

## Definite Results of Nuclides Analysis at Fukushima Daiichi Nuclear Power Station (Announced on May 16-1315, 2012)

< Legend > - : γ nuclides except for the major 3 nuclides (I-131, Cs-134, Cs-137) were not detected. Please refer to the preliminary reports for the result of the major nuclides.  
 : γ nuclides other than the major 3 nuclides (I-131, Cs-134, Cs-137) were detected. Please refer to the following pages.  
 / : Not applicable or cancelled due to the bad weather

Announcement Date of the Preliminary Report Sampling Location	May															
	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Nuclides Analysis Result of the Radioactive Materials in the Air at Fukushima Nuclear Power Stations	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nuclides Analysis Result of the Radioactive Materials in the Air at the Seaside of Fukushima Nuclear Power Stations	/	/	-	/	/	/	/	/	/	-	/	/	/	/	/	/
Nuclides Analysis Result of Radioactive Materials in the Seawater < Coast >	-	-	-	-	-	-	-	-	/	-	-	-	-	-	-	-
Nuclides Analysis Result of Radioactive Materials in the Seawater < Offshore >	/	-	-	/	/	/	/	/	/	-	/	/	/	/	/	-
Nuclides Analysis Result of Radioactive Materials in the Seawater < Offshore Remeasurement >	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
Nuclides Analysis Result of the Radioactive Materials in the Seawater < Offshore of Ibaraki Prefecture >	/	/	/	/	/	/	-	/	/	/	/	/	/	/	/	/
Nuclides Analysis Result of Radioactive Materials in the Seawater < Offshore of Miyagi prefecture >	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
Nuclides Analysis Result of the Radioactive Materials in the Seawater of the Port	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nuclides Analysis Result of the Radioactive Materials in the Seawater of Unit 5-6 Intake	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
Nuclides Analysis Result of the Sub-drain of Fukushima Daiichi NPS	/	-	/	-	/	/	-	/	-	/	-	/	/	-	/	-
Nuclides Analysis Result of Marine Soil	/	/	/	/	-	/	/	-	/	/	-	/	/	/	/	-
Nuclides Analysis Result of the Sub-drain Water in the Surroundings of the Central Radioactive Waste Treatment Facility	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nuclides Analysis Results of the Radioactive Materials in the Air at the Opening of Buildings at Fukushima Daiichi NPS	/	/	/	/	/	/	/	/	-	/	/	/	/	/	/	/
Nuclides Analysis Results of the Radioactive Fallout inside and Outside Fukushima Daiichi NPS	/	/	/	/	/	/	/	/	-	/	/	/	/	/	/	/

【Definite Report】 Radioactivity Density of the Seawater in the Port of Fukushima Daiichi NPS < 1/3 >

Place of Sampling	Shallow Draft Quay at 1F				Inside Unit 1-4 Water Intake Canal (North) at 1F				Unit 1 Screen at 1F (Outside the Silt Fence)		Unit 1 Screen at 1F (Inside the Silt Fence)		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.)
	May 17, 2012 7:03 AM		N/A		May 17, 2012 7:12 AM		N/A		May 17, 2012 7:20 AM		May 17, 2012 7:22 AM		
Detected Nuclides (Half-life)	Density of Sample (Bq/L)	Scaling Factor ( / )	Density of Sample (Bq/L)	Scaling Factor ( / )	Density of Sample (Bq/L)	Scaling Factor ( / )	Density of Sample (Bq/L)	Scaling Factor ( / )	Density of Sample (Bq/L)	Scaling Factor ( / )	Density of Sample (Bq/L)	Scaling Factor ( / )	
I-131 (Approx. 8 days)	ND	-	-	-	ND	-	-	-	ND	-	ND	-	40
Cs-134 (Approx. 2 years)	ND	-	-	-	8.5	0.14	-	-	4.2	0.07	10	0.17	60
Cs-137 (Approx. 30 years)	ND	-	-	-	13	0.14	-	-	13	0.14	15	0.17	90
Mn-54 (Approx. 310 days)	ND	-	-	-	ND	-	-	-	ND	-	ND	-	1,000
Co-60 (Approx. 5 years)	ND	-	-	-	ND	-	-	-	ND	-	ND	-	200
Tc-99m (Approx. 6 hrs)	ND	-	-	-	ND	-	-	-	ND	-	ND	-	40,000
Te-129m (Approx. 34 days)	ND	-	-	-	ND	-	-	-	ND	-	ND	-	300
Te-129 (Approx. 70 mins)	ND	-	-	-	ND	-	-	-	ND	-	ND	-	10,000
Cs-136 (Approx. 13 days)	ND	-	-	-	ND	-	-	-	ND	-	ND	-	300
Ba-140 (Approx. 13 days)	ND	-	-	-	ND	-	-	-	ND	-	ND	-	300
La-140 (Approx. 40 hrs)	ND	-	-	-	ND	-	-	-	ND	-	ND	-	400

\* 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.

