

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

(Data summarized on April 18)

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)			
Time of Sampling	Apr 17, 2014 7:25 AM	Apr 17, 2014 5:31 AM		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.)	
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(0.70)	-	ND(0.77)	-	40
Cs-134 (Approx. 2 years)	ND(0.59)	-	ND(0.84)	-	60
Cs-137 (Approx. 30 years)	ND(0.74)	-	ND(0.76)	-	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.

## Nuclides Analysis Result of Radioactive Materials in the Seawater <1/5>

(Data summarized on April 18)

Place of Sampling (Place No.)	North of Unit 5-6 Discharge Channel at Fukushima Daiichi NPS (Approx. 30m North of Unit 5-6 Discharge Channel) (T-1)		Around South Discharge Channel of Fukushima Daiichi NPS (Approx. 1.3km South of Unit 1-4 Discharge Channel) (T-2-1)		/		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.)
	Date of Sampling	Mar 10, 2014		Mar 10, 2014		/	
Detected Nuclides (Half-life)	①Density of Sample (Bq/L)	Scaling Factor (①/②)	①Density of Sample (Bq/L)	Scaling Factor (①/②)	①Density of Sample (Bq/L)	Scaling Factor (①/②)	
I-131 (Approx. 8 days)	ND(0.79)	—	ND(0.68)	—	/	/	40
Cs-134 (Approx. 2 years)	ND(0.78)	—	ND(0.55)	—	/	/	60
Cs-137 (Approx. 30 years)	0.77	0.01	ND(0.70)	—	/	/	90
H-3 (approx. 12yrs)	4.4	0.00	ND(1.4)	—	/	/	60,000
Gross α	ND(1.5)	—	ND(1.5)	—	/	/	—
Gross β	13	—	13	—	/	/	—
Sr-90 (Approx. 29 years)	0.69	0.02	0.032	0.00	/	/	30

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

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

\* Nuclide analysis results of I-131, Cs-134, Cs-137 and Gross β were announced on March 11. Nuclide analysis results of H-3 were announced on March 14.

\* When the measurement value is below the detection limit, "ND" is marked.

\* Nuclides analysis of Sr-90 was done by Japan Chemical Analysis Center.

(Evaluation)

Although H-3, Gross β, and Sr-90 were detected supposedly as a result of this accident, they are less than the density limit in the water which is specified by the announcement.

## Nuclides Analysis Result of Radioactive Materials in the Seawater <2/5>

(Data summarized on April 18)

Place of Sampling (Place No.)	Around the North Discharge Channel of 2F (T-3) (Around Unit 3-4 Discharge Channel) (Approx. 10km from 1F)	South side of the Ukedo Port (T-6) (Approx. 5.5km north of Unit 5-6 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.)
Date of Sampling	Mar 4, 2014		Mar 11, 2014				
Detected Nuclides (Half-life)	①Density of Sample (Bq/L)	Scaling Factor (①/②)	①Density of Sample (Bq/L)	Scaling Factor (①/②)	①Density of Sample (Bq/L)	Scaling Factor (①/②)	
Cs-134 (Approx. 2 years)	0.05	0.00	0.019	0.00	/	/	60
Cs-137 (Approx. 30 years)	0.14	0.00	0.053	0.00	/	/	90
H-3 (approx. 12yrs)	ND	—	ND	—	/	/	60,000
Gross β	ND	—	ND	—	/	/	—

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

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

\* Nuclide analysis results of Cs-134 and Cs-137 were announced on September 19.

\* When the measurement value is below the detection limit, "ND" is marked. The detection limits are as follows.

H-3: Approx. 0.29Bq/L, All β: Approx. 17Bq/L,

As the detection limit may vary depending on the detectors and sample properties, there are cases where nuclides below the detection limit are detected.

(Evaluation)

H-3 and Gross β were not detected in the sample collected this time.

