

Appendix 6:
Marine Scotland sediment
sampling analysis of
maintenance dredged
material from Aberdeen
Harbour (1988 – 2012)

Marine Scotland sampling: Aberdeen Harbour maintenance dredging heavy metal results 1988 - 2012

NA = Not Analysed; ND = Not Detected; BDL = Below Detection Limit															
Location I	Location II	LIMS/UKAS No.	Lab Sample No.	Latitude	Longitude	Oslo Dump	Year	As mg/g	Cd mg/g	Cr mg/g	Cu mg/g	Hg mg/g	Ni mg/g	Pb mg/g	Zn mg/g
Aberdeen						CR110	1988	4.30	1.540	10.80	4.12	0.010	6.19	26.00	27.30
Aberdeen						CR110	1988	5.73	1.550	6.89	0.50	0.010	2.22	16.90	14.00
Aberdeen						CR110	1988	3.69	1.860	8.24	0.50	0.010	2.66	20.20	16.80
Aberdeen						CR110	1989	4.90	0.200	18.30	6.55	0.060	7.63	17.90	40.20
Aberdeen						CR110	1989	4.58	0.200	17.90	9.03	0.070	8.91	24.30	97.80
Aberdeen						CR110	1989	4.25	0.620	23.10	10.40	0.100	11.60	27.70	57.30
Aberdeen						CR110	1989	4.81	0.200	27.80	10.40	0.090	12.50	32.80	64.50
Aberdeen						CR110	1989	7.09	1.460	15.10	18.20	0.500	16.50	44.00	128.00
Aberdeen						CR110	1989	4.59	0.200	32.40	19.20	0.100	13.50	31.30	99.20
Aberdeen						CR110	1989	5.24	0.200	24.50	21.20	0.100	10.30	28.50	83.90
Aberdeen						CR110	1989	5.94	0.200	13.80	2.45	0.050	4.50	17.30	24.60
Aberdeen						CR110	1989	6.47	0.200	32.30	13.30	0.100	15.40	41.70	89.70
Aberdeen	Albert Quay					CR110	1990	6.24	0.518	36.20	69.70	0.654	28.20	133.00	274.00
Aberdeen	Albert Quay					CR110	1990	4.70	0.713	38.50	67.00	0.377	25.40	139.00	315.00
Aberdeen						CR110	1990	1.39	0.200	47.20	36.00	0.020	37.70	27.70	101.00
Aberdeen						CR110	1990	1.13	0.200	38.90	35.80	0.009	38.00	26.30	104.00
Aberdeen						CR110	1990	5.93	0.200	20.80	39.20	1.010	23.60	978.00	137.00
Aberdeen						CR110	1990	3.13	0.200	15.50	7.29	0.072	11.40	16.60	47.70
Aberdeen						CR110	1990	4.54	0.200	24.20	19.40	0.132	18.20	36.60	89.40
Aberdeen						CR110	1990	2.07	0.200	16.70	8.67	0.078	11.60	16.00	49.40
Aberdeen						CR110	1990	6.89	0.262	22.00	22.60	0.129	18.50	38.90	111.00
Aberdeen						CR110	1990	7.53	0.481	25.00	30.40	0.151	20.20	43.60	127.00
Aberdeen						CR110	1990	7.27	0.737	24.00	48.80	0.220	19.10	51.00	157.00
Aberdeen						CR110	1990	4.72	0.304	19.00	16.30	0.097	14.40	32.60	82.50
Aberdeen	Mearns Quay					CR110	1990	0.34	0.200	10.90	12.60	0.013	12.00	10.00	34.60
Aberdeen	Mearns Quay					CR110	1990	0.48	0.200	7.07	7.90	0.014	6.36	10.70	25.30
Aberdeen	Mearns Quay					CR110	1990	2.28	0.200	12.30	12.70	0.033	8.60	18.30	52.60
Aberdeen	Mearns Quay					CR110	1990	4.96	0.200	20.20	16.30	0.029	5.10	13.00	52.70
Aberdeen	Mearns Quay					CR110	1990	3.11	0.200	19.60	18.60	0.122	16.00	18.90	67.60
Aberdeen	Mearns Quay					CR110	1990	0.92	0.200	9.31	7.30	0.005	7.72	10.70	23.30
Aberdeen	Navigation Channel					CR110	1991	7.51	0.200	19.60	14.40	1.330	20.40	36.90	73.60
Aberdeen	Navigation Channel					CR110	1991	8.81	0.200	20.80	20.50	0.170	20.70	45.70	94.50
Aberdeen	Navigation Channel					CR110	1991	6.07	0.430	16.80	13.50	0.010	17.10	23.80	71.00
Aberdeen						CR110	1991	5.99	0.425	20.00	17.10	0.010	18.70	23.00	87.20
Aberdeen						CR110	1991	7.16	0.200	21.70	9.38	0.010	10.70	21.90	89.80
Aberdeen						CR110	1991	8.93	0.400	21.40	21.60	1.390	18.90	38.50	99.10
Aberdeen						CR110	1991	7.19	0.200	20.50	23.80	1.530	25.70	49.40	104.00
