Results of Nuclide Analysis of Seawater <Coast>

Reference

(Data summerized on August 5)

Place of Sampling	North of Discharge Channel of 5-6u of 1F (approx. 30m north of 5-6u discharge channel)		Around South Discharge Channel of 1F (appox. 330m south of 1-4u Discharge Channel)				Around North Discharge Channel of 2F (Around 3,4u Discharge Channel) (approx. 10 km from 1F)		Around Iwasawa Shore of 2F (appox. 7 km south of 1,2u Discharge Channel) (appox. 16 km from 1F)		② Density limit by the announcement of Reactor Regulation (Bq/L) (the density limit in the water outside of surrounding monitored areas in the section 6 of the appendix 2)
Time and Date of Sample Collection	10:20am August 4,2011		9:55am August 4,2011		2:30 pm August 4,2011		8:30 am August 4,2011		8:05 am August 4,2011		
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)	
I-131 (about 8 days)	ND	-	ND	-	ND	-	ND	-	ND	-	40
Cs-134 (about 2 years)	ND	-	ND	-	ND	-	ND	-	ND	-	60
Cs-137 (about 30 years)	ND	-	ND	-	ND	-	ND	-	ND	-	90

※ Density by the announcement of Reactor Regulation is stated with an amount converted from Bq/cm3 to Bq/L

※ Data of other nuclides are under evaluation.

※ In the case that two or more kinds of nuclides exist, sum of each scaling factor to the density limit is compared with 1.

※ In the case that the data is below measurable limit, "ND" is stated.
Detection limits of the three main nuclides are as follows: I-131: approx. 9Bq/L., Cs-134: approx. 21Bq/L.,Cs-137: approx. 24Bq/L.,
Please note that these nuclides are sometimes detected even when they are below the threshold, contingent on the detector or samples.

Results of Nuclide Analysis of Seawater <Offshore 1/3>

Reference

(Data summerized on August 5)

Place of Sampling	15 km offshore of MinamiSouma City Upper layer		15 km offshore of MinamiSouma City Lower layer		15 km offshore of Ukedo-gawa Upper layer		15 km offshore of Ukedo-gawa Lower layer		15 km offshore of Fukushima Daiichi Upper layer		15 km offshore of Fukushima Daiichi Lower layer		② Density limit by the announcement of Reactor Regulation (Bq/L) (the density limit in the water outside of surrounding monitored areas in the section 6 of the appendix 2)
Time and Date of Sample Collection	8:30am August 4, 2011		8:30am August 4, 2011		N/A		N/A		N/A		N/A		
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)	
I-131 (about 8 days)	ND	-	ND	-									40
Cs-134 (about 2 years)	ND	-	ND	-									60
Cs-137 (about 30 years)	ND	-	ND	-									90

Place of Sampling	15 km offshore of Fukushima Daini Upper layer		15 km offshore of Fukushima Daini Lower layer		15 km offshore of Iwasawa Shore Upper layer		15 km offshore of Iwasawa Shore Lower layer		15 km offshore of Hirono-machi Upper layer		15 km offshore of Hirono-machi Lower layer		② Density limit by the announcement of Reactor Regulation (Bq/L) (the density limit in the water outside of surrounding monitored areas in the section 6 of the appendix 2)
Time and Date of Sample Collection	N/A		N/A		8:35am August 4, 2011		8:35am August 4, 2011		9:15am August 4, 2011		9:15am August 4, 2011		
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)	
I-131 (about 8 days)					ND	-	ND	-	ND	-	ND	-	40
Cs-134 (about 2 years)					ND	-	ND	-	ND	-	ND	-	60
Cs-137 (about 30 years)					ND	-	ND	-	ND	-	ND	-	90

※ Density by the announcement of Reactor Regulation is stated with an amount converted from Bq/cm3 to Bq/L

※ Data of other nuclides are under evaluation.

※ In the case that two or more kinds of nuclides exist, sum of each scaling factor to the density limit is compared with 1.

※ In the case that the data is below measurable limit, "ND" is stated.
Detection limits of the three main nuclides are as follows: I-131: approx. 3Bq/L., Cs-134: approx. 5Bq/L.,Cs-137: approx. 5Bq/L.,
Please note that these nuclides are sometimes detected even when they are below the threshold, contingent on the detector or samples.

