Result of sampling of gas inside the primary containment vessel of Unit 2 in Fukushima Daiichi Nuclear Power Station

【Place of Sampling】: Unit 2 PCV gas sampling system intake

【Date of Sampling】: Wed. November 16, 2011 13:02

[Measurement Result]:

Nuclide		Radioactive material density (Bq/cm ³)	Detection limits (Bq/cm³)	Half-life (approx.)
Gas Vial	I-131	Below detection limits	1.4×10^{-1}	8 days
	Cs-134	Below detection limits	3.4×10^{-1}	2 years
	Cs-137	Below detection limits	3.9×10^{-1}	30 years
	Kr-85	7.5×10^2	2.8×10^{1}	11 years
	Xe-131m	Below detection limits	4.3×10^{0}	12 days
	Xe-133	Below detection limits	3.0×10^{-1}	5 days
	Xe-135	Below detection limits	1.2 × 10 ⁻¹	9 hours

Short half-life Xe were below detection limits in any case. less than criterion of re-criticality, 1 Bq/cm3 (Xe-135)

Result of sampling of gas inside the primary containment vessel of Unit 2 in Fukushima Daiichi Nuclear Power Station

【Place of Sampling】: Unit 2 PCV gas sampling system outlet

【Date of Sampling】: Wed. November 16, 2011 12:21

[Measurement Result]:

Nuclide		Radioactive material density (Bq/cm ³)	Detection limits (Bq/cm³)	Half-life (approx.)
Gas Vial	I-131	Below detection limits	1.4×10^{-1}	8 days
	Cs-134	Below detection limits	3.4×10^{-1}	2 years
	Cs-137	Below detection limits	3.9×10^{-1}	30 years
	Kr-85	4.2×10^2	2.9×10^{1}	11 years
	Xe-131m	Below detection limits	4.9×10^{0}	12 days
	Xe-133	Below detection limits	2.7×10^{-1}	5 days
	Xe-135	Below detection limits	1.2 × 10 ⁻¹	9 hours

Result of sampling of gas inside the primary containment vessel of Unit 2 in Fukushima Daiichi Nuclear Power Station

【Date of Sampling】: 11:47 - 11:57 on Wed. November 16, 2011 (particle filter)

11:58 - 12:28 on Wed. November 16, 2011 (charcoal filter)

[Measurement Result]:

Nuclide		Radioactive density (Bq/cm ³)	Detection limit (Bq/cm ³)	Half life period (approx.)
Particle filter	I-131	Below detection limit	2.7 x 10 ⁻⁶	8 days
	Cs-134	Below detection limit	7.1 x 10 ⁻⁶	2 years
	Cs-137	1.1 x 10⁻⁵	7.8 x 10 ⁻⁶	30 years

Nuclide		Radioactive density (Bq/cm ³)	Detection limit (Bq/cm³)	Half life period (approx.)
Charcoal filter	I-131	Below detection limit	3.2 x 10 ⁻⁶	8 days
	Cs-134	4.4 x 10 ⁻⁶	3.6 x 10 ⁻⁶	2 years
	Cs-137	Below detection limit	4.1 x 10 ⁻⁶	30 years
	Kr-85	4.2 x 10 ²	1.1 x 10 ⁰	11 years
	Xe-131m	Below detection limit	2.6 x 10 ⁻¹	12 days
	Xe-133	Below detection limit	2.1 x 10 ⁻²	5 days
	Xe-135	2.9 x 10 ⁻²	5.6 x 10 ⁻³	9 hours

The radioactive density and detection limit of rare gases (Kr-85,Xe-131m,Xe-133,Xe-135) are evaluated by the result collected at the gas vial container of charcoal filter's rare gas capture ratio.

(Reference) The following are the values before evaluating by the rare gas capture ratio as of November 2

<u>Nuclide</u>	Radioactive density (Bq/cm ³)	Detection limit (Bq/cm ³)
Kr-85	2.3×10^{-1}	5.8×10^{-4}
Xe-131m	Below detection limit	1.4×10^{-4}
Xe-133	Below detection limit	1.1 × 10 ⁻⁵
Xe-135	1.6 × 10 ⁻⁵	3.0×10^{-6}