

Definite Results of Nuclides Analysis at Fukushima Daiichi Nuclear Power Station (Announced on July 16 - 31, 2014)

- < 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 Point	July															
	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 Sea Side of Fukushima Nuclear Power Stations	∕	∕	—	∕	∕	∕	∕	∕	∕	—	∕	∕	∕	∕	∕	∕
Nuclides Analysis Result of Radioactive Materials in the Seawater < Coast >	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Nuclides Analysis Result of the Radioactive Materials in the Seawater < Offshore of Ibaraki Prefecture >	∕	∕	—	∕	∕	∕	∕	∕	∕	∕	∕	∕	∕	∕	∕	∕
Nuclides Analysis Result of the Radioactive Materials in the Seawater of the Port	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Nuclide Analysis of the Radioactive Materials in the Fallouts obtained inside and outside of Fukushima Daiichi Nuclear Power Station	∕	∕	∕	∕	∕	∕	∕	∕	∕	—	∕	∕	∕	∕	∕	∕
Nuclides Analysis Results of the Radioactive Materials in the Air at the Opening of Buildings at Fukushima Daiichi NPS	∕	∕	∕	∕	∕	∕	∕	∕	∕	○	∕	∕	∕	∕	∕	∕
Nuclide Analysis Results of Radioactive Materials in the Air above the Reactor Building at Fukushima Daiichi Power Station (Upper Part of Unit 1 Reactor Building)	∕	∕	∕	∕	∕	∕	∕	∕	∕	—	∕	∕	∕	∕	∕	∕
Nuclide Analysis Results of Radioactive Materials in the Air of Exhaust System of Unit 2 Reactor Building at Fukushima Daiichi Power Station	∕	∕	∕	∕	∕	∕	∕	∕	∕	—	∕	∕	∕	∕	∕	∕
Nuclide Analysis Results of Radioactive Materials in the Air above the Reactor Building at Fukushima Daiichi Power Station (Upper Part of Unit 3 Reactor Building)	∕	∕	∕	∕	∕	∕	∕	∕	∕	—	∕	∕	∕	∕	∕	∕
Nuclide Analysis Results of Radioactive Materials in the Air above the Reactor Building at Fukushima Daiichi Power Station (Upper Part of Unit 4 Reactor Building)	∕	∕	∕	∕	∕	∕	∕	∕	∕	—	∕	∕	∕	∕	∕	∕

Place of Sampling	3rd Floor of Auxiliary Operation Shared Facility (Around the Machine Hatch)		3rd Floor of Auxiliary Operation Shared Facility (In Front of South Stairs)		3rd Floor of Auxiliary Operation Shared Facility (In Front of North Stairs)		② Density Limit in the Air for Workers to Engage in Radiation Related Tasks (Bq/cm ³)*
Time of Sampling	From June 2, 2014 8:38 AM To June 3, 2014 9:06 AM		From June 2, 2014 8:40 AM To June 3, 2014 9:03 AM		From June 2, 2014 8:36 AM To June 3, 2014 9:01 AM		
Detected Nuclides (Half-life)	①Density of Sample (Bq/cm ³)	Scaling Factor (①/②)	①Density of Sample (Bq/cm ³)	Scaling Factor (①/②)	①Density of Sample (Bq/cm ³)	Scaling Factor (①/②)	
I-131 (Approx. 8 days)	ND	-	ND	-	ND	-	1E-03
Cs-134 (Approx. 2 years)	ND	-	ND	-	ND	-	2E-03
Cs-137 (Approx. 30 years)	ND	-	ND	-	ND	-	3E-03
Mn-54 (Approx. 310 days)	ND	-	ND	-	ND	-	2E-02
Co-60 (Approx. 5 years)	2.4E-08	0.00	2.1E-07	0.00	ND	-	1E-03
Nb-95 (Approx. 35 days)	ND	-	ND	-	ND	-	2E-02
Tc-99m (Approx. 6 hrs)	ND	-	ND	-	ND	-	7E-01
Ru-106 (Approx. 370 days)	ND	-	ND	-	ND	-	6E-04
Ag-110m (Approx. 250 days)	ND	-	ND	-	ND	-	3E-03
Sb-125 (Approx. 3 yrs)	ND	-	ND	-	ND	-	6E-03
Te-129 (Approx. 70 mins)	ND	-	ND	-	ND	-	4E-01
Te-129m (Approx. 34 days)	ND	-	ND	-	ND	-	4E-03
I-132 (Approx. 2 hrs)	ND	-	ND	-	ND	-	7E-02
I-132 (Approx. 78 hrs)	ND	-	ND	-	ND	-	4E-03
I-133 (Approx. 21 hrs)	ND	-	ND	-	ND	-	5E-03
Cs-136 (Approx. 13 days)	ND	-	ND	-	ND	-	1E-02
Ba-140 (Approx. 13 days)	ND	-	ND	-	ND	-	1E-02
La-140 (Approx. 40 hrs)	ND	-	ND	-	ND	-	1E-02

* The radioactivity density is the sum of the volatile nuclides density and the particulate nuclides density.

