#### Reference

# Nuclides Analysis Result of the Radioactive Materials in the Seawater < Coast, Fukushima Daiichi Nuclear Power Station, Within 20km Radius >

(Data summarized on November 13)

Place of Sampling	South sid	de of the Ukedo	o Port (Approx. 5.5km	n north of Unit	5-6 Discharge Chann	el)	② Density Limit Specified by the Reactor Regulation (Bq/L)
Time of Sampling	Oct 1, 201 9:15 AM	water outside the surrounding monitored					
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)	areas is provided in section 6 of Appendix 2.)
Cs-134 (Approx. 2 years)	0.022	0.00	0.029	0.00	0.077	0.00	60
Cs-137 (Approx. 30 years)	0.070	0.00	0.091	0.00	0.23	0.00	90

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

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

\* Analysis results by detail analysis (Phosphomolybdic acid ammonium adsorption sampling method) are noted.

\* Analyzed by : Tokyo Power Technology Ltd.

Reference

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

(Data summarized on November 13, 2014)

Place of Sampling	North of Unit 5-6 Discharge	Channel at Fukushima	Around South Discharge C	Channel of Fukushima	② Density Limit Specified by
	Daiichi N	IPS	Daiichi N	IPS	the Reactor Regulation (Bq/L)
	(Approx. 30m North of Unit 5	5-6 Discharge Channel)	(Appox. 1.3km South of Unit	1-4 Discharge Channel)	(The density limit in the water
Time of Sampling	Nov 12, 2	2014	Nov 12, 2	2014	outside the surrounding
	6:55 A	M	5:40 A	M	monitored areas is provided in
Detected Nuclides	①Density of Sample	Scaling Factor	①Density of Sample	Scaling Factor	section 6 of Appendix 2.)
(Half-life)	(Bq/L)	(①/②)	(Bq/L)	(①/②)	
l-131 (Approx. 8 days)	ND(0.62)	-	ND(0.71)	-	40
Cs-134 (Approx. 2 years)	ND(0.68)	-	ND(0.76)	-	60
Cs-137 (Approx. 30 years)	0.74	0.01	ND(0.63)	-	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.

#### Reference

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

## (Data summarized on November 13)

Place of Sampling	North of Uı (App	nit 5-6 Dis vrox. 30m	scharge Chan North of Unit	nel at Fuk 5-6 Disch	ushima Daiich arge Channel	ni NPS )	Around S (Appo	South Disc ox. 1.3km	charge Channe South of Unit	el of Fuku 1-4 Disch	shima Daiichi harge Channe	NPS I)	<ul> <li>② Density Limit</li> <li>Specified by the</li> <li>Reactor Regulation</li> <li>(Bq/L)</li> </ul>
Time of Sampling	Oct 1, 2 6:10 A	014 M	Oct 8, 2 6:37 A	014 M	Oct 16, 2 7:30 A	2014 M	Oct 1, 2 5:30 A	014 M	Oct 8, 2 5:40 A	014 M	Oct 16, 2 5:50 A	2014 M	(The density limit in the water outside the surrounding monitored
Detected Nuclides (Half-life)	clides (Density of Scaling (Density of Sample (Bq/L) (1)/2) (Bq		①Density of Sample (Bq/L)	Scaling Factor (①/②)	areas is provided in section 6 of Appendix 2.)								
Cs-134 (Approx. 2 years)	0.088	0.00	0.20	0.00	0.088	0.00	0.030	0.00	0.056	0.00	0.40	0.01	60
Cs-137 (Approx. 30 years)	0.27	0.00	0.62	0.01	0.32	0.00	0.091	0.00	0.18	0.00	1.2	0.01	90

\* 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.

\* "ND" indicates that the measurement result is below the detection limit, and the detection limit of each nuclide is provided in parentheses.

\* Analysis results by detail analysis (Phosphomolybdic acid ammonium adsorption sampling method) are noted.

\* Analyzed by: Tokyo Power Tecnology Ltd.

