

**OResults of Radioactive Material Monitoring of Aquatic Organisms (Location E along the Nīda River)**

< Location E along the Nīda 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 Nīda 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-1	37.660933°	140.911450°	2014/7/5	7:56	8:01	16.0	16.3	Sand	2.5Y3/2	Pebbles	0.45	>50.0
E-2a	37.664000°	140.944717°		11:19	11:30	16.3	16.6	Sediment with sand	2.5Y3/1	Plant	1.18	43.0
E-2b	37.663450°	140.945150°		10:44	—	16.1	—	—	—	—	0.75	37.0
E-3	37.644400°	141.001783°		14:30	14:58	17.2	16.9	Sand	2.5Y4/3	Pebbles	1.20	>50.0
E-4	37.648467°	140.962950°		13:24	13:30	16.6	16.7	Fine sand	2.5Y4/4	Pebbles	0.82	40.0
E-5	37.665233°	140.916883°		9:42	9:48	15.8	16.4	Sand	2.5Y3/3	Pebbles	0.45	46.0

< Location E along the Nīda 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	37.660933°	140.911450°	2014/7/5	7:56	7.4	<0.5	3.6	10.0	6.0	0.03	1.7	9	5.9	0.13	0.35	0.0025
E-2a	37.664000°	140.944717°		11:19	7.1	<0.5	3.6	8.3	6.5	0.04	1.6	6	4.6	0.078	0.22	—
E-2b	37.663450°	140.945150°		10:44	7.4	0.6	4.2	10.0	6.6	0.04	2.0	14	9.7	0.29	0.74	—
E-3	37.644400°	141.001783°		14:30	7.3	0.7	3.8	9.8	7.3	0.04	1.8	8	6.0	0.091	0.25	—
E-4	37.648467°	140.962950°		13:24	7.4	0.5	3.8	9.5	6.7	0.04	1.8	8	6.1	0.14	0.37	—
E-5	37.665233°	140.916883°		9:42	7.4	0.6	3.4	10.0	6.3	0.04	1.6	8	6.1	0.15	0.40	—

< Location E along the Nīda 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 <sub>NHE</sub> (mV)	Water content (%)	IL (%)	TOC (mg/g-dry)	Soil particle density (g/cm <sup>3</sup> )	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	37.660933°	140.911450°	2014/7/5	8:01	6.8	236	17.8	0.8	1.3	2.678	43.2	40.0	15.9	0.2	0.2	0.5	1.7	19	290	840	N.D.(0.18)
E-2a	37.664000°	140.944717°		11:30	7.1	163	59.3	8.7	21.5	2.592	12.6	7.6	20.3	22.4	13.2	23.9	0.18	19	3,500	10,000	—
E-3	37.644400°	141.001783°		14:58	7.2	159	13.4	1.1	1.5	2.687	40.1	14.0	41.7	2.6	0.3	1.3	1.0	19	120	390	—
E-4	37.648467°	140.962950°		13:30	6.9	208	23.9	1.2	1.2	2.678	18.4	4.0	65.1	10.7	0.2	1.6	0.44	19	150	420	—
E-5	37.665233°	140.916883°		9:48	6.6	222	14.6	1.5	2.1	2.701	45.9	19.0	29.4	3.8	0.8	1.1	1.7	26.5	360	1,000	—

