Sea Area Monitoring

April 22 , 2014

Nuclear Regulation Authority (NRA), Japan

Sea area within 2km radius from the NPS

Sea water radioacitivity (Bq/L):
ND: under detection limits; Numbers in parentheses: detection limits
*1:Total β: including K-40 *2:Total β: excluding K-40

Sampling point	Sampling Date	Cs-134	Cs-137	total β	H-3	Sr-90	total α	Pu-238	Pu-239+Pu-240
T-1	2014/4/7	ND(0.86)	1.2	13*1	2.2				
	2014/3/4	ND(0.76)	0.71					$ND(8.3\times10^{-6})$	$ND(8.1\times10^{-6})$
	2014/2/10	ND(0.80)	ND(0.81)	12*1	ND(1.7)	0.017	ND(1.6)		
F-P02	2014/3/10	ND(0.067)	0.085	0.04*2	In progress	In progress		In progress	In progress
	2014/2/3	0.084	0.19	0.08*2	0.47	0.063		$ND(6\times10^{-6})$	$ND(8\times10^{-6})$
T-0-1A	2014/4/8	ND(0.74)	ND(0.68)	ND(16)*1	In progress				
	2014/4/1	ND(0.70)	ND(0.67)	ND(16)*1	ND(1.6)				
T-0-1	2014/4/8	ND(0.59)	ND(0.58)	ND(16)*1	In progress				
	2014/4/1	ND(0.74)	ND(0.78)	ND(16)*1	ND(1.6)				
M-101	2014/1/15	0.030	0.078		0.17	0.022			
F-P03	2014/3/10	ND(0.065)	0.15	0.07*2	In progress	In progress		In progress	In progress
	2014/2/3	0.54	1.3	0.68*2	3.4	1.1		$ND(6\times10^{-6})$	6×10^{-6}
T-0-2	2014/4/8	ND(0.93)	ND(0.75)	ND(16)*1	In progress				
	2014/4/1	ND(0.72)	ND(0.45)	ND(16)*1	ND(1.6)				
M-102	2014/1/16	0.054	0.13		0.47	0.063			
T-0-3A	2014/4/8	ND(0.86)	ND(0.66)	ND(16)*1	In progress				
	2014/4/1	ND(0.62)	ND(0.63)	ND(16)*1	ND(1.6)				
F-P01	2014/3/10	ND(0.069)	0.14	0.06*2	In progress	In progress		In progress	In progress
	2014/2/3	ND(0.070)	0.20	0.05*2	0.48	0.046		$ND(6\times10^{-6})$	$ND(6\times10^{-6})$
T-0-3	2014/4/8	ND(0.54)	ND(0.45)	ND(16)*1	In progress				
	2014/4/1	ND(0.80)	ND(0.85)	ND(16)*1	ND(1.6)				
T-2-1	2014/4/7	ND(0.59)	ND(0.68)	9.2*1	ND(1.5)				
	2014/3/4	ND(0.73)	ND(0.76)	11*1				$ND(5.9\times10^{-6})$	$(3.0\pm0.41)\times10^{-5}$
	2014/2/17	ND(0.71)	0.64	11*1	ND(1.4)	0.030	ND(1.6)		

Sea area between 2-20km radius from the NPS (1)

Sea water radioacitivity (Bq/L):
ND: under detection limits; Numbers in parentheses: detection limits
*1:Total β: including K-40 *2:Total β: excluding K-40