The detection limits of the major three nuclides not detected are as follows:

I-131: Approx. 2Bq/L, Cs-134: Approx.3Bq/L, Cs-137: Approx.4Bq/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.

【Definite Report】 Radioactivity Density of the Seawater in the Port of Fukushima Daiichi NPS < 2/3 >

Place of Sampling	Unit 2 Screen at 1F (Outside the Silt Fence)		Unit 2 Screen at 1F (Inside the Silt Fence)		Unit 3 Screen at 1F (Outside the Silt Fence)		Unit 3 Screen at 1F (Inside the Silt Fence)		Unit 4 Screen at 1F (Outside the Silt Fence)		Unit 4 Screen at 1F (Inside the Silt Fence)		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	May 17, 2012 7:28 AM		May 17, 2012 7:30 AM		May 17, 2012 7:37 AM		May 17, 2012 7:38 AM		May 17, 2012 7:43 AM		May 17, 2012 7:45 AM		
Detected Nuclides (Half-life)	Density of Sample (Bq/L)	Scaling Factor ( / )	Density of Sample (Bq/L)	Scaling Factor ( / )	Density of Sample (Bq/L)	Scaling Factor ( / )	Density of Sample (Bq/L)	Scaling Factor ( / )	Density of Sample (Bq/L)	Scaling Factor ( / )	Density of Sample (Bq/L)	Scaling Factor ( / )	
I-131 (Approx. 8 days)	ND	-	ND	-	ND	-	ND	-	ND	-	ND	-	40
Cs-134 (Approx. 2 years)	8.8	0.15	21	0.35	8.1	0.14	92	1.5	24	0.40	47	0.78	60
Cs-137 (Approx. 30 years)	11	0.12	30	0.33	15	0.17	160	1.8	38	0.42	64	0.71	90
Mn-54 (Approx. 310 days)	ND	-	0.69	0.00	ND	-	ND	-	ND	-	ND	-	1,000
Co-60 (Approx. 5 years)	ND	-	ND	-	ND	-	ND	-	ND	-	ND	-	200
Tc-99m (Approx. 6 hrs)	ND	-	ND	-	ND	-	ND	-	ND	-	ND	-	40,000
Te-129m (Approx. 34 days)	ND	-	ND	-	ND	-	ND	-	ND	-	ND	-	300
Te-129 (Approx. 70 mins)	ND	-	ND	-	ND	-	ND	-	ND	-	ND	-	10,000
Cs-136 (Approx. 13 days)	ND	-	ND	-	ND	-	ND	-	ND	-	ND	-	300
Ba-140 (Approx. 13 days)	ND	-	ND	-	ND	-	ND	-	ND	-	ND	-	300
La-140 (Approx. 40 hrs)	ND	-	ND	-	ND	-	ND	-	ND	-	ND	-	400

\* 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.

The detection limits of the major three nuclides not detected are as follows:

I-131: Approx. 11Bq/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.

【Definite Report】 Radioactivity Density of the Seawater in the Port of Fukushima Daiichi NPS < 3/3 >

Place of Sampling	Inside Unit 1-4 Water Intake Canal (South) at 1F		Port Entrance of Fukushima Daiichi NPS		In Front of Unit 6 Water Intake Canal at 1F								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	May 17, 2012 7:49 AM		N/A		May 17, 2012 4:30 PM								
Detected Nuclides (Half-life)	Density of Sample (Bq/L)	Scaling Factor ( / )	Density of Sample (Bq/L)	Scaling Factor ( / )	Density of Sample (Bq/L)	Scaling Factor ( / )	Density of Sample (Bq/L)	Scaling Factor ( / )	Density of Sample (Bq/L)	Scaling Factor ( / )	Density of Sample (Bq/L)	Scaling Factor ( / )	Density of Sample (Bq/L)	Scaling Factor ( / )
I-131 (Approx. 8 days)	ND	-	-	-	ND	-								40
Cs-134 (Approx. 2 years)	23	0.38	-	-	3.2	0.05								60
Cs-137 (Approx. 30 years)	35	0.39	-	-	5.7	0.06								90
Mn-54 (Approx. 310 days)	ND	-	-	-	ND	-								1,000
Co-60 (Approx. 5 years)	ND	-	-	-	ND	-								200
Tc-99m (Approx. 6 hrs)	ND	-	-	-	ND	-								40,000
Te-129m (Approx. 34 days)	ND	-	-	-	ND	-								300
Te-129 (Approx. 70 mins)	ND	-	-	-	ND	-								10,000
Cs-136 (Approx. 13 days)	ND	-	-	-	ND	-								300
Ba-140 (Approx. 13 days)	ND	-	-	-	ND	-								300
La-140 (Approx. 40 hrs)	ND	-	-	-	ND	-								400

\* 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.

