

**Table ESM-1.** Measured concentration of major and trace elements in estuarine samples. N.D. stands for non determined. All concentrations are given in  $\mu\text{g L}^{-1}$  unless indicated. Filtration pore size is  $0.22 \mu\text{m}$  unless indicated.

**March 2009**

Sample:	E-1	E-1 1 kDa	E-2	E-2 1 kDa	E-3	E-3 1 kDa	E-4	E-4 1 kDa
Salinity, ‰	0.56	0.57	0.31	0.28	4.52	4.67	13.33	13.27
Alk, mol/L	0.00304				0.00282		0.00262	
DOC	10.16	3.59	9.13	2.89	9.49	5.48	8.115	4.64
Li	5.9	5.9	4.7	4.3	28.9	28.4	75.9	74.5
B	53.0	50.9	20.5	18.1	550.8	536.3	1484.9	1477.1
Na	N.D.	N.D.	11417	11135	N.D.	N.D.	N.D.	N.D.
Mg	20432	20928	11335	10434	166248	171923	490361	488410
Al	41.9	10.0	42.5	10.4	38.0	15.9	20.8	8.4
Si	4930	4850	5240	5200	4420	4430	2870	2810
P	21.8	7.2	23.2	4.7	8.5	7.6	N.D.	N.D.
K	4481	4432	965	951	49189	50171	143621	144930
Ca	49787	47372	47388	44731	93237	93152	178431	178409
Ti	1.384	0.936	1.278	0.887	1.234	1.054	1.588	1.194
V	0.549	0.408	0.363	0.236	0.686	0.585	1.037	0.763
Cr	0.282	0.132	0.234	0.082	0.602	0.497	1.230	0.718
Mn	38.7	37.6	30.9	28.2	42.5	40.2	28.4	27.3
Fe	322.5	42.3	354.3	36.2	389.4	85.0	312.3	136.7
Co	0.056	0.034	0.0457	0.0226	0.0518	0.0347	0.0408	0.0310
Ni	0.713	0.391	0.6324	0.3086	0.9590	0.8287	0.7831	0.6124
Cu	0.751	0.446	0.4004	cntd	0.4146	cntd	0.6402	0.1987
Zn	8.4162	cntd	7.5205	cntd	39.4	cntd	37.6	cntd
Ga	0.016	0.010	0.0106	0.0073	0.0156	0.0151	0.1203	0.0412
Ge	0.010	0.011	0.0090	0.0080	0.0347	N.D.	0.1637	N.D.
As	0.59	0.349	0.59	0.32	0.81	0.56	1.32	1.04
Rb	1.81	1.942	0.9	0.9	15.3	15.3	43.0	42.5
Sr	573	549	538	512	1401	1404	3082	3066
Y	0.137	0.022	0.1228	0.0168	0.1516	0.0431	0.1322	0.0537
Zr	0.165	0.035	0.1514	0.0125	0.1194	0.0545	0.1385	0.0642
Mo	0.443	0.469	0.400	0.379	1.95	1.97	4.80	5.06
Cd	0.014	N.D.	N.D.	0.0068	N.D.	0.0672	N.D.	0.2247
Sb	0.033	0.024	0.027	0.0200	0.0571	0.0484	0.249	0.193
Cs	0.009	0.009	0.009	0.0088	0.0784	0.0838	0.203	0.199
Ba	46.1	42.8	47.4	43.2	40.4	39.7	28.9	28.7
La	0.1192	0.0093	0.0866	0.0060	0.0974	0.0211	0.0752	0.0210
Ce	0.1126	0.0100	0.1048	0.0071	0.1336	0.0220	0.1077	0.0247
Pr	0.0260	0.0022	0.0235	0.0015	0.0277	0.0047	0.0318	0.0060
Nd	0.1066	0.0087	0.1058	0.0060	0.1259	0.0242	0.1391	0.0364
Sm	0.0236	0.0037	0.0223	0.0018	0.0265	0.0064	0.0456	0.0265
Eu	0.0135	0.0066	0.0132	0.0065	0.0129	0.0074	0.0364	0.0181
Gd	0.0291	0.0037	0.0251	0.0023	0.0270	0.0090	0.0485	0.0190
Tb	0.0042	0.0003	0.0036	0.0003	0.0026	0.0013	0.0146	0.0054
Dy	0.0228	0.0021	0.0205	0.0017	0.0256	0.0075	0.0385	0.0084
Ho	0.0047	0.0005	0.0041	0.0002	0.0049	0.0014	0.0131	0.0074
Er	0.0137	0.0017	0.0121	0.0014	0.0127	0.0044	0.0346	0.0045
Tm	0.0019	0.0002	0.0017	0.0001	0.0024	0.0005	0.0135	0.0038
Yb	0.0111	0.0017	0.0104	0.0010	0.0098	0.0028	0.0250	0.0065
Lu	0.0016	0.0002	0.0015	0.0001	0.0021	0.0005	0.0125	0.0052
Hf	0.0039	0.0013	0.0030	0.0008	0.0047	0.0026	0.0326	0.0195
W	0.0088	0.0092	0.0089	0.0073	0.0107	0.0081	0.0961	0.0841
Pb	0.0513	0.0122	0.0329	N.D.	0.1295	0.0568	0.1075	N.D.
Th	0.0111	0.0008	0.0097	0.0006	0.0096	0.0024	0.0102	0.0021
U	0.416	0.321	0.430	0.331	0.729	0.653	1.38	1.29

Table ESM-1, continued. March 2009.

Sample:	E-4b	E-4b 1 kDa	E-5	E-6	E-6 1kDa	E-7	E-7 1 kDa	E-8	E-8 1 kDa
Salinity, ‰	14.90	13.82	1.32	1.28	1.24	9.38	9.09	3.83	3.30
Alk, mol/L		0.00184	0.00296	0.00303		0.00273		0.00281	
DOC	7.476	4.16	10.12	9.94	4.88	8.62	4.2	9.372	3.835
Li	86.0	78.7	9.0	9.0	9.0	45	42	20	20
B	1675.5	1595.9	140.9	133.8	130.3	1058	1000	415	361
Na	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Mg	548382	508535	48637	47283	45500	345274	334397	140821	121445
Al	19.0	14.2	45.0	41.0	12.3	27.7	8.2	36.5	8.7
Si	2470	2430	5130	4955	4885	3620	3560	4263	4054
P	N.D.	13.3	30.0	27.0	9.2	12.7	12.4	30.1	15.3
K	164248	150429	12146	11486	11485	99449	96109	36617	34791
Ca	194226	180155	57620	59431	56946	139416	134952	86704	76425
Ti	1.241	1.094	1.558	1.496	1.011	0.805	0.649	1.384	0.965
V	0.930	0.675	0.696	0.562	0.472	0.803	0.664	0.552	0.412
Cr	0.997	0.878	0.263	0.306	0.245	0.720	0.556	0.465	0.338
Mn	24.807	23	46	40.9	40.1	38.3	36.1	42.0	38.0
Fe	298.003	126	446	396.4	55.8	326.2	104.1	326.6	69.7
Co	N.D.	N.D.	0.058	0.055	0.036	N.D.	N.D.	0.039	0.012
Ni	0.839	0.702	0.734	0.879	0.667	0.499	0.381	0.759	0.528
Cu	0.202	0.081	2.069	1.258	0.541	1.308	0.387	2.786	0.547
Zn	21.0	cntd	10.3	8.9	Cntd	35.0	30.0	23.3	19.0
Ga	0.039	0.008	0.013	0.010	0.007	0.019	0.004	0.009	0.004
Ge	N.D.	0.063	0.012	0.014	0.013	0.058	0.059	N.D.	0.030
As	1.155	0.846	0.655	0.66	0.38	0.800	0.644	0.686	0.422
Rb	48.512	43.659	4.153	3.99	3.93	28.8	28.4	11.1	10.6
Sr	3246	3104	721	724	705	2285	2274	1235.4	1084.6
Y	0.119	0.041	0.147	0.142	0.029	0.129	0.037	0.132	0.029
Zr	0.120	0.084	0.169	0.176	0.032	0.088	0.037	0.120	0.025
Mo	5.03	4.68	0.72	0.88	0.82	2.98	3.13	1.23	1.25
Cd	N.D.	0.274	0.022	0.023	0.018	0.120	0.099	0.041	0.117
Sb	0.136	0.113	0.035	0.034	0.029	0.063	0.047	0.046	0.033
Cs	0.168	0.156	0.010	0.008	0.009	0.077	0.082	0.021	0.022
Ba	25.2	24.2	45.0	45.3	43.7	35.3	34.5	42.6	38.1
La	0.060	0.013	0.104	0.094	0.014	0.074	0.010	0.087	0.009
Ce	0.088	0.016	0.139	0.123	0.017	0.107	0.019	0.111	0.014
Pr	0.021	0.005	0.029	0.027	0.003	0.019	0.004	0.025	0.002
Nd	0.046	0.015	0.121	0.114	0.014	0.106	0.023	0.107	0.018
Sm	0.034	0.010	0.029	0.028	0.004	0.024	0.002	0.022	0.005
Eu	0.003	0.002	0.013	0.015	0.008	0.011	0.005	0.014	0.007
Gd	0.034	N.D.	0.036	0.031	0.006	0.027	0.005	0.028	0.002
Tb	0.004	N.D.	0.004	0.004	0.000	0.003	0.002	0.003	0.001
Dy	0.031	0.003	0.026	0.021	0.003	0.022	N.D.	0.021	0.003
Ho	0.005	0.001	0.004	0.005	0.001	0.005	0.001	0.005	0.001
Er	0.016	0.002	0.015	0.013	0.002	0.010	0.000	0.014	0.001
Tm	0.005	0.001	0.002	0.002	0.000	0.001	0.000	0.002	0.000
Yb	0.012	0.001	0.011	0.013	0.002	0.011	0.001	0.010	0.001
Lu	0.003	0.001	0.002	0.002	0.000	0.002	N.D.	0.002	0.000
Hf	0.019	0.013	0.008	0.006	0.003	0.012	0.005	0.010	0.006
W	0.052	0.041	0.009	0.013	0.012	0.009	0.006	0.003	0.002
Pb	0.121	N.D.	0.085	0.020	N.D.	N.D.	N.D.	N.D.	N.D.
Th	0.003	0.003	0.011	0.011	0.001	0.007	0.001	0.010	0.001
U	1.33	1.26	0.487	0.503	0.418	1.067	0.992	0.573	0.450

Table ESM-1, continued. **January 2010.**

Sample:	SD-5	SD-7	SD-6
Salinity, ‰	0.25	6.12	1.23
DOC	14.46	13.09	15.01
Alk, M	0.00179	0.00175	0.00171
Li	2.6	11.2	17.5
B	23.83	783	148
Na	7580	1801642	319072
Mg	9162	225258	45378
Al	123.8	84.8	95.0
Si	5704	3516	2503.5
P	27.52	50.8	23.1
K	924.1	67562	13159.4
Ca	43950	101316	46699.7
Sc	0.6593	0.787	0.5993
Ti	2.331	3.555	2.7008
V	1.009	1.589	1.2149
Cr	0.4587	3.709	0.6188
Mn	17.13	40.8	28.6
Fe	503.9	430.3	449.2
Co	0.0319	N.D.	N.D.
Ni	1.75	0.608	0.9055
Cu	0.4947	N.D.	N.D.
Zn	3.889	7.374	6.0624
Ga	0.02441	0.044	0.0244
Ge	0.007363	N.D.	0.0147
As	0.7842	0.977	0.7418
Rb	0.8279	18.677	4.4708
Sr	444.3	1530	613.8832
Y	0.2368	0.232	0.2657
Zr	0.302	0.288	0.3734
Mo	0.3677	2.581	0.7128
Cd	0.007813	0.138	0.0447
Sb	0.04094	0.216	0.1817
Cs	0.001097	0.025	0.0047
Ba	38.64	31.337	34.0218
La	0.184	0.172	0.2005
Ce	0.248	0.250	0.3049
Pr	0.050	0.060	0.0572
Nd	0.205	0.233	0.2516
Sm	0.047	0.026	0.0541
Eu	0.014	0.009	0.0126
Gd	0.051	0.048	0.0408
Tb	0.007	0.002	0.0035
Dy	0.040	0.033	0.0288
Ho	0.008	0.013	0.0105
Er	0.021	0.034	0.0288
Tm	0.003	0.005	0.0033
Yb	0.020	0.012	0.0292
Lu	0.003	0.004	0.0020
Hf	0.009	0.001	0.0077
W	0.007	0.028	0.0122
Pb	0.072	0.046	0.1073
Bi	0.001	0.001	0.0033
Th	0.027	0.050	0.0296
U	0.295	0.640	0.3272

Table ESM-1, continued. March 2010.