Sampling point	Sampling Date	Cs-134	Cs-137	total β	H-3	Sr-90	total α	Pu-238	Pu-239+Pu-240	S (S:2m below sea level; Depth(m) from sea level)
T-D1	2014/3/4	0.0039	0.015	In progress	In progress	In progress	In progress	ND(7.3×10^{-6})	(7.8 ± 2.4)$\times10^{-6}$	S
	2014/2/19	0.015	0.039	ND(16)*1	0.34					S
	2014/2/5	0.0046	0.0098	ND(17)*1	ND(0.33)	ND(0.009)	ND(1.6)	ND(5.0×10^{-6})	ND(5.1×10^{-6})	S
T-6	2014/2/25	0.055	0.13	ND(16)*1	ND(0.30)					S
F-P06	2014/3/10	ND(0.058)	ND(0.049)	0.03*2	In progress	In progress		In progress	In progress	S
	2014/2/3	ND(0.057)	0.17	0.07*2	0.39	0.084		ND(8×10^{-6})	7×10^{-6}	S
M-103	2014/1/15	0.016	0.040		0.058	0.0053				0.5m
F-P04	2014/3/10	ND(0.067)	ND(0.061)	0.03*2	In progress	In progress		In progress	In progress	S
	2014/2/3	ND(0.071)	0.088	0.04*2	ND(0.32)	0.014		ND(7×10^{-6})	ND(7×10^{-6})	S
T-5	2014/3/5	0.0016	0.0042	In progress	In progress	In progress	In progress	ND(7.6×10^{-6})	ND(7.3×10^{-6})	S
	2014/2/18	ND(0.0011)	0.0038	ND(16)*1	ND(0.30)					S
	2014/2/3	0.0021	0.0055	ND(17)*1	ND(0.33)	ND(0.009)	ND(1.6)	ND(6.5×10^{-6})	ND(6.3×10^{-6})	S
T-D5	2014/3/4	0.0073	0.018	In progress	In progress	In progress	In progress	ND(7.8×10^{-6})	ND(8.4×10^{-6})	S
	2014/2/19	0.022	0.052	ND(16)*1	0.35					S
	2014/2/5	0.0040	0.0093	ND(17)*1	ND(0.33)	ND(0.009)	ND(1.6)	ND(5.7×10^{-6})	ND(6.1×10^{-6})	S
M-104	2014/1/16	0.024	0.062		0.12	0.019				0.5m
F-P05	2014/3/10	ND(0.057)	ND(0.056)	0.03*2	In progress	In progress		In progress	In progress	S
	2014/2/3	ND(0.058)	0.068	0.04*2	ND(0.32)	0.007		ND(8×10^{-6})	ND(9×10^{-6})	S
T-D9	2014/3/3	0.0058	0.014	In progress	In progress	In progress	In progress	ND(7.1×10^{-6})	(7.6 ± 2.2)$\times10^{-6}$	S
	2014/2/18	0.0099	0.030	ND(15)*1	ND(0.30)					S
	2014/2/3	0.0081	0.016	ND(17)*1	ND(0.31)	ND(0.009)	ND(1.6)	ND(6.6×10^{-6})	(6.1 ± 2.0)$\times10^{-6}$	S
T-3	2014/2/18	0.13	0.29	ND(16)*1	ND(0.30)					S

Sea area between 2-20km radius from the NPS (2)

Sampling point	Sampling Date	Cs-134	Cs-137	S/B

S:2m below sea level
B:2-3m above sea bottom

Sea water radioacitivity (Bq/L):
ND: under detection limits; Numbers in parentheses: detection limits

T-S1	2014/2/20	0.013	0.035	S
		0.013	0.035	B
T-14	2014/3/11	0.0041	0.012	S
		0.0058	0.020	B
	2014/3/4	0.0095	0.025	S
		0.0048	0.016	B
T-S2	2014/2/20	0.019	0.049	S
		0.0084	0.024	B
T-D1	2014/3/19	0.0074	0.021	S
		0.0069	0.014	B
	2014/3/11	0.0056	0.012	S
		0.0063	0.020	B
	2014/3/4	0.0039	0.015	S
		0.0049	0.013	B
T-6	2014/3/18	0.026	0.075	S
	2014/3/11	0.019	0.053	S
T-S8	2014/2/2	0.0087	0.025	S
		0.0081	0.023	B
T-3	2014/3/18	0.049	0.12	S
	2014/3/11	0.040	0.091	S
T-S7	2014/2/23	0.042	0.10	S
		0.030	0.074	B
T-S5	2014/2/23	0.054	0.13	S
		0.052	0.13	B

