

•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)	Transparency (cm)		
H-1	37.65753°	140.12637°	2014/8/26	9:44	9:58	24.0	12.9	Ooze	7.5Y4/2	Plant	14.3	4.3		
H-2	37.66198°	140.12298°		—	—	10:56	—	14.2	Ooze	7.5Y3/1	Plant	—	—	
H-3	37.66540°	140.13262°		10:08	10:27	24.2	20.3	Sand/sediment	7.5Y3/2	Many plant fragments	—	6.8	4.8	
H-4	37.65403°	140.11810°		—	—	11:06	—	22.6	Ooze	7.5Y4/2	Elodea nuttallii plant piece	—	—	
H-5	37.65200°	140.15637°		9:06	9:21	24.3	19.0	Sand/sediment	7.5Y4/2	Plant	—	7.8	4.3	

<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)	37.65753°	140.12637°	2014/8/26	9:44	7.8	1.1	3.3	7.0	6.0	0.04	1.8	2	0.9	0.0071	0.019	—
H-1 (Deep layer)	37.65753°	140.12637°		9:44	6.7	-0.5	3.9	5.3	4.1	0.03	1.5	2	1.0	0.0033	0.0095	—
H-3 (Surface layer)	37.66540°	140.13262°		10:08	7.5	0.7	3.9	8.9	5.7	0.03	1.4	2	1.0	0.0071	0.019	—
H-3 (Deep layer)	37.66540°	140.13262°		10:08	7.2	0.5	4.5	7.0	5.3	0.03	1.8	3	1.1	0.0077	0.024	0.0012
H-5 (Surface layer)	37.65200°	140.15637°		9:06	7.6	0.5	3.3	7.4	6.1	0.04	1.8	1	0.4	0.0057	0.017	—
H-5 (Deep layer)	37.65200°	140.15637°	9:06	7.1	0.8	3.2	6.8	6.0	0.03	1.4	2	1.1	0.0054	0.015	—	

<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 _h (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)
	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)			
H-1	37.65753°	140.12637°	2014/8/26	9:58	6.7	121	63.7	8.1	17.5	2.587	0.0	0.0	0.2	0.2	27.0	72.6	—	2	93	300	—
H-2	37.66198°	140.12298°		10:56	6.7	104	77.5	16.2	59.3	2.426	0.0	0.1	0.3	0.2	29.4	70.0	—	2	340	930	—
H-3	37.66540°	140.13262°		10:27	6.2	75	73.3	14.5	43.8	2.474	0.0	0.2	0.3	20.2	29.4	58.9	—	2	1,100	3,100	2.0
H-4	37.65403°	140.11810°		11:06	6.6	32	68.4	7.5	22.5	2.588	4.0	1.2	2.4	6.9	26.6	58.9	—	9.5	170	480	—
H-5	37.65200°	140.15637°		9:21	6.4	46	58.4	8.6	24.5	2.609	0.0	0.1	0.3	27.3	23.0	49.3	0.0058	2	400	1,200	—

