○Results of Radioactive Material Monitoring of Aquatic Organisms (Location G in Lake Hayama)

＜Location G in Lake Hayama: Samples collected＞

Items	General items		Radioactive materials			
Locations	Water	Sediment	Water (Cs)	Water (Sr)	Sediment (Cs)	Sediment (Sr)
G-1	○	○	○	○	○	○
G-2	-	○	-	-	○	-
G-3	○	○	○	-	○	-
G-4	-	○	-	-	○	-
G-5	○	○	○	-	○	-

＜Location G in Lake Hayama: Site measurement item＞

Items	Latitude and longitude of the location		Survey date and time			Water	Sediment				Other	
Locations	Scheduled latitude	Scheduled longitude	Date	Time (water)	Time (sediment)	Water temperature (degrees C)	Sediment temperature (degrees C)	Property	Color	Contaminants	Water depth (m)	Transparency (m)
G-1(Surface layer)	37.7321°	140.8127°	2015/10/26	14:10	14:30	15.5	14.1	Sand sediment	7.5Y 3/1	Plant	5.4	1.8
G-1(Deep layer)	37.7321°	140.8127°		14:10		15.0						
G-2	37.7267°	140.8223°		-	12:05	-	8.4	Sediment	7.5Y 5/2	Plant	-	-
G-3(Surface layer)	37.7302°	140.8307°		11:00	11:25	16.0	15.1	Sediment with sand	7.5Y 5/3	Plant	5.8	2.0
G-3(Deep layer)	37.7302°	140.8307°		11:00		15.9						
G-4	37.7382°	140.8035°		-	07:40	-	9.2	Sand gravel	7.5Y 4/3	None	-	-
G-5(Surface layer)	37.7341°	140.8088°		14:42	15:10	15.5	15.1	Sediment	7.5Y 3/1	Plant	4.7	1.8
G-5(Deep layer)	37.7341°	140.8088°		14:42		15.0						

＜Location G in Lake Hayama: 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	Scheduled latitude	Scheduled longitude	Date	Time (water)		(mg/L)	(mg/L)	(mg/L)			(mg/L)	(mg/L)	(FNU)	(Bq/L)	(Bq/L)	(Bq/L)
G-1(Surface layer)	37.7321°	140.8127°	2015/10/26	14:10	7.1	0.8	3.6	8.8	6.2	0.04	1.6	4	4.1	0.021	0.088	-
G-1(Deep layer)	37.7321°	140.8127°		14:10	7.1	0.8	3.8	8.3	6.2	0.04	1.6	5	4.5	0.026	0.11	0.0012
G-3(Surface layer)	37.7302°	140.8307°		11:00	7.2	1.0	3.6	9.3	6.0	0.04	1.7	4	3.3	0.024	0.093	-
G-3(Deep layer)	37.7302°	140.8307°		11:00	7.2	0.7	3.7	8.7	6.0	0.04	1.6	4	3.8	0.016	0.072	-
G-5(Surface layer)	37.7341°	140.8088°		14:42	7.1	0.8	3.7	8.3	6.2	0.04	1.6	4	3.8	0.021	0.081	-
G-5(Deep layer)	37.7341°	140.8088°		14:42	7.2	0.6	3.6	8.9	6.2	0.04	1.7	4	4.1	0.017	0.071	-

＜Location G in Lake Hayama: General survey items/Analysis of radioactive materials Sediment＞

Items	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)
Locations	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			
G-1	37.7321°	140.8127°	2015/10/26	14:30	6.7	175	58.4	10.9	37.1	2.515	5.1	2.4	8.6	42.1	23.6	18.2	0.11	9.5	1600	6600	3.8
G-2	37.7267°	140.8223°		12:05	6.7	57	73.8	15.4	42.7	2.417	0.6	2.2	4.8	7.3	47.6	37.5	0.0077	4.8	2400	11000	-
G-3	37.7302°	140.8307°		11:25	6.7	96	57.8	9.2	22.1	2.527	10.7	11.4	17.4	13.8	27.2	19.5	0.11	19	1400	6100	-
G-4	37.7382°	140.8035°		7:40	7.3	290	21.9	3.2	1.8	2.670	28.7	28.4	31.9	10.3	0.3	0.4	1.1	9.5	280	1100	-
G-5	37.7341°	140.8088°		15:10	7.4	99	69.9	17.1	53.1	2.426	0.0	0.2	0.4	6.4	69.6	23.4	0.016	2.0	1900	7900	-