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

Reference

(Data summarized on November 13)

Place of Sampling		2F Aro (Arou	und the North I Ind Unit 3-4 Dis (Approx. 10ki	Discharge ( scharge Ch m from 1F)	Channel annel)		(A)	pprox. 7km	2F Around Iwa South of Unit (Approx. 16kr	sawa Shor 1 & 2 Disch n from 1F)	e large Channel)		② Density Limit Specified by the Reactor Regulation (Bq/L)
Time of Sampling	Oct 1, 2 10:00	tt 1, 2014         Oct 8, 2014         Oct 16, 2014           0:00 AM         10:00 AM         10:00 AM					Sep 30, 4:10	2014 PM	Oct 8, 2 4:10 F	2014 PM	Oct 16, 4:05	2014 PM	water outside the surrounding monitored
Detected Nuclides (Half-life)	①Density of Sample (Bq/L)	Scaling Factor (①/②)	①Density of Sample (Bq/L)	Scaling Factor (①/②)	Scaling Factor (1)/2)Density 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)	①Density of Sample (Bq/L)	Scaling Factor (①/②)	areas is provided in section 6 of Appendix 2.)
Cs-134 (Approx. 2 years)	0.022	0.00	0.094	0.00	0.093	0.00	0.035	0.00	0.053	0.00	0.062	0.00	60
Cs-137 (Approx. 30 years)	0.066	0.00	0.26	0.00	0.26	0.00	0.11	0.00	0.16	0.00	0.18	0.00	90

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

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

\* Analysis results by detail analysis (Phosphomolybdic acid ammonium adsorption sampling method) are noted.

\* Analyzed by : Tokyo Power Technology Ltd.

## Nuclides Analysis Result of Radioactive Materials in the Seawater < Offshore 1/4>

(Data summarized on November 13)

Place of Sampling (Place No.)	3km Off	shore of C	)daka Ward (T-	*1 14)	3km Off	shore of C	)daka Ward (T-	*1 14)	3km Off	shore of L	lkedo River (T-I	*2 D1)	② Density Limit Specified by the Reactor Regulation
	Upper La	ayer	Lower La	ayer	Upper La	ayer	Lower La	ayer	Upper La	ayer	Lower La	ayer	(Bq/L)
Time of Sampling	Oct 1, 20 9:10 A	014 M	Oct 1, 20 9:10 A	014 M	Oct 8, 20 9:16 A	014 M	Oct 8, 20 9:16 A	014 M	Oct 1, 20 9:42 A	014 M	Oct 1, 2014 9:42 AM		(The density limit in the water outside the surrounding monitored
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)	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)	areas is provided in section 6 of Appendix 2.)
Cs-134 (Approx. 2 years)	0.0031	0.00	0.0019	0.00	0.0082	0.00	0.0049	0.00	0.0033	0.00	0.0081	0.00	60
Cs-137 (Approx. 30 years)	0.012	0.00	0.0078	0.00	0.022	0.00	0.012	0.00	0.0087	0.00	0.024	0.00	90

Place of Sampling (Place No.)	3km Off	shore of L	lkedo River (T-I	*2 D1)	3km Offs	shore of L	lkedo River (T-I	*2 D1)	3km Offshore	of Fukusł	nima Daiichi NP	*2 S (T-D5)	② Density Limit Specified by the Reactor Regulation
	Upper La	ayer	Lower La	ayer	Upper La	ayer	Lower La	ayer	Upper La	ayer	Lower La	ayer	(Bq/L)
Time of Sampling	Oct 8, 20 9:52 A	014 M	Oct 8, 20 9:52 A	014 M	Oct 17, 2 9:05 Al	014 M	Oct 17, 2 9:05 Al	:014 M	Oct 1, 20 10:22 A	)14 M	Oct 1, 2014 10:22 AM		(The density limit in the water outside the surrounding monitored
Detected Nuclides (Half-life)	①Density of Sample (Bq/L)	Scaling Factor (①/②)	areas is provided in section 6 of Appendix 2.)										
Cs-134 (Approx. 2 years)	0.022	0.00	0.0066	0.00	0.019	0.00	0.0044	0.00	ND	-	ND	-	60
Cs-137 (Approx. 30 years)	0.070	0.00	0.024	0.00	0.056	0.00	0.014	0.00	0.0057	0.00	0.0040	0.00	90

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

\* 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.

Cs-134: Approx.0.0017Bq/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.

\* Analysis results by detail analysis (Phosphomolybdic acid ammonium adsorption sampling method) are noted.