Sample:	E-20 1 kDa	E-20 50 kDa	E-20	E-21 1 kDa	E-21	E-19 1 kDa	E-19 50 kDa	E-19
Salinity, ‰	0.32	0.33	0.34	0.34	0.33	2.04	2.20	2.28
Alk, M	0.0029	0.0030			0.00285			0.00292
DOC, ppm	3.53	5.31	6.39	3.76	6.53	5.21	6.28	7.21
Li	4.0	4.607	4.189	4.0139	3.827	12.5	13.9	14.1
B	26.0	24.11	25.18	22.26	23.42	226.4	242.1	252.8
Na	11980	12160	12180	12220	11510	533800	575600	599800
Mg	11790	12170	12550	12550	12040	74982	81008	83974
Al	12.08	18.01	19.16	11.16	19.48	17.3	20.4	29.6
Si	N.D.	4578	4678	N.D.	4773	N.D.	N.D.	N.D.
K	1177	1384	1122	1164	1090	19347	20271	20666
Ca	65640	69990	65230	64450	64570	78602	81461	82731
Sc	N.D.	1.03	0.88	0.89	0.87	0.94	1.13	1.20
Ti	0.63	0.64	0.81	0.55	0.93	0.88	0.85	1.20
V	0.33	0.38	0.40	0.24	0.37	1.02	1.07	1.25
Cr	0.11	0.12	0.17	0.09	0.13	0.50	0.48	1.26
Mn	41.7	44.2	44.1	40.1	41.6	61.0	64.7	66.0
Fe	60.65	70.04	328.1	54.28	381.2	76.95	103.88	391.75
Co	0.002		0.006	0.003	0.009	< d.l.	< d.l.	N.D.
Ni	0.346	0.528	0.629	0.409	0.619	0.857	0.959	1.046
Cu	1.019	1.097	1.255	0.180	0.319	N.D.	0.352	0.400
Zn	N.D.	N.D.	1.728	N.D.	8.025	N.D.	2.18	2.43
Ga	0.006	0.010	0.012	0.013	0.020	0.030	0.030	0.031
Ge	N.D.	0.010	0.010	N.D.	0.021	N.D.	0.027	0.027
As	0.388	0.402	0.594	0.39	0.684	0.487	0.554	0.746
Rb	1.13	1.15	1.36	1.02	1.07	5.92	6.85	6.69
Sr	793	801	805	800	815	1036	1056	1054
Y	0.026	0.038	0.089	0.026	0.094	0.054	0.059	0.103
Zr	0.035	0.060	0.133	0.030	0.134	0.068	0.107	0.172
Mo	0.51	0.52	0.52	0.51	0.54	1.16	1.12	1.14
Cd	N.D.	N.D.	0.0094	N.D.	0.0170	N.D.	0.023	0.031
Sb	0.043	0.048	0.057	0.045	0.065	0.118	0.102	0.148
Cs	0.003	0.004	0.006	0.002	0.004	0.011	0.013	0.013
Ba	53.6	53.9	55.7	53.9	56.3	53.2	53.7	53.5
La	0.0097	0.014	0.062	0.0114	0.0683	0.0239	0.0312	0.0657
Ce	0.0100	0.016	0.073	0.0099	0.0805	0.0287	0.0400	0.0935
Pr	0.0027	0.004	0.016	0.0028	0.0185	0.0084	0.0087	0.0197
Nd	0.0103	0.020	0.069	0.0115	0.0809	0.0355	0.0366	0.0969
Sm	0.0041	0.005	0.018	0.0033	0.0222	0.0108	0.0119	0.0324
Eu	N.D.	0.007	0.010	N.D.	0.0119	N.D.	0.0074	0.0083
Gd	0.0041	0.0063	0.0194	0.00554	0.0269	N.D.	0.0168	0.0233
Tb	0.0006	0.0010	0.0028	0.00059	0.0040	N.D.	0.0024	0.0035
Dy	0.0030	0.0034	0.0141	0.00276	0.0191	0.0038	0.0105	0.0113
Ho	0.0004	0.0011	0.0029	0.00053	0.0043	0.0028	0.0024	0.0038
Er	0.0021	0.0034	0.0086	0.00212	0.0132	0.0078	0.0112	0.0148
Tm	0.0004	0.0006	0.0011	0.00025	0.0022	N.D.	N.D.	0.0010
Yb	0.0027	0.0039	0.0083	0.00094	0.0103	0.0041	0.0072	0.0146
Lu	0.0004	0.0006	0.0011	0.00025	0.0022	0.0003	N.D.	0.0009
Hf	0.0024	0.0032	0.0070	0.00123	0.0066	0.0024	0.0035	0.0066
W	0.0059	0.0062	0.0109	0.00940	0.0106	0.0193	0.0177	0.0237
Pb	0.0142	0.0276	0.0534	0.03829	0.0547	N.D.	N.D.	0.0482
Th	0.0013	0.0022	0.0136	0.00354	0.0108	0.0021	0.0099	0.0122
U	0.495	0.514	0.545	0.516	0.552	0.611	0.617	0.612

Table ESM-1, continued. **March 2010.**

Sample:	E-15 1 kDa	E-15 50 kDa	E-15	E-16 1 kDa	E-16	E-17 1 kDa	E-17
Salinity, ‰	3.66	3.71	4.12	3.51	3.69	3.25	3.37
Alk, M			0.00149		0.0030		0.00293
DOC, ppm	5.09	5.96	7.85	Cntd	6.79	4.80	6.87
Li	19.730	19.737	21.408	21	20	20.038	21.198
B	421.501	424.895	478.806	408	390	422.581	455.804
Na	1100000	1179000	1212000	1043767	1055400	1122500	1157800
Mg	134548	136690	151689	129061	135805	144020	148627
Al	23.035	24.289	38.209	23	29	21.680	33.558
Si	N.D.	N.D.	4199	N.D.	4275	N.D.	4195
K	35610	36033	40675	36618	37602	38648	40128
Ca	92473	97666	97787	99906	93758	95659	98050
Sc	0.81	1.03	1.21	1.08	N.D.	0.191	0.558
Ti	0.863	0.924	1.406	0.871	0.970	0.865	1.254
V	1.400	1.693	1.950	1.360	2.147	1.013	1.091
Cr	1.69	2.03	2.08	1.55	2.88	1.87	2.20
Mn	76.3	76.2	85.2	47.8	49.0	48.8	50.0
Fe	87	109	400	104	327	82.7	358.2
Co	< d.l.	< d.l.	N.D.	N.D.	N.D.	N.D.	N.D.
Ni	1.052	1.250	1.265	0.542	N.D.	0.504	0.869
Cu	N.D.	Cntd	0.672	N.D.	0.788	N.D.	0.403
Zn	N.D.	Cntd	2.970	N.D.	2.876	N.D.	2.407
Ga	0.027	0.023	0.055	0.038	0.048	0.052	0.038
Ge	N.D.	N.D.	N.D.	N.D.	0.054	N.D.	0.029
As	0.632	0.676	0.771	0.639	0.877	0.660	0.816
Rb	10.9	10.9	12.1	12.8	14.6	12.1	12.7
Sr	1295	1291	1333	1328	1367	1352	1374
Y	0.046	0.064	0.117	0.063	0.127	0.054	0.107
Zr	0.061	0.088	0.149	0.068	0.129	0.051	0.148
Mo	1.457	1.490	1.633	1.91	2.04	1.70	1.80
Cd	N.D.	N.D.	0.008	N.D.	0.011	N.D.	0.015
Sb	0.117	0.108	0.156	0.196	0.244	0.189	0.248
Cs	0.012	0.010	N.D.	0.00080	N.D.	N.D.	N.D.
Ba	49.2	50.4	51.5	50.6	49.6	49.3	50.2
La	0.026	0.024	0.066	0.035	0.099	0.043	0.101
Ce	0.040	0.044	0.117	0.032	0.107	0.037	0.087
Pr	0.006	0.009	0.021	0.009	0.027	0.010	0.019
Nd	0.021	0.042	0.087	0.028	0.088	N.D.	0.051
Sm	0.013	0.016	0.024	N.D.	0.028	N.D.	N.D.
Eu	N.D.	0.000	0.004	N.D.	0.011	N.D.	0.007
Gd	N.D.	0.023	0.024	N.D.	0.045	N.D.	0.042
Tb	N.D.	0.000	0.003	N.D.	0.004	N.D.	0.005
Dy	N.D.	0.010	0.014	0.004	0.015	N.D.	0.000
Ho	N.D.	N.D.	0.001	0.003	0.004	0.004	0.005
Er	0.001	N.D.	0.015	0.006	0.015	0.002	0.008
Tm	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Yb	N.D.	N.D.	0.008	0.005	0.022	0.002	0.013
Lu	N.D.	N.D.	0.001	N.D.	0.002	N.D.	N.D.
Hf	0.001	0.001	0.003	0.002	0.020	0.001	0.004
W	N.D.	N.D.	0.010	N.D.	0.017	N.D.	0.019
Pb	N.D.	0.141	0.153	0.160	0.265	0.045	0.175
Th	0.004	0.009	0.015	0.016	0.040	N.D.	0.023
U	0.593	0.620	0.693	0.652	0.679	0.648	0.728

Table ESM-1, continued. **March 2010.**

Sample:	E-18 1 kDa	E-18 50 kDa	E-18	E-14 1 kDa	E-14
Salinity, ‰	4.81	4.93	4.95	8.46	8.73
Alk, M			0.00289		0.00272
DOC, ppm	5.48	5.91	6.85		6.66
Li	24.3	25.0	24.5	41	40
B	545	566	567	995	1023
Na	1398653	1442372	1468744	2583579	2659560
Mg	177155	181435	182102	311233	321154
Al	23.0	26.8	32.5	27	35
Si	N.D.	N.D.	4145	N.D.	3715
K	47709	49077	48751	85312	87230
Ca	104221	106322	106518	136428	140428
Sc	0.5262	0.5952	0.8109	0.737	1.196
Ti	0.8382	1.0778	1.0517	0.995	1.237
V	1.0231	1.0273	1.2188	1.891	1.922
Cr	1.61	1.66	1.96	3.09	3.93
Mn	53.5	53.8	54.6	51.0	53.4
Fe	113	127	349	134	354
Co	N.D.	N.D.	N.D.	N.D.	N.D.
Ni	0.6736	0.7474	1.0968	0.800	1.057
Cu	N.D.	Cntd	0.5245	N.D.	0.458
Zn	N.D.	Cntd	4.6079	N.D.	2.965
Ga	0.0231	0.0232	0.0253	0.037	0.048
Ge	N.D.	0.0418	0.0406	N.D.	N.D.
As	0.6018	0.6794	0.7934	0.850	N.D.
Rb	13.7	14.8	14.2	22.9	23.9
Sr	1470	1497	1488	2038	2064
Y	0.0472	0.0685	0.1034	0.065	0.104
Zr	0.0395	0.0935	0.1244	0.046	0.120
Mo	1.78	1.77	1.88	3.05	3.02
Cd	N.D.	0.0425	0.0403	N.D.	N.D.
Sb	0.0913	0.0804	0.1036	0.047	0.067
Cs	N.D.	N.D.	N.D.	0.010	N.D.
Ba	47.9	49.3	49.0	45.4	45.6
La	0.0259	0.0321	0.0993	0.025	0.065
Ce	0.0328	0.0357	0.0949	0.060	0.092
Pr	0.0075	0.0059	0.0203	0.009	0.020
Nd	0.0120	0.0386	0.0750	0.010	0.045
Sm	0.0084	0.0181	0.0167	0.007	0.027
Eu	N.D.	0.0033	0.0059	N.D.	N.D.
Gd	N.D.	N.D.	0.0033	N.D.	0.008
Tb	N.D.	N.D.	0.0055	N.D.	N.D.
Dy	N.D.	N.D.	0.0148	N.D.	0.009
Ho	0.0052	N.D.	0.0072	N.D.	0.002
Er	N.D.	N.D.	0.0046	0.014	0.017
Tm	N.D.	N.D.	N.D.	N.D.	N.D.
Yb	0.0125	0.0112	N.D.	0.013	N.D.
Lu	N.D.	N.D.	N.D.	N.D.	N.D.
Hf	N.D.	0.0020	0.0103	0.004	0.005
W	N.D.	0.0045	0.0076	N.D.	0.006
Pb	0.0739	0.1061	0.1307	0.059	N.D.
Th	0.0122	0.0098	0.0167	0.013	0.024
U	0.732	0.757	0.764	0.769	0.900

Table ESM-1, continued. March 2010.