＜Location G in Lake Hayama: 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	
G-1	In the lake	37.7321°	140.8127°	H27.10.26	Phycophyta	-	-	-	-	Plankton (Planktonic algae)	-	0.020	-	-	-	3.3	7.8	-
G-2		37.7267°	140.8223°	H27.10.14	Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	*Tribolodon hakonensis*	Japanese dace	3	0.25	Mature fish (4-year-old)	Detritus	Viscera removed	20	76	-
G-3		37.7302°	140.8307°	H27.10.16	Vertebrata	Osteichthyes	Osmeriformes	Osmeridae	*Hypomesus nipponensis*	Japanese smelt	25	0.056	Immature fish (0-year-old)	-	-	18	95	-
				H27.10.14	Vertebrata	Osteichthyes	Perciformes	Centrarchidae	*Micropterus salmoides*	Largemouth bass	1	0.18	Mature fish (1-year-old)	Fish	Viscera removed	29	120	-
					Vertebrata	Osteichthyes	Perciformes	Centrarchidae	*Micropterus dolomieu dolomieu*	Small mouth bass	3	2.8	Mature fish (4-year-old)	Common prawn, Lepidoptera, bluegill	Viscera removed	82	350	1.6
G-4	Inflowing rivers	37.7382°	140.8035°	2015/10/25	Phycophyta	-	-	-	-	Riverbed Deposits (include algae)	-	0.030	-	-	-	80	400	-
					Arthropod	Insecta	Plecoptera	Perlidae	*Kamimuria uenoi*	Kamimuria uenoi Kohno	64	0.0023	Larva	-	-	N.D.(16)	17	-
					Arthropoda	Insecta	Plecoptera	Perlidae	*Kamimuria tibialis*	Kamimura tibialis								
					Arthropod	Insecta	Trichoptera	Stenopsychidae	*Stenopsyche marmorata*	Stenopsyche marmorata	111	0.0034	Larva	-	-	55	170	-
					Arthropod	Insecta	Odonata	Gomphidae	*Stylogomphus suzukii*	Stylogomphus suzukii	78	0.030	Larva (Dragonfly larva)	-	-	5.1	20	-
					Arthropod	Insecta	Odonata	Gomphidae	*Melligomphus viridicostus*	Onychogomphus viridicostus								
					Arthropod	Insecta	Odonata	Cordulegastridae	*Anotogaster sieboldii*	Anotogester sieboldii								
					Arthropod	Insecta	Odonata	Gomphidae	*Sieboldius albardae*	Sieboldius albardae								
					Arthropod	Insecta	Odonata	Corduliidae	*Macromia amphigena amphigena*	Macromia amphigena								
					Arthropod	Insecta	Odonata	Gomphidae	-	Davidius								
					Arthropod	Insecta	Odonata	Calopterygidae	*Mnais costalis*	Mnais costalis								
					Arthropod	Insecta	Odonata	Gomphidae	*Sinogomphus flavolimbatus*	Sinogomphus flavolimbatus								
					Arthropod	Insecta	Odonata	Calopterygidae	*Calopteryx cornelia*	Calopteryx cornelia								
					Arthropod	Insecta	Odonata	Aeshnidae	*Planaeschna milnei*	Planaeschna milnei								
					Arthropod	Insecta	Odonata	Gomphidae	*Asiagomphus melaenops*	Asiagomphus melaenops								
					Arthropod	Insecta	Megaloptera	Corydalidae	*Protohermes grandis*	Protohermes grandis	40	0.029	Larva	-	-	6.3	32	-
					Arthropoda	Malacostraca	Decapoda	Atyidae	*Paratya improvisa*	Freshwater shrimp	184	0.039	Imago	-	-	10	44	-
					Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	*Phoxinus lagowskii steindachneri*	Amur Minnow	66	0.044	Immature fish (1-year-old)	-	-	12	41	-
					Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	*Tribolodon hakonensis*	Japanese dace	77	0.081	Immature fish/Mature fish	-	-	15	57	-
					Vertebrata	Osteichthyes	Cypriniformes	Cobitidae	*Misgurnus anguillicaudatus*	Oriental weatherfish	3	0.0098	Immature fish/Mature fish	-	-	13	56	-
					Vertebrata	Osteichthyes	Perciformes	Gobiidae	*Rhinogobius fluviatilis*	R. fluviatilis	36	0.023	Immature fish/Mature fish	-	-	17	69	-
					Vertebrata	Osteichthyes	Perciformes	Gobiidae	-	Rhinogobius								
					Vertebrata	Amphibia	Anura	Ranidae	*Rana ornativentris*	Montane brown frog	1	0.036	Imago	-	-	160	670	-
					Particulate Organic Matter	-	-	-	-	Bottom fallen leaves	-	0.14	-	-	-	12	48	-

*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.