○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	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	37.657533°	140.126433°	2014/6/24	10:34	10:48	19.8	15.8	Ooze	7.5Y3/2	Plant	13.8	4.5
H-2	37.661550°	140.122550°		—	11:01	—	16.0	Ooze	7.5Y2/2	Plant	—	—
H-3	37.665333°	140.132933°		9:48	10:18	20.2	14.2	Sand/sediment	7.5Y4/2	Many plant	11.2	4.7
H-4	37.655067°	140.118050°		—	11:12	—	23.6	Ooze	7.5Y3/1	Plant	—	—
H-5	37.652333°	140.156833°		9:18	9:30	20.1	13.6	Ooze	5Y3/2	Plant	7.5	4.3

＜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	COD	DO	Electrical conductivity	Salinity	TOC	SS	Turbidity	Cs-134	Cs-137	Sr-90
Locations	Latitude	Longitude	Date	Time		(mg/L)	(mg/L)	(mg/L)	(mS/m)		(mg/L)	(mg/L)	(FNU)	(Bq/L)	(Bq/L)	(Bq/L)
H-1 (Surface layer)	37.657533°	140.126433°	2014/6/24	10:34	7.4	<0.5	3.1	9.7	3.8	0.03	1.3	1	1.0	0.0090	0.023	—
H-1 (Deep layer)					7.4	0.5	3.3	9.1	3.9	0.03	1.2	2	1.0	0.0053	0.013	—
H-3 (Surface layer)	37.665333°	140.132933°		9:48	7.4	0.8	3.3	8.9	4.1	0.03	1.6	<1	1.0	0.0090	0.022	—
H-3 (Deep layer)					7.2	0.7	3.1	9.3	3.9	0.03	1.4	2	1.3	0.0033	0.011	0.0012
H-5 (Surface layer)	37.652333°	140.156833°		9:18	7.3	2.2	4.2	9.2	4.6	0.03	1.6	3	1.7	0.0090	0.027	—
H-5 (Deep layer)					7.2	1.5	3.4	9.6	4.0	0.03	1.3	2	1.0	0.0067	0.017	—

＜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	Water content	IL	TOC	Soil particle density	Grain size distribution							Cs-134	Cs-137	Sr-90
Locations	Latitude	Longitude	Date	Time		$E_{N.H.E}$ (mV)	(%)	(%)	(mg/g-dry)	(g/cm3)	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	37.657533°	140.126433°	2014/6/24	1900/1/0	6.5	14	65.8	8.3	24.5	2.582	0.0	0.0	0.1	0.3	54.7	44.9	0.0065	2	180	580	—
H-2	37.661550°	140.122550°		1900/1/0	6.6	23	77.3	12.6	39.8	2.463	0.0	0.2	0.2	0.2	44.3	55.1	0.0040	2	240	700	—
H-3	37.665333°	140.132933°		1900/1/0	6.3	-18	72.9	13.6	35.1	2.492	0.0	0.2	0.4	18.5	48.8	32.1	0.018	2	810	2,600	1.7
H-4	37.655067°	140.118050°		1900/1/0	6.4	11	69.0	9.5	32.0	2.561	1.9	0.4	0.5	1.6	40.3	55.3	0.0035	9.5	170	550	—
H-5	37.652333°	140.156833°		1900/1/0	6.6	-16	59.6	8.2	24.6	2.619	0.0	0.1	0.4	14.6	51.3	33.6	0.014	2	400	1,000	—