\* Analyzed by : \*1 THE GENERAL ENVIRONMENTAL TECHNOS Co., LTD.、\*2 Tokyo Power Technology Ltd.

## Nuclides Analysis Result of Radioactive Materials in the Seawater < Offshore 2/4 >

(Data summarized on November 13)

Place of Sampling (Place No.)	3km Offshore	of Fukush	nima Daiichi NP	*2 S (T-D5)	3km Offshore	of Fukusł	nima Daiichi NP	*2 S (T-D5)	3km Offshore	e of Fukus	shima Daini NPS	*2 6 (T-D9)	② Density Limit Specified by the Reactor Regulation
	Upper La	ayer	Lower La	ayer	Upper La	ayer	Lower La	ayer	Upper La	ayer	Lower La	ayer	(Bq/L)
Time of Sampling	Oct 8, 20 10:24 A	014 M	Oct 8, 20 10:24 A	014 M	Oct 17, 2 8:10 A	014 M	Oct 17, 2 8:10 A	2014 M	Oct 2, 20 9:24 A	014 M	Oct 2, 2014 9:24 AM		(The density limit in the water outside the surrounding monitored
Detected Nuclides (Half-life)	①Density of Sample (Bq/L)	Scaling Factor (①/②)	①Density of Sample (Bq/L)	Scaling Factor (1/2)	areas is provided in section 6 of Appendix 2.)								
Cs-134 (Approx. 2 years)	0.024	0.00	0.0055	0.00	0.014	0.00	0.0063	0.00	0.0081	0.00	ND	-	60
Cs-137 (Approx. 30 years)	0.067	0.00	0.018	0.00	0.045	0.00	0.016	0.00	0.023	0.00	0.0067	0.00	90

Place of Sampling (Place No.)	f Sampling ce No.) 3km Offshore of Fukushima Daini NPS (T-D9 Upper Layer Lower Layer				3km Offshore	e of Fukus	hima Daini NPS	*2 S (T-D9)	15km Offshor	e of Fuku	shima Daiichi N	*1 PS (T-5)	② Density Limit Specified by the Reactor Regulation
	Upper La	ayer	Lower La	ayer	Upper La	ayer	Lower La	ayer	Upper La	ayer	Lower La	ayer	(Bq/L)
Time of Sampling	Oct 8, 20 8:10 A	014 M	Oct 8, 20 8:10 A	014 M	Oct 18, 2 9:42 Al	014 M	Oct 18, 2 9:42 A	014 M	Oct 2, 20 8:28 A	014 M	Oct 2, 2014 8:28 AM		(The density limit in the water outside the surrounding monitored
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)	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)	areas is provided in section 6 of Appendix 2.)
Cs-134 (Approx. 2 years)	0.030	0.00	0.0052	0.00	0.012	0.00	0.0079	0.00	ND	-	ND	-	60
Cs-137 (Approx. 30 years)	0.094	0.00	0.018	0.00	0.036	0.00	0.027	0.00	0.0030	0.00	0.0032	0.00	90

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

\* 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.

Cs-134: Approx.0.0017Bq/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.

\* Analysis results by detail analysis (Phosphomolybdic acid ammonium adsorption sampling method) are noted.

\* Analyzed by : \*1 THE GENERAL ENVIRONMENTAL TECHNOS Co., LTD.、\*2 Tokyo Power Technology Ltd.

## Nuclides Analysis Result of Radioactive Materials in the Seawater < Offshore 3/4 >

(Data summarized on November 13)

Place of Sampling (Place No.)	pling .) 15km Offshore of Fukushima Daiichi NPS (T-5 Upper Layer Lower Layer				3km Offsl	hore of Iw	asawa Shore (T	-11)	3km Offs	hore of Iw	asawa Shore (T	-11)	② Density Limit Specified by the Reactor Regulation
	Upper La	ayer	Lower La	ayer	Upper La	ayer	Lower La	ayer	Upper La	ayer	Lower La	ayer	(Bq/L)
Time of Sampling	Oct 8, 20 9:38 A	014 M	Oct 8, 20 9:38 A	014 M	Sep 26, 2 7:27 A	2014 M	Sep 26, 2 7:27 A	2014 M	Oct 2, 2 10:17 A	014 \M	Oct 2, 2014 10:17 AM		(The density limit in the water outside the surrounding monitored
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)	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)	areas is provided in section 6 of Appendix 2.)
Cs-134 (Approx. 2 years)	0.0018	0.00	ND	-	0.0024	0.00	0.0042	0.00	0.0087	0.00	ND	-	60
Cs-137 (Approx. 30 years)	0.0065	0.00	0.0028	0.00	0.010	0.00	0.017	0.00	0.029	0.00	0.0076	0.00	90

