5	NT	NT	<0.50	<120
BH8/6.6-7.5	NT	NT	<0.50	<120
BH9/2.0-4.5	NT	NT	<0.50	<120
TP12/1.5-4.0	NT	NT	0.6	144
BH14/4.1-5.2	NT	NT	<0.50	<120
BH15/1.5-3.7	NT	NT	<0.50	<120
BH15/6.0-7.5	NT	NT	<0.50	<120
BH20/1.8-4.5	NT	NT	<0.50	<120
<b>Mixed clay, shale, rubble etc below original factory ground level</b>				
TP12/4.7-5.8	0.20	1.55	<0.50	<120
BH14/7.5-9.0	NT	NT	0.69	164
BH14/10.3-10.5	NT	NT	<0.50	<120
TP16/1.4-4.2	NT	NT	0.69	164
TP16/4.2-4.9	NT	NT	0.80	192
TP18/1.4-4.2	NT	NT	<0.50	<120
BH30/9.4-10.0	0.11	1.40	0.65	156
<b>Boiler ash</b>				
BH7/7.0-7.8	0.05	5.00	2.16	516
BD1-020201 (=BH7/7.0-7.8)	0.10	3.50	3.33	796
BH9/5.4-5.8	NT	NT	<0.50	<120
TP17/1.4-3.5	0.31	12.6	6.64	1586
TP17/3.7-4.3	0.95	36.7	6.06	1448
BD2-080201 (=TP17/3.7-4.3)	1.07	15.1	7.59	1812
BH20/5.0-5.8	0.21	5.90	3.32	792
BH22/8.0-9.0	0.39	13.7	8.95	2138
<b>Spent lime</b>				
BH22/9.0-10.0	0.19	21.6	0.87	208
BH27/8.3-8.6	0.83	1.25	0.67	160
BH30/10.0-10.5	0.05	0.35	<0.50	<120
<b>Reclamation Area R3</b>				
<b>Mixed clay, shale, rubble etc below original factory ground level</b>				
TP25/3.2-3.3	NT	NT	<0.50	<120
TP26/4.1-5.0	1.86	1.45	2.09	500



**TABLE VII - SULFUR, TOC & CALORIFIC VALUE  
ANALYSIS RESULTS**

	Sulphur %	TOC %	Calorific value	
			MJ/kg	kcal/kg
<b>Boiler ash</b>				
TP21/2.9-3.2	NT	NT	11.21	2678
TP24/2.0-4.3	1.03	17.3	4.55	1086
TP24/3.0-3.1	NT	NT	<0.50	<120
TP26/2.2-2.4	NT	NT	6.22	1486
TP28/2.3-2.45	NT	NT	10.98	2622
<b>Spent lime</b>				
TP21/3.2-4.4	0.35	0.70	<0.50	<120
TP23/3.6-4.6	0.02	0.15	<0.50	<120
TP24/4.3-5.0	0.72	0.60	<0.50	<120
TP25/2.5-3.8	8.00	0.60	<0.50	<120
TP26/3.0-4.1	7.40	0.60	<0.50	<120
TP28/2.3-5.5	1.95	1.45	<0.50	<120
<b>Sediments</b>				
TP21/4.8-5.2	NT	NT	<0.50	<120
TP24/5.0-5.1	NT	NT	0.66	158
TP25/5.1-5.3	NT	NT	1.07	256
<b>Reclamation Area R4</b>				
<b>Clean cover</b>				
TP1/0.0-0.2	NT	NT	<0.50	<120
TP2/0.0-1.9	NT	NT	<0.50	<120
TP3/0.0-1.8	NT	NT	<0.50	<120
TP4/0.0-2.2	NT	NT	<0.50	<120
TP5/0.0-2.4	NT	NT	<0.50	<120
<b>Mixed clay, shale, rubble etc above original factory ground level</b>				
TP1/2.0-3.8	NT	3.30	3.01	718
TP2/1.9-4.0	NT	NT	<0.50	<120
TP3/1.8-2.8	NT	NT	1.33	318
TP4/2.2-3.9	NT	NT	<0.50	<120
TP5/2.4-4.5	NT	NT	3.84	918
<b>Boiler ash</b>				
TP2/4.0-5.2	NT	NT	6.67	1594
TP3/2.8-4.2	NT	NT	5.34	1276
TP4/3.9-4.5	NT	NT	8.90	2126
<b>Spent lime</b>				
TP1/4.3-6.4	2.12	0.30	<0.50	<120
TP1/4.1- 6.8 COMP	1.14	3.80	<0.50	<120
TP2/5.2-7.8	1.47	0.15	<0.50	<120
TP3/4.2-6.2	0.13	0.15/0.10	<0.50	<120
TP4/4.5-6.4	0.02/0.01	0.05	<0.50	<120



**TABLE VII - SULFUR, TOC & CALORIFIC VALUE  
ANALYSIS RESULTS**

	Sulphur %	TOC %	Calorific value	
			MJ/kg	kcal/kg
TP5/4.5-6.0	1.06	1.60	<0.50	<120
BD1-300101 (=TP5/4.5-6.0)	1.07	0.35	<0.50	<120
<b>Seawall Area</b>				
<b>Clean cover</b>				
TP11/0.0-1.2	NT	NT	<0.50	<120
<b>Boiler ash</b>				
TP11/1.2-3.0	NT	NT	3.02	722
BD1-070201 (=TP11/1.2-3.0)	NT	NT	5.52	1318
TP11/4.5-4.7	NT	NT	1.33	318
TP19/1.4-3.0	0.13	5.20	3.67	876
TP19/4.0-5.1	NT	NT	2.40	574
<b>Spent lime</b>				
TP11/3.0-4.5	NT	0.15	<0.50	<120
<b>Sediments</b>				
BH32/9-11.0	0.47	4.00	2.19	524
BH32/OFFAUGER	0.16	2.70	<0.50	<120

NT - not tested



TABLE VIII - DIOXINS AND FURANS ANALYSIS RESULTS

Sample Identification; Reclamation Area Material Type	BH7/0.0-0.7 R1&R2 Clean cover ppb	TP18/0.0-1.4 R1&R2 Clean cover ppb	BH6/5.8-7.0 R1&R2 Mixed clay etc # ppb	BH8/1.5-7.5 R1&R2 Mixed clay etc # ppb	TP12/1.5-5.8 R1&R2 Mixed clay etc # ppb	BH14/1.8-5.2 Comp R1&R2 Mixed clay etc # ppb	BH14/5.2-7.5 R1&R2 Mixed clay etc # ppb	BH15/1.5-7.5 R1&R2 Mixed clay etc # ppb	BH15/6.0-7.5 R1&R2 Mixed clay etc # ppb	BH20/5.5-6.5 Comp R1&R2 Mixed clay etc # ppb	BH22/1.7-4.5 R1&R2 Mixed clay etc # ppb	TP29/1.8-4.8 R1&R2 Mixed clay etc # ppb
2378 TCDF	<0.006	<0.003	<0.020	0.0094	0.05	0.18	<0.050	<0.020	<0.007	<0.020	0.021	0.87
Non 2378 TCDF	<0.010	0.056	1.8	0.58	2.4	2.5	2.8	0.48	<0.20	0.42	0.98	19
2378 TCDD	<0.010	<0.300	2.7	0.76	3.3	1.1	7.9	0.58	0.29	1.7	4.8	37
Non 2378 TCDD	<0.020	<0.300	0.46	0.16	0.44	1.3	<0.10	0.51	0.02	0.4	1.1	2.3
12378 PeCDF	<0.0008	<0.002	<0.020	<0.010	0.038	<0.30	<0.030	<0.007	<0.002	<0.020	<0.030	<0.60
23478 PeCDF	<0.002	<0.004	0.0055	0.025	0.071	0.21	0.011	0.011	<0.004	0.008	0.11	5.1
Non 2378 PeCDF	<0.010	<0.010	0.71	0.3	2.2	6.5	0.89	0.49	0.08	0.49	1.2	20
12378 PeCDD	<0.001	<0.007	0.014	0.023	0.078	0.58	0.025	0.026	0.0028	0.18	0.034	0.57
Non 2378 PeCDD	<0.020	<0.020	0.19	0.16	0.44	4.2	0.12	0.29	0.042	2.4	0.66	4.5
123478 HxCDF	<0.004	0.002	0.011	0.077	0.72	0.20	<0.020	0.073	0.0029	0.14	0.29	16
123678 HxCDF	<0.001	<0.004	0.0077	0.016	0.19	0.18	0.0096	0.031	0.0032	0.046	0.037	1.6
234678 HxCDF	<0.002	<0.004	0.0072	0.02	0.11	0.43	0.009	0.04	0.002	0.069	0.038	1.1
123789 HxCDF	<0.001	<0.004	<0.006	<0.020	<0.020	<0.030	<0.003	<0.002	<0.002	<0.010	<0.007	<0.20
Non 2378 HxCDF	<0.020	<0.020	0.13	0.81	9.3	7.8	0.27	1.7	0.044	2.4	1.4	23
123478 HxCDD	<0.003	<0.040	<0.020	<0.040	<0.40	<0.30	<0.020	<0.050	<0.002	0.39	<0.10	<0.40
123678 HxCDD	<0.003	<0.040	0.052	0.27	7.7	3.0	0.074	0.69	0.017	1.3	0.41	4.2
123789 HxCDD	<0.006	<0.030	0.047	0.29	2.8	0.46	0.051	0.17	<0.10	0.39	<0.40	4.4
Non 2378 HxCDD	<0.050	0.091	0.12	1.5	26	5.2	0.50	1.4	0.082	4.5	1.5	13
1234678 HpCDF	0.029	<0.030	0.11	1.3	16	4.8	0.39	3.6	0.069	6.9	1.6	40
1234789 HpCDF	<0.001	<0.006	0.0078	0.067	1.3	0.21	0.02	0.23	0.0041	0.27	0.17	4.1
Non 2378 HpCDF	0.019	<0.050	0.14	1.6	49	6.8	0.62	7.1	0.079	8.2	2.6	60
1234678 HpCDD	0.14	1.5	0.72	4	250	52	1.4	17	0.35	57	11	52
Non 2378 HpCDD	0.16	1.6	0.73	3.5	150	37	1.5	13	0.38	39	8.4	48
OCDF	0.056	<0.10	0.26	1.9	140	17	0.87	18	0.14	26	7.3	100
OCDD	18	350	38	120	7900	630	74	170	22	920	280	760
Sum of PCDD and PCDF congeners: Excluding LOD values	18.4	353	46.2	137	8560	782	91.5	235	23.6	1070	324	1220
Including half LOD values	18.5	354	46.3	137	8560	782	91.6	235	23.7	1070	324	1220
Total I-TEQ: Excluding LOD values	0.0197	0.365	2.77	1.03	15.2	3.16	8.03	1.1	0.32	3.62	5.37	44.5
Including half LOD values	0.0268	0.524	2.77	1.03	15.3	3.18	8.03	1.1	0.322	3.62	5.39	44.5

# - above original factory ground level  
† - below original factory ground level



TABLE VIII - DIOXINS AND FURANS ANALYSIS RESULTS

Sample Identification:	BH14/7.5-10.5 comp R1&R2 Mixed clay etc †	TP16/1.4-4.9 R1&R2 Mixed clay etc †	TP18/1.4-4.2 R1&R2 Mixed clay etc †	BH27/7.5-8.3 R1&R2 Mixed clay etc †	BH30/9.4-10.0 R1&R2 Mixed clay etc †	BH7/7.0-7.8 R1&R2 Boiler ash	TP17/1.4-3.5 R1&R2 Boiler ash	TP17/3.7-4.3 R1&R2 Boiler ash	BH22/8.0-9.0 R1&R2 Boiler ash	BH30/8.0-9.0 R1&R2 Boiler ash	BH22/9.0-10.0 R1&R2 Spent lime	BH27/8.3-8.6 R1&R2 Spent lime
Reclamation Area Material Type	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
2378 TCDF	0.29	0.14	0.0087	<0.008	<0.005	0.15	0.043	0.011	0.031	0.0022	0.13	<0.006
Non 2378 TCDF	8.1	0.33	0.64	<0.008	0.024	13	0.71	0.38	2.3	0.18	0.55	<0.008
2378 TCDD	4.0	0.16	0.96	<0.060	<0.010	18	3.7	0.23	0.78	<0.10	<0.020	<0.020
Non 2378 TCDD	1.6	0.40	0.22	<0.060	0.035	4.9	0.89	0.15	0.48	0.44	0.6	0.085
12378 PeCDF	<0.30	<0.002	<0.006	<0.006	<0.001	<0.10	<0.030	<0.020	<0.040	<0.009	0.026	<0.004
23478 PeCDF	1.2	0.0028	0.013	<0.006	<0.001	0.13	0.025	0.018	0.23	0.011	0.019	<0.005
Non 2378 PeCDF	9.9	0.24	0.46	<0.006	<0.010	7.5	0.65	0.35	2.1	0.11	1.2	<0.004
12378 PeCDD	0.15	<0.006	0.021	<0.006	<0.002	0.16	0.065	0.019	0.056	0.0063	0.014	0.0032
Non 2378 PeCDD	1.7	0.24	0.35	<0.010	0.092	2.5	2.9	0.4	0.86	0.28	1.1	0.14
123478 HxCDF	4.0	0.0074	0.054	<0.008	<0.002	0.19	0.086	0.036	0.41	0.033	0.01	<0.009
123678 HxCDF	0.51	0.0042	0.021	<0.003	<0.002	0.059	0.042	0.014	0.08	0.0058	0.028	<0.006
234678 HxCDF	0.38	<0.001	<0.020	<0.002	<0.002	0.067	0.048	0.012	0.076	0.0044	0.021	<0.003
123789 HxCDF	<0.10	<0.002	<0.005	<0.002	<0.003	<0.020	<0.020	<0.005	<0.020	<0.002	<0.002	<0.003
Non 2378 HxCDF	4.2	0.17	0.85	<0.020	<0.020	3.1	1.2	0.47	2.2	0.17	1.6	<0.009
123478 HxCDD	<0.20	<0.010	<0.050	<0.008	<0.003	<0.020	<0.10	<0.020	0.083	<0.006	<0.010	<0.010
123678 HxCDD	1.0	0.059	0.31	<0.007	<0.010	0.65	0.46	0.16	0.45	0.048	0.17	0.014
123789 HxCDD	0.81	0.037	0.15	<0.030	<0.006	0.48	0.26	0.08	0.38	0.027	0.056	0.059
Non 2378 HxCDD	3.5	0.46	1.1	0.078	0.11	2.6	2.7	1.2	1.8	0.34	0.84	1.5
1234678 HpCDF	6.3	0.23	1	0.017	0.024	2	1.6	0.56	3	0.082	0.093	<0.010
1234789 HpCDF	1.7	0.015	0.14	<0.004	<0.004	0.12	0.095	0.02	0.24	0.012	0.0041	<0.002
Non 2378 HpCDF	3.2	0.33	1.5	0.023	0.022	2.4	2.1	0.8	3.3	0.17	0.072	<0.010
1234678 HpCDD	9.1	2	10	0.51	0.061	6.7	8.1	1	15	0.21	0.26	0.58
Non 2378 HpCDD	6.7	1.9	8	0.58	0.06	5.3	7.1	1.1	10	0.19	0.24	1.8
OCDF	27	0.64	4.1	0.045	0.072	5.5	5	0.75	11	0.15	0.18	<0.010
OCDD	220	61	180	62	1.3	140	130	31	280	2.1	3.4	25
Sum of PCDD and PCDF congeners: Excluding LOD values	315	68.4	210	63.3	1.8	216	168	38.8	335	4.57	10.6	29.2
Including half LOD values	316	68.4	210	63.4	1.84	216	168	38.8	335	4.63	10.6	29.2
Total I-TEQ: Excluding LOD values	5.79	0.27	1.33	0.0673	0.00222	18.5	4.07	0.327	1.55	0.026	0.0665	0.0397
Including half LOD values	5.81	0.272	1.33	0.104	0.00967	18.5	4.08	0.329	1.55	0.0766	0.0771	0.053

# - above original factory ground level  
† - below original factory ground level



TABLE VIII - DIOXINS AND FURANS ANALYSIS RESULTS

Sample Identification:	BH30/10-10.5	TP25/3.2-3.3	TP28/1.0-2.3	TP21/2.9-3.2	TP24/3.0-3.1	TP25/1.8-2.5	TP26/2.2-2.4	TP28/2.3-2.45	TP25/2.5-3.8	TP26/3.0-4.1	TP28/2.3-5.5	TP21/4.8-5.2
Reclamation Area	R1&R2	R3	R3	R3	R3	R3	R3	R3	R3	R3	R3	R3
Material Type	Spent lime	Mixed clay etc †	Mixed clay etc †	Boiler ash	Boiler ash	Boiler ash	Boiler ash	Boiler ash	Spent lime	Spent lime	Spent lime	Sediments
	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
2378 TCDF	<0.002	<0.003	<0.020	<0.007	0.044	0.062	0.61	0.76	3.4	<0.006	0.053	<0.003
Non 2378 TCDF	0.046	0.07	0.32	<0.080	1.3	0.14	18	30	110	0.4	2.0	0.029
2378 TCDD	0.17	<0.070	0.96	0.2	5.2	0.47	47	31	150	0.48	6.1	<0.040
Non 2378 TCDD	0.015	0.07	0.44	1.4	0.96	0.046	31	31	31	0.13	0.32	0.16
12378 PeCDF	<0.004	<0.003	<0.010	<0.006	<0.009	<0.003	<0.040	<0.060	<0.080	<0.007	<0.009	<0.003
23478 PeCDF	<0.006	0.0037	0.01	<0.006	0.0036	<0.005	0.21	0.16	0.32	0.0091	0.024	<0.008
Non 2378 PeCDF	0.009	0.025	0.27	<0.060	0.62	0.056	6	6.9	45	0.19	0.71	0.034
12378 PeCDD	<0.005	<0.006	0.045	0.02	0.015	0.0083	0.16	0.28	1.5	0.021	0.016	<0.010
Non 2378 PeCDD	0.044	0.026	1.3	0.51	0.55	0.042	1.3	2.2	2.3	0.099	0.23	0.22
123478 HxCDF	<0.010	0.013	0.023	0.024	0.02	<0.006	0.5	0.25	0.071	0.047	0.052	<0.006
123678 HxCDF	<0.003	0.0054	0.011	0.006	0.011	<0.003	0.079	0.086	0.053	0.02	0.015	<0.005
234678 HxCDF	<0.001	<0.003	0.015	<0.003	0.012	<0.003	0.069	0.098	0.06	0.025	0.025	<0.005
123789 HxCDF	<0.002	<0.003	<0.003	<0.002	<0.020	<0.002	<0.020	<0.020	<0.003	<0.003	<0.005	<0.004
Non 2378 HxCDF	<0.010	0.032	0.39	0.026	0.6	0.027	3.4	2.6	0.75	0.54	0.76	0.04
123478 HxCDD	<0.006	<0.005	<0.090	0.01	<0.030	<0.004	<0.10	0.5	<0.070	0.018	<0.040	<0.009
123678 HxCDD	<0.009	0.013	1.5	0.032	0.18	0.013	1.0	1.1	1.2	0.22	0.29	0.023
123789 HxCDD	<0.010	0.016	0.51	0.06	0.043	0.022	0.35	0.63	0.92	0.1	0.16	0.036
Non 2378 HxCDD	0.072	0.021	3.2	0.86	1.6	0.12	3.7	5.9	1.2	0.64	0.92	1.3
1234678 HpCDF	<0.020	0.039	0.24	0.041	1.2	0.016	5.3	3.8	0.85	1.1	1.3	0.039
1234789 HpCDF	<0.002	0.011	0.018	0.006	0.089	<0.003	0.32	0.25	0.051	0.057	0.072	<0.008
Non 2378 HpCDF	<0.020	0.022	0.42	0.053	1.9	0.012	9	5.5	1.1	1.5	2.2	0.054
1234678 HpCDD	<0.050	0.16	5.2	0.57	5.8	0.18	38	25	7.2	5.7	12	0.63
Non 2378 HpCDD	<0.030	0.18	5.1	1.2	5.5	0.23	27	24	4.6	4.5	11	2.1
OCDF	<0.030	0.13	0.64	0.083	5	0.024	20	12	1.8	2.4	2.6	0.24
OCDD	<0.60	8.1	50	31	97	3.5	400	320	41	84	140	19
Sum of PCDD and PCDF congeners:												
Excluding LOD values	0.356	8.94	70.9	36.1	128	4.97	613	504	404	102	181	23.9
Including half LOD values	0.766	8.98	71	36.2	128	4.98	613	504	404	102	181	24
Total I-TEQ:												
Excluding LOD values	0.17	0.0169	1.33	0.26	5.41	0.489	48.3	32.2	152	0.693	6.46	0.0318
Including half LOD values	0.176	0.0542	1.33	0.263	5.42	0.492	48.3	32.2	152	0.694	6.46	0.058