T-S3	2014/2/27	0.014	0.036	S
		0.010	0.027	B
T-S4	2014/2/27	0.017	0.043	S
		0.017	0.047	B
T-D5	2014/3/19	0.0073	0.026	S
		0.0091	0.026	B
	2014/3/11	0.0072	0.022	S
		0.0069	0.018	B
	2014/3/4	0.0073	0.018	S
		0.0089	0.023	B
T-5	2014/3/11	ND(0.0015)	0.0058	S
		0.0021	0.0065	B
	2014/3/5	0.0016	0.0042	S
		0.0014	0.0071	B
T-B3	2014/3/15	0.0025	0.0074	S
		ND(0.0016)	0.0059	B
T-B4	2014/3/15	0.0015	0.0046	S
		0.0015	0.0049	B
T-D9	2014/3/19	0.0092	0.025	S
		0.010	0.025	B
	2014/3/11	0.0081	0.0018	S
		0.0074	0.019	B
	2014/3/3	0.0058	0.014	S
		0.0067	0.020	B
T-11	2014/3/11	0.011	0.031	S
		0.012	0.032	B
	2014/3/3	0.016	0.037	S
		0.018	0.046	B

Sea area between 20-100km radius from the NPS(1)

Sampling point	Sampling Date	Cs-134	Cs-137	Sr-90	S/B
					Depth(m) from sea level

S:2m below sea level B:2-3m above sea bottom

Sea water radioacitivity (Bq/L):
ND: under detection limits; Numbers in parentheses: detection limits

Sampling point	Sampling Date	Cs-134	Cs-137	Sr-90	S/B
T-MA	2014/2/6	0.0015	0.0055		S
		0.0047	0.014		B
T-13-1	2014/2/6	0.0046	0.014		S
		0.0061	0.018		B
T-7	2014/3/5	ND(0.0015)	0.0059		S
		0.0023	0.0056		B
T-4	2014/3/18	0.041	0.12		S
	2014/3/11	0.032	0.092		S
T-12	2014/3/2	0.016	0.038		S
		0.016	0.040		B
T-17-1	2014/3/2	0.019	0.053		S
		0.016	0.044		B
M-C1	2014/1/26	0.00096	0.0034	0.00090	1m
		0.00063	0.0027		48m
T-B1	2014/2/25	0.0025	0.0076		S
		0.0049	0.014		B
M-D1	2014/1/23	0.00094	0.0033	0.00085	1m
		ND(0.00060)	0.0034		50m
		0.0011	0.0046		114m
T-B2	2014/2/25	0.0024	0.0090		S
		0.012	0.032		B
M-E1	2014/1/23	ND(0.00059)	0.0027	0.00081	1m
		ND(0.00074)	0.0019		50m
		0.00086	0.0020		125m
M-F1	2014/1/18	0.00063	0.0025		1m
		ND(0.00071)	0.0022		132m
M-G1	2014/1/16	ND(0.00067)	0.0018		1m
		ND(0.00071)	0.0020		129m
M-G0	2014/1/18	0.0018	0.0061		1m
		0.0019	0.0069		50m
		0.0045	0.012		97m

Sea area between 20-100km radius from the NPS(2)

Sampling point	Sampling Date	Cs-134	Cs-137	Total β*	H-3	Sr-90	S/B Depth(m) from sea level

S:2m below, B:2-3m above sea bottom

Sea water radioactivity (Bq/L):
ND: under detection limits; Numbers in parentheses: detection limits
Total β: excluding K-40

M-C3	2014/1/19	0.00086	0.0024	0.021	0.045	0.0011	1m
		ND(0.00082)	0.0022				50m
		ND(0.00068)	0.0016				123m
T-22	2014/2/6	0.0020	0.0074				S
		0.0074	0.017				B
M-D3	2014/1/22	ND(0.00064)	0.0025	0.021	0.073	0.00099	1m
		ND(0.00073)	0.0018				100m
		ND(0.00074)	0.0025				210m
M-F3	2014/1/22	ND(0.00058)	0.0020	0.027	0.066	0.0011	1m
		ND(0.00079)	0.0021				101m
		ND(0.00067)	0.0016				223m
T-18	2014/3/5	0.016	0.039				S
		0.012	0.031				B
T-20	2014/3/2	0.022	0.057				S
		0.017	0.045				B
T-M10	2014/3/5	0.0017	0.0052				S
		0.0022	0.0069				B

