

## Nuclides Analysis Result of the Radioactive Materials in the Seawater < Coast, Fukushima Daiichi Nuclear Power Station >

(Data summarized on February 19)

Place of Sampling	North of Unit 5-6 Discharge Channel at Fukushima Daiichi NPS (Approx. 30m North of Unit 5-6 Discharge Channel)		Around South Discharge Channel of Fukushima Daiichi NPS (Approx. 1.3km South of Unit 1-4 Discharge Channel)		② Density Limit Specified by the Reactor Regulation (Bq/L) (The density limit in the water outside the surrounding monitored areas is provided in section 6 of Appendix 2.)
	Time of Sampling		Time of Sampling		
	Feb 18, 2014 7:50 AM		Feb 18, 2014 5:45 AM		
Detected Nuclides (Half-life)	①Density of Sample (Bq/L)	Scaling Factor (①/②)	①Density of Sample (Bq/L)	Scaling Factor (①/②)	
I-131 (Approx. 8 days)	ND(0.82)	-	ND(0.66)	-	40
Cs-134 (Approx. 2 years)	ND(0.66)	-	ND(0.71)	-	60
Cs-137 (Approx. 30 years)	1.1	0.01	0.67	0.01	90

\* The density specified by the Reactor Regulation is converted from Bq/cm<sup>3</sup> to Bq/L.

\* Data of other nuclides is under evaluation.

\* In the case of more than 2 nuclides, the sum of scaling factors to density limits is compared to 1.

\* "ND" indicates that the measurement result is below the detection limit, which is provided in parentheses.

## Analysis Result of Pu in the Seawater

### 1. Measurement Result:

(Data summarized on February 19)  
(Unit: Bq/L)

Place of Sampling	Date	Pu-238	Pu-239+Pu-240
1F, North of Unit 5-6 Discharge Channel	Sep 10, 2013	N.D. [ $<5.7 \times 10^{-6}$ ]	N.D. [ $<5.3 \times 10^{-6}$ ]
1F, Around South Discharge Channel	Sep 10, 2013	N.D. [ $<6.5 \times 10^{-6}$ ]	$(6.8 \pm 2.2) \times 10^{-6}$
15km Offshore of Fukushima Daiichi NPS, Upper Layer	Sep 6, 2013	N.D. [ $<5.3 \times 10^{-6}$ ]	N.D. [ $<5.3 \times 10^{-6}$ ]
Around 3km Offshore of Ukedo River, Upper Layer	Sep 3, 2013	N.D. [ $<5.6 \times 10^{-6}$ ]	N.D. [ $<5.4 \times 10^{-6}$ ]
3km Offshore of Fukushima Daiichi NPS, Upper Layer	Sep 3, 2013	N.D. [ $<6.4 \times 10^{-6}$ ]	N.D. [ $<6.3 \times 10^{-6}$ ]
3km Offshore of Fukushima Daini NPS, Upper Layer	Sep 6, 2013	N.D. [ $<5.3 \times 10^{-6}$ ]	N.D. [ $<4.9 \times 10^{-6}$ ]
The range of the past measurement results obtained in the ocean near Fukushima Daiichi and Daini Nuclear Power Stations (FY2001 - FY2010)*		—	$ND \sim 1.3 \times 10^{-5}$

[ ] shows below the detection limit.

\*: Source "Report on the environmental radioactivity measurement around the Nuclear Power Plant (2011)", Committee on the safety technology of Nuclear Power Plants in Fukushima.

### 2. Analytical Institution: Japan Chemical Analysis Center

### 3. Evaluation:

Given that the density level of Pu-239+Pu-240 detected at 1F, Around South Discharge Channel on September 10, 2013 is within the range of the past density measurements conducted along the seacoasts of 1F and 2F, it cannot be stated with absolute certainty that the presence of these particles is due to the accident.

End

## Analysis Result of Pu in the Seawater

### 1. Measurement Result:

(Data summarized on February 19)  
(Unit: Bq/L)

Place of Sampling	Date	Pu-238	Pu-239+Pu-240
1F, North of Unit 5-6 Discharge Channel	Oct 8, 2013	N.D. [ $<5.2 \times 10^{-6}$ ]	N.D. [ $<5.6 \times 10^{-6}$ ]
1F, Around South Discharge Channel	Oct 8, 2013	N.D. [ $<6.5 \times 10^{-6}$ ]	$(7.8 \pm 2.0) \times 10^{-6}$
15km Offshore of Fukushima Daiichi NPS, Upper Layer	Oct 4, 2013	N.D. [ $<4.5 \times 10^{-6}$ ]	N.D. [ $<4.5 \times 10^{-6}$ ]
Around 3km Offshore of Ukedo River, Upper Layer	Oct 18, 2013	N.D. [ $<8.1 \times 10^{-6}$ ]	N.D. [ $<7.7 \times 10^{-6}$ ]
3km Offshore of Fukushima Daiichi NPS, Upper Layer	Oct 8, 2013	N.D. [ $<4.8 \times 10^{-6}$ ]	N.D. [ $<4.8 \times 10^{-6}$ ]
3km Offshore of Fukushima Daini NPS, Upper Layer	Oct 8, 2013	N.D. [ $<5.1 \times 10^{-6}$ ]	N.D. [ $<5.1 \times 10^{-6}$ ]
The range of the past measurement results obtained in the ocean near Fukushima Daiichi and Daini Nuclear Power Stations (FY2001 - FY2010)*		—	$ND \sim 1.3 \times 10^{-5}$

[ ] shows below the detection limit.

