○Results of Radioactive Material Monitoring of Aquatic Organisms (Location H in Lake Akimoto)

<Location H in Lake Akimoto: Samples collected>

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

<Location H in Lake Akimoto: 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)
H-1(Surface layer)	37.6575°	140.1264°	2016/6/6	09:31	09:42	18.2	10.7	Ooze	7.5Y 4/3	Plant pieces	14.0	3.5
H-1(Bottom layer)						12.1						
H-2	37.6616°	140.1226°		-	09:52	-	11.5	Ooze	7.5Y 5/2	Plant pieces	-	-
H-3(Surface layer)	37.6653°	140.1329°		08:43	08:59	17.5	16.8	Sand sediment	7.5Y 4/2	Plant pieces	5.5	4.0
H-3(Bottom layer)						16.3						
H-4	37.6551°	140.1181°		-	10:02	-	13.7	Ooze	7.5Y 5/3	Elodea nuttallii	-	-
H-5(Surface layer)	37.6523°	140.1568°		08:09	08:20	17.0	14.5	Sand sediment	7.5Y 5/1	Plant pieces	7.3	3.8
H-5(Bottom layer)						15.6						

<Location H in Lake Akimoto: 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)
H-1(Surface layer)	37.6575°	140.1264°	2016/6/6	09:31	7.2	0.7	3.1	9.4	4.2	0.03	1.1	2	1.1	0.0024	0.011	-
H-1(Bottom layer)					7.0	0.5	3.2	9.7	4.1	0.03	1.1	2	1.4	0.0020	0.010	-
H-3(Surface layer)	37.6653°	140.1329°		08:43	7.2	0.6	3.3	9.7	4.3	0.03	1.2	1	1.3	0.0019	0.0092	-
H-3(Bottom layer)					7.2	0.7	3.3	9.8	4.3	0.03	1.1	2	1.5	0.0032	0.012	0.0012
H-5(Surface layer)	37.6523°	140.1568°		08:09	7.2	0.6	3.2	9.7	4.3	0.03	1.7	1	1.2	0.0031	0.012	-
H-5(Bottom layer)					7.2	1.0	3.4	9.6	4.5	0.03	1.2	2	1.4	0.0028	0.011	-

<Location H in Lake Akimoto: 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)
H-1	37.6575°	140.1264°	2016/6/6	09:42	7.3	123	62.8	9.1	20.4	2.618	0.0	0.0	0.2	0.7	55.9	43.2	0.0070	2.0	9.5	55	-
H-2	37.6616°	140.1226°		09:52	7.1	178	76.7	14.9	42.1	2.512	0.0	0.0	0.1	0.4	48.0	51.5	0.0046	2.0	390	2100	-
H-3	37.6653°	140.1329°		08:59	6.8	109	73.6	16.7	43.9	2.374	0.0	0.0	1.2	26.6	47.0	25.2	0.032	2.0	360	1700	1.7
H-4	37.6551°	140.1181°		10:02	6.9	138	79.2	10.1	32.7	2.488	0.0	0.6	1.2	4.1	47.0	47.1	0.0059	2.0	370	2000	-
H-5	37.6523°	140.1568°		08:20	6.9	210	51.9	6.2	13.3	2.598	0.0	0.0	6.9	53.2	24.8	15.1	0.11	2.0	130	680	-