M-E3	2014/1/22	ND(0.00055)	0.0018	0.030	0.056	0.00099	1m
		ND(0.00061)	0.0019				100m
		ND(0.00067)	0.0022				218m
M-E5	2014/1/24	ND(0.00071)	0.0024	0.031	0.055	0.0011	1m
		ND(0.00080)	0.0021				100m
		ND(0.00076)	0.00062				525m
M-G3	2014/1/16	ND(0.00071)	0.0017	0.021	0.097	0.0011	1m
		ND(0.00057)	0.0018				100m
		ND(0.00063)	0.0021				196m
M-G4	2014/1/17	ND(0.00063)	0.0019	0.023	0.063	0.0010	1m
		ND(0.00056)	0.0019				100m
		ND(0.00077)	0.00085				665m
M-H3	2014/1/16	ND(0.00087)	0.0018	0.025	0.077	0.0010	1m
		ND(0.00058)	0.0016				100m
		ND(0.00069)	0.0020				221m
M-H1	2014/1/16	0.0037	0.010				1m
		0.0012	0.0048				121m

Sea area along and off the coast of Miyagi Prefecture

Sampling point	Sampling Date	Cs-134	Cs-137	Sr-90	S/M/B Depth(m) from sea level

S:2m below sea level
M:between 2m below sea level and 2-3m above sea bottom
B:2-3m above sea bottom

Sea water radioactivity (Bq/L):
ND: under detection limits; Numbers in parentheses: detection limits

T-MG1	2014/3/4	0.0039	0.0098		S
		0.0051	0.014		M
		0.0025	0.011		B
T-MG4	2014/3/4	0.0039	0.011		S
		0.0043	0.012		M
		0.018	0.043		B
T-MG5	2014/3/4	0.0033	0.012		S
		0.0039	0.012		M
		0.0046	0.012		B
	2014/1/7	ND(0.0015)	0.0043	ND(0.02)	S
T-MG6	2014/3/4	0.0025	0.0075		S
		0.0018	0.0083		M
		ND(0.0016)	0.0061		B
M-B1	2014/1/26	0.0027	0.0078		1m
		0.0013	0.0049		37m
M-B3	2014/1/24	ND(0.00099)	0.0021	0.0012	1m
		ND(0.00069)	0.0030		50m
		ND(0.00092)	0.0024		108m

T-MG0	2014/3/4	ND(0.0016)	0.0022		S
		ND(0.0016)	0.0025		M
		ND(0.0016)	0.0014		B
M-A1	2014/1/28	ND(0.00069)	0.0020		1m
		ND(0.00071)	0.0020		100m
		ND(0.00080)	0.0020		195m
M-A3	2014/1/25	ND(0.00081)	0.0029		1m
		ND(0.00093)	0.0014		100m
		ND(0.00078)	0.00092		476m
T-MG2	2014/3/4	ND(0.0016)	0.0016		S
		ND(0.0016)	0.0023		M
		ND(0.0016)	0.0018		B
M-B5	2014/1/25	ND(0.00068)	0.0019		1m
		ND(0.00054)	0.0017		100m
		ND(0.00066)	0.0016		349m
M-MI4	2014/1/27	ND(0.00067)	0.0020		1m
		ND(0.00054)	0.0017		100m
		ND(0.00067)	0.0021		144m
T-MG3	2014/3/4	ND(0.0016)	0.0027		S
		ND(0.0016)	0.0027		M
		ND(0.0016)	0.0021		B

Sea area along and off the coast of Ibaraki Pref. and Chiba Pref.

Sampling point	Sampling Date	Cs-134	Cs-137	Sr-90	S/B
					Depth(m) from sea level

S:2m below sea level B:2-3m above sea bottom

Sea water radioactivity (Bq/L):
ND: under detection limits; Numbers in parentheses: detection limits

Sampling point	Sampling Date	Cs-134	Cs-137	Sr-90	S/B
T-Z	2014/3/10	ND(1.2)	ND(1.3)		S
		ND(1.2)	ND(1.3)		B
T-A	2014/3/10	ND(1.2)	ND(1.3)		S
		ND(1.2)	ND(1.3)		B
T-B	2014/3/12	ND(1.2)	ND(1.3)		S
		ND(1.2)	ND(1.3)		B
M-J1	2014/1/13	0.0027	0.0076	0.00079	1m
		0.0026	0.0082		40m
T-C	2014/3/12	ND(1.2)	ND(1.3)		S
		ND(1.2)	ND(1.3)		B
	2014/1/22	ND(1.2)	ND(1.3)	ND(0.02)	S
M-K1	2014/1/12	0.00077	0.0039		1m
		0.0015	0.0040		19m
T-D	2014/3/11	ND(1.2)	ND(1.3)		S
		ND(1.2)	ND(1.3)		B
M-M1	2014/1/11	ND(0.00092)	0.0029		1m
		ND(0.00073)	0.0038		101m

