Reference

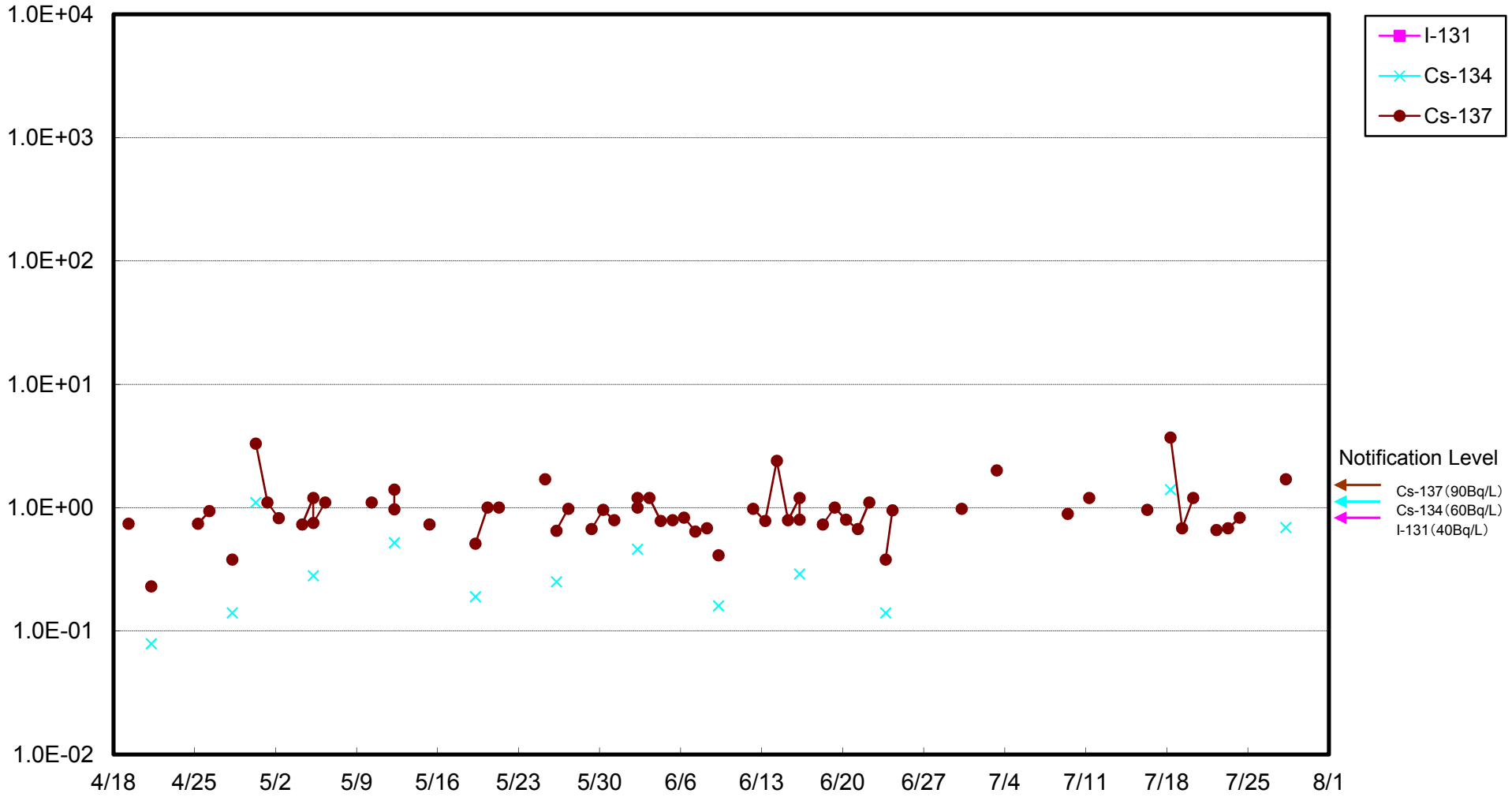
Nuclides Analysis Result of the Radioactive Materials in the Seawater
< Coast, Fukushima Daiichi Nuclear Power Station >

(Data summarized on July 30)