Aberdeen						CR110	1991	5.43	0.330	18.70	19.60	0.010	19.00	36.20	93.80
Aberdeen						CR110	1991	8.81	1.030	23.20	52.10	0.153	24.70	76.90	180.00
Aberdeen						CR110	1991	4.75	0.200	11.70	5.78	0.010	31.00	23.40	36.70
Aberdeen	Albert Quay West					CR110	1992	30.30	1.700	34.00	97.30	0.490	21.80	89.10	505.00
Aberdeen	Albert Quay					CR110	1992	11.30	0.500	21.40	30.30	0.170	13.00	38.50	104.00
Aberdeen	Albert Quay East					CR110	1992	6.19	0.500	19.50	20.00	0.130	15.60	33.50	94.30
Aberdeen	Albert Quay West					CR110	1992	11.50	0.590	27.50	71.70	0.450	20.10	81.40	354.00
Aberdeen	Tug Jetty					CR110	1992	15.20	0.500	21.10	27.00	0.230	15.00	36.50	112.00
Aberdeen	Pontoon No 4					CR110	1992	18.50	0.500	25.90	170.00	0.330	12.90	58.00	327.00
Aberdeen	Pontoon No 4					CR110	1992	21.10	0.860	27.80	187.00	1.010	20.20	97.20	371.00
Aberdeen	Tug Jetty					CR110	1992	8.33	0.500	20.30	29.30	0.360	15.60	36.60	123.00
Aberdeen	Upper Quay					CR110	1992	9.75	0.500	24.80	58.50	0.400	15.50	95.60	248.00
Aberdeen	Trinity Quay					CR110	1992	8.90	0.570	22.20	57.60	0.650	16.10	124.00	275.00
Aberdeen	Entrance Channel					CR110	1992	5.69	0.500	16.70	11.80	0.130	12.20	23.80	67.90
Aberdeen	Entrance Channel					CR110	1992	5.86	0.500	17.80	12.60	0.050	14.40	30.00	78.60
Aberdeen	Approach Channel					CR110	1992	5.66	0.500	20.00	14.20	0.200	15.10	27.60	78.50
Aberdeen	Pacific Wharf					CR110	1992	7.08	0.500	20.00	25.70	0.200	16.00	42.70	110.00
Aberdeen	Atlantic Wharf					CR110	1992	4.36	0.500	21.60	41.50	0.200	18.60	41.50	56.00
Aberdeen	Approach Channel					CR110	1992	5.68	0.500	13.80	6.06	0.130	10.00	14.80	40.20
Aberdeen	Albert Basin					CR110	1992	22.00	0.500	23.10	35.60	0.220	17.80	45.60	137.00

NA = Not Analysed; ND = Not Detected; BDL = Below Detection Limit															
Location I	Location II	LIMS/UKAS No.	Lab Sample No.	Latitude	Longitude	Oslo Dump	Year	As mg/g	Cd mg/g	Cr mg/g	Cu mg/g	Hg mg/g	Ni mg/g	Pb mg/g	Zn mg/g
Aberdeen	Mearns Quay					CR110	1992	15.90	0.500	17.50	19.00	0.100	13.20	43.50	104.00
Aberdeen	Victoria Dock					CR110	1992	25.90	0.500	23.90	40.40	0.350	18.40	66.80	165.00
Aberdeen	Bar					CR110	1992	5.04	0.500	10.80	4.13	0.050	11.40	11.40	32.30
Aberdeen	Atlantic Wharf					CR110	1992	9.00	0.500	15.20	16.60	0.080	13.60	26.60	83.40
Aberdeen	Tidal Basin					CR110	1992	14.80	0.500	19.90	20.60	0.130	15.50	36.20	101.00
Aberdeen	Tidal Basin					CR110	1992	13.30	0.500	19.90	20.30	0.220	15.90	34.80	95.80
Aberdeen	South Bar					CR110	1992	5.08	0.500	13.00	8.13	0.050	10.40	20.50	51.00
Aberdeen	Approach Channel					CR110	1992	5.86	0.500	13.70	14.90	0.100	11.50	26.40	76.10
Aberdeen	Texaco Berth					CR110	1993	8.61	0.200	12.30	16.80	0.060	18.30	38.20	88.90
Aberdeen	Maitland Quay					CR110	1993	6.91	0.200	12.40	22.50	0.100	14.40	55.40	154.00
Aberdeen	Mearns Quay					CR110	1993	8.87	0.200	17.20	15.70	0.100	17.90	51.70	86.30
Aberdeen	Total Quay					CR110	1993	7.98	0.200	12.00	19.50	0.080	18.50	37.00	103.00
Aberdeen	Hall Russell Quay					CR110	1993	10.10	0.200	19.50	45.00	0.530	19.60	110.00	151.00
Aberdeen	Hall Russell Quay					CR110	1993	8.14	0.200	19.80	29.70	0.290	17.20	59.30	121.00
Aberdeen	Hall Russell Quay					CR110	1993	4.04	0.200	6.09	16.70	0.120	5.65	34.60	37.40
Aberdeen	15m North of Jetty					CR110	1993	8.19	0.200	18.10	41.90	0.550	19.40	101.00	129.00
