

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

< Location G in Lake Hayama: Samples collected >

Items Locations	General items		Radioactive materials			
	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 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)	Secchi disk depth (m)
G-1	37.734290°	140.809630°	2013/10/15	10:47	11:09	19.8	18.8	Ooze	7.5Y5/2	None	Plant	4.2	3.8
G-2	37.725833°	140.821383°		9:38	—	—	13.5	Sand gravel	7.5Y4/2	None	Plant	12.8	4.2
G-3	37.729433°	140.831667°		9:05	9:15	19.9	19.3	Sand/gravel/sediment	7.5Y4/2	None	None	6.5	4.0
G-4	37.738200°	140.803450°		—	12:45	—	16.0	Sand/gravel/sediment	7.5Y5/3	None	Plant	0.4	0.4
G-5	37.733880°	140.807920°		10:15	10:30	19.8	19.2	Sand/sediment	7.5YR3/2	None	Plant	6.8	4.0

*Show transparency (cm).

< Location G in Lake Hayama: 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												
G-1 (Surface layer)	37.734290°	140.809630°	2013/10/15	10:47	7.3	0.8	4.4	7.9	7.4	0.04	2.6	<1	1.3	0.030	0.065	—
G-1 (Deep layer)				7.4	1.0	4.7	7.8	7.5	0.04	2.4	2	1.8	0.041	0.089	0.0019	
G-3 (Surface layer)	37.729433°	140.831667°		9:05	7.3	0.9	4.4	7.4	7.5	0.04	2.3	1	1.3	0.030	0.067	—
G-3 (Deep layer)				7.3	<0.5	4.4	7.0	7.4	0.04	2.3	2	1.2	0.036	0.077	—	
G-5 (Surface layer)	37.733880°	140.807920°		10:15	7.4	0.6	4.3	7.7	7.4	0.04	2.1	1	1.2	0.049	0.11	—
G-5 (Deep layer)			7.4		0.9	4.7	7.8	7.4	0.04	2.4	2	1.4	0.036	0.079	—	

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

Items Locations	Latitude and longitude of the location		Survey date and time		pH	Redox potential E _{NiLE} (mV)	Water content (%)	IL (%)	TOC (mg/g-dry)	Soil particle density (g/cm ³)	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)
											(%)	(%)	(%)	(%)	(%)	(%)				(%)	(%)
G-1	37.734290°	140.809630°	2013/10/15	11:09	6.6	107	89.6	47.1	300	2.130	0	0.2	0.5	9.5	16.9	72.9	2	3,900	8,900	6.0	
G-2	37.725833°	140.821383°		9:38	6.6	-32	74.8	17.4	49	2.459	2.7	3.1	3.4	2.7	18.0	70.1	—	4.75	1,700	3,900	—
G-3	37.729433°	140.831667°		9:15	6.6	128	43.1	5.2	9	2.658	19.5	17.8	21.6	11.2	11.4	18.5	0.45	19	1,100	2,500	—
G-4	37.738200°	140.803450°		12:45	7.2	233	28.6	2.8	2	2.708	8.0	23.2	43.0	16.4	4.0	5.4	0.50	9.5	1,500	3,400	—
G-5	37.733880°	140.807920°		10:30	6.5	52	77.4	21.4	62	2.409	0	0	0.9	10.9	46.4	41.8	0.012	2	8,800	19,000	—

Note) N.D. means to be below the detection limit.

