Reference

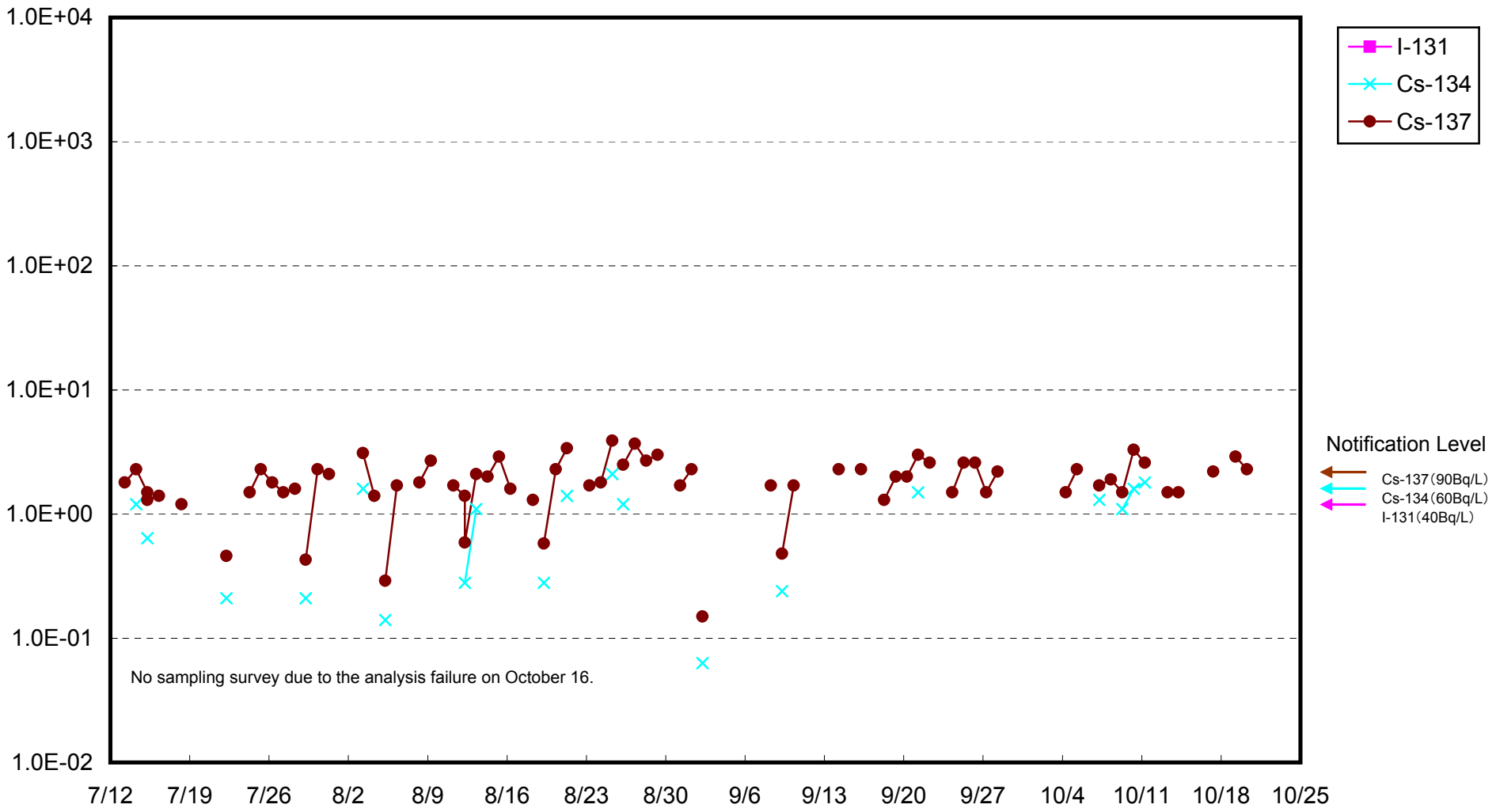
Nuclides Analysis Result of the Radioactive Materials in the Seawater
< Coast, Fukushima Daiichi Nuclear Power Station >

