

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

(Data summarized on August 20)

Place of Sampling	North of Unit 5-6 Discharge Channel at Fukushima Daiichi NPS (Approx. 30m North of Unit 5-6 Discharge Channel)		Around South Discharge Channel of Fukushima Daiichi NPS (Approx. 1.3km South of Unit 1-4 Discharge Channel)		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.)
	Aug 19, 2014 7:00 AM		Aug 19, 2014 5:30 AM		
Detected Nuclides (Half-life)	①Density of Sample (Bq/L)	Scaling Factor (①/②)	①Density of Sample (Bq/L)	Scaling Factor (①/②)	
I-131 (Approx. 8 days)	ND(0.72)	-	ND(0.66)	-	40
Cs-134 (Approx. 2 years)	ND(0.76)	-	ND(0.74)	-	60
Cs-137 (Approx. 30 years)	ND(0.71)	-	ND(0.68)	-	90

* The density specified by the Reactor Regulation is converted from Bq/cm³ to Bq/L.

* Data of other nuclides is under evaluation.

* 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, which is provided in parentheses.

Nuclides Analysis Result of the Radioactive Materials in the Seawater < Offshore 1/2 >

(Data summarized on August 20)

Place of Sampling (Place No.)	3km Offshore of Odaka Ward (T-14)				3km Offshore of Odaka Ward (T-14)				15km Offshore of Fukushima Daiichi NPS (T-5)				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.)
	Upper Layer		Lower Layer		Upper Layer		Lower Layer		Upper Layer		Lower Layer		
Time of Sampling	Jul 16, 2014 8:46 AM		Jul 16, 2014 8:46 AM		Jul 22, 2014 8:46 AM		Jul 22, 2014 8:46 AM		Jul 15, 2014 8:46 AM		Jul 15, 2014 8:46 AM		
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)	
Cs-134 (Approx. 2 years)	0.0016	0.00	0.0036	0.00	0.0032	0.00	0.0031	0.00	ND	-	0.0017	0.00	60
Cs-137 (Approx. 30 years)	0.0083	0.00	0.012	0.00	0.012	0.00	0.0091	0.00	0.0027	0.00	0.0066	0.00	90

Place of Sampling (Place No.)	15km Offshore of Fukushima Daiichi NPS (T-5)				3km Offshore of Iwasawa Shore (T-11)				3km Offshore of Iwasawa Shore (T-11)				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.)
	Upper Layer		Lower Layer		Upper Layer		Lower Layer		Upper Layer		Lower Layer		
Time of Sampling	Jul 22, 2014 8:26 AM		Jul 22, 2014 8:26 AM		Jul 15, 2014 10:40 AM		Jul 15, 2014 10:40 AM		Jul 22, 2014 10:13 AM		Jul 22, 2014 10:13 AM		
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)	
Cs-134 (Approx. 2 years)	ND	-	0.0023	0.00	0.012	0.00	0.012	0.00	0.0082	0.00	0.0024	0.00	60
Cs-137 (Approx. 30 years)	0.0032	0.00	0.0069	0.00	0.031	0.00	0.030	0.00	0.023	0.00	0.0090	0.00	90

* The density specified by the Reactor Regulation is converted from Bq/cm³ 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.

Cs-134: Approx.0.0014Bq/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.

* Analysis results by detail analysis (Phosphomolybdic acid ammonium adsorption sampling method) are noted.

*Analyzed by: THE GENERAL ENVIRONMENTAL TECHNOS Co., LTD.

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

(Data summarized on August 20)

Place of Sampling (Place No.)	15km Offshore of Iwasawa Shore (T-7)				3km Offshore of Onahama Port (T-18)				5km Offshore of Numanouchi (T-M10)				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.)
	Upper Layer		Lower Layer		Upper Layer		Lower Layer		Upper Layer		Lower Layer		
Time of Sampling	Jul 15, 2014 7:52 AM		Jul 15, 2014 7:52 AM		Jul 15, 2014 11:13 AM		Jul 15, 2014 11:13 AM		Jul 15, 2014 9:47 AM		Jul 15, 2014 9:47 AM		
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)	
Cs-134 (Approx. 2 years)	ND	-	0.0018	0.00	0.0020	0.00	0.0025	0.00	0.0032	0.00	ND	-	60
Cs-137 (Approx. 30 years)	0.0044	0.00	0.0059	0.00	0.0075	0.00	0.010	0.00	0.0081	0.00	0.0035	0.00	90

Place of Sampling (Place No.)	Around 3km Offshore of Ukedo River (T-S3)				Around 3km Offshore of Fukushima Daiichi NPS (T-S4)				/				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.)
	Upper Layer		Lower Layer		Upper Layer		Lower Layer		Upper Layer		Lower Layer		
Time of Sampling	Jul 17, 2014 6:15 AM		Jul 17, 2014 6:15 AM		Jul 17, 2014 5:44 AM		Jul 17, 2014 5:44 AM		/		/		
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)	
Cs-134 (Approx. 2 years)	0.0033	0.00	0.0014	0.00	0.0081	0.00	0.0014	0.00	/	/	/	/	60
Cs-137 (Approx. 30 years)	0.012	0.00	0.0049	0.00	0.022	0.00	0.0038	0.00	/	/	/	/	90

* The density specified by the Reactor Regulation is converted from Bq/cm³ 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.

Cs-134: Approx.0.0013Bq/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.

* Analysis results by detail analysis (Phosphomolybdic acid ammonium adsorption sampling method) are noted.

*Analyzed by: THE GENERAL ENVIRONMENTAL TECHNOS Co., LTD.

Nuclides Analysis Result of Radioactive Materials in the Seawater <1/2>

(Data summarized on August 20)

Place of Sampling (Place No.)	15km Offshore of Fukushima Daiichi NPS (T-5) Upper Layer		3km Offshore of Ukedo River (T-D1) Upper Layer		3km Offshore of Fukushima Daiichi NPS (T-D5) Upper Layer		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 15, 2014		Jul 16, 2014		Jul 16, 2014		
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)	
Cs-134 (Approx. 2 years)	ND	—	0.0058	0.00	0.01	0.00	60
Cs-137 (Approx. 30 years)	0.0027	0.00	0.017	0.00	0.024	0.00	90
H-3 (approx. 12yrs)	0.38	0.00	ND	—	ND	—	60,000
Gross β	—	—	—	—	—	—	—
Gross α	ND	—	ND	—	ND	—	—
Sr-90 (Approx. 29 years)	—	—	—	—	—	—	30

* The density specified by the Reactor Regulation is converted from Bq/cm³ to Bq/L.

* Radioactivity density "—" means "not applicable".

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

* Nuclide analysis results of Cs-134, Cs-137 were announced on August 13 and 20, 2014.

Cs-134: Approx. 0.0013Bq/L, H-3: Approx. 0.30Bq/L, Gross β: Approx. 17Bq/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.

(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 <2/2>

(Data summarized on August 20)

Place of Sampling (Place No.)	3km Offshore of Fukushima Daini NPS (T-D9) Upper Layer						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.)
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)	
Cs-134 (Approx. 2 years)	0.0034	0.00					60
Cs-137 (Approx. 30 years)	0.0088	0.00					90
H-3 (approx. 12yrs)	0.38	0.00					60,000
Gross β	—	—					—
Gross α	ND	—					—
Sr-90 (Approx. 29 years)	—	—					30

* The density specified by the Reactor Regulation is converted from Bq/cm³ to Bq/L.

