A. Appendix A. Summary of QA/QC Data (Duplicates, Triplicates and Field Blanks) 2002 – 2004.

Table A-1. Summary of duplicate water samples collected in 2002.

Grace Harbour July 24, 2002	Total Kjeldahl N	Total N	Total Organic N	Ammonia N	Nitrate N Dissolved	Nitrate + Nitrite	Nitrite N	Enterococci (MPN/100g)	Fecal Coliform (MPN/100mL)
Duplicate 1	0.15	0.15	0.15	0.005	0.002	0.002	0.002	2	33
Duplicate 2	0.16	0.16	0.16	0.005	0.002	0.002	0.002	2	130
Difference	0.01	0.01	0.01	0	0	0	0	0	97
Average	0.155	0.155	0.155	0.005	0.002	0.002	0.002	2	81.5
Relative % mean difference	6.45%	6.45%	6.45%	0.00%	0.00%	0.00%	0.00%	0.00%	119.02%

*All units mg/L unless otherwise stated.

Grace Harbour July 26, 2002	Total Kjeldahl N	Total N	Total Organic N	Ammonia N	Nitrate N Dissolved	Nitrate + Nitrite	Nitrite N	Enterococci (MPN/100g)	Fecal Coliform (MPN/100mL)
Duplicate 1	0.17	0.18	0.17	0.005	0.002	0.002	0.002	2	46
Duplicate 2	0.16	0.16	0.16	0.005	0.002	0.002	0.002	2	130
Difference	0.01	0.02	0.01	0	0	0	0	0	84
Average	0.165	0.17	0.165	0.005	0.002	0.002	0.002	2	88
Relative % mean difference	6.06%	11.76%	6.06%	0.00%	0.00%	0.00%	0.00%	0.00%	95.45%

*All units mg/L unless otherwise stated.

Grace Harbour July 30, 2002	Total Kjeldahl N	Total N	Total Organic N	Ammonia N	Nitrate N Dissolved	Nitrate + Nitrite	Nitrite N	Ortho-P	P Total
Duplicate 1	0.17	0.17	0.17	0.005	0.002	0.002	0.002	0.007	0.026
Duplicate 2	0.2	0.2	0.2	0.005	0.002	0.002	0.002	0.009	0.026
Difference	0.03	0.03	0.03	0	0	0	0	0.002	0
Average	0.185	0.185	0.185	0.005	0.002	0.002	0.002	0.008	0.026
Relative % mean difference	16.22%	16.22%	16.22%	0.00%	0.00%	0.00%	0.00%	25.00%	0.00%

*All units mg/L unless otherwise stated.

Penrose Bay July 16, 2002	Total Kjeldahl N	Total N	Total Organic N	Ammonia N	Nitrate N Dissolved	Nitrate + Nitrite	Nitrite N	Enterococci (MPN/100g)	Fecal Coliform (MPN/100mL)
Duplicate 1	0.15	0.15	0.15	0.005	0.002	0.002	0.002	2	4
Duplicate 2	0.14	0.14	0.14	0.005	0.002	0.002	0.002	2	8
Difference	0.01	0.01	0.01	0	0	0	0	0	4
Average	0.145	0.145	0.145	0.005	0.002	0.002	0.002	2	6
Relative % mean difference	6.90%	6.90%	6.90%	0.00%	0.00%	0.00%	0.00%	0.00%	66.67%

*All units mg/L unless otherwise stated.

Table A-2. Summary of field blanks collected in 2002.

	16-Jul-02	24-Jul-02	26-Jul-02	30-Jul-02
Residue Fixed Non-filterable		<1		<1
Residue Non-filterable (TSS)		<4		<4
Residue Volume Non-filterable		<4		<4
Total Kjeldahl N	<0.02	<0.02	<0.02	<0.02
Total N	<0.02	<0.02	<0.02	<0.02
Total Organic N	<0.1	<0.1	<0.1	<0.1
Ammonia N	<0.005	<0.005	<0.005	<0.005
Nitrate N Dissolved	<0.002	<0.002	<0.002	<0.002
Nitrate + Nitrite	<0.002	<0.002	<0.002	<0.002
Nitrite N	<0.002	<0.002	<0.002	<0.002
Ortho-P		<0.001		0.004
P Total		<0.002		0.019
Enterococci (MPN/100g)	<2	<2	<2	<2
Fecal Coliform (MPN/100mL)	<2	<2	<2	<2

*All units mg/L unless otherwise stated.

Table A-3. Summary of duplicate water samples collected in 2003.

Grace Harbour July 8, 2003	Non-filterable residue (fixed)	Non-filterable residue (TSS)	Non-filterable residue (volume)	Total Kjeldahl N	Total N	Total Organic N	Ammonia N	Nitrate N Dissolved	Nitrate + Nitrite	Nitrite N	Ortho-P	P Total	Fecal Coliform (MPN/100mL)
Duplicate 1	4	7	3	0.18	0.19	0.16	0.021	0.002	0.004	0.003	0.023	0.036	33
Duplicate 2	5	8	3	0.24	0.24	0.22	0.018	0.002	0.006	0.002	0.018	0.038	110
Difference	1	1	0	0.06	0.05	0.06	0.003	0	0.002	0.001	0.005	0.002	77
Average	4.5	7.5	3	0.21	0.215	0.19	0.0195	0.002	0.005	0.0025	0.0205	0.037	71.5
Relative % mean difference	22.22%	13.33%	0.00%	28.57%	23.26%	31.58%	15.38%	0.00%	40.00%	40.00%	24.39%	5.41%	107.69%

*all units mg/L unless otherwise stated

Grace Harbour July 16, 2003	Non-filterable residue (fixed)	Non-filterable residue (TSS)	Non-filterable residue (volume)	Total Kjeldahl N	Total N	Total Organic N	Ammonia N	Nitrate N Dissolved	Nitrate + Nitrite	Nitrite N	Ortho-P	P Total	Fecal Coliform (MPN/100mL)
Duplicate 1	5	8	3	0.20	0.19	0.20	0.005	0.002	0.002	0.002	0.014	0.048	2
Duplicate 2	2	4	2	0.21	0.21	0.21	0.005	0.002	0.002	0.002	0.013	0.049	2
Difference	3	4	1	0.01	0.02	0.01	0	0	0	0	0.001	0.001	0
Average	3.5	6	2.5	0.205	0.2	0.205	0.005	0.002	0.002	0.002	0.0135	0.0485	2
Relative % mean difference	85.71%	66.67%	40.00%	4.88%	10.00%	4.88%	0.00%	0.00%	0.00%	0.00%	7.41%	2.06%	0.00%

*all units mg/L unless otherwise stated

Table A3 (Continued)

Grace Harbour July 15, 2003	Duplicate 1	Duplicate 2	Difference	Average	Relative % mean difference
Residue Fixed Non-filterable	6	6	0	6	0.00%
Residue Non-filterable (TSS)	9	9	0	9	0.00%
Residue Volume Non-filterable	3	3	0	3	0.00%
Total Kjeldahl N	0.17	0.18	0.01	0.175	5.71%
Total N	0.17	0.18	0.01	0.175	5.71%
Total Organic N	0.16	0.17	0.01	0.165	6.06%
Ammonia N	0.011	0.006	0.005	0.0085	58.82%
Nitrate N Dissolved	0.002	0.002	0	0.002	0.00%
Nitrate + Nitrite	0.007	0.002	0.005	0.0045	111.11%
Nitrite N	0.002	0.002	0	0.002	0.00%
Ortho-P	0.018	0.016	0.002	0.017	11.76%
P Total	0.034	0.037	0.003	0.0355	8.45%
Fecal Coliform (MPN/100mL)	2	2	0	2	0.00%
Arsenic	0.3	0.3	0	0.3	0.00%
Cadmium	0.1	0.1	0	0.1	0.00%
Chromium	0.5	0.5	0	0.5	0.00%
Cobalt	0.1	0.1	0	0.1	0.00%
Copper	0.3	0.3	0	0.3	0.00%
Iron	3	4	1	3.5	28.57%
Lead	0.1	0.1	0	0.1	0.00%
Manganese	1	1	0	1	0.00%
Nickel	0.5	0.5	0	0.5	0.00%
Zinc	2	1	1	1.5	66.67%

*all units mg/L unless otherwise stated

Table A-4. Summary of replicate sediment samples collected in 2003.

Wootton Bay July 9, 2003	Rep-1	Rep-2	Rep-3	Difference	Average	Relative % standard deviation
Moisture (%W/W)	31.4	31.8	29.4	2.4	30.6	7.84%
% Gravel >2.00 mm	0.17	0.05	0.01	0.04	0.03	133.33%
% Sand 2.00mm > 0.063mm	86.84	87.75	89.14	1.39	88.445	1.57%
% Silt 0.063mm > 0.004mm	9.73	9.18	7.85	1.33	8.515	15.62%
% Clay 0.004 mm	3.26	3.01	3.00	0.01	3.005	0.33%
Inorganic Carbon-Total	760	1300	570	730	935	78.07%
Organic Carbon-Total	5700	6000	6900	900	6450	13.95%
Carbon-Total	6500	7300	7500	200	7400	2.70%
Fecal coliform (MPN/g)	2	2	2	0	2	0.00%
Aluminum	4890	4910	4930	20	4920	0.41%
Antimony	0.2	0.1	0.1	0	0.1	0.00%
Arsenic	4.8	4.0	3.9	0.1	3.95	2.53%
Barium	9.5	10.3	9.6	0.7	9.95	7.04%
Beryllium	0.1	0.1	0.1	0	0.1	0.00%
Bismuth	0.1	0.1	0.1	0	0.1	0.00%
Cadmium	1.75	1.52	1.51	0.01	1.515	0.66%
Calcium	3650	3850	3900	50	3875	1.29%
Chromium	4.7	4.1	4.6	0.5	4.35	11.49%
Cobalt	1.5	1.6	1.5	0.1	1.55	6.45%
Copper	9.4	8.0	8.0	0	8	0.00%
Iron	4160	4080	3940	140	4010	3.49%
Lead	1.6	1.4	1.4	0	1.4	0.00%
Magnesium	2330	2400	2130	270	2265	11.92%
Manganese	66.7	75.4	69.3	6.1	72.35	8.43%
Molybdenum	1.2	1.0	0.9	0.1	0.95	10.53%
Nickel	3.8	3.6	3.6	0	3.6	0.00%
Phosphorus	583	589	579	10	584	1.71%
Potassium	800	787	690	97	738.5	13.13%
Selenium	0.7	0.6	0.6	0	0.6	0.00%
Silver	0.05	0.05	0.05	0	0.05	0.00%
Sodium	6790	5690	4560	1130	5125	22.05%
Strontium	27.9	28.9	25.5	3.4	27.2	12.50%
Tellurium	0.1	0.1	0.1	0	0.1	0.00%
Thallium	0.26	0.31	0.23	0.08	0.27	29.63%
Tin	0.1	0.1	0.1	0	0.1	0.00%
Titanium	139	149	144	5	146.5	3.41%
Vanadium	11	10	10	0	10	0.00%
Zinc	22.2	19.6	18.1	1.5	18.85	7.96%
Zirconium	0.5	0.5	0.5	0	0.5	0.00%
bis(2-Ethylhexyl) phthalate (DEHP)	4	4	4	0	4	0.00%
Butyl benzyl phthalate (BBP)	0.2	0.2	0.2	0	0.2	0.00%
Diethyl phthalate (DEP)	0.18	0.18	0.18	0	0.18	0.00%
Dimethyl phthalate (DMP)	0.14	0.14	0.14	0	0.14	0.00%
Dibutyl phthalate (DBP)	0.14	0.14	0.14	0	0.14	0.00%
Di-n-octyl-phthalate (DnOP)	0.2	0.2	0.2	0	0.2	0.00%
Acenaphthene	0.01	0.01	0.01	0	0.01	0.00%
Acenaphthylene	0.01	0.01	0.01	0	0.01	0.00%

*all units µg/g unless otherwise stated

Table A-4 (continued)

Wootton Bay July 9, 2003	Rep-1	Rep-2	Rep-3	Difference	Average	Relative % standard deviation
Anthracene	0.01	0.01	0.01	0	0.01	0.00%
Benzo(a)anthracene	0.01	0.01	0.01	0	0.01	0.00%
Benzo(b+j)fluoranthene	0.01	0.01	0.01	0	0.01	0.00%
Benzo(k)fluoranthene	0.01	0.01	0.01	0	0.01	0.00%
Benzo(g,h,i)perylene	0.02	0.02	0.02	0	0.02	0.00%
Benzo(a)pyrene	0.01	0.01	0.01	0	0.01	0.00%
Chrysene	0.01	0.01	0.01	0	0.01	0.00%
Dibenzo(a,h)anthracene	0.02	0.02	0.02	0	0.02	0.00%
Fluoranthene	0.01	0.01	0.01	0	0.01	0.00%
Fluorene	0.01	0.01	0.01	0	0.01	0.00%
Indeno(1,2,3-c,d)pyrene	0.02	0.02	0.02	0	0.02	0.00%
Naphthalene	0.02	0.01	0.01	0	0.01	0.00%
Phenanthrene	0.01	0.01	0.01	0	0.01	0.00%
Pyrene	0.01	0.01	0.01	0	0.01	0.00%
Total PAH's	0.02	0.01	0.01	0	0.01	0.00%
Total Low MW PAH's	0.02	0.01	0.01	0	0.01	0.00%
Total High MW PAH's	0.01	0.01	0.01	0	0.01	0.00%

*all units µg/g unless otherwise stated

Table A-4 (continued)

Okeover Central July 9, 2003	Rep-1	Rep-2	Rep-3	Difference	Average	Relative % standard deviation
Moisture (%W/W)	86.6	84.2	85.3	1.1	84.75	1.30%
% Gravel >2.00 mm	0.00	0.13	0.13	0	0.13	0.00%
% Sand 2.00mm > 0.063mm	1.66	1.21	1.06	0.15	1.135	13.22%
% Silt 0.063mm > 0.004mm	13.48	17.88	18.22	0.34	18.05	1.88%
% Clay 0.004 mm	84.87	80.78	80.59	0.19	80.685	0.24%
Inorganic Carbon-Total	3200	3100	1600	1500	2350	63.83%
Organic Carbon-Total	45000	58000	54000	4000	56000	7.14%
Carbon-Total	48000	61000	56000	5000	58500	8.55%
Fecal coliform (MPN/g)	2	2	2	0	2	0.00%
Aluminum	10400	11700	13000	1300	12350	10.53%
Antimony	0.1	0.3	0.3	0	0.3	0.00%
Arsenic	5.1	11.2	11.7	0.5	11.45	4.37%
Barium	31.9	43.7	49.3	5.6	46.5	12.04%
Beryllium	0.2	0.2	0.2	0	0.2	0.00%
Bismuth	0.1	0.1	0.1	0	0.1	0.00%
Cadmium	5.88	4.08	4.44	0.36	4.26	8.45%
Calcium	12900	5850	11700	5850	8775	66.67%
Chromium	15.8	18.6	19.2	0.6	18.9	3.17%
Cobalt	2.9	3.1	3.5	0.4	3.3	12.12%
Copper	35.6	44.2	48.6	4.4	46.4	9.48%
Iron	9870	11400	13000	1600	12200	13.11%
Lead	2.4	10.3	11.7	1.4	11	12.73%
Magnesium	10100	9180	10600	1420	9890	14.36%
Manganese	107	127	139	12	133	9.02%
Molybdenum	24.7	12.3	15.3	3	13.8	21.74%
Nickel	17.6	14.5	15.7	1.2	15.1	7.95%
Phosphorus	660	864	937	73	900.5	8.11%