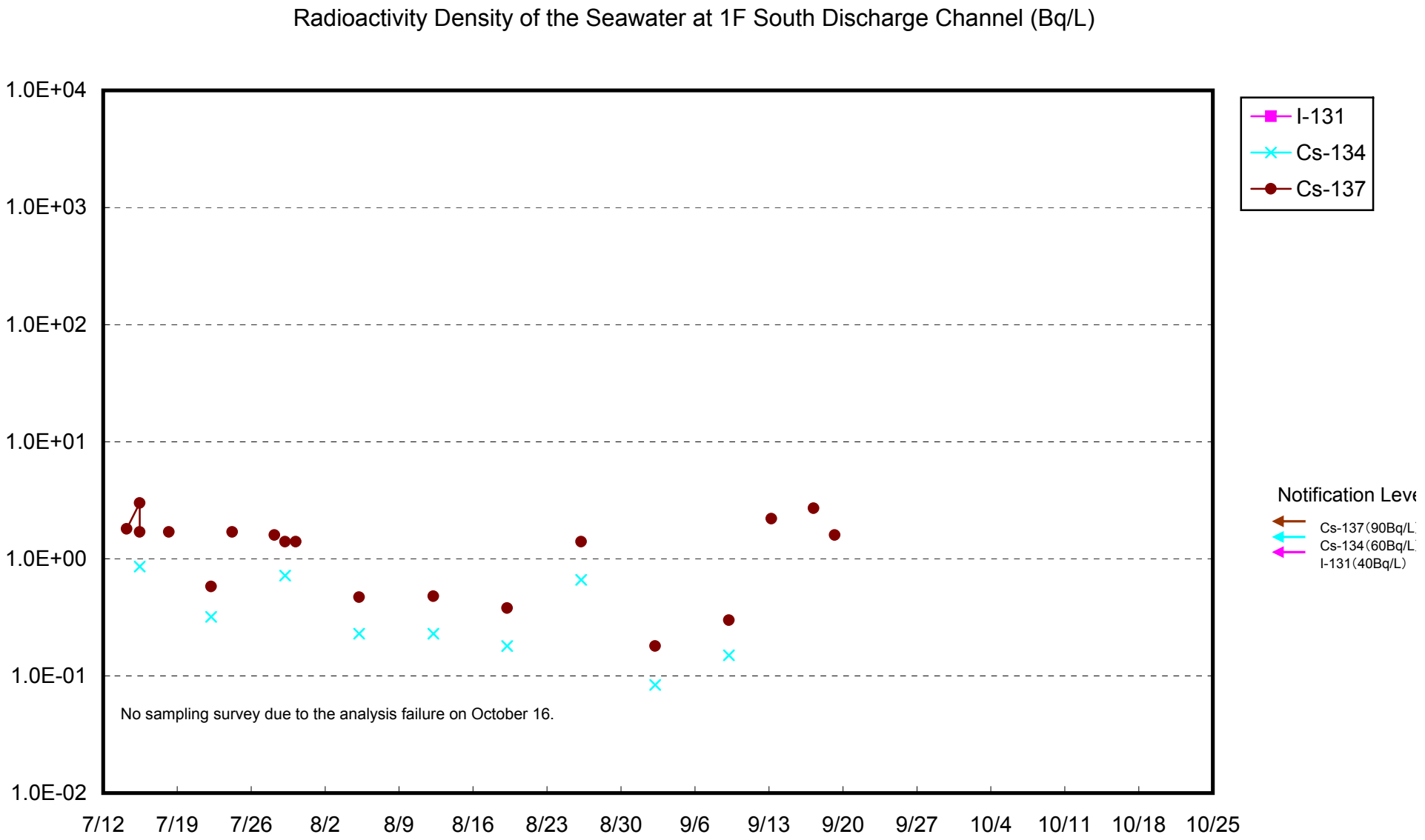
(Data summarized on October 24)

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	Oct 23, 2013 6:50 AM		Oct 23, 2013 5:15 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	-	ND	-	40
Cs-134 (Approx. 2 years)	ND	-	ND	-	60
Cs-137 (Approx. 30 years)	ND	-	ND	-	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.
  I-131: Approx. 1.3Bq/L, Cs-134: Approx. 1.8Bq/L, Cs-137: Approx. 1.5Bq/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.

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)
1.0E+04
1.0E+03
1.0E+02
1.0E+01
1.0E+00
1.0E-01
1.0E-02
7/12
7/19
7/26
8/2
8/9
8/16
8/23
8/30
9/6
9/13
9/20
9/27
10/4
10/11
10/18
10/25
I-131
Cs-134
Cs-137
Notification Leve
Cs-137(90Bq/L
Cs-134(60Bq/L
I-131(40Bq/L)
No sampling survey due to the analysis failure on October 16.

Nuclides Analysis Result of Radioactive Materials in the Seawater <1/7>

(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
All α	ND	—	ND	—			—
All 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 All β were announced on August 13. Nuclide analysis result of 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, All α: Approx. 0.12Bq/L, All 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.
* "*" in the columns insicate the sample is under analysis.