Place of Sampling (Place No.)	3km Offs	3km Offshore of Iwasawa Shore (T-11) Upper Layer Lower Layer				re of Nort	hern Iwaki City	(T-12)	1km Offs	hore of N	atsui River (T-1	7-1)	② Density Limit Specified by the Reactor Regulation
	Opport Leyon         Dotter Leyon           Sampling         Oct 8, 2014         Oct 8, 2014				01 <i>4</i>		014				014	(The density limit in the	
Time of Sampling	7:33 A	M	7:33 A	M	6:14 A	M	6:14 A	M	6:44 A	M	6:44 A	M	water outside the surrounding monitored
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)	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)	areas is provided in section 6 of Appendix 2.)
Cs-134 (Approx. 2 years)	0.031	0.00	0.011	0.00	0.030	0.00	0.011	0.00	0.0071	0.00	0.0023	0.00	60
Cs-137 (Approx. 30 years)	0.10	0.00	0.036	0.00	0.087	0.00	0.035	0.00	0.022	0.00	0.0084	0.00	90

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

\* 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.

Cs-134: Approx.0.0014Bq/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. \* Analysis results by detail analysis (Phosphomolybdic acid ammonium adsorption sampling method) are noted.

\* Analyzed by : THE GENERAL ENVIRONMENTAL TECHNOS Co., LTD.

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

(Data summarized on November 13)

Place of Sampling (Place No.)	3km C	Offshore of	f Toyoma (T-20	)	Around 1ki	m Offshor	e of Ota River (	T-S1)	Around 3km	Offshore	of Odaka Ward	(T-S2)	② Density Limit Specified by the Reactor Regulation
	Upper La	ayer	Lower La	ayer	Upper La	ayer	Lower La	ayer	Upper La	ayer	Lower La	ayer	(Bq/L)
Time of Sampling	Oct 4, 20 7:11 A	014 M	Oct 4, 20 7:11 A	014 M	Sep 26, 2 6:14 Al	2014 M	Sep 26, 2 6:14 A	2014 M	Sep 26, 2 5:48 A	2014 M	Sep 26, 2014 5:48 AM		(The density limit in the water outside the surrounding monitored
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)	①Density of Sample (Bq/L)	ensity of le (Bq/L) Scaling Factor (①/②) ①Density of Sample (Bq/l		Scaling Factor (①/②)	①Density of Sample (Bq/L)	Scaling Factor (1/2)	areas is provided in section 6 of Appendix 2.)
Cs-134 (Approx. 2 years)	ND	-	0.0024	0.00	0.0032	0.00	0.0028	0.00	0.0023	0.00	0.0084	0.00	60
Cs-137 (Approx. 30 years)	0.0059	0.00	0.0090	0.00	0.012	0.00	0.013	0.00	0.011	0.00	0.022	0.00	90

Place of Sampling (Place No.)	Around 3km	Offshore	of Ukedo River	(T-S3)	Around 3km C	offshore of (T-	f Fukushima Da S4)	iichi NPS					<ul> <li>② Density Limit</li> <li>Specified by the</li> <li>Reactor Regulation</li> </ul>
	Upper La	ayer	Lower La	ayer	Upper La	iyer	Lower La	ayer	Upper La	ayer	Lower La	ayer	(Bq/L)
Time of Sampling	Sep 24, 2 6:14 A	2014 M	Sep 24, 2 6:14 A	2014 M	Sep 24, 2 5:46 Al	2014 M	Sep 24, 2 5:46 A	2014 M					(The density limit in the water outside the surrounding monitored
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)	①Density of Sample (Bq/L)	sity of (Bq/L) Scaling Tactor (1/2) Density of Sample (Bq/L) Scaling Factor (1/2) Scaling Factor (1/2) Scaling Factor (1/2)		areas is provided in section 6 of Appendix 2.)			
Cs-134 (Approx. 2 years)	0.0069	0.00	0.0053	0.00	0.0063	0.00	0.0072	0.00					60
Cs-137 (Approx. 30 years)	0.022	0.00	0.020	0.00	0.020	0.00	0.022	0.00					90

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

\* 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.