*all units µg/g unless otherwise stated

Table A-4 (continued)

Okeover Central July 9, 2003	Rep-1	Rep-2	Rep-3	Difference	Average	Relative % standard deviation
Potassium	4320	3780	4260	480	4020	11.94%
Selenium	3.2	2.6	3.4	0.8	3	26.67%
Silver	0.34	0.51	0.56	0.05	0.535	9.35%
Sodium	63000	49800	58900	9100	54350	16.74%
Strontium	89.7	66.0	128	62	97	63.92%
Tellurium	0.1	0.1	0.1	0	0.1	0.00%
Thallium	0.43	0.37	0.37	0	0.37	0.00%
Tin	0.1	0.6	0.7	0.1	0.65	15.38%
Titanium	278	291	304	13	297.5	4.37%
Vanadium	36	32	34	2	33	6.06%
Zinc	45.5	90.6	99.0	8.4	94.8	8.86%
Zirconium	1.0	1.8	1.0	0.8	1.4	57.14%
bis(2-Ethylhexyl) phthalate (DEHP)	4	4	4	0	4	0.00%
Butyl benzyl phthalate (BBP)	0.2	0.2	0.2	0	0.2	0.00%
Diethyl phthalate (DEP)	0.18	0.18	0.18	0	0.18	0.00%
Dimethyl phthalate (DMP)	0.14	0.14	0.14	0	0.14	0.00%
Dibutyl phthalate (DBP)	0.14	0.14	0.14	0	0.14	0.00%
Di-n-octyl-phthalate (DnOP)	0.2	0.2	0.2	0	0.2	0.00%
Acenaphthene	0.01	0.01	0.01	0	0.01	0.00%
Acenaphthylene	0.01	0.01	0.01	0	0.01	0.00%
Anthracene	0.01	0.01	0.01	0	0.01	0.00%
Benzo(a)anthracene	0.01	0.01	0.01	0	0.01	0.00%
Benzo(b+j)fluoranthene	0.01	0.01	0.01	0	0.01	0.00%
Benzo(k)fluoranthene	0.01	0.01	0.01	0	0.01	0.00%
Benzo(g,h,i)perylene	0.02	0.02	0.02	0	0.02	0.00%
Benzo(a)pyrene	0.01	0.01	0.01	0	0.01	0.00%
Chrysene	0.01	0.01	0.01	0	0.01	0.00%
Dibenzo(a,h)anthracene	0.02	0.02	0.02	0	0.02	0.00%
Fluoranthene	0.01	0.01	0.01	0	0.01	0.00%
Fluorene	0.01	0.01	0.01	0	0.01	0.00%
Indeno(1,2,3-c,d)pyrene	0.02	0.02	0.02	0	0.02	0.00%
Naphthalene	0.01	0.07	0.11	0.04	0.09	44.44%
Phenanthrene	0.01	0.01	0.01	0	0.01	0.00%
Pyrene	0.01	0.01	0.01	0	0.01	0.00%
Total PAH's	0.01	0.07	0.11	0.04	0.09	44.44%
Total Low MW PAH's	0.01	0.07	0.11	0.04	0.09	44.44%
Total High MW PAH's	0.01	0.01	0.01	0	0.01	0.00%

*all units µg/g unless otherwise stated

Table A-4 (continued)

Grace Harbour July 9, 2003	Rep-1	Rep-2	Rep-3	Difference	Average	Relative % standard deviation
Moisture (%W/W)	33.8	31.5	24.2	7.3	27.85	26.21%
% Gravel >2.00 mm	0.06	0.02	0.01	0.01	0.015	66.67%
% Sand 2.00mm > 0.063mm	73.43	73.38	82.44	9.06	77.91	11.63%
% Silt 0.063mm > 0.004mm	19.78	20.78	13.00	7.78	16.89	46.06%
% Clay 0.004 mm	6.74	5.82	4.55	1.27	5.185	24.49%
Inorganic Carbon-Total	570	1300	950	350	1125	31.11%
Organic Carbon-Total	13000	8500	8300	200	8400	2.38%
Carbon-Total	14000	9800	9200	600	9500	6.32%
Fecal coliform (MPN/g)	2	2	2	0	2	0.00%
Aluminum	6140	6770	6130	640	6450	9.92%
Antimony	0.1	0.1	0.1	0	0.1	0.00%
Arsenic	2.8	3.1	2.7	0.4	2.9	13.79%
Barium	16.7	17.1	15.3	1.8	16.2	11.11%
Beryllium	0.1	0.1	0.1	0	0.1	0.00%
Bismuth	0.1	0.1	0.1	0	0.1	0.00%
Cadmium	0.94	1.10	0.94	0.16	1.02	15.69%
Calcium	5020	5050	4480	570	4765	11.96%
Chromium	4.9	5.7	4.3	1.4	5	28.00%
Cobalt	2.4	2.5	2.3	0.2	2.4	8.33%
Copper	11.6	11.9	9.3	2.6	10.6	24.53%
Iron	6390	6940	5600	1340	6270	21.37%
Lead	2.5	2.6	2.1	0.5	2.35	21.28%
Magnesium	2870	3170	2580	590	2875	20.52%
Manganese	94.3	103	90.3	12.7	96.65	13.14%
Molybdenum	0.6	0.8	0.7	0.1	0.75	13.33%
Nickel	4.9	5.2	4.5	0.7	4.85	14.43%
Phosphorus	674	717	547	170	632	26.90%
Potassium	1160	1180	973	207	1076.5	19.23%
Selenium	0.5	0.5	0.5	0	0.5	0.00%
Silver	0.08	0.08	0.07	0.01	0.075	13.33%
Sodium	5840	6310	3950	2360	5130	46.00%
Strontium	34.3	34.5	31.1	3.4	32.8	10.37%
Tellurium	0.1	0.1	0.1	0	0.1	0.00%
Thallium	0.28	0.28	0.29	0.01	0.285	3.51%
Tin	0.2	0.2	0.1	0.1	0.15	66.67%
Titanium	216	246	201	45	223.5	20.13%
Vanadium	15	18	15	3	16.5	18.18%
Zinc	27.3	29.2	24.3	4.9	26.75	18.32%
Zirconium	0.5	0.5	0.5	0	0.5	0.00%
Acenaphthene	0.01	0.01	0.01	0	0.01	0.00%
Acenaphthylene	0.01	0.01	0.01	0	0.01	0.00%
Anthracene	0.01	0.01	0.01	0	0.01	0.00%
Benzo(a)anthracene	0.01	0.01	0.01	0	0.01	0.00%
Benzo(b+j)fluoranthene	0.01	0.01	0.01	0	0.01	0.00%
Benzo(k)fluoranthene	0.01	0.01	0.01	0	0.01	0.00%
Benzo(g,h,i)perylene	0.02	0.02	0.02	0	0.02	0.00%
Benzo(a)pyrene	0.01	0.01	0.01	0	0.01	0.00%
Chrysene	0.01	0.01	0.01	0	0.01	0.00%
Dibenzo(a,h)anthracene	0.02	0.02	0.02	0	0.02	0.00%
Fluoranthene	0.01	0.01	0.01	0	0.01	0.00%

*all units µg/g unless otherwise stated

Table A-4 (continued)

Grace Harbour July 9, 2003	Rep-1	Rep-2	Rep-3	Difference	Average	Relative % standard deviation
Fluorene	0.01	0.01	0.01	0	0.01	0.00%
Indeno(1,2,3-c,d)pyrene	0.02	0.02	0.02	0	0.02	0.00%
Naphthalene	0.02	0.02	0.02	0	0.02	0.00%
Phenanthrene	0.01	0.01	0.01	0	0.01	0.00%
Pyrene	0.01	0.01	0.01	0	0.01	0.00%
Total PAH's	0.02	0.02	0.02	0	0.02	0.00%
Total Low MW PAH's	0.02	0.02	0.02	0	0.02	0.00%
Total High MW PAH's	0.01	0.01	0.01	0	0.01	0.00%

*all units µg/g unless otherwise stated

Table A-4 (continued)

Trevenen Bay July 9, 2003	Rep-1	Rep-2	Rep-3	Difference	Average	Relative % standard deviation
Moisture (%W/W)	24.7	25.6	21.3	4.3	23.45	18.34%
% Gravel >2.00 mm	0.48	20.75	0.38	20.37	10.565	192.81%
% Sand 2.00mm > 0.063mm	95.38	73.48	96.08	22.6	84.78	26.66%
% Silt 0.063mm > 0.004mm	2.46	3.56	2.09	1.47	2.825	52.04%
% Clay 0.004 mm	1.67	2.22	1.46	0.76	1.84	41.30%
Inorganic Carbon-Total	1100	5700	570	5130	3135	163.64%
Organic Carbon-Total	5300	15000	4200	10800	9600	112.50%
Carbon-Total	6400	21000	4800	16200	12900	125.58%
Fecal coliform (MPN/g)	2	2	2	0	2	0.00%
Aluminum	6570	5930	6620	690	6275	11.00%
Antimony	0.2	0.2	0.2	0	0.2	0.00%
Arsenic	2.9	5.9	3.0	2.9	4.45	65.17%
Barium	12.9	22.4	13.0	9.4	17.7	53.11%
Beryllium	0.1	0.1	0.1	0	0.1	0.00%
Bismuth	0.1	0.1	0.1	0	0.1	0.00%
Cadmium	0.28	0.34	0.30	0.04	0.32	12.50%
Calcium	10800	34000	6120	27880	20060	138.98%
Chromium	3.8	5.0	6.0	1	5.5	18.18%
Cobalt	3.2	2.9	2.9	0	2.9	0.00%
Copper	5.6	8.4	5.9	2.5	7.15	34.97%
Iron	8770	8570	8740	170	8655	1.96%
Lead	1.7	1.8	2.0	0.2	1.9	10.53%
Magnesium	3570	3610	3070	540	3340	16.17%
Manganese	123	126	115	11	120.5	9.13%
Molybdenum	0.7	0.6	0.2	0.4	0.4	100.00%
Nickel	3.2	4.8	3.6	1.2	4.2	28.57%
Phosphorus	486	649	526	123	587.5	20.94%
Potassium	1080	893	1020	127	956.5	13.28%
Selenium	0.6	0.5	0.5	0	0.5	0.00%
Silver	0.05	0.05	0.05	0	0.05	0.00%
Sodium	4250	5270	3510	1760	4390	40.09%
Strontium	62.7	190	37.3	152.7	113.65	134.36%
Tellurium	0.1	0.1	0.1	0	0.1	0.00%
Thallium	0.21	0.16	0.17	0.01	0.165	6.06%
Tin	0.1	0.1	0.1	0	0.1	0.00%
Titanium	198	165	213	48	189	25.40%
Vanadium	19	22	21	1	21.5	4.65%
Zinc	24.9	27.2	23.8	3.4	25.5	13.33%
Zirconium	0.5	0.5	0.5	0	0.5	0.00%

*all units µg/g unless otherwise stated

Table A-4 (continued)

Penrose Bay July 9, 2003	Rep-1	Rep-2	Rep-3	Difference	Average	Relative % standard deviation
Moisture (%W/W)	23.6	27.1	25.3	1.8	26.2	6.87%
% Gravel >2.00 mm	0.03	0.11	0.00	0.11	0.055	200.00%
% Sand 2.00mm > 0.063mm	81.97	81.64	81.29	0.35	81.465	0.43%
% Silt 0.063mm > 0.004mm	11.54	11.99	12.32	0.33	12.155	2.71%
% Clay 0.004 mm	6.45	6.26	6.39	0.13	6.325	2.06%
Inorganic Carbon-Total	940	750	940	190	845	22.49%
Organic Carbon-Total	3900	5900	5300	600	5600	10.71%
Carbon-Total	4800	6600	6200	400	6400	6.25%
Fecal coliform (MPN/g)	2	2	2	0	2	0.00%
Aluminum	4130	4750	4460	290	4605	6.30%
Antimony	0.1	0.1	0.1	0	0.1	0.00%
Arsenic	1.8	2.6	2.6	0	2.6	0.00%
Barium	6.6	8.5	9.9	1.4	9.2	15.22%
Beryllium	0.1	0.1	0.1	0	0.1	0.00%
Bismuth	0.1	0.1	0.1	0	0.1	0.00%
Cadmium	0.38	0.55	0.60	0.05	0.575	8.70%
Calcium	3110	3640	3340	300	3490	8.60%
Chromium	3.4	4.3	4.4	0.1	4.35	2.30%
Cobalt	1.2	1.3	1.3	0	1.3	0.00%
Copper	5.3	6.4	6.3	0.1	6.35	1.57%
Iron	3690	4010	3950	60	3980	1.51%
Lead	1.4	1.5	1.5	0	1.5	0.00%
Magnesium	1630	1800	1850	50	1825	2.74%
Manganese	51.6	56.7	56.5	0.2	56.6	0.35%
Molybdenum	0.2	0.3	0.4	0.1	0.35	28.57%
Nickel	2.6	3.2	3.3	0.1	3.25	3.08%
Phosphorus	406	424	395	29	409.5	7.08%
Potassium	596	667	644	23	655.5	3.51%
Selenium	0.5	0.6	0.7	0.1	0.65	15.38%
Silver	0.05	0.05	0.05	0	0.05	0.00%
Sodium	3620	3670	4260	590	3965	14.88%
Strontium	22.4	26.3	26.2	0.1	26.25	0.38%
Tellurium	0.1	0.1	0.1	0	0.1	0.00%
Thallium	0.15	0.18	0.31	0.13	0.245	53.06%
Tin	0.1	0.1	0.1	0	0.1	0.00%
Titanium	108	133	127	6	130	4.62%
Vanadium	9	11	10	1	10.5	9.52%
Zinc	12.1	14.7	15.4	0.7	15.05	4.65%
Zirconium	0.5	0.5	0.6	0.1	0.55	18.18%