* O.OE—O is the same as O.O x 10⁰

* 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:

Volatile: I-131: Approx. 2E-8Bq/cm³, Cs-134: Approx. 4E-8Bq/cm³, Cs-137: Approx. 3E-8Bq/cm³

Particulate: I-131: Approx. 1E-8Bq/cm³, Cs-134: 2E-8Bq/cm³, Cs-137: Approx. 2E-8Bq/cm³

As the detection limit may vary depending on the detectors and sample properties, there are cases where nuclides below the detection limit are detected.

Place of Sampling	3rd Floor of Auxiliary Operation Shared Facility (Around the Machine Hatch)		3rd Floor of Auxiliary Operation Shared Facility (In Front of South Stairs)		3rd Floor of Auxiliary Operation Shared Facility (In Front of North Stairs)		② Density Limit in the Air for Workers to Engage in Radiation Related Tasks (Bq/cm ³)*			
	Time of Sampling	From June 8, 2014 8:08 AM To June 9, 2014 9:06 AM	From June 8, 2014 8:10 AM To June 9, 2014 9:03 AM	From June 8, 2014 8:05 AM To June 9, 2014 9:01 AM	Detected Nuclides (Half-life)	①Density of Sample (Bq/cm ³)		Scaling Factor (①/②)	①Density of Sample (Bq/cm ³)	Scaling Factor (①/②)
I-131 (Approx. 8 days)	ND	-	ND	-	ND	-	1E-03			
Cs-134 (Approx. 2 years)	ND	-	ND	-	ND	-	2E-03			
Cs-137 (Approx. 30 years)	ND	-	ND	-	ND	-	3E-03			
Mn-54 (Approx. 310 days)	ND	-	ND	-	ND	-	2E-02			
Co-60 (Approx. 5 years)	ND	-	ND	-	1.8E-08	0.00	1E-03			
Nb-95 (Approx. 35 days)	ND	-	ND	-	ND	-	2E-02			
Tc-99m (Approx. 6 hrs)	ND	-	ND	-	ND	-	7E-01			
Ru-106 (Approx. 370 days)	ND	-	ND	-	ND	-	6E-04			
Ag-110m (Approx. 250 days)	ND	-	ND	-	ND	-	3E-03			
Sb-125 (Approx. 3 yrs)	ND	-	ND	-	ND	-	6E-03			
Te-129 (Approx. 70 mins)	ND	-	ND	-	ND	-	4E-01			
Te-129m (Approx. 34 days)	ND	-	ND	-	ND	-	4E-03			
I-132 (Approx. 2 hrs)	ND	-	ND	-	ND	-	7E-02			
I-132 (Approx. 78 hrs)	ND	-	ND	-	ND	-	4E-03			
I-133 (Approx. 21 hrs)	ND	-	ND	-	ND	-	5E-03			
Cs-136 (Approx. 13 days)	ND	-	ND	-	ND	-	1E-02			
Ba-140 (Approx. 13 days)	ND	-	ND	-	ND	-	1E-02			
La-140 (Approx. 40 hrs)	ND	-	ND	-	ND	-	1E-02			

* The radioactivity density is the sum of the volatile nuclides density and the particulate nuclides density.

* O.OE—O is the same as O.O x 10⁰

* 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:

Volatile: I-131: Approx. 4E-8Bq/cm³, Cs-134: Approx. 6E-8Bq/cm³, Cs-137: Approx. 9E-8Bq/cm³

Particulate: I-131: Approx. 9E-9Bq/cm³, Cs-134: 2E-8Bq/cm³, Cs-137: Approx. 2E-8Bq/cm³

As the detection limit may vary depending on the detectors and sample properties, there are cases where nuclides below the detection limit are detected.

Place of Sampling	3rd Floor of Auxiliary Operation Shared Facility (Around the Machine Hatch)		3rd Floor of Auxiliary Operation Shared Facility (In Front of South Stairs)		3rd Floor of Auxiliary Operation Shared Facility (In Front of North Stairs)		② Density Limit in the Air for Workers to Engage in Radiation Related Tasks (Bq/cm ³)*
	From June 17, 2014 8:22 AM To June 18, 2014 9:03 AM		From June 17, 2014 8:24 AM To June 18, 2014 9:04 AM		From June 17, 2014 8:20 AM To June 18, 2014 9:02 AM		
Detected Nuclides (Half-life)	①Density of Sample (Bq/cm ³)	Scaling Factor (①/②)	①Density of Sample (Bq/cm ³)	Scaling Factor (①/②)	①Density of Sample (Bq/cm ³)	Scaling Factor (①/②)	
I-131 (Approx. 8 days)	ND	-	ND	-	ND	-	1E-03
Cs-134 (Approx. 2 years)	ND	-	ND	-	ND	-	2E-03
Cs-137 (Approx. 30 years)	ND	-	ND	-	ND	-	3E-03
Mn-54 (Approx. 310 days)	ND	-	ND	-	ND	-	2E-02
Co-60 (Approx. 5 years)	4.7E-08	0.00	ND	-	2.8E-08	0.00	1E-03
Nb-95 (Approx. 35 days)	ND	-	ND	-	ND	-	2E-02
Tc-99m (Approx. 6 hrs)	ND	-	ND	-	ND	-	7E-01
Ru-106 (Approx. 370 days)	ND	-	ND	-	ND	-	6E-04
Ag-110m (Approx. 250 days)	ND	-	ND	-	ND	-	3E-03
Sb-125 (Approx. 3 yrs)	ND	-	ND	-	ND	-	6E-03
Te-129 (Approx. 70 mins)	ND	-	ND	-	ND	-	4E-01
Te-129m (Approx. 34 days)	ND	-	ND	-	ND	-	4E-03
I-132 (Approx. 2 hrs)	ND	-	ND	-	ND	-	7E-02
I-132 (Approx. 78 hrs)	ND	-	ND	-	ND	-	4E-03
I-133 (Approx. 21 hrs)	ND	-	ND	-	ND	-	5E-03
Cs-136 (Approx. 13 days)	ND	-	ND	-	ND	-	1E-02
Ba-140 (Approx. 13 days)	ND	-	ND	-	ND	-	1E-02
La-140 (Approx. 40 hrs)	ND	-	ND	-	ND	-	1E-02

