

Fukushima Daiichi Nuclear Power Plant Primary Containment Vessel of Unit 2 Sampling results of the air of the gas controlling system

December 7 2011

Tokyo Electric Power Company

【 Sampling location 】 Exit of the gas controlling system of the Primary Containment Vessel
of Fukushima Daiichi Nuclear Power Plant Unit 2

【 sampling date 】 12:13 pm, December 6 2011

【 results 】

Nuclide		Radioactive material density (Bq/cm ³)	Detection limit (Bq/cm ³)	Half life period
Gas vial bottle	I-131	Below detection limit	1.3×10^{-1}	Approx. 8 days
	Cs-134	Below detection limit	3.4×10^{-1}	Approx. 2 years
	Cs-137	Below detection limit	4.0×10^{-1}	Approx. 30 years
	Kr-85	Below detection limit	2.7×10^1	Approx. 11 years
	Xe-131m	Below detection limit	3.0×10^0	Approx. 12 days
	Xe-133	Below detection limit	2.6×10^{-1}	Approx. 5 days
	Xe-135	Below detection limit *	1.0×10^{-1}	Approx. 9hours

All Short half life period Xe were below detection limit.

*below the recriticality standard 1Bq/cm³(Xe-135).

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【 Sampling location 】 Exit of the gas controlling system of the Primary Containment Vessel
of Fukushima Daiichi Nuclear Power Plant Unit 2

【 sampling date 】 11:26 am, December 6 2011

【 results 】

Nuclide		Radioactive material density (Bq/cm ³)	Detection limit (Bq/cm ³)	Half life period
Gas vial bottle	I-131	Below detection limit	1.4×10^{-1}	Approx. 8 days
	Cs-134	Below detection limit	3.4×10^{-1}	Approx. 2 years
	Cs-137	Below detection limit	3.9×10^{-1}	Approx. 30 years
	Kr-85	Below detection limit	2.5×10^1	Approx. 11 years
	Xe-131m	Below detection limit	3.1×10^0	Approx. 12 days
	Xe-133	Below detection limit	2.4×10^{-1}	Approx. 5 days
	Xe-135	Below detection limit	9.3×10^{-2}	Approx. 9hours

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【sampling date】 11:30 am - 11:40 am of December 6 2011 (particle filter)
10:58 am – 11:28 am (Charcoal filter)

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【results】

Nuclide		Radioactive material density (Bq/cm ³)	Detection limit (Bq/cm ³)	Half life period
Particle filter	I-131	Below detection limit	2.9×10^{-6}	Approx. 8 days
	Cs-134	1.9×10^{-5}	7.4×10^{-6}	Approx. years
	Cs-137	2.1×10^{-5}	8.1×10^{-6}	Approx. 30 years

Nuclide		Radioactive material density (Bq/cm ³)	Detection limit (Bq/cm ³)	Half life period
Charcoal filter	I-131	Below detection limit	1.5×10^{-6}	Approx. 8 days
	Cs-134	4.9×10^{-6}	3.8×10^{-6}	Approx. 2 years
	Cs-137	6.5×10^{-6}	4.2×10^{-6}	Approx. 30 years
	Kr-85	1.3×10^{-1}	6.1×10^{-1}	Approx. 11 years
	Xe-131m	Below detection limit	7.9×10^{-2}	Approx. 12 days
	Xe-133	1.4×10^{-2}	5.9×10^{-3}	Approx. 5 days
	Xe-135	2.5×10^{-2}	2.2×10^{-3}	Approx. 9hours

Radioactive material densities and detection limits of noble gas (Kr-85,Xe-131m,Xe-133,Xe-135) was evaluated based on the measured results of the acquisition rate of the noble gas to the charcoal filter with a gas vial bottle (This time we valued according to the largest acquisition rate detected in the past, since the results of the noble gas detection rate was below detection limit)
(reference) Figures before evaluation based on acquisition rate of noble gas

<u>Nuclide</u>	<u>Radioactive material density (Bq/cm³)</u>	<u>Detection limit (Bq/cm³)</u>
Kr-85	6.8×10^{-3}	3.3×10^{-4}
Xe-131m	Below detection limit	4.3×10^{-5}
Xe-133	7.8×10^{-6}	3.2×10^{-6}
Xe-135	1.4×10^{-5}	1.2×10^{-6}