

Reference

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

(Data summarized on October 3)

Place of Sampling	North of Unit 5-6 Discharge Channel at Fukushima Daiichi NPS (Approx. 30m North of Unit 5-6 Discharge Channel)		Around 1F South Discharge Channel of Fukushima Daiichi NPS (Approx. 330m South of Unit 1-4 Discharge Channel)		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.)
	Oct 2, 2012 (Not sampled)		Oct 2, 2012 (Not sampled)		
Detected Nuclides (Half-life)	Density of Sample (Bq/L)	Scaling Factor ( / )	Density of Sample (Bq/L)	Scaling Factor ( / )	
I-131 (Approx. 8 days)	-	-	-	-	40
Cs-134 (Approx. 2 years)	-	-	-	-	60
Cs-137 (Approx. 30 years)	-	-	-	-	90

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

No sampling due to the bad weather.

## Nuclides Analysis Result of Radioactive Materials in the Seawater <1/3>

(Data summarized on October 3)

Place of Sampling (Place No.)	North of Unit 5-6 Discharge Channel (Approx. 30m North of Unit 5-6 Discharge Channel) (T-1)		Around the South Discharge Channel at Fukushima Daiichi NPS (Approx. 330m South of Unit 1-4 Discharge Channel) (T-2)		/		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.)
	Date of Sampling	Jun 11, 2012		Jun 11, 2012		/	
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 ( / )	
I-131 (Approx. 8 days)	ND	-	ND	-	/	/	40
Cs-134 (Approx. 2 years)	ND	-	ND	-	/	/	60
Cs-137 (Approx. 30 years)	ND	-	ND	-	/	/	90
H-3 (Approx. 12yrs)	ND	-	ND	-	/	/	60,000
All α	ND	-	ND	-	/	/	-
All β	ND	-	ND	-	/	/	-
Sr-89 (Approx. 51 days)	*	-	*	-	/	/	300
Sr-90 (Approx. 29 years)	*	-	*	-	/	/	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 result of all β at around south discharge channel was announced on June 11.

Nuclide analysis results of I-131, Cs-134 and Cs-137 were announced on June 12.

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

I-131: Approx. 0.51Bq/L, Cs-134: Approx.1.2Bq/L, Cs-137: Approx.1.6Bq/L, H-3: Approx. 3.1Bq/L, All α: Approx. 0.12Bq/L, All β: Approx. 27Bq/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.

\* " \* " in the "Density of Sample" columns indicates that the sample is under analysis.

(Evaluation)

H-3, all α and all β were not detected in the sample collected this time.

## Nuclides Analysis Result of Radioactive Materials in the Seawater <2/3>

(Data summarized on October 3)

Place of Sampling (Place No.)	North of Unit 5-6 Discharge Channel (Approx. 30m North of Unit 5-6 Discharge Channel) (T-1)		Around the South Discharge Channel at Fukushima Daiichi NPS (Approx. 330m South of Unit 1-4 Discharge Channel) (T-2)		/		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.)
	Date of Sampling	Jul 9, 2012		Jul 9, 2012		/	
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 ( / )	
I-131 (Approx. 8 days)	ND	-	ND	-	/	/	40
Cs-134 (Approx. 2 years)	ND	-	ND	-	/	/	60
Cs-137 (Approx. 30 years)	ND	-	ND	-	/	/	90
H-3 (Approx. 12yrs)	ND	-	ND	-	/	/	60,000
All α	ND	-	ND	-	/	/	-
All β	ND	-	ND	-	/	/	-
Sr-89 (Approx. 51 days)	*	-	*	-	/	/	300
Sr-90 (Approx. 29 years)	*	-	*	-	/	/	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 result of all β<sub>at</sub> around south discharge channel was announced on July 9.

Nuclide analysis results of I-131, Cs-134 and Cs-137 were announced on July 10.

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

I-131: Approx. 0.51Bq/L, Cs-134: Approx.1.3Bq/L, Cs-137: Approx.1.6Bq/L, H-3: Approx. 3.1Bq/L, All α: Approx. 0.12Bq/L, All β: Approx. 28Bq/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.