* Radioactivity density "—" means "not applicable".

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

* Nuclide analysis results of Cs-134, Cs-137 were announced on August 13, 2014.

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

Gross β: Approx. 15Bq/L

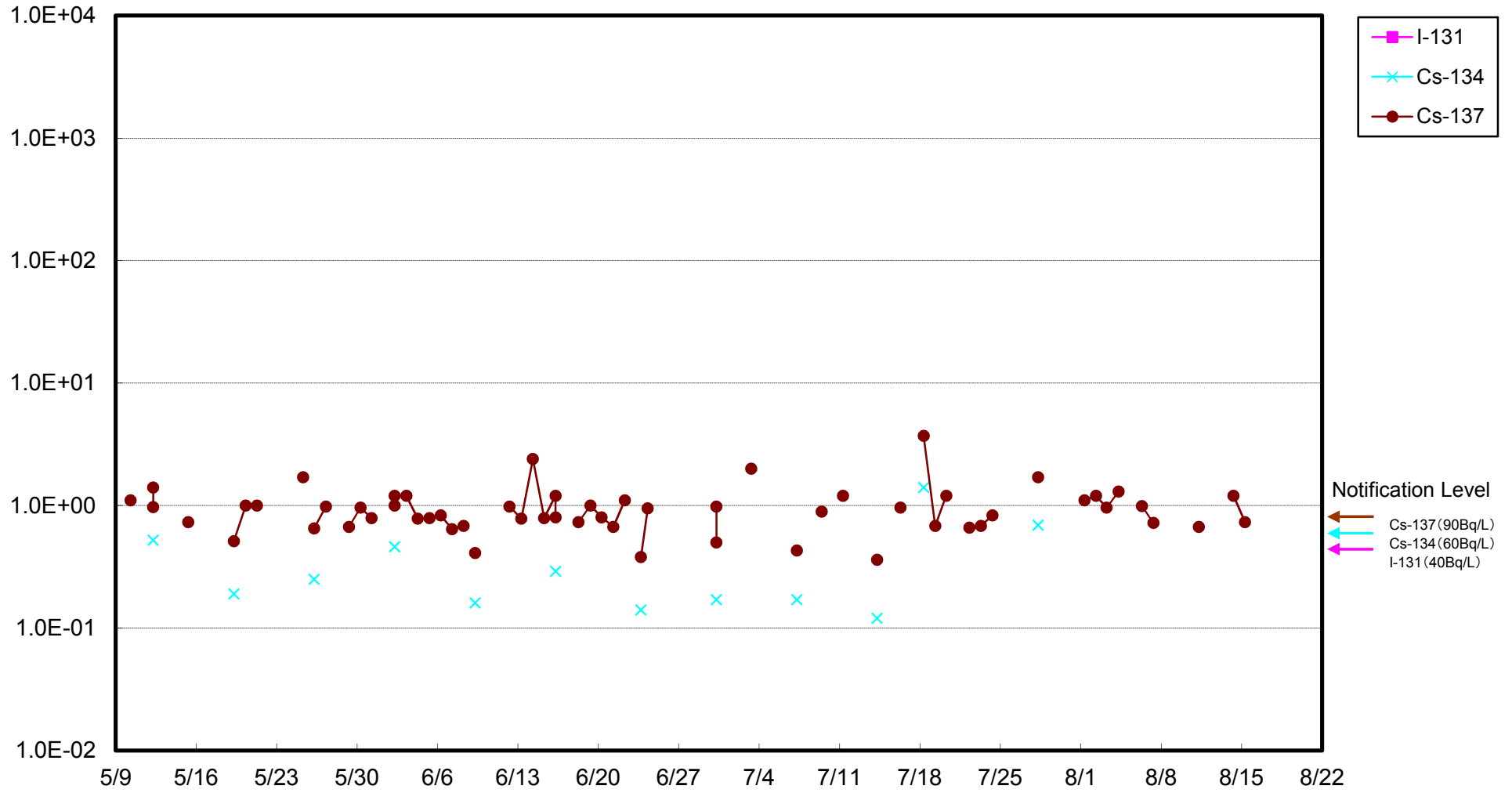
As the detection limit may vary depending on the detectors and sample properties, there are cases where nuclides below the detection limit are detected.

* Nuclides analysis of Sr-89 and Sr-90 were done by Japan Chemical Analysis Center.

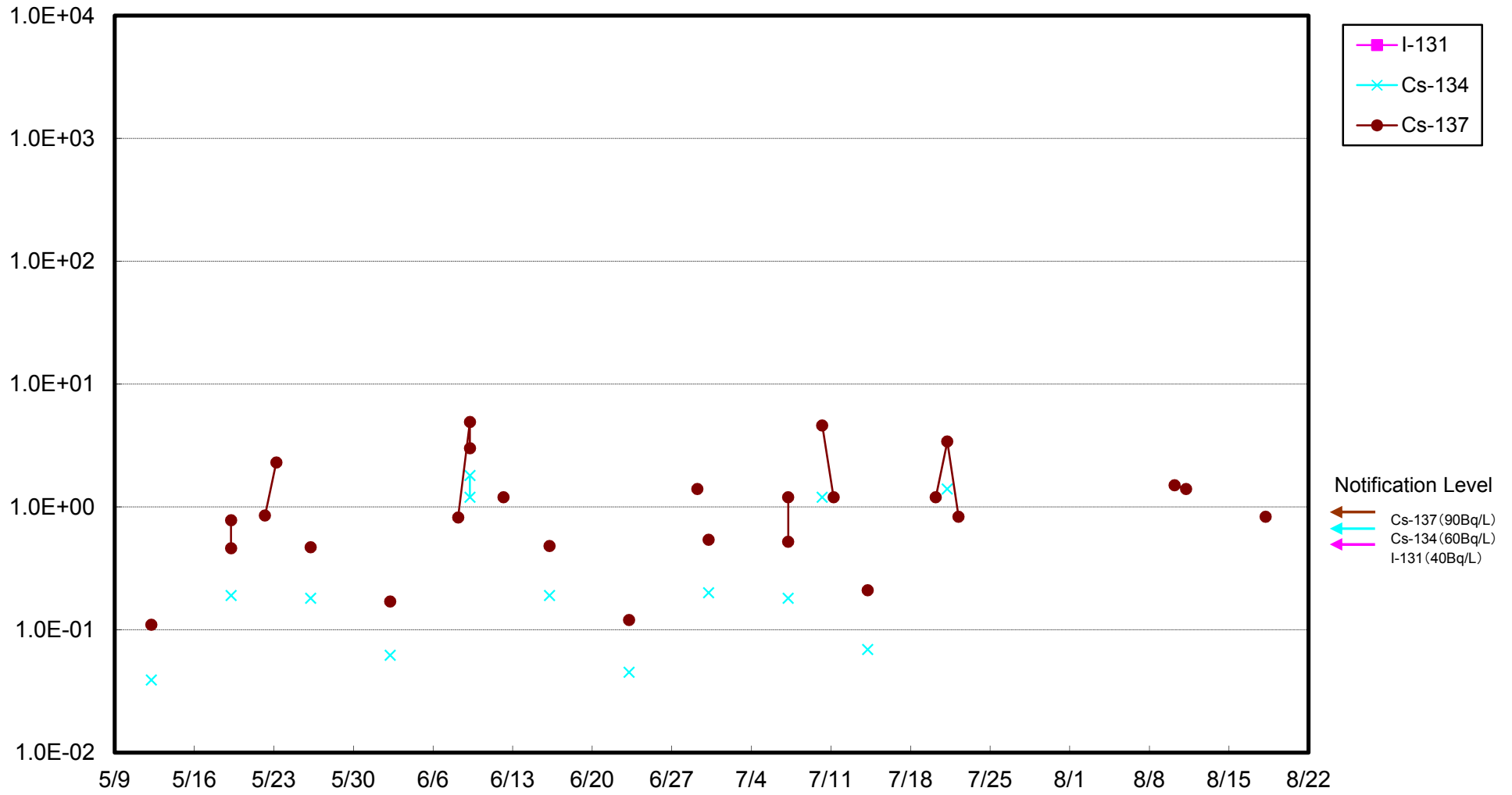
(Evaluation)

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.