*all units µg/g unless otherwise stated

Table A-4 (continued)

Freke Anchorage July 9, 2003	Rep-1	Rep-2	Rep-3	Difference	Average	Relative % standard deviation
Moisture (%W/W)	25.5	17.9	20.1	2.2	19	11.58%
% Gravel >2.00 mm	0.02	0.13	0.04	0.09	0.085	105.88%
% Sand 2.00mm > 0.063mm	91.99	94.51	93.60	0.91	94.055	0.97%
% Silt 0.063mm > 0.004mm	5.24	4.02	4.50	0.48	4.26	11.27%
% Clay 0.004 mm	2.75	1.35	1.87	0.52	1.61	32.30%
Inorganic Carbon-Total	1100	760	500	260	630	41.27%
Organic Carbon-Total	11000	4800	5500	700	5150	13.59%
Carbon-Total	12000	5600	5500	100	5550	1.80%
Fecal coliform (MPN/g)	2	2	2	0	2	0.00%
Aluminum	4240	4230	4220	10	4225	0.24%
Antimony	0.2	0.1	0.1	0	0.1	0.00%
Arsenic	4.2	2.1	2.5	0.4	2.3	17.39%
Barium	8.8	9.2	7.6	1.6	8.4	19.05%
Beryllium	0.1	0.1	0.1	0	0.1	0.00%
Bismuth	0.1	0.1	0.1	0	0.1	0.00%
Cadmium	0.92	0.20	0.32	0.12	0.26	46.15%
Calcium	2750	2660	2920	260	2790	9.32%
Chromium	4.2	3.8	3.9	0.1	3.85	2.60%
Cobalt	1.6	1.9	1.6	0.3	1.75	17.14%
Copper	7.0	5.1	4.8	0.3	4.95	6.06%
Iron	5360	7240	5670	1570	6455	24.32%
Lead	1.3	1.0	1.0	0	1	0.00%
Magnesium	2120	2210	2050	160	2130	7.51%
Manganese	66.1	80.4	69.6	10.8	75	14.40%
Molybdenum	0.9	0.2	0.4	0.2	0.3	66.67%
Nickel	3.6	2.2	2.3	0.1	2.25	4.44%
Phosphorus	339	319	329	10	324	3.09%
Potassium	653	609	577	32	593	5.40%
Selenium	0.5	0.5	0.5	0	0.5	0.00%
Silver	0.05	0.05	0.05	0	0.05	0.00%
Sodium	4090	2410	2750	340	2580	13.18%
Strontium	19.4	18.5	18.6	0.1	18.55	0.54%
Tellurium	0.1	0.1	0.1	0	0.1	0.00%
Thallium	0.23	0.09	0.09	0	0.09	0.00%
Tin	0.1	0.1	0.1	0	0.1	0.00%
Titanium	147	165	143	22	154	14.29%
Vanadium	13	19	16	3	17.5	17.14%
Zinc	18.3	15.6	15.4	0.2	15.5	1.29%
Zirconium	0.5	0.5	0.5	0	0.5	0.00%

*all units µg/g unless otherwise stated

Table A-5. Summary of replicate sediment samples collected in 2004.

Freke Anchorage Aug 10, 2004	Rep-1	Rep-2	Rep-3	Difference	Average	Relative % standard deviation
Carbon Total Inorganic	500	500	500	0	500	0.00%
Carbon Total Organic	500	8800	13000	4200	10900	38.53%
Carbon	1000	9300	13500	4200	11400	36.84%
Hardness Total (T)	16173.92	14563.07	31446.96	16883.89	23005.015	73.39%
Fecal coliforms (MPN/g)	2	2	2	0	2	0.00%
Aluminum	4650	3740	5630	1890	4685	40.34%
Antimony	0.1	0.2	0.3	0.1	0.25	40.00%
Arsenic	1.7	4.4	8.8	4.4	6.6	66.67%
Barium	5.8	6.9	12.7	5.8	9.8	59.18%
Beryllium	0.1	0.1	0.1	0	0.1	0.00%
Bismuth	0.1	0.1	0.1	0	0.1	0.00%
Cadmium	0.14	1.28	1.66	0.38	1.47	25.85%
Calcium	2140	2270	6360	4090	4315	94.79%
Chromium	3	4	7	3	5.5	54.55%
Cobalt	2.1	1.3	2.2	0.9	1.75	51.43%
Copper	7.6	8.5	16.4	7.9	12.45	63.45%
Iron	4990	3980	6730	2750	5355	51.35%
Lead	0.6	1.3	2.8	1.5	2.05	73.17%
Magnesium	2630	2160	3780	1620	2970	54.55%
Manganese	90	55.3	79.1	23.8	67.2	35.42%
Molybdenum	0.3	2.2	5.1	2.9	3.65	79.45%
Nickel	2.4	3.8	6.9	3.1	5.35	57.94%
Phosphorus	236	333	524	191	428.5	44.57%
Potassium	445	640	1170	530	905	58.56%
Selenium	0.6	0.6	1.6	1	1.1	90.91%
Silver	0.05	0.06	0.14	0.08	0.1	80.00%
Sodium	1930	5240	11500	6260	8370	74.79%
Strontium	16.9	18.9	39.6	20.7	29.25	70.77%
Tellurium	0.1	0.1	0.1	0	0.1	0.00%
Thallium	0.1	0.21	0.26	0.05	0.235	21.28%
Tin	0.1	0.1	0.3	0.2	0.2	100.00%
Titanium	114	106	171	65	138.5	46.93%
Vanadium	9	9	16	7	12.5	56.00%
Zinc	15	18	33	15	25.5	58.82%
Zirconium	0.5	0.5	0.5	0	0.5	0.00%

*all units µg/g unless otherwise stated

Table A-5 (continued)

Wootton Bay Aug 10, 2004	Rep-1	Rep-2	Rep-3	Difference	Average	Relative % standard deviation
Moisture (%(W/W))	33.7	20.4	20.9	0.5	20.65	2.42%
Carbon Total Organic	9000	7900	8400	500	8150	6.13%
Carbon Total Inorganic	500	500	500	0	500	0.00%
Carbon Total	9500	8400	8900	500	8650	5.78%
Fecal coliforms (MPN/g)	2	2	2	0	2	0.00%
Hardness Total	48398.4	20873.11	21015.48	142.37	20944.295	0.68%
Aluminum	5070	4790	4620	170	4705	3.61%
Antimony	0.2	0.1	0.1	0	0.1	0.00%
Arsenic	4.1	2.9	3.4	0.5	3.15	15.87%
Barium	13.4	10.7	11.6	0.9	11.15	8.07%
Beryllium	0.1	0.1	0.1	0	0.1	0.00%
Bismuth	0.1	0.1	0.1	0	0.1	0.00%
Cadmium	0.84	0.22	0.2	0.02	0.21	9.52%
Calcium	14600	3890	3980	90	3935	2.29%
Chromium	4	3	3	0	3	0.00%
Cobalt	2.1	2.1	2.1	0	2.1	0.00%
Copper	9.4	5.3	5.4	0.1	5.35	1.87%
Iron	5310	5560	5370	190	5465	3.48%
Lead	1.6	1.1	1.2	0.1	1.15	8.70%
Magnesium	2900	2710	2690	20	2700	0.74%
Manganese	94.1	104	102	2	103	1.94%
Molybdenum	0.9	0.2	0.2	0	0.2	0.00%
Nickel	5.5	2.4	2.2	0.2	2.3	8.70%
Phosphorus	738	414	425	11	419.5	2.62%
Potassium	956	826	853	27	839.5	3.22%
Selenium	0.7	0.5	0.7	0.2	0.6	33.33%
Silver	0.05	0.05	0.05	0	0.05	0.00%
Sodium	4830	2580	3320	740	2950	25.08%
Strontium	99.1	28.5	27.8	0.7	28.15	2.49%
Tellurium	0.1	0.1	0.1	0	0.1	0.00%
Thallium	0.26	0.12	0.09	0.03	0.105	28.57%
Tin	0.1	0.1	0.1	0	0.1	0.00%
Titanium	158	131	136	5	133.5	3.75%
Vanadium	12	11	11	0	11	0.00%
Zinc	19	16	15	1	15.5	6.45%
Zirconium	0.5	0.5	0.5	0	0.5	0.00%
Acenaphthene	0.01	0.01	0.01	0	0.01	0.00%
Acenaphthylene	0.01	0.01	0.01	0	0.01	0.00%
Anthracene	0.01	0.01	0.01	0	0.01	0.00%
Benzo(a)anthracene	0.01	0.01	0.01	0	0.01	0.00%
Benzo(b+j)fluoranthene	0.01	0.01	0.01	0	0.01	0.00%
Benzo(g;h;i)perylene	0.02	0.02	0.02	0	0.02	0.00%
Benzo(k)fluoranthene	0.01	0.01	0.01	0	0.01	0.00%
Benzo(a)pyrene	0.01	0.01	0.01	0	0.01	0.00%
Chrysene	0.01	0.01	0.01	0	0.01	0.00%
Dibenzo(a;h)anthracene	0.02	0.02	0.02	0	0.02	0.00%
Fluoranthene	0.01	0.01	0.01	0	0.01	0.00%
Fluorene	0.01	0.01	0.01	0	0.01	0.00%

*all units µg/g unless otherwise stated

Table A-5 (continued)

Wootton Bay Aug 10, 2004	Rep-1	Rep-2	Rep-3	Difference	Average	Relative % standard deviation
Indeno(1;2;3-cd)pyrene	0.02	0.02	0.02	0	0.02	0.00%
Naphthalene	0.01	0.01	0.01	0	0.01	0.00%
Phenanthrene	0.01	0.01	0.01	0	0.01	0.00%
Pyrene	0.01	0.01	0.01	0	0.01	0.00%
Acen-d10 (%)	79	82	87	5	84.5	5.92%
Chry-d12 (%)	80	84	91	7	87.5	8.00%
Pery-d12 (%)	76	78	86	8	82	9.76%
Phen-d10 (%)	75	80	86	6	83	7.23%
bis(2-Ethylhexyl) phthalate	2	2	2	0	2	0.00%
Butyl benzyl phthalate	0.1	0.1	0.1	0	0.1	0.00%
Diethyl phthalate	0.09	0.09	0.09	0	0.09	0.00%
Dimethyl phthalate	0.07	0.07	0.07	0	0.07	0.00%
Dibutyl phthalate	0.07	0.07	0.07	0	0.07	0.00%
Di-n-octyl-phthalate	0.01	0.01	0.01	0	0.01	0.00%

*all units µg/g unless otherwise stated

Table A-5 (continued)

Grace Harbour Aug 10, 2004	Rep-1	Rep-2	Rep-3	Difference	Average	Relative % standard deviation
Moisture (%(W/W))	83.9	86.2	84.7	1.5	85.45	1.76%
Hardness Total (T)	59220.62	59957.03	57865.61	2091.42	58911.32	3.55%
Carbon Total Inorganic	500	500	960	460	730	63.01%
Carbon Total Organic	38000	39000	33000	6000	36000	16.67%
Carbon Total	38500	39500	33960	5540	36730	15.08%
Aluminum	11900	10400	11400	1000	10900	9.17%
Antimony	0.3	0.2	0.3	0.1	0.25	40.00%
Arsenic	13.4	8.6	12.7	4.1	10.65	38.50%
Barium	42.4	37.8	44.3	6.5	41.05	15.83%
Beryllium	0.2	0.1	0.2	0.1	0.15	66.67%
Bismuth	0.1	0.1	0.1	0	0.1	0.00%
Cadmium	4.47	3.54	3.91	0.37	3.725	9.93%
Calcium	7060	7190	7210	20	7200	0.28%
Chromium	16	14	15	1	14.5	6.90%
Cobalt	3.3	2.8	3.1	0.3	2.95	10.17%
Copper	48.6	43	46.1	3.1	44.55	6.96%
Iron	11500	10300	11000	700	10650	6.57%
Lead	10	10.2	10.6	0.4	10.4	3.85%
Magnesium	10100	10200	9680	520	9940	5.23%
Manganese	124	107	116	9	111.5	8.07%
Molybdenum	12.9	9.8	10	0.2	9.9	2.02%
Nickel	15.9	14	14.7	0.7	14.35	4.88%
Phosphorus	915	716	826	110	771	14.27%
Potassium	4070	3920	4000	80	3960	2.02%
Selenium	3.4	2.8	3	0.2	2.9	6.90%
Silver	0.55	0.47	0.5	0.03	0.485	6.19%
Sodium	55700	57800	54800	3000	56300	5.33%
Strontium	72.7	72.2	71.3	0.9	71.75	1.25%
Tellurium	0.2	0.2	0.2	0	0.2	0.00%

*all units µg/g unless otherwise stated

Table A-5 (continued)

Grace Harbour Aug 10, 2004	Rep-1	Rep-2	Rep-3	Difference	Average	Relative % standard deviation
Thallium	0.34	0.26	0.28	0.02	0.27	7.41%
Tin	0.7	0.6	0.7	0.1	0.65	15.38%
Titanium	271	243	263	20	253	7.91%
Vanadium	30	25	27	2	26	7.69%
Zinc	83	79	81	2	80	2.50%
Zirconium	1.1	0.8	0.7	0.1	0.75	13.33%
Acenaphthene	0.1	0.1	0.1	0	0.1	0.00%
Acenaphthylene	0.1	0.1	0.1	0	0.1	0.00%
Anthracene	0.1	0.1	0.1	0	0.1	0.00%
Benzo(a)anthracene	0.01	0.01	0.01	0	0.01	0.00%
Benzo(b+j)fluoranthene	0.01	0.01	0.01	0	0.01	0.00%
Benzo(g;h;i)perylene	0.02	0.02	0.02	0	0.02	0.00%
Benzo(k)fluoranthene	0.01	0.01	0.01	0	0.01	0.00%
Benzo(a)pyrene	0.01	0.01	0.01	0	0.01	0.00%
Chrysene	0.01	0.01	0.01	0	0.01	0.00%
Dibenzo(a;h)anthracene	0.02	0.02	0.02	0	0.02	0.00%
Fluoranthene	0.01	0.01	0.01	0	0.01	0.00%
Fluorene	0.01	0.01	0.01	0	0.01	0.00%
Indeno(1;2;3-cd)pyrene	0.02	0.02	0.02	0	0.02	0.00%
Naphthalene	0.01	0.01	0.01	0	0.01	0.00%
Phenanthrene	0.01	0.01	0.01	0	0.01	0.00%
Pyrene	0.01	0.01	0.01	0	0.01	0.00%
Total PAH's	0.01	0.01	0.01	0	0.01	0.00%
Total Low MW PAH's	0.01	0.01	0.01	0	0.01	0.00%
Total High MW PAH's	0.01	0.01	0.01	0	0.01	0.00%
Acen-d10 (%)	100	81	92	11	86.5	12.72%
Chry-d12 (%)	93	81	90	9	85.5	10.53%
Pery-d12 (%)	85	77	85	8	81	9.88%
Phen-d10 (%)	94	81	94	13	87.5	14.86%

