

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

## 1. Analysis result

( Unit : Bq/kg·dry soil )

Sampling spot ( ):Distance from the stack of Unit 1, 2	Sampling date/Analyzed organization	U-234	U-235	U-238
Playground (west-northwest approx. 500m)	June 6 Japan	8.0±0.41	0.38±0.072	8.8±0.44
Near the industrial waste disposal plant (south-southwest approx. 500m)	Chemical Analysis Center	5.9±0.36	0.29±0.070	5.7±0.35
Natural Uranium specific radioactivity (Bq/g)		$1.2 \times 10^4$	$5.7 \times 10^2$	$1.2 \times 10^4$
Natural Uranium abundance ratio (wt%)		0.0054	0.72	99.3

## 2. Evaluation

Uranium detected for this analysis is valued as the same level as in the natural condition for the following reasons.

- Radioactive densities of U-234 and U-238 are same in the sampling and , where Uranium in nature forms radioactive balance (same radioactivity density between U-234 and U-238).

- U-235 abundance ratio of the sampling and is almost same as the natural U-235 abundance ratio, which is  $U-235/U-238 = 0.0073$ .

U-235 of the sampling :  $4.7 \times 10^{-6}g$  (0.38Bq/kg Dry soil)

U-238 of the sampling :  $7.1 \times 10^{-4}g$  (8.8Bq/kg Dry soil)

$U-235/U-238=0.0067^*$

U-235 of the sampling :  $3.6 \times 10^{-6}g$  (0.29Bq/kg Dry soil)

U-238 of the sampling :  $4.6 \times 10^{-4}g$  (5.7Bq/kg Dry soil)

$U-235/U-238=0.0079^*$

\* The above values may not match the calculation due to the rounding off.

END