

○ 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	Odor	Contaminants	Water depth (m)	Transparency (cm)
F-1	37.597467°	140.924950°	2013/10/12	7:52	7:58	19.0	19.1	Silt	2.5Y3/3	Sediment smell	None	0.29	>50
F-2	37.601533°	140.943600°		9:21	9:40	19.2	19.2	Sand gravel	2.5Y4/3	None	Pebbles	0.28	>50
F-3	37.604500°	140.963700°		10:50	10:53	20.1	19.9	Sand gravel	2.5Y4/3	None	None	0.25	>50
F-4	37.606883°	140.972017°		11:36	11:41	19.1	18.9	Sand gravel	2.5Y4/4	None	None	0.31	>50
F-5	37.602183°	140.987383°		13:05	13:12	20.3	20.4	Sand	2.5Y4/2	Sediment smell	None	0.22	>50
F-6	37.595333°	141.012633°		14:00	—	21.0	—	—	—	—	—	0.85	>50

< 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												
F-1	37.597467°	140.924950°	2013/10/12	7:52	7.4	<0.5	2.5	9.8	6.3	0.04	1.5	<1	0.7	0.23	0.52	—
F-2	37.601533°	140.943600°		9:21	7.2	<0.5	2.3	9.5	7.4	0.04	1.0	<1	0.4	0.20	0.43	0.0051
F-3	37.604500°	140.963700°		10:50	7.4	<0.5	2.7	9.4	7.5	0.04	1.2	2	1.1	0.17	0.38	—
F-4	37.606883°	140.972017°		11:36	6.8	<0.5	1.1	9.4	8.7	0.05	0.6	<1	0.3	0.079	0.17	—
F-5	37.602183°	140.987383°		13:05	7.2	<0.5	2.0	9.3	9.5	0.05	0.9	3	3	0.11	0.24	—
F-6	37.595333°	141.012633°		14:00	7.0	<0.5	4.0	8.7	45.9	0.23	1.7	4	3.0	0.13	0.27	—

