

Results of Radioactive Material Monitoring of Aquatic Organisms (Locations A and B along the Abukuma River)

< Locations A and B along the Abukuma River: Samples collected>

Items Locations	General items		Radioactive materials			
	Water	Sediment	Water (Cs)	Water (Sr)	Sediment (Cs)	Sediment (Sr)
A-1	○	○	○	○	○	○
A-2	—	—	—	—	—	—
B-1	—	○	○	—	○	—
B-2	○	○	○	—	○	—
B-3	—	—	—	—	—	—

<Locations A and B along the Abukuma River: Site measurement item>

Items Locations	Survey date and time		Latitude and longitude of the location		Water	Sediment					Other	
			Latitude	Longitude	Water temperature	Sediment temperature	Property	Color	Odor	Contaminants	Transparency	Water depth
A-1	2012/6/4	9:17	37.62058	140.52195	19.5	19.0	Sand/sediment	2.5Y-4/2	Faint hydrogen sulfide	Plant	26.5	7.60
A-2		-	37.56668	140.39467	—	—	—	—	—	—	—	—
B-1		12:05	37.78448	140.49227	—	22.6	Fine sand	2.5Y-4/3	Faint hydrogen sulfide	Plant	>50	0.20
B-2		13:52	37.81190	140.50560	20.6	18.4	Fine sand	2.5Y-4/4	None	Pebbles	>50	0.44
B-3	2012/6/19	-	37.81820	140.46788	—	—	—	—	—	—	—	—

<Locations A and B along the Abukuma River: Analysis items Water>

[illegible]

<Locations A and B along the Abukuma River: Analysis items Sediment>

[illegible]