< Location G in Lake Hayama: 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						
G-1 G-2 G-3	37.734290° 37.725833° 37.729433°	140.809630° 140.821383° 140.831667°	2013/10/30	Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	<i>Carassius auratus</i>	Carassius auratus langsdorffii	1	1.1	5-year-old fish	Some (details unknown)	98	230	—			
				Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	<i>Tribolodon hakonensis</i>	Japanese dace	3	0.63	3-year-old fish	Some (details unknown)	200	450	—			
				Vertebrata	Osteichthyes	Salmoniformes	Salmonidae	<i>Oncorhynchus masou</i>	Seema	1	0.73	3-year-old fish	Insects	150	340	—			
				Vertebrata	Osteichthyes	Perciformes	Centrarchidae	<i>Micropterus dolomieu</i>	Small mouth bass	2	1.2	5-year-old fish	Small fish	480	1,100	—			
G-4	37.738200°	140.803450°	2013/10/15	Algae/plant	—	—	—	—	Attached algae	—	0.082	—	—	530	1,300	—			
				Algae/plant	—	—	—	—	—	Floating algae	—	—	0.044	—	—	11	27	—	
				Arthropod	Insecta	Megaloptera	Corydalidae	<i>Protohermes grandis</i>	Protohermes grandis	94	0.064	Larva	—	—	—	24	56	—	
				Arthropod	Insecta	Odonata	Corduliidae	<i>Macromia amphigena amphigena</i>	Macromia amphigena	—	—	—	—	—	—	—	—	—	—
				Arthropod	Insecta	Odonata	Cordulegastridae	<i>Anotogaster sieboldii</i>	Anotogaster sieboldii	—	—	—	—	—	—	—	—	—	—
				Arthropod	Insecta	Odonata	Gomphidae	<i>Asiagomphus melaenops</i>	Asiagomphus melaenops	—	—	—	—	—	—	—	—	—	—
				Arthropod	Insecta	Odonata	Gomphidae	<i>Davidius fujiana</i>	Davidius fujiana	—	—	—	—	—	—	—	—	—	—
				Arthropod	Insecta	Odonata	Gomphidae	<i>Davidius nanus</i>	Davidius nanus	—	—	—	—	—	—	—	—	—	—
				Arthropod	Insecta	Odonata	Gomphidae	<i>Davidius sp.</i>	Davidius	—	—	—	—	—	—	—	—	—	—
				Arthropod	Insecta	Odonata	Gomphidae	<i>Nihonogomphus viridis</i>	Nihonogomphus viridis	376	0.11	Larva	—	—	—	31	68	—	
				Arthropod	Insecta	Odonata	Gomphidae	<i>Sieboldius albardae</i>	<u>Sieboldius albardae</u>	—	—	—	—	—	—	—	—	—	—
				Arthropod	Insecta	Odonata	Gomphidae	<i>Sinogomphus flavolimbanus</i>	Sinogomphus flavolimbanus	—	—	—	—	—	—	—	—	—	—
				Arthropod	Insecta	Odonata	Gomphidae	<i>Stylogomphus suzukii</i>	Stylogomphus suzukii	—	—	—	—	—	—	—	—	—	—
				Arthropod	Insecta	Odonata	Aeshmidae	<i>Epiophlebia superstes</i>	Boyeria maclachlani	—	—	—	—	—	—	—	—	—	—
				Arthropod	Insecta	Odonata	Aeshmidae	<i>Boyeria maclachlani</i>	Planaeschna milnei	—	—	—	—	—	—	—	—	—	—
				Arthropod	Insecta	Odonata	Libellulidae	<i>Planaeschna milnei</i>	Epiophlebia superstes	—	—	—	—	—	—	—	—	—	—
				Arthropod	Malacostraca	Decapoda	Atyidae	<i>Atyidae</i>	Freshwater shrimp	165	0.036	Imago	—	—	—	66	150	—	
				Mollusca	Gastropoda	Sorbococoncha	Pleuroceridae	<i>Semisulcospira libertina</i>	Semisulcospira libertina	47	0.047	Imago	—	—	—	22	48	—	
				Vertebrata	Osteichthyes	Perciformes	Gobiidae	<i>Rhinogobius sp.</i>	Rhinogobius	37	0.069	1-year-old fish	—	—	—	45	100	—	
				Coarse particulate organic matters (CPOMs)	—	—	—	—	—	—	—	CPOMs (fallen leaves)	—	—	0.38	—	—	160	340

Note 1) When multiple types of aquatic organisms were collected, a sample was prepared by mixing them.

Note 2) For species with stomach contents as indicated in the note column, all stomach contents were removed for conducting the analysis.

Note 3) Underlined names in the English name column indicate species largest in number in the respective samples.

Note 4) A statement in red in the "Growth stage" column shows the age assessed based on squama or otolith.

Note 5) N.D. means to be below the detection limit.