# - above original factory ground level

† - below original factory ground level



TABLE VIII - DIOXINS AND FURANS ANALYSIS RESULTS

Sample Identification:	TP24/5.0-5.1	TP25/5.1-5.3	TP2/0.0-1.9	TP1/2.0-3.8	TP2/1.9-4.0	TP4/2.2-3.9	TP5/2.4-4.5	TP1/4.1-4.4	TP3/2.8-4.2	TP1/4.3-6.4	TP2/5.2-7.8	TP5/4.5-6.0
Reclamation Area Material Type	R3 Sediments	R3 Sediments	R4 Clean cover	R4 Mixed clay etc #	R4 Mixed clay etc #	R4 Mixed clay etc #	R4 Mixed clay etc #	R4 Boiler ash	R4 Boiler ash	R4 Spent lime	R4 Spent lime	R4 Spent lime
	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
2378 TCDF	0.0038	0.0043	<0.010	<0.060	0.28	0.18	0.39	0.037	0.27			
Non 2378 TCDF	0.095	0.11	0.18	5.1	4.4	2.5	13	1.2	5.9	<0.40	<1.0	6.7
2378 TCDD	<0.030	<0.040	0.36	21	7.9	5.7	29	2.4	42	96	180	49
Non 2378 TCDD	0.17	0.21	<0.010	0.98	1.8	0.72	<0.10	0.26	11	56	19	140
										3.3	20	15
12378 PeCDF	<0.007	<0.004	<0.006	<0.20	<0.40	<0.20	<0.070	<0.030	<0.080	<0.10	<0.10	<0.10
23478 PeCDF	0.0094	0.011	0.004	1.8	0.38	0.33	0.19	0.18	0.24	0.19	0.39	<0.10
Non 2378 PeCDF	0.16	0.17	<0.060	4.6	6.3	5.7	4.8	0.84	5.5	28	93	1.4
12378 PeCDD	0.0097	0.009	<0.003	0.14	0.21	0.2	0.15	0.089	0.16	0.22	0.93	23
Non 2378 PeCDD	0.27	0.29	<0.040	1.5	3.6	3.5	1.6	0.68	0.98	0.61	1.4	0.33
												1.3
123478 HxCDF	0.0082	0.013	<0.009	3.9	0.92	1.1	0.57	0.57	0.61	0.43	1.1	5.2
123678 HxCDF	0.0049	0.0066	<0.005	0.39	0.18	0.17	0.094	0.071	0.084	0.14	0.35	0.7
234678 HxCDF	0.0071	0.0078	<0.004	0.12	0.29	0.27	0.09	0.049	0.069	0.15	0.35	0.33
123789 HxCDF	<0.003	<0.003	<0.003	<0.10	<0.030	<0.060	<0.009	<0.020	<0.020	<0.010	<0.020	<0.030
Non 2378 HxCDF	0.41	0.42	0.039	5.4	8.5	5.5	2.5	0.87	1.7	4.8	5.5	5.1
123478 HxCDD	<0.020	0.013	<0.003	0.86	<0.30	<0.20	0.85	3.13	<0.20	<0.20	<0.30	<0.20
123678 HxCDD	0.06	0.061	0.024	0.63	2.3	2	0.58	0.44	0.59	2.3	2.3	1.1
123789 HxCDD	0.048	0.06	<0.020	0.65	0.84	0.71	0.38	0.67	0.62	1.6	2.7	1.1
Non 2378 HxCDD	1.6	1.9	0.094	5.6	6.3	4.5	3.3	2.7	2.3	6.2	3.3	3.9
1234678 HpCDF	0.14	0.22	0.039	7.2	6.2	7	3.9	1.4	1.5	6.7	4	7.3
1234789 HpCDF	0.0076	0.013	0.0054	1.5	0.41	0.61	0.25	0.18	0.21	0.4	0.66	2.5
Non 2378 HpCDF	0.16	0.25	0.034	7.3	6.8	11	8.2	1.9	1.8	7.7	3	4.4
1234678 HpCDD	1.3	1.5	0.62	10	20	27	10	5.8	9.2	38	12	14
Non 2378 HpCDD	3.3	3.9	0.44	8.4	15	19	8.4	6.3	6.5	25	7.7	9.1
OCDF	0.42	0.54	0.062	10	20	30	16	4.5	5.3	10	9.6	23
OCDD	42	51	16	120	590	400	230	170	140	290	160	190
Sum of PCDD and PCDF congeners:												
Excluding LOD values	50.2	60.7	17.9	217	703	528	334	201	237	578	527	504
Including half LOD values	50.2	60.7	18	217	703	528	334	201	237	578	528	505
Total I-TEQ:												
Excluding LOD values	0.0796	0.0954	0.387	22.9	9.55	7.18	29.9	2.98	42.7	57.4	20.7	143
Including half LOD values	0.096	0.116	0.391	23	9.58	7.2	29.9	2.98	42.7	57.5	20.7	143

# - above original factory ground level  
 † - below original factory ground level



TABLE VIII - DIOXINS AND FURANS ANALYSIS RESULTS

Sample Identification:	BD1-300101 (=TP5/4.5-6.0)	TP1/6.5-6.8	TP11/0.0-1.2	TP11/1.2-3.0	BD1-070201 (=TP11/1.2-3.0)	TP11/4.5-4.7	TP19/1.4-5.1	TP11/3.0-4.5	FB1-300101	BH10	BH13	BH14
Reclamation Area Material Type	R4 Spent lime	R4 Sediments	Seawall Clean cover	Seawall Boiler ash	Seawall Boiler ash	Seawall Boiler ash	Seawall Boiler ash	Seawall Spent lime	Rinsate Blank	Groundwater	Groundwater	Groundwater
	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	pg/L	pg/L	pg/L	pg/L
2378 TCDF	6	0.18	<0.006	0.28	0.51	0.12	0.38	0.0029	<10	<8	<6	<3
Non 2378 TCDF	52	2.9	<0.020	12	14	4.6	46	0.03	<10	9000	<40	3100
2378 TCDD	180	0.44	<0.020	36	19	7.4	15	<0.050	<70	730	<20	<20
Non 2378 TCDD	8.1	0.94	<0.030	<0.10	2.2	<0.10	4.0	<0.030	<50	220	<20	620
12378 PeCDF	<0.090	<0.10	<0.002	<0.30	<0.30	<0.30	<0.20	<0.004	<8	<8	<5	<10
23478 PeCDF	1.2	0.52	<0.002	1.6	2.1	1.8	0.57	0.0028	<9	<9	<6	28
Non 2378 PeCDF	19	2.5	<0.007	17	11	9.1	22	0.023	<8	760	<10	1100
12378 PeCDD	0.38	0.18	<0.002	0.19	0.34	0.15	0.30	<0.003	<7	<10	<7	<7
Non 2378 PeCDD	0.87	0.92	<0.006	4.3	3.7	3.7	1.4	0.022	<7	63	<10	210
123478 HxCDF	3.3	0.93	<0.001	4.7	6.6	5.9	0.84	<0.005	<5	<20	<4	68
123678 HxCDF	0.39	0.19	<0.001	0.91	1	0.58	0.18	<0.004	<4	<10	<3	<20
234678 HxCDF	0.2	0.18	<0.001	0.43	0.93	0.32	0.17	<0.003	<5	<10	<4	<20
123789 HxCDF	<0.020	<0.020	<0.002	<0.10	<0.20	<0.20	<0.040	<0.001	<6	<7	<5	<9
Non 2378 HxCDF	3.6	4.2	<0.004	43	34	5.2	7.6	0.044	<5	120	<20	150
123478 HxCDD	<0.20	<0.070	<0.003	0.57	0.77	<0.10	<0.30	<0.002	<7	<40	<6	<7
123678 HxCDD	1.1	0.59	<0.003	2.4	3.1	1.1	2.7	0.012	<5	<30	<10	<20
123789 HxCDD	1.5	0.3	<0.010	<9.0	2.8	1.1	1.6	<0.020	<10	<40	<20	<20
Non 2378 HxCDD	3.5	2.2	<0.070	9.9	13	5.1	12	0.087	<7	<500	<30	<60
1234678 HpCDF	6	3.4	<0.005	47	63	7.4	12	0.1	<7	<90	<20	<100
1234789 HpCDF	1.2	0.22	<0.002	2.3	3.4	2.2	0.57	0.0025	<8	<20	<5	<40
Non 2378 HpCDF	4.3	4.6	<0.008	54	99	9	26	0.11	<7	170	<20	<100
1234678 HpCDD	14	2.6	0.56	49	46	19	73	0.19	<40	1100	<200	<100
Non 2378 HpCDD	9.5	4.6	0.69	37	36	13	49	0.13	<40	850	<100	<90
OCDF	110	14	<0.040	95	180	45	120	0.17	<20	230	<20	360
OCDD	510	120	120	430	670	300	5600	4.7	<400	59000	<1000	<1000
Sum of PCDD and PCDF congeners: Excluding LOD values	936	167	121	848	1210	442	6000	5.63	0	72200	0	5640
Including half LOD values	936	167	121	852	1210	442	6000	5.69	378	72700	796	6450
Total I-TEQ: Excluding LOD values	183	1.22	0.126	39.3	23.8	9.92	22.6	0.0107	0	800	0	21.2
Including half LOD values	183	1.23	0.138	39.8	23.8	9.94	22.6	0.0383	42.3	815	17.9	39.8

# - above original factory ground level

† - below original factory ground level



TABLE VIII - DIOXINS AND FURANS ANALYSIS RESULTS

Sample Identification: Reclamation Area Material Type	BD1-210201 (=BH14) Groundwater	BH20 Groundwater	BH22 Groundwater	FB1-210201 Rinsate Blank	TP1/2.0-3.8 TCLP Leachate #	TP2/1.9-4.0 TCLP Leachate #	TP3/2.8-4.2 TCLP Leachate †	BH7/7.0-7.8 TCLP Leachate †	BH14/1.8-5.2 TCLP Leachate #	BH14/7.5-10.5 Comp TCLP Leachate †	TP17/1.4-3.5 TCLP Leachate †	TP19/1.4-5.1 TCLP Leachate †
	pg/L	pg/L	pg/L	pg/L	pg/L	pg/L	pg/L	pg/L	pg/L	pg/L	pg/L	pg/L
2378 TCDF	<4	<10	<6	<5	<3	33	<4	9.3	4.2	7.8	<7	<10
Non 2378 TCDF	5500	<90	150	<9	400	3300	120	5100	130	1300	71	6200
2378 TCDD	41	<20	39	26	61	390	170	100	37	96	120	85
Non 2378 TCDD	330	<100	210	12	99	1300	22	190	120	910	170	140
12378 PeCDF	<7	<5	<10	<4	<7	<20	<6	<6	<5	<10	<4	<3
23478 PeCDF	12	<6	<10	<5	11	25	<7	<7	<9	42	<10	<9
Non 2378 PeCDF	1500	<20	260	<4	450	1900	55	300	190	770	52	430
12378 PeCDD	<10	<7	<7	<6	<10	<30	<10	<20	<20	<20	<6	4.1
Non 2378 PeCDD	160	<10	130	<10	110	1400	<20	160	90	570	120	75
123478 HxCDF	<20	<5	<2	<6	27	41	<10	<10	<10	110	<8	<10
123678 HxCDF	<10	<3	<7	<3	<7	<10	<6	<5	<5	<30	<8	<3
234678 HxCDF	<10	<4	<8	<3	<7	<30	<7	<6	<10	<20	<9	<4
123789 HxCDF	<6	<5	<5	<4	<7	<10	<8	<8	<6	<8	<5	<5
Non 2378 HxCDF	<100	<30	400	<10	150	870	<20	48	300	350	90	100
123478 HxCDD	<9	<7	<6	<5	<9	<10	<10	<10	<9	<10	<7	<4
123678 HxCDD	<10	<10	<40	<8	<20	79	<10	<20	26	17	17	8.7
123789 HxCDD	<30	<10	<30	<20	<9	<30	<10	<9	<8	<10	<10	<5
Non 2378 HxCDD	<40	<100	<200	<20	<40	330	<20	69	67	140	110	46
1234678 HpCDF	<20	<30	<80	<10	32	240	<20	11	30	110	52	24
1234789 HpCDF	<7	<6	<7	<4	<20	<30	<7	<6	<6	32	<10	<4
Non 2378 HpCDF	<20	<30	<70	<10	51	390	<20	19	82	100	79	45
1234678 HpCDD	<100	<70	<300	<100	68	1100	62	70	370	200	300	150
Non 2378 HpCDD	<100	<60	<200	<80	53	860	56	59	390	130	250	120
OCDF	<100	<100	130	<70	150	920	45	55	130	430	370	83
OCDD	2100	<1000	4200	<700	1500	12000	1000	1900	4500	5400	4000	1600
Sum of PCDD and PCDF congeners: Excluding LOD values	9640	0	5520	38	3160	25200	1530	8090	6470	10700	5800	9110
Including half LOD values	9940	869	6010	586	3230	25300	1630	8140	6510	10800	5840	9130
Total I-TEQ: Excluding LOD values	49.1	0	43.3	26	71.9	444	172	104	48.7	140	130	91.3
Including half LOD values	57.4	17.2	55	32.5	77.7	457	179	114	58.5	149	136	95.2

# - above original factory ground level  
† - below original factory ground level



TABLE VIII - DIOXINS AND FURANS ANALYSIS RESULTS

Sample Identification: Reclamation Area Material Type	BH22/1.7-4.5 TCLP Leachate # pg/L	TP28/2.3-2.45 TCLP Leachate † pg/L	TP29/1.8-4.8 TCLP Leachate # pg/L
2378 TCDF	<10	35	8.3
Non 2378 TCDF	<20	2700	1700
2378 TCDD	<60	2400	540
Non 2378 TCDD	<40	340	680
12378 PeCDF	<10	<6	<10
23478 PeCDF	<10	<10	94
Non 2378 PeCDF	<20	960	1600
12378 PeCDD	<20	<20	<30
Non 2378 PeCDD	<20	110	620
123478 HxCDF	<10	<20	310
123678 HxCDF	<10	<5	<50
234678 HxCDF	<10	<10	29
123789 HxCDF	<10	<8	<7
Non 2378 HxCDF	<20	160	1400
123478 HxCDD	<20	<10	<10
123678 HxCDD	<20	44	87
123789 HxCDD	<20	<30	76
Non 2378 HxCDD	<30	250	450
1234678 HpCDF	15	140	630
1234789 HpCDF	<9	<30	63
Non 2378 HpCDF	27	290	900
1234678 HpCDD	110	1400	1200
Non 2378 HpCDD	110	1200	990
OCDF	87	650	2300
OCDD	1700	18000	14000
Sum of PCDD and PCDF congeners: Excluding LOD values	2050	28700	27700
Including half LOD values	2230	28800	27700
Total I-TEQ: Excluding LOD values	3.04	2440	673
Including half LOD values	46.3	2450	684

# - above original factory ground level  
† - below original factory ground level



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## **APPENDIX B**

### **CMP FOR PROPOSED HOMEBUSH BAY BRIDGE CONSTRUCTION**

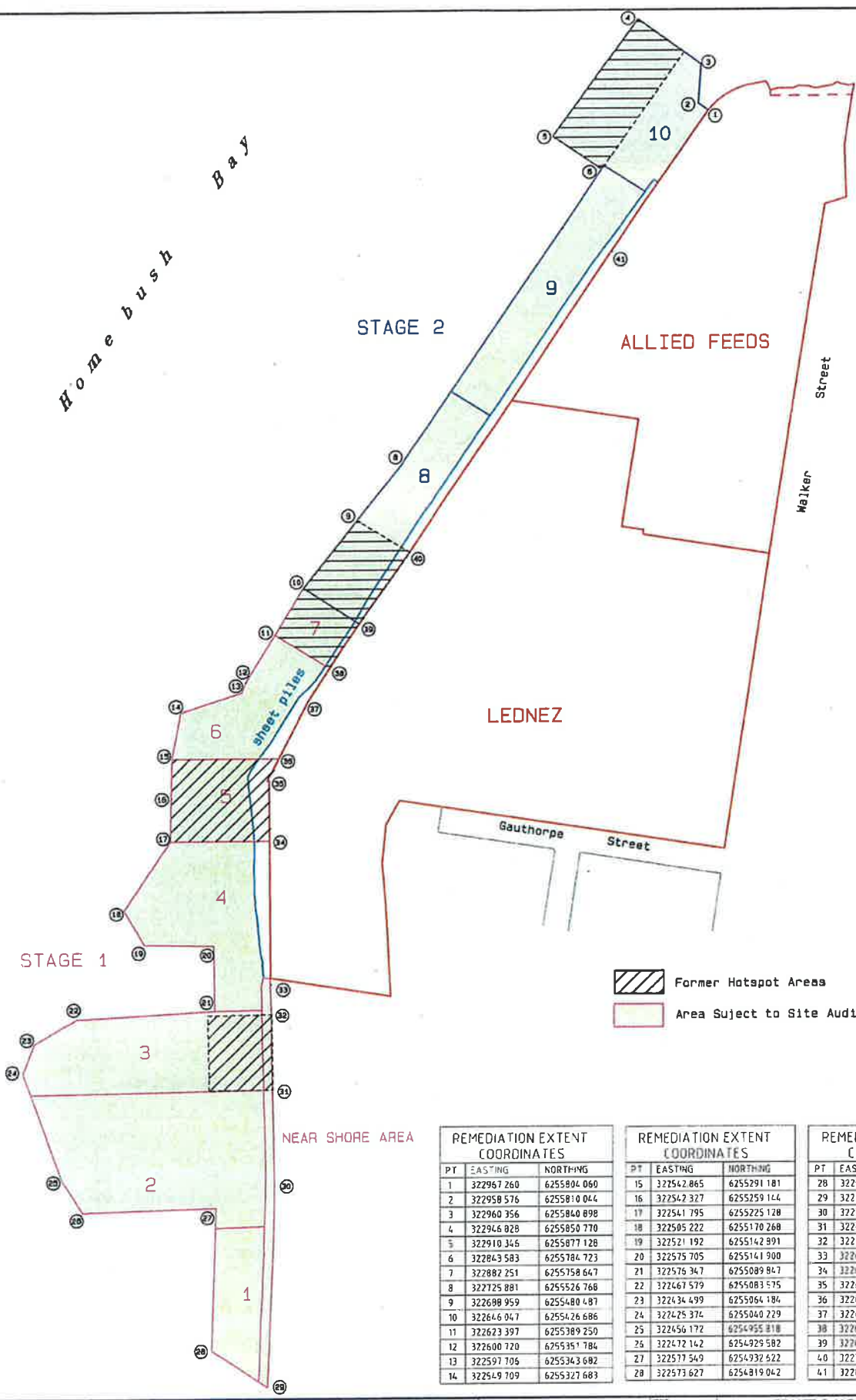
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**Document Reference:** AECOM Site Audit Report (AECOM 2011A)

**Site / Report Reference:** Homebush Bay / Appendix B - 16

**Included Information:** Sample location figures and results summary tables

Homebush Bay



 Former Hotspot Areas  
 Area Subject to Site Audit

REMEDIATION EXTENT COORDINATES		
PT	EASTING	NORTHING
1	322967 260	6255804 060
2	322958 576	6255810 044
3	322960 356	6255840 898
4	322946 828	6255850 770
5	322910 346	6255877 128
6	322843 583	6255784 723
7	322882 251	6255758 647
8	322725 881	6255526 768
9	322698 959	6255480 487
10	322646 047	6255426 686
11	322623 397	6255389 250
12	322600 120	6255351 784
13	322597 106	6255343 682
14	322549 709	6255327 683

REMEDIATION EXTENT COORDINATES		
PT	EASTING	NORTHING
15	322542 865	6255291 181
16	322542 327	6255259 144
17	322541 795	6255225 128
18	322505 222	6255170 268
19	322521 192	6255142 891
20	322575 705	6255141 900
21	322576 347	6255089 847
22	322467 579	6255083 575
23	322434 499	6255064 184
24	322425 374	6255040 229
25	322456 172	6254955 818
26	322472 142	6254929 582
27	322577 549	6254932 622
28	322573 627	6254819 042

REMEDIATION EXTENT COORDINATES		
PT	EASTING	NORTHING
28	322573 627	6254819 042
29	322617 755	6254790 069
30	322623 718	6254950 375
31	322621 824	6255026 888
32	322620 723	6255086 871
33	322620 279	6255110 867
34	322620 067	6255225 128
35	322618 995	6255275 112
36	322626 974	6255291 128
37	322649 176	6255336 650
38	322659 633	6255350 962
39	322690 787	6255398 404
40	322731 135	6255454 969
41	322891 440	6255693 370

REV	DESCRIPTION	DATE
A	FILED FOR INFORMATION	23.11

**MARITIME**

Thiess Services Pty Ltd  
 ACN 076 782 307  
 11 THAMES STREET, HOBART TAS 7500  
 PHONE 03 6236 5000 FAX 03 6236 5011

QUALITY RECORD				SCALE
DESIGN	NAME	SIGNATURE	DATE	1:3000(A3)
CHECKED	DATE			
DESIGNED				
CHECKED				
FILED	FILE NO.	PROJECT	PROJECT	
	A8-LED026-03.plt	HOMEBUSH BAY	LEDNEZ	
		AUDIT PLAN.pln	SITE OFFICE	

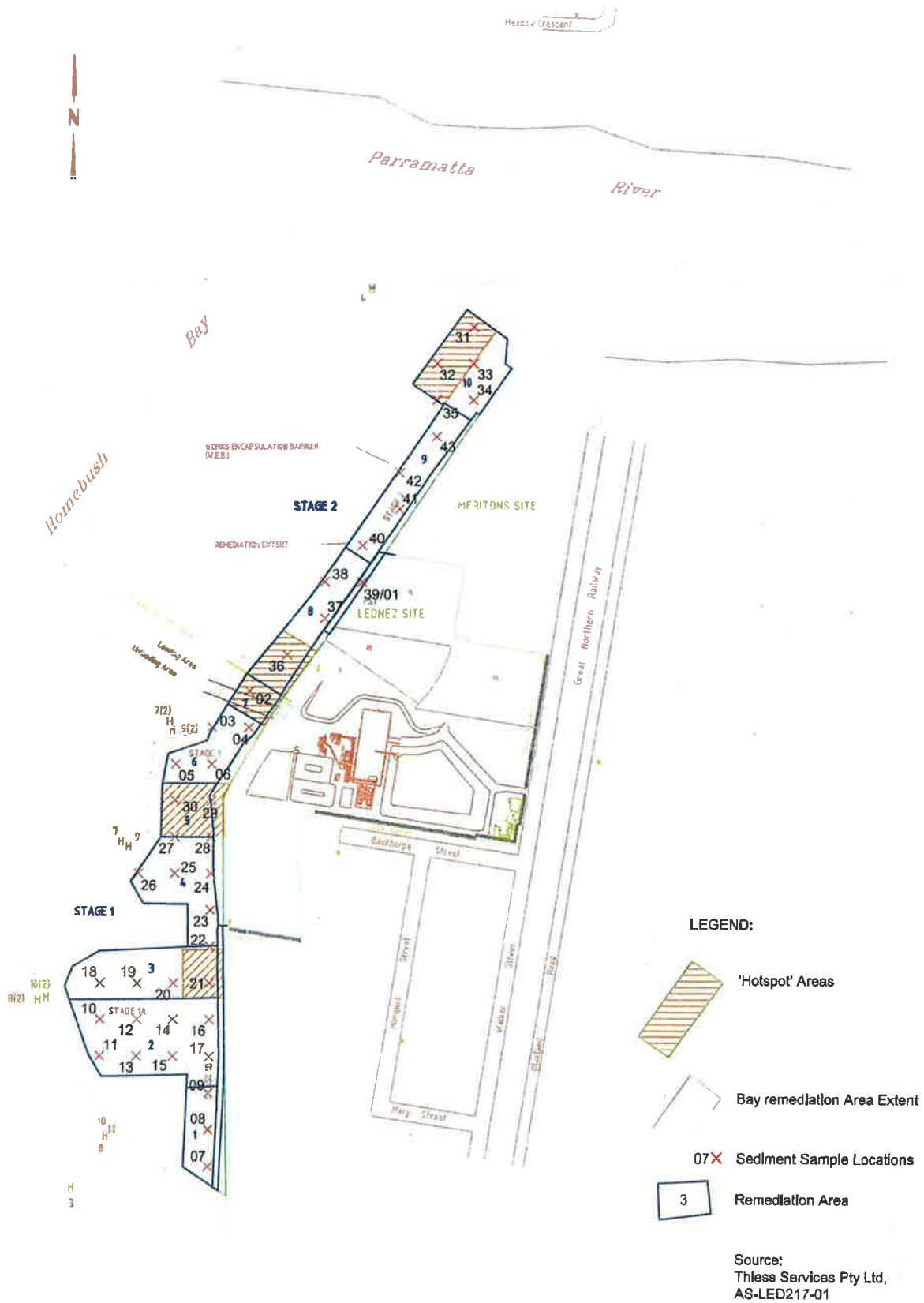
**LEDNEZ & HOMEBUSH BAY**  
**REMEDIATION PROJECT**

**HOMEBUSH BAY**  
 Area subject to Site Audit

Completion of the Quality Record is evidence that the design and drawing have been checked according to the requirements of the Quality Plan. Where the Quality Record is incomplete all information on the drawing is intended for preliminary purposes only as it is unclassified.

