

FY2015 Tokyo Metropolis Survey Results

[Survey Results]

(1) Water

Rivers

Radioactive cesium (Cs-134, Cs-137): Not detectable at any location

Coastal areas

Radioactive cesium (Cs-134, Cs-137): Not detectable at any location

(2) Sediments

Rivers

Cs-134: 20 - 84 Bq/kg (dry)

Cs-137: 66 - 320 Bq/kg (dry)

Coastal areas

Cs-134: 15 - 100 Bq/kg (dry)

Cs-137: 63 - 310 Bq/kg (dry)

(3) Surrounding Environment

(a) Soil

Rivers

Cs-134: 59 - 180 Bq/kg (dry)

Cs-137: 250 - 710 Bq/kg (dry)

(b) Ambient dose rate

Rivers

0.04 - 0.09 μ Sv/h

Tokyo Rivers (Water) 1/1

	Location				Sampling Date	Weather	Air temperature (°C)	Water depth (m)	Water										Remarks
	No.	Water area	Location	Municipality					General items							Activity concentration(Bq/L)			
									Water temperature (°C)	Sampling depth (m)	Color	Odor	Transparency (cm)	Electrical conductivity (mS/m)	SS (mg/L)	Turbidity (FNU)	Cs-134	Cs-137	
Rivers	50	Arakawa River System	Arakawa River Lower Reaches	Kasai Bridge	Koto City/Edogawa City	2015/5/22	Sunny	20.0	1.0	22.2	0.0	Grayish yellow green	Faint sewage	18	798	32	13	<0.68	<0.63
						2015/8/5	Sunny	30.8	2.0	31.2	0.0	Grayish yellow green	None	44	119	16	10	<0.68	<0.63
						2015/11/17	Cloudy	20.8	2.0	16.6	0.0	Light grayish yellow green	None	19	2,910	28	24	<0.75	<0.88
						2016/1/22	Sunny	8.1	2.0	9.6	0.0	Grayish yellow green	None	83	2,710	7	5.3	<0.84	<0.69
	51	Sumida River	Ryogoku Bridge	Chuo City/Sumida City	2015/5/22	Sunny	20.0	3.1	22.0	0.0	Dark grayish yellow green	Faint sewage	58	237	3	2.5	<0.65	<0.48	
					2015/8/5	Sunny	33.0	2.4	30.3	0.0	Grayish yellow green	Faint mold	95	889	4	2.8	<0.86	<0.91	
					2015/11/17	Sunny	24.0	2.6	19.6	0.0	Grayish yellow green	None	>100	2,010	3	0.9	<0.74	<0.84	
					2016/1/22	Sunny	9.1	2.6	11.9	0.0	Dark grayish yellow green	None	>100	3,580	3	1.5	<0.72	<0.80	

Tokyo Rivers (Sediment) 1/1

Rivers	Location				Sampling Date	Weather	Air temperature (°C)	Water depth (m)	Sediment																	Remarks			
	No.	Water area	Location	Municipality					Sediment temperature (°C)	Sample length (cm)	Color	Odor	General items										Sediment content (%)	Density (g/cm ³)	Property		Activity concentration [Bq/kg(dy)]		
													Grain size distribution(%)														Radioactive cesium		
													Coarse gravel	Medium gravel	Fine gravel	Coarse sand	Medium sand	Fine sand	Silt	Clay	Cs-134	Cs-137					Total		
50	Arakawa River System	Arakawa River Lower Reaches	Kasai Bridge	Koto City/Edogawa City	2015/5/22	Sunny	20.0	1.0	21.6	8	Black	Faint hydrogen sulfide	0.0	0.0	0.0	0.5	1.0	1.9	72.8	23.7	32.9	2.563	Silt	84	320	404			
					2015/8/5	Sunny	30.8	2.0	31.0	4	Olive black	Medium hydrogen sulfide	0.0	13.7	6.9	7.2	8.3	10.4	39.3	14.3	44.9	2.605	Silt	40	170	210			
					2015/1/17	Cloudy	20.8	2.0	17.9	6	Blackish brown	Faint rottenness	0.0	5.3	2.5	2.6	3.3	3.0	60.3	23.0	40.4	2.607	Silt	59	220	279			
					2016/1/22	Sunny	8.1	2.0	10.2	5	Olive black	Faint hydrogen sulfide	0.0	5.2	1.5	1.3	1.4	1.3	61.8	27.6	34.8	2.639	Silt	32	240	272			
					2015/5/22	Sunny	20.0	3.1	22.3	4	Black	Faint sewage	0.0	1.2	12.8	3.6	18.1	43.7	9.0	11.6	60.2	2.666	Silt/sand	20	66	86			
					2015/8/5	Sunny	33.0	2.4	31.0	6	Black	Medium hydrogen sulfide	0.0	8.3	7.6	3.4	12.4	44.7	14.6	9.1	50.8	2.599	Silt/sand	41	150	191			
51	Sumida River	Ryogoku Bridge	Chao City /Sumida City	2015/5/22	Sunny	20.0	3.1	22.3	4	Black	Faint sewage	0.0	1.2	12.8	3.6	18.1	43.7	9.0	11.6	60.2	2.666	Silt/sand	20	66	86				
				2015/8/5	Sunny	33.0	2.4	31.0	6	Black	Medium hydrogen sulfide	0.0	8.3	7.6	3.4	12.4	44.7	14.6	9.1	50.8	2.599	Silt/sand	41	150	191				
				2015/1/17	Sunny	24.0	2.6	19.2	5	Black	Faint hydrogen sulfide	0.0	3.3	1.8	1.9	6.3	45.2	24.9	16.7	46.6	2.628	Silt	33	150	183				
				2016/1/22	Sunny	9.1	2.6	12.5	4	Black	Faint sewage	0.0	1.2	2.5	1.7	9.6	53.1	18.4	13.5	46.2	2.678	Silt/sand	27	170	197				

