

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

(Data summarized on October 17, 2014)

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 Oct 16, 2014 7:30 AM		Time of Sampling Oct 16, 2014 5:50 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(0.66)	-	ND(0.81)	-	40
Cs-134 (Approx. 2 years)	ND(0.83)	-	ND(0.62)	-	60
Cs-137 (Approx. 30 years)	ND(0.58)	-	1.4	0.02	90

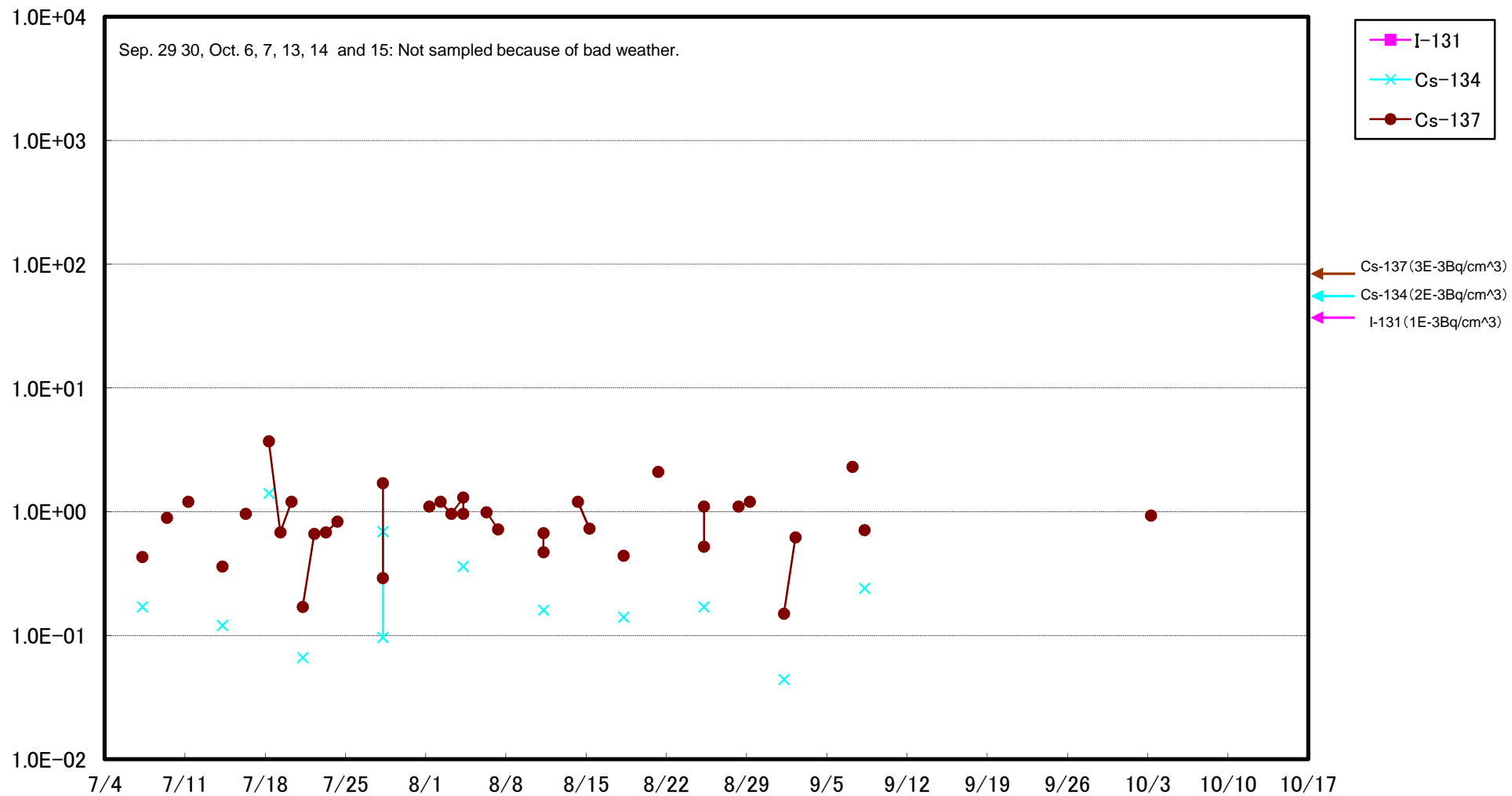
\* The density specified by the Reactor Regulation is converted from Bq/cm<sup>3</sup> to Bq/L.