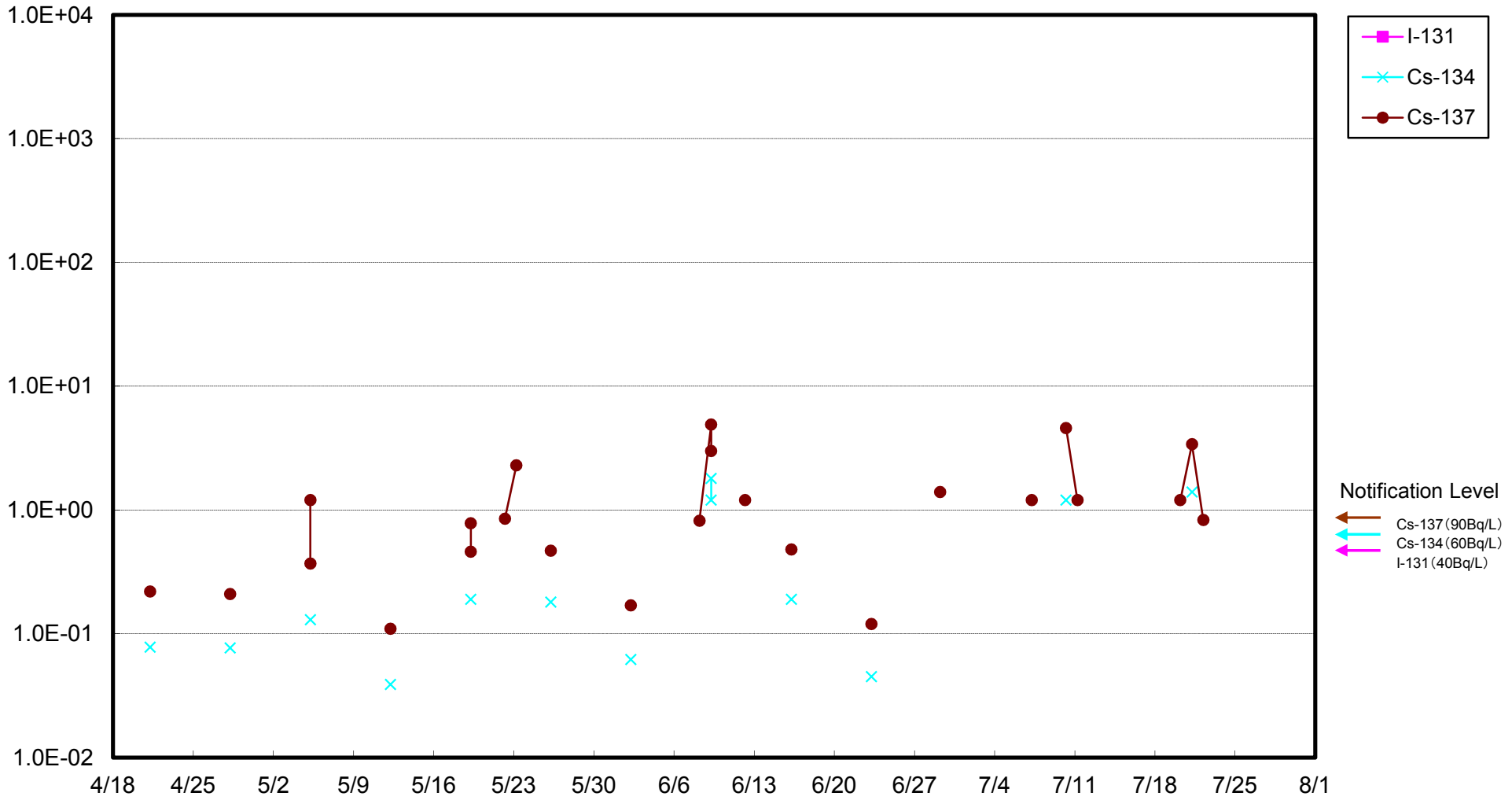
Place of Sampling	North of Unit 5-6 Discharge Channel at Fukushima Daiichi NPS (Approx. 30m North of Unit 5-6 Discharge Channel)		Around South Discharge Channel of Fukushima Daiichi NPS (Appox. 1.3km South of Unit 1-4 Discharge Channel)		② Density Limit Specified by the Reactor Regulation (Bq/L) (The density limit in the water outside the surrounding monitored areas is provided in section 6 of Appendix 2.)
Time of Sampling	Jul 29, 2014 7:10 AM		Jul 29, 2014 5:20 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(0.72)	-	ND(0.66)	-	40
Cs-134 (Approx. 2 years)	ND(0.57)	-	ND(0.74)	-	60
Cs-137 (Approx. 30 years)	ND(0.80)	-	ND(0.58)	-	90

* The density specified by the Reactor Regulation is converted from Bq/cm^3 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.