Aberdeen	Off Duthies Quay					CR110	1993	9.73	0.900	21.80	31.30	0.870	20.70	74.60	131.00
Aberdeen						CR110	1993	4.19	0.200	15.90	10.00	0.350	18.80	21.20	53.30
Aberdeen						CR110	1993	6.02	0.200	7.52	34.00	0.300	10.70	80.60	75.20
Aberdeen						CR110	1993	4.62	0.200	1.44	23.10	0.050	4.81	48.30	57.70
Aberdeen	Turning Basin					CR110	1994	56.10	0.300	17.50	32.70	0.194	19.70	58.20	113.00
Aberdeen	Turning Basin					CR110	1994	47.10	0.050	16.20	21.40	0.124	18.60	39.00	89.30
Aberdeen	Turning Basin					CR110	1994	4.92	0.350	20.20	29.50	0.295	21.50	51.80	112.00
Aberdeen	Navigation Channel					CR110	1994	3.71	0.050	11.10	23.90	0.046	10.90	18.10	49.70
Aberdeen	Navigation Channel					CR110	1994	3.45	0.050	11.30	11.00	0.082	14.50	20.80	58.70
Aberdeen	LN 45					CR110	1994	5.22	0.300	18.90	43.00	0.356	22.00	83.80	129.00
Aberdeen	LN 57					CR110	1994	2.64	0.050	12.90	15.80	0.110	15.80	29.80	78.70
Aberdeen	Navigation Channel					CR110	1994	3.41	0.050	10.10	9.02	0.043	2.64	18.90	53.40
Aberdeen	LN 46					CR110	1994	4.36	0.050	18.60	37.10	0.258	18.90	65.40	119.00
Aberdeen	Albert 1 and 2 Jetties					CR110	1994	3.52	0.350	19.10	29.60	0.220	24.10	45.20	108.00
Aberdeen	Mathews Quay North					CR110	1994	3.97	0.050	15.10	26.90	0.216	20.00	44.60	84.60
Aberdeen	Mearns Quay East					CR110	1994	4.06	0.270	16.20	27.10	0.180	22.10	45.40	98.10
Aberdeen	Total Quay					CR110	1994	3.84	0.230	13.90	19.00	0.125	18.60	37.50	91.80
Aberdeen	Turning Basin					CR110	1994	4.34	0.330	18.20	25.70	0.384	23.40	48.30	103.00
Aberdeen	Regent Quay					CR110	1994	4.89	0.720	20.20	48.30	0.328	23.40	67.00	161.00
Aberdeen	Upper Regent Dock					CR110	1994	3.67	1.510	40.10	72.20	0.938	18.10	103.00	252.00
Aberdeen	Albert Basin					CR110	1994	6.55	0.480	19.70	51.40	0.220	22.80	74.20	180.00
Aberdeen	Pacific/Atlantic Wharf					CR110	1994	4.86	0.230	17.90	33.10	0.266	23.00	57.20	113.00
Aberdeen	vigation Channel					CR110	1994	3.46	0.050	8.63	8.62	0.097	13.70	21.00	50.80
Aberdeen	Telford Dock					CR110	1994	6.85	0.270	18.40	75.00	0.124	24.10	157.00	201.00
Aberdeen	Navigation Channel					CR110	1995	3.50	0.020	9.07	4.93	0.010	10.80	32.30	39.70
Aberdeen	Navigation Channel					CR110	1995	2.40	0.020	16.10	14.00	0.010	16.50	20.20	52.30
Aberdeen	Torry Berth					CR110	1995	3.30	0.020	10.50	6.86	0.080	9.68	19.40	61.50
Aberdeen	Mearns West Approach					CR110	1995	12.50	0.370	15.70	22.90	0.186	21.50	36.70	128.00
Aberdeen	Telford Dock					CR110	1995	3.70	0.020	9.67	15.80	0.082	14.80	23.10	60.80
Aberdeen	Albert Dock					CR110	1995	10.90	0.600	16.10	30.70	0.179	21.10	41.80	126.00
Aberdeen	Regent Quay					CR110	1995	12.50	0.550	16.50	35.10	0.323	21.70	51.70	134.00
Aberdeen	River Dee Approaches					CR110	1995	8.00	0.540	26.30	25.30	0.100	23.20	51.70	112.00
Aberdeen	Torry Quay					CR110	1996	7.11	0.040	19.60	34.90	0.177	22.20	55.40	147.00
Aberdeen	Texaco Quay					CR110	1996	5.81	0.270	15.40	23.70	0.124	18.50	40.00	103.00
Aberdeen	Regent Quay West End					CR110	1996	7.16	0.590	17.60	44.60	0.132	20.90	60.20	165.00
Aberdeen	Albert Quay, No 2 Jetty					CR110	1996	6.12	0.310	16.40	28.90	0.160	20.10	42.60	117.00
Aberdeen	Abercrombie Jetty					CR110	1996	6.99	0.330	17.90	27.00	0.177	21.30	44.70	112.00
Aberdeen	Upper Dock					CR110	1996	7.42	0.620	19.20	46.80	0.275	20.40	75.90	186.00
