

○Results of Radioactive Material Monitoring of Aquatic Organisms (Location F along the Ota River)

< Location F along the Ota River: 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	○	○	○	—	○	—
F-6	○	—	○	—	—	—

< Location F along the Ota 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)
F-1	37.5974°	140.9248°	2014/12/3	8:12	8:05	8.5	8.3	Sediment with sand	2.5Y4/2	None	0.45	>50.0
F-2	37.6015°	140.9436°		9:21	9:07	8.6	8.5	Sand	2.5Y4/6	None	0.36	>50.0
F-3	37.6045°	140.9641°		10:13	10:17	7.4	7.3	Sediment with sand	2.5Y4/2	None	0.50	>50.0
F-4	37.6070°	140.9721°		11:02	11:08	9.2	9.2	Sand	2.5Y4/3	None	0.45	>50.0
F-5	37.6023°	140.9874°		12:39	12:36	9.7	9.4	Sand	2.5Y4/4	None	0.27	>50.0
F-6	37.5954°	141.0126°		13:25	—	9.1	—	—	—	—	1.10	>50.0

< Location F along the Ota 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)	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 (water)												
F-1	37.5974°	140.9248°	2014/12/3	8:12	7.6	<0.5	2.4	11.8	5.5	0.04	1.0	2	1.0	0.081	0.25	—
F-2	37.6015°	140.9436°		9:21	7.2	<0.5	2.6	11.9	6.3	0.04	0.9	2	0.9	0.061	0.18	0.0033
F-3	37.6045°	140.9641°		10:13	7.4	<0.5	2.4	12.1	6.7	0.04	1.0	<1	0.6	0.052	0.15	—
F-4	37.6070°	140.9721°		11:02	7.0	<0.5	2.2	10.2	7.2	0.04	0.8	1	0.5	0.038	0.12	—
F-5	37.6023°	140.9874°		12:39	7.1	0.9	2.8	11.0	8.3	0.05	1.1	2	1.3	0.041	0.12	—
F-6	37.5954°	141.0126°		13:25	7.5	0.6	2.9	11.3	16.5	0.09	1.5	4	1.9	0.036	0.11	—

< Location F along the Ota 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 <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	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)
F-1	37.5974°	140.9248°	2014/12/3	8:05	7.0	344	23.3	2.2	1.8	2.660	24.1	28.9	25.8	10.0	5.3	5.9	0.94	9.5	1,600	5,500	—
F-2	37.6015°	140.9436°		9:07	7.0	344	13.1	0.6	1.1	2.658	42.5	38.4	16.7	1.4	0.9	0.1	1.7	19	820	2,600	N.D.(0.20)
F-3	37.6045°	140.9641°		10:17	7.0	368	15.3	0.7	1.4	2.652	30.5	33.7	24.7	9.3	1.0	0.8	1.3	19	630	2,200	—
F-4	37.6070°	140.9721°		11:08	6.9	381	16.7	0.6	1.0	2.652	28.0	42.8	24.1	4.3	0.7	0.1	1.3	9.5	520	1,700	—
F-5	37.6023°	140.9874°		12:36	6.8	405	27.5	1.2	1.9	2.639	1.6	31.2	58.0	7.2	1.2	0.8	0.66	9.5	580	2,000	—

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

< Location F along the Ota River: 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	Measurement site				
F-1	—	37.5974°	140.9248°	2014/12/6	Algae/plant	—	—	—	—	River bottom materials (incl. algae)	Considerable number	0.051	—	—	—	440	1,400	—	
					Arthropoda	Insecta	Ephemeroptera	Ephemeridae	<i>Ephemera strigata</i>	Mont mayfly	272	0.0087	Larva	—	—	—	350	1,100	—
					Arthropoda	Insecta	Plecoptera	Perlidae	<i>Oyamia seminigra</i>	<i>Oyamia lugubris</i>	144	0.0096	Larva	—	—	—	32	96	—
					Arthropoda	Insecta	Plecoptera	Ephemeropteroidea	<i>Kamimuria tibialis</i>	<i>Kamimuria tibialis</i>									
					Arthropod	Insecta	Trichoptera	Stenopsychidae	<i>Stenopsyche marmorata</i>	<i>Stenopsyche marmorata</i>	112	0.010	Larva	—	—	—	280	910	—
					Arthropod	Insecta	Odonata	Cordulidae	<i>Macromia amphigena amphigena</i>	<i>Macromia amphigena</i>	227	0.075	Larva (dragonfly larva)	—	—	—	160	500	—
					Arthropod	Insecta	Odonata	Cordulegastriidae	<i>Anotogaster sieboldii</i>	<i>Anotogaster sieboldii</i>									
					Arthropod	Insecta	Odonata	Gomphidae	<i>Stylogomphus suzukii</i>	<i>Stylogomphus suzukii</i>									
					Arthropod	Insecta	Odonata	Gomphidae	<i>Onychogomphus viridicostus</i>	<i>Onychogomphus viridicostus</i>									
					Arthropod	Insecta	Odonata	Gomphidae	<i>Sieboldius albardae</i>	<i>Albardae</i>									
					Arthropod	Insecta	Odonata	Gomphidae	<i>Davidius nanus</i>	<i>Davidius nanus</i>									
					Arthropod	Insecta	Odonata	Gomphidae	<i>Davidius</i> sp.	<i>Davidius</i>									
					Arthropod	Insecta	Odonata	Gomphidae	<i>Asiagomphus melaenops</i>	<u><i>Asiagomphus melaenops</i></u>									
					Arthropod	Insecta	Odonata	Aeshnidae	<i>Boyeria maclachlani</i>	<i>Boyeria maclachlani</i>									
					Arthropod	Insecta	Megaloptera	Corydalidae	<i>Protohermes grandis</i>	<i>Protohermes grandis</i>									
					Arthropoda	Malacostraca	Decapoda	Atyidae	<i>Paratya improvisa</i>	Freshwater shrimp	607	0.13	Imago	—	—	—	230	800	—
					Arthropod	Malacostraca	Decapoda	Grapsidae	<i>Eriocheir japonica</i>	Japanese mitten crab	1	0.098	Imago	—	—	—	190	590	—
					Mollusca	Gastropoda	Sorbeoconcha	Pleuroceridae	<i>Semisulcospira libertina</i>	<i>Semisulcospira libertina</i>	24	0.031	Imago	—	—	Molluscan body	67	200	—
					Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	<i>Tribolodon hakonensis</i>	Japanese dace	130	0.086	Immature fish	—	—	—	170	550	—
					Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	<i>Zacco platypus</i>	Pale chub	7	0.097	Mature fish	—	—	—	110	340	—
Vertebrata	Osteichthyes	Cypriniformes	Cobitidae	<i>Misgurnus anguillicaudatus</i>	Oriental weatherfish	1	0.015	Mature fish	—	—	—	150	480	—					
Vertebrata	Osteichthyes	Perciformes	Gobiidae	<i>Rhinogobius fluviatilis</i>	<i>R. fluviatilis</i>	3	0.0083	Mature fish	—	—	—	380	1,200	—					
				Coarse particulate organic matters	—	—	—	—	—	Fallen leaves	Considerable number	0.27	—	—	—	54	180	—	

\*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 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: A statement in red in the "Growth stage" column shows the age assessed based on squama or otolith

\*6: Plankton (suspended algae) is the residue remaining after the filtration of lake water or seawater with a plankton net (40µm-mesh).

\*7: 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.

\*8: N.D. means to be below the detection limit and figures in parentheses show the detection limit.

\*9: Activity concentrations include counting errors, but the details are omitted here.