

Result of gamma ray nuclide analysis of soil

1.Result of measurement: The results of gamma ray nuclide analysis from the samples taken in the power station are as follows. Analysis was conducted on all samples which we conducted plutonium analysis.

2. Valuation: The result of gamma ray nuclide analysis of soil conducted by Fukushima Prefecture in FY 2009 is shown below. Compared to this, higher radioactivity density has been detected.

<Results of the soil analysis conducted by Fukushima Prefecture in FY 2009>

Cs-137: ND ~ 21Bq/kg·dry soil, Others: ND

(unit: Bq/kg·dry soil)

Sampling spot	[Fixed point]*1 Playground (west-northwest approx. 500m) *2		[Fixed point]*1 Forest of wild birds (west approx. 500m) *2		[Fixed point]*1 Adjacent to industrial waste disposal facility (south-southwest approx. 500m) *2		
	3/31	4/4	3/31	4/4	3/31	4/4	
Date of sampling	3/31	4/4	3/31	4/4	3/31	4/4	
Analyses Organization	JAEA	Japan Chemical Analysis Center*3	JAEA	Japan Chemical Analysis Center*3	JAEA	Japan Chemical Analysis Center*3	
Date of analysis	4/1	4/6	4/1	4/6	4/1	4/6	
Nuclide	I-131(approx. 8 days)	2.6E+06	8.1E+05	9.5E+03	1.4E+04	5.9E+06	1.6E+06
	I-132(approx. 2 hours)	*4	2.8E+04	*4	2.9E+01	*4	5.2E+04
	Cs-134(approx. 2 years)	5.0E+05	3.8E+05	1.2E+03	6.7E+02	3.8E+06	8.1E+05
	Cs-136(approx. 13 days)	4.6E+04	2.0E+04	1.2E+02	3.7E+01	3.7E+05	4.3E+04
	Cs-137(approx. 30 years)	4.9E+05	3.8E+05	1.2E+03	6.7E+02	3.8E+06	7.9E+05
	Te-129m(approx. 34 days)	3.2E+05	4.0E+05	ND	4.2E+02	2.2E+06	7.0E+05
	Te-132(approx. 3 days)	1.2E+05	3.6E+04	2.7E+02	3.2E+01	8.4E+05	6.6E+04
	Ba-140(approx. 13 days)	1.0E+04	ND	ND	ND	3.3E+04	ND
	Nb-95(approx. 35 days)	ND	ND	ND	ND	ND	ND
	Ru-106(approx. 370 days)	2.1E+04	ND	ND	ND	6.1E+04	ND
	Mo-99(approx. 66 hours)	ND	ND	ND	ND	ND	ND
	Tc-99m(approx. 6 hours)	ND	ND	ND	ND	1.1E+04	ND
	La-140(approx. 2 days)	1.3E+04	ND	ND	ND	4.7E+04	ND
	Be-7(aapprox. 53 days)	ND	ND	ND	ND	ND	ND
Ag-110m(approx. 250 days)	3.2E+03	ND	ND	ND	ND	ND	

*1 In regard to fixed points "playground" and "Adjacent to industrial waste disposal facility", sampling was conducted alongside the previous sampling point in order to avoid overlap. In regard to fixed point "forest of wild birds", sampling was conducted on the same sampling point but in deeper direction.

*2 Distance from the stack of Unit 1, 2

*3 Analysis results from Japan Chemical Analysis Center do not consider half-life until the sampling date.

*4 Regarding parent nuclide and daughter nuclide forming radiative balance, radioactivity densities are measured on both nuclides and if similar (within 1 order), radioactivity densities are stated for both nuclides in the above chart. If daughter nuclide (especially short-half-life radionuclide) is relatively larger (more than 2 order) than parent nuclide, we verified radioactivity density of parent nuclide and stated it in the above chart (I-132 are verified as its parent nuclide Te-132).