

Reference

Nuclides Analysis Results of the Radioactive Materials in the Air at the Opening of Buildings at Fukushima Daiichi NPS <1/11>

(Data summarized on November 13)

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 Specified by the Reactor Regulation (Bq/cm ³) (Density limit in the air which radiation workers breathe in is specified in section 4 of Appendix 2)	
	Time of Sampling	Oct 2, 2013 8:33 AM	Oct 3, 2013 4:02 PM	Time of Sampling	Oct 2, 2013 8:37 AM	Oct 3, 2013 4:06 PM		Time of Sampling
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	

* This is the nuclides analysis result of the radioactive materials in the air during handling of fuel.

* 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 10⁻⁰

Data of other nuclides is under examination.

* 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 are as follows.

Volatile; I-131: Approx. 3E-8Bq/cm³, Cs-134: Approx. 6E-8Bq/cm³, Cs-137: Approx. 8E-8Bq/cm³

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

Nuclides Analysis Results of the Radioactive Materials in the Air at the Opening of Buildings at Fukushima Daiichi NPS <2/11>

(Data summarized on November 13)

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 Specified by the Reactor Regulation (Bq/cm ³) (Density limit in the air which radiation workers breathe in is specified in section 4 of Appendix 2)
Time of Sampling	Oct 8, 2013 8:05 AM	Oct 9, 2013 4:45 PM	Oct 8, 2013 8:07 AM	Oct 9, 2013 4:43 PM	Oct 8, 2013 8:08 AM	Oct 9, 2013 4:40 PM	
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

* This is the nuclides analysis result of the radioactive materials in the air during handling of fuel.

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

O.OE—O is the same as $O.O \times 10^{-O}$

Data of other nuclides is under examination.

* 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 are as follows.

Volatile; I-131: Approx. 3E-8Bq/cm³, Cs-134: Approx. 6E-8Bq/cm³, Cs-137: Approx. 8E-8Bq/cm³

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

Nuclides Analysis Results of the Radioactive Materials in the Air at the Opening of Buildings at Fukushima Daiichi NPS <3/11>

(Data summarized on November 13)

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 Specified by the Reactor Regulation (Bq/cm ³) (Density limit in the air which radiation workers breathe in is specified in section 4 of Appendix 2)
Time of Sampling	Oct 10, 2013 8:09 AM	Oct 11, 2013 4:02 PM	Oct 10, 2013 8:10 AM	Oct 11, 2013 4:04 PM	Oct 10, 2013 8:08 AM	Oct 11, 2013 4:00 PM	
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

* This is the nuclides analysis result of the radioactive materials in the air during handling of fuel.

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

O.OE—O is the same as $O.O \times 10^{-O}$

Data of other nuclides is under examination.

* 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 are as follows.

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

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

Nuclides Analysis Results of the Radioactive Materials in the Air at the Opening of Buildings at Fukushima Daiichi NPS <4/11>

(Data summarized on November 13)

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 Specified by the Reactor Regulation (Bq/cm ³) (Density limit in the air which radiation workers breathe in is specified in section 4 of Appendix 2)
Time of Sampling	Oct 15, 2013 8:18 AM	Oct 16, 2013 8:36 AM	Oct 15, 2013 8:19 AM	Oct 16, 2013 8:44 AM	Oct 15, 2013 8:14 AM	Oct 16, 2013 8:32 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	-	
Cs-134 (Approx. 2 years)	ND	-	ND	-	ND	-	2E-03
Cs-137 (Approx. 30 years)	6.2E-08	0.00	7.0E-08	0.00	1.4E-07	0.00	3E-03

* This is the nuclides analysis result of the radioactive materials in the air during handling of fuel.

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

O.OE—O is the same as $O.O \times 10^{-O}$

Data of other nuclides is under examination.

* 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 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: Approx. 4E-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.

Nuclides Analysis Results of the Radioactive Materials in the Air at the Opening of Buildings at Fukushima Daiichi NPS <5/11>

(Data summarized on November 13)

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 Specified by the Reactor Regulation (Bq/cm ³) (Density limit in the air which radiation workers breathe in is specified in section 4 of Appendix 2)
	Time of Sampling	Oct 16, 2013 8:44 AM	Oct 17, 2013 8:25 AM	Oct 16, 2013 8:49 AM	Oct 17, 2013 8:21 AM	Oct 16, 2013 8:40 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	-	4.9E-08	0.00	2E-03
Cs-137 (Approx. 30 years)	1.0E-07	0.00	ND	-	8.9E-08	0.00	3E-03

* This is the nuclides analysis result of the radioactive materials in the air during handling of fuel.

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

O.OE—O is the same as $O.O \times 10^{-O}$

Data of other nuclides is under examination.

* 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 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: Approx. 4E-8Bq/cm³, Cs-137: Approx. 6E-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.

Nuclides Analysis Results of the Radioactive Materials in the Air at the Opening of Buildings at Fukushima Daiichi NPS <6/11>

(Data summarized on November 13)

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 Specified by the Reactor Regulation (Bq/cm ³) (Density limit in the air which radiation workers breathe in is specified in section 4 of Appendix 2)
Time of Sampling	Oct 17, 2013 8:27 AM	Oct 18, 2013 4:08 PM	Oct 17, 2013 8:23 AM	Oct 18, 2013 4:05 PM	Oct 17, 2013 8:20 AM	Oct 18, 2013 4:03 PM	
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)	3.2E-08	0.00	ND	-	ND	-	2E-03
Cs-137 (Approx. 30 years)	1.1E-07	0.00	7.3E-08	0.00	9.8E-08	0.00	3E-03

* This is the nuclides analysis result of the radioactive materials in the air during handling of fuel.