* The radioactivity density is the sum of the volatile nuclides density and the particulate nuclides density.

* O.OE—O is the same as O.O x 10⁰

* 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:

Volatile: I-131: Approx. 4E-8Bq/cm³, Cs-134: Approx. 7E-8Bq/cm³, Cs-137: Approx. 1E-7Bq/cm³

Particulate: I-131: Approx. 2E-8Bq/cm³, Cs-134: 4E-8Bq/cm³, Cs-137: Approx. 5E-8Bq/cm³

As the detection limit may vary depending on the detectors and sample properties, there are cases where nuclides below the detection limit are detected.

Place of Sampling	3rd Floor of Auxiliary Operation Shared Facility (Around the Machine Hatch)		3rd Floor of Auxiliary Operation Shared Facility (In Front of South Stairs)		3rd Floor of Auxiliary Operation Shared Facility (In Front of North Stairs)		② Density Limit in the Air for Workers to Engage in Radiation Related Tasks (Bq/cm ³)*
	From June 26, 2014 8:35 AM To June 27, 2014 9:05 AM		From June 26, 2014 8:32 AM To June 27, 2014 9:03 AM		From June 26, 2014 8:30 AM To June 27, 2014 9:00 AM		
Detected Nuclides (Half-life)	①Density of Sample (Bq/cm ³)	Scaling Factor (①/②)	①Density of Sample (Bq/cm ³)	Scaling Factor (①/②)	①Density of Sample (Bq/cm ³)	Scaling Factor (①/②)	
I-131 (Approx. 8 days)	ND	-	ND	-	ND	-	1E-03
Cs-134 (Approx. 2 years)	ND	-	ND	-	ND	-	2E-03
Cs-137 (Approx. 30 years)	2.7E-08	0.00	ND	-	ND	-	3E-03
Mn-54 (Approx. 310 days)	ND	-	ND	-	ND	-	2E-02
Co-60 (Approx. 5 years)	1.9E-08	0.00	ND	-	1.8E-08	0.00	1E-03
Nb-95 (Approx. 35 days)	ND	-	ND	-	ND	-	2E-02
Tc-99m (Approx. 6 hrs)	ND	-	ND	-	ND	-	7E-01
Ru-106 (Approx. 370 days)	ND	-	ND	-	ND	-	6E-04
Ag-110m (Approx. 250 days)	ND	-	ND	-	ND	-	3E-03
Sb-125 (Approx. 3 yrs)	ND	-	ND	-	ND	-	6E-03
Te-129 (Approx. 70 mins)	ND	-	ND	-	ND	-	4E-01
Te-129m (Approx. 34 days)	ND	-	ND	-	ND	-	4E-03
I-132 (Approx. 2 hrs)	ND	-	ND	-	ND	-	7E-02
I-132 (Approx. 78 hrs)	ND	-	ND	-	ND	-	4E-03
I-133 (Approx. 21 hrs)	ND	-	ND	-	ND	-	5E-03
Cs-136 (Approx. 13 days)	ND	-	ND	-	ND	-	1E-02
Ba-140 (Approx. 13 days)	ND	-	ND	-	ND	-	1E-02
La-140 (Approx. 40 hrs)	ND	-	ND	-	ND	-	1E-02

* The radioactivity density is the sum of the volatile nuclides density and the particulate nuclides density.

* O.OE—O is the same as O.O x 10⁰

* 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:

Volatile: I-131: Approx. 2E-8Bq/cm³, Cs-134: Approx. 3E-8Bq/cm³, Cs-137: Approx. 3E-8Bq/cm³

Particulate: I-131: Approx. 1E-8Bq/cm³, Cs-134: 2E-8Bq/cm³, Cs-137: Approx. 2E-8Bq/cm³

As the detection limit may vary depending on the detectors and sample properties, there are cases where nuclides below the detection limit are detected.