Sample:	E-11 1 kDa	E-11 50 kDa	E-11	E-12 1 kDa	E-12 50 kDa	E-12
Salinity, ‰	8.17	8.75	9.08	10.62	10.69	11.01
Alk, M			0.00281			0.00268
DOC, ppm	5.05	6.14	6.72		Cntd	6.76
Li	40.8	38.8	41.1	47	47	47
B	914.7	1027.8	1073.7	1302	1281	1312
Na	2708457	2943695	3057050	3589225	3620645	3700529
Mg	300572	321874	334127	390849	393532	405305
Al	25.1	28.9	35.6	30	32	38
Si	N.D.	N.D.	3633	N.D.	N.D.	N.D.
K	86892	91416	93752	109902	110381	113623
Ca	134523	141177	143698	157077	156246	160772
Sc		0.3042	0.4218	0.406	0.473	0.602
Ti	1.0395	1.0529	1.0856	1.134	1.144	1.269
V	1.9024	2.0465	2.16	1.844	1.872	1.999
Cr	2.55	2.62	3.96	3.32	3.30	3.62
Mn	41.6	44.8	44.7	41.6	39.7	42.6
Fe	89.6	151.7	317.2	157.6	149.4	326.7
Co	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Ni	1.1988	1.2030	1.869	1.645	1.510	1.970
Cu	N.D.	0.6000	0.744	N.D.	0.292	0.634
Zn	N.D.	Cntd	4.496	N.D.	Cntd	4.635
Ga	0.0435	0.0456	0.040	0.018	0.019	0.027
Ge	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
As	1.14	1.10	1.17	1.03	1.08	1.16
Rb	27.9	28.5	28.5	30.7	31.4	31.9
Sr	2171	2191	2221	2474	2470	2496
Y	0.0865	0.1061	0.1118	0.069	0.093	0.124
Zr	0.0740	0.1051	0.1641	0.057	0.079	0.167
Mo	3.40	3.46	3.48	3.83	3.84	3.80
Cd	N.D.	N.D.	0.0338	N.D.	0.002	0.005
Sb	0.0990	N.D.	0.1424	0.139	0.128	0.165
Cs	0.0110	0.0114	0.0135	0.017	0.029	N.D.
Ba	43.1	43.1	43.3	40.2	41.0	42.7
La	0.0350	0.0607	0.0725	0.045	0.053	0.104
Ce	0.0680	0.0714	0.0978	0.045	0.056	0.101
Pr	0.0248	0.0241		0.008	0.013	0.024
Nd	N.D.	0.0103	0.038	0.015	0.018	0.024
Sm	0.0099		0.019	N.D.	N.D.	N.D.
Eu	N.D.	0.0122	0.013	N.D.	0.012	N.D.
Gd	N.D.	0.0489	0.072	N.D.	0.023	0.015
Tb	N.D.	0.0055		N.D.	N.D.	0.002
Dy	0.0245	0.0257	0.0424	N.D.	0.041	0.057
Ho	N.D.	0.0073	0.0005	N.D.	N.D.	N.D.
Er	0.0057	0.0045	0.0112	0.001	N.D.	0.003
Tm	N.D.	0.0011	N.D.	N.D.	N.D.	N.D.
Yb	0.0285	0.0319	N.D.	N.D.	N.D.	0.016
Lu	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Hf	0.0129	0.0084	0.0181	0.010	0.009	N.D.
W	N.D.	0.0131	0.0265	N.D.	0.036	0.026
Pb	0.0924	N.D.	N.D.	N.D.	N.D.	N.D.
Th	0.0126	0.0468	N.D.	0.013	0.014	0.020
U	0.955	1.005	1.027	1.05	1.12	1.12

Table ESM-1, continued. March 2010.

Sample:	E-10 1 kDa	E-10 50 kDa	E-10	E-13 1 kDa	E-13 50 kDa	E-13
Salinity, ‰	13.7	14.02	13.80	15.87	15.89	16.10
Alk, M	0.00252		0.00257			
DOC, ppm	4.67	5.07	6.27		5.23	6.16
Li	61	59	60	78	72	74
B	1613	1583	1627	2214	2220	2226
Na	4771688	4752635	4708701	6298437	6387545	6503546
Mg	504839	515958	507962	681501	684115	688236
Al	30.400	29.578	33.765	35	43	40
Si	N.D.	N.D.	2979	N.D.	N.D.	2388
K	148440	139124	144911	193267	193554	196164
Ca	187927	189454	185879	225642	227297	228662
Sc	0.418		0.336	N.D.	N.D.	N.D.
Ti	1.037	1.092	1.163	0.605	N.D.	0.677
V	2.134	2.057	2.349	2.66	2.85	3.21
Cr	3.0	3.4	3.4	5.04	5.26	5.59
Mn	34	35	35	25.7	25.9	27.0
Fe	169	178	273	213	217	297
Co	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Ni	0.705	0.692	0.934	1.198	1.216	1.573
Cu	N.D.	1.096	0.952	0.455	N.D.	0.530
Zn	N.D.	Cntd	6.262	N.D.	Cntd	5.196
Ga	N.D.	0.049	0.089	0.027	N.D.	0.002
Ge	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
As	1.34	1.44	1.54	1.49	1.51	1.78
Rb	44.7	51.2	47.3	54.5	55.9	56.0
Sr	3023	3005	3057	3794	3791	3822
Y	0.101	0.122	0.152	0.101	0.116	0.114
Zr	0.068	0.129	0.145	0.094	0.116	0.148
Mo	4.95	5.10	5.39	6.01	6.07	6.10
Cd	N.D.	N.D.	N.D.	N.D.		
Sb	0.097	0.130	0.137	0.280	0.316	0.407
Cs	0.063	0.102	0.081	0.129	0.165	0.157
Ba	36.5	37.7	37.0	29.3	30.0	30.9
La	0.062	0.103	0.098	0.063	0.069	0.076
Ce	0.056	0.100	0.096	0.055	0.051	0.103
Pr	0.012	0.014	0.023	0.011	N.D.	0.020
Nd	0.043	0.126	0.139	0.058	N.D.	0.080
Sm	N.D.	0.061	N.D.	N.D.	N.D.	N.D.
Eu	N.D.	0.040	N.D.	N.D.	0.073	N.D.
Gd	0.012	0.011	0.055	N.D.		0.012
Tb	N.D.	0.003	0.005	N.D.	0.019	N.D.
Dy	0.035	0.089	0.097	0.023	0.029	0.035
Ho	N.D.	N.D.	0.006	N.D.	0.022	N.D.
Er	N.D.	N.D.	0.017	0.009	0.071	0.033
Tm	N.D.	N.D.	0.003	N.D.	N.D.	N.D.
Yb	N.D.	N.D.	N.D.	0.035	0.061	N.D.
Lu	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Hf	N.D.	N.D.	0.001	0.014	0.023	0.028
W	0.025	0.033	N.D.	N.D.	N.D.	N.D.
Pb	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Th	0.029	0.046	0.088	0.016	0.018	0.059
U	1.30	1.24	1.35	1.47	1.57	1.66

Table ESM-1, continued. **March 2010.**

Sample:	E-9 1 kDa	E-9 50 kDa	E-9
Salinity, ‰	18.6	18.8	20.1
Alk, M			0.00213
DOC, ppm	4.05	4.39	5.36
Li	71	69	77
B	2146	2148	2290
Na	6151783	6184269	6648774
Mg	692367	695703	708508
Al	35.995	36.065	38.755
Si	N.D.	N.D.	1964
K	186924	187379	202187
Ca	212350	215188	229339
Sc	N.D.	N.D.	N.D.
Ti	0.897	0.860	1.065
V	2.320	2.359	2.626
Cr	5.056	5.185	5.828
Mn	22.258	21.896	22.959
Fe	179	198	275
Co	N.D.	N.D.	N.D.
Ni	1.400	1.410	1.573
Cu	N.D.	0.159	0.198
Zn	N.D.	Cntd	8.097
Ga	N.D.	0.047	N.D.
Ge	N.D.	N.D.	N.D.
As	1.24	1.17	1.41
Rb	52.7	52.4	55.0
Sr	3791	3818	3837
Y	0.056	0.057	0.070
Zr	0.049	0.044	0.060
Mo	5.97	6.04	5.93
Cd	N.D.	N.D.	N.D.
Sb	0.131	0.168	0.171
Cs	0.118	0.108	0.126
Ba	25.0	24.6	25.5
La	0.032	0.035	0.051
Ce	0.055	0.072	0.073
Pr	0.015	0.018	N.D.
Nd	N.D.	0.037	N.D.
Sm	N.D.	N.D.	N.D.
Eu	N.D.	N.D.	N.D.
Gd	N.D.	0.012	0.016
Tb	N.D.	N.D.	N.D.
Dy	N.D.	N.D.	0.039
Ho	N.D.	N.D.	N.D.
Er	0.002	N.D.	0.003
Tm	N.D.	N.D.	N.D.
Yb	N.D.	0.001	N.D.
Lu	N.D.	N.D.	N.D.
Hf	N.D.	N.D.	N.D.
W	N.D.	N.D.	N.D.
Pb	N.D.	N.D.	N.D.
Th	0.010	0.013	0.044
U	1.37	1.41	1.52

Table ESM-1, continued. July 2010.

	E-22	E-22 1 kDa	E-23	E-23 1 kDa	E-24	E-24 1 kDa	E-25	E-25 1 kDa
Salinity, ‰	0.2	0.2	0.2	0.2	3.1	3.1	4.3	4.2
DOC, mg/L	16.11	10.5	23.63	15.8	15.63	13.77	15.07	13.37
pH	7.39		7.39		7.34		7.43	
Alk, M	0.00102		0.00104	0.00099	0.00123		0.00120	
B	13.64	13.48	13.58	13.13	312	310	430	427
Na	6233	6200	6219	6194			1108834	1104665
Mg	5797	5628	5777	5524	115065	113643	156706	155967
Al	56.22	13.91	57.45	11.31	17.9	13.3	18.5	12.2
Si	2602	2562	2579	2515	2028	2016	2003	1995
K	868.7	864.5	863.6	859.8	32164	32137	43847	43406
Ca	14860	14000	14720	14150	29002	28659	34550	34273
Ti	1.938	0.4024	2.192	0.4123	0.9400	0.5931	0.955	0.690
V	0.8026	0.6024	0.8392	0.5623	0.6999	0.6124	0.700	0.553
Cr	0.4309	0.3079	0.4024	0.3306	0.3769	0.3442	0.517	0.385
Mn	2.105	0.1478	2.254	0.1893	0.8540	0.5079	1.315	0.842
Fe	240.2	20.66	253	19.9	140.4	41.7	150.5	39.6
Co	< d.l.	< d.l.						
Ni	1.118	0.6911	1.131	0.7073	0.9075	0.7784	0.882	0.794
Cu	1.232	0.7795	1.209	0.7298	1.0160	0.8428	0.962	0.789
Zn	2.102	1.215	4.684	1.781	2.4259	1.4842	2.709	Cntd
Ga	0.0150	0.0060	0.013	0.005	0.002	N.D.	0.012	< d.l.
Ge	0.0061	0.0021	0.003	0.002	0.009	N.D.	0.010	< d.l.
As	0.8371	0.6647	0.8077	0.6811	0.7677	0.6553	0.796	0.704
Rb	0.606	0.580	0.598	0.572	6.904	6.893	9.544	9.389
Sr	227.1	215.6	226.5	214.3	719	706	917.3	908.4
Zr	0.2523	0.066	0.249	0.0575	0.1520	0.1062	0.221	0.122
Mo	0.1804	0.1792	0.1548	0.14884	0.9935	0.9815	1.756	1.61
Cd	0.0070	0.0005	0.0019	0.0012	ND	0.0101	0.015	ND
Sb	0.0373	0.0285	0.0299	0.0268	0.0465	0.0389	0.159	0.129
Cs	0.0007	ND	ND	ND	0.0148	0.0149	0.018	0.017
Ba	23.3	21.58	24.91	22.23	26.54	26.32	26.9	24.8
La	0.2057	0.04005	0.204	0.0356	0.1009	0.0595	0.099	0.023
Ce	0.2516	0.0376	0.2544	0.0342	0.1493	0.0695	0.153	0.039
Pr	0.06006	0.0074	0.0564	0.0067	0.0237	0.0138	0.020	< d.l.
Nd	0.2475	0.0440	0.2492	0.0376	0.1173	0.0676	0.114	0.037
Sm	0.0568	0.0079	0.0565	0.0081	0.0263	0.0129	0.035	< d.l.
Eu	0.0171	0.0013	0.0127	0.0013	0.0016	0.0012	< d.l.	< d.l.
Gd	0.0575	0.0104	0.0563	0.0096	0.0284	0.0103	0.042	< d.l.
Dy	0.0520	0.008777	0.0500	0.0076	0.0175	0.0126	0.026	0.014
Ho	0.0116	< d.l.	0.0074	0.0018	ND	0.0093	ND	ND
Er	0.0305	0.0047	0.0278	0.0039	0.0115	0.0067	ND	ND
Tm	0.0052	< d.l.	0.0011	0.0002	ND	0.0121	ND	ND
Yb	0.0255	0.00350	0.0224	0.0025	0.0093	0.0071	ND	ND
Lu	0.0046	< d.l.	0.0014	0.0004	ND	0.0154	ND	ND
Hf	0.0118	0.0049	0.0862	0.0437	0.1117	0.0460	0.026	ND
W	0.0466	0.0066	0.0094	0.0072	ND	0.0398	ND	ND
Pb	0.0895	0.0417	0.09518	0.0441	ND	ND	0.184	0.168
Th	0.1909	0.03197	0.1222	0.0233	ND	N.D.	< d.l.	< d.l.
U	0.0898	0.0281	0.0823	0.0267	0.2607	0.2058	0.478	0.336

Table ESM-1, continued. July 2010.

