

○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-1	○	○	○	○	○	○
E-2a	○	○	○	○	○	○
E-2b	○	○	○	○	○	○
E-3	○	○	○	○	○	○
E-4	○	○	○	○	○	○
E-5	○	○	○	○	○	○

< 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	Odor	Contaminants	Water depth (m)	Transparency (cm)
E-1	37.661533°	140.911500°	2013/7/12	8:13	8:10	21.4	22.5	Sand gravel	2.5Y4/2	None	Pebbles, roots	0.23	>50.0
E-2a	37.664583°	140.945450°	2013/7/12	11:45	11:18	23.4	23.6	Druse	2.5Y4/3	Faint hydrogen sulfide	None	0.35	>50.0
E-2b	37.664067°	140.945783°	2013/7/12	10:50	—	22.2	—	—	—	—	—	0.15	>50.0
E-3	37.644483°	141.001017°	2013/7/12	14:23	14:27	23.5	23.8	Sand	2.5Y4/3	None	Pebbles	0.52	>50.0
E-4	37.646233°	140.965800°	2013/7/12	13:18	13:23	25.4	25.2	Sand	2.5Y4/2	Sediment smell	Pebbles	0.46	>50.0
E-5	37.665033°	140.917483°	2013/7/12	9:03	9:50	21.4	21.0	Sand gravel	2.5Y4/2	None	Pebbles	0.37	>50.0

< 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 (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	37.661533°	140.911500°	2013/7/12	8:13	7.4	0.5	3.2	9.1	7.6	0.04	1.5	5	2.3	0.17	0.37	0.0027
E-2a	37.664583°	140.945450°	2013/7/12	11:45	7.2	0.5	3.4	10.3	8.2	0.05	1.6	5	2.6	0.20	0.39	—
E-2b	37.664067°	140.945783°	2013/7/12	10:50	7.4	0.6	3.1	10.2	8.1	0.05	2.1	4	2.4	0.15	0.30	—
E-3	37.644483°	141.001017°	2013/7/12	14:23	7.2	1.3	3.3	8.8	10.9	0.06	1.8	4	2.2	0.12	0.24	—
E-4	37.646233°	140.965800°	2013/7/12	13:18	7.8	0.6	3.3	9.8	8.9	0.05	1.4	3	1.8	0.089	0.18	—
E-5	37.665033°	140.917483°	2013/7/12	9:03	7.5	0.6	3.5	9.9	7.8	0.04	1.6	3	2.1	0.16	0.32	—

< 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 _h (H) (mV)	Water content (%)	IL (%)	TOC (mg/g-dry)	Soil particle density (g/cm ³)	Grain size distribution					Median grain diameter (mm)	Maximum grain diameter (mm)	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) (%)	
															(%)							(%)
E-1	37.661533°	140.911500°	2013/7/12	8:10	7.4	368	16.2	1.1	2	2.667	51.4	35.0	11.3	0.6	0.4	1.3	2.1	19	770	1,700	0.36	
E-2a	37.664583°	140.945450°	2013/7/12	11:18	7.3	402	40.0	3.6	6	2.667	13.8	8.7	34.0	25.7	7.9	0.30	0.30	19	2,400	5,100	—	
E-3	37.644483°	141.001017°	2013/7/12	14:27	7.2	365	14.5	1.1	1	2.703	66.4	24.0	8.6	0.6	0.1	0.3	3.3	19	140	320	—	
E-4	37.646233°	140.965800°	2013/7/12	13:23	7.2	408	13.3	1.6	1	2.702	44.6	14.2	31.6	7.4	0.4	1.8	1.4	19	470	960	—	
E-5	37.665033°	140.917483°	2013/7/12	9:50	7.1	362	18.6	1.7	2	2.681	30.9	35.9	27.8	3.8	0.4	1.2	1.3	19	640	1,400	—	

