<u>The results of sampling surveys gas management system</u> in primary containment vessel (Unit 2, Fukushima Daiichi Nuclear Power Station)

November 10, 2011

Tokyo Electric Power Company

[Place of sampling] The entrance of gas management system in primary containment vessel (Unit 2, Fukushima Daiichi Nuclear Power Station)

[Time of sampling] At 3:38pm on November 9, 2011 [Results of sampling]

Nuclide		Radioactivity Density (Bq/cm³)	Detection Limits (Bq/cm ³)	Half-life
	I-131	ND	1 . 3 × 1 0 ⁻¹	Approx. 8 days
	Cs-134	ND	3 . 3 × 1 0 ⁻¹	Approx. 2 years
Vial	Cs-137	ND	3 . 8 × 1 0 ⁻¹	Approx. 30 years
	Kr-85	8 . 8 × 1 0 ¹	2 . 6 × 1 0 ¹	Approx. 11 years
	Xe-131m	ND	3 . 1 × 1 0 ⁰	Approx. 12 days
	Xe-133	ND	2 . 7 × 1 0 ⁻¹	Approx. 5 days
	Xe-135	ND	1 . 1 × 1 0 ⁻¹	Approx. 9 hours

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[Place of sampling] The exit of gas management system in primary containment vessel (Unit 2, Fukushima Daiichi Nuclear Power Station)

[Time of sampling] At 3:11pm on November 9, 2011 [Results of sampling]

Nuclide		Radioactivity Density (Bq/cm³)	Detection Limits (Bq/cm ³)	Half-life
Vial	I-131	ND	1 . 3 × 1 0 ⁻¹	Approx. 8 days
	Cs-134	ND	3 . 3 × 1 0 ⁻¹	Approx. 2 years
	Cs-137	4 . 9 × 1 0 ⁻¹	3 . 8 × 1 0 ⁻¹	Approx. 30 years
	Kr-85	2 . 8 × 1 0 ²	2 . 8 × 1 0 ¹	Approx. 11 years
	Xe-131m	ND	3 . 3 × 1 0 ⁰	Approx. 12 days
	Xe-133	ND	3 . 1 × 1 0 ⁻¹	Approx. 5 days
	Xe-135	ND	1.0×10 ⁻¹	Approx. 9 hours

* Be used as a reference because the value of Radioactivity Density at the exit shows a higher level than at the entrance

<u>The results of sampling surveys gas management system in primary containment vessel</u> (Unit 2, Fukushima Daiichi Nuclear Power Station)

[Place of sampling] The dust radiation monitor of gas management system in primary containment vessel (Unit 2, Fukushima Daiichi Nuclear Power Station) [Time of sampling] November 9, 2011 at 2:40pm ~ 2:50pm (particle filter) at 2:52pm ~ 3:22pm (charcoal filter)

November 10, 2011 Tokyo Electric Power Company

Nuclide		Radioactivity Density (Bq/cm ³)	Detection Limits (Bq/cm ³)	Half-life
Pari	-131	ND	3.0×10 ⁻⁶	Approx. 8 days
icle	Cs-134	2.0×10 ⁻⁵	7.9×10 ⁻⁶	Approx. 2 years
filter	Cs-137	2.9×10 ⁻⁵	8.4×10 ⁻⁶	Approx. 30 years
	Nuclide	Radioactivity Density (Bq/cm ³)	Detection Limits (Bq/cm ³)	Half-life
	-131	ND	4 . 5 × 1 0 ⁻⁶	Approx. 8 days
Char	Cs-134	ND	4 . 2 × 1 0 ⁻⁶	Approx. 2 years
	Cs-137	6 . 2 × 1 0 ⁻⁶	4.6×10 ⁻⁶	Approx. 30 years
coa	Kr-85	2 . 8 × 1 0 ²	4 . 6 × 1 0 ⁻¹	Approx. 11 years
filte	Xe-131m	2 . 9 × 1 0 ⁻¹	9.4×10 ⁻²	Approx. 12 days
Ч,	Xe-133	ND	8 . 5 × 1 0 ⁻³	Approx. 5 days
	Xe-135	1 . 1 × 1 0 ^{- 2}	2.6×10 ⁻³	Approx. 9 hours

*The radioactivity density and the detection limits of rare gases, such as Kr-85,Xe-131m,Xe-133,Xe-135, were calculated from capture rate of rare gases for charcoal filter by vial.

Ref: before calculated from capture rate of rare gases

<u>Nuclide</u>	<u>Radioactivity Density (Bq/cm³)</u>	Detection Limits(Bq/cm ³)
Kr-85	4.8 × 10 ⁻¹	7.9 × 10 ⁻⁴
Xe-131m	4.9 × 10 ⁻⁴	1.6 × 10 ⁻⁴
Xe-133	ND	1.5 × 10⁻⁵
Xe-135	1.9 × 10 ⁻⁵	4.5 × 10 ⁻⁶

<u>The results of sampling surveys gas management system in primary containment vessel</u> (Unit 2, Fukushima Daiichi Nuclear Power Station) Reference>

[Place of sampling] The dust radiation monitor of gas management system in primary containment vessel (Unit 2, Fukushima Daiichi Nuclear Power Station) [Time of sampling] November 1, 2011 at 1:51pm ~ 2:20pm (particle filter) at 2:20pm ~ 2:32pm (charcoal filter)

	Nuclide	Radioactivity Density (Bq/cm ³)	Detection Limits (Bq/cm ³)	Half-life
Part	-131	ND	2.2 × 10 ⁻⁶	Approx. 8 days
ticle	Cs-134	2.3 × 10 ⁻⁵	5.8 × 10 ⁻⁶	Approx. 2 years
filter	Cs-137	3.6 × 10 ⁻⁵	6.1 × 10 ⁻⁶	Approx. 30years