	E-26 1 kDa	E-27	E-27 1 kDa	E-28	E-28 1 kDa	E-29	E-29 1 kDa
Salinity, ‰	14.6	16.8	16.6	5.5	5.5	13.1	12.8
DOC, mg/L	9.453	10.89	8.81	14.12	11.49	10.34	8.06
pH		7.02		7.28		7.47	
Alk, M				0.00114		0.00174	
B	1452	1674	1643	543	540	1364	1354
Na	3895000	4454218	4414562	1424000	1430202	3681310	3674000
Mg	536553	618215	610818	202681	200791	483139	470203
Al	8.5825	10.8	8.2	21.3	18.2	12.9	10.5
Si	1110	1065	1041	1924	1908	1240	1228
K	151270	170471	170154	55951	55673	134263	134211
Ca	88293	99814	99425	41863	41043	80225	79928
Ti	0.3935	0.85	0.54	0.659	0.494	0.9511	0.5443
V	0.5633	0.69	0.51	0.734	0.647	0.9321	0.6440
Cr	0.2101	0.6		0.367	0.285	0.4457	0.3731
Mn	17.9	14.8	12.5	5.585	4.595	2.1495	1.7432
Fe	61.5	93.4	81.2	186.2	85.8	60.6	53.2
Co	ND	< d.l.	< d.l.	< d.l.	< d.l.	< d.l.	< d.l.
Ni	0.8448	0.766	0.672	0.835	0.743	1.174	0.992
Cu	0.2523	1.208	1.056	1.434	1.048	0.722	0.544
Zn	12.1549	11.1	5.4	24.0	13.5	7.692	Cntd
Ga	ND	0.102	< d.l.	0.058	0.012	0.2273	0.1340
Ge	ND	0.013	0.011	0.098	0.018		
As	0.8403	0.979	0.922	0.789	0.655	0.889	0.796
Rb	30.3	33.8	33.9	11.4	11.4	29.52	29.43
Sr	2668	2985	2959	1107	1105	2441	2439
Zr	0.0363	0.125	< d.l.	0.149	0.081	0.033	0.0250
Mo	3.52	4.02	3.64	1.50	1.49	3.89	3.74
Cd	ND	0.016	0.012	0.098	0.066	0.164	0.126
Sb	ND	0.154	0.140	0.108	0.102	0.559	0.474
Cs	ND	ND	ND	ND	ND	0.102	0.1008
Ba	17.3	20.8	20.5	30.8	30.0	20.0	19.7
La	ND	0.148	0.087	0.154	0.105	0.1883	0.0959
Ce	ND	0.147	0.098	0.153	0.083	0.1206	0.0667
Pr	< d.l.	0.093	0.041	0.073	0.041	0.1549	0.0592
Nd	< d.l.	0.187	0.091	0.194	0.118	0.1519	< d.l.
Sm	< d.l.	0.204	0.077	0.101	0.032	ND	0.0801
Eu	< d.l.	0.052	< d.l.	0.052	0.029	ND	0.0978
Gd	< d.l.	0.087	< d.l.	0.118	0.047	ND	0.0765
Dy	< d.l.	0.153	< d.l.	0.097	0.058	ND	< d.l.
Ho	< d.l.	0.094	< d.l.	0.047	0.033	ND	0.0952
Er	< d.l.	0.168	< d.l.	0.107	0.050	ND	0.0768
Tm	< d.l.	0.046	< d.l.	0.051	0.030	ND	0.0320
Yb	< d.l.	0.051	< d.l.	0.079	0.043	ND	0.0304
Lu	< d.l.	0.090	< d.l.	0.058	0.035	ND	0.0348
Hf	< d.l.	0.036	< d.l.	0.076	0.035	0.044	0.028
W	ND	ND	< d.l.	ND	ND	ND	ND
Pb	ND	ND	1.166	1.537	1.101	ND	ND
Th	ND	ND	0.028	ND	ND	< d.l.	< d.l.
U	0.68	1.055	0.864	0.420	0.390	1.20	1.14

Table ESM-1, continued. July 2010.

	E-30	E-30 1 kDa	E-31	E-31 1 kDa	E-32	E-32 1 kDa
Salinity, ‰	10.42	10.12	8.63	8.55	2.71	2.67
DOC, mg/L	12.27	10.27	8.36	6.51	14.39	12.46
pH	7.48		7.17		7.3	
Alk, M	0.00134		0.00130		0.00096	
B	1055	1019	880	853	273	269
Na			2309198	2252280		
Mg	383443	372284	317548	314635	99566	98172
Al	9.5	8.2	13.5	11.0	17.2	13.5
Si	1385	1348	1583	1496	2079	1996
K	108420	106755	89697	87747	27509	27459
Ca	67171	66639	58470	57357	27405	27119
Ti	0.236		0.85	0.50	0.7220	0.5911
V	0.712	0.500	0.6208	0.4801	0.6662	0.5448
Cr	0.160		0.1226			
Mn					2.34	2.25
Fe	64.9	51.4	103.0	41.6	166.8	46.0
Co	< d.l.	< d.l.	< d.l.	N.D.	< d.l.	< d.l.
Ni	0.834	0.654	1.1409	0.9777	0.9412	0.7649
Cu	0.885	0.775	0.7974	0.6223	0.9785	0.8688
Zn	3.065	2.312	Cntd	Cntd	1.2351	Cntd
Ga	< d.l.	< d.l.	ND	ND	ND	0.0044
Ge	0.005	< d.l.	0.0315	0.0217	ND	0.0014
As	0.821	0.683	0.7268	0.6788	0.758	0.6434
Rb	21.7	21.2	17.8	17.8	5.93	5.92
Sr	1956	1947	1660	1637	656	654
Zr	0.008	0.005	ND	ND	0.1205	0.1032
Mo	2.14	2.08	1.894	1.792	0.982	0.954
Cd	0.085	0.046	ND	ND	ND	ND
Sb	0.003	ND	0.0340	0.0307	0.0659	0.0642
Cs	ND	ND	ND	ND	ND	ND
Ba	21.6	21.6	25.6	24.7	28.2	27.5
La	0.046	0.035	0.0406	0.0233	0.1005	0.0329
Ce	0.032	ND	0.0643	0.0409	0.1394	0.0447
Pr	0.028	< d.l.	0.0135	0.0098	0.0204	0.0056
Nd	0.063	< d.l.	0.0641	0.0307	0.1157	0.0394
Sm	0.032	< d.l.	0.0512	0.0135	0.0223	0.0083
Eu	0.013	< d.l.	0.0155	0.0104	ND	ND
Gd	0.036	< d.l.	0.0307	0.0110	0.0336	0.0096
Dy	0.027	< d.l.	0.0168	0.0105	0.0147	ND
Ho	0.018	< d.l.	0.0016	0.0012	ND	ND
Er	0.039	< d.l.	0.0158	0.0065	0.0037	ND
Tm	0.004	< d.l.	< d.l.	0.0107	ND	ND
Yb	< d.l.	< d.l.	< d.l.	0.0274	ND	ND
Lu	0.038	< d.l.	0.0091	0.0062	ND	ND
Hf	< d.l.	< d.l.	< d.l.	< d.l.	< d.l.	< d.l.
W	0.058	N.D.	N.D.	N.D.	N.D.	N.D.
Pb	0.35	N.D.	ND	0.7846	0.1527	ND
Th	< d.l.	0.185	< d.l.	< d.l.	< d.l.	< d.l.
U	0.674	0.582	0.4861	0.4508	0.2335	0.2121

Table ESM-1, continued. July 2010.

	E-33	E-33 1 kDa	E-34	E-34 1 kDa	E-35	E-35 1 kDa
Salinity, ‰	1.71	1.69	1.27	1.27	0.37	0.36
DOC, mg/L	19.43	12.38	17.87	12.16	19.42	10.36
pH	7.21		7.19		7.41	
Alk, M	0.00113		0.00106		0.00111	
B	167	168	127	126	34.77	34.42
Na	414341	413999			59141	58954
Mg	62891	62208	46663	46848	13728	13345
Al	17.1	10.3	20.3	13.6	21.2	7.7
Si	2148	2118	2125	2087	2276	2111
K	16870	16650	12433	12443	2890	2871
Ca	21939	21895	19453	19408	18888	18398
Ti	0.795	0.460	0.847	0.469	1.07	0.41
V	0.592	0.463	0.664	0.580	0.61	0.42
Cr	0.299	0.221	0.330	0.292	0.29	0.17
Mn	0.971	0.204	1.613	0.538	2.49	0.74
Fe	159	31	175.5	30.8	220	20
Co	< d.l.	< d.l.	< d.l.	< d.l.	< d.l.	< d.l.
Ni	0.961	0.861	0.997	0.815	1.021	0.640
Cu	1.018	0.845	1.096	0.927	1.099	0.707
Zn	1.373	0.894	1.597	Cntd	15.092	5.829
Ga	0.005	0.003	0.005	0.002	0.005	0.003
Ge	0.000	ND	0.005	ND		
As	0.776	0.714	0.774	0.730	0.781	0.646
Rb	3.671	3.663	2.870	2.858	0.972	0.902
Sr	474	473	403	402	318	312
Zr	0.130	0.029	0.175	0.048	0.200	0.099
Mo	0.637	0.582	0.476	0.450	0.359	0.354
Cd	ND	ND	ND	ND	0.054	0.036
Sb	0.038	0.023	0.040	0.036	0.031	0.022
Cs	ND	ND	ND	ND	ND	ND
Ba	27.7	27.5	26.1	25.1	25.2	24.6
La	0.107	0.031	0.119	0.033	0.1313	0.0272
Ce	0.114	0.031	0.146	0.038	0.1699	0.0265
Pr	0.023	0.004	0.026	0.007	0.0341	0.0065
Nd	0.120	0.031	0.155	0.045	0.1536	0.0323
Sm	0.022	0.005	0.036	0.011	0.0289	0.0064
Eu	0.000	ND	0.004	0.004	0.0073	0.0047
Gd	0.029	0.002	0.029	0.016	0.0347	0.0093
Dy	0.018	0.009	0.025	0.010	0.0312	0.0096
Ho	ND	ND	0.000	0.000	0.0024	0.0013
Er	0.005	0.001	0.013	0.008	0.0166	0.0060
Tm	ND	ND	ND	ND	ND	0.0012
Yb	0.009	ND	0.008	0.003	0.0116	0.0063
Lu	ND	ND	ND	0.001	ND	0.0019
Hf	0.069	0.015	0.049	0.035	0.0572	ND
W	ND	0.075	0.065	0.029	0.0248	ND
Pb	ND	0.169	0.095	0.021	0.1450	0.0198
Th	0.339	ND	0.063	ND	0.0396	ND
U	0.192	0.128	0.156	0.113	0.1183	0.0802

Table ESM-1, continued. July 2010.

	E-36	E-37	E-38	E-39
Salinity, ‰	0.18	0.18	0.18	0.18
DOC, mg/L	15.55	15.81	15.65	17.7
pH	7.45	7.51	7.35	7.42
Alk, M	0.00124			0.00121
B	15.38	15.07	15.64	14.97
Na	5487	5490	5759	5434
Mg	6447	6474	6479	6462
Al	57.0	55.1	59.9	47.6
Si	2404	2467	2426	2424
K	797.1	863.2	805.6	787.6
Ca	17620	17390	17420	17480
Ti	1.619	1.638	1.695	1.35
V	0.853	0.918	0.9704	0.8596
Cr	0.3377	0.4092	0.339	0.3196
Mn	11.32	4.133	3.909	4.697
Fe	264.1	274.9	273.3	257.7
Co	0.0012	< d.l.	< d.l.	< d.l.
Ni	1.041	1.15	1.036	0.9966
Cu	1.117	2.062	1.355	1.014
Zn	5.482	14.36	3.843	1.071
Ga	0.011	0.013	0.021	0.013
Ge	0.005	0.005	0.010	0.008
As	0.939	0.952	0.991	0.948
Rb	0.6254	0.6709	0.6517	0.6221
Sr	282	279.3	279.6	283.2
Zr	0.199	0.196	0.205	0.191
Mo	0.216	0.222	0.231	0.222
Cd	0.004	0.030	0.011	0.004
Sb	0.039	0.033	0.039	0.036
Cs	ND	ND	0.00031	ND
Ba	29.0	27.7	28.6	27.5
La	0.186	0.165	0.169	0.168
Ce	0.279	0.243	0.238	0.246
Pr	0.049	0.044	0.048	0.047
Nd	0.210	0.189	0.191	0.189
Sm	0.046	0.039	0.043	0.044
Eu	0.011	0.009	0.013	0.012
Gd	0.048	0.044	0.047	0.045
Dy	0.041	0.037	0.041	0.039
Ho	0.005	0.004	0.009	0.007
Er	0.020	0.019	0.024	0.022
Tm	ND	ND	0.004	0.002
Yb	0.016	0.015	0.020	0.016
Lu	ND	ND	0.004	0.002
Hf	0.053	0.049	0.068	0.058
W	0.001	ND	0.021	0.012
Pb	0.102	0.262	0.169	0.087
Th	0.064	0.047	0.108	0.090
U	0.115	0.116	0.120	0.116

Table ESM-1, continued. **November 2010.**

	E-40 1 kDa	E-40	E-41 1 kDa	E-41	E-42 1 kDa	E-42
Salinity, ‰	3.55	3.56	6.53	7.63	4.53	4.55
DOC, mg/L	7.07	11.8	6.51	13.5	8.66	11.31
pH	7.64	7.63		7.68		
Alk, M	0.00197	0.00199		0.00204		0.00210
B	422	425	781	767	463	467
Na	1120000	1139000	2143000	2090000	ND	ND
Mg	151506	155060	283253	280652	166523	167328
Al	20.9	32.1	23.8	28.7	27.3	39.7
Si	2460	2497	2236	2306	2675	2689
K	42283	42469	78827	78203	46385	45759
Ca	39349	39911	57726	57408	42770	42777
Ti	0.6886	1.1628	0.6054	1.2975	0.7903	1.7411
V	0.4363	0.5505	0.3733	0.4570	0.4759	0.7012
Cr	0.4190	0.6445	0.0774	0.3991	0.1202	0.4868
Mn	17.4	18.4	19.8	20.8	18.6	19.8
Fe	46.3	206.5	55.9	154.2	46.8	194.6
Co	ND	ND	ND	ND	ND	ND
Ni	0.457	0.729	0.440	0.753	0.418	0.602
Cu	0.767	1.116	0.267	0.460	0.360	0.769
Zn	8.44	8.86	4.25	5.16	2.57	3.05
Ga	< d.l.	0.0266	0.0023	0.0072	0.0188	0.0350
Ge	N.D.	0.0384	0.0369	0.0117	0.0004	0.0404
As	0.402	0.511	0.344	0.472	0.536	0.682
Rb	9.2	9.3	15.93	15.95	9.65	9.68
Sr	1033	1045	1600	1617	1128	1125
Zr	0.0811	0.1217	0.0269	0.0664	0.0852	0.1487
Mo	1.40	1.48	2.10	2.14	1.69	1.65
Cd	0.012	0.0306	0.0244	0.0358	0.0382	0.0555
Sb	ND	0.0941	0.0387	0.0507	0.127	0.132
Cs	ND	0.0265	ND	ND	0.0624	0.0699
Ba	26.3	26.4	46.1	47.3	27.1	27.7
La	0.0468	0.0865	0.0104	0.0254	0.022	0.095
Ce	0.0549	0.144	0.0236	0.0574	0.030	0.160
Pr	0.0300	0.0632	0.0193	ND	0.016	0.046
Nd	0.0327	0.1072	ND	0.0145	0.023	0.120
Sm	ND	0.0360	0.0019	0.0084	0.025	0.043
Eu	ND	0.0134	0.0132	ND	0.014	0.023
Gd	0.0213	0.0416	0.0022	0.0094	0.006	0.036
Dy	ND	0.0146	ND	ND	0.017	0.036
Ho	ND	0.0206	0.0001	ND	0.013	0.033
Er	ND	0.0332	0.0223	ND	0.012	0.030
Tm	ND	0.0201	0.0144	ND	0.011	0.022
Yb	0.014	0.017	0.0272	0.0033	0.012	0.029
Lu	ND	0.013	0.0158	ND	0.010	0.020
Hf	ND	0.072	ND	0.0444	0.010	0.017
W	ND	ND	0.290	0.510	0.451	0.774
Pb	ND	ND	ND	ND	ND	0.1227
Th	ND	ND	0.0479	0.0754	0.0679	0.1391
U	0.405	0.428	0.569	0.591	0.434	0.511

