

○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			
	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 >

Locations	Latitude and longitude of the location		Survey date and time		Water	Sediment			Other				
	Scheduled latitude	Scheduled longitude	Date	Time (water)	Time (sediment)	Water temperature (degrees C)	Sediment temperature (degrees C)	Property	Color	Contaminants	Water depth(m)	Transparency(cm)	
E-1	37.6609°	140.9115°	2015/8/22	7:50	7:38	20.6	20.8	Sand	10YR4/6	None	0.28	>50	
E-2a	37.6640°	140.9447°		10:21	10:28	23.3	23.8	Sediment with sand	2.5Y3/3	None	0.47	>50	
E-2b	37.6635°	140.9452°		9:53	-	-	21.8	-	-	-	-	0.17	>50
E-3	37.6444°	141.0018°		13:45	13:40	24.0	24.2	Sand	2.5Y3/3	None	0.40	>50	
E-4	37.6485°	140.9630°		12:48	12:31	23.4	23.3	Sand	2.5Y4/1	None	0.70	>50	
E-5	37.6652°	140.9169°		9:00	8:48	20.8	21.1	Sand	2.5Y4/4	None	0.45	>50	

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

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)
	Scheduled latitude	Scheduled longitude	Date	Time (water)												
E-1	37.6609°	140.9115°	2015/8/22	7:50	8.0	<0.5	2.5	9.1	7.7	0.04	1.0	2	2.3	0.025	0.097	0.0021
E-2a	37.6640°	140.9447°		10:21	8.0	<0.5	2.6	10.6	8.7	0.05	1.2	2	2.5	0.025	0.093	-
E-2b	37.6635°	140.9452°		9:53	7.6	<0.5	4.5	9.8	8.3	0.05	1.1	3	3.0	0.034	0.13	-
E-3	37.6444°	141.0018°		13:45	7.4	1.7	3.2	8.3	11.9	0.06	1.3	3	3.7	0.025	0.095	-
E-4	37.6485°	140.9630°		12:48	7.6	<0.5	2.8	8.6	9.0	0.05	1.1	4	3.0	0.022	0.082	-
E-5	37.6652°	140.9169°		9:00	7.6	<0.5	2.7	9.1	7.7	0.04	1.0	2	2.2	0.029	0.11	-

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

Locations	Latitude and longitude of the location		Survey date and time		pH	Redox potential EN.H.E (mV)	Water content (%)	IL (%)	TOC (mg/g-dry)	Soil particle density (g/cm3)	Grain size distribution						Cs-134 (Bq/kg-dry)	Cs-137 (Bq/kg-dry)	Sr-90 (Bq/kg-dry)		
	Scheduled latitude	Scheduled 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 (0.005-0.0075mm) (%)	Clay (Less than 0.005mm) (%)				Median grain diameter	Maximum grain diameter
E-1	37.6609°	140.9115°	2015/8/22	7:38	7.2	453	14.3	0.9	1.4	2.673	51.0	42.1	6.5	0.1	0.1	0.2	2.0	19	160	650	0.20
E-2a	37.6640°	140.9447°		10:28	6.9	36	50.8	8.8	22.8	2.591	13.8	15.1	19.8	13.6	18.9	18.8	0.23	19	2000	8000	-
E-3	37.6444°	141.0018°		13:40	7.1	429	19.3	0.9	1.8	2.672	13.6	37.3	46.0	1.5	0.6	1.0	0.86	4.8	95	360	-
E-4	37.6485°	140.9630°		12:31	6.5	123	20.0	1.2	2.2	2.672	9.4	20.4	63.7	4.0	1.1	1.4	0.62	9.5	130	520	-
E-5	37.6652°	140.9169°		8:48	6.8	392	17.3	1.4	2.2	2.691	28.6	31.7	33.5	0.3	3.0	2.9	1.1	19	280	1100	-

< Location E along the Niida River: Analysis items Aquatic organisms >

Location	Sampling point	Latitude and longitude of the location		Sampling Date	Division	Class	Order	Family	Species 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	Cs-134	Cs-137			
E-2b	-	37.6635°	140.9452°	2015/8/22	Phycophyta	-	-	-	-	Riverbed Deposits (include algae)	-	0.081	-	-	-	61	280	-		
					Arthropod	Insecta	Odonata	Corduliidae	<i>Macromia amphigena amphigena</i>	Macromia amphigena	-	-	-	-	-	-	-	-	-	-
					Arthropod	Insecta	Odonata	Gomphidae	<i>Meligomphus viridicostus</i>	Onychogomphus viridicostus	84	0.021	Larva (dragonfly larva)	-	-	20	80	-		
					Arthropod	Insecta	Odonata	Gomphidae	<i>Sieboldius albardae</i>	Sieboldius albardae	180	0.044	Larva	-	-	60	240	-		
					Arthropod	Insecta	Megaloptera	Corydalidae	<i>Prothemis grandis</i>	Protohermes grandis	22	0.014	Larva	-	-	16	55	-		
					Arthropod	Malaacostraca	Decapoda	Palaemonidae	<i>Palaeomon paucidens</i>	Common prawn	19	0.024	Imago	-	-	15	55	-		
					Arthropod	Malaacostraca	Decapoda	Grapsidae	<i>Eriocheir japonica</i>	Japanese mitten crab	4	0.031	Imago	-	-	16	66	-		
					Vertebrata	Osteichthyes	Osmeriformes	Osmeridae	<i>Plecoglossus altivelis altivelis</i>	Sweetfish	14	0.40	Mature fish	-	-	42	170	-		
					Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	<i>Tribolodon hakonensis</i>	Japanese dace	7	0.11	Mature fish (2.3-year-old)	Amorphous residue	Viscera removed	20	79	-		
					Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	<i>Cyprinus carpio</i>	Common carp	7	0.091	Immature fish (1-year-old)	-	-	17	64	-		
					Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	<i>Oparichthys platypus</i>	Zacco platypus	16	0.089	Mature fish (1-year-old)	-	-	17	69	-		
					Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	<i>Carassius sp.</i>	<i>Carassius auratus langsdorffii</i>	20	0.11	Mature fish (0-year-old)	-	-	29	120	-		
					Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	<i>Pseudogobio esocinus esocinus</i>	Pseudogobio esocinus	24	0.12	Mature fish (1-year-old)	-	-	11	45	-		
					Vertebrata	Amphibia	Amura	Ranidae	<i>Lithobates catesbeianus</i>	American Bullfrog	24	0.17	Larva (tadpoles)	-	-	220	850	-		
					Particulate Organic Matter	-	-	-	-	Bottom fallen leaves	-	0.12	-	-	-	32	140	-		

*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) 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.