*all units µg/g unless otherwise stated

Table A-5 (continued)

Grace Harbour Aug 10, 2004	Rep-1	Rep-2	Rep-3	Difference	Average	Relative % standard deviation
Moisture (%(W/W))	30.3	30.8	30.2	0.6	30.5	1.97%
Hardness Total (T)	19579.42	18930.2	17447.72	1482.48	18188.96	8.15%
Carbon Total Inorganic	500	500	500	0	500	0.00%
Carbon Total Organic	3400	4200	2000	2200	3100	70.97%
Carbon Total	3900	4700	2500	2200	3600	61.11%
Aluminum	5000	4920	4400	520	4660	11.16%
Antimony	0.1	0.1	0.1	0	0.1	0.00%
Arsenic	2.1	1.9	1.9	0	1.9	0.00%
Barium	11.4	12.1	9.7	2.4	10.9	22.02%
Beryllium	0.1	0.1	0.1	0	0.1	0.00%
Bismuth	0.1	0.1	0.1	0	0.1	0.00%
Cadmium	1.21	1.27	1.79	0.52	1.53	33.99%
Calcium	4180	3920	3920	0	3920	0.00%
Chromium	5	3	2	1	2.5	40.00%

*all units µg/g unless otherwise stated

Table A-5 (continued)

Grace Harbour Aug 10, 2004	Rep-1	Rep-2	Rep-3	Difference	Average	Relative % standard deviation
Cobalt	1.7	1.8	1.4	0.4	1.6	25.00%
Copper	9.4	9.2	7.5	1.7	8.35	20.36%
Iron	4420	4580	3890	690	4235	16.29%
Lead	1.6	1.6	1.3	0.3	1.45	20.69%
Magnesium	2220	2220	1860	360	2040	17.65%
Manganese	68.9	70.7	59.3	11.4	65	17.54%
Molybdenum	0.3	0.3	0.4	0.1	0.35	28.57%
Nickel	3.2	3	2.5	0.5	2.75	18.18%
Phosphorus	614	626	571	55	598.5	9.19%
Potassium	877	872	719	153	795.5	19.23%
Selenium	0.7	0.5	0.5	0	0.5	0.00%
Silver	0.07	0.07	0.05	0.02	0.06	33.33%
Sodium	4530	3940	3540	400	3740	10.70%
Strontium	28.4	26.4	25.7	0.7	26.05	2.69%
Tellurium	0.1	0.1	0.1	0	0.1	0.00%
Thallium	0.28	0.3	0.36	0.06	0.33	18.18%
Tin	0.2	0.2	0.2	0	0.2	0.00%
Titanium	155	153	125	28	139	20.14%
Vanadium	10	10	7	3	8.5	35.29%
Zinc	19	19	16	3	17.5	17.14%
Zirconium	0.5	0.5	0.5	0	0.5	0.00%
Acenaphthene	0.1	0.1	0.1	0	0.1	0.00%
Acenaphthylene	0.1	0.1	0.1	0	0.1	0.00%
Anthracene	0.1	0.1	0.1	0	0.1	0.00%
Benzo(a)anthracene	0.01	0.01	0.01	0	0.01	0.00%
Benzo(b+j)fluoranthene	0.01	0.01	0.01	0	0.01	0.00%
Benzo(g;h;i)perylene	0.02	0.02	0.02	0	0.02	0.00%
Benzo(k)fluoranthene	0.01	0.01	0.01	0	0.01	0.00%
Benzo(a)pyrene	0.01	0.01	0.01	0	0.01	0.00%
Chrysene	0.01	0.01	0.01	0	0.01	0.00%
Dibenzo(a;h)anthracene	0.02	0.02	0.02	0	0.02	0.00%
Fluoranthene	0.01	0.01	0.01	0	0.01	0.00%
Fluorene	0.01	0.01	0.01	0	0.01	0.00%
Indeno(1;2;3-cd)pyrene	0.02	0.02	0.02	0	0.02	0.00%
Naphthalene	0.01	0.01	0.01	0	0.01	0.00%
Phenanthrene	0.01	0.01	0.01	0	0.01	0.00%
Pyrene	0.01	0.01	0.01	0	0.01	0.00%
Total PAH's	0.01	0.01	0.01	0	0.01	0.00%
Total Low MW PAH's	0.01	0.01	0.01	0	0.01	0.00%
Total High MW PAH's	0.01	0.01	0.01	0	0.01	0.00%
Acen-d10 (%)	90	88	80	8	84	9.52%
Chry-d12 (%)	86	82	79	3	80.5	3.73%
Pery-d12 (%)	80	76	75	1	75.5	1.32%
Phen-d10 (%)	85	83	73	10	78	12.82%

*all units µg/g unless otherwise stated

Table A-5 (continued)

Trevenen Bay Aug 11, 2004	Rep-1	Rep-2	Rep-3	Difference	Average	Relative % standard deviation
Moisture (%(W/W))	24.9	25.2	22.6	2.6	23.9	10.88%
Carbon Total Organic	9600	3300	6300	3000	4800	62.50%
Carbon Total Inorganic	500	500	500	0	500	0.00%
Carbon Total	10100	3800	6800	3000	5300	56.60%
Fecal coliforms (MPN/g)	2	2	2	0	2	0.00%
Hardness Total	45646.46	22371.72	71331.5	48959.78	46851.61	104.50%
Aluminum	5730	5400	8230	2830	6815	41.53%
Antimony	0.2	0.2	0.2	0	0.2	0.00%
Arsenic	2.6	2.1	2.1	0	2.1	0.00%
Barium	14.2	18.3	14.4	3.9	16.35	23.85%
Beryllium	0.1	0.1	0.1	0	0.1	0.00%
Bismuth	0.1	0.1	0.1	0	0.1	0.00%
Cadmium	0.22	0.23	0.15	0.08	0.19	42.11%
Calcium	13300	4820	22300	17480	13560	128.91%
Chromium	6	3	3	0	3	0.00%
Cobalt	2.7	2.4	3.3	0.9	2.85	31.58%
Copper	6.4	5.4	6.9	1.5	6.15	24.39%
Iron	6530	6500	8370	1870	7435	25.15%
Lead	2.1	1.4	1.4	0	1.4	0.00%
Magnesium	3020	2510	3800	1290	3155	40.89%
Manganese	103	89.8	148	58.2	118.9	48.95%
Molybdenum	0.2	0.2	0.5	0.3	0.35	85.71%
Nickel	4.5	2.5	2.8	0.3	2.65	11.32%
Phosphorus	435	395	407	12	401	2.99%
Potassium	989	883	1350	467	1116.5	41.83%
Selenium	0.5	0.5	0.5	0	0.5	0.00%
Silver	0.05	0.05	0.05	0	0.05	0.00%
Sodium	3900	3150	4140	990	3645	27.16%
Strontium	72.2	36.6	145	108.4	90.8	119.38%
Tellurium	0.1	0.1	0.1	0	0.1	0.00%
Thallium	0.16	0.13	0.07	0.06	0.1	60.00%
Tin	0.1	0.1	0.1	0	0.1	0.00%
Titanium	120	109	147	38	128	29.69%
Vanadium	12	13	15	2	14	14.29%
Zinc	22	17	24	7	20.5	34.15%
Zirconium	0.5	0.5	0.5	0	0.5	0.00%

*all units µg/g unless otherwise stated

Table A-5 (continued)

Penrose Bay Aug 11, 2004	Rep-1	Rep-2	Rep-3	Difference	Average	Relative % standard deviation
Carbon Total Inorganic	500	500	500	0	500	0.00%
Carbon Total Organic	3400	3600	3100	500	3350	14.93%
Carbon Total	3900	4100	3600	500	3850	12.99%
Hardness Total (T)	13961.09	12622.78	13620.27	997.49	13121.525	7.60%
Fecal coliforms (MPN/g)	2	2	2	0	2	0.00%
Aluminum	4290	3770	4320	550	4045	13.60%
Antimony	0.1	0.1	0.2	0.1	0.15	66.67%
Arsenic	1.7	1.7	2.3	0.6	2	30.00%
Barium	8	6.8	7.6	0.8	7.2	11.11%
Beryllium	0.1	0.1	0.1	0	0.1	0.00%
Bismuth	0.1	0.1	0.1	0	0.1	0.00%
Cadmium	0.66	0.61	0.57	0.04	0.59	6.78%
Calcium	2870	2400	2750	350	2575	13.59%
Chromium	2	3	3	0	3	0.00%
Cobalt	1.1	1.1	1.2	0.1	1.15	8.70%
Copper	5.8	5.3	5.7	0.4	5.5	7.27%
Iron	3310	3370	3580	210	3475	6.04%
Lead	1.3	2.1	1.3	0.8	1.7	47.06%
Magnesium	1650	1610	1640	30	1625	1.85%
Manganese	47.5	44.7	51.4	6.7	48.05	13.94%
Molybdenum	0.3	0.3	0.3	0	0.3	0.00%
Nickel	2.6	3	2.9	0.1	2.95	3.39%
Phosphorus	373	342	362	20	352	5.68%
Potassium	653	628	618	10	623	1.61%
Selenium	0.5	0.5	0.5	0	0.5	0.00%
Silver	0.05	0.05	0.05	0	0.05	0.00%
Sodium	4370	4570	3770	800	4170	19.18%
Strontium	24.5	21.9	24.2	2.3	23.05	9.98%
Tellurium	0.1	0.1	0.1	0	0.1	0.00%
Thallium	0.2	0.25	0.21	0.04	0.23	17.39%
Tin	0.4	0.1	0.3	0.2	0.2	100.00%
Titanium	91	71	95	24	83	28.92%
Vanadium	7	6	8	2	7	28.57%
Zinc	12	16	11	5	13.5	37.04%
Zirconium	0.5	0.5	0.5	0	0.5	0.00%

*all units µg/g unless otherwise stated

B APPENDIX B. SUMMARY OF WATER AND SEDIMENT QUALITY DATA

Table B-1. Summary of Water Quality Data Collected at Site E248646, Freke Anchorage.

	31-Aug-99	1-Sep-99	28-Jul-00	16-Jul-02	24-Jul-02	25-Jul-02	26-Jul-02	30-Jul-02	08-Jul-03	09-Jul-03	10-Jul-03	16-Jul-03	17-Jul-03	9-Aug-04	10-Aug-04	11-Aug-04	12-Aug-04	13-Aug-04
Time					10:35	10:50	9:30	10:30	10:15	10:08	10:25	7:30	< 8am					
Tide					Ebb	Ebb	Ebb	Flood	Flood	Flood	Flood	Ebb	Flood					
Temperature (*C)	18.9	18.9			19.8	22.85	21.39	18.76	18.11	17.66	18.82	16.33	14.80					
Salinity (ppt)	23.5	21.8			24.04	23.6	24.21	24.88	26.79	26.47	26.50	26.31	26.67					
DO (mg/L)	9.9	10.1			9.18	8.87	8.6	8.46	13.08	11.48	12.91	11.80	10.32					
Boat Count																		
Hardness Total-T								3930										
Total Kjeldahl N				0.15	0.13		0.18	0.15	0.22	0.17	0.18	0.17	0.23	0.12	0.12	0.14	0.15	0.16
Total N		0.24		0.15	0.13		0.18	0.15	0.22	0.17	0.18	0.17	0.25	0.12	0.13	0.15	0.17	0.16
Total Organic N				0.15	0.13		0.18	0.15	0.20	0.16	0.17	0.17	0.22	<0.10	<0.10	<0.10	<0.10	<0.10
Ammonia N		0.01		<0.005	<0.005		<0.005	<0.005	0.015	0.015	0.010	<0.005	0.020	0.098	0.106	0.135	0.104	0.118
Nitrate N Dissolved		<0.002		<0.002	<0.002		<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	0.004	<0.002	0.01	0.01	
Nitrate + Nitrite		<0.002		<0.002	<0.002		<0.002	<0.002	0.002	<0.002	<0.002	<0.002	0.011	0.007	0.005	0.018	0.015	<0.002
Nitrite N		<0.002		<0.002	<0.002		<0.002	<0.002	0.003	<0.002	<0.002	<0.002	0.004	0.003	0.004	0.008	0.005	<0.002
pH		8.26																
Ortho-P														0.018	0.019	0.019	0.014	0.011
P Total														0.03	0.027	0.039	0.026	0.021
P total dissolved		0.016																
Enterococci (MPN/100g)				<2	<2	2	<2	<2						<2	<2	17	5	13
Fecal coli. (MPN/100 mL)			13	5	<2	5	2	5	<2	<2	2	<2	<2	<2	<2	2	2	2
Arsenic (µg/L)								0.2	0.3	0.3					0.4	0.6	0.5	
Cadmium (µg/L)								0.1	0.1	0.1					0.1	0.1	0.1	
Chromium (µg/L)								2.5	<0.5	<0.5					<0.5	<0.5	<0.5	
Cobalt (µg/L)								<0.1	<0.1	<0.1					<0.1	<0.1	<0.1	
Copper (µg/L)								0.4	0.3	0.5					0.2	0.2	0.3	
Iron (µg/L)								3	6	4					<1	7	6	
Lead (µg/L)								<0.1	<0.1	4.0					<0.1	<0.1	<0.1	
Manganese (µg/L)								1	1	1					1	1	1	
Nickel (µg/L)								<0.5	<0.5	<0.5					<0.5	<0.5	<0.5	
Zinc (µg/L)								<1	<1	<1					<1	<1	<1	

*all units mg/L unless otherwise stated

Table B-2. Summary of Water Quality Data Collected at Site E248647, Wootton Bay.

