

Results of Radioactive Material Monitoring of Aquatic Organisms (Location K off the mouth of the Abukuma River)

<Location K off the mouth of the Abukuma River: Samples collected>

Items Locations	General items		Radioactive materials			
	Water	Sediment	Water (Cs)	Water (Sr)	Sediment (Cs)	Sediment (Sr)
K-3	○	○	○	○	○	○

<Location K off the mouth of the Abukuma River: 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)
K-3(Surface layer)	38.0458°	140.9518°	2018/6/4	08:00	08:45	20.1	16.9	Silt with sand	5Y4/2	None	21.5	6.0
K-3(Bottom layer)				08:22		16.8						

<Location K off the mouth of the Abukuma River: 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)	Electric 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 (water)												
K-3(Surface layer)	38.0458°	140.9518°	2018/6/4	08:00	8.2	2.2	4.5	9.8	4650	30.84	2.2	3	1.9	N.D.(0.0017)	0.0056	-
K-3(Bottom layer)				08:22	7.9	0.7	1.8	3.3	5050	34.12	1.3	4	1.9	0.0014	0.014	0.00081

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

<Location K off the mouth of the Abukuma River: General survey items/Analysis of radioactive materials Sediment>

Items Locations	Latitude and longitude of the location		Survey date and time		pH	Redox potential E _h (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 (sediment)							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)
K-3	38.0458°	140.9518°	2018/6/4	08:45	7.7	12	34.2	5.4	5.1	2.698	0.0	0.1	0.1	29.6	56.0	14.2	0.053	2.0	19	190	N.D.(0.13)

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

<Location K off the mouth of the Abukuma River: 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 (Bq/kg-wet)
		Latitude	Longitude										Growth stage	Stomach contents	Measurement site	Total	Cs-134	Cs-137	
Surrounding water area off the mouth of the Abukuma River	Sea area in front of the Abukuma River Estuary	-	-	2018/6/4	Arthropoda	Malacostraca	Decapoda	Portunidae	<i>Portunus trituberculatus</i>	Japanese blue crab	3	0.57	Imago	-	-	N.D.	N.D.(0.30)	N.D.(0.31)	-
					Mollusca	Cephalopoda	Octopoda	Octopodidae	<i>Octopus vulgaris</i>	Common octopus	1	0.27	Imago	-	-	N.D.	N.D.(0.26)	N.D.(0.27)	-
					Vertebrata	Osteichthyes	Lophiiformes	Lophiidae	<i>Lophiomus setigerus</i>	Monkfish	2	1.3	Immature fish	Fish	Viscera removed	N.D.	N.D.(0.30)	N.D.(0.35)	-
					Vertebrata	Osteichthyes	Scorpaeniformes	Hexagrammidae	<i>Hexagrammos otakii</i>	Fat greenling	3	0.36	Mature fish	Shrimp	Viscera removed	0.39	N.D.(0.37)	0.39	-
					Vertebrata	Osteichthyes	Scorpaeniformes	Triglidae	<i>Chelidonichthys spinosus</i>	Gurnard	8	2.3	Mature fish	Crab	Viscera removed	N.D.	N.D.(0.35)	N.D.(0.29)	N.D.(0.016)
					Vertebrata	Osteichthyes	Pleuronectiformes	Pleuronectidae	<i>Kareius bicoloratus</i>	Stone flounder	1	0.66	Immature fish	Obscure digesta	Viscera removed	N.D.	N.D.(0.38)	N.D.(0.33)	-
					Vertebrata	Osteichthyes	Pleuronectiformes	Pleuronectidae	<i>Pleuronectes herzensteini</i>	Yellow striped flounder	2	0.63	Mature fish	Obscure digesta	Viscera removed	0.40	N.D.(0.37)	0.40	-
					Vertebrata	Osteichthyes	Pleuronectiformes	Pleuronectidae	<i>Eopsetta grigorjevi</i>	Shotted halibut	6	0.63	Immature fish	Obscure digesta	Viscera removed	N.D.	N.D.(0.35)	N.D.(0.28)	-
					Vertebrata	Osteichthyes	Perciformes	Polyprionidae	<i>Stereolepis doederleini</i>	Striped jewfish	3	0.45	Immature fish	Fish	Viscera removed	N.D.	N.D.(0.39)	N.D.(0.39)	-
					Vertebrata	Osteichthyes	Perciformes	Gobiidae	<i>Acanthogobius flavimanus</i>	Yellowfin Goby	6	0.074	Immature fish, Mature fish	-	-	1.7	N.D.(0.75)	1.7	-
					Vertebrata	Osteichthyes	Tetraodontiformes	Monacanthidae	<i>Thamnaconus modestus</i>	Filefish	1	0.080	Immature fish	Obscure digesta	Viscera removed	N.D.	N.D.(0.76)	N.D.(0.84)	-

*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.