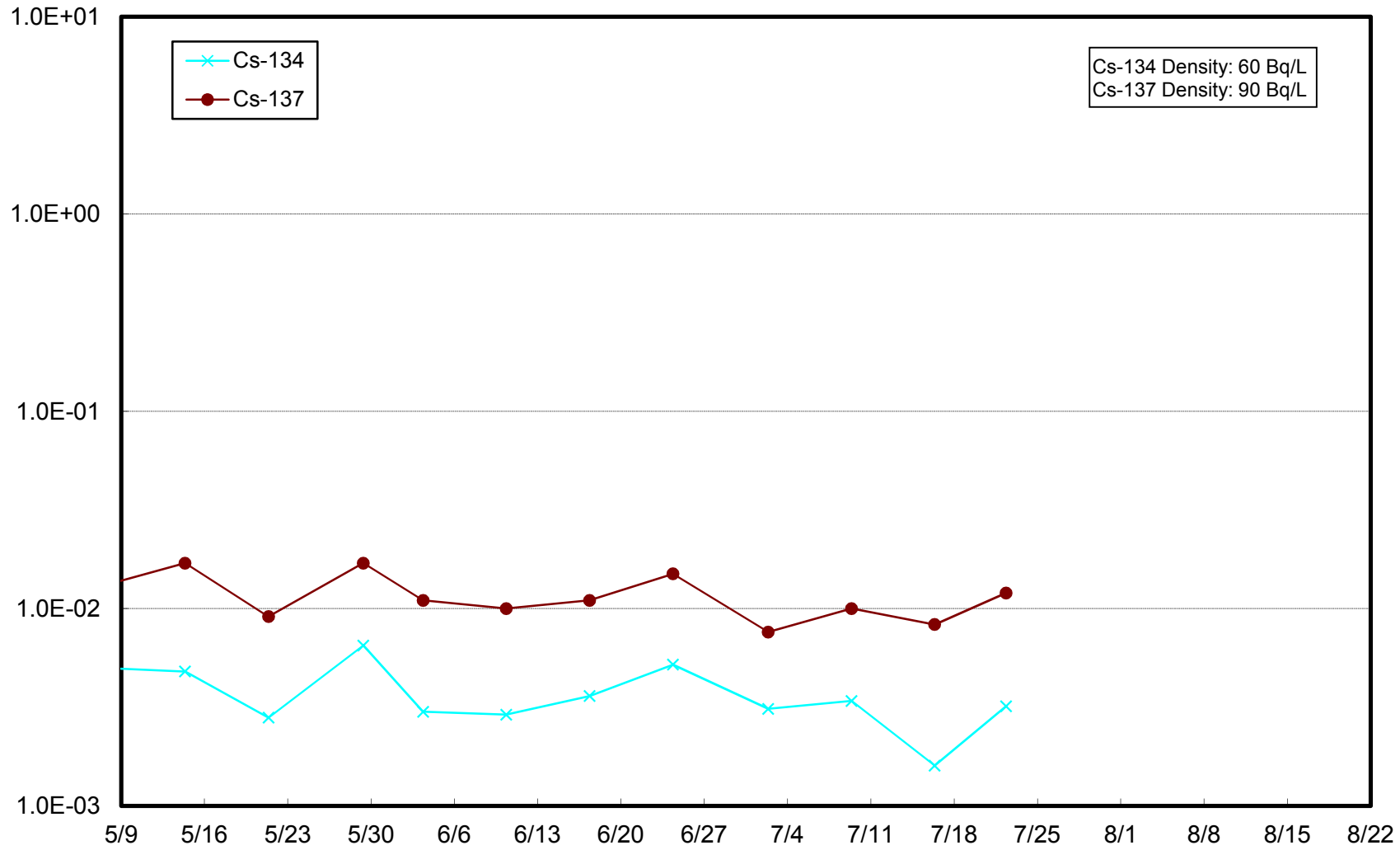
Radioactivity Density of the Seawater at 1F Units 5-6 North Discharge Channel (Bq/L)



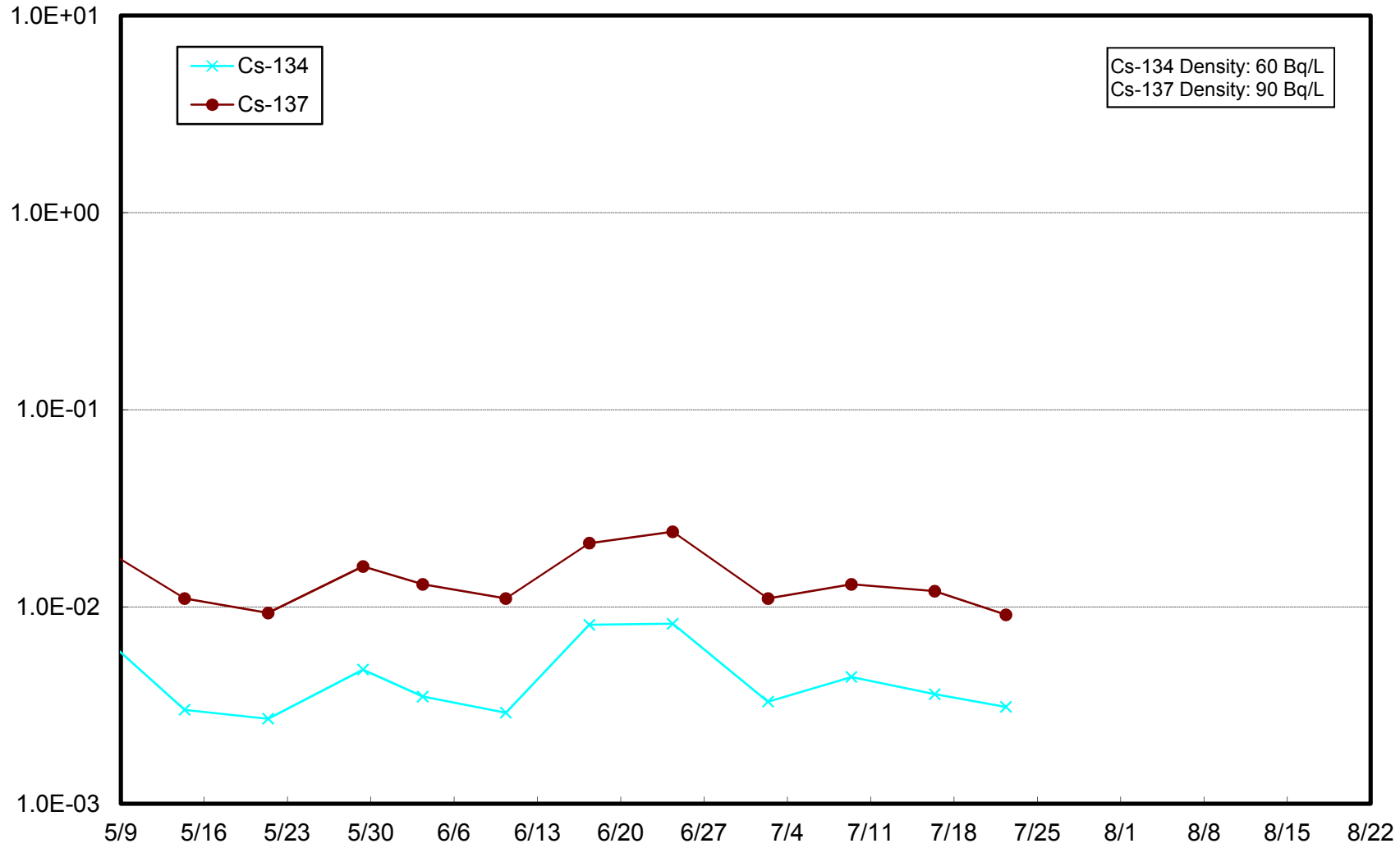
Radioactivity Density of the Seawater at 1F South Discharge Channel (Bq/L)