Aberdeen	Navigation Channel					CR110	1996	6.56	0.310	15.60	20.70	0.410	18.90	42.00	96.50
Aberdeen	Albert Basin					CR110	1996	3.52	0.070	1.31	1.80	0.039	5.11	3.96	11.20
Aberdeen	Pontoon Berth					CR110	1996	19.30	0.680	39.50	1521.00	0.400	29.30	174.00	927.00

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Location I	Location II	LIMS/UKAS No.	Lab Sample No.	Latitude	Longitude	Oslo Dump	Year	As mg/g	Cd mg/g	Cr mg/g	Cu mg/g	Hg mg/g	Ni mg/g	Pb mg/g	Zn mg/g
Aberdeen	Albert Quay					CR110	1996	10.30	0.410	30.00	26.20	0.190	21.60	40.70	113.00
Aberdeen	Pontoon Berth					CR110	1996	15.00	0.550	33.10	17.70	0.270	23.70	75.10	370.00
Aberdeen	Albert Quay					CR110	1996	12.80	0.390	29.80	59.10	0.490	22.40	114.00	170.00
Aberdeen	Total Quay, River Dee					CR110	1998	7.22	0.285	28.90	15.80	0.189	132.00	26.80	76.20
Aberdeen	Telford Dock					CR110	1998	11.00	0.396	37.00	26.90	0.153	174.00	45.20	98.50
Aberdeen	Atlantic Quay, Albert Basin					CR110	1998	12.60	0.508	43.40	29.50	0.115	191.00	47.90	113.00
Aberdeen	Telford Dock					CR110	1998	10.90	0.412	37.50	26.30	0.127	173.00	46.50	100.00
Aberdeen	Navigation Channel					CR110	1998	7.14	0.215	24.80	10.30	0.038	115.00	20.80	57.20
Aberdeen	Total Quay, River Dee					CR110	1998	10.20	0.396	35.50	18.60	0.067	162.00	38.10	86.60
Aberdeen	Regent Quay					CR110	1998	12.70	0.699	40.30	39.40	0.041	178.00	63.60	145.00
Aberdeen	Albert Basin					CR110	1998	9.84	0.471	37.90	29.80	0.225	168.00	43.90	103.00
Aberdeen	Albert Basin					CR110	1998	10.30	0.413	36.60	22.50	0.192	160.00	38.30	91.40
Aberdeen	East end of Pontoon Jetty, Albert capital works					CR110	1999	15.40	0.584	41.20	146.00	0.177	36.20	94.20	422.00
Aberdeen	West end Pontoon jetty, Albert capital works					CR110	1999	14.90	1.450	57.80	135.00	0.473	41.10	94.90	502.00
Aberdeen	North West Corner, Albert capital works					CR110	1999	4.34	0.593	21.40	39.80	0.478	22.30	46.70	162.00
Aberdeen	Outside pontoon jetty, east leg, pontoon jetty works (6)					CR110	1999	10.40	0.615	38.40	52.60	0.241	189.00	50.40	170.00
Aberdeen	Pontoon Jetty (1)					CR110	1999	10.20	0.581	38.60	61.80	0.326	166.00	60.10	234.00
Aberdeen	Pontoon Jetty, No 1 Berth (4)					CR110	1999	31.00	2.660	149.00	11900.00	1.560	84.60	902.00	12300.00
Aberdeen	Pontoon Jetty, Mid West Leg (2)					CR110	1999	26.50	1.590	64.00	778.00	3.690	45.90	388.00	2440.00
Aberdeen	Pontoon Dock 4, below east limb					CR110	1999	2.93	0.147	55.10	38.20	0.170	58.90	29.90	116.00
Aberdeen	Telford Dock					CR110	1999	10.30	0.312	30.10	16.60	0.164	19.80	27.50	76.00
Aberdeen	Channel					CR110	1999	10.60	0.269	32.20	14.40	0.092	34.30	25.60	69.50
Aberdeen	Tidal Harbour					CR110	1999	10.40	0.342	31.00	18.40	0.165	41.60	31.30	81.70
Aberdeen	Turning Basin					CR110	1999	10.80	0.387	33.30	18.70	0.248	42.70	33.30	86.20
Aberdeen	Albert Basin					CR110	1999	12.20	0.456	38.10	26.50	0.167	25.10	37.20	108.00
Aberdeen	Navigation Channel					CR110	1999	8.96	0.242	27.90	12.70	0.106	15.80	23.10	61.70
Aberdeen	Mearns East					CR110	1999	12.40	0.467	39.30	26.90	0.217	29.30	40.80	111.00
Aberdeen	Deep Water Berth, Regent Quay					CR110	1999	9.51	0.583	29.50	35.40	0.176	21.50	46.60	132.00
Aberdeen	Tidal Basin/Pocra					CR110	2000	8.93	0.423	33.00	21.40	0.101	22.60	30.30	104.00