	31-Aug-99	1-Sep-99	28-Jul-00	16-Jul-02	24-Jul-02	25-Jul-02	26-Jul-02	30-Jul-02	08-Jul-03	09-Jul-03	10-Jul-03	16-Jul-03	17-Jul-03	10-Aug-04	11-Aug-04	12-Aug-04	13-Aug-04
Time					10:05	10:25	8:55	9:55	9:50	9:35	10:00	7:55	<8am				
Tide				Flood	Ebb	Ebb	Ebb	Flood	Flood	Flood	Flood	Ebb	Flood				
Temperature (*C)	17.2	18.0		17.8	20.35	20.45	20.86	18.74	12.67	17.95	17.09	16.16	16.11				
Salinity (ppt)	21.8	21.0		25.25	24.92	24.97	24.98	25.47	25.84	25.90	25.93	26.37	26.12				
DO (mg/L)	9.8	10.1		9.55	9.63	10.12	9.07	9.42	10.99	10.21	12.03	11.81	10.77				
Boat Count																	
Physical (mg/L)																	
Non-filterable residue (fixed)				2	11		4	<1	5	5	2		10				
Non-filterable residue (TSS)				<4	15		5	<4	8	8	3	8	13				
Non-filterable residue (volume)				<4	4		1	<4	3	3	1		3				
Total Kjeldahl N				0.16	0.16		0.16	0.12	0.15	0.15	0.13	0.13	0.29	0.14	0.13	0.16	0.14
Total N		0.17		0.16	0.16		0.16	0.12	0.15	0.15	0.13	0.13	0.29	0.14	0.14	0.17	0.16
Total Organic N				0.16	0.16		0.16	0.12	0.14	0.15	0.12	0.13	0.28	<0.10	<0.10	<0.10	<0.10
Ammonia N		0.006		<0.005	<0.005		<0.005	<0.005	0.014	<0.005	0.006	0.006	0.007	0.093	0.112	0.101	0.089
Nitrate N Dissolved		<0.002		<0.002	<0.002		<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	0.003	0.002	0.005	0.014
Nitrate + Nitrite		<0.002		<0.002	<0.002		<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	0.003	0.009	0.008	0.023
Nitrite N		<0.002		<0.002	<0.002		<0.002	<0.002	0.002	<0.002	<0.002	<0.002	<0.002	<0.002	0.007	0.003	0.009
pH		8.19															
Ortho-P				0.015	0.012		0.010	0.010	0.015	0.012	0.016	0.018	0.025	0.007	0.005	0.006	0.008
P Total				0.028	0.025		0.028	0.023	0.026	0.054	0.029	0.039	0.132	0.024	0.023	0.023	0.023
P Total dissolved		0.010															
Enterococci (MPN/100g)				<2	<2	<2	<2	<2						<2	<2	2	<2
Fecal coli. (MPN/100 mL)			<20	2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	5	2	<2
Arsenic (µg/L)													0.3	0.5	0.6	0.6	
Cadmium (µg/L)													0.1	0.1	0.1	1	
Chromium (µg/L)													<0.5	<0.5	<0.5	<0.5	
Cobalt (µg/L)													<0.1	<0.1	<0.1	<0.1	
Copper (µg/L)													0.2	0.3	0.3	0.3	
Iron (µg/L)													5	70	7	6	
Lead (µg/L)													<0.1	<0.1	<0.1	<0.1	
Manganese (µg/L)													2	1	1	1	
Nickel (µg/L)													<0.5	<0.5	<0.5	<0.5	
Zinc (µg/L)													1	<1	1	1	

*all units mg/L unless otherwise stated

Table B-3. Summary of Water Quality Data Collected at Site E248648, Penrose Bay.

	31-Aug-99	1-Sep-99	28-Jul-00	16-Jul-02	24-Jul-02	25-Jul-02	26-Jul-02	30-Jul-02	08-Jul-03	09-Jul-03	10-Jul-03	16-Jul-03	17-Jul-03	9-Aug-04	10-Aug-04	11-Aug-04	12-Aug-04	13-Aug-04
Time				10:50	10:25	10:40	9:20	10:15	10:10	10:03	10:15	7:40	< 8am					
Tide				Flood	Ebb	Ebb	Ebb	Flood	Flood	Flood	Flood	Ebb	Flood					
Temperature (*C)	18.2	18.3		19.71	21.04	21.5	20.36	18.13	16.65	16.68	16.45	16.03	15.09					
Salinity (ppt)	23.0	21.5		25.18	24.08	24.22	24.43	25.13	25.98	26.34	25.65	26.43	26.55					
DO (mg/L)	11.0	10.5		7.9	9.66	9.97	9.58	8.98	11.21	11.29	11.41	11.27	9.69					
Hardness Total-T								4040										
Total Kjeldahl N				0.15	0.15	0.15	0.15	0.15	0.18	0.15	0.17	0.30	0.33	0.12	0.13	0.11	0.14	0.14
Total N		0.21		0.15	0.14	0.14	0.15	0.14	0.19	0.15	0.18	0.30	0.35	0.13	0.14	0.13	0.14	0.14
Total Organic N				0.15	0.15	0.15	0.15	0.15	0.16	0.14	0.16	0.29	0.32	<0.10	<0.10	<0.10	<0.10	<0.10
Ammonia N		<0.005		<0.005	<0.005	<0.005	<0.005	<0.005	0.024	0.011	0.009	0.007	0.009	0.092	0.116	0.132	0.088	0.112
Nitrate N Dissolved		<0.002		<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	0.002	0.003	<0.002	<0.002
Nitrate + Nitrite		<0.002		<0.002	<0.002	<0.002	<0.002	<0.002	0.004	<0.002	0.010	<0.002	0.018	0.004	0.002	0.011	<0.002	0.005
Nitrite N		<0.002		<0.002	<0.002	<0.002	<0.002	<0.002	0.005	<0.002	0.004	<0.002	0.003	0.003	<0.002	0.008	<0.002	0.004
pH		8.28																
Ortho-P														0.010	0.008	0.009	0.001	0.009
P Total														0.025	0.021	0.021	<0.002	0.021
P Total Dissolved		0.014																
Enterococci (MPN/100g)				2	<2	<2	<2	<2						<2	<2	<2	<2	<2
Fecal coli. (MPN/100 mL)			<20	4	2	2	2	4	<2	<2	<2	2	<2	8	<2	<2	4	<2
Arsenic (µg/L)								0.3		0.3	0.5		0.3		0.1	0.6	0.4	
Cadmium (µg/L)								<0.1		0.1	0.1		0.1		0.1	0.1	0.1	
Chromium (µg/L)								2.3		<0.5	0.6		0.6		<0.5	<0.5	<0.5	
Cobalt (µg/L)								<0.1		<0.1	<0.1		<0.1		<0.1	<0.1	<0.1	
Copper (µg/L)								0.5		0.3	0.3		0.1		0.2	0.3	0.2	
Iron (µg/L)								3		<1	3		4		5	5	<1	
Lead (µg/L)								<0.1		<0.1	<0.1		<0.1		<0.1	<0.1	<0.1	
Manganese (µg/L)								1		1	1		1		1	1	1	
Nickel (µg/L)								<0.5		<0.5	<0.5		<0.5		<0.5	<0.5	<0.5	
Zinc (µg/L)								<1		<1	<1		1		<1	1	<1	

*all units mg/L unless otherwise stated

Table B-4. Summary of Water Quality Data Collected at Site E248649, Trevenen Bay.

	31-Aug-99	01-Sep-99	16-Jul-02	24-Jul-02	25-Jul-02	26-Jul-02	30-Jul-02	08-Jul-03	09-Jul-03	10-Jul-03	15-Jul-03	16-Jul-03	9-Aug-04	10-Aug-04	11-Aug-04	12-Aug-04	13-Aug-04
Time			10:15	9:45	10:00	8:20	9:15	9:30	9:15	9:40	10:45	8:15					
Tide			Flood	Ebb	Ebb	Ebb	Flood	Flood	Flood	Slack	Ebb	Ebb					
Temperature (*C)	16.9	17.1	16.6	19.15	18.95	18.08	16.01	16.50	15.89	16.76	16.58	16.46					
Salinity (ppt)	21.5	21	25.4	21.35	22.2	23.75	25.38	24.03	25.57	24.58	25.13	24.58					
DO (mg/L)	10.2	11.2	8.4	9.49	9.57	9.77	11.15	11.00	10.88	11.01	9.38	9.33					
Total Kjeldahl N			0.18	0.13		0.15	0.16	0.20	0.18	0.17	0.16	0.20	0.1	0.14	0.13	0.14	0.15
Total N		0.17	0.2	0.13		0.15	0.16	0.21	0.18	0.17	0.19	0.20	0.12	0.14	0.14	0.14	0.16
Total Organic N			0.18	0.13		0.15	0.16	0.19	0.17	0.17	0.15	0.19	<0.10	<0.10	<0.10	<0.10	<0.10
Ammonia N		<0.005	<0.005	<0.005		<0.005	<0.005	0.017	0.005	<0.005	0.008	0.007	0.085	0.078	0.073	0.072	0.082
Nitrate N Dissolved		<0.002	0.03	<0.002		<0.002	<0.002	<0.002	<0.002	<0.002	0.03	<0.002	0.009	0.003	<0.002	<0.002	0.009
Nitrate + Nitrite		<0.002	0.028	<0.002		<0.002	<0.002	<0.002	<0.002	<0.002	0.032	0.007	0.016	0.003	0.006	0.006	0.015
Nitrite N		<0.002	0.002	<0.002		<0.002	<0.002	0.002	<0.002	<0.002	<0.002	<0.002	0.007	<0.002	0.007	0.005	0.006
pH		8.28															
Ortho-Phosphate Dis.													0.028	0.007	0.006	0.01	0.009
P Total													0.031	0.021	0.019	0.02	0.022
Enterococci (MPN/100g)			2	<2	<2	<2	<2						<2	<2	<2	<2	<2
Fecal Coli. (MPN/100mL)			2	2	2	49	2	<2	2	2	2	<2	<2	<2	<2	2	5

*all units mg/L unless otherwise stated

Table B-5. Summary of Water Quality Data Collected at Site E248650, Cochrane Bay.

	16-Jul-02	24-Jul-02	25-Jul-02	26-Jul-02	30-Jul-02	9-Aug-04	10-Aug-04	11-Aug-04	12-Aug-04	13-Aug-04
Time		9:15	9:50	8:10	8:55					
Tide	Flood	Ebb	Ebb	Ebb	Flood					
Temperature (*C)	4.19	17.05	17.22	17.56	14.98					
Salinity (ppt)	24.31	24.15	24.1	22.71	25.84					
DO (mg/L)	7.58	9.35	9.7	8.52	9.94					
Total Kjeldahl N	0.19	0.14		0.15	0.25	0.14	0.16	0.13	0.18	0.14
Total N	0.24	0.14		0.17	0.25	0.15	0.17	0.14	0.19	0.16
Total Organic N	0.19	0.14		0.15	0.25	<0.10	<0.10	<0.10	<0.10	<0.10
Ammonia N	<0.005	<0.005		<0.005	<0.005	0.095	0.113	0.088	0.1	0.093
Nitrate N Dissolved	0.06	<0.002		<0.002	<0.002	0.007	0.005	0.003	0.005	0.012
Nitrate + Nitrite	0.057	<0.002		0.013	<0.002	0.01	0.007	0.011	0.011	0.016
Nitrite N	<0.002	<0.002		0.002	<0.002	0.003	0.002	0.008	0.006	0.004
Ortho-Phosphate Dis.						0.014	0.016	0.011	0.016	0.012
P--T						0.035	0.032	0.024	0.032	0.023
Enterococci (MPN/100g)	<2	7	<2	5	<2	<2	<2	<2	<2	<2
Fecal Coliform (MPN/100mL)	<2	49	2	2	<2	<2	<2	<2	<2	<2

*all units mg/L unless otherwise stated

Table B-6. Summary of Water Quality Data Collected at Site E248651, Grace Harbour.

	2-Sep-99	04-Sep-99	16-Jul-02	24-Jul-02	25-Jul-02	26-Jul-02	30-Jul-02	08-Jul-03	09-Jul-03	10-Jul-03	15-Jul-03	16-Jul-03	9-Aug-04	10-Aug-04	11-Aug-04	12-Aug-04	13-Aug-04
Time				9:25	10:10	8:35	9:35	9:10	8:58	9:15	10:30	8:30					
Tide			Flood	ebb	ebb	ebb	Flood	Flood	Slack	Ebb	Ebb	Ebb					
Temperature (°C)	17.2	16.5	17.69	19.86	20.12	19.81	17.69	18.24	17.66	18.17	18.33	18.62					
Salinity (ppt)	23	18.1	25.36	24.11	24.35	24.51	25.48	25.55	25.86	25.89	25.99	26.00					
Dissolved Oxygen (mg/L)	9	10.1	9.05	11	11.21	10.25	10.42	12.36	11.80	12.51	12.86	12.80					
Boat Count								11	12	10	6	11					
Non-filterable residue (fixed)			7	<1		11	2	4	7	5	6	5					
Non-filterable residue (TSS)	19		9	5		11	5	7	11	8	9	8					
Non-filterable residue (volume)			2	5		<1	3	3	4	3	3	3					
Total Kjeldahl nitrogen	0.16		0.18	0.15	0.17	0.17	0.17	0.18	0.19	0.15	0.17	0.20	0.13	0.16	0.14	0.16	0.17
Total N			0.18	0.15	0.17	0.18	0.17	0.19	0.19	0.15	0.17	0.19	0.14	0.16	0.14	0.17	0.17
Total Organic N			0.18	0.15	0.17	0.17	0.17	0.16	0.19	0.14	0.16	0.20	<0.10	<0.10	<0.10	<0.10	<0.10
Nitrogen ammonia	<0.005		<0.005	<0.005	<0.005	<0.005	<0.005	0.021	<0.005	0.005	0.011	<0.005	0.089	0.113	0.114	0.096	0.111
Nitrate nitrogen	<0.002		<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Nitrate + Nitrite	<0.002		<0.002	<0.002	<0.002	<0.002	<0.002	0.004	<0.002	0.002	0.007	<0.002	0.005	0.002	0.007	0.004	0.005
Nitrite nitrogen	<0.002		<0.002	<0.002	<0.002	<0.002	<0.002	0.003	<0.002	<0.002	<0.002	<0.002	0.004	<0.002	0.007	0.005	0.004
Ortho-P			0.012	0.008		0.007	0.007	0.023	0.016	0.013	0.018	0.014	0.01	0.013	0.01	0.009	0.011
P Total	<10		0.028	0.023		0.027	0.026	0.036	0.031	0.029	0.034	0.048	0.027	0.027	0.029	0.023	0.021
Total dissolved phosphorus	0.018																
Enterococcus (MPN/100 mL)	2	20	<2	<2	<2	2	<2						<2	<2	<2	<2	<2
Fecal coli. (MPN/100 mL)	<1	2	<2	33	2	46	2	33	<2	<2	<2	<2	2	<2	5	2	5
pH (relative units)	8.2																
Chloride	12000																
Sodium	7900																
Arsenic (µg/L)									0.3	0.2	0.3			0.6	0.5	0.5	
Cadmium (µg/L)									0.1	0.1	0.1			0.1	0.1	0.1	
Chromium (µg/L)									<0.5	<0.5	<0.5			<0.5	<0.5	<0.5	
Cobalt (µg/L)									<0.1	<0.1	<0.1			<0.1	<0.1	<0.1	
Copper (µg/L)									0.3	0.4	0.3			0.5	0.4	0.5	
Iron (µg/L)									2	2	3			<1	5	5	
Lead (µg/L)									<0.1	<0.1	<0.1			<0.1	<0.1	<0.1	
Manganese (µg/L)									1	1	1			1	1	1	
Nickel (µg/L)									<0.5	<0.5	<0.5			<0.5	<0.5	<0.5	
Zinc (µg/L)									1	1	2			2	1	1	

*all units mg/L unless otherwise stated

Table B-7. Summary of Water Quality Data Collected at Site E248652, Government Wharf.