\*: Source "Report on the environmental radioactivity measurement around the Nuclear Power Plant (2011)", Committee on the safety technology of Nuclear Power Plants in Fukushima.

### 2. Analytical Institution: Japan Chemical Analysis Center

### 3. Evaluation:

Given that the density level of Pu-239+Pu-240 detected at 1F, Around South Discharge Channel on October 8, 2013 is within the range of the past density measurements conducted along the seacoasts of 1F and 2F, it cannot be stated with absolute certainty that the presence of these particles is due to the accident.

End

## Analysis Result of Pu in the Seawater

### 1. Measurement Result:

(Data summarized on February 19)  
(Unit: Bq/L)

Place of Sampling	Date	Pu-238	Pu-239+Pu-240
1F, North of Unit 5-6 Discharge Channel	Nov 5, 2013	N.D. [ $<6.5 \times 10^{-6}$ ]	$(7.7 \pm 2.2) \times 10^{-6}$
1F, Around South Discharge Channel	Nov 5, 2013	N.D. [ $<4.7 \times 10^{-6}$ ]	N.D. [ $<4.7 \times 10^{-6}$ ]
15km Offshore of Fukushima Daiichi NPS, Upper Layer	Nov 13, 2013	N.D. [ $<8.1 \times 10^{-6}$ ]	N.D. [ $<8.1 \times 10^{-6}$ ]
Around 3km Offshore of Ukedo River, Upper Layer	Nov 7, 2013	N.D. [ $<5.8 \times 10^{-6}$ ]	$(6.8 \pm 2.0) \times 10^{-6}$
3km Offshore of Fukushima Daiichi NPS, Upper Layer	Nov 7, 2013	N.D. [ $<8.2 \times 10^{-6}$ ]	N.D. [ $<7.8 \times 10^{-6}$ ]
3km Offshore of Fukushima Daini NPS, Upper Layer	Nov 13, 2013	N.D. [ $<6.0 \times 10^{-6}$ ]	N.D. [ $<5.7 \times 10^{-6}$ ]
The range of the past measurement results obtained in the ocean near Fukushima Daiichi and Daini Nuclear Power Stations (FY2001 - FY2010)*		—	$ND \sim 1.3 \times 10^{-5}$

[ ] shows below the detection limit.

\*: Source "Report on the environmental radioactivity measurement around the Nuclear Power Plant (2011)", Committee on the safety technology of Nuclear Power Plants in Fukushima.

### 2. Analytical Institution: Japan Chemical Analysis Center

### 3. Evaluation:

Given that the density level of Pu-239+Pu-240 detected at 1F, Around South Discharge Channel on November 5 and Around 3km Offshore of Ukedo River, Upper Layer on November 7 is within the range of the past density measurements conducted along the seacoasts of 1F and 2F, it cannot be stated with absolute certainty that the presence of these particles is due to the accident.

End

## Analysis Result of Pu in the Seawater

### 1. Measurement Result:

(Data summarized on February 19)  
(Unit: Bq/L)

Place of Sampling	Date	Pu-238	Pu-239+Pu-240
1F, North of Unit 5-6 Discharge Channel	Dec 10, 2013	N.D. [ $<5.8 \times 10^{-6}$ ]	$(6.7 \pm 1.9) \times 10^{-6}$
1F, Around South Discharge Channel	Dec 10, 2013	N.D. [ $<6.5 \times 10^{-6}$ ]	$(1.0 \pm 0.26) \times 10^{-5}$
15km Offshore of Fukushima Daiichi NPS, Upper Layer	Dec 23, 2013	N.D. [ $<7.3 \times 10^{-6}$ ]	N.D. [ $<7.1 \times 10^{-6}$ ]
Around 3km Offshore of Ukedo River, Upper Layer	Dec 3, 2013	N.D. [ $<5.0 \times 10^{-6}$ ]	$(5.3 \pm 1.7) \times 10^{-6}$
3km Offshore of Fukushima Daiichi NPS, Upper Layer	Dec 3, 2013	N.D. [ $<5.0 \times 10^{-6}$ ]	N.D. [ $<5.0 \times 10^{-6}$ ]
3km Offshore of Fukushima Daini NPS, Upper Layer	Dec 23, 2013	N.D. [ $<7.7 \times 10^{-6}$ ]	$(9.9 \pm 2.5) \times 10^{-6}$
The range of the past measurement results obtained in the ocean near Fukushima Daiichi and Daini Nuclear Power Stations (FY2001 - FY2010)*		—	$ND \sim 1.3 \times 10^{-5}$

[ ] shows below the detection limit.