Aberdeen	River Berth					CR110	2000	1.12	0.071	7.42	3.76	0.028	3.39	7.50	28.90
Aberdeen	Atlantic Wharf					CR110	2000	10.70	0.316	39.20	25.50	0.266	25.20	35.40	111.00
Aberdeen	Hall Russells					CR110	2000	9.58	0.372	35.80	33.50	0.087	25.20	37.00	123.00
Aberdeen	Albert Quay, Bunker Berth					CR110	2000	9.78	0.386	33.30	25.40	0.065	23.80	32.50	110.00
Aberdeen	Upper Dock					CR110	2000	10.70	1.030	40.50	82.80	0.429	26.10	122.00	297.00
Aberdeen	Navigation Channel					CR110	2000	7.39	0.082	18.10	4.67	0.047	11.30	9.65	46.40
Aberdeen	Turning Basin/Pilot Jetty					CR110	2000	7.07	0.179	25.00	12.40	0.040	19.10	18.00	71.30
Aberdeen	Off Total Quay					CR110	2001	7.10	0.330	28.90	20.00	0.070	18.00	26.10	71.40
Aberdeen	Russells Quay					CR110	2001	9.80	0.340	35.20	26.60	0.100	23.00	34.50	86.40
Aberdeen	Tidal Harbour					CR110	2001	10.50	0.290	33.50	23.40	0.210	22.70	38.70	84.70
Aberdeen	Albert Basin South					CR110	2001	8.20	0.290	31.90	37.20	0.110	21.30	28.20	87.50
Aberdeen	Regent Quay East					CR110	2001	8.10	0.470	28.70	38.90	0.180	18.80	45.20	118.00
Aberdeen	Atlantic Wharf					CR110	2001	9.10	0.310	33.90	26.10	0.170	23.10	39.60	81.70
Aberdeen	Telford Dock					CR110	2001	11.00	0.270	33.20	22.50	0.100	22.60	33.70	71.90
Aberdeen	Navigation Channel					CR110	2001	7.10	0.186	23.80	9.20	0.048	16.40	17.90	42.90
Aberdeen						CR110	2002	5.11	BDL	23.50	17.90	0.086	13.20	11.60	53.00
Aberdeen						CR110	2002	9.05	1.050	41.30	74.20	0.611	20.40	109.00	234.00
Aberdeen						CR110	2002	7.43	0.298	35.90	23.70	0.158	20.00	27.70	86.00
Aberdeen						CR110	2002	12.00	2.600	51.10	80.70	0.959	28.00	227.00	317.00
Aberdeen						CR110	2002	1.85	BDL	12.70	8.86	0.173	8.82	6.89	29.10
Aberdeen						CR110	2002	7.18	0.445	34.40	21.20	0.115	21.10	32.80	104.00
Aberdeen						CR110	2002	11.00	1.150	55.90	75.80	0.522	24.30	229.00	262.00
Aberdeen						CR110	2002	9.87	0.292	31.70	21.50	0.202	20.50	28.40	81.40
Aberdeen						CR110	2002	7.25	0.276	26.80	15.90	0.155	17.20	24.00	72.60
Aberdeen						CR110	2002	5.98	0.239	23.80	14.00	0.156	15.30	20.70	69.80
Aberdeen						CR110	2002	8.46	0.312	32.20	22.90	0.179	20.90	29.30	86.40
Aberdeen						CR110	2002	10.70	0.261	31.20	38.40	0.160	20.00	31.70	81.00
Aberdeen						CR110	2002	10.20	0.453	45.60	41.80	0.263	26.00	40.90	162.00

NA = Not Analysed; ND = Not Detected; BDL = Below Detection Limit																				
Location I	Location II	LIMS/UKAS No.	Lab Sample No.	Latitude	Longitude	Oslo Dump	Year	As mg/g	Cd mg/g	Cr mg/g	Cu mg/g	Hg mg/g	Ni mg/g	Pb mg/g	Zn mg/g					
Aberdeen						CR110	2002													
Aberdeen						CR110	2002													
Aberdeen						CR110	2002													
Aberdeen						CR110	2003	8.72	0.300	35.21	31.54	0.120	21.67	27.06	100.83					
Aberdeen						CR110	2003	6.89	0.284	29.77	28.05	0.255	21.34	26.56	86.68					
Aberdeen						CR110	2003	10.12	0.327	31.53	36.32	0.209	20.76	30.15	103.69					
Aberdeen						CR110	2004													
Aberdeen						CR110	2004													
Aberdeen						CR110	2004													
Aberdeen						CR110	2004													
Aberdeen						CR110	2004													
Aberdeen						CR110	2004													
Aberdeen						CR110	2004													
Aberdeen						CR110	2004													
Aberdeen						CR110	2004													
Aberdeen						CR110	2004													
Aberdeen						CR110	2004													