\* Data of other nuclides is under evaluation.

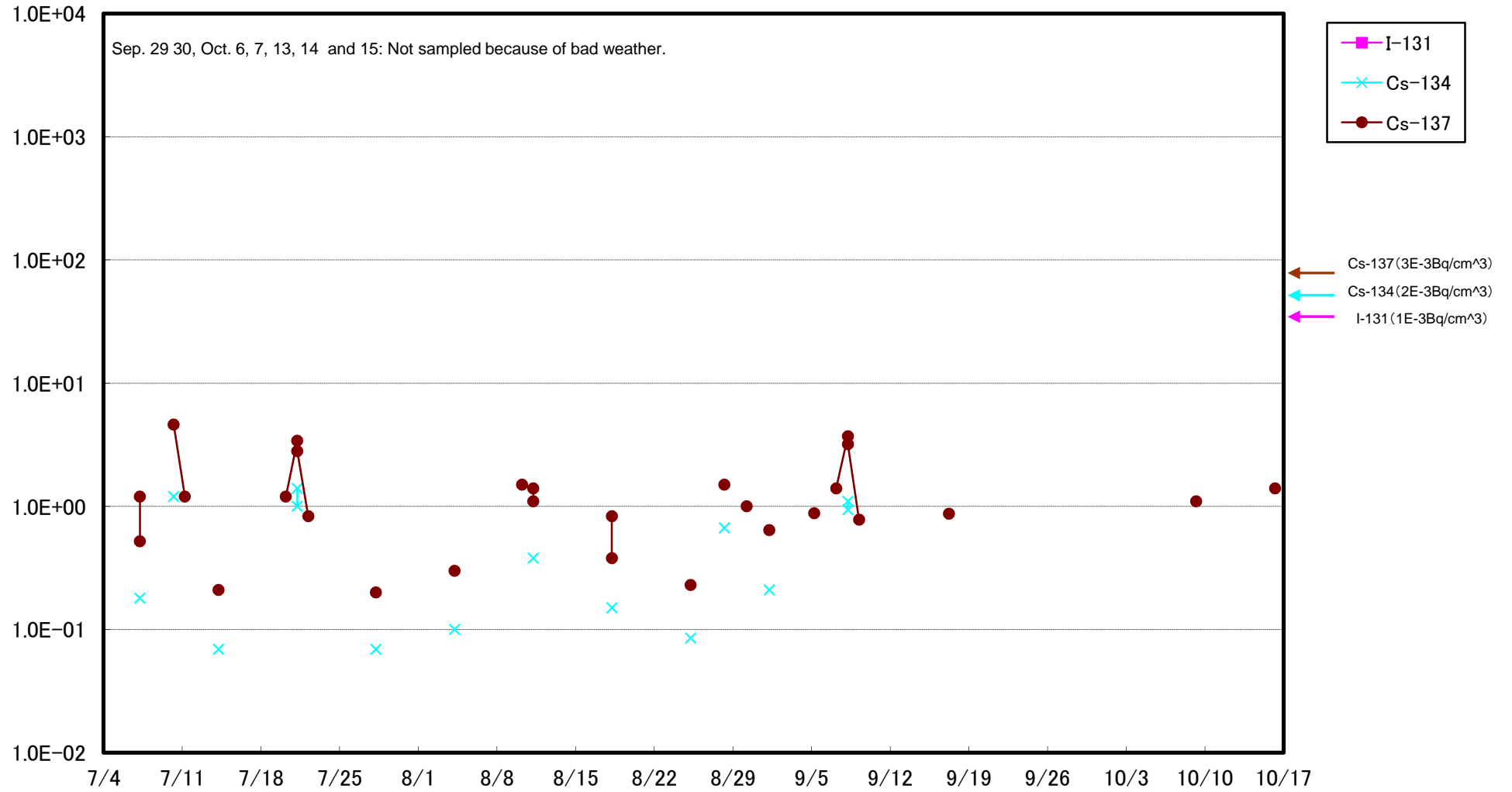
\* In the case of 2 nuclides or more, the sum of scaling factors to density limits is compared to 1.