Table ESM-1, continued. **November 2010.**

	E-43 1 kDa	E-43	E-44 1 kDa	E-44	E-45 1 kDa	E-45
Salinity, ‰	14.78	14.72	11.72	11.79	25.44	24.46
DOC, mg/L	5.9	10.9	5.90	9.10	4.16	6.33
pH		7.68		7.74		7.74
Alk, M		0.00217	0.00220	0.00223		0.00225
B	1513	1495	1204	1205	2596	2543
Na	ND	ND	ND	ND	ND	ND
Mg	544032	541532	431205	433995	936200	900124
Al	13.1	14.8	20.2	25.5	6.3	7.6
Si	1655	1598	1965	1991	598	601
K	155848	153887	122754	122525	266436	257961
Ca	95748	95114	80552	80434	148514	145616
Ti	0.3145	0.5703	0.5730	0.6709	1.8619	2.1911
V	0.3949	0.5497	0.4368	0.585	1.248	1.478
Cr	0.5852	0.7689		0.349	1.872	2.922
Mn	10.1	11.6	12.3	15.1	10.4	10.8
Fe	65.6	114.1	67.6	131.1	70.2	92.1
Co	ND	ND	ND	ND	ND	ND
Ni	0.392	0.694	0.507	0.763	0.466	0.697
Cu	0.223	0.309	0.156	0.430	0.143	0.399
Zn	5.33	5.70	4.01	4.63	4.01	4.74
Ga	0.0062	0.0376	0.0149	0.0144	0.0094	0.0191
Ge	ND	ND	0.0169	0.0057	ND	ND
As	0.580	0.732	0.474	0.649	0.818	1.062
Rb	31.26	30.96	24.58	24.81	54.71	54.63
Sr	2863	2846	2344	2341	4591	4562
Zr	0.0377	0.0814	0.0310	0.0615	0.0427	0.0595
Mo	3.77	3.66	3.14	3.10	7.85	8.25
Cd	0.064	0.118	0.0100	ND	0.0626	0.0725
Sb	0.092	0.137	0.064	0.073	0.562	0.735
Cs	0.134	0.138	0.127	0.126	0.260	0.247
Ba	21.6	20.8	24.9	24.9	14.2	14.3
La	0.019	0.054	0.0297	0.044	0.149	0.184
Ce	0.037	0.093	0.0556	0.076	0.074	0.168
Pr	ND	0.029	0.0056	0.015	0.088	0.145
Nd	0.028	0.044	ND	0.055	0.033	0.071
Sm	0.025	0.056	0.0134	0.025	0.122	0.133
Eu	0.019	0.037	ND	0.008	0.113	0.189
Gd	0.009	0.026	0.0046	0.006	0.012	0.015
Dy	0.006	0.008	ND	ND	0.007	0.012
Ho	ND	0.024	ND	ND	0.009	0.013
Er	0.017	0.021	0.0059	0.011	0.013	0.019
Tm	ND	0.013	ND	ND	0.012	0.014
Yb	0.019	0.026	ND	ND	0.080	0.096
Lu	ND	0.025	ND	0.001	0.010	0.018
Hf	ND	0.035	ND	0.028	0.045	0.082
W	0.14	0.20	0.035	0.061	ND	ND
Pb	ND	ND	ND	ND	ND	ND
Th	0.0963	0.2290	ND	ND	ND	ND
U	0.917	0.951	0.714	0.764	1.942	2.132

Table ESM-1, continued. **November 2010.**

	E-46 1 kDa	E-46	E-47 1 kDa	E-47	E-48 1 kDa	E-48
Salinity, ‰	24.07	24.11	21.01	21.09	5.30	5.35
DOC, mg/L	3.799	6.1	4.327	5.676	7.314	12.99
pH		7.7		7.8		
Alk, M	0.00233	0.00231		0.00234		0.00212
B	2480	2514	2155	2169	539	541
Na	ND	ND	ND	ND	ND	ND
Mg	885800	887000	773278	776221	195170	196889
Al	5.6	7.0	9.2	11.0	26.4	38.4
Si	869	885	1126	1168	2531	2590
K	252854	255680	220229	222961	55150	54814
Ca	143573	142778	126214	128456	47009	46977
Ti	1.0230	1.1573	0.6496	0.8241	0.7240	1.2526
V	0.691	0.697	0.806	0.849	0.473	0.550
Cr	0.508	0.542	0.188	0.253	0.162	0.280
Mn	11.8	13.4	8.5	9.3	18.2	19.2
Fe	72.4	102.7	68.2	112.5	54.6	200.7
Co	ND	ND	ND	ND	ND	ND
Ni	0.348	0.577	0.456	0.562	0.540	0.662
Cu	0.271	0.690	0.308	0.923	0.251	0.374
Zn	4.27	9.92	4.54	5.33	7.23	11.13
Ga	0.0375	0.0288	0.0550	0.0609	0.0002	0.0081
Ge	ND	ND	ND	ND	0.0238	0.0460
As	0.748	1.156	0.663	1.016	0.580	0.647
Rb	51.19	50.53	43.43	44.05	11.22	11.20
Sr	4410	4411	3848	3913	1259	1257
Zr	0.0126	0.0284	0.0846	0.1207	0.0564	0.1025
Mo	6.09	6.36	5.58	5.64	1.61	1.51
Cd	0.0675	0.0837	0.0255	0.0438		0.0134
Sb	0.310	0.337	0.152	0.209	0.020	0.029
Cs	0.196	0.200	0.139	0.151	0.055	0.060
Ba	17.7	17.5	18.0	19.1	27.9	27.2
La	0.045	0.085	0.0174	0.0383	0.0194	0.0674
Ce	0.052	0.078	0.0142	0.0261	0.0291	0.1264
Pr	0.057	0.074	0.0317	0.0409	0.0049	0.0172
Nd	0.015	0.025	0.0282	ND	0.0117	0.1034
Sm	0.043	0.081	ND	0.0011	ND	0.0330
Eu	0.041	0.053	0.0021	ND	ND	0.0052
Gd	0.088	0.155	ND	0.0907	0.0088	0.0163
Dy	0.006	0.007	0.0203	ND	ND	0.0088
Ho	0.027	0.045	0.0017	0.003	ND	ND
Er	0.021	0.033	0.0240	0.030	0.0016	0.0022
Tm	0.069	0.074	ND	0.024	ND	0.0037
Yb	0.065	0.080	ND	0.016	ND	0.0181
Lu	0.046	0.070	0.0293	0.048	ND	0.0000
Hf	0.012	0.023	0.0052	0.008	0.0056	0.0255
W	ND	ND	ND	ND	0.053	0.103
Pb	0.2507	ND	0.3705	0.4413	ND	0.0318
Th	ND	ND	ND	ND	0.0219	0.0999
U	1.447	1.646	1.195	1.264	0.425	0.458

Table ESM-1, continued. **November 2010.**

	E-49 1kDa	E-49	E-50 1 kDa	E-50	E-51 1 kDa	E-51
Salinity, ‰	1.04	1.06	0.92	0.94	0.26	0.27
DOC, mg/L	6.5	15.71	8.58	12.69	4.517	11.62
pH		7.81		7.75		7.86
Alk, M		0.00200		0.00195		0.00211
B	101	103	88	90	30	32
Na	227700	234304			15060	10720
Mg	38214	38964	33980	34615	9678	9979
Al	30.2	69.8	39.6	79.4	35.3	85.6
Si	3023	3108	3078	3087	3412	3403
K	9281	9404	8958	8882	1916	2016
Ca	30428	31349	28240	28703	24700	25950
Ti	0.5836	1.7055	0.5606	1.9189	0.6758	1.3780
V	0.611	0.896	0.724	0.892	0.339	0.427
Cr	0.123	0.272	0.195	0.333	0.138	0.239
Mn	18.9	20.9	19.7	20.6	7.0	14.8
Fe	33.9	278.2	33.2	276.9	24.4	215.7
Co	ND	ND	ND	ND	ND	ND
Ni	0.3767	0.7479	0.4018	0.7099	0.4630	0.5946
Cu	0.2148	0.4941	0.2482	0.5104	0.1214	0.4507
Zn	0.90	2.02	1.92	2.58	0.68	1.23
Ga	0.0054	0.0088	0.0133	0.0179	0.0150	0.0165
Ge	0.0026	0.0030	0.0108	0.0126	0.0087	0.0046
As	0.477	0.613	0.464	0.621	0.492	0.663
Rb	2.23	2.26	2.09	2.11	0.65	0.69
Sr	642	659	602	610	404	479
Zr	0.0425	0.1423	0.0739	0.2316	0.0466	0.1297
Mo	0.49	0.47	0.56	0.56	0.24	0.34
Cd	0.0018	0.0052	0.0043	0.0096	0.0021	0.0052
Sb	0.021	0.026	0.0315	0.0455	0.0290	0.0304
Cs	0.0077	0.0075	0.0095	0.0107	0.0051	0.0063
Ba	26.8	28.3	27.3	28.0	27.6	29.8
La	0.0087	0.0989	0.0147	0.1066	0.0052	0.0769
Ce	0.0195	0.1780	0.0241	0.2026	0.0059	0.1296
Pr	0.0009	0.0279	0.0064	0.0336	0.0022	0.0236
Nd	0.0137	0.1146	0.0189	0.1315	0.0078	0.0944
Sm	0.0045	0.0262	0.0068	0.0339	0.0025	0.0219
Eu	0.0023	0.0062	0.0060	0.0123	0.0038	0.0075
Gd	0.0003	0.0228	0.0090	0.0282	0.0033	0.0219
Dy	0.0003	0.0211	0.0059	0.0266	0.0029	0.0189
Ho	ND	0.0032	0.0036	0.0080	0.0016	0.0039
Er	0.0014	0.0115	0.0047	0.0163	0.0027	0.0122
Tm	ND	0.0001	0.0031	0.0055	0.0007	0.0019
Yb	ND	0.0128	0.0034	0.0133	0.0028	0.0095
Lu	ND	0.0006	0.0030	0.0054	0.0011	0.0022
Hf	0.0213	0.0439	0.0587	0.1105	0.0300	0.0437
W	0.0039	0.0073	0.0718	0.1345	0.0190	0.0229
Pb	0.1065	0.1519			0.0427	0.0851
Th	0.0039	0.0102	0.0698	0.2230	0.0182	0.0730
U	0.207	0.230	0.214	0.250	0.167	0.210

Table ESM-1, continued. **December 2010.**

Salinity, ‰	E-57 1kDa 27.26	E-57 15kDa 27.29	E-57 50kDa 27.72	E-57 27.92
DOC, mg/L	4.83	5.17	5.35	5.40
pH				7.07
Alk, M				0.00175
B	2813	2819	2880	2894
Na	9996000	10043369	10381963	10636704
Mg	1002959	1004134	1020075	1027257
Al	9.54	9.78	9.88	10.05
Si	776	782	785	800
K	286513	290741	288962	295098
Ca	160323	158829	160832	162776
Ti	4.80	4.89	5.15	4.99
V	0.961	0.976	1.075	1.180
Cr	1.01	1.09	1.05	1.13
Mn	5.43	5.51	5.55	5.85
Fe	96	100	116	127
Co	0.46	0.45	0.48	0.46
Ni	0.303	0.349	0.397	0.421
Cu	0.156	0.191	0.393	0.405
Zn	9.73	12.22	14.55	16.12
Ga	ND	ND	ND	ND
Ge	ND	ND	ND	ND
As	1.02	1.01	1.05	1.10
Rb	56.8	57.3	58.5	59.3
Sr	4920	4950	5017	5089
Zr	0.016	ND	ND	0.0206
Mo	7.30	7.49	7.56	7.44
Cd	0.029	0.026	0.032	0.031
Sb	0.126	0.126	0.149	0.151
Cs	0.349	0.340	0.328	0.357
Ba	21.3	21.1	21.4	22.6
La	0.0961	0.1162	0.1178	0.1418
Ce	0.0869	0.0864	0.0850	0.0981
Pr	0.0806	0.0830	0.0828	0.0949
Nd	0.0359	0.0366	0.0379	0.0587
Sm	0.0284	0.0273	0.0382	0.0421
Eu	0.0470	0.0462	0.0565	0.0565
Gd	0.1843	0.2444	0.2383	0.2537
Dy	0.0292	0.0331	0.0343	0.0371
Ho	0.0109	0.0122	0.0126	0.0139
Er	0.0180	0.0193	0.0171	0.0216
Tm	0.0164	0.0181	0.0204	0.0211
Yb	0.0400	0.0434	0.0461	0.0488
Lu	0.0082	0.0092	0.0088	0.0100
Hf		ND	ND	ND
W	ND	ND	ND	ND
Pb	0.58	0.62	0.67	0.67
Th	ND	ND	ND	ND
U	1.479	1.505	1.648	1.622

