

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

<Location H in Lake Akimoto: Samples collected>

Items	General items		Radioactive materials				
	Locations	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	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)	Property	Color	Contaminants	Water depth (m)	Transparency (m)
H-1 (Surface layer)	37.6575°	140.1264°	2015/6/16	10:19	10:30	20.4	13.5	Ooze	7.5Y 3/1	Plant	13	4.5
H-1 (Deep layer)						13.9						
H-2						10:40						
H-3 (Surface layer)	37.6653°	140.1329°		9:38	9:56	20.2	17.2	Sand sediment	7.5Y 4/2	Plant	5.6	4.9
H-3 (Deep layer)						18.8						
H-4	37.6551°	140.1181°		-	10:51	-	16.7	Ooze	7.5Y 4/1	Plant fragments, <i>Elodea nuttallii</i>	-	-
H-5 (Surface layer)	37.6523°	140.1568°	8:58	9:14	19.8	15.9	Sand sediment	7.5Y 4/3	Plant	6.5	4.5	
H-5 (Deep layer)					17.2							

<Location H in Lake Akimoto: General survey items/Analysis of radioactive materials - Water>

Items	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)	
	Locations	Scheduled latitude	Scheduled longitude	Date													Time (water)
H-1 (Surface layer)	37.6575°	140.1264°	2015/6/16	10:19	7.5	0.6	2.6	9.6	4.1	0.03	1.1	2	1.3	0.0058	0.022	-	
H-1 (Deep layer)					7.2	0.7	2.8	9.2	3.9	0.03	1.4	2	1.4	0.0025	0.0092	-	
H-3 (Surface layer)					7	0.8	3	9.2	4	0.03	1.3	1	1.7	0.0037	0.011	-	
H-3 (Deep layer)	7.2	0.8		3	9.5	4.2	0.03	1.8	<1	1.5	0.0063	0.023	0.0012				
H-5 (Surface layer)	37.6523°	140.1568°		8:58	9:14	7.2	0.8	3	9.5	4.1	0.03	1.5	1	1.2	0.0058	0.022	-
H-5 (Deep layer)						7.2	1.2	2.2	9.3	4.9	0.03	1.3	2	1.1	N.D. (0.0019)	0.0084	-

<Location H in Lake Akimoto: 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
H-1	37.6575°	140.1264°	2015/6/16	10:30	6.7	257	64.6	8.7	22.4	2.522	0	0.2	0.3	0.8	52.4	46.3	0.0056	2	31	210	-
H-2	37.6616°	140.1226°		10:40	6.7	267	74.9	10.9	29.7	2.419	0.7	1.1	1.7	2.5	40.9	53.1	0.0045	4.75	120	410	-
H-3	37.6653°	140.1329°		9:56	6.6	296	70.1	19.1	40.5	2.371	4.5	2	1.9	32.5	32.5	26.6	0.042	4.75	630	2400	0.85
H-4	37.6551°	140.1181°		10:51	6.6	221	68.4	10.2	32.7	2.472	0	1.6	0.6	5.4	42.7	49.7	0.0051	2	280	990	-
H-5	37.6523°	140.1568°		9:14	6.8	346	53.5	7	15.6	2.561	0.7	0.6	2.3	48.7	30.2	17.5	0.079	4.75	150	530	-