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DRAWING NO. **A8-LED026-03**  
 REV. A



50 0 50 100 150 200 250  
Approximate Scale Scale in (m)

Figure 2 - Sediment Sampling Locations

**Table A: PID Field Headspace Readings**

**Project name/number:** Thiess Lednez 333009

**Project Deliverable:** Bay Verification Report

Sample Number	Units	
1	ppm	3.2
2	ppm	1.3
3	ppm	0.2
4	ppm	6.1
5	ppm	0.5
6	ppm	0.2
7	ppm	0.0
8	ppm	0.0
9	ppm	0.3
10	ppm	0.2
11	ppm	0.1
12	ppm	0.1
13	ppm	0.2
14	ppm	0.1
15	ppm	0.3
16	ppm	0.2
17	ppm	0.3
18	ppm	0.6
19	ppm	0.5
20	ppm	0.7
21	ppm	0.7
22	ppm	0.8
23	ppm	0.6
24	ppm	0.5
25	ppm	0.7
26	ppm	0.6
27	ppm	0.9
28	ppm	1.0
29	ppm	1.0
30	ppm	0.9
31	ppm	2.4
32	ppm	2.1
33	ppm	3.1
34	ppm	1.1
35	ppm	1.3
36	ppm	0.8
37	ppm	0.2
38	ppm	0.1
39	ppm	4.2
40	ppm	1.3
41	ppm	0.5
42	ppm	0.3
43	ppm	0.4

**Table Notes:**

---
e.g, 50
e.g, 100
ppm

No Sample  
 PID reading not taken  
 PID reading between 50 - 100 ppm  
 PID reading over 100 ppm  
 Parts per million





**Table C**

Thiess Lednez / 333009  
 Bay Characterisation Duplicate Results

BLIND DUPLICATES	Units	LOR	DUP-	CHA-	RPD	Comments	DUP-	CHA-	RPD	Comments	DUP-	CHA-	RPD	Comments
			ALS- 120	BAY-01	%		ALS-243	BAY-21	%		ALS-376	BAY-40	%	
			28-Jul-08	28-Jul-08			19-Aug-09	19-Aug-09			01-Jun-10	01-Jun-10		
<b>Metals</b>														
Arsenic	mg/kg	5	7	8	13.33	PASSED	31	30	3.28	PASSED	26	23	12.24	PASSED
Beryllium	mg/kg	1	<1	<1	NC	PASSED	1	1	0.00	PASSED	1	1	0.00	PASSED
Cadmium	mg/kg	1	<1	<1	NC	PASSED	4	3	28.57	PASSED	2	2	0.00	PASSED
Chromium	mg/kg	2	15	17	6.00	PASSED	220	215	1.83	PASSED	207	193	7.00	PASSED
Copper	mg/kg	5	16	18	11.76	PASSED	172	166	3.55	PASSED	118	128	8.13	PASSED
Lead	mg/kg	5	27	33	20.00	PASSED	354	339	4.33	PASSED	249	264	5.85	PASSED
Manganese	mg/kg	5	88	70	22.78	PASSED	101	106	4.83	PASSED	105	113	7.34	PASSED
Nickel	mg/kg	2	6	16	90.91	FAILED	101	87	14.99	PASSED	28	31	10.17	PASSED
Zinc	mg/kg	5	56	68	19.35	PASSED	654	600	0.91	PASSED	647	670	3.49	PASSED
Mercury	mg/kg	0.1	0.2	<0.1	NC	PASSED	0.8	0.9	11.76	PASSED	0.6	0.6	0.00	PASSED
Total Cyanide	mg/kg	1	<1	<1	NC	PASSED	<1	<1	NC	PASSED	2	1	66.67	PASSED
<b>EP068A: Organochlorine Pesticides (OC)</b>														
Hexachlorobenzene (HCB)	mg/kg	0.1	1.85	0.74	85.71	FAILED	0.1	0.1	0.00	PASSED	<0.25	<0.25	NC	PASSED
4,4'-DDE	mg/kg	0.05	0.38	0.33	14.08	PASSED	0.44	0.38	14.63	PASSED	<0.25	<0.25	NC	PASSED
4,4'-DDD	mg/kg	0.2	2.45	3.62	38.55	FAILED	<0.20	<0.20	NC	PASSED	<0.25	<0.25	NC	PASSED
<b>EP075A: Phenolic Compounds</b>														
Phenol	mg/kg	0.5	<0.50	<0.50	NC	PASSED	3.35	2.96	12.38	PASSED	<0.50	<0.50	NC	PASSED
2,4-Dichlorophenol	mg/kg	0.1	<0.12	<0.12	NC	PASSED	0.11	0.1	9.52	PASSED	<0.25	<0.25	NC	PASSED
<b>EP075B: Polynuclear Aromatic Hydrocarbons</b>														
Naphthalene	mg/kg	0.2	0.54	1.49	93.60	FAILED	2.95	2.91	1.37	PASSED	<0.25	<0.25	NC	PASSED
Phenanthrene	mg/kg	0.2	0.22	0.26	16.67	PASSED	1.29	1.14	12.35	PASSED	0.3	0.47	44.16	PASSED
Anthracene	mg/kg	0.2	<0.20	<0.20	NC	PASSED	0.58	0.6	3.39	PASSED	<0.25	0.36	NC	PASSED
Benzo(b) & Benzo(k)fluoranthene	mg/kg	1	<1.0	<1.0	NC	PASSED	1.2	1.1	3.70	PASSED	<1.0	1.4	NC	PASSED
Benzo(a)pyrene	mg/kg	1	<1.00	<1.00	NC	PASSED	<1.00	<1.00	NC	PASSED	<1.00	1.04	NC	PASSED
<b>EP075G: Chlorinated Hydrocarbons</b>														
1,2,3,5-&1,2,4,5-Tetrachlorobenzene	mg/kg	0.5	0.63	<0.50	NC	PASSED	<0.50	<0.50	NC	PASSED	<0.50	<0.50	NC	PASSED
<b>Dioxins</b>														
WHO-TEQ (0.5 x LOR)	pg/g	-	2609.85	3068.54	16.16	PASSED	7489.89	4785.66	44.08	PASSED	1588.95	1716.65	7.73	PASSED

SPLIT DUPLICATES	Units	LOR	CHA-	CHA-	RPD	Comments	CHA-	CHA-	RPD	Comments	CHA-	CHA-	RPD	Comments
			BAY-01S	BAY-01	%		BAY-21S	BAY-21	%		BAY-40S	BAY-40	%	
			28-Jul-08	28-Jul-08			19-Aug-09	19-Aug-09			01-Jun-10	01-Jun-10		
<b>Metals</b>														
Arsenic	mg/kg	5	12	8	40.00	PASSED	31	30	3.28	PASSED	32	23	32.73	PASSED
Beryllium	mg/kg	1	1	<1	NC	PASSED	<1	1	NC	PASSED	1.1	1	9.52	PASSED
Cadmium	mg/kg	1	0.5	<1	NC	PASSED	4.3	3	35.62	PASSED	1.9	2	5.13	PASSED
Chromium	mg/kg	2	22	17	25.64	PASSED	240	216	10.53	PASSED	220	193	13.08	PASSED
Copper	mg/kg	5	21	18	15.38	PASSED	190	166	13.48	PASSED	120	128	6.45	PASSED
Lead	mg/kg	5	35	33	5.86	PASSED	340	339	0.29	PASSED	280	264	5.88	PASSED
Manganese	mg/kg	5	150	70	72.73	FAILED	150	106	34.38	FAILED	80	113	34.20	FAILED
Nickel	mg/kg	2	10	16	46.15	PASSED	110	87	23.35	PASSED	23	31	29.63	PASSED
Zinc	mg/kg	5	76	68	11.11	PASSED	720	660	8.70	PASSED	640	670	4.58	PASSED
Mercury	mg/kg	0.1	0.07	<0.1	NC	PASSED	0.83	0.9	8.09	PASSED	0.8	0.6	28.57	PASSED
Total Cyanide	mg/kg	1	<0.2	<1	NC	PASSED	--	<1	NC	PASSED	--	1	NC	PASSED
<b>EP068A: Organochlorine Pesticides (OC)</b>														
Hexachlorobenzene (HCB)	mg/kg	0.1	1.4	0.74	61.68	FAILED	<0.6	0.1	NC	PASSED	<0.3	<0.25	NC	PASSED
4,4'-DDE	mg/kg	0.05	0.4	0.33	19.18	PASSED	0.4	0.38	5.13	PASSED	<0.1	<0.25	NC	PASSED
4,4'-DDD	mg/kg	0.2	2.5	3.62	36.60	PASSED	0.5	<0.20	NC	PASSED	0.1	<0.25	NC	PASSED
<b>EP075A: Phenolic Compounds</b>														
Phenol	mg/kg	0.5	<0.5	<0.50	NC	PASSED	1.2	2.96	84.82	FAILED	<0.5	<0.50	NC	PASSED
2,4-Dichlorophenol	mg/kg	0.1	<0.1	<0.12	NC	PASSED	<0.2	0.1	NC	PASSED	<0.1	<0.25	NC	PASSED
<b>EP075B: Polynuclear Aromatic Hydrocarbons</b>														
Naphthalene	mg/kg	0.2	0.6	1.49	85.17	FAILED	1.6	2.91	58.09	FAILED	<0.1	<0.25	NC	PASSED
Phenanthrene	mg/kg	0.2	0.2	0.26	26.09	PASSED	0.8	1.14	35.05	PASSED	0.4	0.47	16.09	PASSED
Anthracene	mg/kg	0.2	0.1	<0.20	NC	PASSED	0.3	0.6	66.67	PASSED	0.1	0.36	113.04	PASSED
Benzo(b) & Benzo(k)fluoranthene	mg/kg	1	0.3	<1.0	NC	PASSED	1.1	1.1	0.00	PASSED	0.9	1.4	43.48	PASSED
Benzo(a)pyrene	mg/kg	1	0.1	<1.00	NC	PASSED	0.8	<1.00	NC	PASSED	0.6	1.04	53.66	PASSED
<b>EP075G: Chlorinated Hydrocarbons</b>														
1,2,3,5-&1,2,4,5-Tetrachlorobenzene	mg/kg	0.5	0.5	<0.50	NC	PASSED	<1.0	<0.50	NC	PASSED	<0.5	<0.50	NC	PASSED
<b>Dioxins</b>														
WHO-TEQ (0.5 x LOR)	pg/g	-	4940	3068.54	46.74	PASSED	7890	4785.66	48.98	PASSED	2400	1716.65	33.20	PASSED

Table Notes:

Laboratory limit of reporting  
 Milligrams per kilogram  
 Picograms per gram  
 Not calculated

LOR
mg/kg
pg/g
NC

**Table D****Thiess Lednez / 333009  
Bay Characterisation Trip Spike Results**

Sample Event & Trip Spike Number	Analyte	Trip Spike Results (mg/kg)	Trip Spike Control Results (mg/kg)	Relative Percent Difference (%)
CHA-BAY-02 TS-301008	Benzene	0.7	0.6	15.38
	Toluene	9.9	9.7	2.04
	Ethyl benzene	1.6	1.7	6.06
	Total xylenes	11.2	11.7	4.37
CHA-BAY-03-06 TS-021208	Benzene	0.7	1.0	<b>35.29</b>
	Toluene	9.8	12.2	21.82
	Ethyl benzene	1.5	1.9	23.53
	Total xylenes	<9.6	<11.8	NC
CHA-BAY-07-09 TS-240209	Benzene	0.6	0.8	28.57
	Toluene	7.5	9.1	19.28
	Ethyl benzene	1.5	1.8	18.18
	Total xylenes	7.1	8.7	20.25
CHA-BAY-10-17 TS-030609 <sup>1</sup>	Benzene	0.6	0.8	28.57
	Toluene	8.5	8.9	4.60
	Ethyl benzene	1.1	1.4	24.00
	Total xylenes	8.4	10.7	24.08
CHA-BAY-18-30 TS-190809	Benzene	1.6	1.7	6.06
	Toluene	8.7	8.5	2.33
	Ethyl benzene	2.1	3.4	<b>47.27</b>
	Total xylenes	8.5	8.2	3.59
CHA-BAY-31-35 TS-210510	Benzene	<0.5	<0.5	NC
	Toluene	10.1	10.7	5.77
	Ethyl benzene	1.7	1.8	5.71
	Total xylenes	12.9	13.6	5.28
CHA-BAY-36-43 TS-010610 <sup>2</sup>	Benzene	<0.5	<0.5	NC
	Toluene	7.1	10.0	<b>33.92</b>
	Ethyl benzene	1.0	1.5	<b>40.00</b>
	Total xylenes	7.8	11.8	<b>40.82</b>

**Table Notes:**RPD's in **BOLD** are > 30%<sup>1</sup> Sampled on the same day as SED45, one TS accompanied the two events. TS reported in batch ES0908082.<sup>2</sup> Sampled on the same day as STP216, one TS accompanied the two events. TS reported in batch ES1010421.

Milligrams per kilogram

mg/kg



---

## **APPENDIX B**

### **CMP FOR PROPOSED HOMEBUSH BAY BRIDGE CONSTRUCTION**

---

**Document Reference:** AECOM Site Audit Report (AECOM 2011B)

**Site / Report Reference:** Former Union Carbide site / Appendix B - 17

**Included Information:** Environmental Management Plan, Lots 310, 312, 313 and 316, DP 1163025, 40 Walker Street, Rhodes NSW, Thiess Services Pty Ltd, May 2011 including Fill analysis results summary tables



**Environmental Management  
Plan**

**Lots 310, 312, 313 and 316, DP 1163025  
40 Walker Street, Rhodes NSW**

**Thiess Services Pty Ltd  
May 2011**

**Revision Status**

Version No.	Date	Revision Description	Prepared by	Name
1	April 2011	Final	Thiess Services Pty Ltd	Dan O'Hanlon
2	May 2011	Final	Thiess Services Pty Ltd	Mary Jaser

**Distribution List**

Version No:	Thiess Services Pty Ltd	NSW EPA Accredited Site Auditor	Office of Environment & Heritage (OEH)	Renewing Homebush Bay Pty Ltd (RHB)
1	1	1	1	1
2	2	2	2	2

**Table of Contents**

**1.0 Introduction ..... 5**

1.1 Purpose and Objectives of this Environmental Management Plan ..... 5

1.2 Lots ..... 6

1.3 Structure of Environmental Management Plan and Context ..... 7

1.4 References to contaminant concentrations ..... 8

1.5 Plan Legality ..... 8

**2.0 Subsurface Configuration of the Lots ..... 9**

2.1 Occurrence of Fill Materials on the Lots ..... 9

2.2 Exposure Pathways ..... 10

**3.0 Construction (or Intrusive) Works ..... 12**

3.1 Introduction ..... 12

3.2 Intrusive Works within the 40 m Foreshore Reuse Zone ..... 12

3.3 Application and Approval Process ..... 12

3.4 Excavation and Material Handling Protocols ..... 13

3.5 Community Liaison and Complaints Handling ..... 21

**4.0 Post-Construction (Operation and Maintenance) ..... 22**

4.1 Permitted Activities ..... 22

4.2 Operations and Maintenance Activities within the 40 m Foreshore Reuse Zone ..... 22

4.3 Operation and Maintenance Activities ..... 23

4.4 Contingency and Emergency Response Planning ..... 23

**5.0 Health and Safety Planning ..... 25**

5.1 Occupational Health and Safety Plan (OHSP) ..... 25

**6.0 Plan Implementation ..... 26**

6.1 Roles and Responsibilities ..... 26

6.2 Environmental Monitoring, Inspections and EMP Auditing ..... 26

6.3 Identifying Issues and Assigning Corrective and Preventative Actions ..... 26

6.4 Training, Awareness and Competence ..... 27

6.5 Record Keeping ..... 27

6.6 Plan Review and Update ..... 28

6.7 Distribution ..... 28

**LIST OF FIGURES**

Figure 1.1	Location of Lots.....	30
Figure 2.1	Backfill Plan of the Lots .....	31
Figure 2.2	Cross section U-U' .....	32
Figure 2.3	Cross section T-T' .....	33
Figure 2.4	Cross section S-S' .....	34
Figure 2.5	Subsurface Profiles for the Lots.....	35
Figure 2.6	Decision Making Process.....	36

**LIST OF TABLES**

Table 2.1	Backfill Material Used on the Lots.....	9
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**APPENDICES**

Appendix A	Background .....	37
Appendix B	Statutory Requirements .....	42
Appendix C	Soil Remediation Criteria for Lots 310, 312, 313 and 316.....	45
Appendix D	Maximum and Average Concentrations in Placed Soils .....	48

## **1.0 INTRODUCTION**

### **1.1 Purpose and Objectives of this Environmental Management Plan**

This Environmental Management Plan (EMP) applies to Lots 310, 312, 313 and 316 (hereafter referred to collectively as the “Lots”) in Deposited Plan 1163025. Lots form part of the former Union Carbide site, now known as the “Lednez site”, located at 40 Walker St Rhodes, NSW.

Lots were the subject of remediation works over the period May 2005 to March 2011. The primary objectives of this EMP are to:

- Document the nature of the subsurface conditions at Lots; and
- Provide guidance on protocols for the ongoing management of Lots during construction of residential development and, subsequently, once the residential development is occupied so as to protect human health and the environment and to ensure the integrity of the remediation works.

This plan outlines management requirements for both:

- the short-term construction (or intrusive) works phase - being construction for residential development on Lots; and
- the longer-term - being the post-construction (operation and maintenance) phase of the residential development on Lots.

This EMP includes:

- background information describing the Lednez site location, its history, the remediation works undertaken and information on the nature of contaminants formerly on the site and the potential risks associated with those contaminants;
- a description of the area to which this EMP applies and information on suitable land uses within Lots;
- a summary of some of the relevant regulatory requirements that apply to Lots;
- information pertaining to the approval and consultation processes to be followed with respect to the undertaking of post remediation construction and maintenance activities;

- sufficient information to provide a basic level of understanding of the subsurface configuration of Lots at the completion of remediation works, including procedures to be adopted when planning, and conducting post remediation construction and maintenance activities;
- the delegation of responsibilities for plan implementation; and
- a process to review, update and amend the plan as required.

For clarity, it is noted that this EMP is the document contemplated by the term "Site Management Plan" in the Remediation Agreement between Thiess Services Pty Limited (Thiess) and Renewing Homebush Bay Pty Limited (RHB), dated 23 December 2004.

## 1.2 Lots

A summary of the Lednez site history and its remediation (up until March 2011), including that of Lots, is presented in **Appendix A**.

Lots occupy a total area of approximately 16,500 square metres. **Figure 1.1** indicates the location of Lots.

