

Artificial radioactive materials detected from environmental radiation monitoring samples collected around Kashiwazaki Kariwa Nuclear Power Station in 2011

In accordance with “Annual plan of environmental radioactivity monitoring survey at around Kashiwazaki Kariwa Nuclear Power Station” Tokyo Electric Power Company has been conducting environmental radioactivity monitoring survey at around Kashiwazaki Kariwa Nuclear Power Station. Since artificial radioactive materials have been detected from environmental samples from 1Q, we report the issue here.

Nuclide Analysis Results of Environmental Samples Collected at Kashiwazaki Kariwa Nuclear Power Station (in 2011)

Name of Sample		Unit	Sampling Month (plan - actual)	Preliminary results of measurement for 1Q of 2011 (data range)	Measurement results during the contrasting period (data range of the nuclide)		Past measurement results (Jan, 1985 - 2005)
					Recent survey (2006 - 2010)	Preliminary survey (- Dec, 1984)	
Suspended Dust		Bq/m ³	Every Month	(April) Cs-134 0.00057 ~ 0.00062 Cs-137 0.00054 ~ 0.00058 Nb-95 Not Detectable ~ 0.000086 Te-129m Not Detectable ~ 0.00018 (May) Cs-134 0.00023 ~ 0.00024 Cs-137 0.00023 ~ 0.00024 Nb-95 Not Detectable ~ 0.000083	Cs-134 Not Detectable ~ 0.000093 Cs-137 Not Detectable ~ 0.000069 Nb-95 Not Detectable Te-129m Not Detectable	Cs-134 Not Detectable Cs-137 Not Detectable ~ 0.00011 Nb-95 Not Detectable ~ 0.000019 Te-129m Not Detectable	Cs-134 Not Detectable ~ 0.0030 Cs-137 Not Detectable ~ 0.0063 Nb-95 Not Detectable ~ 0.000037 Te-129m Not Detectable ~ 0.0033
Land Water	Drinkable Water	Bq/	Apr, Jul, Oct, Feb	Cs-137 Not Detectable	Cs-137 Not Detectable ~ 0.0015	Cs-137 Not Detectable	Cs-137 Not Detectable ~ 0.0023
				H-3 0.54 ~ 0.60	H-3 Not Detectable ~ 1.2	H-3 1.6 ~ 4.4	H-3 Not Detectable ~ 2.6
Soil	Land Soil	Bq/kg (dry)	May, Nov	Cs-137 1.4 ~ 4.6	Cs-137 2.2 ~ 6.9	Cs-137 0.85 ~ 29	Cs-137 1.9 ~ 19
				Sr-90 To be measured	Sr-90 Not Detectable ~ 0.21		
Agricultural Product	Rice (polished)	Bq/kg (raw)	Harvest time		Cs-137 Not Detectable ~ 0.014 Sr-90 Not Detectable	Cs-137 0.041 ~ 0.15	Cs-137 Not Detectable ~ 0.089
	Cabbage (Green Stem)		Harvest time		Cs-137 Not Detectable ~ 0.039	Cs-137 0.022 ~ 0.12	Cs-137 Not Detectable ~ 0.20
	White Radish (Root)		Harvest time		Cs-137 Not Detectable ~ 0.045 Sr-90 0.028	Cs-137 Not Detectable ~ 0.26	Cs-137 Not Detectable ~ 0.19
Animal Product	Milk (Raw Milk)	Bq/	May, Aug, Nov, Feb	I-131 Not Detectable Cs-134 Not Detectable ~ 0.025 Cs-137 0.021 ~ 0.025	I-131 Not Detectable Cs-134 Not Detectable Cs-137 Not Detectable ~ 0.022	I-131 Not Detectable Cs-134 Not Detectable Cs-137 0.030 ~ 0.25	I-131 Not Detectable ~ 1.7 Cs-134 Not Detectable ~ 0.089 Cs-137 Not Detectable ~ 0.85
				Sr-90 To be measured	Sr-90 Not Detectable ~ 0.022		
Index Organism	Pine Needle	Bq/kg (raw)	May, Aug, Nov, Mar	Cs-134 2.2 ~ 2.8 Cs-137 2.3 ~ 2.8	Cs-134 Not Detectable Cs-137 Not Detectable ~ 0.37	Cs-134 Not Detectable Cs-137 0.18 ~ 6.7	Cs-134 Not Detectable ~ 13 Cs-137 0.046 ~ 26
				Seawater (Upper Layer)	Bq/	May, Jul, Oct, Feb	Cs-137 0.0021 ~ 0.0022
				H-3	H-3	H-3	H-3