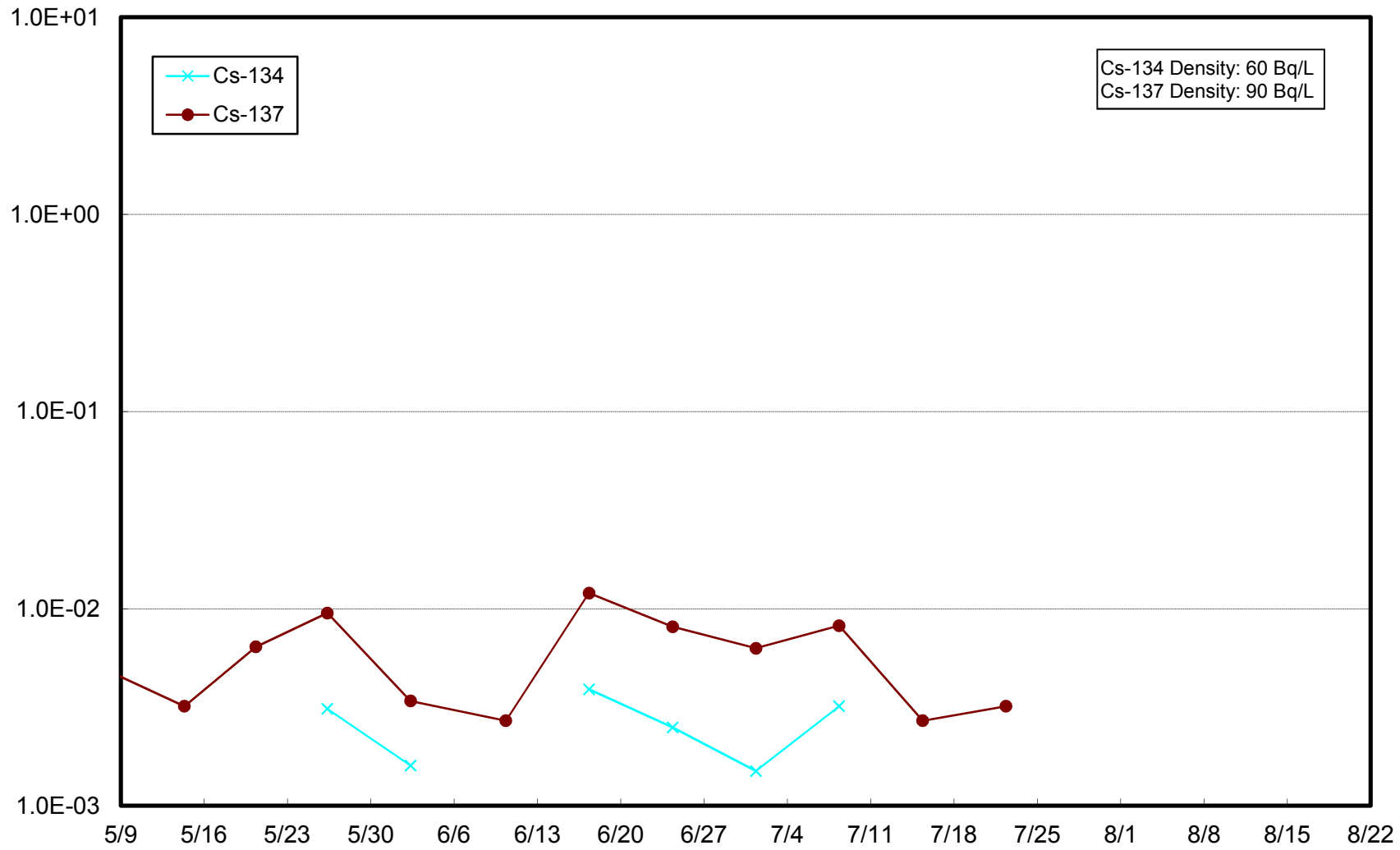
Radioactivity Density of the Seawater at 3km Offshore of Odaka Ward (T-14) Upper Layer (Bq/L)



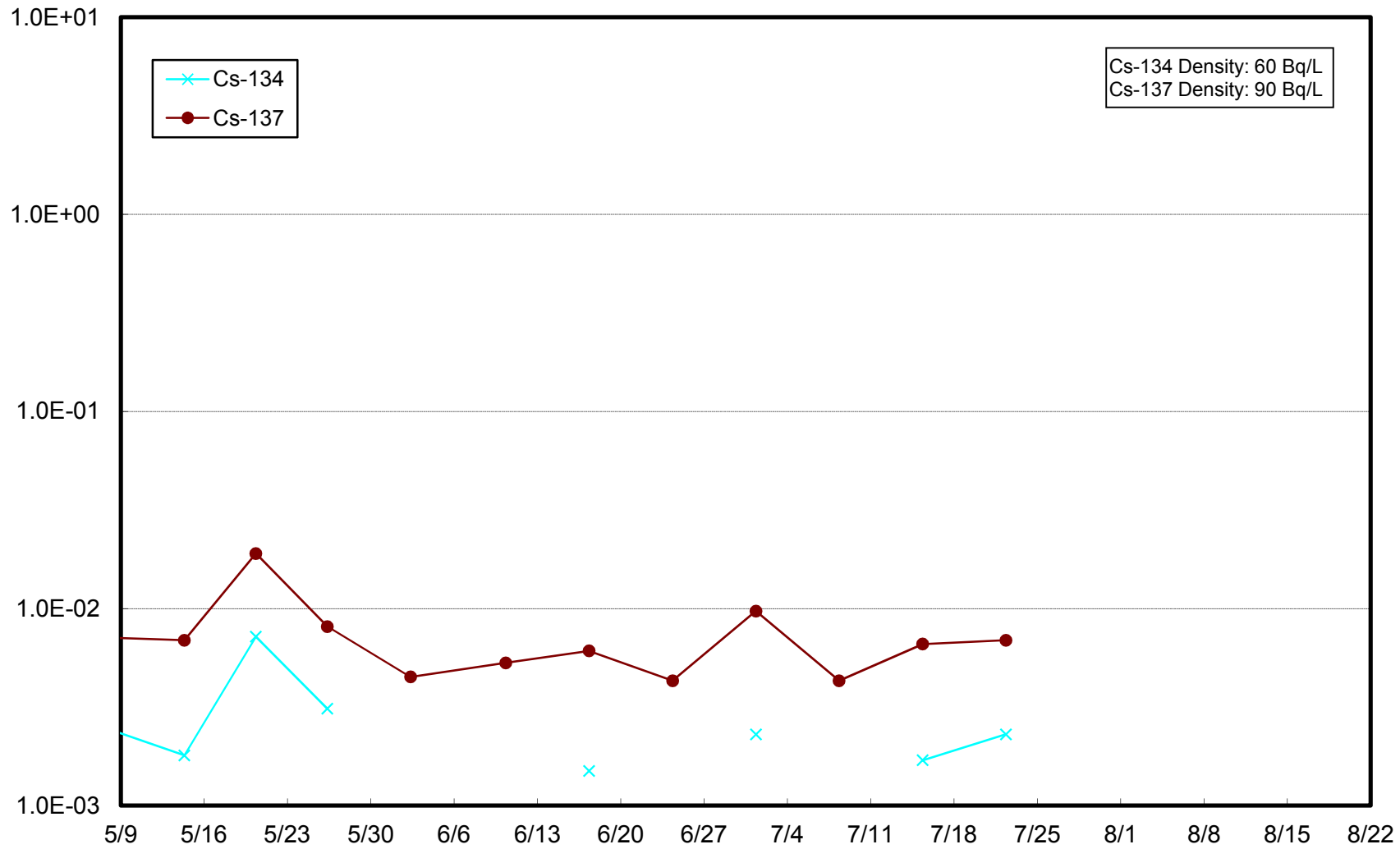
Radioactivity Density of the Seawater at 3km Offshore of Odaka Ward (T-14) Lower Layer (Bq/L)