### 1.2.1 Lot 310

Lot 310 is situated along the western foreshore of the Lednez site. Lot 310 is bound to the north by Lot 202, to the east by Lots 306, 311, 309 and 312, to the west by Lot 316 and to the South by council owned foreshore/parkland area. Lot 310 is completely within 40m of Homebush Bay ("40 m Foreshore Reuse Zone").

Lot 310 has been specifically remediated to provide for future use as "Open Space Foreshore".

### 1.2.2 Lot 312

Lot 312 is located in the southernmost parkland area of the Lednez site. Lot 312 is bound to the north and west by Lot 310, to the east Lot 311 and to the south by the Lednez southern boundary adjoining council owned foreshore/parkland area.

Lot 312 has been specifically remediated to provide for future use as both "Open Space Foreshore" and "Open Space Parkland".

### 1.2.3 Lot 313

Lot 313 is located in the southernmost parkland area of the Lednez site. Lot 313 is bound to the north and west by Lot 311, to the east by the adjacent “Sol Rio/Statewide” complex and to the south by the Lednez southern boundary adjoining council owned foreshore/parkland area.

Lot 313 has been specifically remediated to provide for future use as “Open Space Parkland”.

### 1.2.4 Lot 316

Lot 316 is located along the western foreshore of the Lednez site. Lot 316 is bound to the north by Lot 202, to the east by Lot 310, to the west by Homebush Bay and to the south by the Lednez southern boundary adjoining council owned foreshore/parkland area.

Lot 316 has been specifically remediated to provide for future use as “Open Space foreshore”.

### 1.2.5 Subsurface Profiles of the Lots

The subsurface of Lots is stratified with a number of layers of material (each with concentrations of contaminants at or below the relevant Lednez site remediation criteria – see **Section 1.4** below) placed beneath the finished remediation surface level. Further details on the subsurface conditions within Lots are provided in **Chapter 2** of this EMP. The cross-section profiles for lots are shown in **Figures 2.2, 2.3 and 2.4**.

The typical subsurface profiles for Lots are illustrated in **Figure 2.5**.

## 1.3 Structure of Environmental Management Plan and Context

This EMP has been prepared generally in accordance with the requirements of AS/NZ ISO 14001:1996, and the requirements of the Guidelines for the NSW Site Auditor Scheme (2nd Edition) 2006, made by the Office of Environment and Heritage (OEH) (previously Department of Environment, Climate Change and Water (DECCW)) under the Contaminated Land Management Act 1997 (CLM Act).

This EMP sets the overall context for the management of the subsurface materials within Lots as the land is redeveloped and occupied. It describes the system for managing health and environmental risks associated with activities undertaken within the remediated materials. Guidelines made by regulatory authorities concerning the content of the EMP are outlined in **Appendix B**.

To address activities that may impact on the subsurface materials, this EMP has been set up in a manner that identifies the likely risks, and then identifies management procedures/protocols for these risks.

#### **1.4 References to contaminant concentrations**

Where this plan refers to materials remaining on Lots containing certain concentrations of contaminants, those concentrations have been determined by statistical analysis of sampling data, using upper confidence levels in accordance with applicable guidelines endorsed by OEH.

#### **1.5 Plan Legality**

Responsibility for implementation of this EMP lies with each person who is from time to time an owner, occupier or other party who controls use of land comprising part of Lots. It is understood that the requirements of this plan and its contents are to be notified through a positive covenant imposed by the OEH. The covenant will burden the subterranean land of Lots, where subterranean land means the portion of the land that is below the finished remediation surface level, to ensure that, if the emplaced subsurface materials are disturbed, then such disturbance is managed in an appropriate manner to minimise potential risks to human health or the environment.

It is understood that a notation will also be placed on the Section 149 certificate by OEH to require maintenance of remediation action under the CLM Act. This notification would serve to advise future owners of restrictions on use of land and/or permitted activities.

## 2.0 SUBSURFACE CONFIGURATION OF THE LOTS

This section describes the location, type and concentration of the contaminants present in the reinstated soils on Lots. Details are also provided regarding the potential risk posed by the contaminants present in the subsurface and relevant exposure pathways.

### 2.1 Occurrence of Fill Materials on the Lots

**Figure 2.1** provides a plan view of Lots, showing the backfill batches that were used to reinstate Lots. The classification, classification code, backfill batch number and volume of the backfill batch are shown in **Table 2.1**.

**Table 2.1 Backfill Material Used on the Lots**

Classification	Classification code	Backfill batch number	Approx. volume <sup>1</sup> (cubic metres)
Virgin Excavated Natural Materials (VENM) <sup>1</sup>	2D	BF61	8,054
40m Foreshore Reuse Zone <sup>2</sup>	2E	BF50 BF52	20,906 11,199
Virgin Excavated Natural Materials/ Open Space 0-1m depth <sup>3</sup>	2D/2A	BF53	16,460
Open Space 1-5m depth	2B	BF48	9,680
Maintenance Worker	2J	BF51	3,642

<sup>1</sup> Within 3m of Homebush Bay

<sup>2</sup> Between 3m and 40m from Homebush Bay, at depths greater than 1m

<sup>3</sup> At 0-1m depth across entire surface of lots

**Figures 2.2, 2.3 and 2.4** provide cross sections showing the placement of the classified materials beneath the finished remediated surface levels.

**Figure 2.5** illustrates the typical subsurface profiles across Lots.

### *2.1.1 Application of this EMP*

It has been assumed that:

- Where excavation activities are to be conducted within the top 1m of the “40m Foreshore Reuse Zone” (VENM), of Lots, or the open space <1m layer in Lots 312 and 313, then these activities will be subject to the procedures in **Chapter 4** (post-construction (operation and maintenance) activities); and
- If the need arises to excavate beneath the above mentioned layers, then the procedures and processes described in **Chapter 3** for construction (intrusive) works will apply.

**Figure 2.6** illustrates the process to be employed to determine which course of action applies when working on Lots.

## **2.2 Exposure Pathways**

### *2.2.1 Construction and Maintenance Workers*

Workers involved in disturbing the subsurface of the site could be exposed to the contaminants (in the fill material) by:

- Dermal contact through contact with soils;
- Inhalation by respiration of dust/vapours generated from the fill material/groundwater;
- Ingestion of contaminated materials through poor hygiene practices; and
- Possible secondary exposure from contaminated equipment and clothing.

Planning of intrusive works and implementation of appropriate health and safety measures will minimise the potential for worker (and public) exposure to contaminants through the above listed pathways.

When planning intrusive activities, a range of aspects needs to be considered. It is recommended that these are considered via the preparation of formal construction work method statements (also known as Job Safety and Environmental Analyses, or JSEAs).

Each owner, occupier or other person controlling use of land within Lots, is responsible for ensuring that adequate environmental and safety procedures are in place prior to undertaking such intrusive activities.

**Chapter 3** examines risks associated with intrusive activities and provides guidance on aspects to be considered in the preparation and planning of these activities. **Chapter 4** considers the risks associated with operational and maintenance activities.

#### 2.2.2 *Future Users*

Potential exposure pathways for future users of Lots, including residents (children & adults), workers, visitors and trespassers include:

- Dermal contact from contact with soils;
- Inhalation by respiration of dust/vapours generated from the fill material/groundwater; and
- Ingestion of fill materials through poor hygiene practices.

These potential pathways may occur if excavations are undertaken into the contaminated fill materials. Measures are required to minimise the potential for users of the site undertaking passive activities to come into contact with reinstated materials through the above listed pathways. Passive activities may include living, working and participating in recreational activities on the site and are unlikely to involve direct contact with contaminated fill materials. As a minimum, the following measures are required:

- Car park air ventilation must comply with AS1668.2-2002; and
- All surfaces shall be finished with a cover material (ie. Concrete slab or asphalt or other hard surfacing, or topsoil and grassing) to prevent direct contact by users undertaking passive activities on the land.

## 3.0 CONSTRUCTION (OR INTRUSIVE) WORKS

### 3.1 Introduction

**Figure 3.1** illustrates the process to be employed to determine the appropriate course of action that applies when planning works on Lots.

Where disturbance of the reinstated soils in the “40 m Foreshore Reuse Zone” (at depths below 0.5 m), or beneath the “surface” layer (in “Open Space Roadway” areas) is proposed, certain restrictions will apply. This chapter provides guidance on the processes which shall be followed if intrusive works are proposed.

Where works do not extend into the subsurface below the VENM (in the “40 m Foreshore Reuse Zone”) or the surface layer, then such works are subject to the procedures in **Chapter 4**.

### 3.2 Intrusive Works within the 40 m Foreshore Reuse Zone

The “40 m Foreshore Reuse Zone” consists of the following:

- 0-3m from Homebush Bay - VENM, including largely shale and clay; and
- 3-40m from Homebush Bay – including largely shale/clay and treated materials overlain by 1m of VENM (shale and clay).

Materials reinstated in the “40 m Foreshore Reuse Zone” were required to meet strict soil reuse criteria, as agreed with the NSW OEH. The reinstatement of this area has been completed to effectively provide a 37m “barrier” behind a 3m tidal flushing zone. The integrity of this barrier must be maintained for the protection of marine species within Homebush Bay.

Any party proposing to undertake intrusive works within 40 m of Homebush Bay, i.e. in the “40 m Foreshore Reuse Zone”, must consult with and satisfy the requirements of OEH (including the EPA) prior to commencement of any activity that disturbs the subsurface of this area.

### 3.3 Application and Approval Process

Any party proposing to undertake intrusive works must consult with and satisfy the requirements of OEH (including the EPA) prior to commencement of any activity that disturbs the subsurface of the site. Any proposal to disturb the subsurface at depths below the 1m surface capping layer across lots must be accompanied by

an application addressing (at a minimum) the following:

- Applicants details;
- A description of works (location, geometry);
- Types of equipment to be used;
- Review of the contaminated soils which will be encountered;
- Specific health and safety plan for works;
- Site specific environmental protection plans for the works including air, water and noise management plans;
- Emergency response protocols;
- Community and regulatory stakeholder liaison management protocols;
- Contaminated materials management plan;
- Acid sulfate management plan (potential or otherwise); and
- Method of reinstatement and potential disposal/storage of impacted soils excavated.

This list is not considered exhaustive. Accordingly, it is recommended that the OEHL be consulted to determine the extent of documentation required.

### **3.4 Excavation and Material Handling Protocols**

#### *3.4.1 Earthworks*

During excavation works, care shall be taken to separate differently classified materials from each other and from the surrounding soils. Excavated/disturbed materials must be replaced in the order/depth that they were removed and the surface level maintained and restored upon reinstatement.

Excess spoil generated that cannot be reinstated to the original excavation area (or at another suitable location) must be classified and assessed for off-site disposal as per the *DECCWs Waste Classification Guidelines (2008)*. It is noted that some material may not be acceptable for offsite disposal (see **Section 3.3.8**) and, as such, the generation of excess spoil should be minimised. If excess spoil cannot be disposed of offsite, then the OEHL shall be contacted and an alternative

solution found.

### 3.4.2 *Erosion and Sedimentation Controls*

To minimise the potential of contaminants migrating into Homebush Bay or to surrounding areas, appropriately installed silt controls shall be provided and maintained.

Intrusive works shall be conducted in a manner which prevents surface water originating in surrounding areas from being contaminated. Surface water runoff shall be controlled by intercepting and redirecting runoff in a controlled manner by appropriate means including, but not limited to, the use of temporary bunds, diversion drains, ditches, straw bales and silt fences. The runoff controls shall be installed in accordance with the NSW Landcom's *Managing Urban Stormwater: Soils and Construction, (4<sup>th</sup> Edition, 2004)* guidelines and regulatory requirements. The work may include the construction of stormwater retention basins, covers over stormwater pits, bunding, silt fences, straw bale barriers and the use of oil absorbent products.

### 3.4.3 *Air Quality Management*

A detailed air quality management plan shall be prepared prior to excavation/disturbance of the soils on-site and implemented for the duration of the works. The air quality management plan should include consideration of the following:

- Monitoring procedures for gaseous and particulate emissions from the works;
- Pro-active and reactive management and response mechanisms for particulates, odour and gaseous emissions;
  
- Procedures and processes for monitoring ambient air quality impacts including (as appropriate) high volume air samplers, dust deposition gauges, olfactory observations and sampling pumps fitted with reactive tubes targeted to volatile organic compounds, including chlorinated compounds;
- Provisions for review of air monitoring data as required;
- Complaints management procedures in the event that air quality complaints are received;

- Procedures for the minimisation of gaseous and particulate emissions from the works; and
- A contingency plan should an incident or other initiating factor lead to elevated air quality impacts, whether above normal operating conditions or environmental performance goals.

#### *3.4.4 Water Management*

A detailed water management plan shall be prepared prior to excavation/disturbance of the soils on-site and implemented for the duration of the works. The water management plan should include consideration of the following:

- Methods to avoid discharges to ground and / or ambient waters, including methods to minimise the volume of contaminated water generated;
- Procedures for separating “clean” water from any contaminated areas;
- Details of water management measures to be implemented for clean and dirty waters;
- Calculation of a water balance for all waters generated on-site, including potential volumes of groundwater and stormwater for treatment onsite or offsite, proposed discharges, recycling or reuse;
- Details of remedial actions to be taken by the applicant and site operators in response to an exceedance of the ambient water management controls, including but not limited to:
  - Use of fences/curtains;
  - Contingency actions for flood, heavy rainfall and storm surges into the work areas; and
  - Contingency actions for failure of sediment controls.
- Procedures for reviewing and updating the water management plan as works progress.

#### *3.4.5 Noise Management*

A detailed noise management plan shall be prepared prior to excavation/disturbance of the site and implemented for the duration of the works.

The noise management plan should include consideration of the following:

- Procedures to ensure that all reasonable noise mitigation measures are applied to the works;
- Identification of the noise sources/activities that will be carried out during the works;
- Assessment of the works noise impacts against the construction noise goals;
- Details of overall management methods and procedures that will be implemented to control noise from the works;
- Noise monitoring, reporting and response procedures;
- Internal compliance audits of all plant and equipment;
- Works timetabling to minimise noise impacts; and
- Procedures for notifying residents of work activities likely to affect their noise amenity.

#### *3.4.6 Equipment Control Measures*

On account of the presence of contaminated materials at the site, the following shall be considered to control the movement of vehicles from work areas:

- All surfaces carrying vehicular traffic should be kept free of contaminated material;
- All trucks transporting solid materials should be securely and completely covered immediately after loading the material, to prevent wind blown emissions and spillage. Such covering should be maintained until immediately before unloading the trucks;
- All truck tailgates should be securely fixed prior to loading and immediately after unloading solid material;
- Trucks or equipment should only move within designated transportation corridors. No trucks or equipment carrying contaminated materials shall be allowed to move across remediated or clean areas except across designated transportation corridors; and
- All vehicles transporting materials should be operated in a manner as to

prevent any loss of materials during loading, transport and unloading activities.

The following requirements should be considered in relation to equipment cleaning:

- All equipment that comes in contact with any contaminated material should be washed and cleaned before its removal from the site;
- Equipment working within an excavation area containing contaminated soils may be washed inside the area so that any wash water remains within the excavation. Wash waters may be allowed to naturally evaporate or be removed from the excavation along with other ponded water;
- Subject to the scope of works, a dedicated wash facility may need to be installed for the effective cleaning of equipment prior to leaving the site. All equipment that has come in contact with contaminated materials should be cleaned prior to leaving the site; and
- All vehicles leaving the site should have clean wheels and underbodies. A high-pressure washer may be used to effectively clean all plant prior to leaving the site.

#### *3.4.7 Contaminated Soil Management*

A detailed contaminated soil management plan shall be prepared prior to excavation/disturbance of the site and implemented for the duration of the works. The contaminated soil management plan should include consideration of the following:

- Procedures for testing and classification of excavated/disturbed impacted materials;
- Procedures and processes for the management of excavated materials, including the offsite disposal of excess spoil (see **Section 3.3.8**);
- Provision for the management of excavated materials during all stages of the works, including excavation, transport, storage and disposal/reinstatement;
- Details of measures to be implemented to minimise the loss of chemicals of concern to the environment by volatilisation, dust or leachate generation and

other significant emission pathways that may occur as result of intrusive activities on the site; and

- Management systems, procedures, structures and equipment to be applied to ensure best environmental practice for all contaminated materials disturbance and handling activities on the site, including but not limited to:
  - Excavation and related activities;
  - Transport of materials;
  - Storage and handling of excavated materials; and
  - Reinstatement of materials.

#### 3.4.8 *Disposal of Excess Spoil*

Spoil that is not returned to its original location (depth and area) must be appropriately managed. This may entail assessment and off-site disposal to a licenced landfill facility. If the material is to be disposed to landfill, the process shall be conducted in accordance with the *DECCWs Waste Classification Guidelines (2008)* (or other relevant EPA requirements such as those provided for by Chemical Control Orders made under the Environmentally Hazardous Chemicals Act 1985 (EHC Act)) and will involve (at a minimum) analytical testing for the chemicals of concern. Provisions for temporary storage of the excess spoil in an environmentally responsible manner prior to disposal shall be detailed in any application for excavation on-site. This should include measures such as:

- Placement of material on a sealed or plastic lined surface;
- Construction of sediment retention features around stockpiled materials;
- Vapour and odour suppression;
- Dust suppression; and
- A monitoring program to ensure the effectiveness of these storage measures.

Some of the contaminants found in the materials classified as “Open Space 1 – 5m Depth” and “Open Space >5m Depth” are declared as either Scheduled Chemical Waste or Dioxin Waste under the EHC Act. The management of these chemicals is controlled in NSW by Chemical Control Orders (CCOs) issued by the NSW EPA. At the time of writing, CCOs specific to the site include Dioxin-

Contaminated Waste Materials (1986), Scheduled Chemical Wastes (2004) and Polychlorinated biphenyls (PCBs) (1997).

CCOs set out requirements for manufacturing, keeping, using, processing, storing, selling, transporting or disposing of chemicals and declared chemical wastes. For example, certain chemicals occurring above the prescribed concentrations are prohibited from being disposed of at any landfill.

#### *3.4.9 Asbestos*

If encountered during intrusive works, all asbestos waste shall be stored, handled, transported and disposed of in accordance with Section 42 of the Protection of the Environment Operations (Waste) Regulation 2005.

Asbestos wastes shall not be stored on site. If found, materials shall be contained in specially designed bags or lined bins (as managed by the licensed asbestos removal contractor) and removed to an appropriately licensed landfill facility. All personnel concerned with the removal shall be equipped with the appropriate personal protective equipment. Documentation pertaining to the removal of asbestos shall be maintained. All asbestos management shall be in accordance with WorkCover requirements and the National Occupational Health and Safety Commission Codes of Practice.

#### *3.4.10 Acid Sulfate Soils*

Where disturbance of any potential acid sulfate generating material is anticipated an Acid Sulfate Management Plan shall be developed. Guidance for the development of an Acid Sulfate Soil Management Plan is provided in the *Acid Sulfate Soil Manual (Acid Sulfate Soil Management Advisory Committee, 1998)*.

#### *3.4.11 Landscape and Urban Design*

During site subdivision and development it is anticipated that various earthworks will be conducted for the installation of drainage, retaining walls, lighting and other electrical and data services, street planting and street furniture.

Pending the finalisation of the urban landscaping works, landscape and urban design maintenance procedures need to be developed to manage how activities associated with the construction of these features are conducted without

disturbing soils beneath the base of the surface layer. The placement of additional clean fill layers on top of the finished remediation surface level is one such method that would protect the integrity of the surface layer.

Careful consideration is required when developing planting specifications, particularly in the case of deep rooted trees. Deep planting within the Lednez site is not recommended, however, within the Lots, deep soil planting within sealed and drained systems may be considered acceptable subject to approval by OEH prior to construction. The depth of soil to be provided should be sufficient for root growth such that the 1m surface layer is not impacted by root ingress. A qualified landscape designer, arborist or similar shall be consulted to determine the appropriate additional fill requirements for the tree roots.

All irrigation shall be laid in or above the surface layer. All urban and landscape design aspects shall be designed to reduce water migration into the subsurface.

#### 3.4.12 Groundwater

No use of site groundwater is permitted.

Basements and other subsurface structures shall be designed so as to not penetrate any groundwater table. Where this is unavoidable, measures shall be designed and implemented to prevent the ingress of groundwater into subsurface structures.

Alternatively, drainage structures and equipment shall be installed and maintained to recover groundwater encountered in such structures. Once collected, testing will be required to determine contaminant concentrations, and appropriate disposal options in accordance with the *DECCWs Waste Classification Guidelines (2008)* (or other relevant EPA requirements).

At the conclusion of the construction works, a groundwater monitoring plan shall be developed in consultation with OEH for post-construction implementation.

The plan shall identify where groundwater monitoring is required, sampling methods, chemicals of concern, analytical methods and sensitivity, and over what period monitoring is to be conducted.

### *3.4.13 Storage of Materials on Lots*

No soil, filling materials or rock are to be placed on Lots without the express written permission of the Site Auditor.

## **3.5 Community Liaison and Complaints Handling**

The remediation of the Lednez site has generated a substantial amount of community interest and involvement. The highly visible site is in close proximity to residences on the Rhodes peninsula (e.g: Blaxland Road, Walker Street, Gauthorpe Street, Mary Street) and across the Parramatta River (such as Meadow Crescent, Meadowbank).

Each person who is an owner, occupier or other party who controls the use of the land comprising Lots shall liaise with the community to ensure that community interest, complaints or otherwise are handled in an appropriate manner.

## 4.0 POST-CONSTRUCTION (OPERATION AND MAINTENANCE)

### 4.1 Permitted Activities

Lots have been remediated to a standard that permits the development of “Open Space Foreshore” (within the “40 m Foreshore Reuse Zone”) and “Open Space Parkland” (greater than 40 m from Homebush Bay). **Figure 2.2, 2.3 and 2.4** illustrate the typical subsurface profiles across Lots, including the “40 m Foreshore Reuse Zone” and “Open Space Roadway/Parkland” materials.

