○Results of Radioactive Material Monitoring of Aquatic Organisms (Locations A and B along the Abukuma River)

<Locations A and B along the Abukuma River: Samples collected>

Items / Locations	General items		Radioactive materials			
	Water	Sediment	Water (Cs)	Water (Sr)	Sediment (Cs)	Sediment (Sr)
A-1	○	○	○	○	○	○
A-2	○	○	○	-	○	-
B-2	○	○	○	-	○	-
B-3	○	○	○	-	○	-

<Locations A and B along 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)	Transparency (cm)
A-1(Surface layer)	37.6210°	140.5218°	2023/12/4	08:42	09:09	6.6	7.3	Sand with silt	5Y3/2	None	5.70	>50 (1.2m)*
A-1(Bottom layer)				08:35		6.3						
A-2	37.5673°	140.3946°		11:25	11:36	7.8	8.4	Sand with gravel	10YR4/4	None	0.58	>50
B-2	37.8121°	140.5058°		15:05	15:15	8.7	9.1	Sand	10YR4/2	None	0.52	>50
B-3	37.8182°	140.4679°		13:57	14:05	9.3	9.0	Sand	10YR4/3	None	0.55	>50

* The number in parentheses indicates Secchi disk depth.

<Locations A and B along 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	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)
A-1(Surface layer)	37.6210°	140.5218°	2023/12/4	08:42	7.6	1.5	3.3	11.8	20.7	0.10	1.6	3	2.4	N.D.(0.0014)	0.0068	0.00097
A-1(Bottom layer)				08:35	7.6	1.7	3.4	12.2	20.9	0.10	1.6	4	2.4	N.D.(0.0013)	0.0054	-
A-2	37.5673°	140.3946°		11:25	7.4	0.6	1.8	12.3	12.0	0.06	0.9	<1	0.6	N.D.(0.0015)	0.0037	-
B-2	37.8121°	140.5058°		15:05	7.7	1.1	3.2	13.2	19.2	0.10	1.5	5	3.9	N.D.(0.0015)	0.032	-
B-3	37.8182°	140.4679°		13:57	7.6	0.7	2.7	12.5	10.5	0.06	1.2	2	1.4	N.D.(0.0014)	0.0038	-

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

<Locations A and B along 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 $E_{N.H.E}$	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)
A-1	37.6210°	140.5218°	2023/12/4	09:09	7.3	173	27.2	3.1	7.7	2.710	0.2	2.1	44.2	32.6	13.9	7.0	0.23	4.8	2.6	160	N.D.(0.11)
A-2	37.5673°	140.3946°		11:36	7.2	507	19.6	1.5	1.9	2.740	29.9	28.3	29.3	4.9	3.6	4.0	1.1	9.5	1.5	70	-
B-2	37.8121°	140.5058°		15:15	7.3	392	25.2	1.5	1.7	2.690	0.8	4.0	76.3	14.7	0.7	3.5	0.41	4.8	1.5	83	-
B-3	37.8182°	140.4679°		14:05	7.5	497	21.7	0.9	0.8	2.650	25.1	40.9	26.1	3.0	2.1	2.8	1.2	9.5	0.35	26	-

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

<Locations A and B along 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
		Latitude	Longitude										Growth stage	Stomach contents	Measurement site	Total	Cs-134	Cs-137	(Bq/kg-wet)
A-1	The main stream of the Abukuma River	37.6210°	140.5218°	2023/12/4	Algae/plant	-	-	-	-	Sediment deposited on riverbed (Including algae)	-	0.0064	-	-	-	88	N.D.(12)	88	-
					Arthropoda	Insecta	Megaloptera	Corydalidae	*Protohermes grandis*	Dobsonfly	38	0.025	Larva	-	-	7.0	N.D.(1.3)	7.0	-
					Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	*Pseudaspius hakonensis*	Japanese dace	30	0.15	Immature fish	-	-	3.7	N.D.(0.38)	3.7	-
					Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	*Gnathopogon elongatus elongatus*	Field gudgeon	60	0.20	Immature fish, Mature fish	-	-	2.1	N.D.(0.32)	2.1	-
					Coarse Particulate Organic Matter	-	-	-	-	Water-bottom leaf litter	-	0.25	-	-	-	3.6	N.D.(0.33)	3.6	-
A-2	Harase River	37.5673°	140.3946°	2023/12/4	Algae/plant	-	-	-	-	Sediment deposited on riverbed (Including algae)	-	0.014	-	-	-	110	N.D.(16)	110	-
					Arthropoda	Insecta	Ephemeroptera	Ephemeridae	*Ephemera strigata*	Mont mayfly	88	0.0051	Larva	-	-	41	N.D.(8.0)	41	-
					Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	*Rhynchocypris lagowskii steindachneri*	Amur minnow	18	0.034	Immature fish, Mature fish	-	-	3.7	N.D.(1.3)	3.7	-
					Coarse Particulate Organic Matter	-	-	-	-	Water-bottom leaf litter	-	0.23	-	-	-	32	N.D.(1.5)	32	-
B-2	The main stream of the Abukuma River	37.8121°	140.5058°	2023/12/1	Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	*Pseudaspius hakonensis*	Japanese dace	4	0.87	Mature fish	Obscure digesta	Viscera removed	9.9	N.D.(1.1)	9.9	-
					Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	*Carassius* sp.	Silver crucian carp	3	0.23	Mature fish	Obscure digesta	Viscera removed	3.7	N.D.(0.78)	3.7	-
					Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	*Hemibarbus barbus*	Barbel steed	2	3.1	Mature fish	*Eriocheir japonica*	Viscera removed	11	N.D.(1.1)	11	0.39
					Vertebrata	Osteichthyes	Perciformes	Centrarchidae	*Micropterus dolomieu dolomieu*	Smallmouth bass	1	0.19	Immature fish	Empty stomach	Viscera removed	4.1	N.D.(0.53)	4.1	-
					Vertebrata	Osteichthyes	Siluriformes	Ictaluridae	*Ictalurus punctatus*	American catfish	2	3.0	Mature fish	*Eriocheir japonica*	Viscera removed	7.8	N.D.(1.3)	7.8	0.21
B-3	Surikami River	37.8182°	140.4679°	2023/12/1	Algae/plant	-	-	-	-	Sediment deposited on riverbed (Including algae)	-	0.037	-	-	-	38	N.D.(4.4)	38	-
					Arthropoda	Insecta	Trichoptera	Stenopsychidae	*Stenopsyche marmorata*	Caddisfly	171	0.038	Larva	-	-	8.7	N.D.(1.6)	8.7	-
					Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	*Pseudaspius hakonensis*	Japanese dace	5	0.017	Immature fish	-	-	3.3	N.D.(1.7)	3.3	-
					Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	*Hemibarbus barbus*	Barbel steed	2	0.020	Immature fish	-	-	2.5	N.D.(1.2)	2.5	-
					Vertebrata	Amphibia	Anura	Lithobates	*Lithobates catesbeianus*	American bullfrog	1	0.29	Imago	-	-	12	N.D.(1.7)	12	-
					Coarse Particulate Organic Matter	-	-	-	-	Water-bottom leaf litter	-	0.21	-	-	-	6.2	N.D.(0.87)	6.2	-

*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.