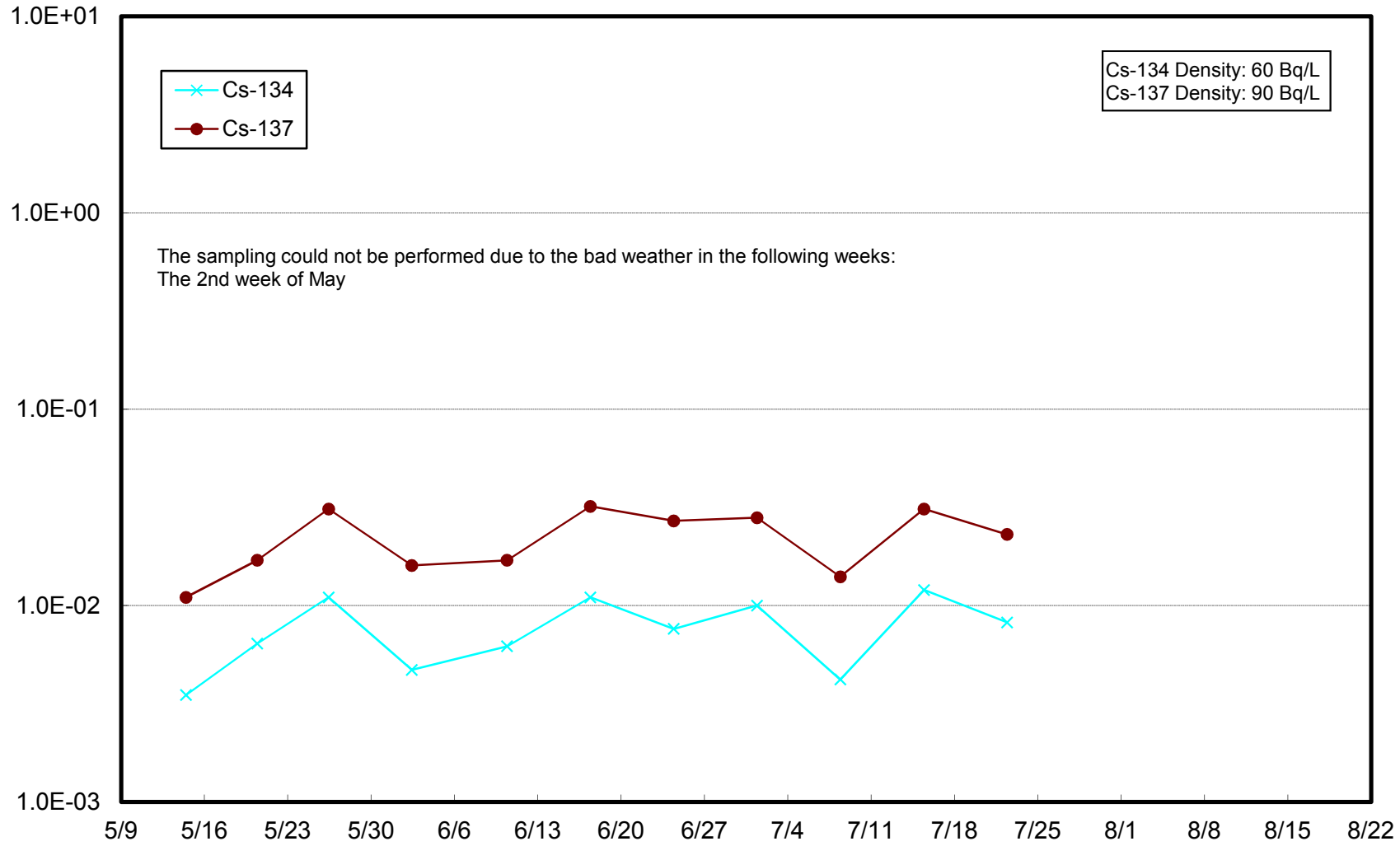
Radioactivity Density of the Seawater at 15km Offshore of Fukushima Daiichi NPS (T-5) Upper Layer (Bq/L)