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 (g-wet)	Growth stage	Note			Cs-134 (Bq/kg-wet)	Cs-137 (Bq/kg-wet)	Sr-90 (Bq/kg-wet)		
	Latitude	Longitude											Stomach contents	Measurement site						
H-1 H-2 H-3 (incl. around the Nakatsu River) Around H-4	37.65753° 37.66198° 37.66540° 37.65403°	140.12637° 140.12298° 140.13262° 140.11810°	2014/8/26	Algae/plant	—	—	—	—	Plankton(singular plankton)	Considerable number	0.013	—	—	—	—	24	70	—		
				Angiospermae	Monocotyledonae	Hydrocharitales	Hydrocharitaceae	<i>Elodea nuttallii</i>	Western Waterweed	Considerable number	0.24	—	—	—	—	—	2.4	7.3	—	
				Arthropod	Insecta	Odonata	Cordulegastridae	<i>Anotogaster sieboldii</i>	Anotogaster sieboldii	71	0.069	Larva (dragonfly larva)	—	—	—	—	3.7	9.8	—	
				Mollusca	Gastropoda	Sorboconcha	Pleuroceridae	<i>Semulcospira libertina</i>	Semulcospira libertina	180	0.19	Imago	—	—	—	—	15	39	—	
				Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	<i>Phoxinus lagowskii steindachneri</i>	Amur Minnow	21	0.060	Immature fish (1-year-old)	Some (details unknown)	—	—	—	2.5	6.0	—	
				Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	<i>Phoxinus lagowskii steindachneri</i>	Amur Minnow	3	0.060	Mature fish (3-year-old)	Some (details unknown)	—	—	—	6.4	17	—	
				Vertebrata	Amphibia	Caudata	Salamandridae	<i>Cynops pyrrhogaster</i>	Cynops pyrrhogaster	2	0.012	Imago	—	—	—	—	N.D.(3.1)	6.2	—	
				Vertebrata	Amphibia	Anura	—	—	—	9	0.011	Larva (tadpoles)	—	—	—	—	13	33	—	
				Inflowing rivers	—	—	—	—	—	—	—	Fallen leaves	Considerable number	0.40	—	—	—	15	46	—
				Coarse particulate organic matters (CPOMs)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
H-1 H-2 H-3 (incl. around the Nakatsu River) Around H-4	37.65753° 37.66198° 37.66540° 37.65403°	140.12637° 140.12298° 140.13262° 140.11810°	2014/8/27	Arthropod	Malacostraca	Decapoda	Astacidae	<i>Pacifastacus leniusculus trawbridgii</i>	Signal crayfish	30	1.4	Imago	—	—	—	13	40	8.4		
				Vertebrata	Osteichthyes	Osmerniformes	Osmernidae	<i>Hypomesus nipponensis</i>	Japanese smelt	30	0.16	Mature fish	Some (details unknown)	—	—	6.2	18	—		
				Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	<i>Carassius auratus langsdorffii</i>	Carassius auratus langsdorffii	8	0.21	Immature fish (2-year-old)	Some (details unknown)	—	—	11	31	—		
				Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	<i>Carassius auratus langsdorffii</i>	Carassius auratus langsdorffii	13	7.7	Mature fish (6-year-old)	Some (details unknown)	—	—	13	42	1.2		
				Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	<i>Cyprinus carpio</i>	Common carp	1	1.2	Mature fish (4-year-old)	Some (details unknown)	—	—	10	31	—		
				Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	<i>Hemibarbus barbus</i>	Hemibarbus barbus	4	0.80	Mature fish (3-year-old)	Some (details unknown)	—	—	15	44	—		
				Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	<i>Tribolodon hakonensis</i>	Japanese dace	6	1.1	Mature fish (4-year-old)	—	—	—	18	53	—		
				Vertebrata	Osteichthyes	Salmoniformes	Salmonidae	<i>Oncorhynchus masou</i>	Seauna	5	1.6	Mature fish (2-year-old)	Fish (lake smelt, etc.)	—	—	13	38	—		
				Vertebrata	Osteichthyes	Salmoniformes	Salmonidae	<i>Salvelinus leucomaenis</i>	Char	1	0.25	Mature fish (2-year-old)	Some (details unknown)	—	—	17	53	—		
				Vertebrata	Osteichthyes	Salmoniformes	Salmonidae	<i>Salvelinus leucomaenis</i>	Char	3	1.7	Mature fish (3-year-old)	Fish	—	—	23	69	—		
Vertebrata	Osteichthyes	Perciformes	Centrarchidae	<i>Micropterus dolomieu</i>	Small mouth bass	5	1.2	Mature fish (2-year-old)	Crustaceans	—	—	20	60	—						
Vertebrata	Osteichthyes	Perciformes	Centrarchidae	<i>Micropterus dolomieu</i>	Small mouth bass	6	3.9	Mature fish (4-year-old)	Crustaceans, aquatic insects, insects	—	—	26	81	1.2						

*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 organisms samples. Viscera (stomachs 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.