Tokyo Rivers (Surrounding Environment) 1/1

Rivers	Location				Sampling Date	Weather	Air temperature (°C)	Surrounding Environment(Soil,Air dose)												Remarks						
	No.	Water area	Location	Municipality				Left bank						Right bank												
								Color	Odor	Property	Activity concentration [Bq/kg(dry)]			Air Dose (μSv/h)	Color	Odor	Property	Activity concentration [Bq/kg(dry)]			Air Dose (μSv/h)					
											Radioactive cesium							Radioactive cesium								
			Cs-134	Cs-137	Total				Cs-134	Cs-137	Total															
50	Arakawa River System	Arakawa River Lower Reaches	Kasai Bridge	Koto City/Edogawa City	2015/5/22	Sunny	20.0	Dark brown	Faint earth	Loamy	150	520	670	0.08	Grayish yellowish brown	Faint earth	Loamy	62	250	312	0.09					
					2015/8/5	Sunny	30.8	Dim yellowish brown	Faint earth	Loamy	170	700	870	0.07	Dim yellowish brown	Faint earth	Loamy	120	470	590	0.09					
					2015/11/17	Cloudy	20.8	Dim yellowish brown	Faint earth	Loamy	180	710	890	0.08	Dim yellowish brown	Faint earth	Loamy	96	370	466	0.08					
					2016/1/22	Sunny	8.1	Dim yellowish brown	Faint earth	Loamy	60	370	430	0.07	Dim yellowish brown	Faint earth	Loamy	59	260	319	0.09					
	51	Sumida River	Ryogoku Bridge	Chuo City /Sumida City	2015/5/22	Sunny	20.0	-	-	-	-	-	-	0.04	-	-	-	-	-	-	-	0.06	Soil not exposed			
					2015/8/5	Sunny	33.0	-	-	-	-	-	-	-	-	-	0.04	-	-	-	-	-	-	0.05	Soil not exposed	
					2015/11/17	Sunny	24.0	-	-	-	-	-	-	-	-	-	0.05	-	-	-	-	-	-	-	0.05	Soil not exposed
					2016/1/22	Sunny	9.1	-	-	-	-	-	-	-	-	-	0.04	-	-	-	-	-	-	-	0.05	Soil not exposed