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 >

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	Measurement site							
E-2a E-2b	—	37.664000° 37.663450°	140.944717° 140.945150°	2014/7/3	Algae/plant	—	—	—	River bottom materials (incl. algae)	Considerable number	0.026	—	—	—	65	180	—				
					Arthropoda	Insecta	Ephemeroptera	Potamanthidae	<u>Potamanthus formosus</u>	<u>Potamanthus formosus</u>	420	0.0093	Larva	—	—	—	250	650	—		
					Arthropoda	Insecta	Ephemeroptera	Isonychidae	<u>Isonychia japonica</u>	<u>Isonychia japonica</u>											
					Arthropoda	Insecta	Ephemeroptera	Ephemeridae	<u>Ephemera strigata</u>	<u>Ephemera strigata</u>											
					Arthropod	Insecta	Trichoptera	Stenopsychidae	<u>Stenopsyche marmorata</u>	<u>Stenopsyche marmorata</u>	28	0.024	Larva	—	—	—	120	370	—		
					Arthropod	Insecta	Odonata	Corduliidae	<u>Macromia amphigena amphigena</u>	<u>Macromia amphigena</u>	278	0.043	Larva (dragonfly)	—	—	—	38	110	—		
					Arthropod	Insecta	Odonata	Cordulegastriidae	<u>Anotogaster sieboldii</u>	<u>Anotogaster sieboldii</u>											
					Arthropod	Insecta	Odonata	Gomphidae	<u>Davidius nanus</u>	<u>Davidius nanus</u>											
					Arthropod	Insecta	Odonata	Gomphidae	<u>Onychogomphus viridicostus</u>	<u>Onychogomphus viridicostus</u>											
					Arthropod	Insecta	Odonata	Gomphidae	<u>Steboldius albardae</u>	<u>Albardae</u>											
					Arthropod	Insecta	Odonata	Aeshnidae	<u>Boyeria maclachlani</u>	<u>Boyeria maclachlani</u>											
					Arthropod	Insecta	Megaloptera	Corydalidae	<u>Protohermes grandis</u>	<u>Protohermes grandis</u>	38	0.014	Larva	—	—	—	23	49	—		
					Arthropod	Malacostraca	Decapoda	Procambarus	<u>Procambarus clarkii</u>	<u>Procambarus clarkii</u>	5	0.040	Imago	—	—	—	71	200	—		
					Arthropod	Malacostraca	Decapoda	Grapsidae	<u>Eriocheir japonica</u>	<u>Eriocheir japonica</u>	13	0.31	Imago	—	—	—	62	160	—		
					Arthropod	Malacostraca	Decapoda	Atyidae	<u>Atyidae</u>	<u>Atyidae</u>	207	0.034	Larva	—	—	—	48	140	—		
					Mollusca	Gastropoda	Sarbecoconcha	Pleuroceridae	<u>Semisulcospira libertina</u>	<u>Semisulcospira libertina</u>	34	0.095	Imago	—	—	Husk	3.6	10	—		
					Mollusca	Gastropoda	Sarbecoconcha	Pleuroceridae	<u>Semisulcospira libertina</u>	<u>Semisulcospira libertina</u>	34	0.045	Imago	—	—	Molluscan body	36	100	—		
					Vertebrata	Osteichthyes	Osmeriformes	Osmeridae	<u>Plecoglossus altivelis</u>	<u>Plecoglossus altivelis</u>	10	0.12	Immature fish	Some (details unknown)	—	—	36	95	—		
					Vertebrata	Osteichthyes	Osmeriformes	Osmeridae	<u>Plecoglossus altivelis</u>	<u>Plecoglossus altivelis</u>	10	0.14	Immature fish	—	—	—	96	260	—		
					Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	<u>Carassius auratus langsdorfii</u>	<u>Carassius auratus langsdorfii</u>	17	0.24	Immature fish	Some (details unknown)	—	—	40	120	—		
					Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	<u>Tribolodon hakonensis</u>	<u>Tribolodon hakonensis</u>	11	0.097	Mature fish (1.2-year-old)	Some (details unknown)	—	—	53	150	—		
					Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	<u>Zacco platypus</u>	<u>Zacco platypus</u>	15	0.13	Mature fish	Algae	—	—	40	110	—		
					Vertebrata	Osteichthyes	Perciformes	Gobiidae	<u>Rhinogobius sp.</u>	<u>Rhinogobius sp.</u>	28	0.11	Mature fish	—	—	—	65	180	—		
					Vertebrata	Amphibia	Anura	Ranidae	<u>Rana catesbeiana</u>	<u>Rana catesbeiana</u>	14	0.13	Larva(tadpole)	—	—	—	390	1,100	—		
									Coarse particulate organic matters	—	—	—	—	Fallen leaves	Considerable number	1.6	—	—	280	800	—

\*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 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: A statement in red in the "Growth stage" column shows the age assessed based on squama or otolith.

\*6: Plankton (suspended algae) is the residue remaining after the filtration of lake water or seawater with a plankton net (40µm-mesh).

\*7: 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.

\*8: N.D. means to be below the detection limit and figures in parentheses show the detection limit.

\*9: Activity concentrations include counting errors, but the details are omitted here.