

OResults 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			
	Water	Sediment	Water (Cs)	Water (Sr)	Sediment (Cs)	Sediment (Sr)
Locations						
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	
	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°	2017/12/6	08:52	09:18	6.1	6.2	Sediment with sand	2.5Y3/3	None	0.37	>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
	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°	2017/12/6	08:52	7.3	<0.5	2.1	12.9	6.7	0.04	0.9	1	1.1	0.0038	0.028	0.0016

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 E _{NHE} (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)
Locations	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°	2017/12/6	09:18	7.2	147	57.9	9.8	26.4	2.537	3.5	4.7	18.3	30.7	24.5	18.3	0.12	19	530	4400	1.3

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 (Bq/kg-wet)	
		Latitude	Longitude										Growth stage	Stomach contents	Measurement site	Total	Cs-134	Cs-137		
E-2b	The main stream of the Niida River	37.6635°	140.9452°	2017/12/3	Algae/plant	-	-	-	-	Riverbed Deposits (Include algae)	-	0.021	-	-	-	374	44	330	-	
					Arthropoda	Insecta	Ephemeroptera	Isonychiidae	<i>Isonychia japonica</i>	Isonychia japonica	261	0.0092	Larva	-	-	-	43.7	5.7	38	-
					Arthropoda	Insecta	Plecoptera	Perlidae	<i>Kamimuria uenoi</i>	Kamimuria uenoi Kohno	280	0.018	Larva	-	-	3.9	N.D.(1.9)	3.9	-	
					Arthropoda	Insecta	Plecoptera	Perlidae	<i>Oyamia lugubris</i>	Oyamia lugubris										
					Arthropoda	Insecta	Plecoptera	Perlidae	<i>Kamimuria tibialis</i>	<i>Kamimura tibialis</i>										
					Arthropoda	Insecta	Plecoptera	Perlidae	<i>Neoperla geniculata</i>	Neoperla geniculata										
					Arthropoda	Insecta	Trichoptera	Stenopsychidae	<i>Stenopsyche marmorata</i>	Stenopsyche marmorata	103	0.021	Larva	-	-	131	11	120	-	
					Arthropoda	Malacostraca	Decapoda	Cambaridae	<i>Procambarus clarkii</i>	Red swamp crawfish	6	0.030	Juvenile, Imago	-	-	35.4	4.4	31	-	
					Mollusca	Gastropoda	Discopoda	Pleuroceridae	<i>Semisulcospira libertina</i>	Semisulcospira libertina	30	0.025	Imago	-	Molluscous part	22.9	2.9	20	-	
					Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	<i>Sarcocheilichthys variegatus variegatus</i>	<i>Sarcocheilichthys variegatus variegatus</i>	3	0.037	Immature fish, Mature fish	-	-	22.2	3.2	19	-	

*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.