○Results of Radioactive Material Monitoring of Aquatic Organisms (Location C along the Uda River)

＜Location C along the Uda River: Samples collected＞

Items / Locations	General items		Radioactive materials			
	Water	Sediment	Water (Cs)	Water (Sr)	Sediment (Cs)	Sediment (Sr)
C-1	○	○	○	—	○	—
C-2	○	○	○	—	○	—
C-3	○	—	○	—	—	—
C-4	○	○	○	○	○	○
C-5	○	○	○	—	○	—
C-6	○	○	○	—	○	—

＜Location C along the Uda River: Site measurement item＞

Items	Latitude and longitude of the location		Survey date and time			Water	Sediment				Other	
Locations	Latitude	Longitude	Date	Time (water)	Time (sediment)	Water temperature (degrees C)	Sediment temperature (degrees C)	Property	Color	Contaminants	Water depth (m)	Transparency (cm)
C-1	37.7956°	140.7457°	2014/10/22	9:00	9:07	13.3	13.4	Sand	10YR4/4	None	0.88	>50.0
C-2	37.7710°	140.7277°		9:53	10:00	13.1	13.3	Sediment with sand	2.5Y3/2	Plant	0.42	36.5
C-3	37.7791°	140.8041°		10:54	—	13.3	—	—	—	—	0.40	36.0
C-4	37.7693°	140.8442°		11:40	11:55	14.3	14.5	Sand	2.5Y5/2	None	0.33	>50.0
C-5	37.7645°	140.8604°		13:33	13:38	14.3	14.3	Sand	2.5Y4/1	None	0.23	>50.0
C-6	37.7764°	140.8876°		14:15	14:21	14.3	14.3	Fine sand	2.5Y5/2	None	0.45	>50.0

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

Items	Latitude and longitude of the location		Survey date and time		pH	BOD	COD	DO	Electrical conductivity	Salinity	TOC	SS	Turbidity	Cs-134	Cs-137	Sr-90
Locations	Latitude	Longitude	Date	Time		(mg/L)	(mg/L)	(mg/L)	(mS/m)		(mg/L)	(mg/L)	(FNU)	(Bq/L)	(Bq/L)	(Bq/L)
C-1	37.7956°	140.7457°	2014/10/22	9:00	7.4	0.5	3.7	10.2	8.2	0.05	1.4	3	1.4	0.020	0.056	—
C-2	37.7710°	140.7277°		9:53	7.1	1.0	7.2	8.8	9.2	0.05	3.3	12	7.5	0.071	0.21	—
C-3	37.7791°	140.8041°		10:54	7.5	0.7	4.1	10.6	8.0	0.05	1.6	10	7.8	0.066	0.19	—
C-4	37.7693°	140.8442°		11:40	7.6	<0.5	3.2	10.6	7.7	0.04	1.2	3	1.9	0.029	0.091	0.0010
C-5	37.7645°	140.8604°		13:33	7.7	<0.5	3.3	10.4	7.9	0.04	1.3	4	3.3	0.022	0.064	—
C-6	37.7764°	140.8876°		14:15	7.7	<0.5	2.9	9.9	8.7	0.05	1.3	3	2.3	0.014	0.045	—

