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

<Location M off Iwaki City: Samples collected>

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

<Location M off Iwaki City: 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	Contaminants	Water depth (m)	Secchi disk depth (m)
M-2(Surface layer)	37.1996°	141.0853°	2019/8/20	08:26	08:38	25.4	19.3	Sand	5Y3/2	Shell fragments	42.0	22.0
M-2(Bottom layer)				08:10		17.2						

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

Items / Locations	Latitude and longitude of the location		Survey date and time		pH	BOD	COD	DO	Electric conductivity	Salinity	TOC	SS	Turbidity	Cs-134	Cs-137	Sr-90
	Latitude	Longitude	Date	Time (water)		(mg/L)	(mg/L)	(mg/L)	(mS/m)		(mg/L)	(mg/L)	(FNU)	(Bq/L)	(Bq/L)	(Bq/L)
M-2(Surface layer)	37.1996°	141.0853°	2019/8/20	08:26	8.1	0.7	1.4	7.2	4980	33.29	1.2	3	0.5	N.D.(0.0014)	0.0024	-
M-2(Bottom layer)				08:10	8.1	0.6	1.2	7.8	4940	33.88	0.9	3	0.8	N.D.(0.0012)	0.0041	0.00093

Note) N.D. means to be below the detection limit and figures in parentheses show the detection limit.

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

Items / Locations	Latitude and longitude of the location		Survey date and time		pH	Redox potential $E_{N.H.E}$	Water content	IL	TOC	Soil particle density	Grain size distribution								Cs-134	Cs-137	Sr-90
	Latitude	Longitude	Date	Time (sediment)		(mV)	(%)	(%)	(mg/g-dry)	(g/cm^3)	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)	(Bq/kg-dry)	(Bq/kg-dry)	(Bq/kg-dry)
M-2	37.1996°	141.0853°	2019/8/20	08:38	7.7	273	22.3	1.8	2.1	2.778	1.0	0.7	2.3	92.5	1.6	1.9	0.15	4.8	1.3	22	N.D.(0.15)

Note) N.D. means to be below the detection limit and figures in parentheses show the detection limit.

<Location M off Iwaki City: Analysis items Aquatic organisms>

Locations	Sampling point	Latitude and longitude of the location		Sampling date	Division	Class	Order	Family	Scientific name	English name	Population	Sample weight (kg-wet)	Note			Radioactive cesium (Bq/kg-wet)			Sr-90
		Latitude	Longitude										Growth stage	Stomach contents	Measurement site	Total	Cs-134	Cs-137	(Bq/kg-wet)
M-1 M-2 M-3	Offshore of Hisanohama	37.1736° 37.1996° 37.2324°	141.0788° 141.0853° 141.0935°	2019/8/20	Vertebrata	Osteichthyes	Scorpaeniformes	Triglidae	*Chelidonichthys spinosus*	Gurnard	3	0.75	Mature fish	Shrimp,Crab,Fish	Viscera removed	0.54	N.D.(0.36)	0.54	-
					Vertebrata	Osteichthyes	Pleuronectiformes	Pleuronectidae	*Pleuronectes yokohamae*	Marbled sole	4	1.2	Immature fish,Mature fish	Obscure digesta	Viscera removed	1.0	N.D.(0.38)	1.0	-
					Vertebrata	Osteichthyes	Pleuronectiformes	Pleuronectidae	*Eopsetta grigorjewi*	Shotted halibut	2	0.38	Immature fish	Crab	Viscera removed	0.73	N.D.(0.37)	0.73	-
					Vertebrata	Osteichthyes	Pleuronectiformes	Paralichthyidae	*Paralichthys olivaceus*	Bastard halibut	2	3.1	Mature fish	Empty stomach	Viscera removed	0.44	N.D.(0.35)	0.44	N.D.(0.018)
					Vertebrata	Osteichthyes	Perciformes	Sparidae	*Pagrus major*	Red seabream	2	1.9	Immature fish,Mature fish	Shellfish	Viscera removed	0.56	N.D.(0.28)	0.56	-
					Vertebrata	Osteichthyes	Zeiformes	Zeidae	*Zeus faber*	John dory	3	1.9	Immature fish,Mature fish	Empty stomach	Viscera removed	0.47	N.D.(0.38)	0.47	-
					Vertebrata	Chondrichthyes	Squatiniformes	Squatinidae	*Squatina japonica*	Japanese angelshark	1	4.6	Mature fish	Empty stomach	Viscera removed	3.7	N.D.(0.31)	3.7	-
					Vertebrata	Chondrichthyes	Carcharhiniformes	Triakidae	*Mustelus manazo*	Starspotted smooth-hound	2	2.6	Immature fish	Crab	Viscera removed	1.4	N.D.(0.41)	1.4	-
M-4	Hisanohama Coastal areas	—	—	2019/8/20	Algae/plant	Phaeophyceae	Laminariales	Laminariaceae	*Eisenia bicyclis*	Eisenia bicyclis	-	1.5	-	-	-	0.26	N.D.(0.080)	0.26	-
					Mollusca	Gastropoda	Archaeogastropoda	Haliotidae	*Haliotis sp.*	Abalone	3	0.39	Imago	-	Molluscous part	N.D.	N.D.(0.40)	N.D.(0.35)	-
					Echinodermata	Echinoidea	Echinoida	Strongylocentrotidae	*Strongylocentrotus nudus*	Northern sea urchin	5	0.58	Imago	-	-	N.D.	N.D.(0.30)	N.D.(0.30)	-

*1: Organisms were collected in or around the targeted water areas.

*2: When multiple types of aquatic organisms were collected, a sample was prepared by mixing them.

*3: For a sample made of multiple types of aquatic organisms, the English name of the dominant one largest in number is underlined.

*4: Basically, measurement was conducted for all organism samples. Viscera (stomach and bowels) were removed for the measurement when possible so that undigested food and sediments, etc. in the digestive system would be excluded.

*5: Plankton (suspended algae) is the residue remaining after the filtration of lake water or seawater with a plankton net (40μm-mesh).

*6: River bottom materials (incl. algae) are algae, etc. that were scratched off stones with a brush, etc. and may include very fine particles such as inorganic silt and clay.

*7: N.D. means to be below the detection limit and figures in parentheses show the detection limit.

*8: Activity concentrations include counting errors, but the details are omitted here.