<< Location E along the Nida 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	37.661533° 37.664583° 37.664067°	140.911500° 140.945450° 140.945783°	2013/7/18	Algae/plant	—	—	—	—	Attached algae	—	0.035	—	—	1,300	2,700	—		
				Streptophyta	Zygnematophyceae	Zygnematales	Zygnemataceae	<i>Spirogyra sp.</i>	Spirogyra	—	0.15	—	—	—	3.5	5.8	—	
				Arthropod	Insecta	Trichoptera	Stenoprychidae	<i>Stenopryche marmorata</i>	<u>Stenopryche marmorata</u>	—	—	—	—	—	—	—	—	—
				Arthropod	Insecta	Trichoptera	Stenoprychidae	<i>Stenopryche sauteri</i>	Parastenopryche sauteri	232	0.045	Larva	—	—	—	500	1,000	—
				Arthropod	Insecta	Odonata	Cordulidae	<i>Macromia amphigena amphigena</i>	<u>Macromia amphigena</u>	—	—	—	—	—	—	—	—	—
				Arthropod	Insecta	Odonata	Cordulegastriidae	<i>Anotogaster sieboldii</i>	Anotogaster sieboldii	—	—	—	—	—	—	—	—	—
				Arthropod	Insecta	Odonata	Gomphidae	<i>Asiagomphus melanocephalus</i>	Asiagomphus melanocephalus	—	—	—	—	—	—	—	—	—
				Arthropod	Insecta	Odonata	Gomphidae	<i>Davidius sp.</i>	Davidius	—	—	—	—	—	—	—	—	—
				Arthropod	Insecta	Odonata	Gomphidae	<i>Gomphus postocularis</i>	Gomphus postocularis	69	0.023	Larva	—	—	—	90	180	—
				Arthropod	Insecta	Odonata	Gomphidae	<i>Onychogomphus viridicostus</i>	Onychogomphus viridicostus	—	—	—	—	—	—	—	—	—
				Arthropod	Insecta	Odonata	Gomphidae	<i>Sieboldius albardae</i>	<u>Sieboldius albardae</u>	—	—	—	—	—	—	—	—	—
				Arthropod	Insecta	Odonata	Gomphidae	<i>Sinogomphus flavolimbatus</i>	Sinogomphus flavolimbatus	—	—	—	—	—	—	—	—	—
				Arthropod	Insecta	Odonata	Libellulidae	<i>Sympetrum sp.</i>	Sympetrum	—	—	—	—	—	—	—	—	—
				Arthropod	Malacostraca	Decapoda	Grapsidae	<i>Eriocheir japonica</i>	Japanese mitten crab	36	1.9	Imago	—	—	—	130	270	—
				Arthropod	Malacostraca	Decapoda	Atyidae	<i>Atyidae</i>	Freshwater shrimp	48	0.012	Imago	—	—	—	240	500	—
				Vertebrata	Osteichthyes	Osmertiiformes	Osmertiidae	<i>Plecoglossus altivelis</i>	Sweetfish (natural upstream)	3	0.096	Yearling fish	Some (details unknown)	—	—	86	180	—
				Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	<i>Tribolodon hakonensis</i>	Japanese dace	7	0.088	3-year-old fish	—	—	—	86	180	—
				Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	<i>Pseudogobio esocinus</i>	Pseudogobio esocinus	6	0.027	2-year-old fish	—	—	—	90	180	—
				Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	<i>Hemibarbus barbus</i>	Hemibarbus barbus	15	0.007	Yearling fish	—	—	—	68	130	—
				Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	<i>Zacco platypus</i>	Zacco platypus	5	0.043	More than 1 year old	Some (details unknown)	—	—	93	210	—
				Vertebrata	Osteichthyes	Perciformes	Gobiidae	<i>Rhinogobius sp.</i>	R. sp. CB	10	0.026	More than 1 year old	—	—	—	150	310	—
				Vertebrata	Osteichthyes	Siluriformes	Siluridae	<i>Silurus asotus</i>	Amur catfish	3	0.012	Yearling fish	—	—	—	120	300	—
								Coarse particulate organic matters	—	—	—	—	CPOMs (fallen leaves)	—	0.48	—	—	280

Note 1) Underlined names in the English name column indicate species largest in number in the respective samples.

Note 2) A statement in red in the "Growth stage" column shows the age assessed based on squama or otolith.