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

Items	Latitude and longitude of the location		Survey date and time		pH	Redox potential	Water content	IL	TOC	Soil particle density	Grain size distribution								Cs-134	Cs-137	Sr-90
											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	Maximum grain diameter			
Locations	Latitude	Longitude	Date	Time		$E_{N.H.E}$ (mV)	(%)	(%)	(mg/g-dry)	(g/cm3)	(%)	(%)	(%)	(%)	(%)	(%)	(mm)	(mm)	(Bq/kg-dry)	(Bq/kg-dry)	(Bq/kg-dry)
C-1	37.7956°	140.7457°	2014/10/22	9:07	7.0	269	29.1	3.3	3.9	2.745	26.1	36.6	26.9	6.9	1.6	1.9	1.2	19	330	1,100	—
C-2	37.7710°	140.7277°		10:00	7.0	248	28.1	3.8	6.0	2.772	16.6	27.9	28.0	10.9	7.4	9.2	0.70	9.5	190	620	—
C-4	37.7693°	140.8442°		11:55	7.1	235	23.1	1.6	1.3	2.727	18.6	34.5	42.9	3.3	0.4	0.3	0.91	9.5	200	670	0.65
C-5	37.7645°	140.8604°		13:38	7.2	232	21.0	1.4	1.3	2.711	39.7	44.3	13.8	1.7	0.3	0.2	1.7	9.5	130	420	—
C-6	37.7764°	140.8876°		14:21	7.2	258	26.5	2.0	1.2	2.750	2.1	22.1	61.5	11.7	1.5	1.1	0.55	4.75	170	510	—

Note) N.D. means to be below the detection limit and figures in parentheses show the detection limit.

＜Location C along the Uda 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			
C-6	–	37.7764°	140.8876°	2014/10/30	Algae/plant	–	–	–	–	River bottom materials (incl. algae)	Considerable number	0.061	–	–	–	49	150	–
					Arthropod	Insecta	Trichoptera	Stenopsychidae	*Stenopsyche sauteri*	Parastenopsyche sauteri	177	0.013	Larva	–	–	27	87	–
					Arthropod	Insecta	Trichoptera	Stenopsychidae	*Stenopsyche marmorata*	Stenopsyche marmorata								
					Arthropod	Insecta	Odonata	Corduliidae	*Macromia amphigena amphigena*	Macromia amphigena	111	0.024	Larva (dragonfly larva)	–	–	4.6	14	–
					Arthropod	Insecta	Odonata	Cordulegastridae	*Anotogaster sieboldii*	Anotogester sieboldii								
					Arthropod	Insecta	Odonata	Gomphidae	*Onychogomphus viridicostus*	Onychogomphus viridicostus								
					Arthropod	Insecta	odonata	Gomphidae	*Sieboldius albardae*	Albardae								
					Arthropod	Insecta	Odonata	Gomphidae	*Davidius nanus*	Davidius nanus								
					Arthropod	Insecta	Odonata	Gomphidae	*Davidius* sp.	Davidius								
					Arthropod	Insecta	Odonata	Gomphidae	*Sinogomphus flavolimbatus*	Sinogomphus flavolimbatus								
					Arthropod	Insecta	Odonata	Aeshnidae	*Boyeria maclachlani*	Boyeria maclachlani								
					Arthropod	Insecta	Megaloptera	Corydalidae	*Protohermes grandis*	Protohermes grandis	28	0.017	Larva	–	–	N.D.(3.1)	12	–
					Arthropoda	Malacostraca	Decapoda	Atyidae	*Paratya improvisa*	Freshwater shrimp	940	0.13	Imago	–	–	5.9	18	–
					Arthropod	Malacostraca	Decapoda	Grapsidae	*Eriocheir japonica*	Japanese mitten crab	18	0.31	Imago	–	–	6.7	22	–
					Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	*Tribolodon hakonensis*	Japanese dace	5	0.024	Immature fish/mature fish	–	–	10	35	–
					Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	*Zacco platypus*	Pale chub	36	0.24	Immature fish/mature fish	–	–	7.8	28	–
					Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	*Nipponocypris temminckii*	Dark chub	9	0.044	Mature fish	–	–	4.8	16	–
					Vertebrata	Osteichthyes	Perciformes	Gobiidae	*Rhinogobius* sp.	R. sp. CB	49	0.13	Immature fish/mature fish	–	–	10	26	–
					Vertebrata	Amphibia	Anura	Ranidae	*Rana rugosa*	Wrinkled Frog	2	0.019	Imago	–	–	N.D.(2.2)	8.7	–
					coarse particulate organic matters (CPOMs)	–	–	–	–	Fallen leaves	Considerable number	0.20	–	–	–	8.6	24	–

*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.