The detection limits of the major three nuclides not detected are as follows:

I-131: Approx. 1Bq/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.

【Definite Report】 Radioactivity Density of the Seawater in the Port of Fukushima Daiichi NPS < 1/3 >

Place of Sampling	Shallow Draft Quay at 1F				Inside Unit 1-4 Water Intake Canal (North) at 1F				Unit 1 Screen at 1F (Outside the Silt Fence)		Unit 1 Screen at 1F (Inside the Silt Fence)		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.)
	May 19, 2012 6:42 AM		N/A		May 19, 2012 6:46 AM		N/A		May 19, 2012 6:49 AM		May 19, 2012 6:51 AM		
Detected Nuclides (Half-life)	Density of Sample (Bq/L)	Scaling Factor ( / )	Density of Sample (Bq/L)	Scaling Factor ( / )	Density of Sample (Bq/L)	Scaling Factor ( / )	Density of Sample (Bq/L)	Scaling Factor ( / )	Density of Sample (Bq/L)	Scaling Factor ( / )	Density of Sample (Bq/L)	Scaling Factor ( / )	
I-131 (Approx. 8 days)	ND	-	-	-	ND	-	-	-	ND	-	ND	-	40
Cs-134 (Approx. 2 years)	12	0.20	-	-	11	0.18	-	-	7.6	0.13	9.3	0.16	60
Cs-137 (Approx. 30 years)	21	0.23	-	-	15	0.17	-	-	10	0.11	17	0.19	90
Mn-54 (Approx. 310 days)	ND	-	-	-	ND	-	-	-	ND	-	ND	-	1,000
Co-60 (Approx. 5 years)	ND	-	-	-	ND	-	-	-	ND	-	ND	-	200
Tc-99m (Approx. 6 hrs)	ND	-	-	-	ND	-	-	-	ND	-	ND	-	40,000
Te-129m (Approx. 34 days)	ND	-	-	-	ND	-	-	-	ND	-	ND	-	300
Te-129 (Approx. 70 mins)	ND	-	-	-	ND	-	-	-	ND	-	ND	-	10,000
Cs-136 (Approx. 13 days)	ND	-	-	-	ND	-	-	-	ND	-	ND	-	300
Ba-140 (Approx. 13 days)	ND	-	-	-	ND	-	-	-	ND	-	ND	-	300
La-140 (Approx. 40 hrs)	ND	-	-	-	ND	-	-	-	ND	-	ND	-	400

\* 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.

The detection limits of the major three nuclides not detected are as follows:

I-131: Approx. 2Bq/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.

【Definite Report】 Radioactivity Density of the Seawater in the Port of Fukushima Daiichi NPS < 2/3 >

Place of Sampling	Unit 2 Screen at 1F (Outside the Silt Fence)		Unit 2 Screen at 1F (Inside the Silt Fence)		Unit 3 Screen at 1F (Outside the Silt Fence)		Unit 3 Screen at 1F (Inside the Silt Fence)		Unit 4 Screen at 1F (Outside the Silt Fence)		Unit 4 Screen at 1F (Inside the Silt Fence)		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	May 19, 2012 6:54 AM		May 19, 2012 6:56 AM		May 19, 2012 6:59 AM		May 19, 2012 7:03 AM		May 19, 2012 6:59 AM		May 19, 2012 10:23 AM			
Detected Nuclides (Half-life)	Density of Sample (Bq/L)	Scaling Factor ( / )	Density of Sample (Bq/L)	Scaling Factor ( / )	Density of Sample (Bq/L)	Scaling Factor ( / )	Density of Sample (Bq/L)	Scaling Factor ( / )	Density of Sample (Bq/L)	Scaling Factor ( / )	Density of Sample (Bq/L)	Scaling Factor ( / )	Density of Sample (Bq/L)	Scaling Factor ( / )	
I-131 (Approx. 8 days)	ND	-	ND	-	ND	-	ND	-	ND	-	ND	-	ND	-	40
Cs-134 (Approx. 2 years)	9.0	0.15	28	0.47	10	0.17	260	4.3	50	0.83	110	1.8	60	60	
Cs-137 (Approx. 30 years)	14	0.16	46	0.51	16	0.18	390	4.3	71	0.79	160	1.8	90	90	
Mn-54 (Approx. 310 days)	ND	-	1.6	0.00	ND	-	ND	-	ND	-	ND	-	ND	-	1,000
Co-60 (Approx. 5 years)	ND	-	ND	-	ND	-	ND	-	ND	-	ND	-	ND	-	200
Tc-99m (Approx. 6 hrs)	ND	-	ND	-	ND	-	ND	-	ND	-	ND	-	ND	-	40,000
Te-129m (Approx. 34 days)	ND	-	ND	-	ND	-	ND	-	ND	-	ND	-	ND	-	300
Te-129 (Approx. 70 mins)	ND	-	ND	-	ND	-	ND	-	ND	-	ND	-	ND	-	10,000
Cs-136 (Approx. 13 days)	ND	-	ND	-	ND	-	ND	-	ND	-	ND	-	ND	-	300
Ba-140 (Approx. 13 days)	ND	-	ND	-	ND	-	ND	-	ND	-	ND	-	ND	-	300
La-140 (Approx. 40 hrs)	ND	-	ND	-	ND	-	ND	-	ND	-	ND	-	ND	-	400

\* 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.

