○Results of Radioactive Material Monitoring of Aquatic Organisms (Location E along the Niida River)

<Location E along the Niida River: Samples collected>

Items / Locations	General items		Radioactive materials			
	Water	Sediment	Water (Cs)	Water (Sr)	Sediment (Cs)	Sediment (Sr)
E-2 a	○	○	○	○	○	○

<Location E along the Niida 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)
E-2 a	37.6640°	140.9447°	2023/6/9	13:40	14:15	18.8	19.2	Sand	10YR4/2	None	0.42	31

<Location E along the Niida 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)
E-2 a	37.6640°	140.9447°	2023/6/9	13:40	7.3	1.4	5.4	9.4	9.2	0.05	2.3	9	8.1	N.D.(0.0016)	0.041	0.0014

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

<Location E along the Niida River: General survey items/Analysis of radioactive materials Sediment>

Items / Locations	Latitude and longitude of the location		Survey date and time		pH	Redox potential $E_{N.H.E}$ (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)			
E-2 a	37.6640°	140.9447°	2023/6/9	14:15	7.1	517	19.1	1.6	2.1	2.670	10.0	16.5	59.3	7.5	3.5	3.2	0.59	4.8	5.8	330	0.19

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

<Location E along the Niida 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)
E-2 b	The main stream of the Niida River	37.6635°	140.9452°	2023/6/13	Algae/plant	-	-	-	-	Sediment deposited on riverbed (Including algae)	-	0.014	-	-	-	110	N.D.(11)	110	-
					Algae/plant	Zygnematophyceae	Zygnematales	Zygnemataceae	*Spirogyra* sp.	Spirogyra	-	0.22	-	-	-	5.4	N.D.(0.28)	5.4	-
					Arthropoda	Insecta	Trichoptera	Stenopsychidae	*Stenopsyche marmorata*	Caddisfly	323	0.067	Larva	-	-	60	N.D.(3.5)	60	-
					Arthropoda	Insecta	Odonata	Corduliidae	*Macromia amphigena amphigena*	Dragonfly	89	0.022	Larva (Dragonfly larva)	-	-	22	N.D.(2.8)	22	-
					Arthropoda	Insecta	Odonata	Cordulegastridae	*Anotogaster sieboldii*	Jumbo dragonfly									
					Arthropoda	Insecta	Odonata	Gomphidae	*Melligomphus viridicostus*	Dragonfly									
					Arthropoda	Insecta	Odonata	Gomphidae	*Sieboldius albardae*	Dragonfly									
					Arthropoda	Insecta	Odonata	Gomphidae	*Davidius* sp.	Dragonfly									
					Arthropoda	Insecta	Odonata	Gomphidae	*Anisogomphus maacki*	Dragonfly									
					Arthropoda	Insecta	Odonata	Gomphidae	*Asiagomphus melaenops*	Dragonfly									
					Arthropoda	Insecta	Odonata	Libellulidae	*Sympetrum* sp.	Dragonfly									
					Arthropoda	Insecta	Megaloptera	Corydalidae	*Protohermes grandis*	Dobsonfly	74	0.046	Larva	-	-	7.4	N.D.(0.98)	7.4	-
					Arthropoda	Malacostraca	Decapoda	Cambaridae	*Procambarus clarkii*	Red swamp crawfish	9	0.072	Juvenile,Imago	-	-	17	N.D.(3.2)	17	-
					Arthropoda	Malacostraca	Decapoda	Palaemonidae	*Palaemon paucidens*	Lake prawn	185	0.17	Imago	-	-	11	N.D.(1.1)	11	-
					Arthropoda	Malacostraca	Decapoda	Atyidae	*Paratya improvisa*	Freshwater shrimp	254	0.061	Juvenile,Imago	-	-	16	N.D.(4.2)	16	-
					Arthropoda	Malacostraca	Decapoda	Varunidae	*Eriocheir japonica*	Japanese mitten crab	13	0.090	Juvenile	-	-	18	N.D.(2.5)	18	-
					Vertebrata	Osteichthyes	Scorpaeniformes	Cottidae	*Cottus pollux*	Japanese fluvial sculpin	4	0.041	Immature fish	-	-	5.6	N.D.(0.93)	5.6	-
					Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	*Pseudaspius hakonensis*	Japanese dace	1	0.019	Immature fish	-	-	8.7	N.D.(1.9)	8.7	-
					Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	*Opsariichthys platypus*	Pale break	44	0.15	Immature fish, Mature fish	-	-	6.6	N.D.(0.70)	6.6	-
					Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	*Sarcocheilichthys variegatus variegatus*	Sarcocheilichthys	2	0.017	Immature fish, Mature fish	-	-	4.8	N.D.(2.0)	4.8	-
					Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	*Candidia temminckii*	Dark chub	3	0.011	Immature fish	-	-	3.9	N.D.(2.9)	3.9	-
					Vertebrata	Osteichthyes	Cypriniformes	Cobitidae	*Cobitis* sp.	Japanese striped loach	6	0.015	Immature fish, Mature fish	-	-	N.D.	N.D.(2.6)	N.D.(2.2)	-
					Vertebrata	Osteichthyes	Cypriniformes	Cobitidae	*Misgurnus anguillicaudatus*	Oriental weatherfish	3	0.015	Immature fish	-	-	3.1	N.D.(2.9)	3.1	-
					Vertebrata	Osteichthyes	Salmoniformes	Osmeridae	*Plecoglossus altivelis altivelis*	Ayu sweetfish	2	0.023	Immature fish	-	-	26	N.D.(4.6)	26	-
					Vertebrata	Osteichthyes	Perciformes	Gobiidae	*Gymnogobius urotaenia*	Floating goby	2	0.023	Immature fish	-	-	21	N.D.(4.1)	21	-
					Vertebrata	Osteichthyes	Perciformes	Gobiidae	*Rhinogobius fluviatilis*	Rhinogobius	28	0.087	Immature fish, Mature fish	-	-	8.5	N.D.(0.90)	8.5	-
					Vertebrata	Osteichthyes	Perciformes	Gobiidae	*Rhinogobius nagoyae*	Rhinogobius									
					Vertebrata	Osteichthyes	Siluriformes	Siluridae	*Silurus asotus*	Amur catfish	1	0.15	Immature fish	*Rhinogobius nagoyae* , *Palaemon paucidens*	Viscera removed	18	N.D.(2.1)	18	-
					Vertebrata	Amphibia	Anura	-	Amphibia	Frog	12	0.0044	Larva(Tadpole)	-	-	31	N.D.(6.9)	31	-
					Vertebrata	Amphibia	Anura	Glandirana	*Glandirana rugosa*	Wrinkled frog	7	0.044	Imago	-	-	12	N.D.(1.3)	12	-
					Vertebrata	Amphibia	Anura	Pelophylax	*Pelophylax porosus porosus*	Tokyo daruma pond frog									
					Coarse Particulate Organic Matter	-	-	-	-	Water-bottom leaf litter	-	0.27	-	-	-	96.3	2.3	94	-
E-3	The main stream of the Niida River	37.6444°	141.0018°	2023/6/10	Arthropoda	Malacostraca	Decapoda	Palaemonidae	*Palaemon paucidens*	Lake prawn	73	0.046	Juvenile,Imago	-	-	7.3	N.D.(0.93)	7.3	-
					Vertebrata	Osteichthyes	Anguilliformes	Anguillidae	*Anguilla japonica*	Japanese eel	6	0.036	Immature fish	Obscure digesta	Viscera removed	9.0	N.D.(1.3)	9.0	-
					Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	*Hemibarbus barbus*	Barbel steed	1	1.5	Mature fish	Obscure digesta	Viscera removed	11	N.D.(1.2)	11	1.2
					Vertebrata	Osteichthyes	Salmoniformes	Osmeridae	*Plecoglossus altivelis altivelis*	Ayu sweetfish	23	0.16	Immature fish	-	-	25	N.D.(1.7)	25	-
					Vertebrata	Osteichthyes	Siluriformes	Siluridae	*Silurus asotus*	Amur catfish	1	1.2	Mature fish	*Plecoglossus altivelis altivelis* , *Palaemon paucidens*	Viscera removed	28	N.D.(1.5)	28	0.52
					Vertebrata	Osteichthyes	Siluriformes	Siluridae	*Silurus asotus*	Amur catfish	1	1.7	Mature fish	*Plecoglossus altivelis altivelis* , *Palaemon paucidens*	Viscera removed	73	N.D.(1.4)	73	0.59
					Vertebrata	Osteichthyes	Siluriformes	Siluridae	*Silurus asotus*	Amur catfish	1	1.9	Mature fish	*Palaemon paucidens*	Viscera removed	39	N.D.(1.4)	39	0.63

*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.