Table ESM-1, continued. **December 2010.**

	E-58 1kDa	E-58 15kDa	E-58 50kDa	E-58
Salinity, ‰	12.6	12.6	12.6	12.6
DOC, mg/L	6.9	7.49	11.92	13.76
pH				7.19
Alk, M				0.00201
B	1120.8	1120.7	1164.5	1160.6
Na	4009852	4180774	4288914	4271516
Mg	403652	403032	416877	418044
Al	29.3	30.1	32.5	39.9
Si	2593	2626.000	2626.000	2678
K	110785	113399	115866	115751
Ca	74722	75413	77374	77475
Ti	0.69	0.86	0.95	1.11
V	0.57	0.58	0.63	0.63
Cr	0.29	0.28	N.D.	0.33
Mn	20.5	21.8	22.3	22.4
Fe	106	145	146	180
Co	0.26	0.31	0.28	0.26
Ni	0.5965	0.6070	0.6052	0.8511
Cu	0.2477	0.4642	0.4969	0.5051
Zn	8.89	12.70	13.19	13.05
Ga	ND	ND	ND	ND
Ge	ND	ND	ND	ND
As	0.680	0.651	0.682	0.799
Rb	23.2	23.7	23.7	23.7
Sr	2198	2208	2293	2275
Zr	ND	ND	0.0078	0.0417
Mo	2.64	2.61	2.77	2.74
Cd	0.045	0.082	0.092	0.145
Sb	0.085	ND	0.0915	0.0950
Cs	0.151	0.158	0.149	0.149
Ba	35.3	35.4	36.1	39.9
La	0.095	0.121	0.117	0.135
Ce	0.113	0.116	0.127	0.129
Pr	0.028	0.029	0.031	0.056
Nd	0.127	0.129	0.128	0.202
Sm	0.038	0.038	0.039	0.057
Eu	0.034	0.035	0.043	0.043
Gd	0.090	0.092	0.097	0.117
Dy	0.027	0.030	0.032	0.054
Ho	0.006	0.010	0.009	0.008
Er	0.014	0.022	0.028	0.032
Tm	ND	ND	ND	ND
Yb	0.023	ND	ND	0.028
Lu	0.006	0.006	0.006	0.008
Hf	ND	< d.l.	< d.l.	< d.l.
W	ND	ND	ND	ND
Pb	0.32	0.35	0.33	0.47
Th	ND	< d.l.	< d.l.	< d.l.
U	0.712	0.715	0.720	0.740

Table ESM-1, continued. **December 2010.**

	E-56 1kDa	E-56 15kDa	E-56 50kDa	E-56
Salinity, ‰	0.25	0.26	0.26	0.26
DOC, mg/L	12.06	12.51	13.96	18.82
pH				6.92
Alk, M				0.00103
B	31.7	32.4	31.0	32.8
Na	28160	28353	28052	28630
Mg	9127	9540	9589	9666
Al	21.44	34.29	39.79	79.2
Si	3046	3040.000	3087.000	3098
K	1569	1652	1668	1699
Ca	17000	17370	17590	17940
Ti	0.5331	0.6902	0.8097	2.049
V	0.4143	0.4956	0.5045	0.6453
Cr	0.2136	0.2354	0.2757	0.5815
Mn	5.91	9.08	9.33	9.52
Fe	44.6	65.7	79.0	387.1
Co	ND	ND	ND	ND
Ni	0.549	0.6495	0.6803	0.8689
Cu	0.496	0.5217	0.545	0.9219
Zn	1.76	3.74	3.80	3.82
Ga	0.0053	0.0104	0.0094	0.0112
Ge	0.0017	0.0053	0.0038	0.0089
As	0.506	0.551	0.529	0.719
Rb	0.63	0.69	0.69	0.70
Sr	321	330	340	346
Zr	0.061	0.098	0.117	0.199
Mo	0.24	0.27	0.26	0.26
Cd	0.0035	0.0066	0.0067	0.0089
Sb	0.0241	0.0247	0.0261	0.0324
Cs	0.0014	0.0017	0.0012	0.0019
Ba	20.1	21.7	21.4	51.2
La	0.0261	0.0469	0.0547	0.2015
Ce	0.0386	0.0693	0.0854	0.3127
Pr	0.0074	0.0149	0.0153	0.0577
Nd	0.0330	0.0575	0.0658	0.2329
Sm	0.0086	0.0158	0.0157	0.0557
Eu	0.0033	0.0061	0.0055	0.0195
Gd	0.0085	0.0170	0.0169	0.0575
Dy	0.0065	0.0137	0.0159	0.0453
Ho	0.0014	0.0024	0.0031	0.0108
Er	0.0046	0.0096	0.0095	0.0275
Tm	0.0004	0.0013	0.0013	0.0052
Yb	0.0037	0.0079	0.0082	0.0230
Lu	0.0005	0.0008	0.0012	0.0051
Hf	0.0277	0.0447	0.0463	0.0608
W	0.0103	0.0103	0.0118	0.0153
Pb	0.0159	0.0884	0.0775	0.1105
Th	0.0103	0.0198	0.0181	0.0498
U	0.073	0.093	0.095	0.133

Table ESM-1, continued. **December 2010.**

	E-52 1kDa	E-52 15kDa	E-52 50kDa	E-52
Salinity, ‰	1.05	1.05	1.05	1.05
DOC, mg/L	13.24	15.62	15.9	18.1
pH				6.6
Alk, M				0.0011
B	84.1	84.1	84.2	85.9
Na	196501	197184	198247	200465
Mg	31015	31377	31780	31929
Al	23.1	27.9	28.5	55.5
Si	3049	3088	3089	3126
K	7841	7849	7859	8046
Ca	18162	18111	18580	18581
Ti	0.8825	0.7597	0.7704	1.7382
V	0.4475	0.4304	0.4561	0.6907
Cr	0.2441	0.2822	0.3009	0.4266
Mn	11.1	11.2	11.3	14.3
Fe	66.6	84.3	92.9	363.2
Co	0.094	0.098	0.094	0.100
Ni	0.6090	0.693	0.740	0.850
Cu	0.5002	0.562	0.594	0.785
Zn	5.70	5.27	5.31	11.22
Ga	0.0113	0.0129	0.0167	0.0196
Ge	0.0165	0.0165	0.0179	0.0190
As	0.553	0.551	0.572	0.715
Rb	1.90	1.90	1.90	1.91
Sr	380	381	381	388
Zr	0.1185	0.1140	0.1185	0.1902
Mo	0.43	0.44	0.44	0.46
Cd	0.0114	0.0103	0.0106	0.0193
Sb	0.0360	0.0399	0.0392	0.0426
Cs	0.0064	0.0069	0.0065	0.0073
Ba	22.3	22.9	23.0	51.6
La	0.0479	0.0716	0.0697	0.2024
Ce	0.0717	0.1022	0.0977	0.3126
Pr	0.0161	0.0208	0.0199	0.0644
Nd	0.0568	0.0832	0.0836	0.2279
Sm	0.0168	0.0261	0.0203	0.0635
Eu	0.0072	0.0084	0.0091	0.0241
Gd	0.0178	0.0232	0.0323	0.0653
Dy	0.0144	0.0199	0.0247	0.0569
Ho	0.0063	0.0071	0.0106	0.0188
Er	0.0120	0.0191	0.0158	0.0345
Tm	0.0041	0.0051	0.0039	0.0146
Yb	0.0090	0.0120	0.0163	0.0324
Lu	0.0067	0.0091	0.0104	0.0130
Hf	0.0283	0.0390	0.0457	0.0472
W	0.0237	0.0332	0.0340	0.0352
Pb	0.1695	0.1956	0.2198	0.2717
Th	N.D.	N.D.	N.D.	N.D.
U	0.145	0.146	0.148	0.170

Table ESM-1, continued. **December 2010.**

	E-54 1kDa	E-54 15kDa	E-54 50kDa	E-54
Salinity, ‰	1.80	1.80	1.80	1.80
DOC, mg/L	10.1	10.62	13.34	14.91
pH				6.73
Alk, M				0.00108
B	141	140	141	151
Na		552580	560796	563785
Mg	52332	52413	52473	53212
Al	26.0	29.1	30.3	54.6
Si	2926	3028	3070	3054
K	13500	13900	14000	14010
Ca	27800	27600	28200	28700
Ti	0.818	0.892	0.814	1.715
V	0.549	0.549	0.546	0.663
Cr		0.240	0.403	0.505
Mn	15.3	15.1	15.4	17.4
Fe	84	99	108	356
Co	< d.l.	< d.l.	< d.l.	< d.l.
Ni	0.602	0.729	0.776	0.787
Cu	0.536	0.568	0.616	0.712
Zn	4.92	3.20	7.45	26.02
Ga	0.0103	0.0090	0.0105	0.0100
Ge	N.D.	N.D.	N.D.	N.D.
As	0.633	0.655	0.674	0.707
Rb	3.10	3.13	3.16	3.13
Sr	622	629	620	632
Zr	0.147	0.169	0.134	0.211
Mo	0.60	0.60	0.58	0.57
Cd	0.0062	0.0091	0.0210	0.0196
Sb	0.0235	0.0236	0.0234	0.0359
Cs	N.D.	0.0039	0.0095	0.0132
Ba	25.1	23.9	23.7	60
La	0.0640	0.0784	0.0842	0.1915
Ce	0.0907	0.1174	0.1287	0.2992
Pr	0.0196	0.0232	0.0304	0.0542
Nd	0.0725	0.1015	0.1013	0.2342
Sm	0.0172	0.0276	0.0283	0.0489
Eu	0.0054	0.0061	0.0149	0.0172
Gd	0.0208	0.0329	0.0273	0.0530
Dy	0.0193	0.0214	0.0239	0.0467
Ho	0.0033	0.0056	0.0120	0.0095
Er	0.0111	0.0160	0.0213	0.0223
Tm	0.0017	0.0024	0.0027	0.0030
Yb	0.0092	0.0102	0.0159	0.0206
Lu	0.0019	0.0029	0.0030	0.0041
Hf	N.D.	N.D.	0.0358	0.0467
W	N.D.	N.D.	N.D.	0.0305
Pb	0.0757	0.0805	0.0868	0.1760
Th	N.D.	N.D.	N.D.	N.D.
U	0.169	0.171	0.173	0.196

Table ESM-1, continued. **December 2010.**

	E-55 1kDa	E-55 15kDa	E-55 50kDa	E-55
Salinity, ‰	0.634	0.634	0.634	0.634
DOC, mg/L	11.48	13.9	14.26	22.7
pH				7.03
Alk, M				0.00106
B	53.9	53.5	54.0	56.0
Na	115900	N.D.	N.D.	115435
Mg	20488	20463	20651	21127
Al	22.5	36.6	38.5	85.6
Si	3111	3100	3158	3188
K	4808	4785	4809	4811
Ca	20810	20948	21464	21637
Ti	0.6288	0.7370	0.7090	1.9478
V	0.4289	0.4383	0.4391	0.6579
Cr		0.2737	0.2583	0.4555
Mn	9.5	9.5	9.5	13.0
Fe	56.0	76.0	81.6	383.5
Co	N.D.	N.D.	N.D.	N.D.
Ni	0.600	0.644	0.665	0.846
Cu	0.543	0.559	0.508	0.777
Zn	4.33	4.95	4.25	12.36
Ga	0.0066	0.0107	0.0104	0.0126
Ge	0.0058	0.0088	0.0049	0.0073
As	0.531	0.561	0.552	0.727
Rb	1.31	1.29	1.30	1.30
Sr	418	416	420	427
Zr	0.073	0.126	0.135	0.219
Mo	0.35	0.36	0.36	0.35
Cd	0.0068		0.0072	0.0134
Sb	0.0344	0.0359	0.0330	0.0362
Cs	N.D.	N.D.	N.D.	N.D.
Ba	22.7	22.5	22.5	54.7
La	0.0379	0.0585	0.0648	0.200
Ce	0.0532	0.0834	0.0875	0.310
Pr	0.0105	0.0171	0.0194	0.0583
Nd	0.0410	0.0720	0.0727	0.237
Sm	0.0099	0.0179	0.0202	0.0525
Eu	0.0038	0.0048	0.0062	0.0198
Gd	0.0135	0.0175	0.0214	0.0529
Dy	0.0092	0.0182	0.0178	0.0453
Ho	0.0021	0.0049	0.0055	0.0111
Er	0.0069	0.0135	0.0119	0.0287
Tm	0.0009	0.0024	0.0029	0.0046
Yb	0.0058	0.0087	0.0106	0.0232
Lu	0.0003	0.0033	0.0033	0.0045
Hf	0.0300	0.0509	0.0571	0.0556
W	N.D.	N.D.	N.D.	N.D.
Pb	N.D.	N.D.	N.D.	0.1203
Th	N.D.		0.0028	0.0474
U	0.108	0.120	0.122	0.154