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)



Revised Version

Nuclides Analysis Result of Radioactive Materials in the Seawater <1/8>

(Data summarized on July 23)

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 (Appox. 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	Jun 10, 2013		Jun 10, 2013				
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	—	ND	—			40
Cs-134 (Approx. 2 years)	ND	—	ND	—			60
Cs-137 (Approx. 30 years)	ND	—	ND	—			90
H-3 (approx. 12yrs)	ND	—	ND	—			60,000
Gross α	ND	—	ND	—			—
Gross β	ND	—	ND	—			—
Sr-90 (Approx. 29 years)	0.26	0.01	0.15	0.01			30

* The density specified by the Reactor Regulation is converted from Bq/cm^3 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 obtained at "Around South Discharge Channel of Fukushima Daiichi NPS " were announced on Ju
* When the measurement value is below the detection limit, "ND" is marked. The detection limits are as follows.
  I-131: Approx. 0.90Bq/L, Cs-134: Approx. 1.4Bq/L, Cs-137: Approx. 1.3Bq/L,
  H-3: Approx. 3.1Bq/L, Gross α: Approx. 0.14Bq/L[*1], Gross β: Approx. 20Bq/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.

*1 The detection limit of Gross α was corrected from approx. 2.8Bq/L to 0.14Bq/L.

(Evaluation)

Although Sr-90 was detected supposedly as a result of this accident, it is less than the density limit in the water which is specified by the announcement.

Nuclides Analysis Result of Radioactive Materials in the Seawater <2/8>

(Data summarized on October 24)

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 (Appox. 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	Aug 12, 2013		Aug 12, 2013				
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	—	ND	—			40
Cs-134 (Approx. 2 years)	ND	—	ND	—			60
Cs-137 (Approx. 30 years)	1.4	0.02	ND	—			90
H-3 (approx. 12yrs)	4.7	0.00	ND	—			60,000
Gross α	ND	—	ND	—			—
Gross β	ND	—	ND	—			—
Sr-90 (Approx. 29 years)	*	—	*	—			30

* The density specified by the Reactor Regulation is converted from Bq/cm^3 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 August 13. H-3 was announced on August 16.
* When the measurement value is below the detection limit, "ND" is marked. The detection limits are as follows.
I-131: Approx. 1.1Bq/L, Cs-134: Approx. 1.2Bq/L, Cs-137: Approx. 1.4Bq/L,
H-3: Approx. 2.9Bq/L, Gross α: Approx. 2.4Bq/L[*1], Gross β: Approx. 19Bq/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.
* "*" indicates that the sample is under analysis.
*1 The detection limit of Gross α was corrected from approx. 0.12Bq/L to 2.4Bq/L.

Nuclides Analysis Result of Radioactive Materials in the Seawater <3/8>

(Data summarized on November 28)

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 (Appox. 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	Aug 12, 2013		Aug 12, 2013				
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	—	ND	—			40
Cs-134 (Approx. 2 years)	ND	—	ND	—			60
Cs-137 (Approx. 30 years)	1.4	0.02	ND	—			90
H-3 (approx. 12yrs)	4.7	0.00	ND	—			60,000
Gross α	ND	—	ND	—			—
Gross β	ND	—	ND	—			—
Sr-90 (Approx. 29 years)	1.2	0.04	0.16	0.01			30

* The density specified by the Reactor Regulation is converted from Bq/cm^3 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 August 13. H-3 was announced on August 16. Gross α was announced
* When the measurement value is below the detection limit, "ND" is marked. The detection limits are as follows.
  I-131: Approx. 1.1Bq/L, Cs-134: Approx. 1.2Bq/L, Cs-137: Approx. 1.4Bq/L,
  H-3: Approx. 2.9Bq/L, Gross α: Approx. 2.4Bq/L[*1], Gross β: Approx. 19Bq/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.

*1 The detection limit of Gross α was corrected from approx. 0.12Bq/L to 2.4Bq/L.

(Evaluation)

Although H-3 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 <4/8>

(Data summarized on October 24)

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 (Appox. 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	Sep 23, 2013		Sep 23, 2013				
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	—	ND	—			40
Cs-134 (Approx. 2 years)	ND	—	ND	—			60
Cs-137 (Approx. 30 years)	ND	—	ND	—			90
H-3 (approx. 12yrs)	ND	—	ND	—			60,000
Gross α	ND	—	ND	—			—
Gross β	ND	—	ND	—			—
Sr-90 (Approx. 29 years)	*	—	*	—			30

* The density specified by the Reactor Regulation is converted from Bq/cm^3 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 September 24. H-3 was announced on September 27.
* When the measurement value is below the detection limit, "ND" is marked. The detection limits are as follows.
I-131: Approx. 1.2Bq/L, Cs-134: Approx. 1.2Bq/L, Cs-137: Approx. 1.4Bq/L,
H-3: Approx. 1.8Bq/L, Gross α: Approx. 2.6Bq/L[*1], Gross 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.
* "*" indicates that the sample is under analysis.
*1 The detection limit of Gross α was corrected from approx. 0.13Bq/L to 2.6Bq/L.