## Nuclides Analysis Result of Radioactive Materials in the Seawater <3/5>

(Data summarized on April 18)

Place of Sampling (Place No.)	Central Area of Sendai Bay (T-MG5) Upper Layer		3km Offshore of Oarai Shore (T-C) Upper Layer				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.)
Date of Sampling	Mar 4, 2014		Mar 12, 2014				
Detected Nuclides (Half-life)	①Density of Sample (Bq/L)	Scaling Factor (①/②)	①Density of Sample (Bq/L)	Scaling Factor (①/②)	①Density of Sample (Bq/L)	Scaling Factor (①/②)	
Cs-134 (Approx. 2 years)	0.0033	0.00	ND	—	/	/	60
Cs-137 (Approx. 30 years)	0.012	0.00	ND	—	/	/	90
Sr-90 (Approx. 29 years)	ND	—	ND	—	/	/	30

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

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

\* Nuclide analysis results of Cs-134, Cs-137 were announced on March 25 and April 11, 2014.

\* When the measurement value is below the detection limit, "ND" is marked. The detection limits are as follows.

Cs-134: Approx. 0.99Bq/L, Cs-137: Approx. 1.0Bq/L, Sr-90: Approx. 0.009Bq/L

As the detection limit may vary depending on the detectors and sample properties, there are cases where nuclides below the detection limit are detected.

\* Nuclides analysis of Sr-90 was done by Japan Chemical Analysis Center.

(Evaluation)

Sr-90 was not detected in the sample collected this time.

## Nuclides Analysis Result of Radioactive Materials in the Seawater <4/5>

(Data summarized on April 18)

Place of Sampling (Place No.)	15km Offshore of Fukushima Daiichi NPS (T-5) Upper Layer		3km Offshore of Ukedo River (T-D1) Upper Layer		3km Offshore of Fukushima Daiichi NPS (T-D5) Upper Layer		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.)
Date of Sampling	Mar 5, 2014		Mar 4, 2014		Mar 4, 2014		
Detected Nuclides (Half-life)	①Density of Sample (Bq/L)	Scaling Factor (①/②)	①Density of Sample (Bq/L)	Scaling Factor (①/②)	①Density of Sample (Bq/L)	Scaling Factor (①/②)	
Cs-134 (Approx. 2 years)	0.0016	0.00	0.0039	0.00	0.0073	0.00	60
Cs-137 (Approx. 30 years)	0.0042	0.00	0.015	0.00	0.018	0.00	90
H-3 (approx. 12yrs)	ND	—	ND	—	ND	—	60,000
Gross $\alpha$	ND	—	ND	—	ND	—	—
Gross $\beta$	ND	—	ND	—	ND	—	—
Sr-90 (Approx. 29 years)	ND	—	ND	—	ND	—	30

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

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

\* Nuclide analysis results of Cs-134, Cs-137 were announced on April 11, 2014..

\* When the measurement value is below the detection limit, "ND" is marked. The detection limits are as follows.

H-3: Approx. 0.29Bq/L, Gross  $\alpha$ : Approx. 1.9Bq/L, Gross  $\beta$ : Approx. 15Bq/L, Sr-90: Approx. 0.009Bq/L

As the detection limit may vary depending on the detectors and sample properties, there are cases where nuclides below the detection limit are detected.

\* Nuclides analysis of Sr-90 was done by Japan Chemical Analysis Center.

(Evaluation)

H-3, Gross  $\alpha$ , Gross  $\beta$ , and Sr-90 were not detected in the sample collected this time.

## Nuclides Analysis Result of Radioactive Materials in the Seawater <5/5>

(Data summarized on April 18)

Place of Sampling (Place No.)	3km Offshore of Fukushima Daini NPS (T-D9) Upper Layer						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.)
Date of Sampling	Mar 3, 2014						
Detected Nuclides (Half-life)	①Density of Sample (Bq/L)	Scaling Factor (①/②)	①Density of Sample (Bq/L)	Scaling Factor (①/②)	①Density of Sample (Bq/L)	Scaling Factor (①/②)	
Cs-134 (Approx. 2 years)	0.0058	0.00					60
Cs-137 (Approx. 30 years)	0.014	0.00					90
H-3 (approx. 12yrs)	ND	—					60,000
Gross α	ND	—					—
Gross β	ND	—					—
Sr-90 (Approx. 29 years)	ND	—					30

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

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

\* Nuclide analysis results of Cs-134, Cs-137 were announced on April 11, 2014.

\* When the measurement value is below the detection limit, "ND" is marked. The detection limits are as follows.