Aberdeen						CR110	2004													
Aberdeen						CR110	2005	01/2005/DS/O	57° 08.5927'N	002° 05.2257'W	CR110	2005	1.47	BDL	10.10	9.57	BDL	8.38	7.69	37.51
Aberdeen						CR110	2005	02/2005/DS/O	57° 08.5707'N	002° 05.0818'W	CR110	2005	7.70	0.289	32.03	29.77	0.178	21.01	30.34	91.50
Aberdeen	CR110	2005	03/2005/DS/O	57° 08.5732'N	002° 05.2345'W	CR110	2005	2.22	BDL	14.37	13.02	BDL	10.17	9.46	33.44					
Aberdeen	CR110	2005	04/2005/DS/O	57° 08.5534'N	002° 05.1016'W	CR110	2005	10.24	0.470	33.02	55.32	0.228	21.64	43.75	130.58					
Aberdeen	CR110	2005	05/2005/DS/O			CR110	2005	5.66	BDL	19.74	9.56	0.129	14.56	14.24	49.42					
Aberdeen Beach Recharge	Aberdeen Beach Recharge	1320/06	56/2006/DS/O	56° 42.16'N	002° 27.95'W	N/A	2006													
Aberdeen Beach Recharge	Aberdeen Beach Recharge	1322/06	58/2006/DS/O	56° 42.23'N	002° 27.24'W	N/A	2006													
Aberdeen Beach Recharge	Aberdeen Beach Recharge	1324/06	60/2006/DS/O	56° 42.17'N	002° 25.95'W	N/A	2006													
Aberdeen Beach Recharge	Aberdeen Beach Recharge	1326/06	62/2006/DS/O	56° 42.20'N	002° 27.95'W	N/A	2006													
Aberdeen Beach Recharge	Aberdeen Beach Recharge	1328/06	64/2006/DS/O	56° 42.16'N	002° 27.24'W	N/A	2006													
Aberdeen Beach Recharge	Aberdeen Beach Recharge	1330/06	66/2006/DS/O	56° 42.16'N	002° 27.24'W	N/A	2006													
Aberdeen Beach Recharge	Aberdeen Beach Recharge	1332/06	68/2006/DS/O	56° 42.23'N	002° 27.95'W	N/A	2006													
Aberdeen	Aberdeen Harbour	1348/07	30/2007/DS/O	57 08.68 N	02 04.67 W	CR110	2007	8.95	0.287	36.10	28.30	0.099	22.60	28.70	78.50					
Aberdeen	Aberdeen Harbour	1349/07	31/2007/DS/O	E395374	N805981	CR110	2007	8.91	0.298	37.70	31.00	0.092	22.90	29.00	83.10					
Aberdeen	Aberdeen Harbour	1350/07	32/2007/DS/O	E395474	N805915	CR110	2007	8.97	0.317	37.70	30.10	BDL	22.80	29.80	82.70					
Aberdeen	Aberdeen Harbour	1351/07	33/2007/DS/O	57 08.65 N	02 04.75 W	CR110	2007	10.10	0.337	39.20	26.00	BDL	23.50	29.80	82.60					
Aberdeen	Aberdeen Harbour	1352/07	34/2007/DS/O	57 08 56 N	02 04.40 W	CR110	2007	9.37	0.315	38.60	25.00	0.103	23.40	30.30	82.60					
Aberdeen	Aberdeen Harbour	1353/07	35/2007/DS/O	57 08.43 N	02 05.04 W	CR110	2007	7.39	0.313	33.40	20.90	0.063	20.30	26.50	76.60					
Aberdeen	Aberdeen Harbour	1354/07	36/2007/DS/O	E395178	N805316	CR110	2007	8.94	0.407	38.40	28.00	0.091	23.50	32.80	90.20					
Aberdeen	Aberdeen Harbour	1355/07	37/2007/DS/O	57 08.42 N	02 04.68 W	CR110	2007	8.31	0.339	36.10	22.10	BDL	21.60	28.20	79.60					
Aberdeen	Aberdeen Harbour	1356/07	38/2007/DS/O	E395534	N805561	CR110	2007	7.35	BDL	31.70	17.10	BDL	20.10	23.80	66.40					
Aberdeen	Aberdeen Harbour	1357/07	39/2007/DS/O	E385474	E805633	CR110	2007	8.84	0.304	36.20	23.50	BDL	22.50	27.90	79.10					
Aberdeen	Navigation Channel	1315/07	19/2007/DS/O	396391E	805979N	CR110	2007	5.51	BDL	15.00	3.92	BDL	10.10	9.42	27.50					
Aberdeen	Navigation Channel	1316/07	20/2007/DS/O	396164E	805832N	CR110	2007	4.21	BDL	12.70	3.72	BDL	6.86	7.53	21.00					
Aberdeen	Navigation Channel	1317/07	21/2007/DS/O	396369E	805926N	CR110	2007	5.14	BDL	16.80	5.15	BDL	9.60	8.47	31.30					
Aberdeen			45/2008/DS	N 805520	E 395686	CR110	2008													
Aberdeen			46/2008/DS	N 805944	E 395491	CR110	2008													
Aberdeen			47/2008/DS	N 805280	E 395819	CR110	2008													