Nuclides Analysis Result of Radioactive Materials in the Seawater <5/8>

(Data summarized on January 9)

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 (Appox. 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	Sep 23, 2013		Sep 23, 2013				
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	—	ND	—			40
Cs-134 (Approx. 2 years)	ND	—	ND	—			60
Cs-137 (Approx. 30 years)	ND	—	ND	—			90
H-3 (approx. 12yrs)	ND	—	ND	—			60,000
Gross α	ND	—	ND	—			—
Gross β	ND	—	ND	—			—
Sr-90 (Approx. 29 years)	0.11	0.00	0.14	0.00			30

* The density specified by the Reactor Regulation is converted from Bq/cm^3 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 Septmeber 24. H-3 was announced on September 27. Gross α was announced on October 24.
* When the measurement value is below the detection limit, "ND" is marked. The detection limits are as follows.
I-131: Approx. 1.2Bq/L, Cs-134: Approx. 1.2Bq/L, Cs-137: Approx. 1.4Bq/L,
H-3: Approx. 1.8Bq/L, Gross α: Approx. 2.6Bq/L[*1], Gross 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.

*1 The detection limit of Gross α was corrected from approx. 0.13Bq/L to 2.6Bq/L.

Nuclides Analysis Result of Radioactive Materials in the Seawater <6/8>

(Data summarized on January 9)

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 (Appox. 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	Oct 14, 2013		Oct 14, 2013				
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	—	ND	—			40
Cs-134 (Approx. 2 years)	ND	—	ND	—			60
Cs-137 (Approx. 30 years)	1.5	0.02	ND	—			90
H-3 (approx. 12yrs)	2.4	0.00	ND	—			60,000
Gross α	ND	—	ND	—			—
Gross β	ND	—	ND	—			—
Sr-90 (Approx. 29 years)	0.83	0.03	0.069	0.00			30

* The density specified by the Reactor Regulation is converted from Bq/cm^3 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 October 15. H-3 was announced on October 18.

* When the measurement value is below the detection limit, "ND" is marked. The detection limits are as follows.
I-131: Approx. 1.1Bq/L, Cs-134: Approx. 1.0Bq/L, Cs-137: Approx. 1.1Bq/L,
H-3: Approx. 1.8Bq/L, Gross α: Approx. 2.6Bq/L[*1], Gross 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.

*1 The detection limit of Gross α was corrected from approx. 0.13Bq/L to 2.6Bq/L.

Nuclides Analysis Result of Radioactive Materials in the Seawater <7/8>

(Data summarized on January 10)

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 (Appox. 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	Nov 11, 2013		Nov 11, 2013				
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	—	ND	—			40
Cs-134 (Approx. 2 years)	ND	—	ND	—			60
Cs-137 (Approx. 30 years)	ND	—	ND	—			90
H-3 (approx. 12yrs)	ND	—	ND	—			60,000
Gross α	ND	—	ND	—			—
Gross β	ND	—	ND	—			—
Sr-90 (Approx. 29 years)	0.22	0.01	0.017	0.00			30

* The density specified by the Reactor Regulation is converted from Bq/cm^3 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 November 12. H-3 was announced on November 16.

* When the measurement value is below the detection limit, "ND" is marked. The detection limits are as follows.
I-131: Approx. 0.97Bq/L, Cs-134: Approx. 1.2Bq/L, Cs-137: Approx. 1.3Bq/L,
H-3: Approx. 1.9Bq/L, Gross α: Approx. 2.5Bq/L[*1], Gross 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.

*1 The detection limit of Gross α was corrected from approx. 0.12Bq/L to 2.5Bq/L.

Nuclides Analysis Result of Radioactive Materials in the Seawater <8/8>

(Data summarized on February 20)

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 (Appox. 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	Dec 16, 2013		Dec 16, 2013				
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	—	ND	—			40
Cs-134 (Approx. 2 years)	ND	—	ND	—			60
Cs-137 (Approx. 30 years)	ND	—	1.8	0.02			90
H-3 (approx. 12yrs)	ND	—	ND	—			60,000
Gross α	ND	—	ND	—			—
Gross β	8.9	—	13	—			—
Sr-90 (Approx. 29 years)	0.036	0.00	0.16	0.01			300

* The density specified by the Reactor Regulation is converted from Bq/cm^3 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 December 17. H-3 was announced on December 20.

* When the measurement value is below the detection limit, "ND" is marked. The detection limits are as follows.
I-131: Approx. 0.71Bq/L, Cs-134: Approx. 1.1Bq/L, Cs-137: Approx. 0.53Bq/L,
H-3: Approx. 1.6Bq/L, Gross α: Approx. 2.4Bq/L[*1]
As the detection limit may vary depending on the detectors and sample properties, there are cases where nuclides below the detection limit are detected.

*1 The detection limit of Gross α was corrected from approx. 0.12Bq/L to 2.4Bq/L.

Although Cs-137, 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.