

○ Results of Radioactive Material Monitoring of Aquatic Organisms (Location F off Iwaki City (Hisanohama))

< Location F off Iwaki City (Hisanohama): Samples collected >

Items Locations	General items		Radioactive materials			
	Water	Sediment	water (Cs)	water (Sr)	Sediment (Cs)	Sediment (Sr)
F-1	○	○	○	○	○	○
F-2	—	—	—	—	—	—
F-3	—	○	—	—	○	—
F-4	○	○	○	○	○	○
F-5	—	○	—	—	○	—

< Location F off Iwaki City (Hisanohama) Site measurement item >

Items Locations	Survey date and time		Latitude and longitude of the location		Water		Sediment				Other	
			Latitude	Longitude	Water temperature	Sediment temperature	Property	Color	Odor	Contaminants	Secchi disk depth	Water depth
F-1	2012/1/13	11:28	37.17362	141.07880	10.6	10.3	Sand	2.5 G Y 3/1	None	Shells	11.5	42.4
F-2		11:50	37.18610	141.08197	—	10.0	Sand	2.5 G Y 3/1	None	Shells	—	42.7
F-3		12:12	37.19960	141.08530	—	10.2	Sand	2.5 G Y 3/1	None	Shells	—	42.1
F-4		12:41	37.21192	141.08783	10.6	9.8	Sand	2.5 G Y 3/1	None	Shells	10.5	41.8
F-5		13:23	37.23242	141.09352	—	9.9	Sand	2.5 G Y 3/1	None	Sandworms, shells	—	42.9

< Location F off Iwaki City (Hisanohama): Analysis items Water >

Items Locations	Survey date and time		Latitude and longitude of the location		pH	BOD (mg/L)	COD (mg/L)	DO (mg/L)	Electrical conductivity (mS/m)	Salinity	TOC (mg/L)	SS (mg/L)	Turbidity (FNU)	Cs-134 (Bq/L)	Cs-137 (Bq/L)	Sr-90 (Bq/L)
			Latitude	Longitude												
F-1	2012/1/13	11:28	37.17362	141.07880	8.1	<0.5	1.3	9.1	4,990	33.94	0.8	3	0.9	0.058	0.075	0.013
F-2		11:50	37.18610	141.08197	-	-	-	-	-	-	-	-	-	—	—	—
F-3		12:12	37.19960	141.08530	-	-	-	-	-	-	-	-	-	—	—	—
F-4		12:41	37.21192	141.08783	8.1	<0.5	1.0	9.1	4,990	33.95	0.8	2	0.5	0.043	0.055	0.013
F-5		13:23	37.23242	141.09352	-	-	-	-	-	-	-	-	-	—	—	—

< Location F off Iwaki City (Hisanohama): Analysis items Sediment >

Items Locations	Survey date and time		Latitude and longitude of the location		pH	Redox potential E <sub>NHE</sub> (mV)	Water content (%)	IL (%)	TOC mg/g.dry	Soil particle density (g/cm <sup>3</sup> )	Grain size distribution							Cs-134 (Bq/kg-dry)	Cs-137 (Bq/kg-dry)	Sr-90 (Bq/kg-dry)	
			Latitude	Longitude							Gravel (2-75mm) (%)	Coarse sand (0.85-2mm) (%)	Medium sand (0.25-0.85mm) (%)	Fine sand (0.075-0.25mm) (%)	Silt (0.005-0.075mm) (%)	Clay (Less than 0.005mm) (%)	Median grain diameter (mm)				Maximum grain diameter (mm)
F-1	2012/1/13	11:28	37.17362	141.07880	8.5	230	30.4	2.1	3	2.769	—	0.3	2.7	90.6	4.1	2.3	0.1586	2	440	610	<0.11
F-2		11:50	37.18610	141.08197	8.5	331	23.8	2.1	3	2.761	—	0.6	2.9	90.7	3.9	1.9	0.1547	2	530	740	—
F-3		12:12	37.19960	141.08530	8.2	301	24.6	2.3	1	2.731	—	1.6	3.9	89.7	3.0	1.8	0.1617	2	1,400	1,900	—
F-4		12:41	37.21192	141.08783	8.6	346	22.9	1.9	3	2.737	—	1.1	3.8	91.8	2.0	1.3	0.1612	2	250	330	<0.10
F-5		13:23	37.23242	141.09352	8.5	351	22.9	2.3	2	2.693	—	5.8	4.5	86.5	2.1	1.1	0.1694	2	330	480	—