	16-Jul-02	24-Jul-02	25-Jul-02	26-Jul-02	30-Jul-02	08-Jul-03	09-Jul-03	10-Jul-03	15-Jul-03	16-Jul-03	9-Aug-04	10-Aug-04	11-Aug-04	12-Aug-04	13-Aug-04
Time			11:00	9:15	10:35	10:25	10:15	10:30	11:14	7:20					
Tide	Flood		Ebb	Ebb	Flood	Flood	Flood	Flood	Ebb	Ebb					
Temperature (*C)	19.51		21.27	20.64	18.72	16.31	17.62	17.29	15.84	16.73					
Salinity (ppt)	25.18		24.3	24.4	24.76	26.04	26.50	26.11	26.17	26.35					
DO (mg/L)	7.64		10.32	7.86	8.29	12.08	10.57	12.57	9.61	9.92					
Hardness Total-T					4040										
Total Kjeldahl N	0.16	0.13		0.17	0.16	0.17	0.24	0.20	0.21	0.27	0.14	0.16	0.14	0.14	0.13
Total N	0.16	0.13		0.17	0.16	0.17	0.24	0.20	0.25	0.26	0.14	0.19	0.14	0.15	0.14
Total Organic N	0.16	0.13		0.17	0.16	0.16	0.23	0.19	0.21	0.26	<0.10	<0.10	<0.10	<0.10	<0.10
Ammonia N	<0.005	<0.005		<0.005	<0.005	0.014	0.011	0.016	0.006	0.008	0.098	0.125	0.11	0.101	0.105
Nitrate N Dissolved	<0.002	<0.002		<0.002	<0.002	<0.002	<0.002	<0.002	0.04	<0.002	0.004	0.004	<0.002	0.009	<0.002
Nitrate + Nitrite	<0.002	<0.002		<0.002	<0.002	<0.002	<0.002	0.002	0.042	<0.002	0.004	0.004	0.005	0.012	0.004
Nitrite N	<0.002	<0.002		<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	0.007	0.003	0.003
Ortho-P											0.016	0.018	0.013	0.012	0.01
P Total											0.031	0.031	0.027	0.027	0.018
Enterococci (MPN/100g)	<2	<2	2	<2	<2						<2	<2	<2	2	2
Fecal Coli. (MPN/100mL)	<2	2	5	<2	<2		<2	<2	2	<2	<2	240	2	8	13
Arsenic (µg/L)					0.2		0.4	0.3	0.5			0.4	0.6	0.6	
Cadmium (µg/L)					<0.1		0.2	0.1	0.2			0.1	0.1	0.1	
Chromium (µg/L)					2.8		0.5	<0.5	<0.5			<0.5	<0.5	<0.5	
Cobalt (µg/L)					<0.1		<0.1	<0.1	<0.1			<0.1	<0.1	<0.1	
Copper (µg/L)					0.6		0.5	<0.1	0.2			0.4	0.4	0.9	
Iron (µg/L)					4		3	5	3			<1	5	<1	
Lead (µg/L)					<0.1		<0.1	<0.1	<0.1			<0.1	<0.1	<0.1	
Manganese (µg/L)					1		1	1	1			1	1	1	
Nickel (µg/L)					<0.5		<0.5	<0.5	<0.5			<0.5	<0.5	<0.5	
Zinc (µg/L)					1		1	<1	1			2	2	10	

*all units mg/L unless otherwise stated

Table B-8. Summary of Water Quality Data Collected at Site E248653, Okeover Central.

	28-Jul-00	16-Jul-02	24-Jul-02	25-Jul-02	26-Jul-02	30-Jul-02	08-Jul-03	09-Jul-03	10-Jul-03	16-Jul-03	17-Jul-03	9-Aug-04	10-Aug-04	11-Aug-04	12-Aug-04	13-Aug-04
Time			10:15	10:35	9:05	10:10	10:00	9:50	10:05	7:45	<8am					
Tide		Flood	Ebb	Ebb	Ebb		Flood	Flood	Flood	Ebb	Flood					
Temperature (°C)		18.58	20.44	20.58	18.49	18.35	17.52	16.91	18.21	15.53	15.35					
Salinity (ppt)		25.21	24.14	24.86	25.05	25.2	26.22	26.24	25.93	26.01	26.47					
DO (mg/L)		8.36	10.56	10.31	10.2	9.12	12.72	11.56	11.70	10.02	10.61					
Non-filterable residue (volume)						4040										
Total Kjeldahl N		0.32				0.13	0.16	0.14	0.13	0.19	0.32	0.13	0.14	0.16	0.13	0.16
Total N		0.32				0.12	0.17	0.14	0.13	0.20	0.32	0.13	0.15	0.16	0.14	0.17
Total Organic N		0.32				0.13	0.15	0.14	0.13	0.18	0.31	<0.10	<0.10	<0.10	<0.10	<0.10
Ammonia N		<0.005				<0.005	0.017	0.008	<0.005	0.009	0.011	0.079	0.087	0.113	0.096	0.104
Nitrate N Dissolved		<0.002				<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	0.002	<0.002	0.008	0.002
Nitrate + Nitrite		<0.002				<0.002	0.005	<0.002	0.004	0.014	<0.002	0.003	0.007	0.004	0.012	0.007
Nitrite N		<0.002				<0.002	0.004	<0.002	<0.002	<0.002	<0.002	0.002	0.005	0.005	0.004	0.005
Ortho-P												0.009	0.007	0.012	0.01	0.009
P Total												0.023	0.026	0.03	0.02	0.024
Enterococci (MPN/100g)		<2				<2						<2	<2	<2	<2	2
Fecal coli. (MPN/100 mL)	<20	2				<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	23
Arsenic						0.2		0.4	0.3		0.3		0.4	0.6	0.6	
Cadmium						<0.1		0.1	0.1		0.1		0.1	0.1	0.1	
Chromium						0.9		<0.5	<0.5		<0.5		<0.5	<0.5	<0.5	
Cobalt						<0.1		<0.1	<0.1		<0.1		<0.1	<0.1	<0.1	
Copper						0.5		0.3	0.4		0.1		0.3	0.3	0.3	
Iron						3		3	6		3		5	<1	5	
Lead						0.2		<0.1	<0.1		<0.1		<0.1	<0.1	<0.1	
Manganese						1		1	1		1		1	1	1	
Nickel						<0.5		<0.5	<0.5		<0.5		<0.5	<0.5	<0.5	
Zinc						1		<1	<1		1		<1	<1	1	

*all units mg/L unless otherwise stated

Table B-9. Summary of Sediment Quality Data Collected at Site E248646, Freke Anchorage.

	31-Jul-96	21-Jul-98	27-Jul-00	23-Jul-02	10-Jul-03	10-Aug-04
Sample Depth (m)		13	12	15	10-Dec	
Moisture					25.5	
Clay <0.004mm (%)			63.81		2.75	0.7
Silt <0.063mm>0.004mm (%)			2.37		5.24	1.73
Sand <2.00mm>0.063 (%)			95.9		91.99	95.06
Gravel >2.00mm (%)			0.1		0.02	2.51
Gravel 2.0 mm (%)				<0.1		
Coarse Sand 0.59 mm (%)				1.1		
Medium Sand 0.297 mm (%)				7.1		
Fine Sand 0.149 mm (%)				29		
Very Fine Sand 0.053 mm (%)				48.3		
Silt 0.037 mm (%)				8.1		
Clay <0.037 mm (%)				6.3		
Inorganic Carbon-Total				<500	1100	<500
Organic Carbon-Total	4200	3510		27000	11000	<500
Carbon-Total				27000	12000	<1000
Hardness Total						16173.92
Fecal Coli. (MPN/100mL in pore water)	9	<1	13	<20	<2	<2
Enterococcus (MPN/100 g)	9	<1				
Amphipod Bioassay (% survival)	90					
Aluminum		8257	10700	7120	4240	4650
Antimony			<8	0.4	0.2	<0.1
Arsenic		9	<8	9.8	4.2	1.7
Barium		11	21.6	15.9	8.8	5.8
Beryllium		0.2	0.2	0.1	<0.1	<0.1
Bismuth				<0.1	<0.1	<0.1
Boron		5	61			
Cadmium	1	1	<0.8	2.02	0.92	0.14
Calcium		7390	10300	4460	2750	2140
Chromium		13	9.9	9.8	4.2	3
Cobalt		4.3	1.6	2.2	1.6	2.1
Copper	9.7	8.4	7.6	18.5	7.0	7.6
Iron		11850	22900	8340	5360	4990
Lead		<8	<8	3.6	1.3	0.6
Magnesium		1800	2210	6280	2120	2630
Manganese		166.8	216	88.7	66.1	90
Molybdenum		<2	<2	6.2	0.9	0.3
Nickel		4	6	7.6	3.6	2.4
Phosphorus		410	482	609	339	236
Potassium		652	885	1110	653	445
Selenium			<8	1.1	0.5	0.6
Silicon			412			
Silver			<2	0.15	<0.05	<0.05
Sodium		2040	3060	21300	4090	1930
Strontium			83.2	41.9	19.4	16.9
Sulphur		704	826			<0.1
Tellurium				<0.1	<0.1	0.1
Thallium				0.26	0.23	<0.1
Tin		<8	<8	0.4	<0.1	<0.1
Titanium			1530	235	147	114
Vanadium			91	21	13	9
Zinc	18.8	13	19	43.4	18.3	15
Zirconium				<0.5	<0.5	<0.5

*all units µg/g unless otherwise stated

Table B-9 (continued)

	31-Jul-96	21-Jul-98	27-Jul-00	23-Jul-02	10-Jul-03	10-Aug-04
Phthalates (µg/g)						
bis(2-Ethylhexyl) phthalate			0.51			
Butyl benzyl phthalate			0.02			
di-n-Butyl Phthalate			<0.02			
Di-n-octyl-phthalate			<0.02			
Diethyl phthalate			<0.02			
Dimethyl phthalate			0.02			
Monobromobiphenyl			97			
Field Notes:		Fine sand, uniform oxidized	Uniform, brown sand, oxidized	Dark brown mud, large clam	Uniform brown sand. Not a large amount of worms.	

*all units µg/g unless otherwise stated

Table B-10. Summary of Sediment Quality Data Collected at Site E248647, Wootton Bay.

	31-Jul-96	21-Jul-98	27-Jul-00	24-Jul-02	9-Jul-03	10-Aug-04
Sample Depth (m)		10-12	15	20		
Moisture				33.4	31.4	33.7
Clay <0.004mm (%)			3.25		3.26	4.82
<0.063mm>0.004mm (%)			6.74		9.73	8.16
Sand <2.00mm>0.063 (%)			89.86		86.84	81.99
Gravel >2.00mm (%)			0.15		0.17	5.03
Gravel 2.0 mm (%)				<0.1		
Coarse Sand 0.59 mm (%)(%)				9.7		
Medium Sand 0.297 mm (%)				20.8		
Fine Sand 0.149 mm (%)				27.6		
Very Fine Sand 0.053 mm (%)				37.2		
Silt 0.037 mm (%)				2.3		
Clay <0.037 mm (%)				2.5		
Inorganic Carbon-Total				<500	760	<500
Organic Carbon-Total	8190	25800		16000	5700	9000
Carbon-Total				<16000	6500	<9500
Fecal Coli. (MPN/100mL in pore water)	<2	<1	<20	<20	<2	<2
Enterococcus (MPN/100 g)	9	<1				
Amphipod Bioassay (% survival)	91.3					
Hardness Total						48398.4
Aluminum		10190	11500	6060	4890	5070
Antimony			<8	0.2	0.2	0.2
Arsenic		9	<8	3.4	4.8	4.1
Barium		22.1	21.2	15.4	9.5	13.4
Beryllium		0.9	<0.2	<0.1	<0.1	<0.1
Bismuth				<0.1	<0.1	<0.1
Boron		26	33			
Cadmium	1	1	1.3	0.56	1.75	0.84
Calcium		49350	10300	3870	3650	14600
Chromium		14	4.3	4.4	4.7	4
Cobalt		4.3	2.3	2.3	1.5	2.1
Copper	8.5	18	10.4	7.4	9.4	9.4
Iron		14330	8410	7640	4160	5310
Lead		<8	<8	1.5	1.6	1.6
Magnesium		4000	2480	3990	2330	2900
Manganese		207	196	129	66.7	94.1
Molybdenum		<2	<2	0.6	1.2	0.9
Nickel		6	9	3.1	3.8	5.5
Phosphorus		1000	680	545	583	738
Potassium		1520	1190	737	800	956
Selenium			17	<0.5	0.7	0.7
Silicon			1660			
Silver			<2	<0.05	<0.05	0.05
Sodium		7610	3506	5290	6790	4830
Strontium			77.6	30	27.9	99.1
Sulphur		2231	1420			
Tellurium				<0.1	<0.1	<0.1
Thallium				0.23	0.26	0.26
Tin		<8	<8	<0.1	<0.1	0.1
Titanium			1210	238	139	158
Vanadium			34	19	11	12
Zinc	16.6	28.2	22.9	25.9	22.2	19
Zirconium				<0.5	<0.5	<0.5

*all units µg/g unless otherwise stated

Table B-10 (continued)

	31-Jul-96	21-Jul-98	27-Jul-00	24-Jul-02	9-Jul-03	10-Aug-04
Phthalates (µg/g)						
bis(2-Ethylhexyl) phthalate			1.65	0.5	<4	<2
Butyl benzyl phthalate			0.04	<0.1	<0.2	<0.1
di-n-Butyl Phthalate			<0.02	<0.09	<0.18	<0.09
Di-n-octyl-phthalate			<0.02	<0.07	<0.14	<0.07
Diethyl phthalate			<0.02	<0.07	<0.14	<0.07
Dimethyl phthalate			<0.02	<0.1	<0.2	<0.01
Monobromobiphenyl			93			
Polycyclic Aromatic Hydrocarbons (µg/g)						
Acenaphthene				<0.07	<0.01	<0.01
Acenapthylene				<0.07	<0.01	<0.01
Anthracene				<0.1	<0.01	<0.01
Benzo(a)anthracene				<0.01	<0.01	<0.01
Benzo(b)fluoranthene				<0.01	<0.01	<0.01
Benzo(k)fluoranthene				<0.01	<0.01	<0.01
Benzo(g,h,i)perylene				<0.02	<0.02	<0.02
Benzo(a)pyrene				<0.01	<0.01	<0.01
Chrysene				<0.01	<0.01	<0.01
Dibenzo(a,h)anthracene				<0.02	<0.02	<0.02
Fluoranthene				<0.01	<0.01	<0.01
Fluorene				<0.01	<0.01	<0.01
Indeno(1,2,3-c,d)pyrene				<0.02	<0.02	<0.02
Naphthalene				<0.01	0.02	<0.01
Phenanthrene				<0.01	<0.01	<0.01
Pyrene				<0.01	<0.01	<0.01
Total PAH's				<0.01	0.02	<0.01
Total Low MW PAH's				<0.01	0.02	<0.01
Total High MW PAH's				<0.01	<0.01	<0.01
Observations		Coarse grained sand, shells	Uniform brown fine sand; 3cm fine particulate at surface, oxidized	Fine sand, many brittle stars	Fine, sandy mud. Brown, uniform, lots of worms	

*all units µg/g unless otherwise stated

Table B-11. Summary of Sediment Quality Data Collected at Site E248648, Penrose Bay.