It has been assumed, for the purpose of developing this plan for operational and maintenance activities, that the surface layer acts as a barrier that is not to be penetrated. If the need arises to disturb the underlying materials, then the procedures and processes described in **Chapter 3** (for intrusive site works) will apply. Otherwise, the operation and maintenance procedures outlined below will apply.

### 4.2 Operations and Maintenance Activities within the 40 m Foreshore Reuse Zone

As noted in **Section 3.2**, the top 1m of the “40 m Foreshore Reuse Zone” is Virgin Excavated Natural Material (VENM), and as such, operations and maintenance works are permitted in this layer. To ensure protection of the integrity of the underlying material, the following controls shall be employed:

- Any materials which are removed shall be reinstated with the material that has been removed from the excavation or VENM;
- Surface water flows shall be controlled to prevent erosion; and
- All surfaces shall be finished and maintained so as to be stable. Suitable finishes include turf, paving or other hard surfaces (concrete/bitumen or similar) or any other finish that ensures erosion of surfaces and exposure of the underlying materials does not occur.

If operations or maintenance activities require the excavation of material in the underlying layer, i.e. below 1m depth, then the requirements outlined in **Section 3.2** shall apply.

### 4.3 Operation and Maintenance Activities

As noted in **Section 3.1**, **Figure 3.1** illustrates the process to be employed to determine which course of action applies when planning works on Lots.

#### 4.3.1 Surface Cover Management

As noted in **Section 2**, the site soils have been placed in layers, each with particular contaminant characteristics. In order for the exposure scenarios upon which the risk assessment was founded to remain valid, the integrity of these layers (and in particular the surface layer) must be maintained to minimise health and environmental risks. The following controls shall be employed as a minimum to ensure the protection of the integrity of the remediated works:

- Any materials which are removed shall be reinstated with the material that has been removed from the excavation or Virgin Excavated Natural Material (VENM);
- Surface water flows shall be controlled to prevent erosion and subsequent exposure/transportation of contaminated material; and
- All surfaces shall be finished and maintained so as to be stable. Suitable finishes include turf, paving or other hard surfaces (concrete/bitumen or similar) or any other finish that ensures erosion of surfaces and exposure of the underlying materials does not occur.

#### 4.3.2 Groundwater

No use of groundwater is permitted.

At the conclusion of the construction works, a groundwater monitoring plan shall be developed in consultation with OEH for post-construction implementation.

The plan shall identify where groundwater monitoring is required, sampling methods, chemicals of concern, analytical methods and sensitivity, and over what period monitoring is to be conducted.

### 4.4 Contingency and Emergency Response Planning

As the majority of operational and maintenance activities will occur without

penetration of the surface layer, there should be minimal need for contingency planning. However, if unexpected conditions are encountered during works within the surface layer, all works shall cease and contingency plans developed to manage any environmental or health and safety impacts associated with the unexpected event.

## 5.0 HEALTH AND SAFETY PLANNING

### 5.1 Occupational Health and Safety Plan (OHSP)

Prior to commencement of any intrusive activity an Occupational Health and Safety Plan (OHSP) shall be developed. The purpose of the OHSP is to provide all relevant health and safety information for personnel undertaking work at the site.

The information provided by the OHSP should include:

- assignment of responsibilities;
- a discussion of site conditions;
- details of the work;
- an evaluation of on-site and off-site hazards;
- establishment of personnel protection standards and mandatory safety practices and procedures;
- establishment of OHS monitoring protocols;
- training and responsibilities of emergency team members;
- evacuation procedures and emergency drills;
- provision for contingencies that may arise while operations are being conducted during the project, both on-site and off-site; and
- Personal Protective Equipment (PPE) requirements.

The OHSP should account for the various contaminants that occur within Lots (refer **Appendix C**).

This information is not intended to be a comprehensive review of such factors. It is the responsibility of any party responsible for handling or otherwise disturbing site soils to undertake an activity-specific health and safety assessment.

## 6.0 PLAN IMPLEMENTATION

### 6.1 Roles and Responsibilities

Responsibility for implementation of this EMP lies with each person who is an owner, occupier or other party who controls the use of land comprising Lots.

In addition, all personnel working at depths below the finished remediation surface levels have responsibilities for compliance with this EMP. This includes both contractors carrying out construction (intrusive) works and operation and maintenance contractors, or their sub contractors.

Prior to undertaking works, construction work method statements, or for larger works, a specific environmental management plan will need to be prepared and approved by the relevant party. Responsibility for ensuring this risk assessment process is undertaken lies with each owner, occupier or other party who controls the land comprising Lots.

As shown in **Figure 3.1**, approval to conduct works within the surface layer or top 1m of the “40 m Foreshore Reuse Zone”, is limited to that required by site based processes (construction, operational or otherwise). For works at greater depths, approval will need to be sought from OEH.

### 6.2 Environmental Monitoring, Inspections and EMP Auditing

Environmental monitoring, inspection and environmental management plan auditing requirements will vary depending on the specific activities being undertaken.

During intrusive works a site inspection routine shall be developed and undertaken daily to ensure that all environmental controls are being implemented, as per the plans or construction work methods prepared for the activity.

Environmental monitoring, inspections and environmental management plan auditing shall be built into annual maintenance programs.

### 6.3 Identifying Issues and Assigning Corrective and Preventative Actions

The effectiveness of environmental protection measures shall be assessed on a

regular basis, the frequency of which will be determined based on the activity and level of risk.

To achieve this, checklists should be prepared when planning any activity that may impact on the integrity of the remediation works, incorporating best management practices and safeguards as well as any specific approval requirements. The purpose of the checklists is to:

- provide a surveillance tool to ensure that safeguards are being implemented;
- identify where problems might be occurring;
- identify where sound environmental practices are not being implemented; and
- facilitate the identification and early resolution of problems.

#### **6.4 Training, Awareness and Competence**

All personnel working on Lots shall receive an induction addressing the specific environmental and health and safety requirements for works on the Lots. More detailed inductions may be required depending on the depth of intrusion.

#### **6.5 Record Keeping**

Record keeping provisions shall apply for construction or operations and maintenance work. At a minimum, the following documentary records shall be maintained:

- Daily logs documenting the quantities of material excavated, the amount reinstated and the amount disposed of from the site. This should be noted along with the progress of the excavation/disturbance works;
- Receipts from the licensed facility to which the spoil has been sent. In the event that spoil cannot be disposed of off site then documentation regarding what happened to such spoil should also be kept;
- Documentation with respect to classification of waste in accordance with NSW EPA protocols;
- Soil analytical results including the samples origin;
- All environmental monitoring results (air, noise, water);
- A copy of the complaints register (if applicable), including details of all

complaints and actions taken; and

- Survey reports for each area of work at the completion of works, documenting that the final surface levels for each area of work have not been altered from the post remediation final surface levels without written approval from OEH. For clarity, it is noted that this does not prohibit the installation of additional suitably classified material over the remediation final surface levels.

## **6.6 Plan Review and Update**

Revisions to the EMP may be required having regard to the nature of activities carried out on Lots in the future.

Responsibility for the review and update of this EMP rests with each owner, occupier or other party who controls use of land comprising Lots.

When amendments occur, it is recommended that the entire document be reissued with the revision number updated accordingly.

## **6.7 Distribution**

Thiess will provide an original, approved copy of this EMP to the Site Auditor, OEH, the Department of Planning and RHB.

Each owner (from time to time) of land comprising Lots will be responsible for the distribution of copies of the approved EMP to relevant parties and for distribution of any future revisions to the EMP.

## Figures

Figure 1.1 Location of Lots

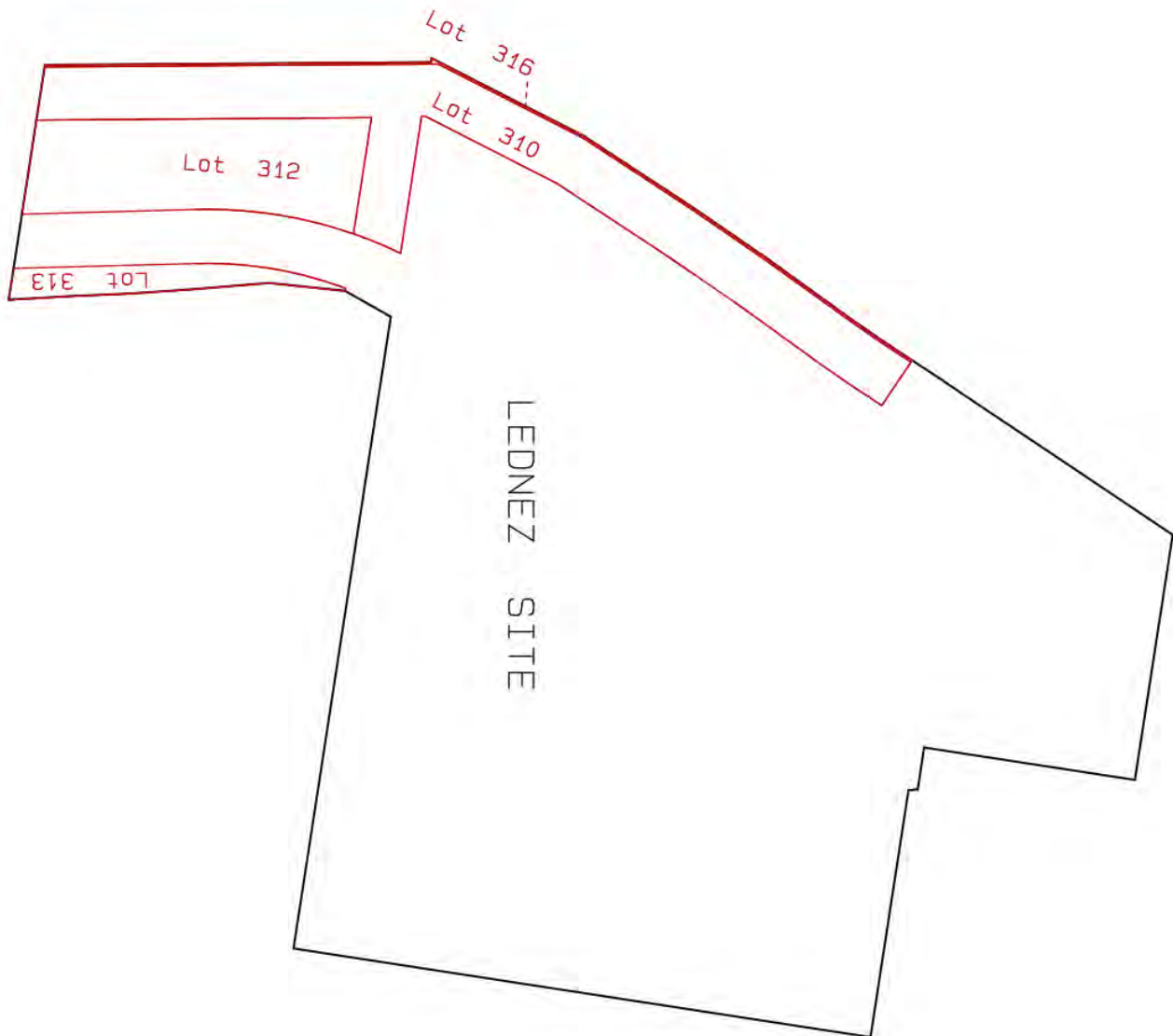


Figure 2.1 Backfill Plan of the Lots

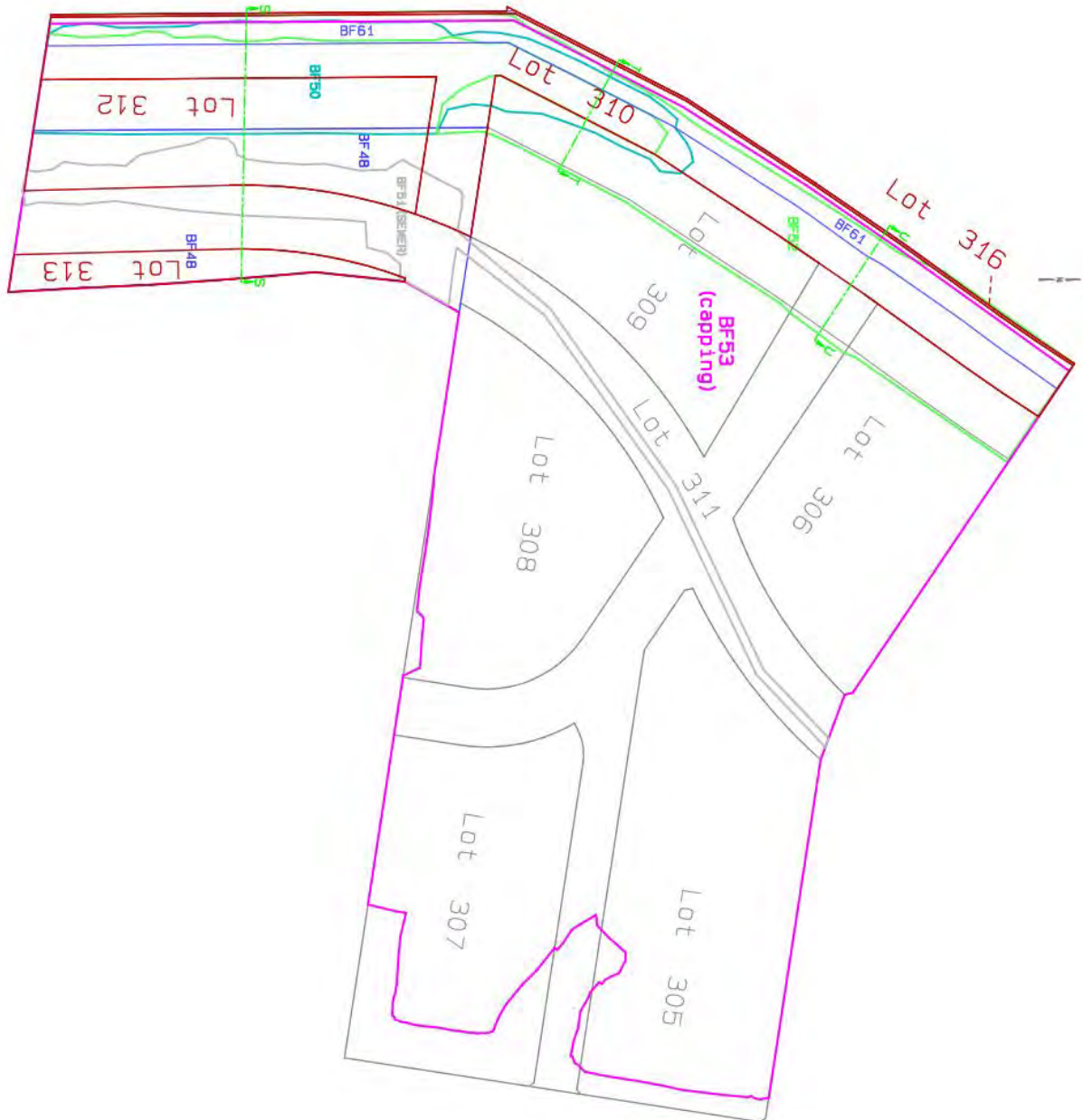


Figure 2.2 Cross section U-U'

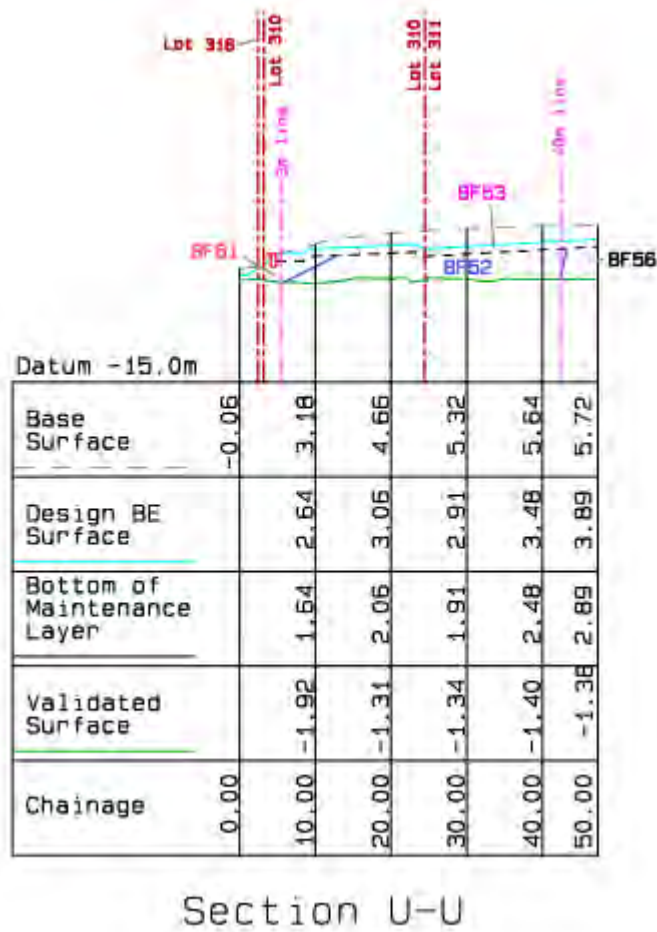


Figure 2.3 Cross section T-T'

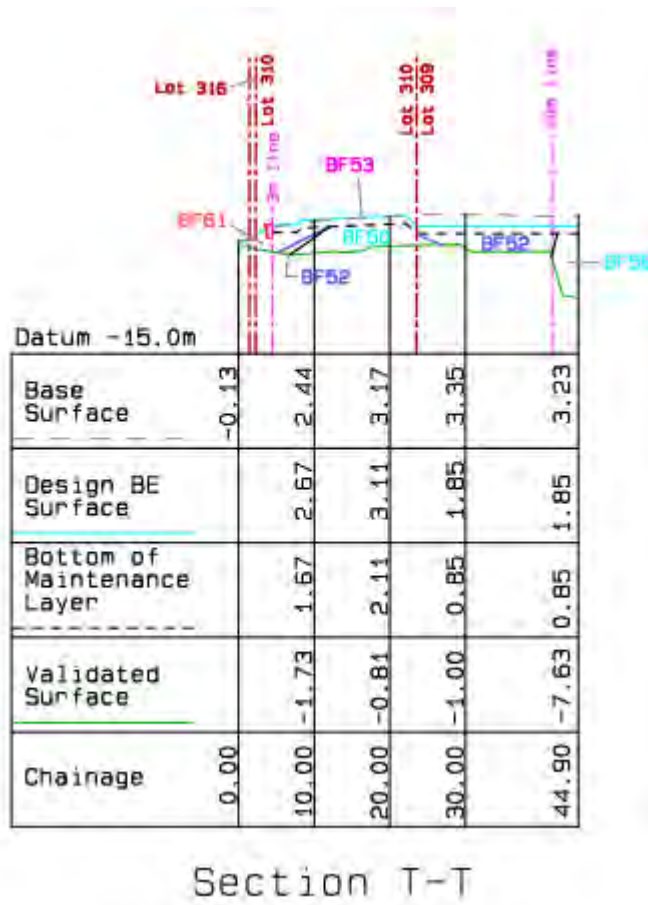
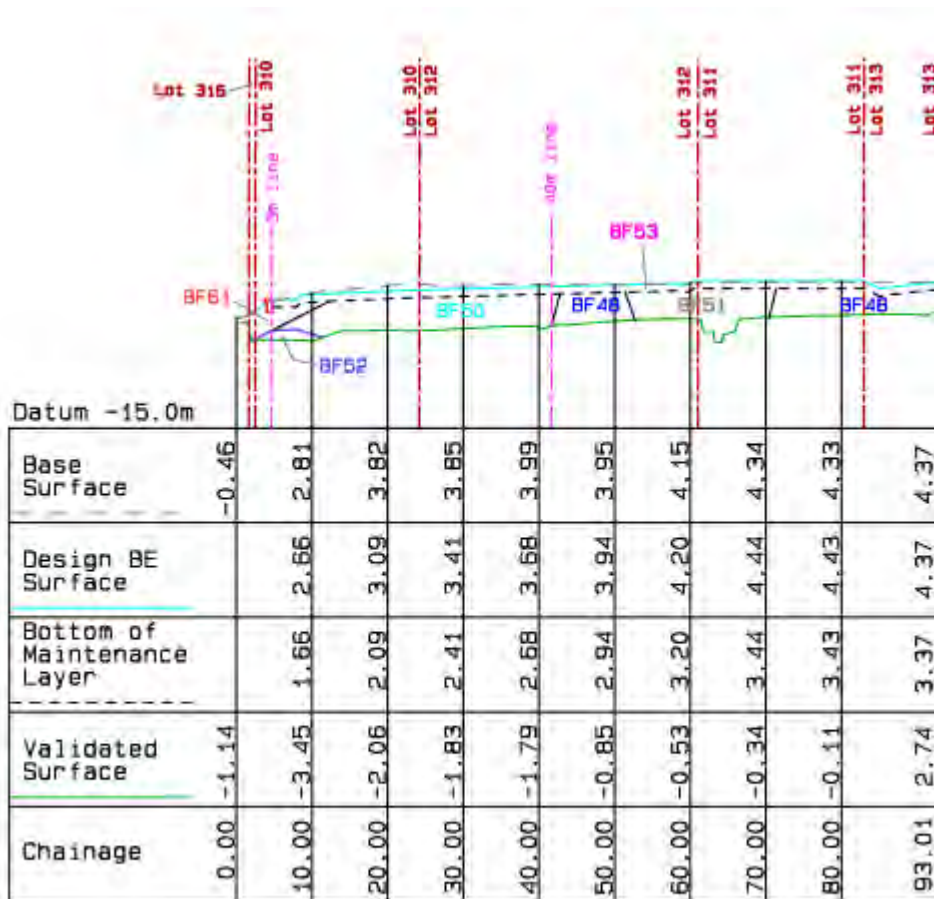