\* "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)



## Nuclides Analysis Result of Radioactive Materials in the Seawater < 1/6 >

(Data summarized on October 17)

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.)
	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)	
Date of Sampling	Sep 8, 2014		Sep 22, 2014		/		
Detected Nuclides (Half-life)							
I-131 (Approx. 8 days)	ND(0.72)	—	ND(0.64)	—	/	/	40
Cs-134 (Approx. 2 years)	ND(0.66)	—	ND(0.64)	—	/	/	60
Cs-137 (Approx. 30 years)	ND(0.69)	—	ND(0.67)	—	/	/	90
H-3 (approx. 12yrs)	3.7	0.00	ND(1.9)	—	/	/	60,000
Gross α	ND(2.0)	—	ND(2.0)	—	/	/	—
Gross β	11	—	12	—	/	/	—
Sr-90 (Approx. 29 years)	0.23	0.01	ND(0.0079)	—	/	/	30

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

\* In the case of 2 nuclides or more, 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 9 and 23, 2014.

\* Nuclide analysis results of H-3 was announced on September 12 and 26, 2014.

\* ND indicates that the measurement result is below the detection limit. Detection limit level is showed in parenthesis.

\* 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. As of H-3 and Sr-90 were less than the density limit in the water which is specified by the announcement.

## Nuclides Analysis Result of Radioactive Materials in the Seawater<2/6>

(Data summarized on October 17)

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		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	Sep 2, 2014		Sep 2, 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)	0.027	0.00	0.020	0.00	/	/	60
Cs-137 (Approx. 30 years)	0.11	0.00	0.055	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.

\* Radioactivity density "—" means "not applicable".

\* In the case of 2 nuclides or more, 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 16.

\* When the measurement value is below the detection limit, "ND" is marked. The detection limits are as follows. H-3: Approx. 0.31Bq/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<3/6>

(Data summarized on October 17)

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 18, 2014		Aug 18, 2014		Aug 18, 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)	ND	—	0.0022	0.00	0.0025	0.00	60
Cs-137 (Approx. 30 years)	0.0034	0.00	0.0069	0.00	0.0066	0.00	90
H-3 (approx. 12yrs)	0.59	0.00	0.89	0.00	0.60	0.00	60,000
Gross α	—	—	—	—	—	—	—
Gross β	ND	—	ND	—	ND	—	—
Sr-90 (Approx. 29 years)	—	—	—	—	—	—	30

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

\* Radioactivity density "—" means "not applicable".

\* In the case of 2 nuclides or more, 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.

Cs-134: Approx. 0.0013Bq/L, 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.

(Evaluation)

Although H-3 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<4/6>

(Data summarized on October 17)

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 18, 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)	ND	—	/	/	/	/	60
Cs-137 (Approx. 30 years)	0.0039	0.00	/	/	/	/	90
H-3 (approx. 12yrs)	0.49	0.00	/	/	/	/	60,000
Gross α	—	—	/	/	/	/	—
Gross β	ND	—	/	/	/	/	—
Sr-90 (Approx. 29 years)	—	—	/	/	/	/	30

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

\* Radioactivity density "—" means "not applicable".

\* In the case of 2 nuclides or more, 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.

Cs-134: Approx. 0.0017Bq/L,

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.

(Evaluation)

Although H-3 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<5/6>

(Data summarized on October 17)

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		Date of Sampling		Date of Sampling		
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)	ND	—	0.0031	0.00	0.010	0.00	60
Cs-137 (Approx. 30 years)	0.0018	0.00	0.0099	0.00	0.030	0.00	90
H-3 (approx. 12yrs)	ND	—	0.56	0.00	0.38	0.00	60,000
Gross α	ND	—	ND	—	ND	—	—
Gross 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<sup>3</sup> to Bq/L.

\* Radioactivity density "—" means "not applicable".

\* In the case of 2 nuclides or more, 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 16.

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

Cs-134: Approx. 0.0012Bq/L, H-3: Approx. 0.34Bq/L, Gross α: Approx. 2.0Bq/L, Gross β: Approx. 16Bq/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-89 and Sr-90 were done by Japan Chemical Analysis Center.

(Evaluation)

Although H-3 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 <6/6>

(Data summarized on October 17)

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 2, 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)	0.0017	0.00					60
Cs-137 (Approx. 30 years)	0.0059	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.

\* Radioactivity density "—" means "not applicable".

\* In the case of 2 nuclides or more, 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 16.

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

H-3: Approx. 0.34Bq/L, Gross α: Approx. 1.9Bq/L, Gross β: Approx. 16Bq/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 were done by Japan Chemical Analysis Center.

(Evaluation)

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