The detection limits of the major three nuclides not detected are as follows:

I-131: 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.

【Definite Report】 Radioactivity Density of the Seawater in the Port of Fukushima Daiichi NPS < 3/3 >

Place of Sampling	Inside Unit 1-4 Water Intake Canal (South) at 1F		Port Entrance of Fukushima Daiichi NPS		In Front of Unit 6 Water Intake Canal at 1F								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	May 19, 2012 7:06 AM		N/A		May 19, 2012 4:25 PM								
Detected Nuclides (Half-life)	Density of Sample (Bq/L)	Scaling Factor ( / )	Density of Sample (Bq/L)	Scaling Factor ( / )	Density of Sample (Bq/L)	Scaling Factor ( / )	Density of Sample (Bq/L)	Scaling Factor ( / )	Density of Sample (Bq/L)	Scaling Factor ( / )	Density of Sample (Bq/L)	Scaling Factor ( / )	Density of Sample (Bq/L)	Scaling Factor ( / )
I-131 (Approx. 8 days)	ND	-	-	-	ND	-								40
Cs-134 (Approx. 2 years)	60	1.0	-	-	ND	-								60
Cs-137 (Approx. 30 years)	89	0.99	-	-	ND	-								90
Mn-54 (Approx. 310 days)	ND	-	-	-	ND	-								1,000
Co-60 (Approx. 5 years)	ND	-	-	-	ND	-								200
Tc-99m (Approx. 6 hrs)	ND	-	-	-	ND	-								40,000
Te-129m (Approx. 34 days)	ND	-	-	-	ND	-								300
Te-129 (Approx. 70 mins)	ND	-	-	-	ND	-								10,000
Cs-136 (Approx. 13 days)	ND	-	-	-	ND	-								300
Ba-140 (Approx. 13 days)	ND	-	-	-	ND	-								300
La-140 (Approx. 40 hrs)	ND	-	-	-	ND	-								400

\* 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.

The detection limits of the major three nuclides not detected are as follows:

I-131: Approx. 2Bq/L, Cs-134: Approx.3Bq/L, Cs-137: Approx.4Bq/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.

**【Definite Report】 Nuclides Analysis Result of Marine Soil**

Place of Sampling (Place No.)	North of Unit 5-6 Discharge Channel at 1F (Approx. 30m North of Unit 5-6 Discharge Channel) (T-1)	Around South Discharge Channel of 1F (1-4U Discharge Channel) (T-2)	3km Offshore of Northern Iwaki City (T-12)	1km Offshore of Natsui River (T-17-1)	3km Offshore of Toyoma (T-20)
Time of Sampling	May 14, 2012 8:45 AM	May 14, 2012 9:10 AM	May 14, 2012 6:30 AM	May 14, 2012 7:05 AM	May 14, 2012 7:30 AM
Detected Nuclides (Half-life)	Radioactivity Density ( Bq/kg, Moist Soil)				
I-131 (Approx. 8 days)	ND	ND	ND	ND	ND
Cs-134 (Approx. 2 years)	350	700	67	39	54
Cs-137 (Approx. 30 years)	500	1,000	89	61	76
Mn-54 (Approx. 310 days)	ND	4.6	ND	ND	ND
Co-60 (Approx. 5 years)	ND	ND	ND	ND	ND
Tc-99m (Approx. 6 hrs)	ND	ND	ND	ND	ND
Ag-110m (Approx. 250 days)	ND	ND	ND	ND	ND
Sb-125 (Approx. 3 yrs)	ND	ND	ND	ND	ND
Te-129 (Approx. 70 mins)	ND	ND	ND	ND	ND
Te-129m (Approx. 34 days)	ND	ND	ND	ND	ND
Cs-136 (Approx. 13 days)	ND	ND	ND	ND	ND
Ba-140 (Approx. 13 days)	ND	ND	ND	ND	ND
La-140 (Approx. 40 hrs)	ND	ND	ND	ND	ND

\* "ND" indicates that the measurement result is below the detection limit.

The detection limits of the major three nuclides not detected are as follows: I-131: Approx. 12Bq/kg·Moist Soil, As the detection limit may vary depending on the detectors and sample properties, there are cases where nuclides below the detection limit are detected.