\* "\*" in the "Density of Sample" columns indicates that the sample is under analysis.

(Evaluation)

H-3, all α and all β were not detected in the sample collected this time.

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

(Data summarized on October 3)

Place of Sampling (Place No. )	North of Unit 5-6 Discharge Channel (Approx. 30m North of Unit 5-6 Discharge Channel) (T-1)		Around the South Discharge Channel at Fukushima Daiichi NPS (Approx. 330m South of Unit 1-4 Discharge Channel) (T-2)		/		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.)
	Date of Sampling		Date of Sampling		/		
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 ( / )	
I-131 (Approx. 8 days)	ND	-	ND	-	/	/	40
Cs-134 (Approx. 2 years)	ND	-	ND	-	/	/	60
Cs-137 (Approx. 30 years)	ND	-	ND	-	/	/	90
H-3 (Approx. 12yrs)	6.4	0.00	ND	-	/	/	60,000
All α	ND	-	ND	-	/	/	-
All β	ND	-	ND	-	/	/	-
Sr-89 (Approx. 51 days)	*	-	*	-	/	/	300
Sr-90 (Approx. 29 years)	*	-	*	-	/	/	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 result of all <sup>131</sup>I, <sup>134</sup>Cs and <sup>137</sup>Cs at around south discharge channel was announced on August 14.

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

<sup>131</sup>I: Approx. 0.49Bq/L, <sup>134</sup>Cs: Approx.1.2Bq/L, <sup>137</sup>Cs: Approx.1.6Bq/L, H-3: Approx. 2.9Bq/L, All α: Approx. 0.087Bq/L, All β: Approx. 26Bq/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.

\* "\*" in the "Density of Sample" columns indicates that the sample is under analysis.

(Evaluation)

Although H-3 was detected supposedly as a result of this accident, it is less than the density limit in the water which is specified by the announcement.

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

(Data summarized on October 3)

Place of Sampling (Place No.)	3km Offshore of Ukedo River (T-D1)				3km Offshore of Fukushima Daiichi NPS (T-D5)				3km Offshore of Fukushima Daini NPS (T-D9)				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.)
	Upper Layer		Lower Layer		Upper Layer		Lower Layer		Upper Layer		Lower Layer		
Time of Sampling	Sep 4, 2012 8:10 AM		Sep 4, 2012 8:10 AM		Sep 4, 2012 8:45 AM		Sep 4, 2012 8:45 AM		Sep 5, 2012 7:45 AM		Sep 5, 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 ( / )	
Cs-134 (Approx. 2 years)	0.011	0.00	0.030	0.00	0.059	0.00	0.14	0.00	0.0097	0.00	0.0072	0.00	60
Cs-137 (Approx. 30 years)	0.020	0.00	0.049	0.00	0.097	0.00	0.21	0.00	0.017	0.00	0.014	0.00	90