Cs-134: Approx.0.0016Bq/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. \* Analysis results by detail analysis (Phosphomolybdic acid ammonium adsorption sampling method) are noted.

\* Analyzed by : THE GENERAL ENVIRONMENTAL TECHNOS Co., LTD.

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

(Data summarized on November 13)

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)
Date of Sampling	Sep 16, 2014		Sep 16, 2014				(The density limit in the water outside the surrounding monitored
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)	areas is provided in section 6 of Appendix 2.)
Cs-134 (Approx. 2 years)	0.043	0.00	0.017	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
ΑΙΙ 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 allicable".

\* 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 28, 2014.

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

H-3: Approx. 0.38Bq/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 detecte

(Evaluation)

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

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

(Data summarized on November 13)

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)				<ul> <li>② Density Limit Specified by the Reactor Regulation (Bq/L)</li> <li>(The density limit in the water outside the surrounding monitored</li> </ul>
Date of Sampling	Oct 16, 2014		Oct 16, 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)	areas is provided in section 6 of Appendix 2.)
Cs-134 (Approx. 2 years)	0.093	0.00	0.077	0.00			60
Cs-137 (Approx. 30 years)	0.26	0.00	0.23	0.00			90
H-3 (approx. 12yrs)	ND	_	ND	_			60,000
ΑΙΙ 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 allicable".

\* 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 November 13, 2014.

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

H-3: Approx. 0.30Bq/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)

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

# Nuclides Analysis Result of Radioactive Materials in the Seawater <3/6>

(Data summarized on November 13)

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)
Date of Sampling	Sep 16, 2014		Sep 16, 2014		Sep 16, 2014		water outside the
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)	areas is provided in section 6 of Appendix 2.)
Cs-134 (Approx. 2 years)	ND	_	0.0042	0.00	0.0031	0.00	60
Cs-137 (Approx. 30 years)	0.0022	0.00	0.013	0.00	0.012	0.00	90
H-3 (approx. 12yrs)	ND	_	ND	_	ND	_	60,000
All α	_	_	_	_	_	_	_
ΑΙΙ 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.

\* "-" means "not applicable".

\* 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 28, 2014.

\* 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. 0.32Bq/L, Gross β: Approx. 15Bq/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  $\boldsymbol{\beta}$  were not detected in the sample collected this time.

# Nuclides Analysis Result of Radioactive Materials in the Seawater <4/6>

(Data summarized on November 13)

						(_ 0.0	
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)
Date of Sampling	Sep 16, 2014						(The density limit in the water outside the surrounding monitored
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)	areas is provided in section 6 of Appendix 2.)
Cs-134 (Approx. 2 years)	0.011	0.00					60
Cs-137 (Approx. 30 years)	0.034	0.00					90
H-3 (approx. 12yrs)	ND	_					60,000
All α	_	_					_
All 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 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 28, 2014.

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

H-3: Approx. 0.32Bq/L, Gross β: Approx. 15Bq/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  $\boldsymbol{\beta}$  were not detected in the sample collected this time.

# Nuclides Analysis Result of Radioactive Materials in the Seawater<5/6>

(Data summarized on November 13)

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		<ul> <li>② Density Limit Specified by the Reactor Regulation (Bq/L)</li> <li>(The density limit in the water outside the surrounding monitored</li> </ul>
Date of Sampling	Oct 2, 2014		Oct 1, 2014		Oct 1, 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)	areas is provided in section 6 of Appendix 2.)
Cs-134 (Approx. 2 years)	ND	-	0.0033	0.00	ND	_	60
Cs-137 (Approx. 30 years)	0.0030	0.00	0.0087	0.00	0.0057	0.00	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<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 November 13, 2014.

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

The detection are as follows.

Cs-134: Approx. 0.0017Bq/L, H-3: Approx. 0.32Bq/L, Gross α: Approx. 1.9Bq/L, Gross 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.