Aberdeen			48/2008/DS	N 805745	E 395126	CR110	2008													
Aberdeen			50/2008/DS	N 805565	E 395539	CR110	2008													
Aberdeen			51/2008/DS	N 805506	E 395338	CR110	2008													
Aberdeen			52/2008/DS	N 805647	E 395363	CR110	2008													
Aberdeen			53/2008/DS	N 805840	E 396212	CR110	2008													
Aberdeen			54/2008/DS	N 806167	E 396479	CR110	2008													
Aberdeen			55/2008/DS			CR110	2008													
Aberdeen Navigation Channel	0-0.5m	N/A	V1	57 08.250	02 04.230	CR110	2012	6.14	0.150	27.80	12.22	0.080	15.44	15.49	48.76					
Aberdeen Navigation Channel	0.5-1.0m	N/A	V1	57 08.250	02 04.230	CR110	2012	6.91	0.210	28.96	15.07	0.050	15.80	17.38	54.97					
Aberdeen Navigation Channel	1.0-1.5m	N/A	V1	57 08.250	02 04.230	CR110	2012	8.56	0.190	30.19	12.76	0.040	17.06	19.60	56.44					
Aberdeen Navigation Channel	0-0.5m	N/A	V2	57 08.433	02 04.257	CR110	2012	5.06	0.190	24.67	10.48	0.040	13.28	17.01	51.65					
Aberdeen Navigation Channel	0.5-1.24m	N/A	V2	57 08.433	02 04.257	CR110	2012	6.78	0.350	24.85	12.85	0.110	14.47	34.51	67.81					
Aberdeen Navigation Channel	1.24-1.74m	N/A	V2	57 08.433	02 04.257	CR110	2012	6.95	0.700	29.78	16.15	0.160	16.80	41.52	77.38					
Aberdeen Navigation Channel	0-0.5m	N/A	V3	57 08.481	02 04.132	CR110	2012	4.63	0.140	22.27	9.57	0.060	11.84	16.58	41.00					

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Location I	Location II	LIMS/UKAS No.	Lab Sample No.	Latitude	Longitude	Oslo Dump	Year	As mg/g	Cd mg/g	Cr mg/g	Cu mg/g	Hg mg/g	Ni mg/g	Pb mg/g	Zn mg/g
Aberdeen Navigation Channel	1.0-1.57m	N/A	V3	57 08.481	02 04.132	CR110	2012	4.92	0.230	22.19	11.95	0.570	14.10	33.33	54.71
Aberdeen Navigation Channel	0-0.36m	N/A	V4	57 08.558	02 03.938	CR110	2012	4.52	0.120	21.49	7.56	0.260	11.33	11.22	36.05
Aberdeen Navigation Channel	0.36-0.86m	N/A	V4	57 08.558	02 03.938	CR110	2012	5.62	0.140	21.94	10.03	0.180	12.21	12.81	39.79
Aberdeen Navigation Channel	0.86-1.36m	N/A	V4	57 08.558	02 03.938	CR110	2012	5.49	0.260	24.16	10.31	0.190	13.66	23.14	53.79
Aberdeen Navigation Channel	0-0.5m	N/A	V5	57 08.620	02 03.768	CR110	2012	5.30	0.030	9.16	2.38	0.060	4.01	5.53	16.58
Aberdeen Navigation Channel	0.5-1.07m	N/A	V5	57 08.620	02 03.768	CR110	2012	4.79	0.040	9.97	3.58	0.100	5.10	7.57	19.77
Aberdeen Navigation Channel	0.5-1.17m	N/A	V6	57 08.400	02 03.350	CR110	2012	5.46	0.060	11.68	2.87	0.070	5.87	7.12	24.23
Aberdeen Navigation Channel	0-0.5m	N/A	VC6	57 08.400	02 03.350	CR110	2012	6.58	0.040	11.82	2.90	0.040	5.83	6.88	22.92
Aberdeen Navigation Channel	Grab	N/A	G1	57 08.604	02 03.932	CR110	2012	6.81	0.070	14.14	4.15	0.040	7.53	9.61	28.02
Aberdeen Navigation Channel	Grab	N/A	G2	57 08.689	02 03.688	CR110	2012	6.48	0.090	20.87	5.32	0.120	11.52	11.23	31.09
Aberdeen Navigation Channel	Grab	N/A	G3	57 08.771	02 03.541	CR110	2012	5.79	<0.03	8.44	1.53	0.050	3.50	5.38	14.29
Aberdeen Navigation Channel	Grab	N/A	G4	57 08.743	02 03.411	CR110	2012	5.94	<0.03	7.22	1.53	0.040	3.22	4.50	12.50
Aberdeen Navigation Channel	Grab	N/A	G5	57 08.814	02 03.371	CR110	2012	6.35	<0.03	12.51	1.75	<0.03	4.26	5.77	14.88
Aberdeen Navigation Channel	Grab	N/A	G6	57 08.845	02 03.408	CR110	2012	6.17	<0.03	12.53	1.80	0.030	4.39	6.88	15.40
Aberdeen		54/2012/DS	MAR-2012-6256	57.1454 N	2.0600 W	CR110	2012	4.60	0.029	9.323	2.45	0.059	5.07	6.19	21.31