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	Cs-137	Sr-90
		Latitude	Longitude										Growth stage	Stomach contents	Measurement site	(Bq/kg-wet)	(Bq/kg-wet)	(Bq/kg-wet)
H-1 H-2 H-3 (Incl. around the Nakatsu River) Near H-4	In the lake	37.657533° 37.661550° 37.665333° 37.655067°	140.126433° 140.122550° 140.132933° 140.118050°	2014/6/24	Algae/plant	–	–	–	–	Plankton(singular plankter)	Considerable number	0.019	–	–	–	39	110	–
	In the lake				Angiospermae	Monocotyledoneae	Hydrocharitales	Hydrocharitaceae	*Elodea nuttallii*	Western Waterweed	Considerable number	0.39	–	–	–	3.5	9.2	–
	Inflowing rivers				Arthropod	Insecta	Plecoptera	Perlidae	*Acroneuria sp.*	Acroneuria	70	0.012	Larva	–	–	N.D.(2.9)	4.4	–
	Inflowing rivers				Arthropod	Insecta	Plecoptera	Perlidae	*Calineuria sp.*	Calineuria								
	Inflowing rivers				Arthropoda	Insecta	Plecoptera	Perlidae	*Kamimuria sp.*	Kamimuria quadrata								
	Inflowing rivers				Arthropod	Insecta	Odonata	Cordulegastridae	*Anotogaster sieboldii*	Anotogester sieboldii	39	0.022	Larva(dragonfly)	–	–	3.5	10	–
	In the lake				Arthropod	Malacostraca	Decapoda	Astacidae	*Pacifastacus leniusculus trowbridgii*	Signal crayfish	49	3.2	Imago	–	–	13	37	9.5
	In the lake				Mollusca	Gastropoda	Sorbeoconcha	Pleuroceridae	*Semisulcospira libertina*	Semisulcospira libertina	245	0.26	Imago	–	Molluscan body	15	44	–
	Inflowing rivers				Vertebrata	Osteichthyes	Scorpaeniformes	Cottidae	*Cottus pollux*	Japanese fluvial sculpin	22	0.029	Immature fish	Aquatic insects	Viscera removed	4.4	14	–
	Inflowing rivers				Vertebrata	Osteichthyes	Scorpaeniformes	Cottidae	*Cottus pollux*	Japanese fluvial sculpin	17	0.11	Mature fish (3-year-old)	Aquatic insects	Viscera removed	7.0	19	–
	In the lake				Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	*Cyprinus carpio*	Common carp	1	3.5	Mature fish	Some (details unknown)	Viscera removed	10	33	1.2
	In the lake				Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	*Carassius auratus*	Carassius auratus langsdorfii	3	0.90	Mature fish (3,4-year-old)	Empty stomach	Viscera removed	22	67	–
	In the lake				Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	*Carassius auratus*	Carassius auratus langsdorfii	3	3.1	Mature fish	Empty stomach	Viscera removed	20	59	1.5
	In the lake				Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	*Hemibarbus barbus*	Hemibarbus barbus	2	1.1	Mature fish (4-year-old)	Aquatic insects	Viscera removed	25	72	–
	In the lake				Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	*Phoxinus lagowskii steindachneri*	Amur Minnow	8	0.028	Immature fish (2,3-year-old)	–	–	3.1	11	–
	In the lake				Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	*Tribolodon hakonensis*	Japanese dace	7	1.7	Mature fish (4-year-old)	Aquatic insects	Viscera removed	31	86	0.93
	In the lake				Vertebrata	Osteichthyes	Salmoniformes	Salmonidae	*Salvelinus leucomaenis*	Char	5	1.7	Mature fish (3,4-year-old)	Terrestrial insect, fish, crustaceans	Viscera removed	18	55	0.42
	In the lake				Vertebrata	Osteichthyes	Salmoniformes	Salmonidae	*Oncorhynchus masou*	Seema	3	0.66	Mature fish (2-year-old)	Terrestrial insect	Viscera removed	15	38	–
	In the lake				Vertebrata	Osteichthyes	Salmoniformes	Salmonidae	*Oncorhynchus masou*	Yamame trout	1	0.094	Immature fish (2-year-old)	Terrestrial insect, aquatic insects	Viscera removed	7.4	23	–
	In the lake				Vertebrata	Osteichthyes	Perciformes	Centrarchidae	*Micropterus dolomieu*	Small mouth bass	11	2.2	Immature fish (2-year-old)	Fish, crustaceans, aquatic insects	Viscera removed	28	86	–
	In the lake				Vertebrata	Osteichthyes	Perciformes	Centrarchidae	*Micropterus dolomieu*	Small mouth bass	4	4.0	Mature fish (3,4-year-old)	Fish, crustaceans	Viscera removed	46	130	1.1
	In the lake				Vertebrata	Amphibia	Anura	–	–	Frogs	4	0.0071	Imago	–	–	5.7	13	–
	In the lake				Vertebrata	Amphibia	Anura	–	–	Frogs	135	0.021	Larva (tadpoles)	–	–	62	170	–
	In the lake				Vertebrata	Amphibia	Caudata	Salamandridae	*Cynops pyrrhogaster*	Cynops pyrrhogaster	4	0.022	Imago	–	–	5.2	14	–
	Inflowing rivers				coarse particulate organic matters (CPOMs)	–	–	–	–	Fallen leaves	Considerable number	1.1	–	–	–	22	64	–

*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.