(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 < 6/6>

(Data summarized on November 13)

						(244 64		
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)	
Date of Sampling	Oct 2, 2014						(The density limit in the water outside the surrounding monitored	
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)	areas is provided in section 6 of Appendix 2.)	
Cs-134 (Approx. 2 years)	0.0081	0.00					60	
Cs-137 (Approx. 30 years)	0.023	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<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 November 13, 2014.

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

H-3: Approx. 0.32Bq/L, Gross α: Approx. 1.9Bq/L, Gross 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.

#### (Evaluation)

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

Radioactivity Density of the Seawater at South of Ukedo port (Bq/L)



### 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)



### Radioactivity Density of the Seawater at 2F North Discharge Channel (Bq/L)



### Radioactivity Density of the Seawater Around the Iwasawa Shore of 2F (Bq/L)



Radioactivity Density of the Seawater at 3km Offshore of Odaka Ward (T-14) Upper Layer (Bq/L)



Radioactivity Density of the Seawater at 3km Offshore of Odaka Ward (T-14) Lower Layer (Bq/L)



Radioactivity Density of the Seawater at 3km Offshore of Ukedo River (T-D1) Upper Layer (Bq/L)



Radioactivity Density of the Seawater at 3km Offshore of Ukedo River (T-D1) Lower Layer (Bq/L)



Radioactivity Density of the Seawater at 3km Offshore of Fukushima Daiichi NPS (T-D5) Upper Layer (Bq/L)



Radioactivity Density of the Seawater at 3km Offshore of Fukushima Daiichi NPS (T-D5) Lower Layer (Bq/L)



Radioactivity Density of the Seawater at 3km Offshore of Fukushima Daini NPS (T-D9) Upper Layer (Bq/L)



Radioactivity Density of the Seawater at 3km Offshore of Fukushima Daini NPS (T-D9) Lower Layer (Bq/L)



## Radioactivity Density of the Seawater at 15km Offshore of Fukushima Daiichi NPS (T-5) Upper Layer (Bq/L)



## Radioactivity Density of the Seawater at 15km Offshore of Fukushima Daiichi NPS (T-5) Lower Layer (Bq/L)



Radioactivity Density of the Seawater at 3km Offshore of Iwasawa Shore (T-11) Upper Layer (Bq/L)



Radioactivity Density of the Seawater at 3km Offshore of Iwasawa Shore (T-11) Lower Layer (Bq/L)



Radioactivity Density of the Seawater at 3km Offshore of North of Iwaki City(T-12) Upper Layer (Bq/L)



Radioactivity Density of the Seawater at 3km Offshore of North of Iwaki City(T-12) Lower Layer (Bq/L)



## Radioactivity Density of the Seawater at 1km Offshore of Natsui River (T-17-1) Upper Layer (Bq/L)



## Radioactivity Density of the Seawater at 1km Offshore of Natsui River (T-17-1) Lower Layer (Bq/L)



Radioactivity Density of the Seawater at 3km Offshore of Toyoma (T-20) Upper Layer (Bq/L)



Radioactivity Density of the Seawater at 3km Offshore of Toyoma (T-20) Upper Layer (Bq/L)



Radioactivity Density of the Seawater at 1km Offshore of Ohta River (T-S1) Upper Layer (Bq/L)



Radioactivity Density of the Seawater at 1km Offshore of Ohta River (T-S1) Lower Layer (Bq/L)



Radioactivity Density of the Seawater at 3km Offshore of Odaka Ward (T-S2) Upper Layer (Bq/L)



Radioactivity Density of the Seawater at 3km Offshore of Odaka Ward (T-S2) Lower Layer (Bq/L)



Radioactivity Density of the Seawater Around 3km Offshore of Ukedo River (T-S3) Upper Layer (Bq/L)



Radioactivity Density of the Seawater Around 3km Offshore of Ukedo River (T-S3) Lower Layer (Bq/L)



Radioactivity Density of the Seawater Around 3km Offshore of Fukushima Daiichi NPS (T-S4) Upper Layer (Bq/L)



Radioactivity Density of the Seawater Around 3km Offshore of Fukushima Daiichi NPS (T-S4) Lower Layer (Bq/L)