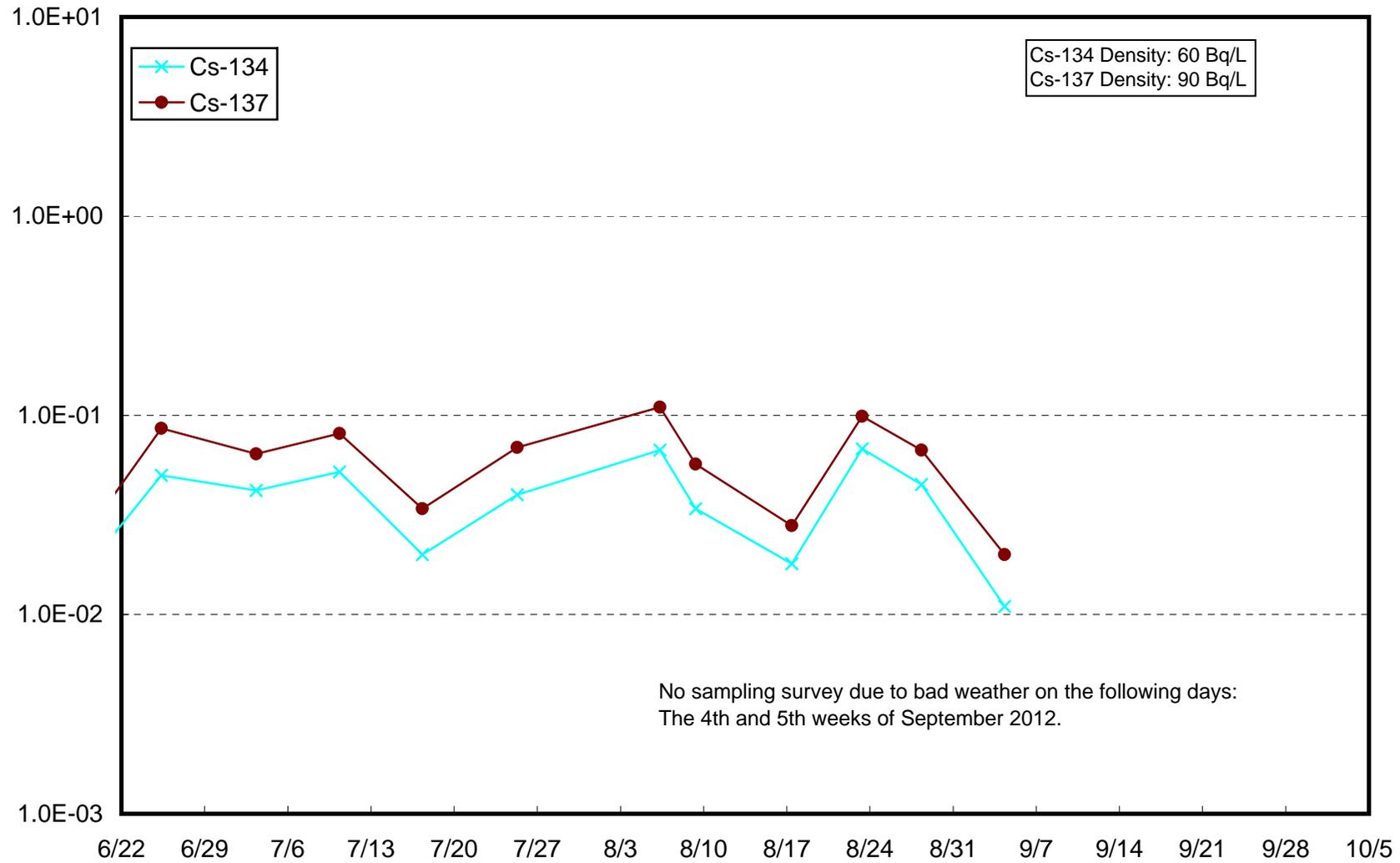
Place of Sampling (Place No.)	/				/				/				Density Limit Specified by the Reactor Regulation (Bq/L)  (The density limit in the water outside the surrounding monitored areas is provided in section 6 of Appendix 2.)
	Upper Layer		Lower Layer		Upper Layer		Lower Layer		Upper Layer		Lower Layer		
Time of Sampling	/		/		/		/		/		/		
Detected Nuclides (Half-life)	Density of Sample (Bq/L)	Scaling Factor ( / )											
Cs-134 (Approx. 2 years)	/	/	/	/	/	/	/	/	/	/	/	/	60
Cs-137 (Approx. 30 years)	/	/	/	/	/	/	/	/	/	/	/	/	90

