

Fukushima Daiichi Nuclear Power Station: Plutonium analysis result in the soil

1. Analysis result

(Unit: Bq/kg· Dry soil)

Sampling spot ( ): Distance from the stack of Unit 1, 2	Date of sampling/ Analyses organization	Pu-238	Pu-239, Pu-240
Playground ( west-northwest approx. 500m )	April 7/ JAEA	$( 1.3 \pm 0.24 ) \times 10^{-1}$	N.D.
Forest of wild birds ( west approx. 500m )		N.D.	N.D.
Adjacent to industrial waste disposal facility ( south-southwest approx. 500m )		N.D.	N.D.
Playground ( west-northwest approx. 500m )	April 11/ Japan Chemical Analysis Center	$( 1.2 \pm 0.12 ) \times 10^{-1}$	$( 5.9 \pm 0.78 ) \times 10^{-2}$
Forest of wild birds ( west approx. 500m )		N.D.	$( 1.2 \pm 0.38 ) \times 10^{-2}$
Adjacent to industrial waste disposal facility ( south-southwest approx. 500m )		$( 8.3 \pm 0.94 ) \times 10^{-2}$	$( 3.2 \pm 0.56 ) \times 10^{-2}$
Soil in Japan*		N.D. $\sim 1.5 \times 10^{-1}$	N.D. $\sim 4.5$

\*: Ministry of Education, Culture, Sports, Science and Technology “Environmental Radiation Database, ” 1978 - 2008

2. Valuation

Detected densities of Pu-238, 239, and Pu-240 are the same level as those of the measured fallouts in Japan in the cases of previous nuclear tests in the atmosphere. However, since densities of Pu-238 detected in the playground and in area adjacent to industrial waste disposal facility on April 11<sup>th</sup> are higher than those of Pu-239 and 240 and radioactive ratio (Pu-238/Pu-239,240) exceeds 0.026, which is the index as the effect of previous nuclear tests in the atmosphere, this can be considered to be caused by the nuclear accident of this time.

Meanwhile, from the playground and from area adjacent to industrial waste disposal facility, although Pu-238, 239, and Pu-240 are detected from the samples taken on March 21<sup>st</sup> and after, those values have not been greatly changed.

End