

○ Results of Radioactive Material Monitoring of Aquatic Organisms (Locations M off Iwaki City)

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

Items Locations	General items		Radioactive materials			
	Water	Sediment	Water (Cs)	Water (Sr)	Sediment (Cs)	Sediment (Sr)
M-1	○	○	○	○	○	○
M-2	○	○	○	○	○	○
M-3	○	○	○	○	○	○
M-4	○	○	○	○	○	○

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

Items Locations	Latitude and longitude of the location		Survey date and time			Water					Sediment			Other	
	Latitude	Longitude	Date	Time (water)	Time (sediment)	Water temperature (degrees C)	Sediment temperature (degrees C)	Property	Color	Odor	Contaminants	Water depth (m)	Secchi disk depth (m)		
M-1	37.173717°	141.078817°	2013/7/30	8:38	8:45	15.7	15.4	Sand	10Y4/1	None	Shell fragments	—	—		
M-2	37.199283°	141.085317°	2013/7/30	8:38	8:45	19.5	15.4	Fine sand	10Y5/1	None	Shell fragments	42.0	7.8		
M-3	37.232167°	141.093267°	2013/7/30	8:28	9:25	—	15.6	Fine sand	10Y5/1	None	Shell fragments	—	—		
M-4	37.154650°	141.001550°	2013/7/30	—	—	—	—	—	—	—	—	—	—		

< Location M off Iwaki City (Hisanohama): General survey items/Analysis of radioactive materials Water >

Items Locations	Latitude and longitude of the location		Survey date and time		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	Date	Time												
M-2 (Surface layer)	37.199283°	141.085317°	2013/7/30	8:38	8.1	<0.5	1.3	8.6	5.050	32.47	1.3	1	0.8	0.0023	0.0059	—
M-2 (Deep layer)	37.199283°	141.085317°	2013/7/30	8:28	8.1	<0.5	1.0	8.7	5.310	33.56	1.1	<1	0.3	0.0058	0.013	0.0010

< Location M off Iwaki City (Hisanohama): General survey items/Analysis of radioactive materials Sediment >

Items Locations	Latitude and longitude of the location		Survey date and time		pH	Redox potential E _{SHLE} (mV)	Water content (%)	IL (%)	TOC (mg/g-dry)	Soil particle density (g/cm ³)	Grain size distribution						Cs-134 (Bq/kg-dry)	Cs-137 (Bq/kg-dry)	Sr-90 (Bq/kg-dry)		
	Latitude	Longitude	Date	Time							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)
M-1	37.173717°	141.078817°	2013/7/30	8:02	7.7	220	27.3	1.9	<1	2.798	0	0	2.5	92.4	2.4	2.7	0.15	0.85	220	460	—
M-2	37.199283°	141.085317°	2013/7/30	8:45	7.8	216	27.0	2.2	1	2.814	0	0	3.2	90.8	0.5	5.5	0.15	0.85	70	140	N.D. (0.20)
M-3	37.232167°	141.093267°	2013/7/30	9:25	7.8	220	25.6	2.2	2	2.769	0.9	1.4	3.6	90.1	1.0	3.0	0.16	4.75	50	110	—

Note) N.D. means to be below the detection limit.

< Location M off Iwaki City (Hisanohama): Survey items Aquatic organisms >

Location	Latitude and longitude of the location		Sampling Date	Division	Class	Order	Family	Species name	English name	Population	Sample weight (kg-wet)	Note		Cs-134 (Bq/kg-wet)	Cs-137 (Bq/kg-wet)	Sr-90 (Bq/kg-wet)				
	Latitude	Longitude										Growth stage	Stomach contents							
M-1 M-2 M-3 (Hisanohama)	37.173717° 37.199283° 37.232167°	141.078817° 141.085317° 141.093267°	2013/7/30	Echinoderm	Sea Urchin	Sea urchin	Sea urchin	<i>Glyptocidaris crenularis</i>	tugaruni	38	1.4	Imago	—	9.8	21	8.1				
								Vertebrata	Osteichthyes	Perciformes	Sparidae	<i>Eynnys japonica</i>	Crimson sea-bream	2	0.78	Mature fish	Small cephalopod fragments	3.2	7.1	—
								Vertebrata	Osteichthyes	John dory	John dory	<i>Zeus faber</i>	John dory	2	2.9	Mature fish	Small fish (flatfish, etc.)	1.5	2.8	N.D. (<0.022)
								Vertebrata	Osteichthyes	Marbled rockfish	Fat greenling	<i>Hexagrammos otakii</i>	Fat greenling	2	0.59	Mature fish	Crustacean fragments	2.0	3.9	—
								Vertebrata	Osteichthyes	Righteye flounder	Flounder	<i>Paralichthys olivaceus</i>	Flounder	4	5.0	3-year-old fish	Some (details unknown)	1.8	3.5	0.039
								Vertebrata	Osteichthyes	Righteye flounder	Righteye flounder	<i>Pleuronectes yokohamae</i>	Marbled sole	5	2.7	2-year-old fish	Crustacean fragments	13	27	0.13
								Vertebrata	Osteichthyes	Marbled rockfish	Gumard	<i>Lepidotrigla microptera</i>	Lepidotrigla	17	1.4	Mature fish	Shrimps	1.6	4.1	—
								Vertebrata	Cartilage fish	Skate	Skate	<i>Okamejei kenaei</i>	Common Skate	3	4.0	Mature fish	Shrimps, crabs, small fish	34	72	0.46
								Vertebrata	Cartilage fish	Sandbar shark	Banded houndshark	<i>Mustelus manazo</i>	Starspotted smooth-hound	2	2.6	Mature fish	Crabs	12	25	0.083
								M-4 (Hisanohama)	37.154650°	141.001550°	2013/7/30	Brown algae	Phaeophyceae	Sea cabbage	Sea cabbage	<i>Eisenia bicyclis</i>	Eisenia bicyclis	—	2.3	—
Echinoderm	Sea Urchin	Loxechinus	Strongylocentrotus madus	Northern sea urchin	24	2.3	Imago									—	1.7	3.3	—	
Mollusca	Gastropoda	Archaeogastropod	Haliotis asinina	Abalone (shell)	—	0.55	—									—	4.2	8.7	—	
Mollusca	Gastropoda	Archaeogastropod	Haliotis asinina	Haliotis discus	Abalone (molluscan body)	10	1.4									Imago	—	0.73	0.95	—

Note 1) A statement in red in the "Growth stage" column shows the age assessed based on squama or otolith.

Note 2) N.D. means to be below the detection limit.