

Result of gamma ray nuclide analysis of soil

- 1.Result of measurement: The results of gamma ray nuclide analysis 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 in Fukushima Prefecture during 2011 is shown below. Compared to this, higher radioactivity density has been detected.
 <Results of the soil analysis in Fukushima Prefecture conducted in 2011>
 Cs-137: ND~21Bq/kg·dry soil, Others: ND

(unit: Bq/kg·dry soil)

Sampling spot	【Fixed point①】*1 Playground (west-northwest approx. 500m)*2			【Fixed point②】*1 Forest of wild birds (west approx. 500m)*2		【Fixed point③】*1 Adjacent to industrial waste disposal facility (south-southwest approx. 500m)*2		④Front of administration Building of Unit 5/6 (north approx. 1,000m)*2	⑤Adjacent to solid waste storage 1/2 (north approx. 500m)*2	⑥south- southwest approx. 500m*2	⑦south- southwest approx. 750m*2	⑧south- southwest approx. 1,000m*2	
	Date of sampling	3/21	3/25	3/28	3/25	3/28	3/25	3/28	3/25	3/22	3/22	3/22	3/22
Analytical body	JAEA	JAEA	Japan Chemical Analysis Center*3	JAEA	Japan Chemical Analysis Center*3	JAEA	Japan Chemical Analysis Center*3	JAEA	JAEA	JAEA	JAEA	JAEA	
Date of analysis	3/24	3/28	3/30	3/28	3/30	3/28	3/30	3/28	3/25	3/25	3/25	3/25	
Nuclide	I-131(approx. 8 days)	5.8E+06	5.7E+06	3.8E+06	3.0E+06	3.9E+04	1.2E+07	2.6E+06	4.6E+05	3.1E+06	7.9E+05	2.2E+06	5.4E+06
	I-132(approx. 2 hours)	*4	*4	2.3E+05	*4	1.3E+02	*4	1.5E+05	*4	*4	*4	*4	*4
	Cs-134(approx. 2 years)	3.4E+05	4.9E+05	5.3E+05	7.7E+04	3.2E+02	3.5E+06	9.7E+05	6.8E+04	9.5E+05	8.7E+03	1.7E+04	1.6E+05
	Cs-136(approx. 13 days)	7.2E+04	6.1E+04	3.3E+04	1.0E+04	2.8E+01	4.6E+05	6.9E+04	8.6E+03	1.1E+05	1.9E+03	2.2E+03	2.5E+04
	Cs-137(approx. 30 years)	3.4E+05	4.8E+05	5.1E+05	7.6E+04	3.2E+02	3.5E+06	9.3E+05	6.7E+04	1.0E+06	2.0E+04	1.6E+04	1.6E+05
	Te-129m(approx. 34 days)	2.5E+05	2.9E+05	8.5E+05	5.3E+04	ND	2.7E+06	6.0E+05	2.8E+04	8.9E+05	9.5E+03	1.9E+04	1.7E+05
	Te-132(approx. 3 days)	6.1E+05	3.4E+05	3.0E+05	6.5E+04	1.4E+02	3.1E+06	2.0E+05	3.2E+04	1.9E+06	2.1E+04	3.9E+04	3.8E+05
	Ba-140(approx. 13 days)	1.3E+04	1.5E+04	ND	2.5E+03	ND	ND	ND	ND	8.0E+04	ND	ND	ND
	Nb-95(approx. 35 days)	1.7E+03	2.4E+03	ND	ND	ND	5.3E+03	ND	ND	8.1E+03	ND	ND	7.9E+02
	Ru-106(approx. 370 days)	5.3E+04	ND	ND	6.4E+03	ND	2.7E+05	ND	ND	6.8E+04	1.9E+03	ND	3.2E+04
	Mo-99(approx. 66 hours)	2.1E+04	ND	ND	ND	ND	6.6E+04	ND	ND	ND	ND	ND	ND
	Tc-99m(approx. 6 hours)	2.3E+04	2.0E+04	ND	ND	ND	4.5E+04	ND	1.8E+03	2.3E+04	ND	ND	8.3E+03
	La-140(approx. 2 days)	3.3E+04	3.7E+04	ND	2.3E+03	ND	9.7E+04	ND	2.5E+03	2.1E+05	4.2E+02	6.2E+02	7.8E+03
	Be-7(aapprox. 53 days)	ND	ND	ND	ND	ND	ND	ND	ND	3.2E+04	ND	ND	ND
	Ag-110m(approx. 250 days)	1.1E+03	2.6E+03	ND	ND	ND	ND	ND	1.7E+02	1.8E+04	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).