	31-Jul-96	21-Jul-98	24-Jul-02	10-Jul-03	11-Aug-04
Depth		14	12m	12	
Moisture				23.6	
% Clay <0.004 mm (% w/w)				6.45	2.27
% Silt < 0.063mm > 0.004mm (% w/w)				11.54	8.39
% Sand < 2.00mm > 0.063mm (% w/w)				81.97	89.37
% Gravel >2.00 mm (% w/w)				0.03	0.01
Gravel 2.0 mm (% w/w)			<0.1		
Coarse Sand 0.59 mm (% w/w)			0.7		
Medium Sand 0.297 mm (% w/w)			3.4		
Fine Sand 0.149 mm (% w/w)			17.2		
Very Fine Sand 0.053 mm (% w/w)			72.9		
Silt 0.037 mm (% w/w)			3.1		
Clay <0.037 mm (% w/w)			2.8		
Inorganic Carbon-Total			3300	940 (560)	<500
Organic Carbon-Total	4500	4690	3300	3900	3400
Carbon-Total			6600	4800	<3900
Fecal coliform (MPN/100 g)	<2	<1	<20	<2	
Enterococcus (MPN/100 g)	9	<1			2
Amphipod Bioassay (% survival)	86.3				
Hardness Total					13961.09
Aluminum		9458	4170	4130	4290
Antimony			0.1	0.1	0.1
Arsenic		<8	2.4	1.8	1.7
Barium		16.5	7.9	6.6	8
Beryllium		0.2	<0.1	<0.1	<0.1
Bismuth			<0.1	<0.1	<0.1
Cadmium	<0.8	2	0.67	0.38	0.66
Calcium		8290	3230	3110	2870
Chromium		9.4	3.2	3.4	2
Cobalt		4	1.1	1.2	1.1
Copper	8.5	9.2	5	5.3	5.8
Iron		10820	4020	3690	3310
Lead		10	1.3	1.4	1.3
Magnesium		2270	2200	1630	1650
Manganese		165.9	48.2	51.6	47.5
Molybdenum		<2	0.3	0.2	0.3
Nickel		4	2.6	2.6	2.6
Phosphorus		500	389	406	373
Potassium		1010	420	596	653
Selenium			<0.5	<0.5	<0.5
Silver			<0.05	<0.05	<0.05
Sodium		4760	3610	3620	4370
Strontium			22.4	22.4	24.5
Tellurium			<0.1	<0.1	<0.1
Thallium			0.2	0.15	0.2
Tin		<8	<0.1	<0.1	0.4
Titanium			113	108	91
Vanadium			9	9	7
Zinc	13	15	13.4	12.1	12
Zirconium			<0.5	<0.5	0.7
Observations		Fine sand, oxidized	Fine sand, fine layer of lighter brown mud on top	Uniform brown, fine sand. Lots of pink worms.	

*all units µg/g unless otherwise stated

Table B-12. Summary of Sediment Quality Data Collected at Site E248649, Trevenen Bay.

	31-Jul-96	21-Jul-98	27-Jul-00	24-Jul-02	09-Jul-03	11-Aug-04
Moisture (%)				28.1	24.7	24.9
Sample Depth (m)		9	25	25 & 10	20	
Clay <0.004mm (%)			2.22		1.67	2.64
Silt <0.063mm>0.004mm (%)			1.72		2.46	2.19
Sand <2.00mm>0.063 (%)			95.05		95.38	85.45
Gravel >2.00mm (%)			1.01		0.48	9.72
Gravel 2.0 mm (%)				5.1		
Coarse Sand 0.59 mm (%)				8.1		
Medium Sand 0.297 mm (%)				6.9		
Fine Sand 0.149 mm (%)				12.4		
Very Fine Sand 0.053 mm (%)				66.1		
Silt 0.037 mm (%)				0.9		
Clay <0.037 mm (%)				0.5		
Nitrogen, Total as N			500			
Inorganic Carbon-Total				770	1100	<500
Organic Carbon-Total	7500	12700		3800	5300	9600
Carbon-Total				4600	6400	<10100
Hardness Total						45646.46
Fecal Coli. (MPN/100mL in pore water)	<2	<1		<20	<2	<2
Enterococcus (MPN/100 g)	9	<1				
Amphipod Bioassay (% survival)	91.3					
Aluminum		12860	10400	5760	6570	5730
Antimony			<8	0.2	0.2	0.2
Arsenic		10	<8	2.3	2.9	2.6
Barium		24.1	20.5	10.4	12.9	14.2
Beryllium		0.8	<0.2	<0.1	<0.1	<0.1
Bismuth					<0.1	<0.1
Boron		16	28	<0.1		
Cadmium	<0.8	1	<0.8	0.21	0.28	0.22
Calcium		36700	9110	7030	10800	13300
Chromium		12	2.5	3.9	3.8	6
Cobalt		6.2	3.8	2	3.2	2.7
Copper	7	15	6	4.4	5.6	6.4
Iron		14250	8500	6790	8770	6530
Lead		<8	<8	1.3	1.7	2.1
Magnesium		3700	2230	2960	3570	3020
Manganese		235.9	153	84.5	123	103
Molybdenum		2	<2	0.2	0.7	0.2
Nickel		7	5	2.7	3.2	4.5
Phosphorus		860	398	529	486	435
Potassium		1350	1060	558	1080	989
Selenium			9	<0.5	0.6	<0.5
Silicon			2280			
Silver			<2	<0.05	<0.05	<0.05
Sodium		5670	1990	2590	4250	3900
Strontium			71.7	42.9	62.7	72.2
Sulphur		20445	669			
Tellurium				<0.1	<0.1	<0.1
Thallium				0.13	0.21	0.16
Tin		<8	<8	<0.1	<0.1	0.1
Titanium			887	169	198	120
Vanadium			31	16	19	12
Zinc	19	26.2	18.6	16.4	24.9	22
Zirconium				<0.5	<0.5	<0.5

*all units µg/g unless otherwise stated

Table B-12 (continued)

	31-Jul-96	21-Jul-98	27-Jul-00	24-Jul-02	09-Jul-03	11-Aug-04
Phthalates (µg/g)						
bis(2-Ethylhexyl) phthalate			28.4	0.2	<4	<2
Butyl benzyl phthalate			0.05	<0.1	<0.2	<0.1
di-n-Butyl Phthalate			<0.02	<0.09	<0.18	<0.07
Di-n-octyl-phthalate			<0.02	<0.07	<0.14	<0.1
Diethyl phthalate			<0.02	<0.07	<0.14	<0.09
Dimethyl phthalate			<0.02	<0.1	<0.2	<0.07
Monobromobiphenyl			95			
Field Notes:		Coarse sand, gravel, shells	Fine brown sand, oxidized	Fine sand, uniform, lots of shells, worms & brittle stars	Sandy, brown, uniform	

*all units µg/g unless otherwise stated

Table B-13. Summary of Sediment Quality Data Collected at Site E248651, Grace Harbour.

	02-Sep-99	24-Jul-02	09-Jul-03	10-Aug-04
Sample collection depth (m)	14	12	12	
Moisture (%)		35.8	33.8	83.9
Clay <0.004mm (%)	5.26		6.74	76.65
Silt < 0.063mm>0.004mm (%)	25.66		19.78	19.22
Sand <2.00mm>0.063 mm (%)	69.00		73.43	3.89
Gravel >2.00 mm (%)	0.07		0.06	0.24
Gravel 2.0 mm (%)		<0.1		
Coarse Sand 0.59 mm (%)		1.9		
Medium Sand 0.297 mm (%)		3.8		
Fine Sand 0.149 mm (%)		10.9		
Very Fine Sand 0.053 mm (%)		69.1		
Silt 0.037 mm (%)		7.3		
Clay <0.037 mm (%)		7.1		
Inorganic Carbon-Total		1100	570	<500
Organic Carbon-Total		8300	13000	38000
Carbon-Total		9400	14000	<38500
Total nitrogen	780			
Residue volatile	21400			
Solid Phase MicroTox %(5min)	2.08			
Solid Phase MicroTox %(15 min)	1.41			
Hardness Total				59220.62
Enterococcus (MPN/100 g)	20			
Fecal coliforms (MPN/100 g)	<20	<20	<2	<2
Aluminum	9930	5610	6140	11900
Antimony	<8	<0.1	0.1	0.3
Arsenic	<8	2	2.8	13.4
Barium	17	13.4	16.7	42.4
Beryllium	0.7	<0.1	0.1	0.2
Bismuth		<0.1	<0.1	<0.1
Boron	10			
Cadmium	1	0.96	0.94	4.47
Calcium	9220	4590	5020	7060
Chromium	7.6	4.5	4.9	16
Cobalt	6.5	1.9	2.4	3.3
Copper	9.9	8.9	11.6	48.6
Iron	7140	7100	6390	11500
Lead	10	1.8	2.5	10
Magnesium	2270	3130	2870	10100
Manganese	160	80.7	94.3	124
Molybdenum	<2	0.5	0.6	12.9
Nickel	5	3.8	4.9	15.9
Phosphorus	670	718	674	915
Potassium	1030	586	1160	4070
Selenium	<8	<0.5	<0.5	3.4
Silicon	360			
Silver	<2	0.07	0.08	0.55
Sodium	3230	5000	5840	55700
Strontium	66.1	29.3	34.3	72.7
Sulphur	1320			
Tellurium		<0.1	<0.1	0.2
Thallium		0.23	0.28	0.34
Tin	<8	0.1	0.2	0.7
Titanium	1120	224	216	271
Vanadium	26	15	15	30

*all units µg/g unless otherwise stated

Table B-13 (continued)

	02-Sep-99	24-Jul-02	09-Jul-03	10-Aug-04
Zinc	21.2	20.3	27.3	83
Zirconium		<0.5	<0.5	1.1
Polycyclic Aromatic Hydrocarbons				
Acenaphthene		<0.01	<0.01	<0.1
Acenapthylene		<0.01	<0.01	<0.1
Anthracene		<0.01	<0.01	<0.1
Benzo(a)anthracene		<0.01	<0.01	<0.01
Benzo(b)fluoranthene		<0.01	<0.01	<0.01
Benzo(k)fluoranthene		<0.01	<0.01	<0.02
Benzo(g,h,i)perylene		<0.02	<0.02	<0.01
Benzo(a)pyrene		<0.01	<0.01	<0.01
Chrysene		<0.01	<0.01	<0.01
Dibenz(a,h)anthracene		<0.02	<0.02	<0.02
Fluoranthene		<0.01	<0.01	<0.01
Fluorene		<0.01	<0.01	<0.01
Indeno(1,2,3-c,d)pyrene		<0.02	<0.02	<0.02
Naphthalene		<0.01	0.02	<0.01
Phenanthrene		<0.01	<0.01	<0.01
Pyrene		<0.01	<0.01	<0.01
Total PAH's		<0.01	0.02	<0.01
Total Low MW PAH's		<0.01	0.02	<0.01
Total High MW PAH's		<0.01	<0.01	<0.01
Description	Fine sand, silt, dark, not anoxic organic matter	Brown mud, some lighter brown mud in thin surface layer	Dark brown, uniform mud. A few worms.	

*all units µg/g unless otherwise stated

Table B-14. Summary of Sediment Quality Data Collected at Site E248653, Okeover Central.