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

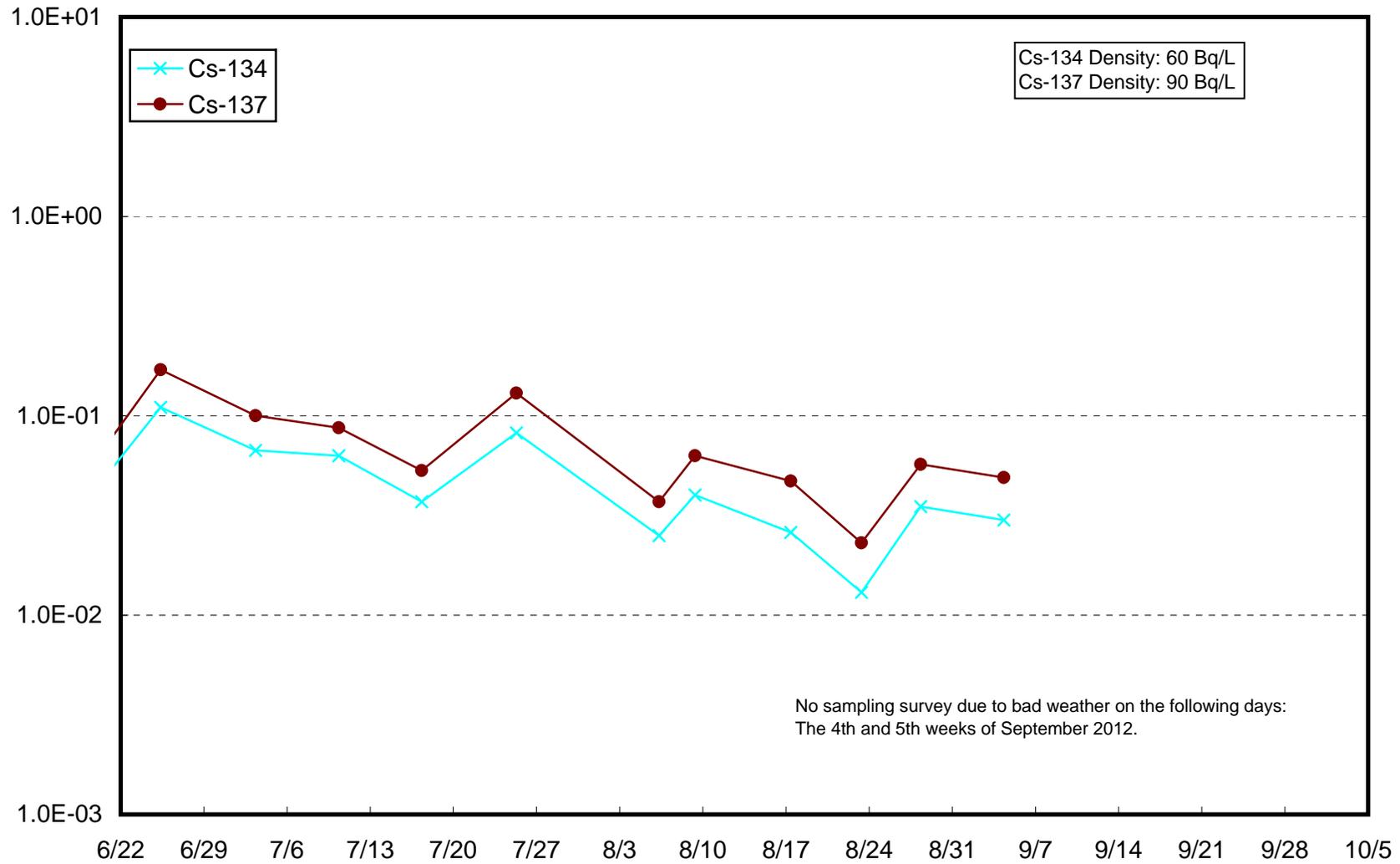
\* In the case of more than 2 nuclides, the sum of scaling factors to density limits is compared to 1.

\* Analyzed by : Tokyo Electric Power Environmental Engineering Co., Inc.

