

Table S2. Field measurements, major anions and cations and grab sediment Ra-226, Ra-228 and Total Ra reported as Bq/kg. All anion and cation concentrations are reported as mg/L.

Site Name	Temperature (°C)	DO (mg/L)	pH	EC (uS/cm)	Cl	SO ₄	Br	NO ₃	PO ₄	Sr	Mn	K	Mg	Ca	Ba	B	Na	Li	²²⁶ Ra ± error (Bq/kg)	²²⁸ Ra ± error (Bq/kg)	Total Ra ± error (Bq/kg)
CSW	4.85	1.56	8.80	900	6	318		0.14	0.08	4.3	-	3	41	44	0.02	0.08	81	0.08	44.4 ± 0.6	45.2 ± 2.0	89.6 ± 4.2
DA-D	35.43	0.42	7.07	6404	672	1868	1.0	0.13	0.11	3.2	-	80	71	304	0.04	3.09	780	1.46	1013.3 ± 3.5	739.9 ± 10.0	1753.2 ± 24.4
DA-DSW1	3.62	2.28	8.05	6325	631	1795	1.0	0.15	-	3.7	-	95	90	314	-	4.17	1018	1.68	520.7 ± 5.4	271.8 ± 13.0	792.5 ± 38.7
DA-DSW2	2.37	3.48	8.56	11410	1531	4279	2.3	0.18	0.13	5.7	-	172	168	363	-	7.92	2252	3.02	229.2 ± 1.3	213.3 ± 4.1	442.6 ± 8.8
DA-W1	1.96	1.67	8.41	5788	660	1865	0.9	0.31	-	3.4	-	90	77	275	-	3.33	890	1.52	1518.0 ± 7.2	1202.8 ± 21.2	2720.8 ± 49.6
DA-W2	2.11	3.70	8.30	7829	1038	2711	1.4	0.22	0.12	6.2	-	109	102	286	-	4.63	1303	1.89	233.5 ± 2.4	135.5 ± 6.5	369.1 ± 18.1
DB-100m	6.62	1.50	8.10	4719	391	1749	0.6	0.11	0.07	6.7	-	110	93	315	0.04	2.78	569	1.61	2724.1 ± 9.1	1565.3 ± 24.4	4289.4 ± 68.4
DB-D	10.55	1.18	7.40	5084	437	2068	0.7	0.15	0.12	4.6	-	117	94	340	0.05	2.82	604	1.80	1375.0 ± 9.0	681.7 ± 21.5	2056.7 ± 66.2
DB-DSW1	1.87	4.49	7.77	6431	544	2343	0.9	0.10	0.08	10.5	0.03	153	139	426	0.04	3.56	845	2.12	333.0 ± 2.2	131.6 ± 5.0	464.6 ± 18.0
DB-W1	1.02	3.18	7.62	6420	600	2600	1.0	0.14	0.07	9.0	-	153	137	421	0.03	3.66	852	2.16	724.7 ± 4.9	162.0 ± 8.3	886.7 ± 45.8
DC-100m	41.10	0.61	8.11	2291	176	465	0.2	0.11	-	3.9	-	26	39	86	0.14	0.96	264	0.42	442.0 ± 4.8	237.3 ± 11.1	679.3 ± 32.7
DC-D	40.44	0.49	7.90	2266	174	458	0.2	0.08	-	5.4	-	26	39	90	0.14	0.93	265	0.41	451.2 ± 3.9	197.5 ± 9.9	648.6 ± 32.9
DC-DSW1	25.25	1.85	8.36	2074	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	407.0 ± 2.4	154.7 ± 5.3	561.6 ± 19.4
DC-DSW2	2.42	3.21	7.81	1987	186	593	0.2	3.41	-	3.2	-	28	42	63	0.12	1.04	293	0.48	139.1 ± 0.9	106.3 ± 2.7	245.4 ± 6.4
DC-PLAYA	11.80	2.22	7.72	2090	182	606	0.2	0.01	-	4.9	0.21	27	41	65	0.11	0.99	289	0.45	174.7 ± 1.0	98.7 ± 2.7	273.4 ± 7.6
DC-USW1	29.76	1.70	8.40	2093	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	675.3 ± 4.3	321.0 ± 10.1	996.3 ± 32.1
DC-USW2	16.48	1.59	7.73	1995	172	578	0.2	0.15	-	2.5	-	29	41	61	0.13	1.03	291	0.47	567.1 ± 1.9	240.5 ± 4.3	807.6 ± 14.8
DC-W1	27.14	1.98	8.50	2083	179	472	0.2	0.12	-	3.0	-	30	40	57	0.11	1.28	272	0.51	550.3 ± 3.1	275.1 ± 7.8	825.4 ± 23.8
DC-W2	15.67	1.42	7.76	1908	177	598	0.2	0.22	-	4.7	-	29	42	64	0.12	1.00	280	0.45	780.1 ± 2.2	311.0 ± 5.3	1091.1 ± 18.8

[-] below detection limits

NC indicates water sample not collected for DC-USW1 and DC-DSW1