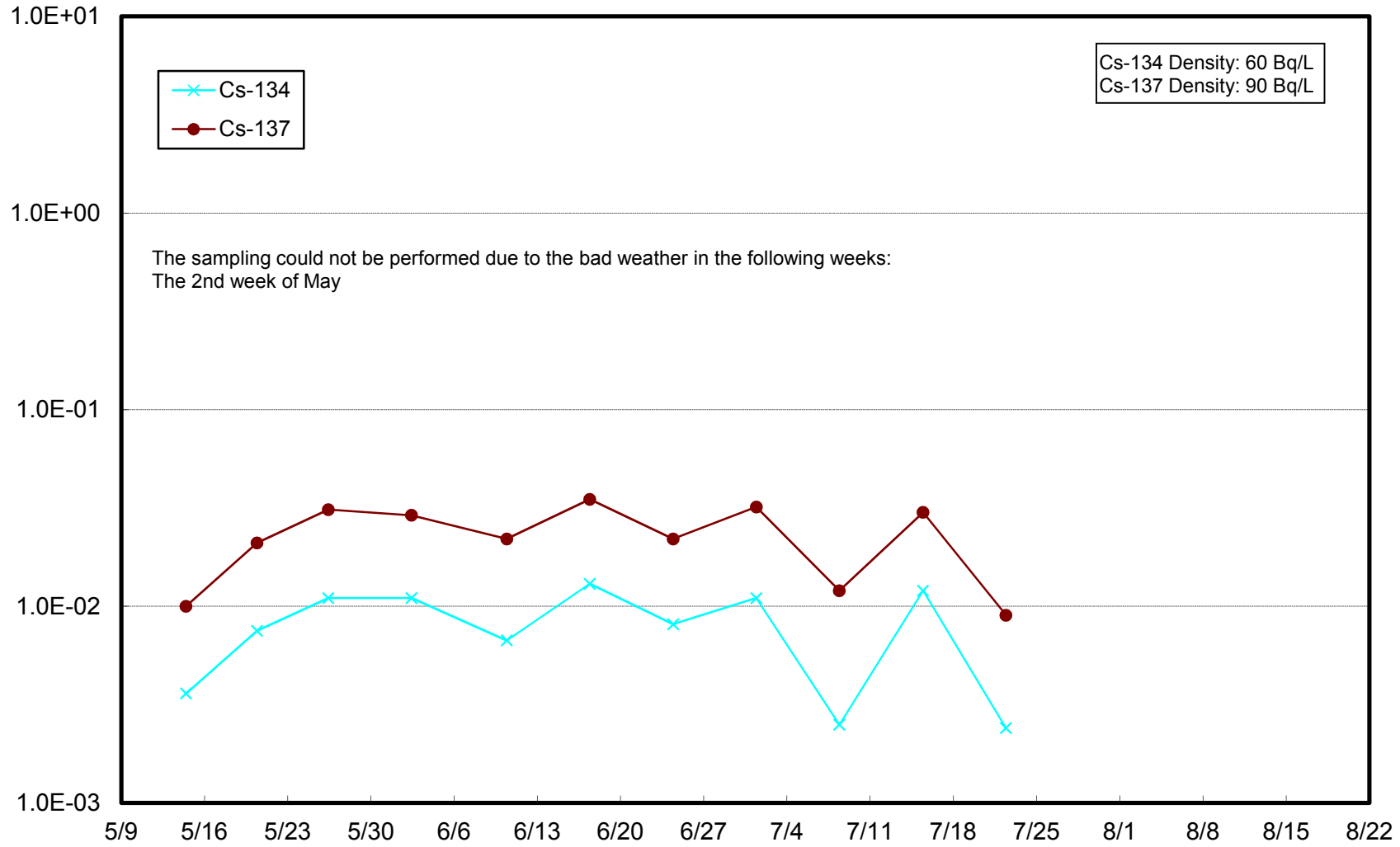
Radioactivity Density of the Seawater at 15km Offshore of Fukushima Daiichi NPS (T-5) Lower Layer (Bq/L)



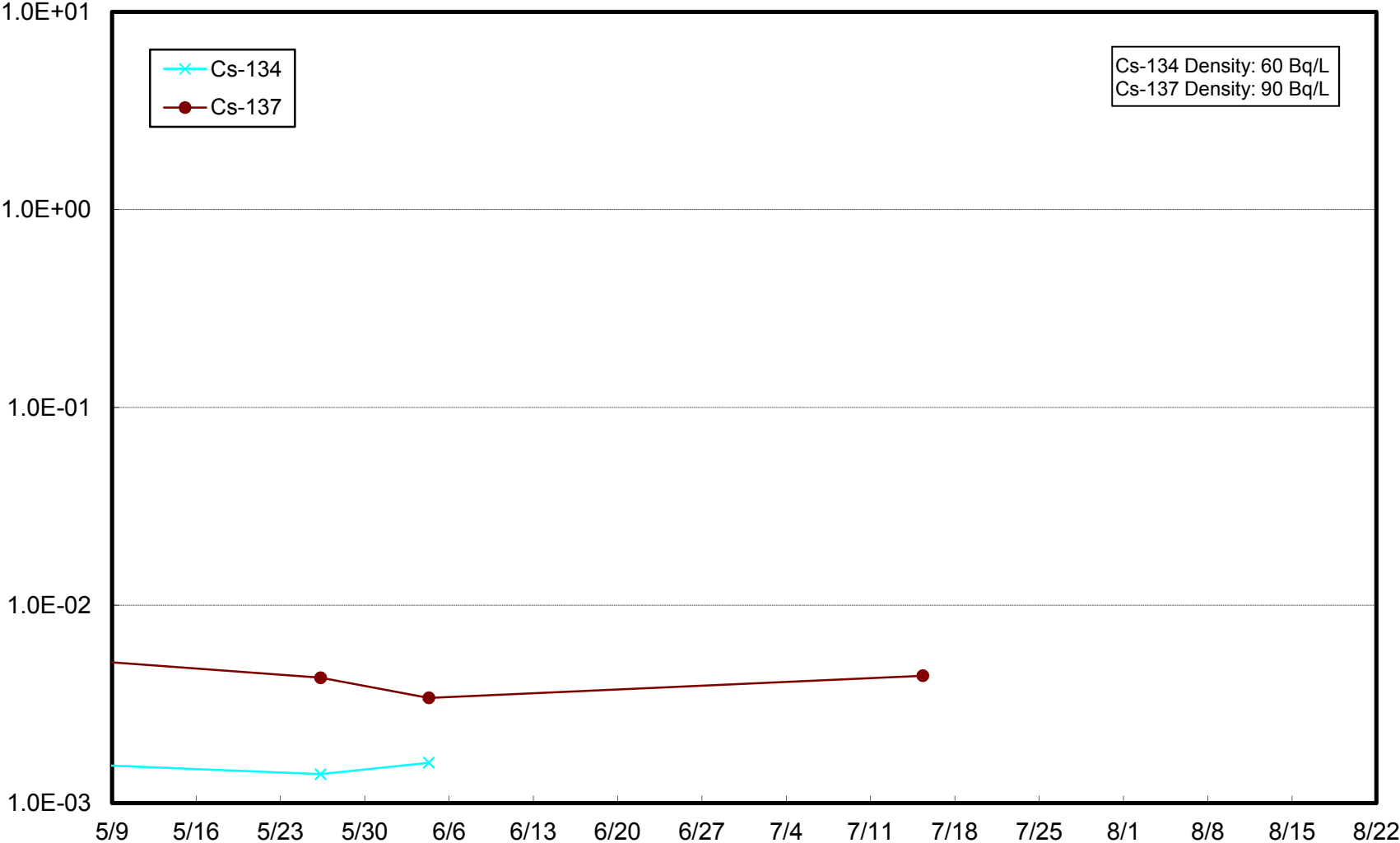
Radioactivity Density of the Seawater at 3km Offshore of Iwasawa Shore (T-11) Upper Layer (Bq/L)