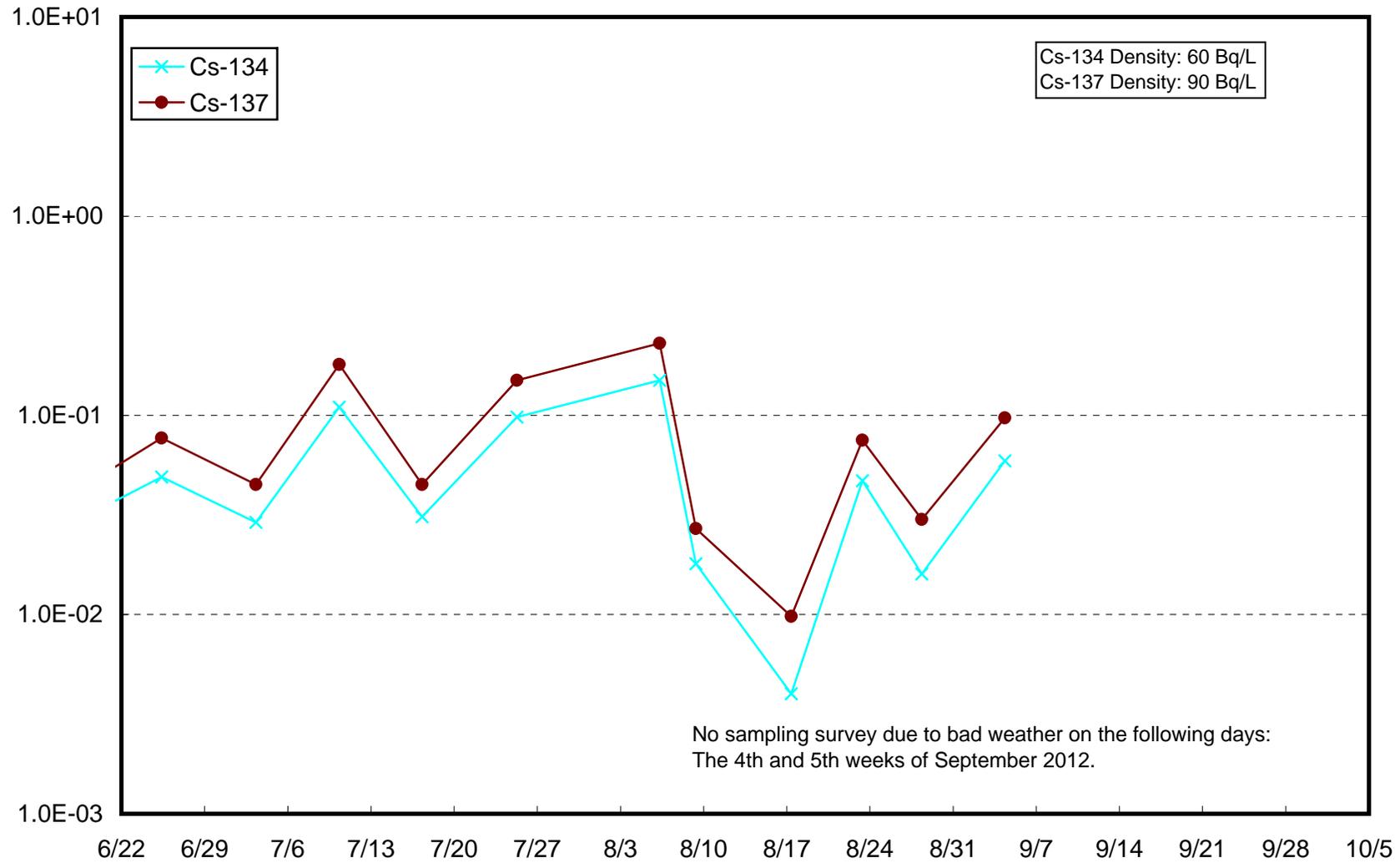
Radioactivity Density of the Seawater at 3km Offshore of Ukedo River (T-D1) Upper Layer (Bq/L)