Results of Nuclide Analysis of Seawater <Offshore 2/3>

Reference

(Data summerized on August 5)

Place of Sampling	3km offshore of Haramachi district Upper layer		3km offshore of Haramachi district Lower layer		3km offshore of Odaka district Upper layer		3km offshore of Odaka district Lower layer		3km offshore of Iwasawa coast Upper layer		3km offshore of Iwasawa coast Lower layer		② Density limit by the announcement of Reactor Regulation (Bq/L) (the density limit in the water outside of surrounding monitored areas in the section 6 of the appendix 2)
Time and Date of Sample Collection	9:05am August 4, 2011		9:05am August 4, 2011		9:15am August 4, 2011		9:15am August 4, 2011		7:40am August 4, 2011		7:40am August 4, 2011		
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)	
I-131 (about 8 days)	ND	-	ND	-	ND	-	ND	-	ND	-	ND	-	40
Cs-134 (about 2 years)	ND	-	ND	-	ND	-	ND	-	ND	-	ND	-	60
Cs-137 (about 30 years)	ND	-	ND	-	ND	-	ND	-	ND	-	ND	-	90

Place of Sampling	8km offshore of Odaka district Upper layer		8km offshore of Odaka district Lower layer		8km offshore of Iwasawa coast Upper layer		8km offshore of Iwasawa coast Lower layer						② Density limit by the announcement of Reactor Regulation (Bq/L) (the density limit in the water outside of surrounding monitored areas in the section 6 of the appendix 2)
Time and Date of Sample Collection	9:35am August 4, 2011		9:35am August 4, 2011		8:05am August 4, 2011		8:05am August 4, 2011						
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)	
I-131 (about 8 days)	ND	-	ND	-	ND	-	ND	-					40
Cs-134 (about 2 years)	ND	-	ND	-	ND	-	ND	-					60
Cs-137 (about 30 years)	ND	-	ND	-	ND	-	ND	-					90

※ Density by the announcement of Reactor Regulation is stated with an amount converted from Bq/cm3 to Bq/L

※ Data of other nuclides are under evaluation.

※ In the case that two or more kinds of nuclides exist, sum of each scaling factor to the density limit is compared with 1.

※ In the case that the data is below measurable limit, "ND" is stated.
Detection limits of the three main nuclides are as follows: I-131: approx. 3Bq/L., Cs-134: approx. 5Bq/L.,Cs-137: approx. 5Bq/L.,
Please note that these nuclides are sometimes detected even when they are below the threshold, contingent on the detector or samples

Results of Nuclide Analysis of Seawater <Offshore 3/3>

Reference

(Data summerized on August 5)

Place of Sampling	North Iwaki Offshore 3km Upper Layer		North Iwaki Offshore 3km Lower Layer		Natsui-gawa Offshore 3km Upper Layer		Natsui-gawa Offshore 3km Lower Layer		Onahama Port Offshore 3km Upper Layer		Onahama Port Offshore 3km Lower Layer		② Density limit by the announcement of Reactor Regulation (Bq/L) (the density limit in the water outside of surrounding monitored areas in the section 6 of the appendix 2)
Time and Date of Sample Collection	4:50am August 4, 2011		4:50am August 4, 2011		6:00am August 4, 2011		6:00am August 4, 2011		5:30am August 4, 2011		5:30am August 4, 2011		
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)	
I-131 (about 8 days)	ND	-	ND	-	ND	-	ND	-	ND	-	ND	-	40
Cs-134 (about 2 years)	ND	-	ND	-	ND	-	ND	-	ND	-	ND	-	60
Cs-137 (about 30 years)	ND	-	ND	-	ND	-	ND	-	ND	-	ND	-	90

Place of Sampling	Ena Offshore 3km Upper Layer		Ena Offshore 3km Lower Layer		Numanouchi Offshore 3km Upper Layer		Numanouchi Offshore 3km Lower Layer		Toyoma Offshore 3km Upper Layer		Toyoma Offshore 3km Lower Layer		② Density limit by the announcement of Reactor Regulation (Bq/L) (the density limit in the water outside of surrounding monitored areas in the section 6 of the appendix 2)
Time and Date of Sample Collection	5:50am August 4, 2011		5:50am August 4, 2011		5:40am August 4, 2011		5:40am August 4, 2011		5:25am August 4, 2011		5:25am August 4, 2011		
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)	
I-131 (about 8 days)	ND	-	ND	-	ND	-	ND	-	ND	-	ND	-	40
Cs-134 (about 2 years)	ND	-	ND	-	ND	-	ND	-	ND	-	ND	-	60
Cs-137 (about 30 years)	ND	-	ND	-	ND	-	ND	-	ND	-	ND	-	90

※ Density by the announcement of Reactor Regulation is stated with an amount converted from Bq/cm3 to Bq/L

※ Data of other nuclides are under evaluation.