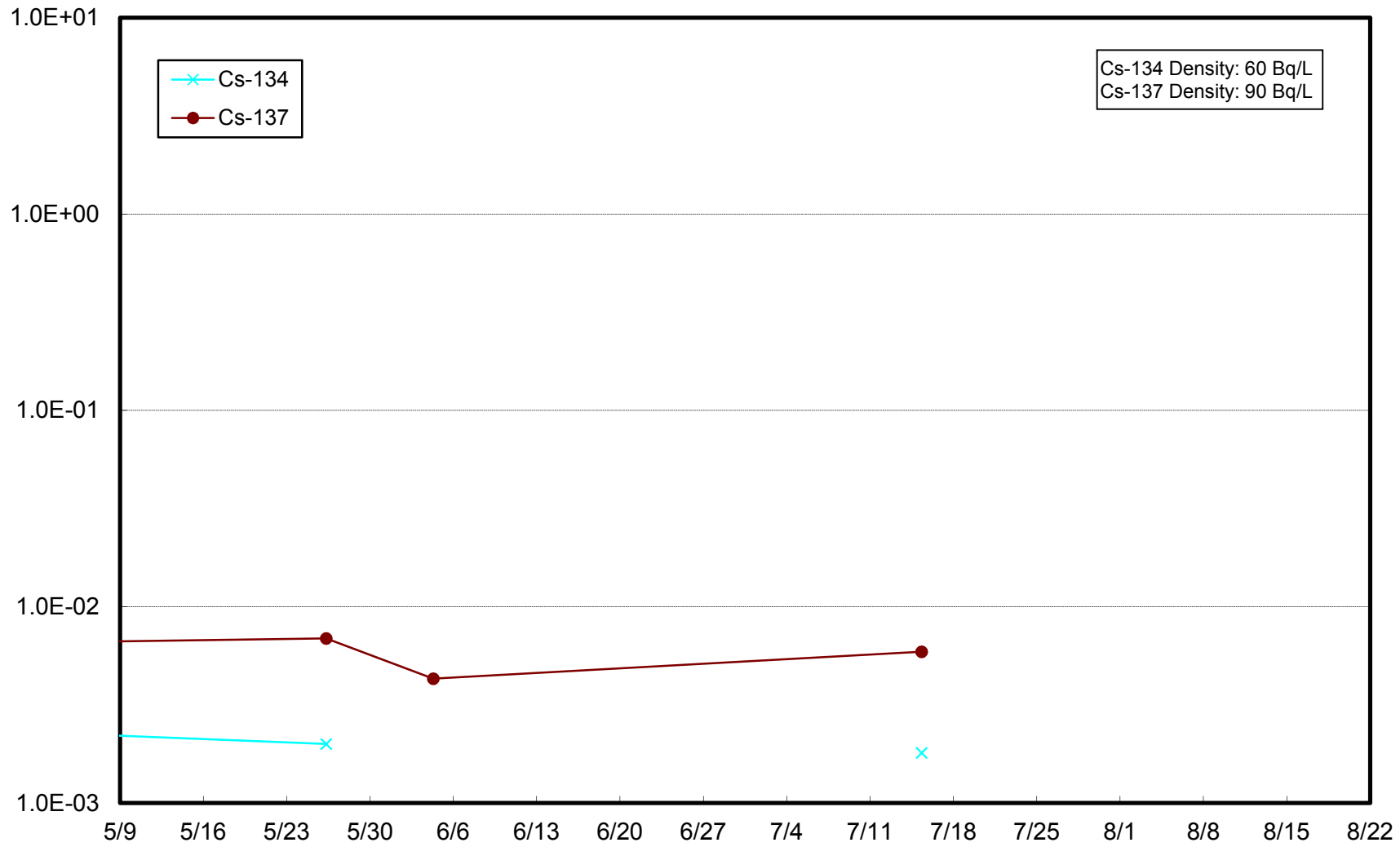
Radioactivity Density of the Seawater at 3km Offshore of Iwasawa Shore (T-11) Lower Layer (Bq/L)



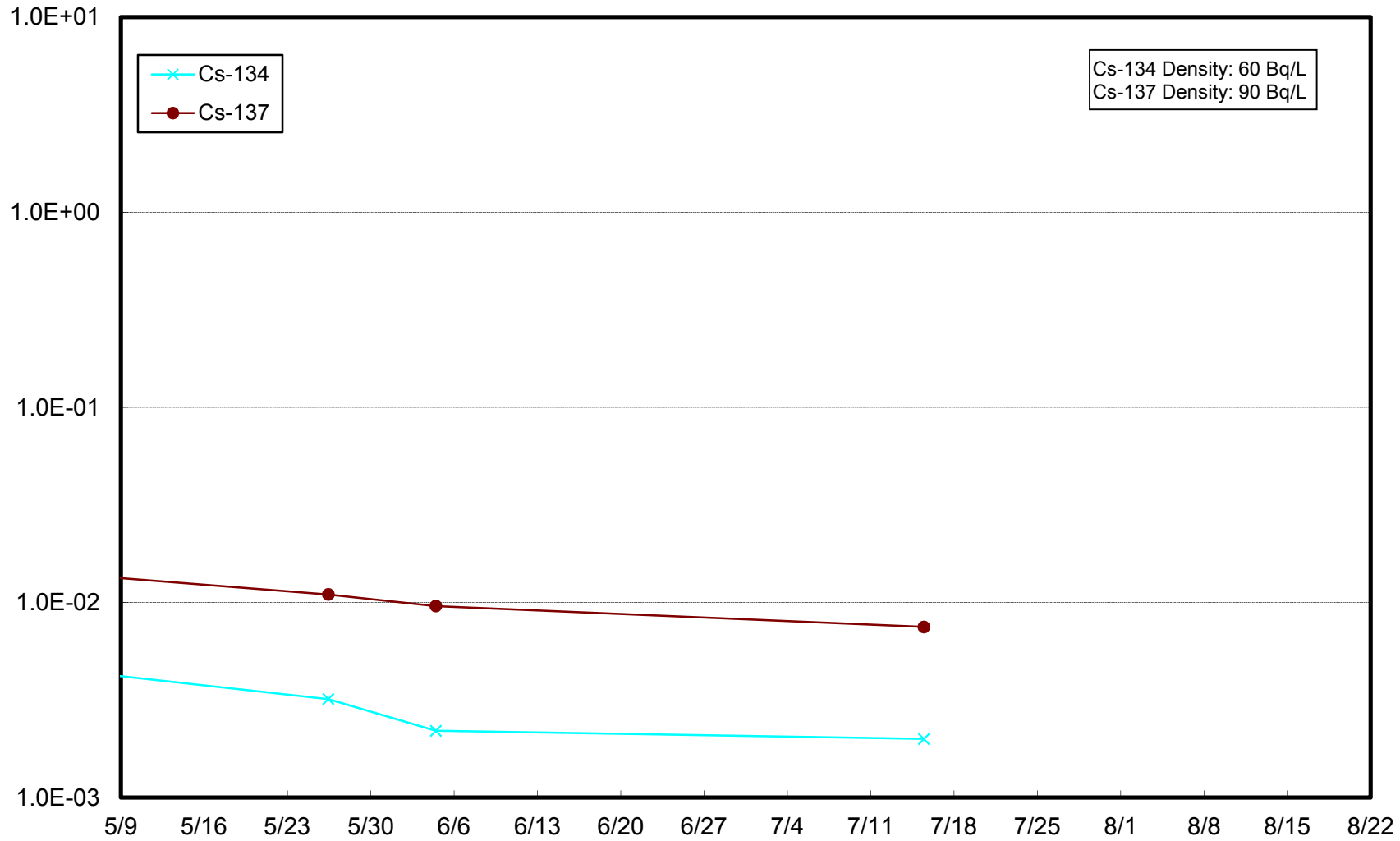
Radioactivity Density of the Seawater at 15km Offshore of Iwasawa Shore (T-7) Upper Layer (Bq/L)



