

○ 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	37.734190°	140.809720°	2013/12/9	11:32	11:50	9.7	9.1	Ooze	7.5Y4/2	None	Plant	5.5	3.0
G-2	37.725833°	140.821383°		—	10:25	10.2	10.2	Ooze	7.5Y3/2	Faint hydrogen sulfide	Plant	18.0	3.5
G-3	37.729433°	140.831667°		9:40	9:55	9.7	10.0	Soft sediment with sand	7.5Y4/2	None	Plant	6.0	3.0
G-4	37.738200°	140.803450°		—	13:00	6.2	6.2	Ooze	7.5Y5/3	None	Plant	0.1	0.1
G-5	37.733660°	140.808110°		11:05	11:20	9.6	9.0	Ooze	7.5Y4/2	None	Plant	5.0	3.2

*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)	37.734190°	140.809720°	2013/12/9	11:32	7.4	0.7	3.7	10.3	7.2	0.04	1.8	2	1.6	0.11	0.25	—
G-1 (Deep layer)				—	7.3	1.1	4.1	10.2	7.3	0.04	2.0	3	2.5	0.046	0.10	0.0018
G-3 (Surface layer)	37.729433°	140.831667°		9:40	7.4	1.5	4.4	10.0	7.5	0.04	2.4	3	2.5	0.048	0.10	—
G-3 (Deep layer)				—	7.4	1.5	4.4	10.0	7.5	0.04	2.4	3	2.5	0.048	0.10	
G-5 (Surface layer)	37.733660°	140.808110°		11:05	7.4	1.0	3.9	10.0	7.3	0.04	2.0	2	1.6	0.055	0.086	—
G-5 (Deep layer)			—	7.4	1.2	5.0	10.3	7.3	0.04	2.4	2	2.8	0.041	0.093	—	

< 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 _{NHE} (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	37.734190°	140.809720°	2013/12/9	11:50	6.6	154	87.9	74.3	310	2.038	0	24.2	8.2	9.2	23.6	34.8	0.039	2	3,600	8,600	3.8
G-2	37.725833°	140.821383°		10:25	6.8	25	71.1	19.6	73	2.436	5.0	2.0	3.2	5.3	61.1	23.4	0.018	9.5	3,200	7,600	—
G-3	37.729433°	140.831667°		9:55	7.1	11	51.0	8.0	11	2.623	15.3	9.7	16.6	15.6	19.4	23.4	0.15	19	1,700	4,000	—
G-4	37.738200°	140.803450°		13:00	7.4	85	26.6	3.0	3	2.693	7.5	23.3	54.1	9.9	1.6	3.6	0.61	19	1,300	3,100	—
G-5	37.733660°	140.808110°		11:20	7.0	78	76.3	24.7	96	2.389	0	4.0	4.0	14.9	48.9	28.2	0.018	2	8,200	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	37.734190° 37.725833° 37.729433°	140.809720° 140.821383° 140.831667°		Vertebrata	Osteichthyes	Osmeriformes	Osmeridae	<i>Hypomesus nipponensis</i>	Japanese smelt	308	0.87	Mature fish	—	17	43	—		
				Vertebrata	Osteichthyes	Salmoniformes	Salmonidae	<i>Oncorhynchus mykiss</i>	Rainbow trout	1	2.6	5-year-old fish	Some (details unknown)	430	1,000	0.88		
				Vertebrata	Osteichthyes	Perciformes	Centrarchidae	<i>Micropterus dolomieu</i>	Small mouth bass	2	1.3	4-year-old fish	Some (details unknown)	310	740	—		
G-4	37.738200°	140.803450°	2013/12/9	Algae/plant	—	—	—	—	Attached algae	—	0.046	—	—	190	430	—		
				Algae/plant	—	—	—	—	—	Floating algae	—	0.047	—	—	—	16	40	—
				Arthropod	Insecta	Megaloptera	Corydalidae	<i>Protohermes grandis</i>	Protohermes grandis	54	0.029	Larva	—	—	—	21	50	—
				Arthropod	Insecta	Odonata	Corduliidae	<i>Macromia amphigena amphigena</i>	Macromia amphigena	129	0.055	Larva	—	—	—	26	60	—
				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									
				Arthropod	Insecta	Odonata	Gomphidae	<i>Sieboldius albardae</i>	Sieboldius albardae									
				Arthropod	Insecta	Odonata	Gomphidae	<i>Stylogomphus suzukii</i>	Stylogomphus suzukii									
				Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	<i>Tribolodon hakonensis</i>	Japanese dace (small)									
				Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	<i>Tribolodon hakonensis</i>	Japanese dace (large)	1	0.034	2-year-old fish	Aquatic insects	49	120	—		
				Vertebrata	Osteichthyes	Perciformes	Gobiidae	<i>Rhinogobius flumineus</i>	Rhinogobius flumineus	71	0.060	Mature fish	—	46	90	—		
				Vertebrata	Osteichthyes	Salmoniformes	Salmonidae	<i>Oncorhynchus masou</i>	Yamame trout	5	0.081	1-year-old fish	Aquatic insects	49	120	—		
				Coarse particulate organic matters (CPOMs)	—	—	—	—	CPOMs (fallen leaves)	—	0.53	—	—	73	170	—		

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.