\*: Source "Report on the environmental radioactivity measurement around the Nuclear Power Plant (2011)", Committee on the safety technology of Nuclear Power Plants in Fukushima.

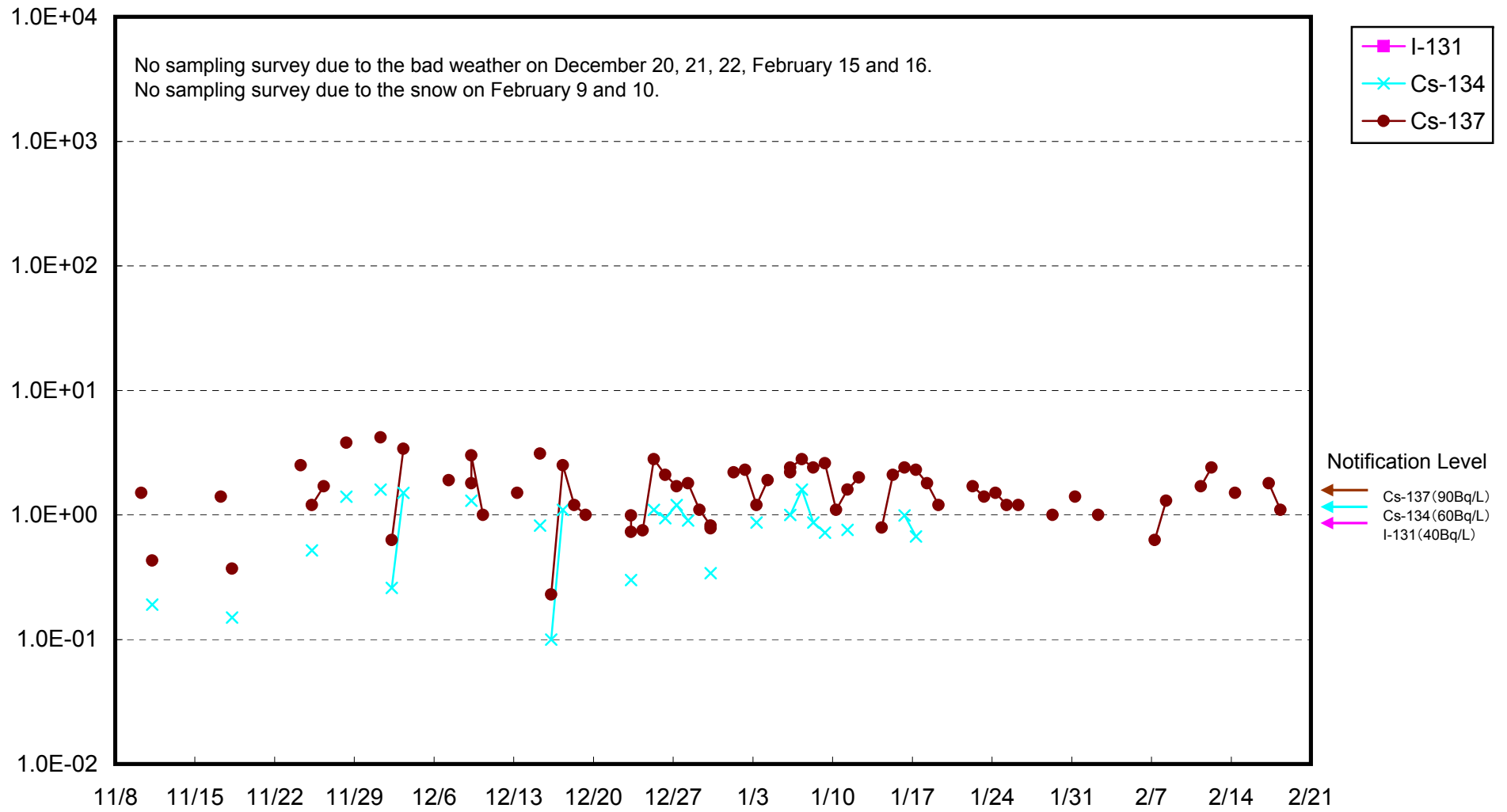
### 2. Analytical Institution: Japan Chemical Analysis Center

### 3. Evaluation:

Given that the density level of Pu-239+Pu-240 detected at 1F, North of Unit 5-6 Discharge Channel and 1F, Around South Discharge Channel on December 10 and Around 3km Offshore of Ukedo River, Upper Layer on December 3 and 3km Offshore of Fukushima Daiichi NPS, Upper Layer on December 23 is within the range of the past density measurements conducted along the seacoasts of 1F and 2F, it cannot be stated with absolute certainty that the presence of these particles is due to

End

Radioactivity Density of the Seawater at 1F Units 5-6 North Discharge Channel (Bq/L)



Radioactivity Density of the Seawater at 1F South Discharge Channel (Bq/L)