Nuclides Analysis Result of Radioactive Materials in the Seawater <2/7>

(Data summarized on October 24)

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	Aug 7, 2013		Aug 6, 2013		Aug 6, 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)	—	—	—	—	—	—	
Cs-134 (Approx. 2 years)	ND	—	0.0053	—	0.0057	—	60
Cs-137 (Approx. 30 years)	0.0049	—	0.011	—	0.019	—	90
H-3 (approx. 12yrs)	ND	—	ND	—	ND	—	60,000
All α	ND	—	ND	—	ND	—	—
All β	ND	—	ND	—	ND	—	—
Sr-90 (Approx. 29 years)	ND	—	ND	—	ND	—	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 Cs-134, Cs-137 obtained at points T-D1 and T-D5 were announced on October 3. Nuclide analysis results of Cs-134, Cs-137 obtained at points T-5 were announced on October 9. H-3, all α and all β were announced on September 19.
* When the measurement value is below the detection limit, "ND" is marked. The detection limits are as follows.
  Cs-134: Approx. 0.0015Bq/L, H-3: Approx. 0.37Bq/L, All α: Approx. 1.7Bq/L, All β: Approx. 17Bq/L, Sr-90: Approx. 0.01Bq/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.

Nuclides Analysis Result of Radioactive Materials in the Seawater <3/7>

(Data summarized on October 24)

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	Aug 7, 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)	—	—					
Cs-134 (Approx. 2 years)	0.0058	—					60
Cs-137 (Approx. 30 years)	0.013	—					90
H-3 (approx. 12yrs)	ND	—					60,000
All α	ND	—					—
All β	ND	—					—
Sr-90 (Approx. 29 years)	ND	—					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 Cs-134, Cs-137 were announced on October 3. Nuclide analysis results of H-3, all α and all β were announced on September
* When the measurement value is below the detection limit, "ND" is marked. The detection limits are as follows.
H-3: Approx. 0.37Bq/L, All α: Approx. 1.7Bq/L, All β: Approx. 17Bq/L, Sr-90: Approx. 0.01Bq/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.

Nuclides Analysis Result of Radioactive Materials in the Seawater <4/7>

(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
All α	ND	－	ND	－			－
All 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 All β were announced on September 24. Nuclide analysis result of H-3 was announced on September
* 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, All α: Approx. 0.13Bq/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.
* "*" in the columns insicate the sample is under analysis.

Nuclides Analysis Result of Radioactive Materials in the Seawater <5/7>

(Data summarized on October 24)

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	Sep 6, 2013		Sep 3, 2013		Sep 3, 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)	—	—	—	—	—	—	
Cs-134 (Approx. 2 years)	ND	—	0.002	0.00	0.0052	0.00	60
Cs-137 (Approx. 30 years)	0.0027	0.00	0.0073	0.00	0.012	0.00	90
H-3 (approx. 12yrs)	ND	—	1.3	0.00	0.94	0.00	60,000
All α	ND	—	ND	—	ND	—	—
All β	ND	—	ND	—	ND	—	—
Sr-90 (Approx. 29 years)	ND	—	ND	—	ND	—	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 Cs-134, Cs-137 were announced on October 23.
* When the measurement value is below the detection limit, "ND" is marked. The detection limits are as follows.
  Cs-134: Approx. 0.00098Bq/L, H-3: Approx. 0.34Bq/L, All α: Approx. 1.7Bq/L, All β: Approx. 17Bq/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.

Nuclides Analysis Result of Radioactive Materials in the Seawater <6/7>

(Data summarized on October 24)

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	Sep 6, 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)	—	—					
Cs-134 (Approx. 2 years)	0.0100	0.00					60
Cs-137 (Approx. 30 years)	0.022	0.00					90
H-3 (approx. 12yrs)	ND	—					60,000
All α	ND	—					—
All β	ND	—					—
Sr-90 (Approx. 29 years)	ND	—					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 Cs-134, Cs-137 were announced on October 23.
* When the measurement value is below the detection limit, "ND" is marked. The detection limits are as follows.
H-3: Approx. 0.34Bq/L, All α: Approx. 1.3Bq/L, All β: Approx. 17Bq/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.

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

(Data summarized on October 24)

Place of Sampling (Place No.)	Around North Discharge Channel of Fukushima Daini NPS (T-3) (Around Unit 3, 4 Discharge Channel) (Approx. 10km of Fukushima Daiichi NPS)		South Side of the Ukedo Port (T-6) (Appox. 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	Sep 3, 2013		Sep 3, 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)	—	—	—	—			
Cs-134 (Approx. 2 years)	0.055	0.00	0.021	0.00			60
Cs-137 (Approx. 30 years)	0.12	0.00	0.049	0.00			90
H-3 (approx. 12yrs)	ND	—	ND	—			60,000
All β	ND	—	ND	—			—

* 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 Cs-134 and Cs-137 were announced on October 19.
* When the measurement value is below the detection limit, "ND" is marked. The detection limits are as follows.
  H-3: Approx. 0.34Bq/L, All β: Approx. 16Bq/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.