	27-Jul-00	22-Jul-02	09-Jul-03
Sample Depth	75	80	
Moisture		87	86.6
Clay <0.004mm (%)	75.48		84.87
<0.063mm>0.004mm (%)	21.32		13.48
Sand <2.00mm>0.063 (%)	3.2		1.66
Gravel >2.00mm (%)	<0.01		0.00
Gravel 2.0 mm (%)		<0.1	
Coarse Sand 0.59 mm (%)		1.7	
Medium Sand 0.297 mm (%)		12.3	
Fine Sand 0.149 mm (%)		33.5	
Very Fine Sand 0.053 mm (%)		44.3	
Silt 0.037 mm (%)		7.1	
Clay <0.037 mm (%)		1.1	
Inorganic Carbon-Total		960	3200
Organic Carbon-Total		53000	45000
Carbon-Total		54000	48000
Sulphides	0.15		
Echinoid Fertilization Test % success	7%		
Fecal Coli. (MPN/100mL in pore water)	<20	<20	<2
Aluminum	17300	12900	10400
Antimony	<8	0.4	0.1
Arsenic	17	12.7	5.1
Barium	76.2	48.7	31.9
Beryllium	0.4	0.2	0.2
Bismuth		<0.1	<0.1
Boron	148		
Cadmium	6.2	4.13	5.88
Calcium	12700	7240	12900
Chromium	23.2	18.2	15.8
Cobalt	3.8	3.4	2.9
Copper	61.3	44.6	35.6
Iron	16100	12600	9870
Lead	16	10.5	2.4
Magnesium	10500	12500	10100
Manganese	235	136	107
Molybdenum	9	17.2	24.7
Nickel	21	14.7	17.6
Phosphorus	1290	1030	660
Potassium	4750	2970	4320
Selenium	16	2.8	3.2
Silicon	1830		
Silver	<2	0.54	0.34
Sodium	36510	64200	63000
Strontium	114	78.4	89.7
Sulphur	13100		
Tellurium		<0.1	<0.1
Thallium		0.4	0.43
Tin	<8	0.6	<0.1
Titanium	1140	318	278
Vanadium	55	36	36
Zinc	145	89.2	45.5
Zirconium		1.3	1.0

*all units µg/g unless otherwise stated

Table B-14 (continued)

	27-Jul-00	22-Jul-02	09-Jul-03
Phthalates (µg/g)			
bis(2-Ethylhexyl) phthalate	2.21	<1	<4
Butyl benzyl phthalate	0.24	<1	<0.2
di-n-Butyl Phthalate	<0.02	<0.9	<0.18
Di-n-octyl-phthalate	<0.02	<0.7	<0.14
Diethyl phthalate	<0.02	<0.7	<0.14
Dimethyl phthalate	0.05	<1	<0.2
Monobromobiphenyl	86		
Polycyclic Aromatic Hydrocarbons (µg/g)			
Acenaphthene			<0.01
Acenapthylene			<0.01
Anthracene			<0.01
Benzo(a)anthracene			<0.01
Benzo(b)fluoranthene			<0.01
Benzo(k)fluoranthene			<0.01
Benzo(g,h,i)perylene			<0.02
Benzo(a)pyrene			<0.01
Chrysene			<0.01
Dibenzo(a,h)anthracene			<0.02
Fluoranthene			<0.01
Fluorene			<0.01
Indeno(1,2,3-c,d)pyrene			<0.02
Naphthalene			<0.01
Phenanthrene			<0.01
Pyrene			<0.01
Total PAH's			<0.01
Total Low MW PAH's			<0.01
Total High MW PAH's			<0.01
Field Notes:	Black fine mud, sulphide odor	Black, uniform mud, not smelly	Very dark mud, uniform. Consistency of "pudding". No worms.

*all units µg/g unless otherwise stated

Table B-15. Summary of Marine and Freshwater Bacteriological Data Collected by Volunteer Samplers (2001 - 2004).

	Sites:	10-May-01				14-Jun-01				13-Jul-01				31-Aug-01				30-May-02			
		Entero		Fecal		Entero		Fecal		Entero		Fecal		Entero		Fecal		Entero		Fecal	
		FW	MW	FW	MW	FW	MW	FW	MW	FW	MW	FW	MW	FW	MW	FW	MW	FW	MW	FW	MW
1	Freke Anchorage	6		9		9		24		81	<2	13	2	21	<2	35	<2	40	<2	55	2
2	Sliammon Lease	5	2	1	<2	1	<2	114	<1	39	<2	38	2	37	<2	47	4	40	<2	<1	2
3	Larson Landing	19	<2	<1	<2	<1	<2	4	<1	<1	<2	<1	<2	28	<2	19	<2	<1	2	<1	5
4	Govt Wharf Ditch	69		252		40		114		2580		750		6		140		91	<2	8	<2
5	D/S Park South					45		5		30		4		37		>300		52		10	
6	D/S Park North		<2		2	>3000				30		12		31		241		26		81	
7	Penrose Bay		<2		<2		<2		<1		<2		<2		<2		2				
8	Trevenen Bay Head		<2		<2		<2		<1		<2		<2		<2		<2		<2		<2
9	Trevenen Bay	3	<2	1	<2	1	<2	38	<1	17	4	5	<2	40	<2	111	11	23	<2	<1	<2
10	Cochrane Bay	29	<2		<2	1		4		290	<2	<3000	<2	121	<2	9	130	16	<2	<1	<2
11	Cochrane Ck	355	2	16	<2	1	<2	77	<1	25	<2	1	<2	20	<2	250	2	14	<2	<1	2
12	Cochrane Bay north		<2		<2		<2		<1		<2		<2		<2		<2				
13	Thorp Island		<2		<2		<2		<1		<2		<2		<2		<2				
14	Parker Bay	27	<2	5	<2	4	<2	24	<1	7		<1			<2		<2	1	<2	<1	<2
15	Cavendish Bay						<2		<1		<2		<2		<2		2		<2		<2
16	Jean Island W		<2		<2		<2		<1		<2		<2		<2		<2		<2		<2
17	Jean Is East		<2		<2		<2		<1		<2		<2		<2		22		<2		<2
18	Grace Harbour Head	64	<2	11	<2	2	<2	56	<1	53	<2	29	<2	34	<2	55	13	59	<2	6	<2
19	Edith Is. North		<2		<2		<2		<1		<2		<2		<2		<2				
20	Edith Is. South		<2		<2						<2		<2		5		3				
21	Isabel Bay		<2		<2		<2		<1		<2		<2		<2		<2				
22	Madge Island		<2		<2		<2		<1		<2		<2		<2		4				
23	Wootton Bay		<2		<2						<2		<2		<2		2				
24	Grail Point	137	<2	2	14					212	<2	225	<2	147	<2	>300	2	17	2	18	7
25	Thors Cove										<2		<2		<2		8		<2		<2
26	Theodosia Inlet									14	<2	2	12	28	<2	10	49	18	8	<1	13
27	Grace Harbour Ctr						<2		<1		<2		<2		<2		13		<2		<2
28	Moss Point						<2		<1		<2		<2		<2		5		2		<2
29	Moss Point Bay						<2		<1		2		<2		2		4		<2		<2

*Entero = Enterococci (MPN/100 mL); Fecal = Fecal coliforms (MPN/100 mL:); FW = Freshwater sample; MW = Marine water sample

Table B-15 (continued)

	Sites:	30-Aug-02				23-Sep-02				30-Oct-02				14-Nov-02				14-Dec-02			
		Entero		Fecal		Entero		Fecal		Entero		Fecal		Entero		Fecal		Entero		Fecal	
		FW	MW	FW	MW	FW	MW	FW	MW	FW	MW	FW	MW	FW	MW	FW	MW	FW	MW	FW	MW
1	Freke Anchorage	77	5	45	>1600	39	4	7	13	339	<2	>300	<2	73	22		26	44	17	82	33
2	Sliammon Lease	97	2	11	<2	<1	13	8	5	5	<2	1	<2	3	2		<2	2	2	1	<2
3	Larson Landing	510		1400		68	<2	81	<2	46	<2	55	<2	1	8		<2	4		1	2
4	Govt Wharf Ditch	1140		410		>300		>300		124		320		79	33		<2	25		>300	
5	D/S Park South	4		<25						<1		<2		29				1		10	
6	D/S Park North	16	<2	13	<2	8	<2	2	<2	103	<2	45	<2	93				36	<2	15	2
7	Penrose Bay		<2		<2	22	<2	233	2		<2		<2		8		2		<2		<2
8	Trevenen Bay Head		2		<2		<2		2		<2		<2		<2		<2				2
9	Trevenen Bay	7	<2	8	<2	4	<2	<1	4	<1	<2	3	<2	2	2		<2	3		3	5
10	Cochrane Bay	37	<2	2	2	45	<2	12	<2	32	<2	2	<2	35	2		<2	<1		3	<2
11	Cochrane Ck	11		<1		1	<2	<1	<2	2	<2	<1	<2	2	5		<2	17		25	2
18	Grace Harbour Head	174	<2	93	4	44	<2	31	<2	107	<2	23	<2	9	2		<2	4		5	8
19	Edith Is. North		<2		<2		<2		<2		<2		<2		2		<2				2
20	Edith Is. South		<2		<2										13		2				<2
24	Grail Point	1760	<2	>3000	13	>300		>300		243	<2	>3000	<2	28	8		9	3	2	3	9
25	Thors Cove		<2		<2		<2		<2		<2		<2		2		<2				<2
26	Theodosia Inlet	30	<2	14	23	20	4	12	17		<2		<2	6	5		4	1	5	3	8
27	Grace Harbour Ctr		<2		2		2		<2		<2		<2		5		<2		<2		2
28	Moss Point																				
29	Moss Point Bay						<2		4												
33	Hillingdon Point	31	<2	13	5	424	<2	264	8		<2		<2	11	23		<2	3	<2	<1	<2

*Entero = Enterococci (MPN/100 mL); Fecal = Fecal coliforms (MPN/100 mL:); FW = Freshwater sample; MW = Marine water sample

Table B-15 (continued)

	Sites:	20-Jan-03		17-Nov-03		27-Nov-03		11-Dec-03		12-Jan-04		15-Jan-04		20-Jan-04		10-Feb-04	
		Entero	Fecal	Entero	Fecal	Entero	Fecal	Entero	Fecal	Entero	Fecal	Entero	Fecal	Entero	Fecal	Entero	Fecal
		MW	MW	FW	FW	FW	FW	FW	FW	FW	FW	FW	FW	FW	FW	FW	FW
1	Freke Anchorage	<2	49	69	120	85	290	81	110	11	26	8	3	3	25	1	<1
2	Sliammon Lease	<2	7														
3	Larson Landing	<2	2	<1	3	<1	2	<1	1	2	1	<1	<1	<1	<1	<1	<1
4	Govt Wharf Ditch			82	13	11	1	1	1	1	<1	<1	2	<1	1	1	<1
6	D/S Park North	<2	5														
7	Penrose Bay	<2	<2														
8	Trevenen Bay Head	<2	<2														
9	Trevenen Bay	2	5														
10	Cochrane Bay	<2	<2	1	<1	<1	<1	<1	<1	1	6	2	2	3	3	<1	<1
11	Cochrane Ck	<2	2														
18	Grace Harbour Head	2	13			<1	2	3	4	5	5	3	3	<1	1	<1	<1
19	Edith Is. North	<2	<2														
20	Edith Is. South	<2	<2														
24	Grail Point	<2	<2	11	4	3	<1	<1	<1	<1	<1	<1	<1	<1	1	<1	<1
25	Thors Cove	<2	2														
26	Theodosia Inlet	<2	2			<1	1	1	<1	<1	<1	<1	<1	<1	<1	<1	<1
27	Grace Harbour Ctr	<2	<2														
33	Hillingdon Point	<2	7	9	99	1	29	<1	12	<1	<1	<1	3	<1	<1	<1	<1
34	Malaspina Rd Ditch U/S of Parking Lots			110	11	10	3	3	2	2	1	1	<1	<1	1	<1	<1

*Entero = Enterococci (MPN/100 mL); Fecal = Fecal coliforms (MPN/100 mL:); FW = Freshwater sample; MW = Marine water sample

Table B-15 (continued)

	Sites:	12-Feb-04		16-Feb-04		17-Feb-04		18-Feb-04		25-Aug-04		02-Sep-04		15-Sep-04		23-Sep-04	
		Entero	Fecal	Entero	Fecal	Entero	Fecal	Entero	Fecal	Entero	Fecal	Entero	Fecal	Entero	Fecal	Entero	Fecal
		FW	FW	FW	FW	FW	FW	FW	FW	FW	FW	FW	FW	FW	FW	FW	FW
1	Freke Anchorage	1	<1	1	3	<1	1	<1	2	120	150	34	180	53	160	87	150
3	Larson Landing	<1	<1	1	<1	<1	<1	<1	<1	190	560	12	89	5	25	22	11
4	Govt Wharf Ditch	<1	<1	1	<1	<1	1	<1	<1	940	270	6	17	89	49	26	53
5	D/S Park South													2500	3700	1000	1500
6	D/S Park North											86	360	430	370	14	50
9	Trevenen Bay									860	890	1	1	6	2	4	9
10	Cochrane Bay	<1	<1	2	<1	*<1	*<1	2	<1	260	2400	450	3	360	6	230	<1
18	Grace Harbour Head	<1	<1	<1	1	<1	1	*1	*<1	3000	2200	130	250	24	120	160	86
24	Grail Point	<1	<1	<1	1	<1	1	<1	1	1300	1200	310	750	1700	2400	310	1400
26	Theodosia Inlet	<1	<10	<1	1	<1	2	<1	<1	110	78	53	8	19	1	8	4
33	Hillingdon Point	<1	<1	2	1	<1	<1	<1	1	760	2100	3000	750	60	51	25	37
34	Malaspina Rd Ditch U/S of Parking Lots	<1	<1	<1	<1	<1	<1	1	<1	1800	710	23	22	8	24		
35	Larson Landing: Creek thru residence													51	22		

*Entero = Enterococci (MPN/100 mL); Fecal = Fecal coliforms (MPN/100 mL:); FW = Freshwater sample; MW = Marine water sample

Table B-15 (continued)

	Sites:	04-Oct-04		14-Oct-04		25-Oct-04		08-Nov-04		22-Nov-04		01-Dec-04		06-Dec-04	
		Entero FW	Fecal FW	Entero FW	Fecal FW	Entero FW	Fecal FW	Entero FW	Fecal FW	Entero FW	Fecal FW	Entero FW	Fecal FW	Entero FW	Fecal FW
1	Freke Anchorage	28	50	57	410			35	24	18	68	11	35	10	12
3	Larson Landing			7	10	34	38	1	<1	<1	5	<1	10	<1	1
4	Govt Wharf Ditch	6	17	1	5	60	38	3	3	<1	<1	<1	<1	<1	2
5	D/S Park South	4000	4700	1200	2000	200	120	24	20	17	84	17	42	5	4
6	D/S Park North	<1	670	<1	4	1	1	<1	2	<1	<1	<1	<1	<1	<1
9	Trevenen Bay	<1	10	2	4	12	33	2	5	<1	1	<1	<1	<1	<1
10	Cochrane Bay	2	23	21	22	76	49	<1	1	<1	3	<1	<1	2	<1
18	Grace Harbour Head	21	4	4	4	49	7	23	15	<1	2	<1	13	<1	<1
24	Grail Point	3500	110	42	420	2800000	4300000	4	7	2	2	<1	<1	<1	<1
26	Theodosia Inlet	<1	<1			62	56	1	<1	<1	<1	<1	1	<1	<1
33	Hillingdon Point	<1	2	58	2	70	44	<1	2	1	4	1	14	<1	<1
34	Malaspina Rd Ditch U/S of Parking Lots									<1	2	<1	7	<1	<1
35	Larson Landing:Creek thru residence	7	6												

*Entero = Enterococci (MPN/100 mL); Fecal = Fecal coliforms (MPN/100 mL:); FW = Freshwater sample; MW = Marine water sample