※ In the case that two or more kinds of nuclides exist, sum of each scaling factor to the density limit is compared with 1.

※ In the case that the data is below measurable limit, "ND" is stated.
Detection limits of the three main nuclides are as follows: I-131: approx. 3Bq/L., Cs-134: approx. 5Bq/L.,Cs-137: approx. 5Bq/L.,
Please note that these nuclides are sometimes detected even when they are below the threshold, contingent on the detector or samples.

Results of Nuclide Analysis of Seawater ＜Offshore＞

attachment

(Data summerized on August 5)

Place of Sampling	Fukushima Daiichi 15km offshore from site		Fukushima Daini 15km offshore from site		②Density limit by the announcement of Reactor Regulation (Bq/L) (the density limit in the water outside of surrounding monitored areas in the section 6 of the appendix 2)
Time and Date of Sample Collection	July 14,2011		July 14,2011		
Detected Nuclides (Half-life)	①Density of Sample (Bq/L)	Scaling Factor (①/②)	①Density of Sample (Bq/L)	Scaling Factor (①/②)	
I-131 (about 8 days)	ND	—	ND	—	40
Cs-134 (about 2 years)	ND	—	ND	—	60
Cs-137 (about 30 years)	ND	—	ND	—	90
Sr-89 (about 51 days)	**0.11**	**0.00**	**0.13**	**0.00**	**300**
Sr-90 (about 29 yeras)	**0.048**	**0.00**	**0.048**	**0.00**	**30**

※ Density by the announcement of Reactor Regulation is stated with an amount converted from Bq/cm3 to Bq/L

※ In the case that two or more kinds of nuclides exist, sum of each scaling factor to the density limit is compared with 1.

※ The data of "Ｉ－１３１""Ｃｓ－１３４" and "Ｃｓ－１３７" had released at July 15.

※ Analysis Agency：Japan Chemical Analysis Center（Ｓｒ－８９，９０）、TEPCO（Ｉ－１３１，Ｃｓ－１３４，Ｃｓ－１３７）

(Evaluation)
As Sr-89 and 90 were detected at the coast, the influence of the accident is considered,
but each density was below each density limit in the water.

Results of Nuclide Analysis of Seawater ＜Offshore＞

Attachment

(Data summerized on August 5)

Place of Sampling	North of Discharge Channel of 5-6u of 1F (approx. 30m north of 5-6u discharge channel)		Around South Discharge Channel of 1F (appox. 330m south of 1-4u Discharge Channel)		Fukushima Daiichi 15km offshore from site		Fukushima Daini 15km offshore from site		②Density limit by the announcement of Reactor Regulation (Bq/L) (the density limit in the water outside of surrounding monitored areas in the section 6 of the appendix 2)
Time and Date of Sample Collection	June 13,2011		June 13,2011		June 14,2011		June 14,2011		
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)	
I-131 (about 8 days)	ND	—	ND	—	ND	—	ND	—	40
Cs-134 (about 2 years)	21	0.35	24	0.40	ND	—	ND	—	60
Cs-137 (about 30 years)	30	0.33	25	0.28	ND	—	ND	—	90
Total α ray	ND	—	ND	—	ND	—	ND	—	—
Total β ray	31	—	27	—	ND	—	ND	—	—

※ Density by the announcement of Reactor Regulation is stated with an amount converted from Bq/cm3 to Bq/L

※ In the case that two or more kinds of nuclides exist, sum of each scaling factor to the density limit is compared with 1.

※ The data of "Ｉ－１３１""Ｃｓ－１３４" and "Ｃｓ－１３７" had released at June 14 and 15.

(Evaluation)

As total beta rays were detected at the coast, the influence of the accident is considered,