Figure 2.4 Cross section S-S'



Section S-S'

**Figure 2.5 Subsurface Profiles for the Lots**

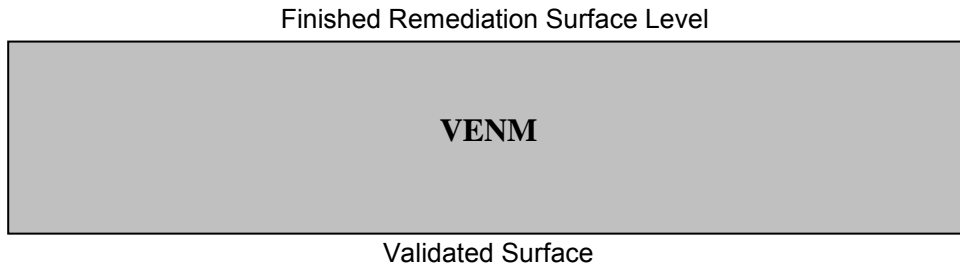


Figure 2.5 (a) Subsurface profile of Lot 310 and 316 – Less than 3m from Homebush Bay

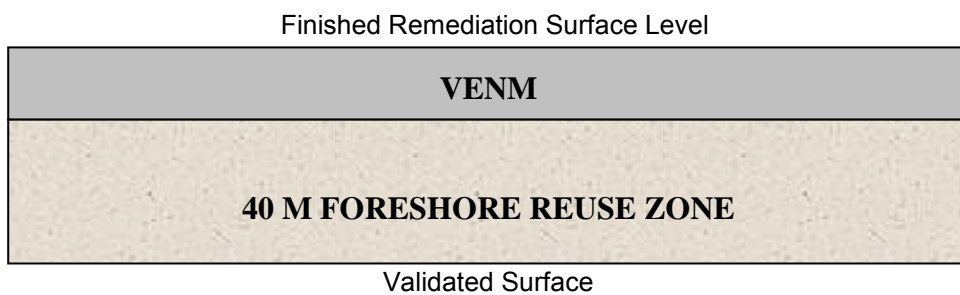


Figure 2.5 (b) Subsurface profile of Lot 310 and 312 – Between 3m & 40m from Homebush Bay

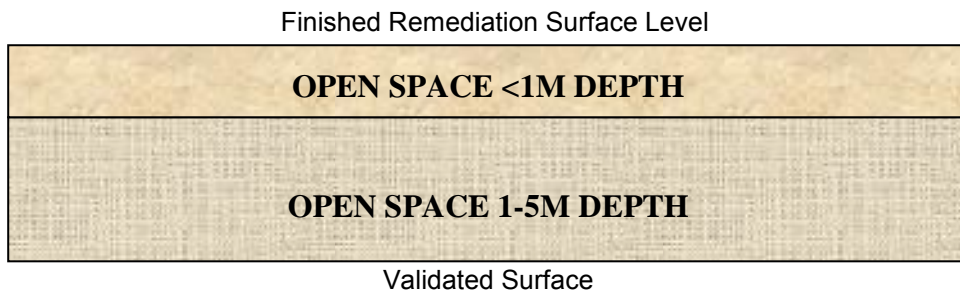
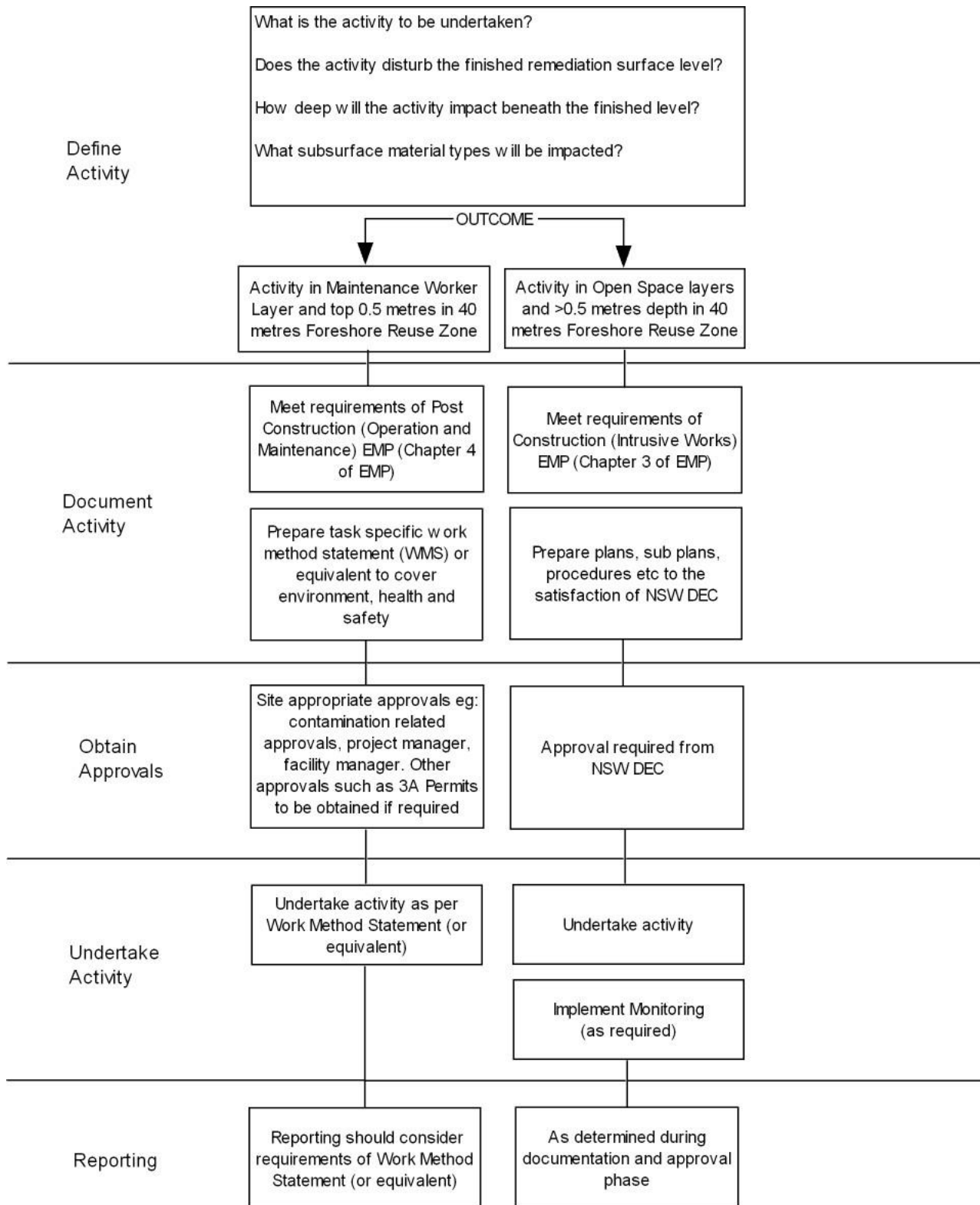


Figure 2.5 (c) Subsurface profile of Lot 310, 312 and 313 – Greater than 40m from Homebush Bay

Figure 2.6 Decision Making Process (DEC to OEH in figure)



**Appendix A Background**

## Background

The Lednez site is located at 40 Walker Street, Rhodes NSW, and comprises Lot 10 in Deposited Plan 1007931 in the Canada Bay Local Government Area, Parish of Concord, County of Cumberland ("the site"). The site location is shown on Appendix A - Figure 1.1 - Site Locality. Lots forms a part of the Lednez site.

The site is zoned for residential and commercial uses under the State Regional Environmental Plan No 29 (SREP 29) and occupies an area of approximately 10.5ha.

The Lednez site is bound to the south by local roads and newly developed residential buildings. Homebush Bay lies to the west of the site and the active Main Northern Railway line runs parallel to Walker Street which is adjacent to the eastern boundary.

On the northern boundary is the former Allied Feeds site (owned by Meriton Apartments at the time of writing), and to be redeveloped for residential purposes. To the far south-west, across the Bay, is the former Olympics 2000 site. Outside the immediate area, mixed commercial, light industrial and residential uses predominate.

The site has a history of chemical manufacturing beginning in 1928 and ending in 1986. The original owner was Timbrol Limited, a small Australian company, which established a wood preservation plant in 1928 utilising waste coal tar oils from the Australian Gaslight Company's operations at Mortlake.

In 1957, Timbrol Limited, merged with Union Carbide to form Union Carbide Australia Limited, which was 60% owned by Union Carbide Corporation of the United States and the remainder by various Australian entities. The chemical manufacturing operations continued on the site, which was progressively enlarged by reclamation of the bay. Significant quantities of process by-products were utilised in land reclamation operations, resulting in the site being contaminated with a range of chemicals.

Partial remediation of the site was undertaken targeted to a residential land use standard from 1988 to 1993.

These works involved excavating selected areas, primarily within the original site

(before reclamation), of fill and solid debris (construction materials), to shale bedrock and encapsulating these materials over the reclaimed parts on site, including Lots.

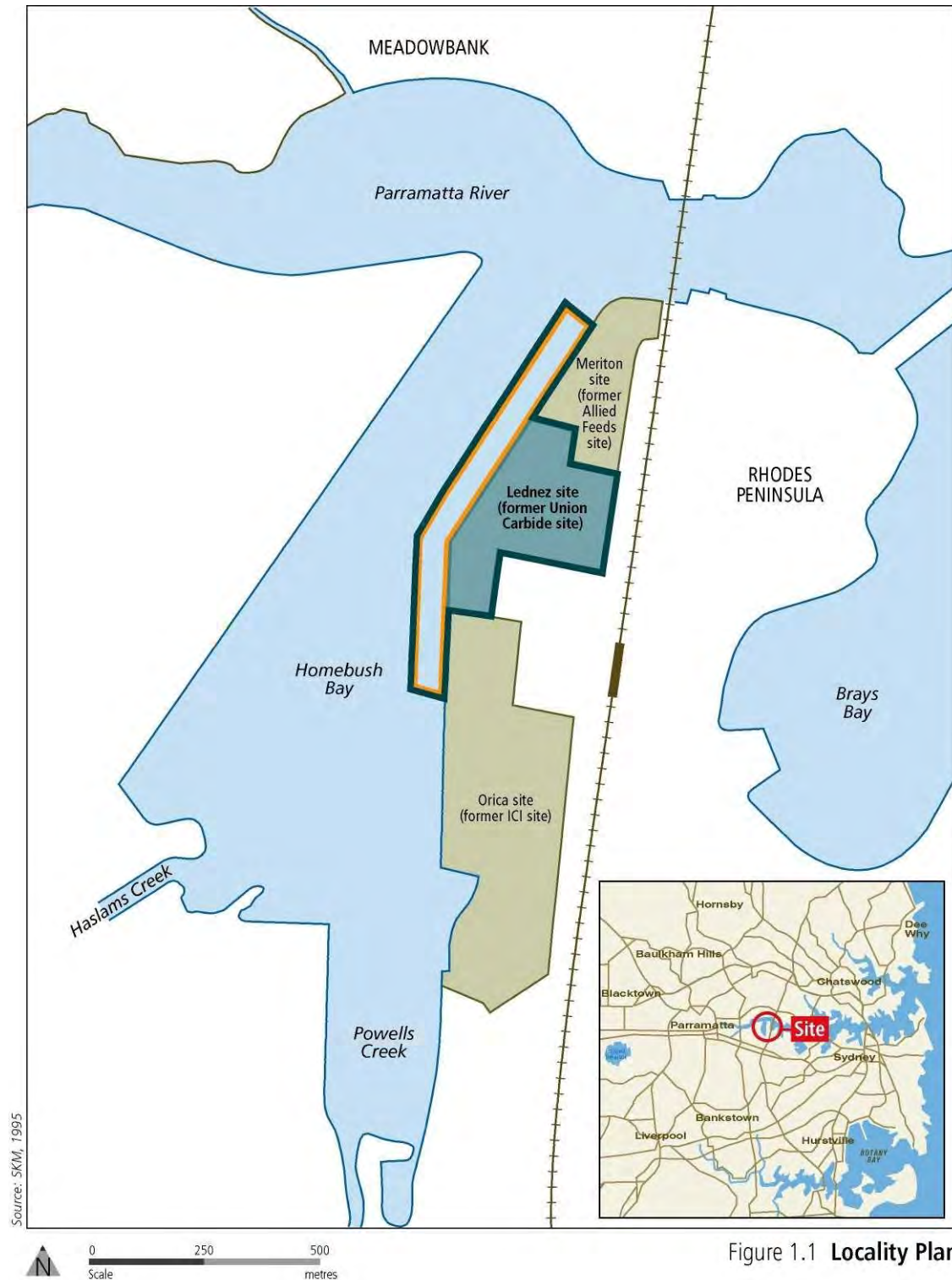


Figure 1.1 Locality Plan

- EIS proposal boundary
- Lednez site boundary
- Area of Homebush Bay to be remediated

In 2001 Thiess Services (Thiess) were engaged by NSW Maritime (formerly Waterways Authority) and Renewing Homebush Bay Pty Ltd (a joint venture of Multiplex Constructions Pty Ltd and Trafalgar Corporate Pty Ltd) (RHB) to remediate the Lednez site, and part of the bed of Homebush Bay.

Development consent for the project was granted by the Minister for Infrastructure and Planning in May 2004 and the staged remediation commenced in May 2005.

### **Remediation activities**

As part of remediation establishment activities, a licensed demolition subcontractor was commissioned to undertake the site demolition works and to remove asbestos material contained in above ground structures on the site. The works associated with demolition included removal of:

- The former Lednez offices (a two- and three-storey building that faced Walker Street); and
- The partial demolition of the former Glad factory which encroached on the southern part of the site.

During the remediation process, the contaminated soils (materials with contaminant concentrations greater than the site remediation criteria) were excavated and stockpiled to enable classification. Following classification, suitable materials (materials with contaminant concentrations less than or equal to the site remediation criteria) were used as backfill to reinstate excavations in open space areas, future residential areas, under roadways, or as capping materials.

### **Remediation Criteria by Land Use**

A site-specific risk-based assessment, which considered both human health and environmental aspects, was utilised to derive soil remediation criteria for the site. The criteria are applicable only to the intended redevelopment of the site, and have been approved by the EPA and an EPA accredited Site Auditor. The soil remediation criteria for lots are presented in **Appendix C**.

**Appendix B Statutory Requirements**

Environmental management of activities at the site must comply with all relevant NSW environmental legislation including Acts, regulations, environmental planning instruments, and any relevant guidelines.

The Environmental Management Plan has been prepared having regard to the applicable provisions of the Contaminated Land Management Act, in particular the requirements of the Guidelines for the NSW Site Auditor Scheme (2nd Edition) 2006 made by OEH under the Contaminated Land Management Act 1997.

According to the NSW Site Auditor Guidelines (2006) the environmental management plan should address the integration of environmental mitigation and monitoring measures for soil and groundwater throughout an existing or proposed land use.

An environmental management plan should also succinctly describe the nature and location of contamination remaining on-site. It should state what the objectives of the plan are; define how contaminants will be managed; identify who will be responsible for the plan's implementation; and nominate over what time frame actions specified in the plan will take place.

An EMP must be a stand-alone document with enough detail and clarity in the description of the site and the actions required to be readily understood.

The Guidelines state that:

- The EMP must have been reviewed by the Site Auditor.
- The EMP can reasonably be made to be legally enforceable, for example because compliance with it is a requirement of a notice under the CLM Act or of development consent conditions issued by the relevant planning authority.
- There will be appropriate public notification of any restrictions applying to the land to ensure that potential purchasers or other interested individuals are aware of the restrictions, for example appropriate notations on a planning certificate issued under section 149(2) of the Environmental Planning and Assessment Act 1979 or a covenant registered on the title to land under section 88B of the Conveyancing Act 1919.

- There is no off-site migration of contamination from the site which is the subject of the site audit or, where there is off-site migration or its potential, that contamination within the site is managed or monitored so that it does not present an unacceptable risk to either the on-site or off-site environments.

**Appendix C      Soil Remediation Criteria for Lots 310, 312, 313 and 316**

Analyte	Unit	2J	2A	2B	2D	2E
<b>Metals</b>						
Arsenic	mg/kg	200	200	200	10	200
Beryllium	mg/kg	40	40	40	N/A	40
Cadmium	mg/kg	40	40	40	2	40
Chromium (total)	mg/kg	200	200	200	10	200
Copper	mg/kg	2000	2000	2000	1000	2000
Cyanides (complex)	mg/kg	1000	1000	1000	N/A	1000
Lead	mg/kg	600	600	600	10	600
Manganese	mg/kg	3000	3000	3000	N/A	3000
Mercury (inorganic)	mg/kg	30	30	30	0.4	30
Nickel	mg/kg	600	600	600	4	600
Zinc	mg/kg	14 000	14000	14000	7000	14 000
<b>BTEX</b>						
Benzene	mg/kg	1	1	1	<0.5	1*
Toluene	mg/kg	130	130	130	<2	130*
Ethylbenzene	mg/kg	50	0.2	1.8	<0.1	0.2*
Xylene (totals)	mg/kg	25	5.79	57.9	<2	5.79*
<b>Chlorobenzenes</b>						
Chlorobenzene	mg/kg	150	150	150	<0.5	1
1,3-Dichlorobenzene	mg/kg	13	13	13	<2	7.2
1,4-Dichlorobenzene	mg/kg	11.9	11.9	236	<1	1.7
1,2-Dichlorobenzene	mg/kg	370	370	370	<2	4.5
1,2,4-Trichlorobenzene	mg/kg	650	650	650	<2	3.6
1,2,3,5- & 1,2,4,5-Tetrachlorobenzene	mg/kg	18	18	18	<0.5	0.51
1,2,3,4-Tetrachlorobenzene	mg/kg	12	160	1130	<0.5	0.29
Pentachlorobenzene	mg/kg	49	49	49	<4	0.24
Hexachlorobenzene	mg/kg	2.9	7.6	274	<0.1	0.02
<b>Organochlorine Pesticides</b>						
Hexachlorobutadiene	mg/kg	0.063	0.57	1.1	<0.05	0.0019
a-BHC	mg/kg	3030	497	>100 000	<5	497*
g-BHC	mg/kg	2170	188	>100 000	<5	0.0014
b-BHC	mg/kg	1100	38	>100 000	<5	38*
Heptachlor+Heptachlor epoxide	mg/kg	20	20	20	<5	0.0013
Aldrin & Dieldrin (sum)	mg/kg	20	20	20	<5	0.019
Chlordane	mg/kg	100	100	100	<0.05	0.0052
Endosulfan	mg/kg	370	370	370	<0.05	0.013
DDE	mg/kg	400 (sum)	400(sum)	400(sum)	<0.05	0.0046
DDD	mg/kg				<0.2	0.004
DDT	mg/kg				<1	0.0053
Endrin	mg/kg	18	18	18	<5	0.0051
Methoxychlor	mg/kg	310	310	310	<5	0.01

Analyte	Unit	Reuse Criteria				
		2J	2A	2B	2D	2E
<b>Phenols and Chlorophenols</b>						
Phenol	mg/kg	17 000	17000	17 000	<0.5	6.9
2-Chlorophenol	mg/kg	63	1.7	17	<0.5	9.4
2-Methylphenol	mg/kg	3100	3100	3100	<5	3100*
3-&4-Methylphenol	mg/kg	310	310	310	<5	310*
2,4-Dimethylphenol	mg/kg	1200	1200	1200	<5	0.089
2,4-Dichlorophenol	mg/kg	N/A	N/A	N/A	<0.1	5.3
2,4,6-Trichlorophenol	mg/kg	154	154	154	<10	0.22
2,4,5-Trichlorophenol	mg/kg	6100	6100	6100	<10	0.29
2,3,4,6-Tetrachlorophenol	mg/kg	1800	1800	1800	<10	1.2
Pentachlorophenol	mg/kg	6300	180	>100 000	<5	4.5
<b>Polycyclic Aromatic Hydrocarbons</b>						
Naphthalene	mg/kg	0.88	2.3	99.8	<0.2	7.8
Acenaphthene	mg/kg	3700	3700	3700	<5	3700*
Fluorene	mg/kg	2600	2600	2600	<5	2600*
Anthracene	mg/kg	22 000	22000	22000	<0.2	0.5
Fluoranthene	mg/kg	1000	1000	1000	<5	6
Phenanthrene	mg/kg	N/A	N/A	N/A	<0.2	2.5
Pyrene	mg/kg	2300	2300	2300	<5	2300*
All as Benzo(a)pyrene- TEQ	mg/kg	1500	1.4	>100 000	<1	9.4
<b>Amines</b>						
Aniline	mg/kg	3.3	29	270	<2	3
Pyridine	mg/kg	61	3.15	31.7	<1	3.15*
<b>Nitrosamines</b>						
Mono-Nitrobenzene	mg/kg	20	20	20	<0.2	0.5
<b>Ketones</b>						
MEK	mg/kg	7300	260	2600	<5	260*
<b>Phthalates</b>						
Butyl benzyl phthalate	mg/kg	12 000	12 000	12 000	<5	12 000*
Di-n-butyl phthalate	mg/kg	6100	6100	6100	<5	6100*
Diethyl phthalate	mg/kg	49 000	49 000	49 000	<5	49 000*
PCBs	mg/kg	20	20	20	<5	20*
<b>Phenoxy Acid Herbicides</b>						
2,4-D	mg/kg	690	690	690	<2	690*
2,4,5-T	mg/kg	610	610	610	<2	610*
<b>Others</b>						
Ammonia	mg/kg	25	25	250	<20	25*
<b>Dioxins</b>						
WHO-TEQ (0.5 x LOR)	pg/g	160	85	16 000	N/A	1000