Tokyo Coastal areas (Water) 1/1

No.	Location		Sampling Date	Weather	Air temperature (°C)	Water depth (m)	Water										Remarks	
							General items					Activity concentration (Bq/L)						
	Water temperature (°C)	Sampling depth (m)					Color	Odor	Secchi disk depth (m)	Salinity (‰)	SS (mg/L)	Turbidity (FNU)	Radioactive cesium					
									Cs-134	Cs-137								
65	Approx. 1 km offshore of Kyu-Edogawa River Estuary	Offshore of Kyu-Edogawa River Estuary	Surface layer	2015/5/19	Cloudy	23.2	6.8	22.3	0.5	Grayish yellow green	None	1.1	10.9	14	7.8	<0.72	<0.75	
			Deep layer					20.9	5.8	-	None			27.5	9	3.9	<0.82	<0.61
			Surface layer	2015/6/16	Cloudy	25.4	7.3	24.5	0.5	Dark grayish reddish yellow	None	1.0	23.1	2	1.1	<0.68	<0.75	
			Deep layer					22.9	6.3	-	None			27.2	3	0.8	<0.70	<0.88
			Surface layer	2015/7/28	Sunny	32.8	7.8	29.8	0.5	Dark grayish yellow	None	0.9	17.6	9	6.8	<0.85	<0.80	
			Deep layer					26.5	6.8	-	None			25.0	3	2.5	<0.68	<0.69
			Surface layer	2015/9/1	Cloudy	24.1	7.1	23.2	0.5	Grayish yellow	None	1.0	14.2	13	4.7	<0.84	<0.80	
			Deep layer					23.0	6.1	-	None			30.0	3	1.3	<0.63	<0.80
			Surface layer	2015/9/15	Sunny	25.2	7.3	22.3	0.5	Grayish yellow	None	0.6	8.5	32	17.0	<0.58	<0.75	
			Deep layer					22.9	6.3	-	None			26.2	4	3.0	<0.82	<0.96
			Surface layer	2015/11/16	Sunny	20.0	6.9	17.8	0.5	Dark grayish yellow green	None	4.0	18.5	3	1.6	<0.65	<0.69	
			Deep layer					18.5	5.9	-	None			29.4	13	4.4	<0.95	<0.75
			Surface layer	2016/2/5	Sunny	11.5	6.8	10.7	0.5	Dark grayish yellow green	None	3.0	28.7	5	2.7	<0.67	<0.63	
			Deep layer					10.6	5.8	-	None			30.8	2	2.0	<0.72	<0.75
			Surface layer	2015/5/19	Cloudy	21.4	4.4	21.6	0.5	Grayish yellow green	None	1.0	15.7	16	8.2	<0.94	<0.75	
			Deep layer					20.5	3.4	-	None			28.3	18	6.8	<0.70	<0.55
			Surface layer	2015/6/16	Cloudy	27.0	5.1	24.1	0.5	Reddish yellowish dark gray	None	1.0	22.4	4	1.6	<0.72	<0.63	
			Deep layer					23.2	4.1	-	None			26.5	<1	0.5	<0.65	<0.63
Surface layer	2015/7/28	Sunny	34.2	5.6	30.0	0.5	Dark grayish yellow	None	0.9	15.5	10	7.6	<0.63	<0.63				
Deep layer					27.5	4.6	-	None			22.6	5	4.5	<0.70	<0.63			
Surface layer	2015/9/1	Cloudy	24.8	4.9	23.9	0.5	Dark grayish greenish yellow	None	1.0	9.0	5	1.6	<0.52	<0.55				
Deep layer					23.5	3.9	-	None			24.4	5	2.4	<0.84	<0.75			
Surface layer	2015/9/15	Sunny	24.4	5.0	23.8	0.5	Grayish yellow yellow	None	0.6	6.9	14	11.0	<0.73	<0.63				
Deep layer					23.9	4.0	-	None			19.5	19	8.8	<0.89	<0.69			
Surface layer	2015/11/16	Sunny	20.7	5.3	18.6	0.5	Grayish yellow green	None	2.1	19.2	4	1.9	<0.85	<0.80				
Deep layer					18.5	4.3	-	None			27.0	1	0.8	<0.75	<0.69			
Surface layer	2016/2/5	Sunny	11.5	6.2	10.9	0.5	Dark grayish yellow green	None	2.4	21.3	4	2.6	<0.79	<0.80				
Deep layer					10.7	5.2	-	None			27.1	7	2.8	<0.59	<0.80			
Surface layer	2015/5/19	Cloudy	20.2	10.3	21.0	0.5	Dark grayish yellow green	None	1.7	20.9	4	3.6	<0.69	<0.55				
Deep layer					17.9	9.3	-	None			30.7	1	0.9	<0.93	<0.78			
Surface layer	2015/8/25	Cloudy	23.4	11.1	24.8	0.5	Dark grayish yellow red	None	1.4	19.8	1	0.8	<0.73	<0.88				
Deep layer					22.4	10.1	-	Medium hydrogen sulfide			27.5	1	0.8	<0.85	<0.84			
Surface layer	2015/11/16	Sunny	22.0	11.3	19.0	0.5	Dark grayish yellow green	None	3.6	22.6	1	0.8	<0.80	<0.80				
Deep layer					19.2	10.3	-	None			31.0	3	2.3	<0.70	<0.69			
Surface layer	2016/2/5	Sunny	12.5	11.2	11.7	0.5	Dark grayish yellow green	None	3.1	26.1	2	2.0	<0.66	<0.84				
Deep layer					11.6	10.2	-	None			30.6	5	2.6	<0.74	<0.63			