Nuclide		Radioactivity Density (Bq/cm ³)	Detection Limits (Bq/cm ³)	Half-life
	1-131	ND	4.2 × 10⁻ ⁶	Approx. 8 days
0	Cs-134	4.6 × 10 ⁻⁶	3.6 × 10 ⁻⁶	Approx. 2years
Charcoa	Cs-137	6.6 × 10 ⁻⁶	4.1 × 10 ⁻⁶	Approx. 30years
	Kr-85	6.8 × 10 ²	1.2 × 10 ⁰	Approx. 11years
filte	Xe-131m	1.1 × 10 ⁰	2.1 × 10 ⁻¹	Approx. 12days
er	Xe-133	2.2 × 10 ⁻²	2.1 × 10 ⁻²	Approx. 5days
	Xe-135	1.9 × 10 ⁻²	6.4 × 10 ⁻³	Approx. 9 hours

*The radioactivity density and the detection limits of rare gases, such as Kr-85,Xe-131m,Xe-133,Xe-135, were calculated from capture rate of rare gases for charcoal filter by vial.

Ref: before calculated from capture rate of rare gases for public on Nov. 2.

<u>Nuclide</u>	Radioactivity Density (Bq/cm ³)	Detection Limits(Bq/cm ³)
Kr-85	4.4 × 10 ⁻¹	7.6 × 10 ⁻⁴
Xe-131m	6.9 × 10 ⁻⁴	1.3 × 10 ⁻⁴
Xe-133	1.4 × 10 ⁻⁵	1.3 × 10 ⁻⁵
Xe-135	1.2 × 10 ⁻⁵	4.1 × 10 ⁻⁶

November 10, 2011 Tokyo Electric Power Company

 [Place of sampling] The dust radiation monitor of gas management system in primary containment vessel (Unit 2, Fukushima Daiichi Nuclear Power Station)
[Time of sampling] At 1:51pm ~ 2:20pm on November 1, 2011

Nuclide		Radioactivity Density (Bq/cm ³)	Detection Limits (Bq/cm ³)	Half-life
Charcoal filter	I-131	ND	1.8 × 10 ⁻⁶	Approx. 8days
	Cs-134	ND	3.8 × 10 ⁻⁶	Approx. 2 years
	Cs-137	5.3 × 10 ⁻⁶	4.2 × 10 ⁻⁶	Approx. 3 0 years
	Kr-85	5.7 × 10 °	4.9 × 10 ⁻¹	Approx. 1 1 years
	Xe-131m	8.2 × 10 ⁻¹	6.5 × 10 ⁻²	Approx. 1 2 days
	Xe-133	1.0 × 10 ⁻²	5.3 × 10 ⁻³	Approx. 5 days
	Xe-135	2.0 × 10 ⁻²	8.4 × 10 ⁻³	Approx. 9 hours

*The radioactivity density and the detection limits of rare gases, such as Kr-85,Xe-131m,Xe-133,Xe-135, were calculated from capture rate of rare gases for charcoal filter by vial.

Ref: before calculated from capture rate of rare gases for public on Nov. 2.

<u>Nuclide</u>	Radioactivity Density (Bq/cm ³)	Detection Limits (Bq/cm ³)
Kr-85	3.6 × 10 ⁻³	3.1 × 10 ⁻⁴
Xe-131m	5.3 × 10 ⁻⁴	4.2 × 10 ⁻⁵
Xe-133	6.5 × 10 ⁻⁶	3.4 × 10 ⁻⁶
Xe-135	1.3 × 10 ⁻⁵	5.4 × 10 ⁻⁶

<u>The results of sampling surveys gas management system in primary containment vessel</u> (Unit 2, Fukushima Daiichi Nuclear Power Station) Reference>

November 10, 2011 Tokyo Electric Power Company

 [Place of sampling] The dust radiation monitor of gas management system in primary containment vessel (Unit 2, Fukushima Daiichi Nuclear Power Station)
[Time of sampling] At 11:59am ~ 12:29pm on November 2, 2011

Nuclide		Radioactivity Density(Bq/cm ³)	Detection Limits(Bq/cm ³)	Half-life
	I-131	ND	4.4 × 10 ⁻⁶	Approx.8 days
Charcoal filter	Cs-134	7.9 × 10 ⁻⁶	3.6 × 10 ⁻⁶	Approx. 2 years
	Cs-137	ND	4.0 × 10 ⁻⁶	Approx.30 years
	Kr-85	8.3 × 10 ²	1.1 × 10 °	Approx.11 years
	Xe-131m	9.5 × 10 ⁻¹	2.5 × 10 ⁻¹	Approx.12 days
	Xe-133	ND	2.4 × 10 ⁻²	Approx.5 days
	Xe-135	2.7 × 10 ⁻²	6.8 × 10 ⁻³	Approx. 9 hours

*The radioactivity density and the detection limits of rare gases, such as Kr-85,Xe-131m,Xe-133,Xe-135, were calculated from capture rate of rare gases for charcoal filter by vial.

Ref: before calculated from capture rate of rare gases for public on Nov. 2.

<u>Nuclide</u>	<u>Radioactivity Density(Bq/cm³)</u>	Detection Limits(Bq/cm ³)
Kr-85	5.3 × 10 ⁻¹	7.2 × 10 ⁻⁴
Xe-131m	6.1 × 10 ⁻⁴	1.6 × 10 ⁻⁴
Xe-133	ND	1.5 × 10 ⁻⁵
Xe-135	1.7 × 10 ⁻⁵	4.3 × 10 ⁻⁶