

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

【sampling date】 2:07 pm - 2:17 pm of 2 December 2011 ( particle filter )  
 2:18 pm – to 2:48 pm ( Charcoal filter )

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【results】

	Nuclide	Radioactive material density ( Bq/cm <sup>3</sup> )	Detection limit ( Bq/cm <sup>3</sup> )	Half life period
Particle filter	I-131	Below detection limit	$2.4 \times 10^{-6}$	Approx. 8 days
	Cs-134	Below detection limit	$7.1 \times 10^{-6}$	Approx. 2 years
	Cs-137	$9.5 \times 10^{-6}$	$8.0 \times 10^{-6}$	Approx. 30 years

	Nuclide	Radioactive material density ( Bq/cm <sup>3</sup> )	Detection limit ( Bq/cm <sup>3</sup> )	Half life period
Charcoal filter	I-131	Below detection limit	$1.7 \times 10^{-6}$	Approx. 8 days
	Cs-134	$4.0 \times 10^{-6}$	$3.8 \times 10^{-6}$	Approx. 2 years
	Cs-137	$5.4 \times 10^{-6}$	$4.2 \times 10^{-6}$	Approx. 30 years
	Kr-85	$2.1 \times 10^1$	$5.9 \times 10^{-1}$	Approx. 11 years
	Xe-131m	Below detection limit	$8.8 \times 10^{-2}$	Approx. 12 days
	Xe-133	$1.2 \times 10^{-2}$	$6.6 \times 10^{-3}$	Approx. 5 days
	Xe-135	$2.6 \times 10^{-2}$	$2.4 \times 10^{-3}$	Approx. 9 hours

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/cm<sup>3</sup> )</u>	<u>Detection limit ( Bq/cm<sup>3</sup> )</u>
Kr-85	$1.1 \times 10^{-2}$	$3.2 \times 10^{-4}$
Xe-131m	Below detection limit	$4.8 \times 10^{-5}$
Xe-133	$6.5 \times 10^{-6}$	$3.6 \times 10^{-6}$
Xe-135	$1.4 \times 10^{-5}$	$1.3 \times 10^{-6}$

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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 】 3:18 pm, 2 December 2011

【results】

Nuclide		Radioactive material density ( Bq/cm <sup>3</sup> )	Detection limit ( Bq/cm <sup>3</sup> )	Half life period
Gas vial bottle	I-131	Below detection limit	$1.3 \times 10^{-1}$	Approx. 8 days
	Cs-134	$3.9 \times 10^{-1}$	$3.3 \times 10^{-1}$	Approx. 2 years
	Cs-137	$5.1 \times 10^{-1}$	$3.8 \times 10^{-1}$	Approx. 30 years
	Kr-85	Below detection limit	$2.7 \times 10^1$	Approx. 11 years
	Xe-131m	Below detection limit	$3.1 \times 10^0$	Approx. 12 days
	Xe-133	Below detection limit	$2.6 \times 10^{-1}$	Approx. 5 days
	Xe-135	Below detection limit	$1.0 \times 10^{-1}$	Approx. 9 hours