

○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	37.6584°	140.1275°	2014/12/4	13:50	14:01	7.2	7.0	Ooze	7.5Y4/3	None	15.5	2.8	
H-2	37.6624°	140.1234°		—	—	14:12	—	6.8	Ooze	7.5Y4/2	—	—	—
H-3	37.6648°	140.1306°		13:23	13:37	6.8	6.8	Sand/sediment	7.5Y4/2	Humus	16.2	2.5	
H-4	37.6540°	140.1182°		—	—	14:18	—	7.1	Soft sand with gravel	7.5Y4/2	Plant fragments, Elodea nuttallii	—	—
H-5	37.6540°	140.1530°		12:50	13:02	7.3	6.9	Sand/sediment	7.5Y4/2	Plant	16.0	3.2	

< 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 (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												
H-1 (Surface layer)	37.6584°	140.1275°	2014/12/4	13:50	7.4	0.7	3.7	11.2	5.0	0.03	1.4	3	1.9	0.0050	0.015	—
H-1 (Deep layer)					7.2	0.6	3.6	10.4	4.8	0.03	1.7	2	2.0	0.0042	0.015	—
H-3 (Surface layer)	37.6648°	140.1306°		13:23	7.2	1.0	4.2	10.3	4.8	0.03	1.7	3	2.0	0.010	0.030	—
H-3 (Deep layer)					7.2	0.7	4.2	10.5	4.8	0.03	1.5	2	2.2	0.0046	0.013	0.0014
H-5 (Surface layer)	37.6540°	140.1530°		12:50	7.2	0.5	3.2	10.9	5.0	0.03	1.4	2	1.5	0.0049	0.014	—
H-5 (Deep layer)			7.3		0.5	3.2	10.8	5.0	0.03	1.4	2	1.5	0.0050	0.013	—	

< 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 <sub>NHLE</sub> (mV)	Water content (%)	IL (%)	TOC (mg/g-dry)	Soil particle density (g/cm <sup>3</sup> )	Grain size distribution						Cs-134 (Bq/kg-dry)	Cs-137 (Bq/kg-dry)	Sr-90 (Bq/kg-dry)		
	Latitude	Longitude	Date	Time							Gravel (2-7mm) (%)	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)
H-1	37.6584°	140.1275°	2014/12/4	14:01	6.7	116	64.1	9.1	23.5	2.602	0.0	0.0	0.2	0.1	54.0	45.7	0.0060	2	83	310	—
H-2	37.6624°	140.1234°		14:12	6.7	289	75.7	14.0	50.6	2.516	0.0	0.1	0.1	0.1	50.2	49.5	0.0052	2	190	650	—
H-3	37.6648°	140.1306°		13:37	6.7	363	69.9	13.4	46.1	2.490	0.0	0.1	0.2	12.5	38.0	49.2	0.0054	2	550	1,800	1.8
H-4	37.6540°	140.1182°		14:18	6.6	117	69.1	10.3	39.9	2.565	1.1	1.4	2.3	8.0	33.6	53.6	0.0030	9.5	290	900	—
H-5	37.6540°	140.1530°		13:02	6.7	260	58.3	10.5	26.4	2.623	0.0	0.0	0.6	21.9	42.1	35.4	0.013	2	260	820	—

Note) N.D. means to be below the detection limit and figures in parentheses show the detection limit.

< Location H in Lake Akimoto: 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	Measurement site				
H-1 H-2 H-3(Including the Nakatsu River area) Near H-4	In the lake	37.6584°	140.1275°	2014/12/3 2014/12/4	Algae/plant	—	—	—	—	Plankton(singular plankter)	Considerable number	0.014	—	—	—	110	380	—	
	In the lake				Arthropod	Insecta	Odonata	Cordulegastriidae	<i>Anotogaster sieboldii</i>	Anotogaster sieboldii	29	0.035	Larva (dragonfly larva)	—	—	—	2.8	8.8	—
	In the lake				Arthropod	Malacostraca	Decapoda	Astacidae	<i>Pacifastacus leniusculus trowbridgii</i>	Signal crayfish	32	2.0	Imago	—	—	—	11	33	8.6
	In the lake				Mollusca	Gastropoda	Sorbeoconcha	Pleuroceridae	<i>Semisulcospira libertina</i>	Semisulcospira libertina	94	0.069	Imago	—	—	Molluscan body	4.1	11	—
	In the lake				Vertebrata	Osteichthyes	Osmeriformes	Osmeridae	<i>Hypomesus nipponensis</i>	Japanese smelt	52	0.27	Mature fish	—	—	—	6.2	19	—
	In the lake				Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	<i>Tribolodon hakonensis</i>	Japanese dace	7	1.5	Mature fish	Algae	—	Viscera removed	12	38	0.73
	In the lake				Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	<i>Hemibarbus barbus</i>	Hemibarbus barbus	2	1.8	Mature fish	Many unknown content	—	Viscera removed	24	76	0.90
	In the lake				Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	<i>Carassius sp.</i>	Carassius	10	1.5	Mature fish (3-year-old)	Many unknown content	—	Viscera removed	15	53	1.2
	In the lake				Vertebrata	Osteichthyes	Salmoniformes	Salmonidae	<i>Salvelinus leucomaenis</i>	Char	11	1.2	Immature fish/mature fish	Lake smelt	—	Viscera removed	9.2	33	0.34
	In the lake				Vertebrata	Amphibia	Anura	Ranidae	<i>Rana ornativentris</i>	Montane brown frog	8	0.099	Imago	—	—	—	7.7	27	—
	Inflowing rivers				Coarse particulate organic matters (CPOMs)	—	—	—	—	—	—	—	Fallen leaves	Considerable number	0.23	—	—	—	20

\*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.

\*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: A statement in red in the "Growth stage" column shows the age assessed based on squama or otolith

\*6: Plankton (suspended algae) is the residue remaining after the filtration of lake water or seawater with a plankton net (40µm-mesh).

\*7: 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.

\*8: N.D. means to be below the detection limit and figures in parentheses show the detection limit.

\*9: Activity concentrations include counting errors, but the details are omitted here.