○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	Contaminants	Water depth (m)	Secchi disk depth (m)
G-1(Surface layer)	37.7321°	140.8127°	2016/5/31	12:15	12:00	23.3	14.3	Ooze	5Y 2/2	Plant pieces	6.0	1.5
G-1(Bottom layer)						15.3						
G-2	37.7267°	140.8223°		-	11:15	-	6.5	Ooze	5Y 2/2	Plant pieces	-	-
G-3(Surface layer)	37.7302°	140.8307°		10:25	10:45	22.0	13.6	Ooze with gravel	5Y 4/2	None	7.1	2.5
G-3(Bottom layer)						13.5						
G-4	37.7382°	140.8035°		-	07:50	-	20.1	Sand gravel	7.5Y 5/3	None	-	-
G-5(Surface layer)	37.7341°	140.8088°		13:10	13:20	23.3	14.2	Sediment	5Y 2/2	Plant pieces	5.1	1.5
G-5(Bottom layer)						17.3						

<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	COD	DO	Electric conductivity	Salinity	TOC	SS	Turbidity	Cs-134	Cs-137	Sr-90
	Latitude	Longitude	Date	Time (water)		(mg/L)	(mg/L)	(mg/L)	(mS/m)		(mg/L)	(mg/L)	(FNU)	(Bq/L)	(Bq/L)	(Bq/L)
G-1(Surface layer)	37.7321°	140.8127°	2016/5/31	12:15	7.6	3.1	6.7	9.7	7.2	0.04	1.8	6	3.4	0.0096	0.053	-
G-1(Bottom layer)					7.4	1.7	4.5	8.3	7.3	0.04	1.9	5	5.5	0.013	0.068	0.0012
G-3(Surface layer)	37.7302°	140.8307°		10:25	7.6	1.0	3.7	9.7	6.9	0.04	1.7	<1	1.1	0.0042	0.022	-
G-3(Bottom layer)					7.4	0.9	3.7	9.5	7.0	0.04	1.5	2	2.2	0.011	0.059	-
G-5(Surface layer)	37.7341°	140.8088°		13:10	7.6	1.7	5.0	9.6	7.0	0.04	1.8	4	3.1	0.0068	0.036	-
G-5(Bottom layer)					7.2	1.1	4.5	8.5	7.4	0.04	1.6	7	5.8	0.028	0.15	-

<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 $E_{N.H.E}$	Water content	IL	TOC	Soil particle density	Grain size distribution								Cs-134	Cs-137	Sr-90
	Latitude	Longitude	Date	Time (sediment)		(mV)	(%)	(%)	(mg/g-dry)	(g/cm^3)	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)	(Bq/kg-dry)	(Bq/kg-dry)	(Bq/kg-dry)
G-1	37.7321°	140.8127°	2016/5/31	12:00	7.1	378	61.1	11.9	21.9	2.589	4.7	2.6	5.2	24.2	40.1	23.2	0.037	19	990	5300	3.4
G-2	37.7267°	140.8223°		11:15	7.2	219	72.3	15.6	39.8	2.552	0.0	1.1	2.3	5.4	37.1	54.1	0.0037	2.0	1600	8100	-
G-3	37.7302°	140.8307°		10:45	7.0	272	60.2	8.9	26.4	2.614	7.0	8.8	16.2	12.0	28.9	27.1	0.043	9.5	750	3800	-
G-4	37.7382°	140.8035°		07:50	7.4	272	29.4	4.1	5.9	2.703	20.0	12.2	23.4	25.4	8.6	10.4	0.31	19	370	2000	-
G-5	37.7341°	140.8088°		13:20	6.9	275	73.7	27.8	80.8	2.434	0.2	0.7	0.5	11.5	51.6	35.5	0.016	4.8	2100	11000	-