**Appendix D      Maximum and Average Concentrations in Placed Soils**

**Concentrations in Placed Soil Materials in Lots 310, 312, 313 & 316**
**Open Space 1 - 5m depth (2B)**

<b>Contaminant</b>	<b>Units</b>	<b>Max</b>	<b>Average</b>
<b>Total Metals</b>			
Arsenic	mg/kg	22.00	12.83
Beryllium	mg/kg	2.00	1.07
Cadmium	mg/kg	2.00	1.10
Chromium	mg/kg	187	64.34
Copper	mg/kg	265	104.55
Lead	mg/kg	319	123.69
Manganese	mg/kg	1300	520.62
Nickel	mg/kg	198	45.97
Zinc	mg/kg	2230	575.89
Mercury	mg/kg	3.70	0.50
<b>Organochlorine Pesticides</b>			
Hexachlorobutadiene	mg/kg	0.05	0.05
a-BHC	mg/kg	5.00	5.00
g-BHC	mg/kg	5.00	5.00
b-BHC	mg/kg	5.00	5.00
Heptachlor + Heptachlor epoxide	mg/kg	5.00	5.00
Aldrin + Dieldrin (sum)	mg/kg	5.00	5.00
Chlordane	mg/kg	5.00	5.00
Endosulfan	mg/kg	5.00	5.00
4,4'-DDE	mg/kg	0.60	0.07
4,4'-DDD	mg/kg	1.09	0.20
4,4'-DDT	mg/kg	1.00	0.87
Sum DDE/DDD/DDT	mg/kg	1.37	1.12
Endrin	mg/kg	5.00	5.00
Methoxychlor	mg/kg	5.00	5.00
<b>Halogenated Aromatic Compounds</b>			
Chlorobenzene	mg/kg	0.50	0.50
1,3-Dichlorobenzene	mg/kg	1.00	1.00
1,4-Dichlorobenzene	mg/kg	1.00	1.00
1,2-Dichlorobenzene	mg/kg	2.00	2.00
1,2,4-Trichlorobenzene	mg/kg	2.00	2.00
1,2,3,5- & 1,2,4,5-Tetrachlorobenzene	mg/kg	0.50	0.50
1,2,3,4-Tetrachlorobenzene	mg/kg	1.79	0.52
Pentachlorobenzene	mg/kg	4.00	4.00
Hexachlorobenzene	mg/kg	798.78	33.27
<b>Phenols &amp; Chlorophenols</b>			
Phenol	mg/kg	2.90	0.69

2-Chlorophenol	mg/kg	0.50	0.50
2-Methylphenol	mg/kg	5.00	5.00
3&4-Methylphenol	mg/kg	5.00	5.00
2.4-Dichlorophenol	mg/kg	0.10	0.10
2.4-Dimethylphenol	mg/kg	5.00	5.00
2.4.5-Trichlorophenol	mg/kg	10.00	10.00
2.4.6-Trichlorophenol	mg/kg	10.00	10.00
2.3.4.6-Tetrachlorophenol	mg/kg	10.00	10.00
Pentachlorophenol	mg/kg	5.00	5.00
<b>Poly-Aromatic Hydrocarbons</b>			
Naphthalene	mg/kg	0.42	0.22
Acenaphthene	mg/kg	5.00	5.00
Fluorene	mg/kg	5.00	5.00
Anthracene	mg/kg	0.20	0.20
Fluoranthene	mg/kg	5.00	5.00
Phenanthrene	mg/kg	0.20	0.20
Pyrene	mg/kg	5.00	5.00
All as Benzo(a)pyrene - TEQ	mg/kg	1.00	1.00
<b>BTEX</b>			
Benzene	mg/kg	1.20	0.61
Toluene	mg/kg	2.00	2.00
Ethylbenzene	mg/kg	0.10	0.10
Xylene	mg/kg	2.00	2.00
<b>Dioxins</b>			
WHO-TEQ (0.5 x LOR)	pg/g	3644.64	581.95
<b>Amines</b>			
Aniline	mg/kg	2.00	2.00
<b>Nitrosamines</b>			
Mono-nitrobenzene	mg/kg	0.20	0.20
<b>Phthalates</b>			
Butyl benzyl phthalate	mg/kg	5.00	5.00
Di-n-butyl phthalate	mg/kg	5.00	5.00
Diethyl phthalate	mg/kg	5.00	5.00
<b>Others</b>			
Total Cyanide	mg/kg	1.00	1.00

**NOTES**

Averages calculated using average values for each stockpile in backfill, weighted according to volume

**Concentrations in Placed Soil Materials in Lots 310, 312, 313 & 316**
**Virgin Excavated Natural Materials/  
Open Space 0-1m depth (2D/2A)**

<b>Contaminant</b>	<b>Units</b>	<b>Max</b>	<b>Average</b>
<b>Total Metals</b>			
Arsenic	mg/kg	16.00	7.83
Beryllium	mg/kg	2.20	1.41
Cadmium	mg/kg	1.00	1.00
Chromium	mg/kg	21	8.76
Copper	mg/kg	542	41.49
Lead	mg/kg	36	17.70
Manganese	mg/kg	2610	653.35
Nickel	mg/kg	51.62	19.02
Zinc	mg/kg	142	64.25
Mercury	mg/kg	0.10	0.10
<b>Organochlorine Pesticides</b>			
Hexachlorobutadiene	mg/kg	0.05	0.05
a-BHC	mg/kg	0.10	0.10
g-BHC	mg/kg	5.00	5.00
b-BHC	mg/kg	0.05	0.05
Heptachlor + Heptachlor epoxide	mg/kg	0.05	0.05
Aldrin + Dieldrin (sum)	mg/kg	0.05	0.05
Chlordane	mg/kg	0.05	0.05
Endosulfan	mg/kg	0.05	0.05
4,4'-DDE	mg/kg	1.23	0.16
4,4'-DDD	mg/kg	0.40	0.17
4,4'-DDT	mg/kg	0.20	0.20
Sum DDE/DDD/DDT	mg/kg	2.63	0.61
Endrin	mg/kg	0.05	0.05
Methoxychlor	mg/kg	0.05	0.05
<b>Halogenated Aromatic Compounds</b>			
Chlorobenzene	mg/kg	0.50	0.50
1,3-Dichlorobenzene	mg/kg	1.00	1.00
1,4-Dichlorobenzene	mg/kg	1.00	1.00
1,2-Dichlorobenzene	mg/kg	2.00	2.00
1,2,4-Trichlorobenzene	mg/kg	2.00	2.00
1,2,3,5- & 1,2,4,5-Tetrachlorobenzene	mg/kg	0.50	0.50
1,2,3,4-Tetrachlorobenzene	mg/kg	0.80	0.59
Pentachlorobenzene	mg/kg	4.00	4.00
Hexachlorobenzene	mg/kg	0.10	0.10
<b>Phenols &amp; Chlorophenols</b>			
Phenol	mg/kg	0.50	0.50
2-Chlorophenol	mg/kg	0.50	0.50

2-Methylphenol	mg/kg	5.00	5.00
3&4-Methylphenol	mg/kg	5.00	5.00
2.4-Dichlorophenol	mg/kg	0.10	0.10
2.4-Dimethylphenol	mg/kg	5.00	5.00
2.4.5-Trichlorophenol	mg/kg	10.00	10.00
2.4.6-Trichlorophenol	mg/kg	10.00	10.00
2.3.4.6-Tetrachlorophenol	mg/kg	10.00	10.00
Pentachlorophenol	mg/kg	5.00	5.00

**Poly-Aromatic Hydrocarbons**

Naphthalene	mg/kg	0.33	0.20
Acenaphthene	mg/kg	5.00	5.00
Fluorene	mg/kg	5.00	5.00
Anthracene	mg/kg	0.20	0.20
Fluoranthene	mg/kg	0.20	0.20
Phenanthrene	mg/kg	0.33	0.20
Pyrene	mg/kg	5.00	5.00
All as Benzo(a)pyrene - TEQ	mg/kg	1.00	1.00

**BTEX**

Benzene	mg/kg	0.50	0.50
Toluene	mg/kg	2.00	2.00
Ethylbenzene	mg/kg	0.20	0.10
Xylene	mg/kg	2.00	2.00

**Dioxins**

WHO-TEQ (0.5 x LOR)	pg/g	257.86	12.66
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**Amines**

Aniline	mg/kg	3.00	2.00
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**Nitrosamines**

Mono-nitrobenzene	mg/kg	1.20	0.20
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**Phthalates**

Butyl benzyl phthalate	mg/kg	5.00	5.00
Di-n-butyl phthalate	mg/kg	5.00	5.00
Diethyl phthalate	mg/kg	5.00	5.00

**Others**

Total Cyanide	mg/kg	1.00	1.00
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## NOTES

Averages calculated using average values for each stockpile in backfill, weighted according to volume

**Concentrations in Placed Soil Materials in Lots 310, 312, 313 & 316**
**40m Foreshore Reuse Zone (2E)**

<b>Contaminant</b>	<b>Units</b>	<b>Max</b>	<b>Average</b>
<b>Total Metals</b>			
Arsenic	mg/kg	29.00	8.93
Beryllium	mg/kg	4.00	1.22
Cadmium	mg/kg	1.00	1.00
Chromium	mg/kg	162	25.33
Copper	mg/kg	615	54.61
Lead	mg/kg	288	79.42
Manganese	mg/kg	2300	917.99
Nickel	mg/kg	122	26.56
Zinc	mg/kg	2400	241.67
Mercury	mg/kg	1.40	0.30
<b>Organochlorine Pesticides</b>			
Hexachlorobutadiene	mg/kg	0.05	0.05
a-BHC	mg/kg	5.00	5.00
g-BHC	mg/kg	0.10	0.10
b-BHC	mg/kg	5.00	5.00
Heptachlor + Heptachlor epoxide	mg/kg	0.05	0.05
Aldrin + Dieldrin (sum)	mg/kg	0.05	0.05
Chlordane	mg/kg	0.05	0.05
Endosulfan	mg/kg	0.05	0.05
4,4'-DDT	mg/kg	0.05	0.05
4,4'-DDE	mg/kg	0.05	0.05
4,4'-DDD	mg/kg	0.20	0.20
Sum DDE/DDD/DDT	mg/kg	ND	ND
Endrin	mg/kg	0.05	0.05
Methoxychlor	mg/kg	0.05	0.05
<b>Halogenated Aromatic Compounds</b>			
Chlorobenzene	mg/kg	0.50	0.50
1,3-Dichlorobenzene	mg/kg	1.00	1.00
1,4-Dichlorobenzene	mg/kg	1.00	1.00
1,2-Dichlorobenzene	mg/kg	2.00	2.00
1,2,4-Trichlorobenzene	mg/kg	2.00	2.00
1,2,3,5- & 1,2,4,5-Tetrachlorobenzene	mg/kg	0.50	0.50
1,2,3,4-Tetrachlorobenzene	mg/kg	0.97	0.52
Pentachlorobenzene	mg/kg	4.00	4.00
Hexachlorobenzene	mg/kg	0.10	0.05
<b>Phenols &amp; Chlorophenols</b>			
Phenol	mg/kg	1.97	0.60
2-Chlorophenol	mg/kg	0.50	0.50
2-Methylphenol	mg/kg	5.00	5.00
3&4-Methylphenol	mg/kg	5.00	5.00
2,4-Dichlorophenol	mg/kg	0.10	0.10
2,4-Dimethylphenol	mg/kg	5.00	5.00
2,4,5-Trichlorophenol	mg/kg	10.00	10.00
2,4,6-Trichlorophenol	mg/kg	10.00	10.00
2,3,4,6-Tetrachlorophenol	mg/kg	10.00	10.00
Pentachlorophenol	mg/kg	5.00	5.00

<b>Poly-Aromatic Hydrocarbons</b>			
Naphthalene	mg/kg	0.63	0.23
Acenaphthene	mg/kg	5.00	5.00
Fluorene	mg/kg	5.00	5.00
Phenanthrene	mg/kg	0.64	0.23
Anthracene	mg/kg	5.00	2.70
Fluoranthene	mg/kg	5.00	2.50
Pyrene	mg/kg	5.00	5.00
All as Benzo(a)pyrene - TEQ	mg/kg	1.00	1.00
<b>BTEX</b>			
Benzene	mg/kg	1.00	0.54
Toluene	mg/kg	2.00	2.00
Ethylbenzene	mg/kg	0.10	0.10
Xylene	mg/kg	2.00	2.00
<b>Dioxins</b>			
WHO-TEQ (0.5 x LOR)	pg/g	735.83	115.38
<b>Amines</b>			
Aniline	mg/kg	2.00	2.00
<b>Nitrosamines</b>			
Mono-nitrobenzene	mg/kg	0.20	0.20
<b>Phthalates</b>			
Butyl benzyl phthalate	mg/kg	5.00	5.00
Di-n-butyl phthalate	mg/kg	5.00	5.00
Diethyl phthalate	mg/kg	5.00	5.00
<b>Others</b>			
Total Cyanide	mg/kg	1.00	1.00

**NOTES**

Averages calculated using average values for each stockpile in backfill, weighted according to volume



# **APPENDIX C**

## **EPA notices**

**Environment Protection Authority****Declaration of remediation site****Section 21 of the Contaminated Land Management Act 1997**

The EPA declares the following land to be a remediation site under the Contaminated Land Management Act 1997 ("the Act"):

**1. Land to which this declaration applies ("the site")**

The bed of Homebush Bay adjacent to the Lednez Industries (Australia) Limited and BT Custodial Services Pty Limited premises, Walker Street, Rhodes, as delineated by the area encompassed by the outermost dotted line in the bay and the adjacent foreshore on the attached map, "Dioxin Contamination in Sediments of Homebush Bay (derived from Patterson Britton & Partners Pty Ltd)" (being that part of the bay adjacent to the following land parcels: Lot 1 DP 550155, Lot 1 DP 129390, Lot 1 DP 554438, Lot 1 DP 509736, Lot 2 DP 227163).

**2. Nature of the substance causing the contamination:**

Dioxin (in particular the most toxic congener, 2,3,7,8-tetrachlorodibenzo-p-dioxin (2,3,7,8-TCDD) but including other 2,3,7,8-containing congeners of dioxins and furans).

**3. Nature of the harm that the substance may cause:**

The EPA has considered the matters in s.9 of the Act and found that

- 2,3,7,8-TCDD would not be expected to occur naturally at this site or in the elevated concentrations found
- applicable guidance levels have been greatly exceeded
- dioxin is probably carcinogenic in humans
- dioxin is toxic, bioaccumulative and persistent in the environment
- changes to the approved use of the land around Homebush Bay increase the risk of exposure to humans
- contaminated sediments have the potential to migrate from the site

The EPA has found the site is contaminated with dioxin in such a way as to present a significant risk of harm to aquatic life in the vicinity of the site, and to humans consuming aquatic biota from the bay. There is a significant risk that:

- (a) Harm is being caused to estuarine organisms living in the sediments by direct exposure to the contaminated sediments.
- (b) Harm is being caused to larger estuarine organisms from inadvertent consumption of contaminated sediments whilst browsing for food.
- (c) Harm is being caused to larger estuarine organisms from consuming contaminated sediment-dwelling organisms.
- (d) Harm may be caused to humans from the increased risk associated with the consumption of contaminated estuarine organisms or through direct contact with sediment.

**4. Further action under the Act:**

The making of this declaration does not prevent the carrying out of a voluntary remediation of the site and any person may submit a voluntary remediation proposal for the site to the

EPA. If the proposal satisfies the requirements of s.26 of the Act, the EPA may agree not to issue a remediation order to the person or persons bringing the proposal.

#### **5. Submissions invited:**

The EPA advises that the public may make written submissions to the EPA on

- Whether the EPA should issue a remediation order in relation to the site or
- Any other matter concerning the site.

Submissions should be made in writing to

Manager Contaminated Sites  
Environment Protection Authority  
P.O. Box 1135  
Chatswood NSW 2057

or faxed to: 02 9325 5788

by no later than 24 December 1998.

[signed]

**NEIL SHEPHERD**  
**Director-General**

**(signed Peter B. Yates)**

.....  
**PETER YATES**  
**Director Special Operations Projects(by delegation)**

Date: 1-12-1998

#### **NOTE:**

##### **Remediation order may follow**

If remediation of the site or part of the site is required, the EPA may issue a remediation order under s.23 of the Act.

##### **Variation/Revocation**

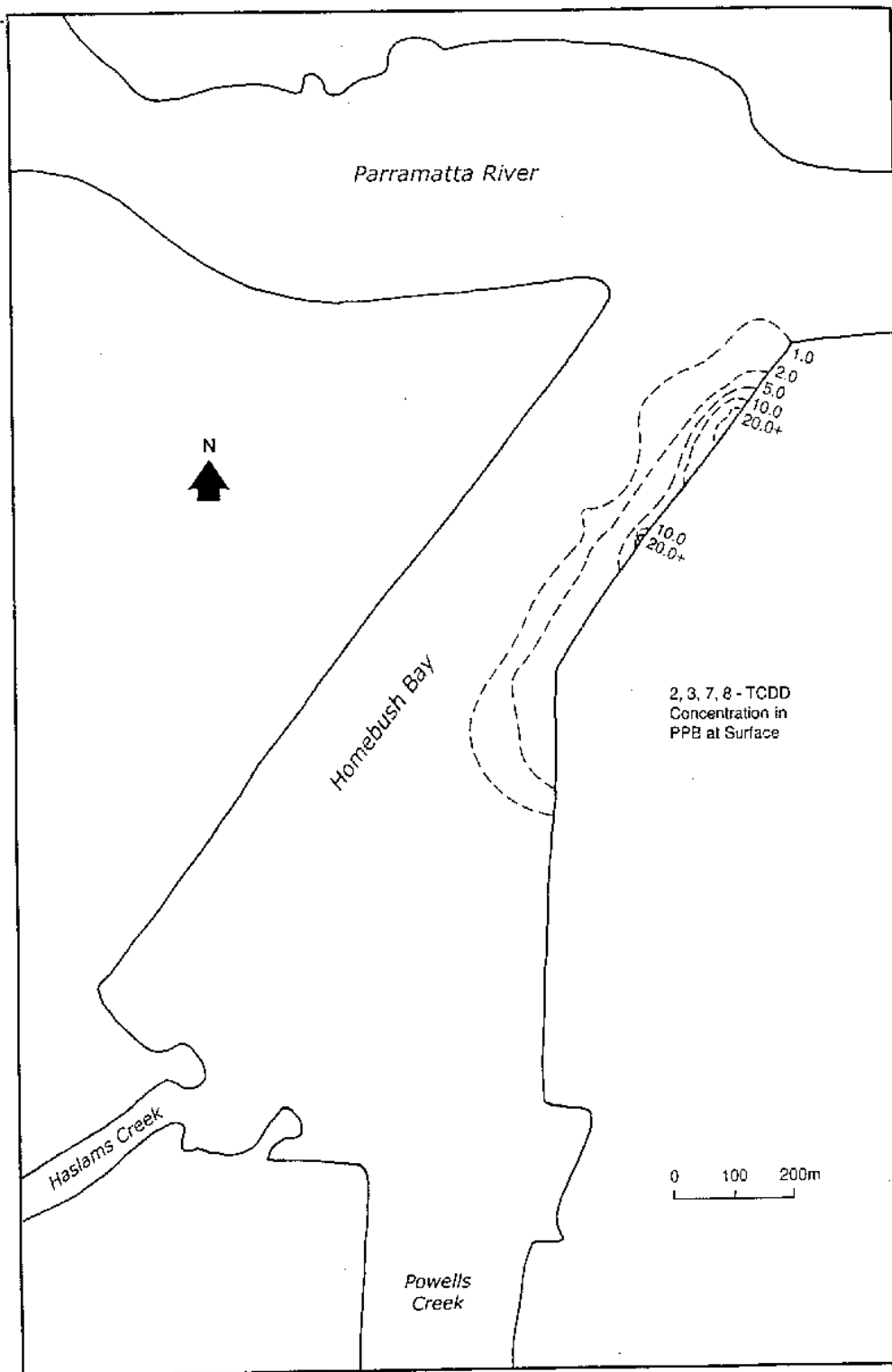
This declaration remains in force until it is otherwise varied or revoked. A declaration may only be revoked when the EPA does not have reasonable grounds to believe that land is contaminated in such a way as to present a significant risk of harm (s.44 of the Act).

##### **Information recorded by EPA**

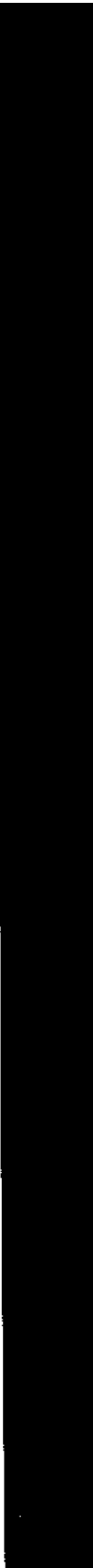
Section 58 of the Act requires the EPA to maintain a public record including current and former declarations.

##### **Information recorded by councils**

Section 59 of the Act requires the EPA to give a copy of this declaration to the relevant local council. The council is then required to note on any certificate issued pursuant to s.149(2) of the Environmental Planning and Assessment Act in relation to the site that the land is currently within an area covered by a declaration issued under the Act. The EPA is required to notify council as soon as practicable when the declaration is no longer in force. The local council is then no longer required to make the notation on the s.149(2) certificate.