<Location H in Lake Akimoto: 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)	Growth stage	Note	Radioactive cesium (Bq/kg-wet)		Sr-90 (Bq/kg-wet)					
		Latitude	Longitude												Measurement site	Measurement site						
H-1 H-2 H-3	In the lake	37.6575° 37.6616° 37.6653°	140.1264° 140.1226° 140.1329°	2015/6/16	Arthropod	Malacostraca	Decapoda	Astacidae	<i>Pacifastacus leniusculus</i>	Signal crayfish		15	0.76	Imago	-	-	8.0	31	-			
					Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	<i>Opsarichthys platypus</i>	Zacco platypus	9	0.39	Mature fish (3-year-old)	Chironomus	Viscera removed	8.5	32	-				
					Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	<i>Tribolodon hakonensis</i>	Japanese dace	11	0.52	Mature fish (2-year-old)	Chironomus	Viscera removed	11	40	-				
					Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	<i>Hemibarbus barbus</i>	Hemibarbus barbus	6	1.1	Mature fish (3-year-old)	Obscure digesta	Viscera removed	12	43	-				
					Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	<i>Carassius sp.</i>	Carassius auratus langsdorffii	19	2.7	Mature fish (2.6-year-old)	Obscure digesta	Viscera removed	16	58	1.2				
					Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	<i>Cyprinus carpio</i>	Common carp	1	1.6	Mature fish (3-year-old)	Obscure digesta	Viscera removed	8.7	30	1.2				
					Vertebrata	Osteichthyes	Osmerniformes	Osmernidae	<i>Hypomesus nipponensis</i>	Japanese smelt	80	0.19	Mature fish (0.1-year-old)	Cladocera, Chironomus	Viscera removed	4.2	15	-				
					Vertebrata	Osteichthyes	Salmoniformes	Salmonidae	<i>Salvelinus leucomaenis</i>	Char	14	4.7	Mature fish (2.3-year-old)	Viscera removed	Viscera removed	16	57	0.38				
					Vertebrata	Osteichthyes	Salmoniformes	Salmonidae	<i>Oncorhynchus masou masou</i>	Scema	1	0.35	Mature fish (2-year-old)	Empty stomach	Viscera removed	8.8	33	-				
					Vertebrata	Osteichthyes	Perciformes	Centrarchidae	<i>Lepomis macrochirus macrochirus</i>	Bluegill	10	0.82	Mature fish (2.3-year-old)	Terrestrial insects, Crane fly	Viscera removed	7.0	27	-				
					Vertebrata	Osteichthyes	Perciformes	Centrarchidae	<i>Micropterus salmoides</i>	Largemouth bass	1	2.5	Mature fish (6-year-old)	Empty stomach	Viscera removed	22	85	0.98				
					Vertebrata	Osteichthyes	Perciformes	Centrarchidae	<i>Micropterus dolomieu dolomieu</i>	Small mouth bass	1	0.61	Mature fish (2-year-old)	Empty stomach	Viscera removed	26	100	-				
					H-3	Inflowing rivers	37.6653°	140.1329°	2015/6/16	Particulate Organic Matter	-	-	-	Bottom fallen leaves	-	-	0.25	-	-	8.4	34	-
					H-4	Within the lake and rivers in the vicinity	37.6551°	140.1181°	2015/6/16	Phytophyta	-	-	-	-	Plankton (Planktonic algae)	-	-	0.0037	-	-	49	170
Angiospermae	Monocotyledonae	Hydrocharitales	Hydrocharitaceae	<i>Elodea nuttallii</i>						Western Waterweed	-	-	-	-	-	0.18	-	-	2.8	11	-	
Arthropoda	Insecta	Ephemeroptera	Ephemeridae	<i>Ephemera japonica</i>						Futsujimonkagerou	-	-	-	-	-	-	-	-	49	180	-	
Arthropoda	Insecta	Ephemeroptera	Ephemeridae	<i>Ephemera strigata</i>						Monkagerou	124	0.0055	Larva	-	-	-	-	-	-	49	180	-
Arthropoda	Insecta	Trichoptera	Eubasilissidae	<i>Eubasilissa regina</i>						Murasakibikera	11	0.0063	Larva	-	-	-	-	-	N.D. (4.4)	N.D. (4.1)	-	
Arthropod	Insecta	Odonata	Cordulegastriidae	<i>Anotogaster sieboldii</i>						Anotogaster sieboldii	39	0.059	Larva (dragonfly larva)	-	-	-	-	-	5.4	18	-	
Mollusca	Gastropoda	Sorbeosoncha	Pleuroceridae	<i>Semisulcopira libertina</i>						Semisulcopira libertina	38	0.015	Imago	-	-	-	-	-	N.D. (3.6)	7.1	-	
Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	<i>Phoxinus lagowskii steindachneri</i>						Amur Minnow	15	0.082	Mature fish (1.2-year-old)	-	-	-	-	-	3.3	13	-	
Vertebrata	Amphibia	Anura	Ranidae	<i>Glandirana rugosa</i>						Wrinkled Frog	8	0.055	Imago	-	-	-	-	-	3.4	12	-	
Vertebrata	Amphibia	Anura	Ranidae	<i>Pelophylax porosus porosus</i>						Dacroma pond frog	77	0.011	Larva (tadpoles)	-	-	-	-	-	31	120	-	
Vertebrata	Amphibia	Anura	-	-						Tadpole	77	0.011	Larva (tadpoles)	-	-	-	-	-	31	120	-	
Vertebrata	Amphibia	Caudata	Salamandridae	<i>Cynops pyrrhogaster</i>						Cynops pyrrhogaster	4	0.027	Imago	-	-	-	-	-	2.9	7.6	-	

*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.