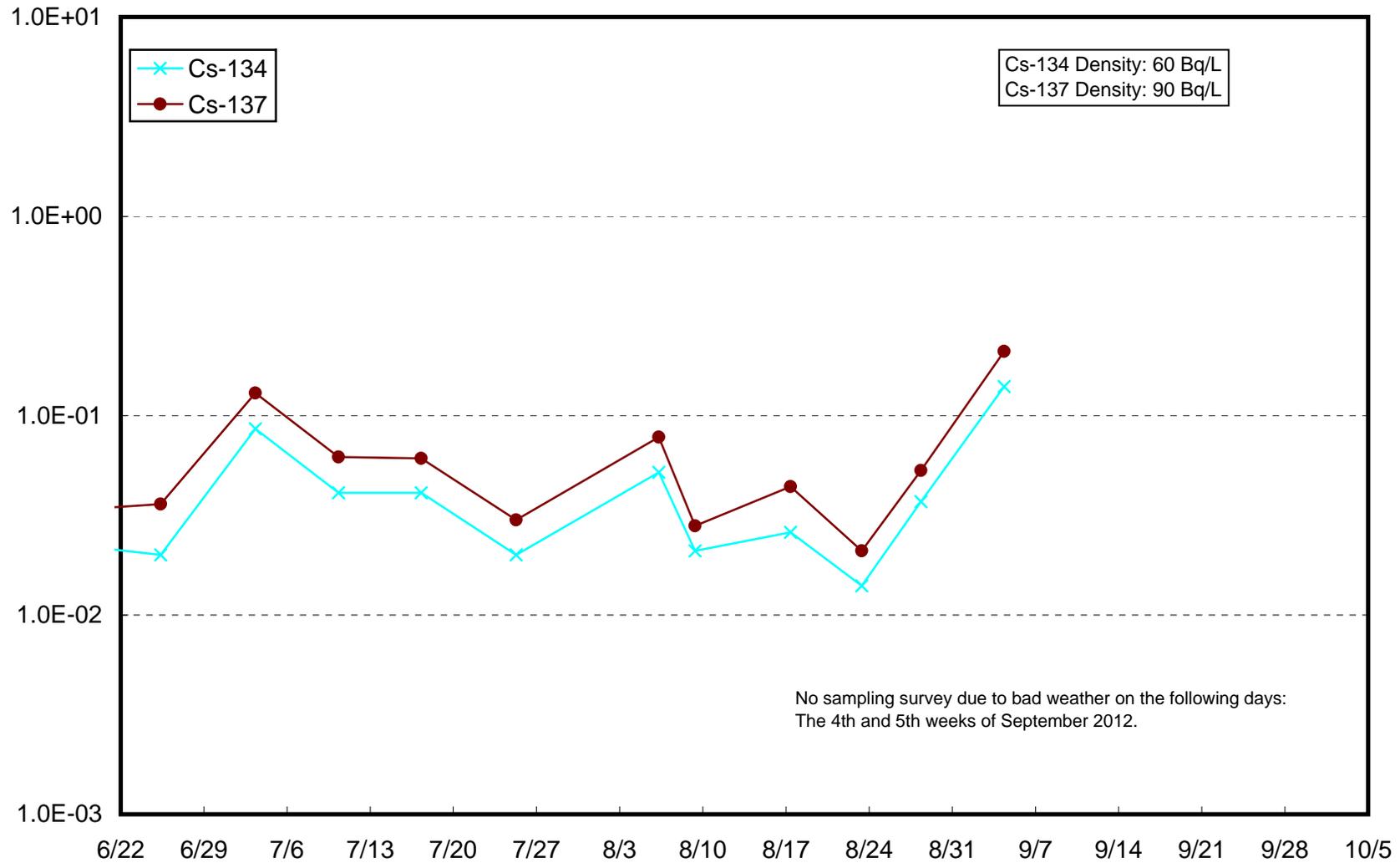
Radioactivity Density of the Seawater at 3km Offshore of Ukedo River (T-D1) Lower Layer (Bq/L)