<Location G in Lake Hayama: Analysis items Aquatic organisms>

Locations	Sampling point	Latitude and longitude of the location		Sampling date	Division	Class	Order	Family	Scientific 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	Total	Cs-134	Cs-137	
G-1	In the lake	37.7321°	140.8127°	2016/5/31	Algae/plant	-	-	-	-	Plankton (Planktonic algae)	-	0.027	-	-	-	11.1	1.9	9.2	-
G-2		37.7267°	140.8223°	2016/6/27	Vertebrata	Osteichthyes	Perciformes	Centrarchidae	*Micropterus salmoides*	Largemouth bass	1	0.037	Immature fish	Empty stomach	Viscera removed	112	17	95	-
G-3		37.7302°	140.8307°		Vertebrata	Osteichthyes	Perciformes	Centrarchidae	*Micropterus dolomieu*	Small mouth bass	3	1.1	Immature fish,Mature fish	Japanese dace	Viscera removed	189	29	160	0.83
					Vertebrata	Osteichthyes	Perciformes	Centrarchidae	*Lepomis macrochirus*	Bluegill	2	0.030	Immature fish	Obscure digesta	Viscera removed	76	13	63	-
G-4	Inflowing rivers	37.7382°	140.8035°	2016/5/31	Algae/plant	-	-	-	-	Riverbed Deposits (Include algae)	-	0.010	-	-	-	235	35	200	-
					Arthropoda	Insecta	Trichoptera	Stenopsychidae	*Stenopsyche marmorata*	Stenopsyche marmorata	92	0.023	Larva	-	-	117	22	95	-
					Arthropoda	Insecta	Odonata	Corduliidae	*Macromia amphigena amphigena*	Macromia amphigena	60	0.018	Larva (Dragonfly larva)	-	-	101	20	81	-
					Arthropoda	Insecta	Odonata	Cordulegastridae	*Anotogaster sieboldii*	Anotogester sieboldii									
					Arthropoda	Insecta	Odonata	Gomphidae	*Stylogomphus suzukii*	Stylogomphus suzukii									
					Arthropoda	Insecta	Odonata	Gomphidae	*Onychogomphus viridicostus*	Melligomphus viridicostus									
					Arthropoda	Insecta	Odonata	Gomphidae	*Sieboldius albardae*	Sieboldius albardae									
					Arthropoda	Insecta	Odonata	Gomphidae	*Davidius sp.*	Davidius									
					Arthropoda	Insecta	Odonata	Gomphidae	*Sinogomphus flavolimbatus*	Sinogomphus flavolimbatus									
					Arthropoda	Insecta	Odonata	Aeshnidae	*Planaeschna milnei*	Planaeschna milnei									
					Arthropoda	Insecta	Megaloptera	Corydalidae	*Protohermes grandis*	Protohermes grandis	22	0.014	Larva	-	-	11	N.D.(2.9)	11	-
					Arthropoda	Malacostraca	Decapoda	Atyidae	*Paratya improvisa*	Freshwater shrimp	27	0.0079	Imago	-	-	49.7	8.7	41	-
					Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	*Phoxinus lagowskii steindachneri*	Amur Minnow	10	0.020	Immature fish	-	-	37.8	7.8	30	-
					Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	*Tribolodon hakonensis*	Japanese dace	7	0.091	Immature fish	-	-	79	13	66	-
					Vertebrata	Osteichthyes	Cypriniformes	Cobitidae	*Misgurnus anguillicaudatus*	Oriental weatherfish	2	0.0076	Immature fish	-	-	138	18	120	-
					Vertebrata	Osteichthyes	Salmoniformes	Salmonidae	*Oncorhynchus masou*	Yamame trout	2	0.0096	Immature fish	-	-	55.5	9.5	46	-
					Vertebrata	Osteichthyes	Perciformes	Gobiidae	*Rhinogobius flumineus*	Rhinogobius flumineus	5	0.015	Immature fish,Mature fish	-	-	62	11	51	-
					Particulate Organic Matter	-	-	-	-	Bottom fallen leaves	-	0.21	-	-	-	310	50	260	-

*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 English 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: Plankton (suspended algae) is the residue remaining after the filtration of lake water or seawater with a plankton net (40μm-mesh).

*6: 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.

*7: N.D. means to be below the detection limit and figures in parentheses show the detection limit.

*8: Activity concentrations include counting errors, but the details are omitted here.