

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

< Location E along the Nida River: Samples collected >

Items Locations	General items		Radioactive materials			
	Water	Sediment	Water (Cs)	Water (Sr)	Sediment (Cs)	Sediment (Sr)
E-1	○	○	○	○	○	○
E-2a	○	○	○	—	○	—
E-2b	○	○	○	—	○	—
E-3	○	○	○	—	○	—
E-4	○	○	○	—	○	—
E-5	○	○	○	—	○	—

< Location E along the Nida 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)
E-1	37.661500°	140.911500°	2013/12/12	7:49	7:42	5.2	4.9	Sand	2.5Y3/2	None	Pebbles	0.24	>50
E-2a	37.664283°	140.945433°		9:44	10:02	5.5	5.7	Sediment with sand	2.5Y3/1	None	Some plant fragments	0.51	>50
E-2b	37.664033°	140.945867°		9:21	—	5.2	—	—	—	—	—	0.31	>50
E-3	37.644733°	141.001533°		13:54	14:01	7.4	7.0	Sand	2.5Y4/3	None	Pebbles	0.47	>50
E-4	37.646267°	140.965817°		13:00	13:07	7.1	6.9	Sand	2.5Y4/3	None	Pebbles	0.67	>50
E-5	37.665150°	140.917533°	8:42	8:48	5.6	5.7	Sand	2.5Y3/3	None	Pebbles	0.35	>50	

< Location E along the Nida 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												
E-1	37.661500°	140.911500°	2013/12/12	7:49	7.3	0.7	2.3	12.7	6.8	0.04	0.8	<1	0.6	0.038	0.088	0.0021
E-2a	37.664283°	140.945433°		9:44	7.4	0.5	2.3	13.1	7.1	0.04	0.9	1	0.9	0.035	0.080	—
E-2b	37.664033°	140.945867°		9:21	7.4	0.5	2.2	12.9	7.0	0.05	0.8	1	0.7	0.031	0.072	—
E-3	37.644733°	141.001533°		13:54	7.3	0.9	2.3	12.4	9.4	0.05	0.9	<1	0.7	0.030	0.066	—
E-4	37.646267°	140.965817°		13:00	7.5	0.6	2.0	12.2	7.6	0.04	0.8	<1	0.6	0.027	0.069	—
E-5	37.665150°	140.917533°	8:42	7.4	<0.5	1.9	13.3	6.9	0.04	0.8	<1	0.5	0.033	0.072	—	

< Location E along the Nida 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 _{HRE} (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							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-1	37.661500°	140.911500°	2013/12/12	7:42	7.2	115	19.0	0.8	<1	2.662	39.0	55.6	4.2	0	1.0	0.2	1.8	9.5	370	880	N.D.(<0.17)
E-2a	37.664283°	140.945433°		10:02	6.8	42	86.5	10.7	26	2.565	18.1	7.2	11.3	12.9	22.1	28.4	0.070	19	5,600	13,000	—
E-2b	37.664033°	141.001533°		14:01	7.0	145	21.5	1.0	<1	2.659	5.1	23.8	62.7	6.6	1.3	0.5	0.64	9.5	180	450	—
E-4	37.646267°	140.965817°		13:07	7.2	157	22.8	0.9	<1	2.684	5.1	29.5	61.1	3.3	0.8	0.2	0.70	9.5	260	600	—
E-5	37.665150°	140.917533°		8:48	7.1	153	19.6	1.8	2	2.678	43.8	39.4	13.9	1.9	0.6	0.4	1.8	19	680	1,600	—

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

< Location E along the Niida River: Analysis 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						
E-1 E-2a E-2b	37.661500° 37.664283° 37.664033°	140.911500° 140.945433° 140.945867°	2013/12/8	Algae/plant	—	—	—	—	Attached algae	—	0.068	—	—	510	1,300	—			
				Arthropod	Insecta	Trichoptera	Stenopsychidae	<i>Stenopsyche marmorata</i>	<i>Stenopsyche marmorata</i>	382	0.071	Larva	—	—	240	560	—		
				Arthropod	Insecta	Trichoptera	Stenopsychidae	<i>Stenopsyche sauteri</i>	<i>Parastenopsyche sauteri</i>										
				Arthropoda	Insecta	Plecoptera	<u>Perlidae</u>	<i>Kamimura tibialis</i>	<i>Kamimura tibialis</i>										
				Arthropod	Insecta	Plecoptera	Perlidae	<i>Neoperla sp.</i>	<i>Neoperla gemiculata</i>	571	0.038	Larva	—	—	10	22	—		
				Arthropod	Insecta	Odonata	Corduliidae	<i>Macromia amphigena amphigena</i>	<i>Macromia amphigena</i>										
				Arthropod	Insecta	Odonata	Cordulegastridae	<i>Anotogaster sieboldii</i>	<i>Anotogaster sieboldii</i>										
				Arthropod	Insecta	Odonata	Gomphidae	<i>Asiagomphus melanoops</i>	<i>Asiagomphus melanoops</i>										
				Arthropod	Insecta	Odonata	Gomphidae	<i>Davidius nanus</i>	<i>Davidius nanus</i>										
				Arthropod	Insecta	Odonata	Gomphidae	<i>Davidius sp.</i>	<i>Davidius</i>	81	0.025	Larva	—	—	63	140	—		
				Arthropod	Insecta	Odonata	Gomphidae	<i>Onychogomphus viridicostus</i>	<i>Onychogomphus viridicostus</i>										
				Arthropod	Insecta	Odonata	Gomphidae	<i>Sieboldius albardae</i>	<i>Sieboldius albardae</i>										
				Arthropod	Insecta	Odonata	Gomphidae	<i>Stylogomphus suzukii</i>	<i>Stylogomphus suzukii</i>										
				Arthropod	Insecta	Odonata	Aeshnidae	<i>Anax parthenope julius</i>	<i>Anax parthenope</i>										
				Arthropod	Malacostraca	Decapoda	Atyidae	<i>Atyidae</i>	Freshwater shrimp	277	0.045	Imago	—	—	110	250	—		
				Arthropod	Malacostraca	Decapoda	Grapsidae	<i>Eriocheir japonica</i>	Japanese mitten crab	16	0.13	Imago	—	—	96	210	—		
				Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	<i>Carassius auratus</i>	<i>Carassius auratus langsdorffii</i>	6	0.31	4-year-old fish	Some (details unknown)		74	180	—		
				Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	<i>Cyprinus carpio</i>	Common carp	5	0.36	1-year-old fish	Some (details unknown)		67	150	—		
				Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	<i>Tribolodon hakonensis</i>	Japanese dace	55	0.16	1-year-old fish	Some (details unknown)		57	140	—		
								Coarse particulate organic matters	—	—	—	—	CPOMs (fallen leaves)	—	0.55	—	—	120	280

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.