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

<Location E along the Niida River: Samples collected>

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

<Location E along the Niida River: Site measurement item>

Items	Latitude and longitude of the location		Survey date and time			Water	Sediment				Other	
Locations	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°	2018/9/7	12:28	12:59	22.9	23.4	Sand	2.5Y3/2	None	0.45	>50

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

Items	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
Locations	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°	2018/9/7	12:28	7.4	0.5	3.6	9.7	7.8	0.05	1.4	3	2.8	0.0047	0.050	0.0020

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	Latitude and longitude of the location		Survey date and time		pH	Redox potential	Water content	IL	TOC	Soil particle density	Grain size distribution								Cs-134	Cs-137	Sr-90
Locations	Latitude	Longitude	Date	Time (sediment)		E_{NHE} (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)
E-2 a	37.6640°	140.9447°	2018/9/7	12:59	7.1	337	13.6	1.5	2.6	2.708	33.6	28.8	23.5	11.5	2.6		1.3	4.8	46	460	0.23

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°	2018/8/26	Algae/plant	-	-	-	-	Riverbed Deposits (Include algae)	-	0.0085	-	-	-	696	66	630	-
					Arthropoda	Insecta	Trichoptera	Stenopsychidae	*Stenopsyche marmorata*	Stenopsyche marmorata	88	0.020	Larva	-	-	182	12	170	-
					Arthropoda	Insecta	Odonata	Corduliidae	*Macromia amphigena amphigena*	Macromia amphigena	94	0.029	Larva(Dragonfly larva)	-	-	52.5	5.5	47	-
					Arthropoda	Insecta	Odonata	Gomphidae	*Melligomphus viridicostus*	Melligomphus viridicostus									
					Arthropoda	Insecta	Odonata	Gomphidae	*Sieboldius albardae*	Sieboldius albardae									
					Arthropoda	Insecta	Odonata	Gomphidae	*Davidius sp.*	Davidius									
					Arthropoda	Insecta	Odonata	Gomphidae	*Asiagomphus melaenops*	Asiagomphus melaenops									
					Arthropoda	Insecta	Megaloptera	Corydalidae	*Protohermes grandis*	Protohermes grandis	8	0.0062	Larva	-	-	143	13	130	-
					Arthropoda	Insecta	Megaloptera	Corydalidae	*Parachauliodes japonicus*	Parachauliodes japonicus									
					Arthropoda	Malacostraca	Decapoda	Cambaridae	*Procambarus clarkii*	Red swamp crawfish	3	0.046	Imago	-	-	48.3	4.3	44	-
					Arthropoda	Malacostraca	Decapoda	Palaemonidae	*Palaemon paucidens*	Common prawn	12	0.017	Imago	-	-	27	N.D.(11)	27	-
					Arthropoda	Malacostraca	Decapoda	Atyidae	*Paratya improvisa*	Freshwater shrimp	430	0.044	Juvenile,Imago	-	-	51.3	5.3	46	-
					Arthropoda	Malacostraca	Decapoda	Varunidae	*Eriocheir japonica*	Japanese mitten crab	10	0.11	Juvenile	-	-	52.1	4.1	48	-
					Mollusca	Gastropoda	Discopoda	Pleuroceridae	*Semisulcospira libertina*	Semisulcospira libertina	30	0.029	Imago	-	Molluscous part	35.3	3.3	32	-
					Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	*Tribolodon hakonensis*	Japanese dace	114	1.9	Immature fish,Mature fish	-	-	29.8	2.8	27	0.50
					Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	*Opsariichthys platypus*	Pale chub	33	0.19	Immature fish	-	-	29.7	2.7	27	-
					Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	*Pseudogobio esocinus esocinus*	Pseudogobio esocinus esocinus	4	0.10	Immature fish,Mature fish	-	-	30.6	3.6	27	-
					Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	*Candidia temminckii*	Dark chub	15	0.094	Immature fish	-	-	19.6	2.6	17	-
					Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	*Carassius auratus*	Carassius auratus langsdorfii	1	0.018	Immature fish	-	-	95	13	82	-
					Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	*Cyprinus carpio*	Common carp	2	0.027	Immature fish	-	-	30.2	2.2	28	-
					Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	*Acheilognathus melanogaster*	Acheilognathus melanogaster	5	0.012	Immature fish,Mature fish	-	-	75.7	8.7	67	-
					Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	*Gnathopogon elongatus elongatus*	Gnathopogon elongatus elongatus	7	0.038	Immature fish,Mature fish	-	-	45.8	5.8	40	-
					Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	*Hemibarbus barbus*	Hemibarbus barbus	179	0.54	Immature fish	-	-	22.9	1.9	21	-
					Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	*Pseudorasbora parva*	Stone moroko	6	0.024	Mature fish	-	-	21.3	2.3	19	-
					Vertebrata	Osteichthyes	Cypriniformes	Cobitidae	*Misgurnus anguillicaudatus*	Oriental weatherfish	9	0.044	Immature fish,Mature fish	-	-	15.5	1.5	14	-
					Vertebrata	Osteichthyes	Salmoniformes	Osmeridae	*Plecoglossus altivelis altivelis*	Sweetfish	22	0.35	Immature fish,Mature fish	-	-	71.2	5.2	66	-
					Vertebrata	Osteichthyes	Perciformes	Gobiidae	*Rhinogobius nagoyae*	Rhinogobius nagoyae	6	0.021	Mature fish	-	-	44.0	4.0	40	-
					Vertebrata	Osteichthyes	Siluriformes	Bagridae	*Tachysurus tokiensis*	Cut-tailed bullhead	12	0.012	Immature fish	-	-	16	N.D.(3.5)	16	-
					Vertebrata	Amphibia	Anura	-	-	Frog	70	0.13	Larva(Tadpole)	-	-	695	65	630	-
					Coarse Particulate Organic Matter	-	-	-	-	Bottom fallen leaves	-	0.28	-	-	-	186	16	170	-
E-4	The main stream of the Niida River	37.6485°	140.9630°	2018/9/1	Vertebrata	Osteichthyes	Salmoniformes	Osmeridae	*Plecoglossus altivelis altivelis*	Sweetfish	11	0.30	Immature fish,Mature fish	-	-	51.5	4.5	47	-

*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.