Sampling point	Sampling Date	Cs-134	Cs-137	Sr-90	Depth(m)
M-I0	2014/1/13	0.0043	0.014		1m
		0.0054	0.013		63m
M-I1	2014/1/15	0.0043	0.011		1m
		0.0050	0.013		50m
		0.0060	0.015		90m
M-I3	2014/1/15	0.00099	0.0040		1m
		0.0013	0.0040		100m
		0.0012	0.0043		175m
M-IB2	2014/1/12	0.00092	0.0029	0.0011	1m
		0.0047	0.012		104m
M-J3	2014/1/14	ND(0.00069)	0.0023		1m
		ND(0.00068)	0.0025		100m
		ND(0.00061)	0.0011		560m
M-IB4	2014/1/12	ND(0.00089)	0.0031		1m
		0.00099	0.0029		107m
T-E	2014/3/11	ND(1.2)	ND(1.3)		S
		ND(1.2)	ND(1.3)		B
M-L1	2014/1/11	ND(0.00089)	0.0024		1m
		0.0012	0.0030		35m
M-L3	2014/1/11	ND(0.00083)	0.0023		1m
		ND(0.00091)	0.0029		100m
		0.00088	0.0027		156m

Open sea off the coast of Eastern Japan

Sea water radioactivity (Bq/L):
ND: under detection limits; Numbers in parentheses: detection limits

Sampling point	Sampling Date	Cs-134	Cs-137	Depth(m) from sea level
M-10	2013/10/19	ND(0.00080)	0.0026	1m
		ND(0.00079)	0.0029	100m
		ND(0.00056)	0.0018	200m
		ND(0.00064)	0.0012	300m
		ND(0.00071)	0.00080	500m
M-14	2013/10/28	ND(0.00078)	0.0025	1m
		ND(0.00069)	0.0018	100m
		ND(0.00058)	0.0016	200m
		ND(0.00058)	0.0016	300m
		ND(0.00065)	0.00091	500m
M-19	2013/10/30	ND(0.00082)	0.0018	1m
		ND(0.00069)	0.0025	100m
		ND(0.00058)	0.0021	200m
		ND(0.00069)	0.0015	300m
		ND(0.00066)	0.00093	500m
M-20	2013/10/30	ND(0.00060)	0.0017	1m
		ND(0.00071)	0.0022	100m
		0.0014	0.0050	200m
		ND(0.00089)	0.0038	300m
		ND(0.00060)	0.0014	500m
M-25	2013/10/31	ND(0.00080)	0.0014	1m
		ND(0.00065)	0.0019	100m
		0.00084	0.0034	200m
		0.0025	0.0068	300m
		ND(0.00057)	0.0022	500m
M-11	2013/10/19	ND(0.00064)	0.0022	1m
		0.0020	0.0061	100m
		0.00071	0.0029	200m
		ND(0.00077)	0.0025	300m
		ND(0.00054)	0.0013	500m
M-15	2013/10/29	ND(0.00069)	0.0019	1m
		0.00091	0.0018	100m
		ND(0.00070)	0.0019	200m
		ND(0.00050)	0.0018	300m
		ND(0.00057)	0.00065	500m
M-21	2013/10/29	ND(0.00083)	0.0017	1m
		ND(0.00060)	0.0015	100m
		0.00097	0.0039	200m
		0.00078	0.0028	300m
		ND(0.00072)	0.0011	500m
M-26	2013/10/31	ND(0.00085)	0.0024	1m
		ND(0.00068)	0.0026	100m
		0.0012	0.0038	200m
		0.0022	0.0061	300m
		ND(0.00081)	0.0034	500m
M-27	2013/11/1	ND(0.00068)	0.0021	1m
		ND(0.00060)	0.0016	100m
		0.00083	0.0029	200m
		0.0015	0.0047	300m
		0.0011	0.0038	500m