< Locations A and B along the Abukuma River: Analysis items Aquatic organisms >

Location	Sampling Date	Latitude and longitude of the location		Division	Class	Order	Family	Species name	English name	Population	Sample weight (kg,wet)	Cs-134 (Bq/kg,wet)	Cs-137 (Bq/kg,wet)	Sr-90 (Bq/kg,wet)	Note	
		Latitude	Longitude												Growth stage	Stomach contents
A-2 (Harase River)	2012/6/20	37.5667	140.3947	Vertebrata	Caudata	Caudata	Salamandridae	<i>Cynops pyrrhogaster</i>	Cynops pyrrhogaster	5	0.030	170	250	—	Imago	—
				Vertebrata	Anura	Anura	Hylidae	<i>Hyla japonica</i>	Japanese tree flog	54	0.28	120	170	—	Imago	—
				Vertebrata	Anura	Anura	Ranidae	<i>Rana rugosa</i>	Wrinkled Frog							
				Vertebrata	Anura	Anura	Ranidae	<i>Rana porosa</i>	Daruma pond frog							
				Vertebrata	Anura	Anura	—	—	Tadpole	113	0.15	130	190	—	Non-adult	—
				Vertebrata	Cypriniformes	Cypriniformes	Cyprinidae	<i>Phoxinus lagowskii</i>	Amur Minnow	8	0.020	30	43	—	Mature fish	Some (details unknown)
				Vertebrata	Cypriniformes	Cypriniformes	Cobitidae	<i>Misgurnus anguillicaudatus</i>	Oriental weatherfish	43	0.080	29	45	—	Mature fish	Some (details unknown)
				Arthropoda	Decapoda	Decapoda	Atyidae	<i>Neocaridina denticulata</i>	Freshwater shrimp	694	0.11	71	110	—	Imago	—
				Mollusca	Sorbeoconcha	Sorbeoconcha	Pleuroceridae	<i>Semisulcospira libertina</i>	Semisulcospira libertina	15	0.03	70	100	—	Adult / non-adult	—
				Arthropod	Odonata	Odonata	Aeshnidae	<i>Boyeria maclachlani</i>	Boyeria maclachlani	100	0.11	20	32	—	Non-adult	—
				Arthropod	Odonata	Odonata	Gomphidae	<i>Sieboldius albardae</i>	Sieboldius albardae							
				Arthropod	Odonata	Odonata	Cordulegastridae	<i>Anotogaster sieboldii</i>	<i>Anotogaster sieboldii</i>							
				Arthropoda	Insecta	Hemiptera	Belostomatidae	<i>Appasus sp.</i>	Ferocious water bug						Imago	—
				Streptophyta	Zygnematales	Zygnematales	Zygnemataceae	<i>Spirogyra sp.</i>	Spirogyra	—	0.12	300	440	—	—	—
A-1 (Abukuma River)	2012/7/11	37.6206	140.5220	Vertebrata	Siluriformes	Siluriformes	Ictaluridae	<i>Ictalurus punctatus</i>	Channel catfish	11	0.22	28	39	—	Immature fish	—
				Vertebrata	Perciformes	Perciformes	Centrarchidae	<i>Micropterus dolomieu</i>	Small mouth bass	2	1.5	67	100	—	Mature fish	Some (details unknown)
				Vertebrata	Cypriniformes	Cypriniformes	Cyprinidae	<i>Hemibarbus barbus</i>	Hemibarbus barbus	37	1.6	16	24	—	Immature fish	—
				Vertebrata	Cypriniformes	Cypriniformes	Cyprinidae	<i>Carassius auratus</i>	Carassius auratus langsdorfii	2	2.7	40	62	—	Mature fish	Some (details unknown)
				Vertebrata	Cypriniformes	Cypriniformes	Cyprinidae	<i>Tribolodon hakonensis</i>	Japanese dace	5	0.12	20	30	—	Immature fish	—
B-3 (Surikami River)	2012/6/19	37.8182	140.4679	Amphibia	Anura	Anura	Ranidae	<i>Rana catesbeiana</i>	American Bullfrog	1	0.43	150	220	—	Imago	—
				Vertebrata	Anura	Anura	Ranidae	<i>Rana rugosa</i>	Wrinkled Frog	3	0.020	110	170	—	Imago	—
				Vertebrata	Cypriniformes	Cypriniformes	Cobitidae	<i>Noemacheilus barbanulus</i>	Stone loach	5	0.050	29	47	—	Mature fish	—
				Vertebrata	Cypriniformes	Cypriniformes	Cobitidae	<i>Misgurnus anguillicaudatus</i>	Oriental weatherfish	31	0.13	45	68	—	Mature fish	—
				Streptophyta	Zygnematales	Zygnematales	Zygnemataceae	<i>Spirogyra sp.</i>	Spirogyra	—	0.070	220	330	—	—	—
B-2 (Abukuma River)	2012/6/19	37.8119	140.5056	Vertebrata	Siluriformes	Siluriformes	Siluridae	<i>Silurus asotus</i>	Amur catfish	2	2.8	260	390	—	Mature fish	Some (details unknown)
				Chordata	Actinopterygii	Siluriformes	Ictaluridae	<i>Ictalurus punctatus</i>	Channel catfish	1	2.2	240	360	0.27	Mature fish	Some (details unknown)
	Chordata			Actinopterygii	Anguilliformes	Anguillidae	<i>Anguilla japonica</i>	Eel	2	0.42	130	190	—	Mature fish	Some (details unknown)	
	Vertebrata			Perciformes	Perciformes	Centrarchidae	<i>Micropterus dolomieu</i>	Small mouth bass	2	1.6	190	300	—	Mature fish	Some (details unknown)	
	Vertebrata			Cypriniformes	Cypriniformes	Cyprinidae	<i>Cyprinus carpio</i>	Common carp	1	3.7	110	170	—	Mature fish	Some (details unknown)	
	Vertebrata			Cypriniformes	Cypriniformes	Cyprinidae	<i>Hemibarbus barbus</i>	Hemibarbus barbus	1	1.4	220	310	—	Mature fish	Some (details unknown)	
	Vertebrata			Cypriniformes	Cypriniformes	Cyprinidae	<i>Tribolodon sp.</i>	Tribolodon	4	1.6	140	200	—	Mature fish	Some (details unknown)	
	Vertebrata			Osmeriformes	Osmeriformes	Osmeridae	<i>Plecoglossus altivelis</i>	Sweetfish (natural upstream)	(Many)	1.9	60	87	0.16	Immature fish	—	