Tokyo Coastal areas (Sediment) 1/1

No.	Location		Sampling Date	Weather	Air temperature (°C)	Water depth (m)	Sediment																	Remarks	
	Water area						General items											Sediment content (%)	Density (g/cm ³)	Property	Activity concentration [Bq/kg(dry)]				
							Sediment temperature (°C)	Sample length (cm)	Color	Odor	Grain size distribution(%)						Cs-134				Cs-137	Total			
											Coarse gravel	Medium gravel	Fine gravel	Coarse sand	Medium sand	Fine sand							Silt		Clay
C o a s t a l a r e a s	65	Approx. 1 km offshore of Kyu-Edogawa River Estuary	Offshore of Kyu-Edogawa River Estuary	2015/5/19	Cloudy	23.2	6.8	18.8	14	Black	Medium hydrogen sulfide	0.0	0.0	0.0	0.0	0.0	2.0	77.8	20.2	32.3	2.581	Silt	100	310	410
				2015/6/16	Cloudy	25.4	7.3	21.0	8	Black	Faint hydrogen sulfide	0.0	0.0	0.0	0.0	17.3	58.4	24.3	45.2	2.620	Silt	57	210	267	
				2015/7/28	Sunny	32.8	7.8	26.1	6	Black	Faint hydrogen sulfide	0.0	0.0	0.0	0.1	1.6	49.5	33.7	15.2	48.9	2.668	Silt/sand	16	93	109
				2015/9/1	Cloudy	24.1	7.1	23.2	9	Black	Medium hydrogen sulfide	0.0	0.0	0.0	0.1	0.3	2.3	72.1	25.3	29.4	2.605	Silt	46	220	266
				2015/9/15	Sunny	25.2	7.3	23.4	10	Olive black	Faint hydrogen sulfide	0.0	0.0	0.0	0.0	0.0	2.8	66.9	30.3	32.4	2.649	Silt	55	280	335
				2015/11/16	Sunny	20.0	6.9	18.5	10	Black	Faint sewage	0.0	0.0	0.0	0.0	0.1	0.2	69.2	30.6	37.5	2.613	Silt	28	170	198
	2016/2/5	Sunny	11.5	6.8	11.5	6	Black	Faint sewage	0.0	0.0	0.0	0.4	3.3	47.7	31.3	17.3	51.0	2.696	Silt/sand	37	160	197			
	2015/5/19	Cloudy	21.4	4.4	19.5	11	Olive black	None	0.0	0.0	0.0	0.0	0.2	1.4	72.7	25.7	38.1	2.631	Silt	30	150	180			
	2015/6/16	Cloudy	27.0	5.1	21.5	7	Olive black	Faint swamp	0.0	0.0	0.0	0.0	0.1	0.8	71.6	27.5	44.5	2.643	Silt	45	150	195			
	2015/7/28	Sunny	34.2	5.6	25.9	7	Black	None	0.0	0.0	0.0	0.0	0.1	0.6	72.0	27.4	39.9	2.623	Silt	50	230	280			
	2015/9/1	Cloudy	24.8	4.9	23.8	7	Black	Faint hydrogen sulfide	0.0	0.0	0.0	0.0	0.1	0.4	71.7	27.8	38.3	2.645	Silt	38	210	248			
	2015/9/15	Sunny	24.4	5.0	23.5	8	Olive black	None	0.0	0.0	0.0	0.0	0.0	0.7	73.1	26.1	40.4	2.639	Silt	44	190	234			
2015/11/16	Sunny	20.7	5.3	18.3	10	Olive black	None	0.0	0.0	0.0	0.0	0.1	4.5	68.7	26.6	37.9	2.592	Silt	62	260	322				
2016/2/5	Sunny	11.5	6.2	11.5	7	Olive black	Faint sewage	0.0	0.0	0.0	0.0	0.1	0.2	72.6	27.1	41.1	2.688	Silt	30	200	230				
2015/5/19	Cloudy	20.2	10.3	16.8	15	Black	Faint hydrogen sulfide	0.0	0.0	0.0	0.0	0.0	1.2	74.9	23.8	23.5	2.598	Silt	20	63	83				
2015/8/25	Cloudy	23.4	11.1	22.4	10	Black	Medium hydrogen sulfide	0.0	0.0	0.0	0.1	1.1	11.4	44.3	43.1	21.5	2.364	Silt	23	87	110				
2015/11/16	Sunny	22.0	11.3	18.8	15	Black	Faint hydrogen sulfide	0.0	0.0	0.0	0.0	0.0	0.7	68.1	31.2	22.7	2.629	Silt	15	74	89				
2016/2/5	Sunny	12.5	11.2	12.2	15	Black	Medium hydrogen sulfide	0.0	0.0	0.0	0.1	0.2	1.5	62.2	36.1	21.9	2.687	Silt	19	65	84				