Table ESM-1, continued. **December 2010.**

	E-53 1kDa	E-53 15kDa	E-53 50kDa	E-53
Salinity, ‰	2.13	2.14	2.14	2.18
DOC, mg/L	8.1	Cntd	Cntd	17.13
pH				6.74
Alk, M				0.00135
B	213	216	219	215
Na	N.D.	N.D.	N.D.	N.D.
Mg	78487	78724	78904	80264
Al	19.8	23.4	24.9	46.7
Si	2823	2838	2850	2873
K	21593	21609	21357	21621
Ca	24609	24660	24530	25251
Ti	0.6433	N.D.	0.9882	1.687
V	0.4289	0.4328	0.4579	0.659
Cr		0.3434	0.3383	0.466
Mn	15.1	15.3	15.6	18.3
Fe	71.8	92.2	95.0	331.7
Co	N.D.	N.D.	N.D.	N.D.
Ni	0.588	0.655	0.694	0.798
Cu	0.508	0.540	0.508	0.755
Zn	5.66	Cntd	5.01	11.76
Ga	0.0086	0.0103	0.0212	0.021
Ge	0.0163	0.0174	0.0251	0.028
As	0.502	0.530	0.633	0.714
Rb	4.66	4.67	4.79	4.70
Sr	603	605	602	614
Zr	0.079	0.099	0.177	0.182
Mo	0.90	0.78	0.91	0.85
Cd	0.0165	0.0209	0.0397	0.0563
Sb	0.0458	N.D.	N.D.	0.0657
Cs	0.0060	N.D.	N.D.	0.0068
Ba	22.9	23.0	23.5	44.7
La	0.0478	0.0675	0.0802	0.196
Ce	0.0700	0.0990	0.1165	0.297
Pr	0.0161	0.0174	0.0280	0.0582
Nd	0.0558	0.0853	0.0905	0.2248
Sm	0.0185	0.0223	0.0286	0.0555
Eu	0.0067	0.0087	0.0103	0.0285
Gd	0.0212	0.0294	0.0340	0.0558
Dy	0.0127	0.0212	0.0274	0.0552
Ho	0.0069	0.0049	0.0155	0.0244
Er	0.0116	0.0130	0.0166	0.0431
Tm	0.0033	0.0024	0.0136	0.0152
Yb	0.0078	0.0089	0.0218	0.0418
Lu	0.0031	0.0042	0.0103	0.0188
Hf	0.0213	0.0191	0.0196	0.0810
W	N.D.	N.D.	N.D.	N.D.
Pb	N.D.	N.D.	0.0546	0.1824
Th	N.D.	N.D.	N.D.	N.D.
U	0.189	0.198	0.261	0.250

Table ESM-1, continued. July 2012.

	E-60 1 kDa	E-60 15 kDa	E-60 50 kDa	E-60
Salinity, ‰	0.14	0.14	0.14	0.16
pH				7.40
DIC, ppm				12.27
DOC, ppm	13.59	14.5	14.09	16.83
B	15.85	15.22	15.64	16.56
Na	3803	3995	3924	4574
Mg	4332	4168	4702	5710
Al	14.9	18.74	19.927	42.21
Si	1683	1681	1689	1744
P	< d.l.	< d.l.	< d.l.	16.45
K	541.8	501.9	541	708.5
Ca	12610	12020	12850	16650
Ti	0.3569	0.416	0.4139	1.68
V	0.3323	0.2881	0.2958	0.6341
Cr	0.1743	0.1645	0.1816	0.3948
Mn	2.52	2.41	2.66	3.07
Fe	30.19	27.59	36.01	272.8
Co	0.015	0.035	0.033	0.053
Ni	0.5912	0.5051	0.6107	1.08
Cu	0.93	0.82	0.95	1.35
Zn	N.D.	0.5406	1.169	1.068
Ga	0.0081	0.0085	0.0092	0.0137
Ge	0.0032	0.0035	0.0035	0.0080
As	0.498	0.478	0.470	0.862
Rb	0.649	0.645	0.641	0.645
Sr	232	238	240	260.4
Zr	0.082	0.087	0.086	0.302
Mo	0.205	0.194	0.197	0.255
Cd	0.0122	N.D.	N.D.	0.0212
Sb	0.0307	0.0292	0.0296	0.0476
Cs	< d.l.	< d.l.	< d.l.	0.0008
Ba	19.3	18.2	19.4	26.1
La	0.043	0.043	0.049	0.217
Ce	0.051	0.053	0.054	0.266
Pr	0.012	0.012	0.010	0.061
Nd	0.058	0.044	0.052	0.286
Sm	0.015	0.016	0.012	0.061
Eu	0.005	0.004	0.004	0.018
Gd	0.016	0.015	0.014	0.065
Dy	0.012	0.010	0.012	0.051
Ho	0.002	0.002	0.003	0.011
Er	0.009	0.009	0.008	0.030
Tm	0.001	0.001	0.001	0.005
Yb	0.007	0.007	0.008	0.024
Lu	0.001	0.001	0.001	0.004
Hf	0.008	0.008	0.008	0.027
W	0.012	0.011	0.013	0.040
Pb	0.017	0.016	0.019	0.084
Th	0.004	0.003	0.004	0.026
U	0.072	0.076	0.076	0.119

Table ESM-1, continued. July 2012.

	E-61 1 kDa	E-61 15 kDa	E-61 50 kDa	E-61
Salinity, ‰	0.69	0.70	0.70	0.70
pH				7.14
DIC, ppm	12.75			
DOC, ppm	17.43			19.5
B	97	99	100	101
Na	192016	195359	197263	197931
Mg	28510	29301	29384	29464
Al	10.4	10.0	11.6	22.5
Si	1574	1590	1568	1599
P			3.7	16.6
K	7240	7294	7301	7300
Ca	19940	20210	20286	20499
Ti	0.439	0.444	0.473	1.530
V	0.451	0.474	0.481	0.688
Cr	0.330	0.339	0.370	0.439
Mn	1.61	1.64	1.70	1.86
Fe	39.7	45.2	46.3	236.7
Co	0.055	0.057	0.053	0.081
Ni	0.826	0.930	0.937	1.086
Cu	0.84	0.88	0.85	1.06
Zn	Cntd	Cntd	Cntd	0.858
Ga	<d.l.	<d.l.	<d.l.	<d.l.
Ge	<d.l.	<d.l.	<d.l.	<d.l.
As	0.725	0.730	0.734	0.783
Rb	2.429	2.464	2.503	2.461
Sr	359	362	363	367
Zr	0.120	0.150	0.148	0.250
Mo	0.509	0.496	0.498	0.538
Cd	N.D.	N.D.	N.D.	N.D.
Sb	0.0452	0.046	0.044	0.048
Cs	0.0158	0.016	0.014	0.027
Ba	26.4	26.4	26.5	26.9
La	0.0515	0.057	0.066	0.176
Ce	0.0600	0.065	0.071	0.223
Pr	0.0137	0.017	0.018	0.051
Nd	0.0709	0.088	0.089	0.255
Sm	0.0255	0.020	0.022	0.060
Eu	0.0095	0.009	0.009	0.020
Gd	0.0182	0.020	0.029	0.059
Dy	0.0195	0.017	0.021	0.046
Ho	0.0033	0.004	0.005	0.010
Er	0.0119	0.014	0.015	0.031
Tm	0.0018	0.002	0.003	0.004
Yb	0.0137	0.017	0.017	0.020
Lu	0.0017	0.002	0.002	0.003
Hf	0.0199	0.020	0.021	0.027
W	N.D.	0.018	0.016	0.035
Pb	0.0771	0.078	0.089	0.125
Th	0.0100	0.010	0.011	0.029
U	0.1405	0.158	0.157	0.173

Table ESM-1, continued. July 2012.

	E-62 1 kDa	E-62 15 kDa	E-62 50 kDa	E-62
Salinity, ‰	2.03	2.08	2.06	2.12
pH				7.16
DIC, ppm				13.09
DOC, ppm	14.37			16.53
B	287	294	297	303
Na	625175	626244	626728	627700
Mg	88336	88235	89855	90700
Al	3.66	3.73	3.91	3.99
Si	1421	1429	1410	1404
P	18	14	14	21
K	23699	24280	24048	24713
Ca	28228	28366	28594	28689
Ti	0.684	0.69	0.90	1.19
V	0.557	0.63	0.52	0.73
Cr	0.490	0.44	0.48	0.53
Mn	3.054	2.99	3.08	3.30
Fe	56.3	53.9	59.2	188.9
Co	0.129	0.132	0.126	0.178
Ni	0.8511	0.9398	0.9635	0.9790
Cu	2.26	2.14	2.36	2.88
Zn	Cntd	Cntd	Cntd	2.45
Ga	<d.l.	<d.l.	<d.l.	<d.l.
Ge	<d.l.	<d.l.	<d.l.	<d.l.
As	0.562	0.709	0.740	0.777
Rb	6.95	6.92	7.03	7.18
Sr	668	670	680	687
Zr	0.1268	0.1270	0.1498	0.1547
Mo	1.05	1.03	1.06	1.09
Cd	0.012	0.014	N.D.	0.0212
Sb	0.040	0.044	0.044	0.048
Cs	0.042	0.044	0.046	0.042
Ba	25.2	25.9	25.6	25.9
La	0.0844	0.0866	0.1040	0.134
Ce	0.0864	0.0830	0.1181	0.180
Pr	0.0349	0.0376	0.0444	0.044
Nd	0.0493	0.0574	0.1459	0.196
Sm	0.0371	0.0359	0.0375	0.0553
Eu	0.0216	0.0211	0.0237	0.0291
Gd	0.0353	0.0350	0.0400	0.0418
Dy	0.0303	0.0317	0.0332	0.0389
Ho	0.0058	0.0046	0.0054	0.0082
Er	0.0134	0.0212	0.0239	0.0230
Tm	0.0032	0.0032	0.0031	0.0049
Yb	0.0114	0.0134	0.0149	0.0145
Lu	0.0022	0.0024	0.0029	0.0052
Hf	N.D.	N.D.	N.D.	N.D.
W	N.D.	N.D.	N.D.	N.D.
Pb	0.246	0.238	0.308	0.319
Th	N.D.	0.013	N.D.	0.0108
U	0.2272	0.236	0.233	0.263

Table ESM-1, continued. **July 2012.**

	E-63 1 kDa	E-63 15 kDa	E-63 50 kDa	E-63
Salinity, ‰	6.11	6.14	6.30	6.17
pH				7.25
DIC, ppm				15.29
DOC, ppm	11.92			13.24
B	769	780	781	784
Na	1844597	1854095	1843758	1850990
Mg	224751	225967	231865	227011
Al	42.1	43.6	43.8	46.0
Si	1062	1068	1063	1061
P	N.D.	N.D.	N.D.	N.D.
K	N.D.	N.D.	N.D.	N.D.
Ca	54127	54093	54431	54487
Ti	0.891	0.876	0.957	1.247
V	0.720	0.694	0.712	1.035
Cr	0.670	0.613	0.820	0.873
Mn	1.44	1.46	1.49	2.09
Fe	55.1	55.1	52.5	87.6
Co	0.13	0.13	0.14	0.18
Ni	0.6911	0.7314	0.6994	0.9150
Cu	1.39	1.35	1.48	2.05
Zn	ND	ND	ND	2.3776
Ga	ND	ND	ND	ND
Ge	ND	ND	ND	ND
As	0.679	0.771	0.790	0.823
Rb	17	18	18	18
Sr	1465	1458	1467	1473
Zr	0.210	0.218	0.249	0.248
Mo	2.6	2.6	2.9	2.8
Cd	ND	ND	ND	ND
Sb	0.218	0.199	0.232	0.256
Cs	0.256	0.274	0.269	0.270
Ba	24.3	24.3	24.5	24.7
La	0.056	0.064	0.077	0.075
Ce	0.051	0.042	0.075	0.080
Pr	0.017	0.024	0.034	0.034
Nd	0.064	0.071	0.107	0.109
Sm	ND	ND	ND	ND
Eu	ND	ND	ND	ND
Gd	ND	ND	ND	ND
Dy	ND	ND	ND	ND
Ho	ND	ND	ND	ND
Er	ND	ND	ND	ND
Tm	ND	ND	ND	ND
Yb	0.024	0.022	0.027	0.0349
Lu	N.D.	N.D.	N.D.	N.D.
Hf	N.D.	N.D.	N.D.	N.D.
W	N.D.	N.D.	N.D.	N.D.
Pb	0.610	0.606	0.693	0.711
Th	N.D.	N.D.	N.D.	N.D.
U	0.584	0.616	0.617	0.653

Table ESM-1, continued. July 2012.