<Location H in Lake Akimoto: 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	
H-1 H-2 H-3	In the lake	37.6575° 37.6616° 37.6653°	140.1264° 140.1226° 140.1329°	2016/6/6	Arthropoda	Malacostraca	Decapoda	Astacidae	*Pacifastacus leniusculus trowbridgii*	Signal crayfish	7	0.49	Imago	-	-	39.8	6.8	33	-
					Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	*Tribolodon hakonensis*	Japanese dace	13	2.8	Mature fish	Midge	Viscera removed	47.7	7.7	40	0.80
					Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	*Carassius auratus*	Carassius auratus langsdorfii	9	2.5	Mature fish	Obscure digesta	Viscera removed	44.0	7.0	37	1.5
					Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	*Cyprinus carpio*	Common carp	1	4.2	Mature fish	Amorphous Residue	Viscera removed	39.8	5.8	34	0.49
					Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	*Hemibarbus barbus*	Hemibarbus barbus	7	2.4	Immature fish,Mature fish	Amorphous Residue	Viscera removed	40.6	6.6	34	1.2
					Vertebrata	Osteichthyes	Salmoniformes	Osmeridae	*Hypomesus nipponensis*	Japanese smelt	94	0.35	Immature fish,Mature fish	-	-	13.0	2.0	11	-
					Vertebrata	Osteichthyes	Salmoniformes	Salmonidae	*Salvelinus leucomaenis*	Char	7	1.4	Immature fish,Mature fish	Japanese smelt	Viscera removed	49.8	8.8	41	0.32
					Vertebrata	Osteichthyes	Salmoniformes	Salmonidae	*Oncorhynchus masou*	Seema	3	0.63	Immature fish	Japanese smelt	Viscera removed	49.3	8.3	41	-
					Vertebrata	Osteichthyes	Perciformes	Centrarchidae	*Micropterus salmoides*	Largemouth bass	1	1.2	Mature fish	Fish	Viscera removed	99	15	84	1.2
					Vertebrata	Osteichthyes	Perciformes	Centrarchidae	*Micropterus dolomieu*	Small mouth bass	6	2.6	Immature fish,Mature fish	Japanese smelt,Common prawn	Viscera removed	90	15	75	1.1
H-3	The confluence with Nakatsu River	37.6653°	140.1329°	2016/6/6	Algae/plant	-	-	-	-	Riverbed Deposits (Include algae)	-	0.078	-	-	-	9.4	1.6	7.8	-
					Arthropoda	Insecta	Plecoptera	Perlidae	*Acroneuria sp.*	Acroneuria	76	0.016	Larva	-	-	N.D.	N.D.(2.8)	N.D.(2.4)	-
					Arthropoda	Insecta	Plecoptera	Perlidae	*Kamimuria quadrata*	Kamimuria quadrata									
					Arthropoda	Insecta	Plecoptera	Perlidae	*Calineuria sp.*	Calineuria									
					Vertebrata	Osteichthyes	Scorpaeniformes	Cottidae	*Cottus pollux*	Japanese fluvial sculpin	24	0.19	Immature fish	-	-	14.5	2.5	12	-
					Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	*Tribolodon hakonensis*	Japanese dace	1	0.068	Mature fish	Obscure digesta	Viscera removed	27.8	4.8	23	-
					Vertebrata	Osteichthyes	Salmoniformes	Salmonidae	*Salvelinus leucomaenis*	Char	7	0.12	Immature fish	Mayfly	Viscera removed	10.1	1.7	8.4	-
					Vertebrata	Osteichthyes	Salmoniformes	Salmonidae	*Oncorhynchus masou*	Yamame trout	8	0.25	Immature fish	Mayfly	Viscera removed	17.1	3.1	14	-
					Vertebrata	Cephalaspidomorphi	Petromyzontiformes	Petromyzontidae	*Lampetra reissneri*	Far eastern brook lamprey	1	0.0058	Ammocoetes larva	-	-	N.D.	N.D.(4.9)	N.D.(4.9)	-
					Vertebrata	Amphibia	Anura	Rhacophoridae	*Buergeria buergeri*	Kajika frog	6	0.065	Imago	-	-	41.2	5.2	36	-
					Vertebrata	Amphibia	Anura	Ranidae	*Rana japonica*	Japanese Brown Frog									
					Particulate Organic Matter	-	-	-	-	Bottom fallen leaves	-	0.18	-	-	-	58.7	8.7	50	-
H-4	Within the lake and rivers in the vicinity	37.6551°	140.1181°	2016/6/6	Algae/plant	-	-	-	-	Plankton (Planktonic algae)	-	0.032	-	-	-	1.4	N.D.(1.3)	1.4	-
					Arthropoda	Insecta	Odonata	Cordulegastridae	*Anotogaster sieboldii*	Anotogester sieboldii	17	0.023	Larva (Dragonfly larva)	-	-	26.0	5.0	21	-
					Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	*Phoxinus lagowskii steindachneri*	Amur Minnow	7	0.062	Immature fish,Mature fish	-	-	3.8	N.D.(0.89)	3.8	-
					Vertebrata	Osteichthyes	Cypriniformes	Cobitidae	*Lefua echigonia*	Lefua echigonia	12	0.012	Immature fish,Mature fish	-	-	7.7	N.D.(4.8)	7.7	-
					Vertebrata	Osteichthyes	Salmoniformes	Salmonidae	*Salvelinus leucomaenis*	Char	1	0.034	Immature fish	Obscure digesta	Viscera removed	5.2	N.D.(1.7)	5.2	-
					Vertebrata	Amphibia	Anura	-	-	Frog	22	0.0065	Larva (Tadople)	-	-	259	29	230	-
					Vertebrata	Amphibia	Anura	Ranidae	*Rana ornativentris*	Montane brown frog	5	0.12	Imago	-	-	62	10	52	-
					Vertebrata	Amphibia	Caudata	Salamandridae	*Cynops pyrrhogaster*	Cynops pyrrhogaster	8	0.046	Imago	-	-	13.4	2.4	11	-

*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.