Dioxin Contamination in Sediments of Homebush Bay (derived from Patterson Britton & Partners)



Our Reference : CH2020/15 Notice No. 28016
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## ENVIRONMENT PROTECTION AUTHORITY (EPA)

### MAINTENANCE OF REMEDIATION NOTICE

### SECTION 28 CONTAMINATED LAND MANAGEMENT ACT 1997

*Service: By Registered Mail to Place of Business*

**To: Marine Ministerial Holding Corporation  
c/- Marine Assets Division  
Waterways Authority  
James Craig Road  
ROZELLE BAY NSW 2039**

**Date: 14.01.2000**

The Marine Ministerial Holding Corporation (the "recipient") must maintain remediation action in accordance with the requirements set out in this Notice.

This Notice is issued under Section 28 of the *Contaminated Land Management Act 1997* ("CLM Act").

Previous notices have been issued under the *Environmentally Hazardous Chemicals Act* ("EHC Act") as detailed below:

Notice # 101, issued on 20 March 1987, under s.35 of the EHC Act  
Notice # 104, issued on 26 June 1987, under s.35 of the EHC Act  
Notice # 113, issued on 11 August 1988, under s.35 of the EHC Act  
Notice # 114, issued on 19 August 1988, under s.35 of the EHC Act  
Notice # 117, issued on 28 October 1988, under s.35 of the EHC Act  
Notice # 134, issued on 8 May 1989, under s.35 of the EHC Act  
Notice # 141, issued on 28 August 1989, under s.35 of the EHC Act  
Notice # 146, issued on 6 November 1989, under s.35 of the EHC Act  
Notice # 150, issued on 21 December 1989, under s.35 of the EHC Act  
Notice # 152, issued on 29 December 1989, under s.35 of the EHC Act  
Notice # 153, issued on 11 January 1990, under s.35 of the EHC Act  
Notice # 158, issued on 7 February 1990, under s.35 of the EHC Act  
Notice # 159, issued on 19 February 1990, under s.35 of the EHC Act  
Notice # 162, issued on 5 March 1990, under s.35 of the EHC Act  
Notice # 177, issued on 17 July 1990, under s.35 of the EHC Act  
Notice # 240, issued on 19 August 1987, under s.35 of the EHC Act  
Notice # 241, issued on 22 August 1989, under s.35 of the EHC Act  
Notice # 247, issued on 10 May 1991, under s.35 of the EHC Act  
Notice # 255, issued on 20 May 1991, under s.35 of the EHC Act  
Notice # 271, issued on 20 August 1991, under s.35 of the EHC Act  
Notice # 276, issued on 28 October 1991, under s.35 of the EHC Act  
Notice # 280, issued on 26 November 1991, under s.35 of the EHC Act  
Notice # 291, issued on 6 March 1992, under s.35 of the EHC Act  
Notice # 315, issued on 25 October 1992, under s.35 of the EHC Act  
Notice # 322, issued on 23 July 1992, under s.35 of the EHC Act  
Notice # 348, issued on 7 September 1993, under s.35 of the EHC Act  
Notice # 377, issued on 9 March 1994, under s.35 of the EHC Act  
Notice # 500, issued on 29 August 1989, under s.35 of the EHC Act  
Notice #28010, issued on 26 August 1998, under the CLM Act.

#### **1. Land to which this Notice applies ("the land")**

The premises located at Walker Street, Rhodes, NSW 2138, and currently occupied by the recipient.

Premises references: Lot 10 in DP1007931

## **2. Commencement of maintenance of remediation**

This Notice takes effect on the date shown on page 1 of the Notice and continues in force until it is otherwise varied or revoked.

## **3. Maintenance requirements**

The EPA requires the recipient to maintain the following remediation action in relation to the land:

- a) The occupier of the land is to implement the program for the continued long-term monitoring of the Landscape and Carparking Area that was submitted to the EPA as a requirement of a s.35 Notice under the Environmentally Hazardous Chemicals Act 1985 (Notice number 377, dated 9 March 1994).

## **4. Notification of change of owner/occupier**

At least 30 days prior to the recipient selling, transferring, leasing or otherwise relinquishing responsibility for the land, the recipient should give written notification to the EPA confirming the name of the prospective owner or occupier.

*(signed 14.01.2000)*

**P B YATES**  
**Director - Special Operations Projects**  
**Environment Protection Authority**  
(by Delegation)

### **NOTE:**

#### **Breaches of this Notice**

A person who fails to comply with a legal notice issued under Section 28 of the Act is guilty of an offence. Heavy penalties may be imposed where a person fails to comply with directions given in a notice issued under Section 28 of the Act.

#### **Information recorded by EPA**

Section 58 of the Contaminated Land Management Act 1997 and Clause 6 of the Contaminated Land Management Regulation 1998 requires the EPA to maintain a public record. A copy of this Notice will be included in the public record.

Note: On 13 May 2010 the EPA issued a notice to amend ongoing maintenance order (No. [20104403](#)) to amend this notice. As amended, this notice no longer applies to Lot 102 in DP1101827 and Lot 204 in DP1101828.

On 9 November 2010 the EPA issued a notice to amend ongoing maintenance order (No. [20104407](#)) to amend this notice. As amended, this notice no longer applies to Lot 103 in DP1101827.

This notice is still in force as it applies to the other parcels of land listed in this notice.

Lot 204 DP1101828 and Lot 103 DP1101827 continue to be regulated by the EPA under notice Nos. [20102801](#) and [20102803](#), respectively. A public positive covenant under the Conveyancing Act 1919 has been placed on Lot 102 DP1101827.

## Environment Protection Authority NSW

# Maintenance of remediation notice

### Section 28 of the Contaminated Land Management Act 1997

#### REGISTERED MAIL

Thiess Services Pty Ltd (ABN 69 010 725 247)  
43 Fourth Avenue  
BLACKTOWN NSW 2148

Attention: [Name Withheld]  
Senior Project Manager

Notice Number: 28016A  
Area # 3064  
Date: 7 August 2008

This notice is issued under section 28 of the Contaminated Land Management Act 1997 ("the Act").

Thiess Services Pty Ltd ("the recipient"), the occupier of the land to which the notice applies, must maintain remediation action on the land which it occupies in accordance with the requirements set out in this notice.

### **1. Background**

A notice under section 28 of the Act was issued on 14 January 2000 (Notice No. 28016) to the current owner of the land to which this notice applies. The notice requires the owner of the land to implement a program for the continual long-term monitoring of the containment area within which contaminated materials have been consolidated, capped and contained on the land.

The Environment Protection Authority ("EPA") has been notified that some parts of the land have been remediated and that further remediation is occurring on the land. The containment area has been opened up and the contaminated material removed. The most contaminated material will be decontaminated by means of a thermal treatment process. The less contaminated material has been re-located on other parts of the land in accordance with the proposed uses of the sub-divided land.

Environmental Management Plans (EMPs) have been prepared for the areas that have been remediated and validated to be suitable for their intended redevelopment. These remediated areas, however, also contain the untreated but less contaminated material being placed at depth on these areas. The primary objective of the EMPs is to manage environmental issues that may arise on these remediated areas during the construction phase of these areas.

The EPA anticipates that before the completion of the site construction, revised environmental management plans will be developed to reflect the passive long term requirements and obligations for the residential occupation of the developed land. The revised EMP will be submitted to the EPA for review and for its inclusion under a positive covenant attached to each of the developed areas.

## 2. Land to which this notice applies (“the land”)

This notice applies to the following parcels of land (located at Walker Street Rhodes, NSW 2138):

### DP1101827

Lot 98 Owner- RHB Stage 2 Lessor Pty Ltd – ACN 113 526 024  
Lot 99 Owner- RHB Stage 2 Lessor Pty Ltd – ACN 113 526 024  
Lot 101 Owner- RHB Stage 8 Lessor Pty Ltd – ACN 113 526 168  
Lot 102 Owner- Village Quay Site 1A Pty Ltd – ACN 113 525 983  
Lot 103 Owner- RHB Stage 2 Lessor Pty Ltd – ACN 113 526 024

### DP1101828

Lot 202 Owner- RHB Stage 4 Lessor Pty Ltd – ACN 113 526 088  
Lot 203 Owner- RHB Stage 4 Lessor Pty Ltd – ACN 113 526 088  
Lot 204 Owner- RHB Stage 4 Lessor Pty Ltd – ACN 113 526 088

## 3. Commencement of maintenance of remediation

This notice takes effect from the date of this notice and continues in force while the recipient is the owner or the occupier of the land.

## 4. Maintenance requirements

The EPA requires the recipient to implement the following respective EMPs:

- “*Environmental Management Plan, Proposed Lots 98, 99 and 101, DP 1101827, 40 Walker Street, Rhodes NSW, 23 February 2007, Version No. 1*” by Thiess Services Pty Ltd;
- “*Environmental Management Plan, Proposed Lot 102 and Part Lot 101, DP 1101827, 40 Walker Street, Rhodes NSW, 20 February 2007, Version No. 0*” by Thiess Services Pty Ltd;
- “*Environmental Management Plan, Proposed Lot 103, DP 1101827, 40 Walker Street, Rhodes NSW, 19 February 2007, Version No. 2*” by Thiess Services Pty Ltd;
- *Environmental Management Plan, Lots 202 & 203, DP 1101828, 40 Walker Street, Rhodes NSW, 20 August 2007, Version No. 0*” by Thiess Services Pty Ltd; and
- *Environmental Management Plan, Lot 204, DP 1101828, 40 Walker Street, Rhodes NSW, 20 August 2007, Version No. 0*” by Thiess Services Pty Ltd.

## 5. Notification of change of owner/occupier

At least 30 days prior to the recipient ceasing to be the owner or occupier of the land the recipient must give written notification to the EPA of the name and contact details of the prospective owner or occupier, as appropriate.

[Signed]

**JOHN COFFEY**  
**A/Manager Contaminated Sites**  
**Department of Environment and Climate Change**

### NOTE:

#### Breaches of this Notice

A person who fails to comply with a notice issued under section 28 of the Act is guilty of an offence. Heavy penalties may be imposed where a person fails to comply with directions given in a notice issued under section 28 of the Act.

#### Information recorded by the EPA

Section 58 of the Contaminated Land Management Act 1997 and clause 6 of the Contaminated Land Regulation requires the EPA to maintain a public record. A copy of this notice will be included in the public record.

Note: On 13 May 2010 the EPA issued a notice to amend ongoing maintenance order (No. [20104403](#)) to amend this notice. As amended, this notice no longer applies to Lot 102 in DP1101827 and Lot 204 in DP1101828.

On 9 November 2010 the EPA issued a notice to amend ongoing maintenance order (No. [20104407](#)) to amend this notice. As amended, this notice no longer applies to Lot 103 in DP1101827.

This notice is still in force as it applies to the other parcels of land listed in this notice.

Lot 204 DP1101828 and Lot 103 DP1101827 continue to be regulated by the EPA under notice Nos. [20102801](#) and [20102803](#), respectively. A public positive covenant under the Conveyancing Act 1919 has been placed on Lot 102 DP1101827.

## Environment Protection Authority NSW

# Maintenance of remediation notice

### Section 28 of the Contaminated Land Management Act 1997

#### REGISTERED MAIL

Renewing Homebush Bay Pty Ltd (ACN 098 914 633)  
1 Kent Street  
MILLERS POINT NSW 2000

Attention: [Name Withheld]  
Project Director

Notice Number: 28016B  
Area # 3064  
Date: 7 August 2008

This notice is issued under section 28 of the Contaminated Land Management Act 1997 ("the Act").

Renewing Homebush Bay Pty Ltd ("the recipient"), one of the owners of the land to which the notice applies, must maintain remediation action on the land which it owns in accordance with the requirements set out in this notice.

### **1. Background**

A notice under section 28 of the Act was issued on 14 January 2000 (Notice No. 28016) to the current owner of the land to which this notice applies. The notice requires the owner of the land to implement a program for the continual long-term monitoring of the containment area within which contaminated materials have been consolidated, capped and contained on the land.

The Environment Protection Authority ("EPA") has been notified that some parts of the land have been remediated and that further remediation is occurring on the land. The containment area has been opened up and the contaminated material removed. The most contaminated material will be decontaminated by means of a thermal treatment process. The less contaminated material has been re-located on other parts of the land in accordance with the proposed uses of the sub-divided land.

Environmental Management Plans (EMPs) have been prepared for the areas that have been remediated and validated to be suitable for their intended redevelopment. These remediated areas, however, also contain the untreated but less contaminated material being placed at depth on these areas. The primary objective of the EMPs is to manage environmental issues that may arise on these remediated areas during the construction phase of these areas.

The EPA anticipates that before the completion of the site construction, revised environmental management plans will be developed to reflect the passive long term requirements and obligations for

the residential occupation of the developed land. The revised EMP will be submitted to the EPA for review and for its inclusion under a positive covenant attached to each of the developed areas.

## 2. Land to which this notice applies (“the land”)

This notice applies to the following parcels of land (located at Walker Street Rhodes, NSW 2138):

### DP1101827

Lot 98	Owner- RHB Stage 2 Lessor Pty Ltd – ACN 113 526 024
Lot 99	Owner- RHB Stage 2 Lessor Pty Ltd – ACN 113 526 024
Lot 101	Owner- RHB Stage 8 Lessor Pty Ltd – ACN 113 526 168
Lot 102	Owner- Village Quay Site 1A Pty Ltd – ACN 113 525 983
Lot 103	Owner- RHB Stage 2 Lessor Pty Ltd – ACN 113 526 024

### DP1101828

Lot 202	Owner- RHB Stage 4 Lessor Pty Ltd – ACN 113 526 088
Lot 203	Owner- RHB Stage 4 Lessor Pty Ltd – ACN 113 526 088
Lot 204	Owner- RHB Stage 4 Lessor Pty Ltd – ACN 113 526 088

## 3. Commencement of maintenance of remediation

This notice takes effect from the date of this notice and continues in force while the recipient is the owner or the occupier of the land.

## 4. Maintenance requirements

The EPA requires the recipient to implement the following respective EMPs:

- “*Environmental Management Plan, Proposed Lots 98, 99 and 101, DP 1101827, 40 Walker Street, Rhodes NSW, 23 February 2007, Version No. 1*” by Thiess Services Pty Ltd;
- “*Environmental Management Plan, Proposed Lot 102 and Part Lot 101, DP 1101827, 40 Walker Street, Rhodes NSW, 20 February 2007, Version No. 0*” by Thiess Services Pty Ltd;
- “*Environmental Management Plan, Proposed Lot 103, DP 1101827, 40 Walker Street, Rhodes NSW, 19 February 2007, Version No. 2*” by Thiess Services Pty Ltd;
- *Environmental Management Plan, Lots 202 & 203, DP 1101828, 40 Walker Street, Rhodes NSW, 20 August 2007, Version No. 0* by Thiess Services Pty Ltd; and
- *Environmental Management Plan, Lot 204, DP 1101828, 40 Walker Street, Rhodes NSW, 20 August 2007, Version No. 0* by Thiess Services Pty Ltd.

## 5. Notification of change of owner/occupier

At least 30 days prior to the recipient ceasing to be the owner or occupier of the land the recipient must give written notification to the EPA of the name and contact details of the prospective owner or occupier, as appropriate.

[Signed]

**JOHN COFFEY**  
**A/Manager Contaminated Sites**  
**Department of Environment and Climate Change**

**NOTE:**

**Breaches of this Notice**

A person who fails to comply with a notice issued under section 28 of the Act is guilty of an offence. Heavy penalties may be imposed where a person fails to comply with directions given in a notice issued under section 28 of the Act.

**Information recorded by the EPA**

Section 58 of the Contaminated Land Management Act 1997 and clause 6 of the Contaminated Land Regulation requires the EPA to maintain a public record. A copy of this notice will be included in the public record.

Note: On 13 May 2010 the EPA issued a notice to amend ongoing maintenance order (No. [20104403](#)) to amend this notice. As amended, this notice no longer applies to Lot 102 in DP1101827 and Lot 204 in DP1101828.

On 9 November 2010 the EPA issued a notice to amend ongoing maintenance order (No. [20104407](#)) to amend this notice. As amended, this notice no longer applies to Lot 103 in DP1101827.

This notice is still in force as it applies to the other parcels of land listed in this notice.

Lot 204 DP1101828 and Lot 103 DP1101827 continue to be regulated by the EPA under notice Nos. [20102801](#) and [20102803](#), respectively. A public positive covenant under the Conveyancing Act 1919 has been placed on Lot 102 DP1101827.

## Environment Protection Authority NSW

# Maintenance of remediation notice

### Section 28 of the Contaminated Land Management Act 1997

#### REGISTERED MAIL

Village Quay Site 1A Pty Ltd (ACN 113 525 983)  
5 Bay Drive  
MEADOWBANK NSW 2114

Attention: The Proper Officer

Notice Number: 28016C

Area # 3064

Date: 7 August 2008

This notice is issued under section 28 of the Contaminated Land Management Act 1997 ("the Act").

Village Quay Pty Ltd ("the recipient"), one of the owners of the land to which the notice applies, must maintain remediation action on the land which it owns in accordance with the requirements set out in this notice.

### **1. Background**

A notice under section 28 of the Act was issued on 14 January 2000 (Notice No. 28016) to the current owner of the land to which this notice applies. The notice requires the owner of the land to implement a program for the continual long-term monitoring of the containment area within which contaminated materials have been consolidated, capped and contained on the land.

The Environment Protection Authority ("EPA") has been notified that some parts of the land have been remediated and that further remediation is occurring on the land. The containment area has been opened up and the contaminated material removed. The most contaminated material will be decontaminated by means of a thermal treatment process. The less contaminated material has been re-located on other parts of the land in accordance with the proposed uses of the sub-divided land.

Environmental Management Plans (EMPs) have been prepared for the areas that have been remediated and validated to be suitable for their intended redevelopment. These remediated areas, however, also contain the untreated but less contaminated material being placed at depth on these areas. The primary objective of the EMPs is to manage environmental issues that may arise on these remediated areas during the construction phase of these areas.

The EPA anticipates that before the completion of the site construction, revised environmental management plans will be developed to reflect the passive long term requirements and obligations for the residential occupation of the developed land. The revised EMP will be submitted to the EPA for review and for its inclusion under a positive covenant attached to each of the developed areas.

## 2. Land to which this notice applies (“the land”)

This notice applies to the following parcels of land (located at Walker Street Rhodes, NSW 2138):

### DP1101827

Lot 98 Owner- RHB Stage 2 Lessor Pty Ltd – ACN 113 526 024  
Lot 99 Owner- RHB Stage 2 Lessor Pty Ltd – ACN 113 526 024  
Lot 101 Owner- RHB Stage 8 Lessor Pty Ltd – ACN 113 526 168  
Lot 102 Owner- Village Quay Site 1A Pty Ltd – ACN 113 525 983  
Lot 103 Owner- RHB Stage 2 Lessor Pty Ltd – ACN 113 526 024

### DP1101828

Lot 202 Owner- RHB Stage 4 Lessor Pty Ltd – ACN 113 526 088  
Lot 203 Owner- RHB Stage 4 Lessor Pty Ltd – ACN 113 526 088  
Lot 204 Owner- RHB Stage 4 Lessor Pty Ltd – ACN 113 526 088

## 3. Commencement of maintenance of remediation

This notice takes effect from the date of this notice and continues in force while the recipient is the owner or the occupier of the land.

## 4. Maintenance requirements

The EPA requires the recipient to implement the following respective EMPs:

- “*Environmental Management Plan, Proposed Lots 98, 99 and 101, DP 1101827, 40 Walker Street, Rhodes NSW, 23 February 2007, Version No. 1*” by Thiess Services Pty Ltd;
- “*Environmental Management Plan, Proposed Lot 102 and Part Lot 101, DP 1101827, 40 Walker Street, Rhodes NSW, 20 February 2007, Version No. 0*” by Thiess Services Pty Ltd;
- “*Environmental Management Plan, Proposed Lot 103, DP 1101827, 40 Walker Street, Rhodes NSW, 19 February 2007, Version No. 2*” by Thiess Services Pty Ltd;
- *Environmental Management Plan, Lots 202 & 203, DP 1101828, 40 Walker Street, Rhodes NSW, 20 August 2007, Version No. 0* by Thiess Services Pty Ltd; and
- *Environmental Management Plan, Lot 204, DP 1101828, 40 Walker Street, Rhodes NSW, 20 August 2007, Version No. 0* by Thiess Services Pty Ltd.

## 5. Notification of change of owner/occupier

At least 30 days prior to the recipient ceasing to be the owner or occupier of the land the recipient must give written notification to the EPA of the name and contact details of the prospective owner or occupier, as appropriate.

[Signed]

**JOHN COFFEY**  
**A/Manager Contaminated Sites**  
**Department of Environment and Climate Change**

### NOTE:

#### Breaches of this Notice

A person who fails to comply with a notice issued under section 28 of the Act is guilty of an offence. Heavy penalties may be imposed where a person fails to comply with directions given in a notice issued under section 28 of the Act.

#### Information recorded by the EPA

Section 58 of the Contaminated Land Management Act 1997 and clause 6 of the Contaminated Land Regulation requires the EPA to maintain a public record. A copy of this notice will be included in the

public record.

At Golder Associates we strive to be the most respected global company providing consulting, design, and construction services in earth, environment, and related areas of energy. Employee owned since our formation in 1960, our focus, unique culture and operating environment offer opportunities and the freedom to excel, which attracts the leading specialists in our fields. Golder professionals take the time to build an understanding of client needs and of the specific environments in which they operate. We continue to expand our technical capabilities and have experienced steady growth with employees who operate from offices located throughout Africa, Asia, Australasia, Europe, North America, and South America.

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