H-3: Approx. 0.29Bq/L, Gross α: Approx. 1.9Bq/L, Gross β: Approx. 15Bq/L, Sr-90: Approx. 0.008Bq/L

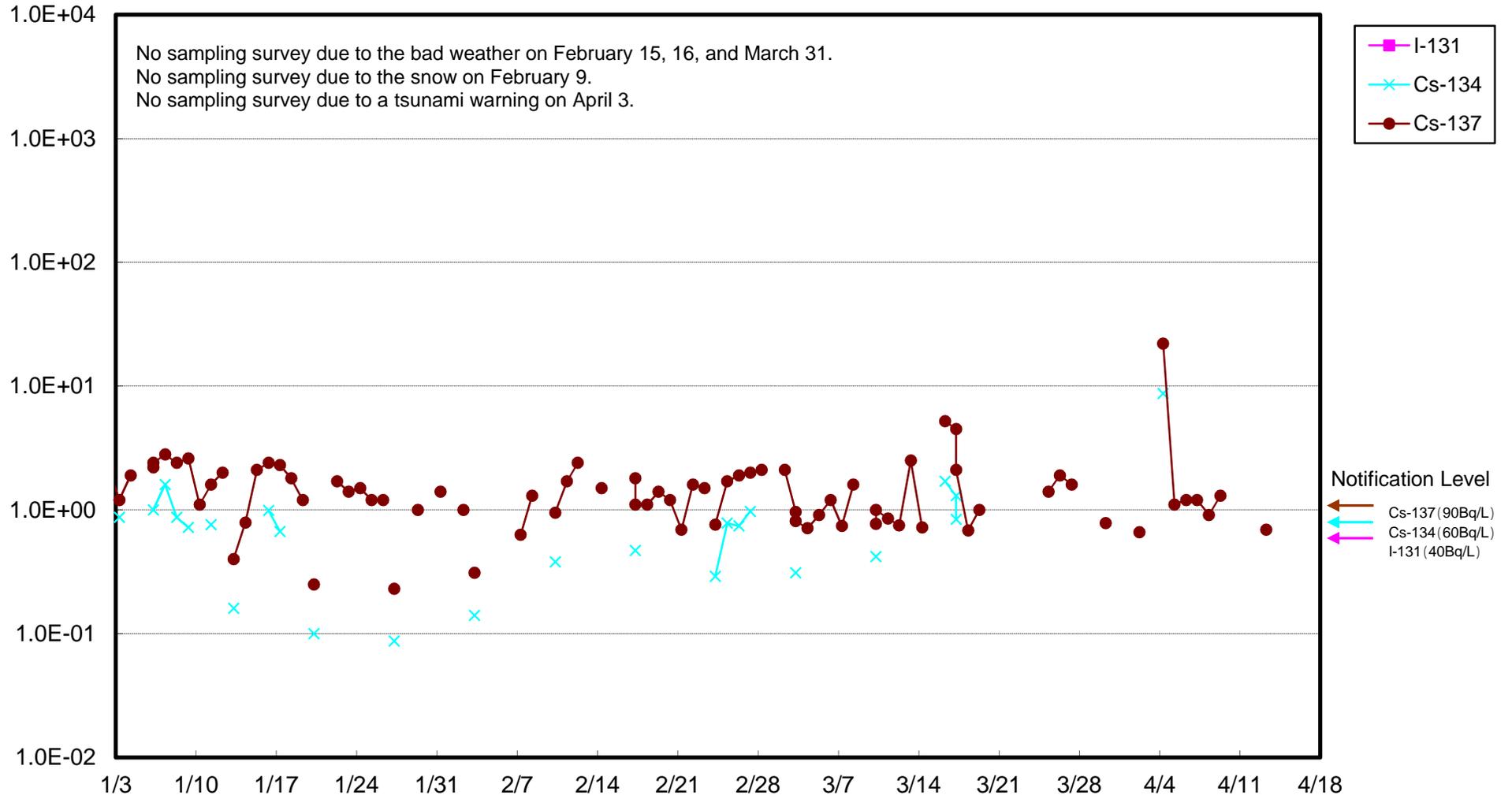
As the detection limit may vary depending on the detectors and sample properties, there are cases where nuclides below the detection limit are detected.

\* Nuclides analysis of Sr-90 was done by Japan Chemical Analysis Center.

(Evaluation)

H-3, Gross α, Gross β, and Sr-90 were not detected in the sample collected this time.

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)