			Not Detectable	Not Detectable ~ 3.5	1.4 ~ 2.9	Not Detectable ~ 5.2
				Sr-90 0.0021		

Name of Sample	Unit	Sampling Month (plan - actual)	Preliminary results of measurement for 1Q of 2011 (data range)	Measurement results during the contrasting period (data range of the nuclide)		Past measurement results (Jan, 1985 - 2005)	
				Recent survey (2006 - 2010)	Preliminary survey (- Dec,1984)		
Marine Soil (Surface Soil)	Bq/kg (dry)	May, Oct	Cs-137 Not Detectable	Cs-137 Not Detectable	Cs-137 Not Detectable	Cs-137 Not Detectable~ 1.0	
Marine Product	sea bream (edible part)	Bq/kg (raw)	Harvest time (May) Cs-137 0.11	Cs-137 0.080 ~ 0.11	Cs-137 0.21 ~ 0.24	Cs-137 0.11 ~ 0.26	
	flounder (edible part)		Harvest time (May) Cs-137 0.18	Cs-137 0.11 ~ 0.16	Cs-137 0.24 ~ 0.28	Cs-137 0.12 ~ 0.74	
	turban shell (edible part)		Harvest time	Cs-137 Not Detectable ~ 0.058 Sr-90 0.015 ~ 0.023	Cs-137 0.093	Cs-137 Not Detectable ~ 0.1	
	brown seaweed (green stem)		Harvest time (May) I-131 Not Detectable Cs-137 Not Detectable	I-131 Not Detectable Cs-137 Not Detectable	I-131 Not Detectable Cs-137 0.078	I-131 Not Detectable ~ 48 Cs-137 Not Detectable ~ 0.058	
Index Organism	sargasso (green stem)	Bq/kg (raw)	May, Sep, Nov, Feb	I-131 0.18 ~ 0.23 Cs-134 Not Detectable ~ 0.24 Cs-137 0.13 ~ 0.26 Sr-90 To be measured	I-131 Not Detectable Cs-134 Not Detectable Cs-137 Not Detectable ~ 0.11 Sr-90 0.057 ~ 0.058	I-131 Not Detectable Cs-134 Not Detectable Cs-137 Not Detectable ~ 0.16	I-131 Not Detectable ~ 81 Cs-134 Not Detectable ~ 0.22 Cs-137 Not Detectable ~ 0.56

(Note)

- 1 Measurement results represents the range of measured figure of the detected artificial radioactive materials. In instrumental analysis, Cs-137 was described as substitute for the samples without artificial radioactive nuclides.
- 2 Radiochemical analysis was adopted for H-3 and Sr-90.
- 3 Density of radioactivity is described to two significant figures.
- 4 The number of sampling points for pine needles have increased since 2009, and the sampling point around MP-2 and MP-8 were moved to the north and south part of the station respectively. As such, data from the previous points are included in the past measurement results.
- 5 Sr-90 has been analysed since 2009.
- 6 With regard to the data range of H-3 in the recently collected seawater, the measured figure (3.5Bq/) for 4Q of 2008 has been removed since it seemed to have some impact from the planned discharge of liquid waste.
Items previously announced