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

O.OE—O is the same as $O.O \times 10^{-O}$

Data of other nuclides is under examination.

* 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 are as follows.

Volatile; I-131: Approx. $3E-8Bq/cm^3$, Cs-134: Approx. $5E-8Bq/cm^3$, Cs-137: Approx. $8E-8Bq/cm^3$

Particulate; I-131: Approx. $2E-8Bq/cm^3$, Cs-134: Approx. $3E-8Bq/cm^3$

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 Results of the Radioactive Materials in the Air at the Opening of Buildings at Fukushima Daiichi NPS <7/11>

(Data summarized on November 13)

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 Specified by the Reactor Regulation (Bq/cm ³) (Density limit in the air which radiation workers breathe in is specified in section 4 of Appendix 2)	
	Time of Sampling	Oct 25, 2013 8:28 AM	Oct 26, 2013 4:06 PM	Time of Sampling	Oct 25, 2013 8:35 AM	Oct 26, 2013 4:10 PM		Time of Sampling
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	

* This is the nuclides analysis result of the radioactive materials in the air during handling of fuel.

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

O.OE—O is the same as $O.O \times 10^{-O}$

Data of other nuclides is under examination.

* 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 are as follows.

Volatile; I-131: Approx. 3E-8Bq/cm³, Cs-134: Approx. 6E-8Bq/cm³, Cs-137: Approx. 8E-8Bq/cm³

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

Nuclides Analysis Results of the Radioactive Materials in the Air at the Opening of Buildings at Fukushima Daiichi NPS <8/11>

(Data summarized on November 13)

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 Specified by the Reactor Regulation (Bq/cm ³) (Density limit in the air which radiation workers breathe in is specified in section 4 of Appendix 2)
Time of Sampling	Oct 28, 2013 8:30 AM	Oct 29, 2013 8:40 AM	Oct 28, 2013 8:33 AM	Oct 29, 2013 8:45 AM	Oct 28, 2013 8:26 AM	Oct 29, 2013 8:36 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	-	
Cs-134 (Approx. 2 years)	ND	-	ND	-	ND	-	2E-03
Cs-137 (Approx. 30 years)	ND	-	ND	-	ND	-	3E-03

* This is the nuclides analysis result of the radioactive materials in the air during handling of fuel.

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

O.OE—O is the same as $O.O \times 10^{-O}$

Data of other nuclides is under examination.

* 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 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: Approx. 4E-8Bq/cm³, Cs-137: Approx. 6E-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.

Nuclides Analysis Results of the Radioactive Materials in the Air at the Opening of Buildings at Fukushima Daiichi NPS <9/11>

(Data summarized on November 13)

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 Specified by the Reactor Regulation (Bq/cm ³) (Density limit in the air which radiation workers breathe in is specified in section 4 of Appendix 2)
Time of Sampling	Oct 29, 2013 8:42 AM	Oct 30, 2013 8:32 AM	Oct 29, 2013 8:49 AM	Oct 30, 2013 8:30 AM	Oct 29, 2013 8:39 AM	Oct 30, 2013 8:26 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

* This is the nuclides analysis result of the radioactive materials in the air during handling of fuel.

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

O.OE—O is the same as $O.O \times 10^{-O}$

Data of other nuclides is under examination.

* 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 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: Approx. 4E-8Bq/cm³, Cs-137: Approx. 6E-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.

Nuclides Analysis Results of the Radioactive Materials in the Air at the Opening of Buildings at Fukushima Daiichi NPS <10/11>

(Data summarized on November 13)

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 Specified by the Reactor Regulation (Bq/cm ³) (Density limit in the air which radiation workers breathe in is specified in section 4 of Appendix 2)
Time of Sampling	Oct 30, 2013 8:34 AM	Oct 31, 2013 7:49 AM	Oct 30, 2013 8:32 AM	Oct 31, 2013 7:52 AM	Oct 30, 2013 8:28 AM	Oct 31, 2013 7:46 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

* This is the nuclides analysis result of the radioactive materials in the air during handling of fuel.

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

O.OE—O is the same as $O.O \times 10^{-O}$

Data of other nuclides is under examination.

* 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 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: Approx. 4E-8Bq/cm³, Cs-137: Approx. 6E-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.

Nuclides Analysis Results of the Radioactive Materials in the Air at the Opening of Buildings at Fukushima Daiichi NPS <11/11>

(Data summarized on November 13)

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 Specified by the Reactor Regulation (Bq/cm ³) (Density limit in the air which radiation workers breathe in is specified in section 4 of Appendix 2)
Time of Sampling	Oct 31, 2013 8:31 AM	Nov 1, 2013 4:04 PM	Oct 31, 2013 8:28 AM	Nov 1, 2013 4:07 PM	Oct 31, 2013 8:24 AM	Nov 1, 2013 4:02 PM	
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)	3.5E-08	0.00	ND	-	4.3E-08	0.00	2E-03
Cs-137 (Approx. 30 years)	8.1E-08	0.00	8.4E-08	0.00	7.6E-08	0.00	3E-03

* This is the nuclides analysis result of the radioactive materials in the air during handling of fuel.

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

O.OE—O is the same as $O.O \times 10^{-O}$

Data of other nuclides is under examination.

* 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 are as follows.

Volatile; I-131: Approx. $3E-8Bq/cm^3$, Cs-134: Approx. $6E-8Bq/cm^3$, Cs-137: Approx. $8E-8Bq/cm^3$

Particulate; I-131: Approx. $2E-8Bq/cm^3$, Cs-134: Approx. $3E-8Bq/cm^3$

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