< 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						Median grain diameter (mm)	Maximum grain diameter (mm)	Cs-134 (Bq/kg-dry)	Cs-137 (Bq/kg-dry)	Sr-90 (Bq/kg-dry)
	Latitude	Longitude	Date	Time							Gravel	Coarse sand	Medium sand	Fine sand	Silt	Clay					
											(2-75mm) (%)	(0.85-2mm) (%)	(0.25-0.85mm) (%)	(0.075-0.25mm) (%)	(0.005-0.075mm) (%)	(Less than 0.005mm) (%)					
F-1	37.597467°	140.924950°	2013/10/12	7:58	6.7	290	74.9	12.3	25	2.492	0	0.5	8.6	32.6	19.0	39.3	0.031	2	16,000	37,000	—
F-2	37.601533°	140.943600°		9:40	6.8	262	12.6	0.6	<1	2.649	55.8	33.6	9.2	0.4	0.3	0.7	2.3	19	1,900	4,400	0.39
F-3	37.604500°	140.963700°		10:53	6.8	283	16.8	0.6	<1	2.666	39.3	37.6	17.2	4.7	0.4	0.8	1.6	9.5	930	2,200	—
F-4	37.606883°	140.972017°		11:41	6.9	317	17.2	0.5	<1	2.653	27.4	38.9	29.1	3.7	0.2	0.7	1.2	9.5	660	1,500	—
F-5	37.602183°	140.987383°		13:12	6.5	335	21.3	0.9	1	2.662	30.3	30.8	32.3	4.4	0.6	1.6	1.1	9.5	470	1,100	—
F-6	37.595333°	141.012633°		14:00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Note) N.D. means to be below 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					
F-1	37.597467°	140.924950°	2013/10/13	Algae/plant	—	—	—	—	Attached algae	—	0.055	—	—	2,700	6,000	—		
				Streptophyta	Zygnematoiphyceae	Zygnematales	Zygnemataceae	<i>Spirogyra sp.</i>	Spirogyra	—	0.036	—	—	—	—	69	160	—
				Bryopsida	Sphagnopsida	Sphagnales	Sphagnaceae	<i>Sphagnum sp.</i>	Sphagnum	—	0.044	—	—	—	—	550	1,200	—
				Angiospermae	Monocotyledoneae	Najadales	Potamogetonaceae	<i>Potamogeton pusillus</i>	Small pondweed	—	0.034	—	—	—	—	23	50	—
				Arthropod	Insecta	Megaloptera	Corydalidae	<i>Parachauliodes continentalis</i>	Parachauliodes continentalis Weele	54	0.026	Larva	—	—	—	98	210	—
				Arthropod	Insecta	Megaloptera	Corydalidae	<i>Protohermes grandis</i>	<u>Protohermes grandis</u>									
				Arthropod	Insecta	Odonata	Corduliidae	<i>Macromia amphigena amphigena</i>	<u>Macromia amphigena</u>	109	0.027	Larva	—	—	220	440	—	
				Arthropod	Insecta	Odonata	Gomphidae	<i>Asiagomphus melaenops</i>	Asiagomphus melaenops									
				Arthropod	Insecta	Odonata	Gomphidae	<i>Davidius nanus</i>	Davidius nanus									
				Arthropod	Insecta	Odonata	Gomphidae	<i>Davidius sp.</i>	Davidius									
				Arthropod	Insecta	Odonata	Gomphidae	<i>Nihonogomphus viridis</i>	Nihonogomphus viridis									
				Arthropod	Insecta	Odonata	Gomphidae	<i>Onychogomphus viridicostus</i>	Onychogomphus viridicostus									
				Arthropod	Insecta	Odonata	Gomphidae	<i>Sieboldius albardae</i>	Sieboldius albardae									
				Arthropod	Insecta	Odonata	Gomphidae	<i>Stylogomphus suzukii</i>	Stylogomphus suzukii									
				Arthropod	Insecta	Odonata	Aeshnidae	<i>Boyeria maclachlani</i>	Boyeria maclachlani									
				Arthropod	Insecta	Odonata	Aeshnidae	<i>Planaeschna milnei</i>	Planaeschna milnei									
				Arthropod	Malacostraca	Decapoda	Atyidae	<i>Atyidae</i>	Freshwater shrimp	414	0.078	Imago	—	—	480	1,100	—	
				Arthropod	Malacostraca	Decapoda	Grapsidae	<i>Eriocheir japonica</i>	Japanese mitten crab	4	0.095	Imago	—	—	420	970	—	
				Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	<i>Carassius auratus langsdorffii</i>	Carassius auratus langsdorffii	3	0.083	5-year-old fish	Some (details unknown)	—	270	640	—	
				Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	<i>Tribolodon hakonensis</i>	Japanese dace	23	0.043	1-year-old fish	Some (details unknown)	—	200	490	—	
Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	<i>Zacco platypus</i>	Zacco platypus	6	0.038	2-year-old fish	—	—	300	680	—					
Vertebrata	Osteichthyes	Perciformes	Gobiidae	<i>Rhinogobius fluviatilis</i>	R. fluviatilis	23	0.073	Mature fish	Some (details unknown)	—	870	2,000	—					
Vertebrata	Osteichthyes	Perciformes	Gobiidae	<i>Rhinogobius sp.</i>	R. sp. CB	11	0.021	Mature fish	Some (details unknown)	—	570	1,200	—					
F-5 Lower Reichs	—	—	2013/11/21	Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	<i>Cyprinus carpio</i>	Common carp	1	5.8	8-year-old fish	Some (details unknown)	150	350	1.1		
			2013/11/12	Vertebrata	Osteichthyes	Anguilliformes	Anguillidae	<i>Anguilla japonica</i>	Japanese eel	4	0.97	Mature fish	Crustacean fragments	190	440	—		

Note 1) When multiple types of aquatic organisms were collected, a sample was prepared by mixing them.

Note 2) For species with stomach contents as indicated in the note column, all stomach contents were removed for conducting the analysis.

Note 3) Underlined names in the English name column indicate species largest in number in the respective samples.

Note 4) A statement in red in the "Growth stage" column shows the age assessed based on squama or otolith.

Note 5) N.D. means to be below the detection limit.