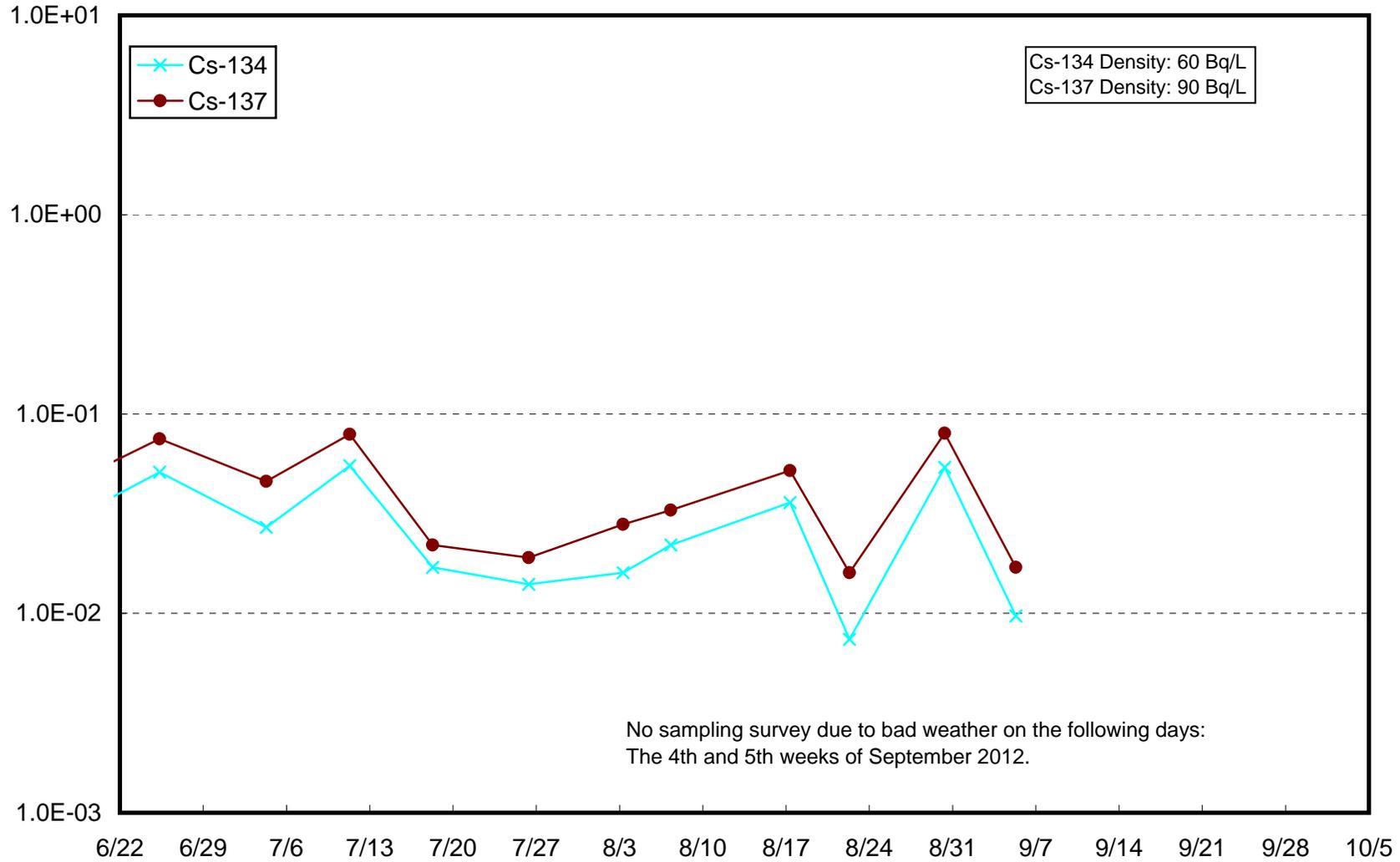
Radioactivity Density of the Seawater at 3km Offshore of Fukushima Daiichi NPS (T-D5) Upper Layer (Bq/L)



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)

