○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	○	○	○	○	○	○

<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	37.5975°	140.9252°	2019/6/6	09:10	09:20	20.8	21.6	Fine sand	2.5Y4/2	None	0.45	>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	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)
F-1	37.5975°	140.9252°	2019/6/6	09:10	7.7	0.8	3.5	9.3	7.1	0.04	1.1	1	1.2	0.019	0.24	0.0047

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

<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 $E_{N.H.E}$	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)
F-1	37.5975°	140.9252°	2019/6/6	09:20	7.1	242	27.3	2.0	4.2	2.639	5.0	29.4	44.9	10.3	4.9	5.5	0.60	4.8	220	2800	0.76

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

<Location F along the Ota 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)
F-1	The main stream of the Ota River	37.6020°	140.9358°	2019/6/6	Algae/plant	-	-	-	-	Riverbed Deposits (Include algae)	-	0.0077	-	-	-	318	28	290	-
					Algae/plant	-	-	-	*Bryophyta*	Bryophyte	-	0.28	-	-	-	258	18	240	-
					Algae/plant	Zygnematophyceae	Zygnematales	Zygnemataceae	*Spirogyra sp.*	Spirogyra	-	0.33	-	-	-	13.0	1.0	12	-
					Arthropoda	Insecta	Ephemeroptera	Isonychiidae	*Isonychia valida*	Isonychia valida	245	0.019	Larva	-	-	172	12	160	-
					Arthropoda	Insecta	Trichoptera	Stenopsychidae	*Stenopsyche marmorata*	Stenopsyche marmorata	74	0.017	Larva	-	-	243	23	220	-
					Arthropoda	Insecta	Odonata	Corduliidae	*Macromia amphigena amphigena*	Macromia amphigena	31	0.0096	Larva(Dragonfly larva)	-	-	118.9	8.9	110	-
					Arthropoda	Insecta	Odonata	Cordulegastridae	*Anotogaster sieboldii*	Anotogester sieboldii									
					Arthropoda	Insecta	Odonata	Gomphidae	*Melligomphus viridicostus*	Melligomphus viridicostus									
					Arthropoda	Insecta	Odonata	Gomphidae	*Davidius sp.*	Davidius									
					Arthropoda	Insecta	Odonata	Gomphidae	*Asiagomphus melaenops*	Asiagomphus melaenops									
					Arthropoda	Insecta	Odonata	Aeshnidae	*Boyeria maclachlani*	Boyeria maclachlani									
					Arthropoda	Insecta	Megaloptera	Corydalidae	*Protohermes grandis*	Protohermes grandis	64	0.026	Larva	-	-	103.3	9.3	94	-
					Arthropoda	Insecta	Megaloptera	Corydalidae	*Parachauliodes japonicus*	Parachauliodes japonicus									
					Arthropoda	Malacostraca	Decapoda	Palaemonidae	*Palaemon paucidens*	Common prawn	44	0.083	Imago	-	-	244	14	230	-
					Arthropoda	Malacostraca	Decapoda	Atyidae	*Paratya improvisa*	Freshwater shrimp	162	0.034	Juvenile	-	-	333	23	310	-
					Arthropoda	Malacostraca	Decapoda	Varunidae	*Eriocheir japonica*	Japanese mitten crab	11	0.14	Juvenile	-	-	311	21	290	-
					Mollusca	Gastropoda	Discopoda	Pleuroceridae	*Semisulcospira libertina*	Semisulcospira libertina	30	0.030	Imago	-	Molluscous part	207	17	190	-
					Vertebrata	Osteichthyes	Anguilliformes	Anguillidae	*Anguilla japonica*	Japanese eel	4	0.78	Immature fish,Mature fish	Red swamp crawfish,Ferocious water bug,Freshwater shrimp,Gomphidae,Ecdyonurus,Ephemerellidae	Viscera removed	215	15	200	-
					Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	*Tribolodon hakonensis*	Japanese dace	8	0.063	Immature fish	-	-	396	26	370	-
					Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	*Opsariichthys platypus*	Pale chub	9	0.011	Immature fish	-	-	233	13	220	-
					Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	*Candidia temminckii*	Dark chub	8	0.026	Immature fish,Mature fish	-	-	172	12	160	-
					Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	*Carassius auratus*	Carassius auratus langsdorfii	1	0.031	Mature fish	Obscure digesta	Viscera removed	310	20	290	-
					Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	*Cyprinus carpio*	Common carp	1	3.5	Mature fish	Obscure digesta	Viscera removed	473	33	440	4.4
					Vertebrata	Osteichthyes	Cypriniformes	Cobitidae	*Cobitis biwae*	Cobitis biwae	3	0.0046	Mature fish	-	-	191	21	170	-
					Vertebrata	Osteichthyes	Cypriniformes	Cobitidae	*Lefua echigonia*	Lefua echigonia	5	0.0055	Immature fish	-	-	92.3	8.3	84	-
					Vertebrata	Osteichthyes	Perciformes	Gobiidae	*Rhinogobius fluviatilis*	Rhinogobius fluviatilis	13	0.065	Mature fish	-	-	387	27	360	-
					Vertebrata	Osteichthyes	Perciformes	Gobiidae	*Rhinogobius nagoyae*	Rhinogobius nagoyae									
					Vertebrata	Cephalaspidomorphi	Petromyzontiformes	Petromyzontidae	*Lethenteron reissneri*	Far eastern brook lamprey	2	0.0050	Ammocoetes(larva)	-	-	19	N.D.(6.5)	19	-
					Coarse Particulate Organic Matter	-	-	-	-	Bottom fallen leaves	-	0.25	-	-	-	91.6	7.6	84	-
F-5	The main stream of the Ota River	37.6022°	140.9868°	2019/6/3	Vertebrata	Osteichthyes	Anguilliformes	Anguillidae	*Anguilla japonica*	Japanese eel	2	0.012	Immature fish	-	-	46.4	4.4	42	-
					Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	*Carassius auratus*	Carassius auratus langsdorfii	1	0.016	Immature fish	-	-	39.5	2.5	37	-
					Vertebrata	Amphibia	Anura	-	-	Frog	775	0.23	Larva(Tadpole)	-	-	152	12	140	-
					Vertebrata	Amphibia	Anura	Lithobates	*Lithobates catesbeianus*	American bullfrog	14	0.49	Larva(Tadpole)	-	-	194	14	180	-
					Vertebrata	Amphibia	Anura	Lithobates	*Lithobates catesbeianus*	American bullfrog	7	2.7	Imago	-	-	32.7	1.7	31	1.5

*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.