	E-64 1 kDa	E-64 15 kDa	E-64 50 kDa	E-64
Salinity, ‰	20.34	20.83	20.64	20.82
pH				7.25
DIC, ppm				20.16
DOC, ppm	5.8			6.71
B	2977	3072	3110	3096
Na	6902635	7012522	7194762	7127150
Mg	859472	876200	877454	872823
Al	99.5	101.4	106.2	110.0
Si	728	734	734	740
P	34	36	33	39
K	248160	254106	251796	253964
Ca	167089	170572	170588	169514
Ti	1.309	1.770	1.818	1.968
V	0.678	1.021	0.946	0.979
Cr	6.3	6.330	6.650	7.1
Mn	2.07	2.48	2.33	2.54
Fe	21.3	19.2	25.4	25.6
Co	0.13	N.D.	N.D.	0.19
Ni	1.50	1.52	1.68	1.65
Cu	Cntd	Cntd	Cntd	1.74
Zn	Cntd	Cntd	Cntd	4.55
Ga	ND	ND	ND	ND
Ge	ND	ND	ND	ND
As	0.894	0.901	1.156	1.072
Rb	65	67	66	66
Sr	4863	4906	4943	4913
Zr	0.279	0.271	0.248	0.341
Mo	7.5	7.7	7.6	8.0
Cd	ND	N.D.	N.D.	ND
Sb	0.39	ND	ND	0.45
Cs	2.11	2.3	2.1	2.1
Ba	15.7	15.2	15.7	15.9
La	0.15	ND	ND	0.165
Ce	0.107	ND	ND	0.142
Pr	ND	ND	ND	ND
Nd	ND	ND	ND	ND
Sm	ND	ND	ND	ND
Eu	ND	ND	ND	ND
Gd	ND	ND	ND	ND
Dy	ND	ND	ND	ND
Ho	ND	ND	ND	ND
Er	ND	ND	ND	ND
Tm	ND	ND	ND	ND
Yb	N.D.	N.D.	N.D.	N.D.
Lu	N.D.	N.D.	N.D.	N.D.
Hf	N.D.	N.D.	N.D.	N.D.
W	N.D.	N.D.	N.D.	N.D.
Pb	0.61	0.62	0.76	0.71
Th	N.D.	N.D.	N.D.	N.D.
U	1.65	1.77	1.77	1.73

Table ESM-1, continued. July 2012.

	E-65 1 kDa	E-65 15 kDa	E-65 50 kDa	E-65
Salinity, ‰	7.57	7.46	7.66	7.58
pH				7.25
DIC, ppm				
DOC, ppm	11.42			13.9
B	1164	1154	1166	1169
Na	2800000	2760000	2850000	2743000
Mg	333200	330000	338484	334392
Al	67.8	65.9	68.0	75.50
Si	1157	1183	1192	1212
P	21	24	27	35
K	91609	90206	92621	91646
Ca	68268	67641	68090	68220
Ti	0.7500			1.0288
V	0.5704	0.7999	0.7954	0.9031
Cr	3.05	3.18	3.6	3.5
Mn	3.1	3.4	4.6	3.4
Fe	55.0	50.8	60.0	99.0
Co	ND	ND	ND	ND
Ni	ND	ND	ND	ND
Cu	Cntd	Cntd	Cntd	1.5
Zn	Cntd	Cntd	Cntd	4.97
Ga	ND	ND	ND	ND
Ge	ND	ND	ND	ND
As	0.8350	0.9153	0.8768	1.0342
Rb	27.8	28.4	27.6	29.4
Sr	2085	2084	2088	2090
Zr	0.4915	0.5728		0.5133
Mo	3.896	3.700	3.67	4.19
Cd	ND	N.D.	N.D.	
Sb	0.1975	N.D.	N.D.	0.2310
Cs	1.0969	1.0086	0.9584	1.1870
Ba	23.8	24.0	23.9	25.1
La	0.13	0.13	0.14	0.17
Ce	0.13	0.14	0.12	0.17
Pr	0.0364	0.0514	0.0321	0.0968
Nd	0.0880	0.1245	0.0925	0.1939
Sm	0.0405	0.0601	0.0567	0.1109
Eu	0.0421	0.0502	0.0572	0.0723
Gd	0.0458	0.0589	0.0780	0.0709
Dy	0.0428	0.0402	0.0393	0.0747
Ho	0.0275	0.0254	0.0249	0.0661
Er	0.0365	0.0466	0.0476	0.0959
Tm	0.0234	0.0320	0.0291	0.0615
Yb	0.0420	0.0433	0.0616	0.0721
Lu	0.0267	0.0239	0.0256	0.0729
Hf	N.D.	N.D.	N.D.	N.D.
W	N.D.	N.D.	N.D.	N.D.
Pb	0.507	0.507	0.519	0.563
Th	N.D.	N.D.	N.D.	N.D.
U	0.8575	0.8819	0.877	0.990

Table ESM-1, continued. **July 2012.**

	E-66 1 kDa	E-66 15 kDa	E-66 50 kDa	E-66
Salinity, ‰	10.30	10.36	10.37	10.37
pH				7.28
DIC, ppm				16.31
DOC, ppm	8.5			10.01
B	1563	1572	1564	1575
Na	3807100	3809600	3808000	3883000
Mg	460256	459471	460268	466631
Al	79	75	80	84
Si	952	960	969	945
P	39	37	29	38
K	125074	125736	125854	125890
Ca	87636	87836	87592	87641
Ti	2.64	3.24	4.01	3.58
V	0.87	0.85	1.03	1.11
Cr	2.4	N.D.	2.66	2.72
Mn	1.57	1.69	1.84	2.26
Fe	19.5	17	19	27
Co	0.20	N.D.	0.27	0.29
Ni	2.67	3.06	3.06	3.24
Cu	N.D.	N.D.	N.D.	1.4
Zn	31.5	30.4	40.2	36.1
Ga	N.D.	N.D.	N.D.	N.D.
Ge	N.D.	N.D.	N.D.	N.D.
As	0.92	1.13	1.07	1.07
Rb	37	37.2	37.0	37.2
Sr	2728	2780	2753	2766
Zr	0.380	0.359	0.465	0.513
Mo	4.21	4.28	4.30	4.38
Cd	0.099	0.115	0.096	0.112
Sb	0.293	0.201	0.377	0.315
Cs	1.11	0.96	1.21	1.41
Ba	21.3	21.6	21.5	21.6
La	0.204	0.202	0.200	0.242
Ce	0.109	0.104	0.112	0.119
Pr	0.034	0.042	0.045	0.042
Nd	0.050	0.053	0.053	0.101
Sm	0.029	0.059	0.058	0.061
Eu	0.026	0.024	0.022	0.031
Gd	0.037	0.034	0.033	0.045
Dy	0.016	0.023	0.024	0.019
Ho	0.025	0.021	0.022	0.036
Er	0.035	N.D.	N.D.	0.057
Tm	0.014	0.015	0.012	0.021
Yb	0.047	0.047	0.053	0.060
Lu	0.017	0.023	0.018	0.019
Hf	0.028	0.028	0.037	0.033
W	N.D.	N.D.	N.D.	N.D.
Pb	1.071	1.052	1.150	1.233
Th	0.308	0.214	0.331	0.489
U	1.008	1.005	1.026	1.137

Table ESM-1, continued. July 2012.

	E-67 1 kDa	E-67	E-68	E-69 1 kDa	E-69
Salinity, ‰	7.79	8.04	10.70	5.22	5.35
pH		7.54	7.55		7.74
DIC, ppm	16.69	16.61	17.59	14.8	15.34
DOC, ppm	12.09	13.83	11.88	13.42	16.11
B	1153	1197	1651	797	806
Na	2898000	2994000	4026000	1927000	1977000
Mg	341168	355532	475964	229764	236953
Al	31.03	37.90	73.6	33.2	38.9
Si	1074	1153	906	1195	1364
P	19.57	25.34	0.0000	23.4	31.9
K	94248	97308	129908	62714	64372
Ca	70130	71795	91920	51989	53225
Ti	1.25	1.79	1.46	1.43	1.95
V	0.65	0.96	1.466	0.702	0.845
Cr	1.14	1.37	0.6800	1.70	1.95
Mn	2.55	2.99	4.50	3.22	3.98
Fe	42	68	77	63.0	93.2
Co	0.14	0.19	0.20	0.14	0.21
Ni	2.48	3.16	3.26	1.49	2.27
Cu	0.85	1.19	N.D.	1.50	2.10
Zn	Cntd	24.45	31.5	16.0	15.3
Ga	N.D.	N.D.	0.2872	0.0743	0.083
Ge	N.D.	N.D.	0.53	0.23	0.27
As	0.82	1.00	2.0531	0.91	1.00
Rb	27	28	42.4	19.4	19.3
Sr	2124	2185	2965	1545	1559
Zr	0.590	0.750	1.41	0.626	0.788
Mo	2.98	3.14	4.82	2.50	2.590
Cd	0.05	0.07	N.D.	0.074	0.098
Sb	0.1128	0.1367	0.2570	0.084	0.100
Cs	0.744	0.657	1.226	0.301	0.258
Ba	25.8	26.6	23.6	27.5	28.4
La	0.1893	0.2216	0.2330	0.1388	0.1662
Ce	0.0706	0.1281	0.1350	0.1095	0.1465
Pr	0.0134	0.0198	0.1665	0.0417	0.0502
Nd	0.1049	0.1204	0.2578	0.0947	0.1575
Sm	0.0889	0.0977	0.1846	0.0590	0.0688
Eu	0.0108	0.0173	0.1549	0.0146	0.0324
Gd	0.0741	0.0812	0.2915	0.0483	0.0591
Dy	0.0104	0.0127	0.1305	0.0312	0.0452
Ho	0.0108	0.0116	0.1317	0.0232	0.0342
Er	0.0188	0.0263	0.0138	0.0305	0.0357
Tm	0.0035	0.0042	0.0142	0.0242	0.0295
Yb	0.0420	0.0595	0.0120	0.0231	0.0302
Lu	0.0013	0.0016	0.0139	0.0235	0.0336
Hf	0.0208	0.0227	N.D.	0.0381	0.0472
W	0.1206	0.1845	N.D.	N.D.	N.D.
Pb	1.029	1.194	1.370	0.557	0.596
Th	0.019	0.028	N.D.	0.026	0.031
U	0.751	0.780	1.365	0.607	0.614

Table ESM-1, continued. July 2012.

	E-70 1 kDa	E-70	E-71 1 kDa	E-71	E-72 1 kDa	E-72
Salinity, ‰	1.42	1.46	0.62	0.62	0.16	0.16
pH		7.99	7.86			7.86
DIC, ppm	13.46	13.67	14.65	14.51	15.65	15.45
DOC, ppm	7.428	17.53	12.76	16.85	11.66	16.25
B	211	215	73.7	75.2	19.54	19.58
Na	N.D.	190929	179341	183695	6367	6200
Mg	N.D.	27751	26103	26972	6415	6603
Al	13.92	29.17	11.4	17.0	7.8	15.65
Si	1552	1749	1697.9	1602.8	818.6	846.3
P	15.4	25.3	19	28	7.934	16.19
K	16190	16671	6406	6423	787	721.6
Ca	18351	18927	18347	18781	16760	17560
Ti	0.430	1.100	0.55	0.95	0.4098	0.8033
V	0.570	0.762	0.44	0.71	0.42	0.6583
Cr	0.540	1.350	0.32	0.48	0.1996	0.3205
Mn	1.04	4.56	1.449	5.492	1.93	2.572
Fe	63.7	242.9	45.98	210.21	22.79	217.3
Co	0.061	0.071	0.039	0.046	0.0226	0.0330
Ni	1.09	1.24	1.16	1.58	0.8359	0.9850
Cu	1.96	2.45	3.40	1.40	N.D.	N.D.
Zn	8.32	3.53	N.D.	N.D.	cntd	0.5076
Ga	N.D.	N.D.	N.D.	N.D.	0.0074	0.0096
Ge	N.D.	N.D.	N.D.	N.D.	0.0066	0.0073
As	0.838	0.922	0.8063	0.9509	0.7362	0.9749
Rb	5.345	5.532	2.512	2.387	0.781	0.699
Sr	581.5	599.3	381.1	391.8	323.5	329.5
Zr	0.157	0.227	0.112	0.206	0.076	0.171
Mo	0.490	0.536	0.503	0.536	0.204	0.287
Cd	0.026	0.037	0.030	0.041	N.D.	N.D.
Sb	0.057	0.064	0.0350	0.0509	0.0437	0.057
Cs	N.D.	N.D.	0.0273	0.0271	0.0011	0.0016
Ba	27.1	28.9	28.3	29.1	29.0	30.9
La	0.0594	0.1639	0.0679	0.1368	0.0392	0.129
Ce	0.0602	0.2068	0.1008	0.1856	0.0463	0.169
Pr	0.0128	0.0395	0.0103	0.0371	0.0066	0.036
Nd	0.0601	0.1816	0.0492	0.1721	0.0306	0.163
Sm	0.0201	0.0426	0.0155	0.0438	0.0069	0.036
Eu	0.0093	0.0117	0.0044	0.0134	0.0044	0.011
Gd	0.0126	0.0399	0.0231	0.0436	0.0105	0.040
Dy	0.0166	0.0347	0.0144	0.0317	0.0066	0.030
Ho	0.0057	0.0070	0.0027	0.0076	0.0020	0.006
Er	0.0095	0.0204	0.0092	0.0197	0.0047	0.016
Tm	0.0036	0.0052	0.0016	0.0034	0.0006	0.002
Yb	0.0092	0.0177	0.0065	0.0177	0.0032	0.015
Lu	0.0039	0.0047	0.0014	0.0043	0.0008	0.002
Hf	0.0503	0.1068	0.0387	0.0502	0.0050	0.012
W	0.1229	0.1682	0.0408	0.0857	0.0083	0.037
Pb	0.188	0.196	0.125	0.138	0.02	0.051
Th	0.009	0.019	0.0068	0.0115	0.0016	0.009
U	0.125	0.178	0.126	0.131	0.1054	0.1218