Aberdeen		55/2012/DS	MAR-2012-5874	57 8.6274 N	02 3.8266 W	CR110	2012	6.63	0.116	50.825	31.58	0.059	47.25	18.92	82.64
Aberdeen		56/2012/DS	MAR-2012-6257	57.1432 N	2.0646 W	CR110	2012	6.01	0.089	46.617	29.24	0.059	38.17	19.19	84.37
Aberdeen		57/2012/DS	MAR-2012-5875	57 8.8562 N	02 3.3729 W	CR110	2012	7.03	0.287	26.974	17.42	0.115	16.12	29.97	75.76
Aberdeen		58/2012/DS	MAR-2012-5876	57 8.7003 N	02 3.5818 W	CR110	2012	0.00	0.000	0.000	0.00	0.000	0.00	0.00	0.00
Aberdeen		59/2012/DS	MAR-2012-5877	57 8.7694 N	02 3.3390 W	CR110	2012	9.14	0.287	29.577	16.08	0.113	17.93	29.59	78.66
Aberdeen		60/2012/DS	MAR-2012-5878	57 8.4299 N	02 4.2982 W	CR110	2012	0.00	0.000	0.000	0.00	0.000	0.00	0.00	0.00
Aberdeen		61/2012/DS	MAR-2012-6258	57.1420 N	2.0670 W	CR110	2012	0.00	0.000	0.000	0.00	0.000	0.00	0.00	0.00
Aberdeen		62/2012/DS	MAR-2012-5879	57 8.48823 N	02 4.1159 W	CR110	2012	0.00	0.000	0.000	0.00	0.000	0.00	0.00	0.00
Aberdeen		63/2012/DS	MAR-2012-6259	57.1428 N	2.0655 W	CR110	2012	6.05	0.054	42.172	27.32	0.059	38.53	15.57	72.78
Aberdeen		64/2012/DS	MAR-2012-6260	57.1403 N	2.0732 W	CR110	2012	3.16	0.029	26.058	18.79	0.059	19.57	8.11	45.95
Aberdeen		65/2012/DS	MAR-2012-6261	57.1448 N	2.0617 W	CR110	2012	4.42	0.026	8.894	4.12	0.059	4.54	4.76	18.74
Aberdeen		66/2012/DS	MAR-2012-5880	57 8.6437 N	02 3.6393 W	CR110	2012	5.13	0.082	20.319	16.02	0.059	15.67	13.04	44.53
Aberdeen		67/2012/DS	MAR-2012-5881	57 8.7381 N	02 3.4054 W	CR110	2012	3.90	0.045	13.944	20.22	0.059	10.53	17.51	28.92
Aberdeen		68/2012/DS	MAR-2012-5882	57 8.9203 N	02 3.4553 W	CR110	2012	8.53	0.130	32.179	12.89	0.116	19.59	22.50	59.83
Aberdeen	Aberdeen	MAR-2012-6256	54/2012/DS	57.1454 N	2.0600 W	CR110	2012								
Aberdeen	Aberdeen	MAR-2012-5874	55/2012/DS	57 8.6274 N	02 3.8266 W	CR110	2012	4.16	0.035	9.97	2.67	0.059	5.39	6.38	20.27
Aberdeen	Aberdeen	MAR-2012-6257	56/2012/DS	57.1432 N	2.0646 W	CR110	2012								
Aberdeen	Aberdeen	MAR-2012-5875	57/2012/DS	57 8.8562 N	02 3.3729 W	CR110	2012	4.60	0.029	9.32	2.45	0.059	5.07	6.19	21.31
Aberdeen	Aberdeen	MAR-2012-5876	58/2012/DS	57 8.7003 N	02 3.5818 W	CR110	2012	6.63	0.116	50.83	31.58	0.059	47.25	18.92	82.64
Aberdeen	Aberdeen	MAR-2012-5877	59/2012/DS	57 8.7694 N	02 3.3390 W	CR110	2012	6.01	0.089	46.62	29.24	0.059	38.17	19.19	84.37
Aberdeen	Aberdeen	MAR-2012-5878	60/2012/DS	57 8.4299 N	02 4.2982 W	CR110	2012	7.03	0.287	26.97	17.42	0.115	16.12	29.97	75.76
Aberdeen	Aberdeen	MAR-2012-6258	61/2012/DS	57.1420 N	2.0670 W	CR110	2012								
Aberdeen	Aberdeen	MAR-2012-5879	62/2012/DS	57 8.48823 N	02 4.1159 W	CR110	2012	9.14	0.287	29.58	16.08	0.113	17.93	29.59	78.66
Aberdeen	Aberdeen	MAR-2012-6259	63/2012/DS	57.1428 N	2.0655 W	CR110	2012								
Aberdeen	Aberdeen	MAR-2012-6260	64/2012/DS	57.1403 N	2.0732 W	CR110	2012								
Aberdeen	Aberdeen	MAR-2012-6261	65/2012/DS	57.1448 N	2.0617 W	CR110	2012								
Aberdeen	Aberdeen	MAR-2012-5880	66/2012/DS	57 8.6437 N	02 3.6393 W	CR110	2012	6.05	0.054	42.17	27.32	0.059	38.53	15.57	72.78
Aberdeen	Aberdeen	MAR-2012-5881	67/2012/DS	57 8.7381 N	02 3.4054 W	CR110	2012	3.16	0.029	26.06	18.79	0.059	19.57	8.11	45.95
Aberdeen	Aberdeen	MAR-2012-5882	68/2012/DS	57 8.9203 N	02 3.4553 W	CR110	2012	4.42	0.026	8.89	4.12	0.059	4.54	4.76	18.74