< Location F off Iwaki City (Hisanohama): Analysis items Sediment >

Location	Sampling Date	Latitude and longitude of the location		Division	Class	Order	Family	Species name	English name	Population	Sample weight (kg.wet)	Cs-134 (Bq/kg.wet)	Cs-137 (Bq/kg.wet)	Sr-90 (Bq/kg.wet)	*Stomach contents	
		Latitude	Longitude													
F-1-5	2012/1/13	37.17362 37.18610 37.19960 37.21192 37.23242	141.07880 141.08197 141.08530 141.08783 141.09352	Echinoderm	Echinoidea	Echinoidea	Physonomatidae	<i>Glyptocidaris crenularis</i>	Sea urchin	Many	3	92	120	—	—	
											Many	3	—	—	10	—
				Echinodermata	Asteroidea	Forcipulatida	Asteridae	<i>Asterias amurensis</i>	Northern Pacific seastar	Many	3	3.4	3.7	—	—	—
				Echinodermata	Holothuroidea	Aspidochirotda	Maactridae	<i>Sichopus japonicus</i>	Japanese common sea cucumber	3	0.8	49	62	—	—	—
				Mollusca	Bivalvia	Veneroidea	Maetra	<i>Pseudocardium sachalinense</i>	Sakhalin surf clam (molluscosus part)	13	0.17	25	42	—	—	—
									Sakhalin surf clam (shell)		0.90	2.0	2.7	—	—	—
				Mollusca	Cephalopoda	Octopodiiformes	Common octopus	<i>Paroctopus dofleini</i>	North Pacific Giant Octopus	2	8	7.4	8.0	—	—	—
				Mollusca	Cephalopoda	Octopodiiformes	Common octopus	<i>Octopus vulgaris</i>	Common octopus	6	4	4.6	4.2	—	—	—
				Mollusca	Cephalopoda	Octopodiiformes	Common octopus	<i>Octopus ocellatus</i>	Ocellated octopus	20	0.6	5.6	7.0	—	—	—
				Mollusca	Cephalopoda	Decapodiiformes	Cuttlefish	<i>Sepia sp.</i>	Cuttlefish	34	1.4	3.1	3.7	—	—	—
				Mollusca	Cephalopoda	Squid	Squid	<i>Lololus sp.</i>	Japanese squid	66	1	6.0	12	—	—	—
				Vertebrata	Cartilage fish	Ray	Skate	<i>Okamejei kenoei</i>	Common Skate	4	4	90	110	—	—	Metapenaeopsis
				Vertebrata	Osteichthyes	Righteye flounder	Flounder	<i>Paralichthys olivaceus</i>	Flounder	2	4	40	57	—	—	—
										3	4	—	—	0.10	—	Anchovy,sardine,dotted gizzard shad
				Vertebrata	Osteichthyes	Righteye flounder	Righteye flounder	<i>Pleuronectes herzensteini</i>	Brown sole	4	3.3	44	63	—	—	Empty stomach
				Vertebrata	Osteichthyes	Righteye flounder	Righteye flounder	<i>Pleuronectes yokohamae</i>	Marbled sole	9	3	48	66	—	—	Squid,amphipoda,sandworm
				Vertebrata	Osteichthyes	Righteye flounder	Righteye flounder	<i>Kareius bicoloratus</i>	Stone flounder	4	1.3	7.7	15	—	—	Empty stomach
				Vertebrata	Osteichthyes	Righteye flounder	Righteye flounder	<i>Microstomus achne</i>	Slime flounder	5	3	120	140	—	—	Bottle-tailed cuttlefish, sandworm, shellfish
				Vertebrata	Osteichthyes	Righteye flounder	Righteye flounder	<i>Eopsetta grigorjewi</i>	Round-nose flounder	11	3	40	59	—	—	Fish, Mimiika, metapenaeopsis, crabs
				Vertebrata	Osteichthyes	Righteye flounder	Righteye flounder	<i>Pleuronichthys cornutus</i>	Frog-flounder	14	0.8	11	18	—	—	—
				Vertebrata	Osteichthyes	Haddock	Haddock	<i>Gadus macrocephalus</i>	Pacific cod	1	1.3	20	32	—	—	Dotted gizzard shad
				Vertebrata	Osteichthyes	Marbled rockfish	Fat greenling	<i>Hexagrammos otakii</i>	Fat greenling	7	2	—	110	—	—	Rockfish, sardine class, metapenaeopsis, octopus, fish, fish eggs
										11	2	—	—	0.60	—	—
				Vertebrata	Osteichthyes	Eel	Conger eel	<i>Congridae</i>	Congridae	6	0.4	42	43	—	—	Empty stomach
				Vertebrata	Osteichthyes	Marbled rockfish	Gurnard	<i>Chelidonichthys spinosus</i>	Gurnard	9	1.5	31	45	—	—	Shrimp, metapenaeopsis, unknown
				Vertebrata	Osteichthyes	Perciformes	Lateolabracidae	<i>Lateolabrax japonicus</i>	Japanese sea bass	2	5	110	150	—	—	—
										2	5	—	—	0.12	—	Anchovy,fish, unknown
				Vertebrata	Osteichthyes	Puffer	Thread-sail filefish	<i>Thamnaconus modestus</i>	Filefish	7	0.9	15	16	—	—	—
				Vertebrata	Osteichthyes	Puffer	Puffer	<i>Takifugu pardalis</i>	Globefish	8	3	15	24	—	—	shellfish
				Vertebrata	Osteichthyes	Puffer	Puffer	<i>Takifugu poecilonotus</i>	Pufferrish	22	3	18	34	—	—	shellfish
				Vertebrata	Osteichthyes	Puffer	Puffer	<i>Takifugu sp.</i>	Takifugu	20	3	54	64	—	—	Fish, sandworm, unknown
Vertebrata	Osteichthyes	Pacific herring	Pacific herring	<i>Konosirus punctatus</i>	Dotted gizzard shad	4	0.3	19	20	—	—	—				
Vertebrata	Osteichthyes	John dory	John dory	<i>Zenopsis nebulosa</i>	John Dorey	2	0.4	6.4	5.8	—	—	Anchovy				
F-6	2012/1/18	37.15465	141.00155	Brown algae	Phaeophyceae	Fucales	Sargassum fulvellum	<i>Sargassum horneri</i>	Sargassum horneri	Many	2	11	16	—	—	
				Brown algae	Phaeophyceae	Sea cabbage	Sea cabbage	<i>Eisenia bicyclis</i>	Eisenia bicyclis	Many	3	64	86	—	—	
				Echinoderm	Sea Urchin	Loxechinus	Strongylocentrotus	<i>Strongylocentrotus nudus</i>	Northern sea urchin	Many	2	21	30	—	—	
				Mollusca	Gastropoda	Archaeogastropoda	Haliotis asinina	<i>Haliotis discus</i>	Abalone (molluscan body)	Many	4	21	21	—	—	—
									Abalone (shell)	Many	7	13	14	—	—	—