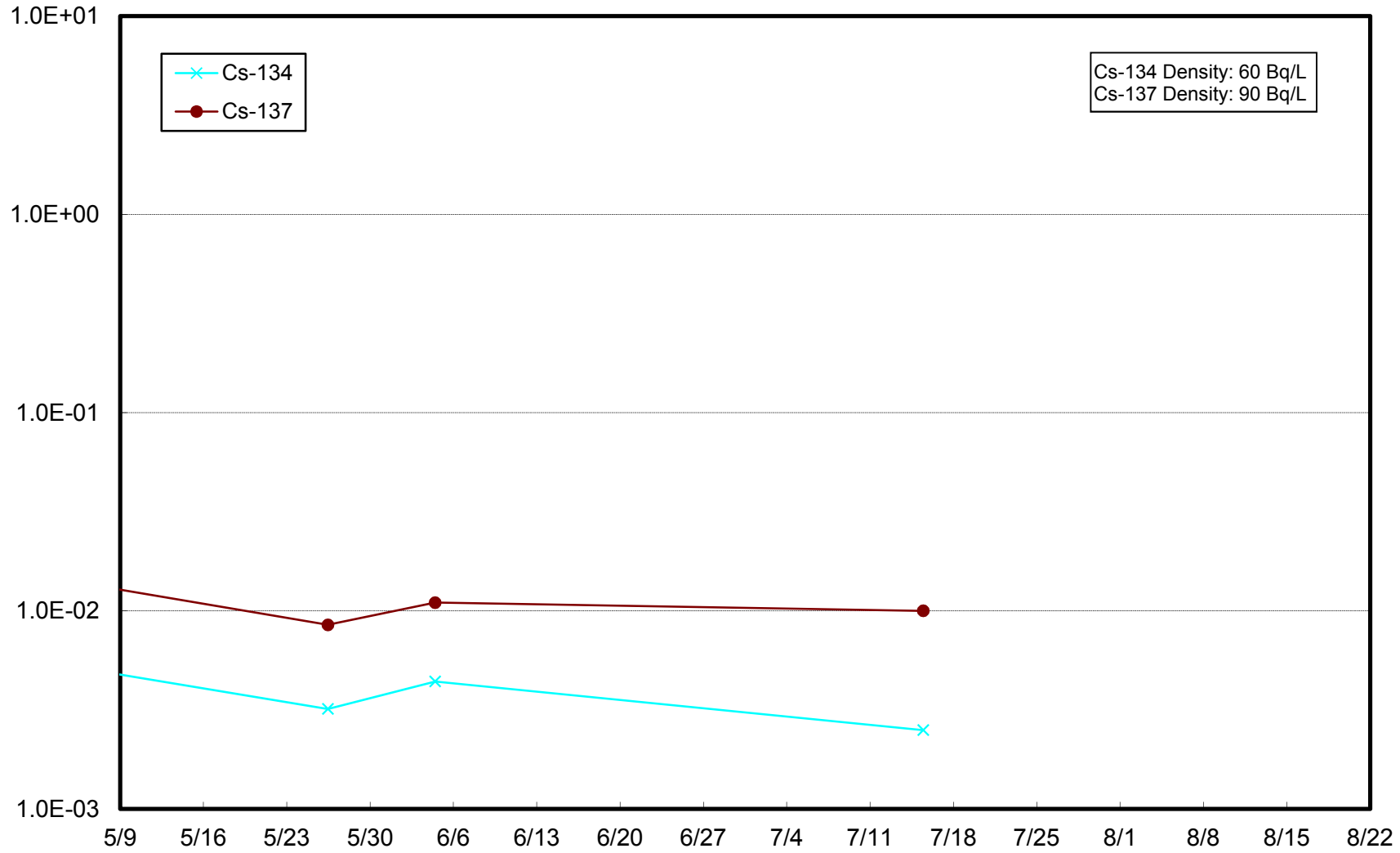
Radioactivity Density of the Seawater at 15km Offshore of Iwasawa Shore (T-7) Lower Layer (Bq/L)



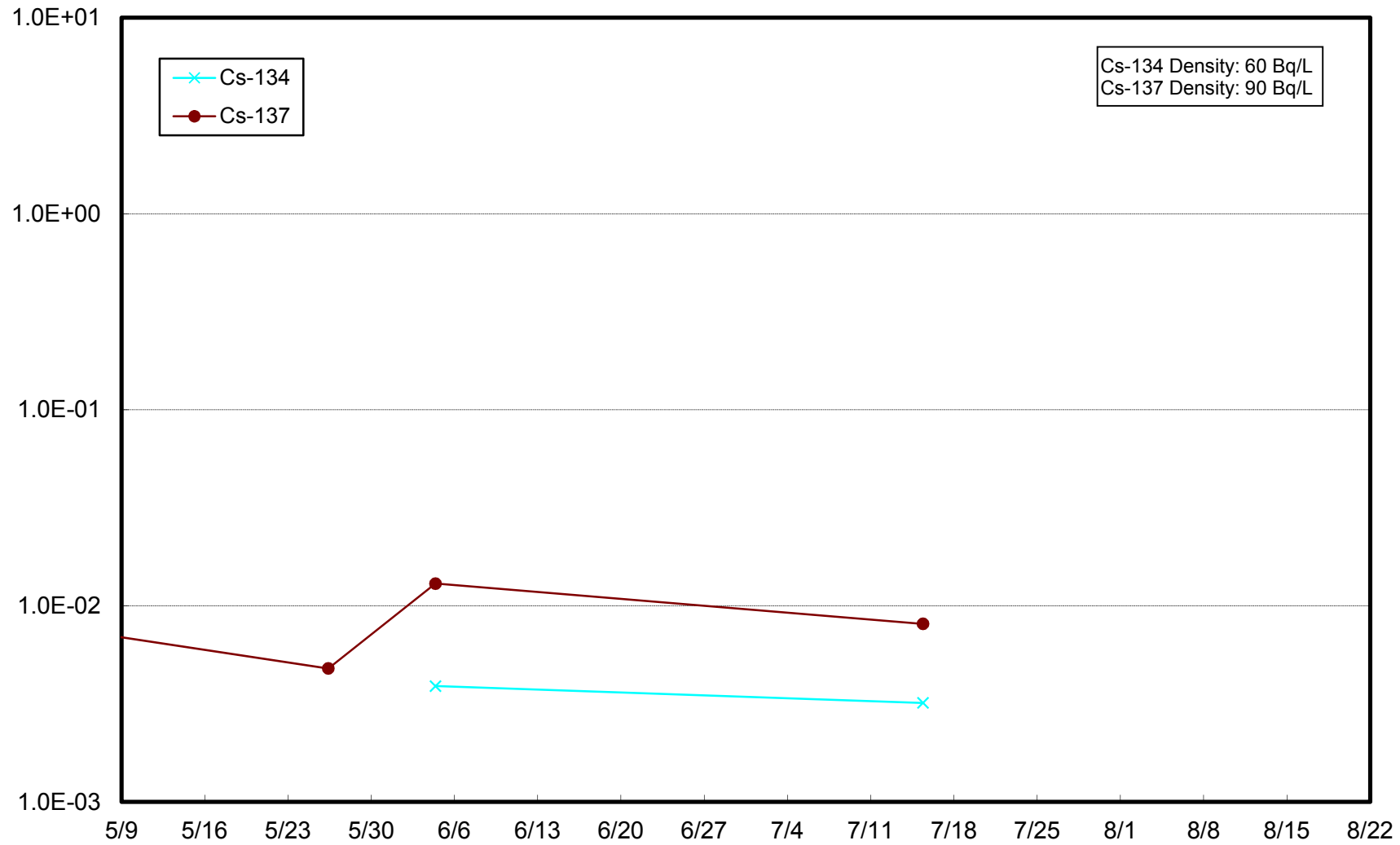
Radioactivity Density of the Seawater at 3km Offshore of Onahama Port (T-18) Upper Layer (Bq/L)



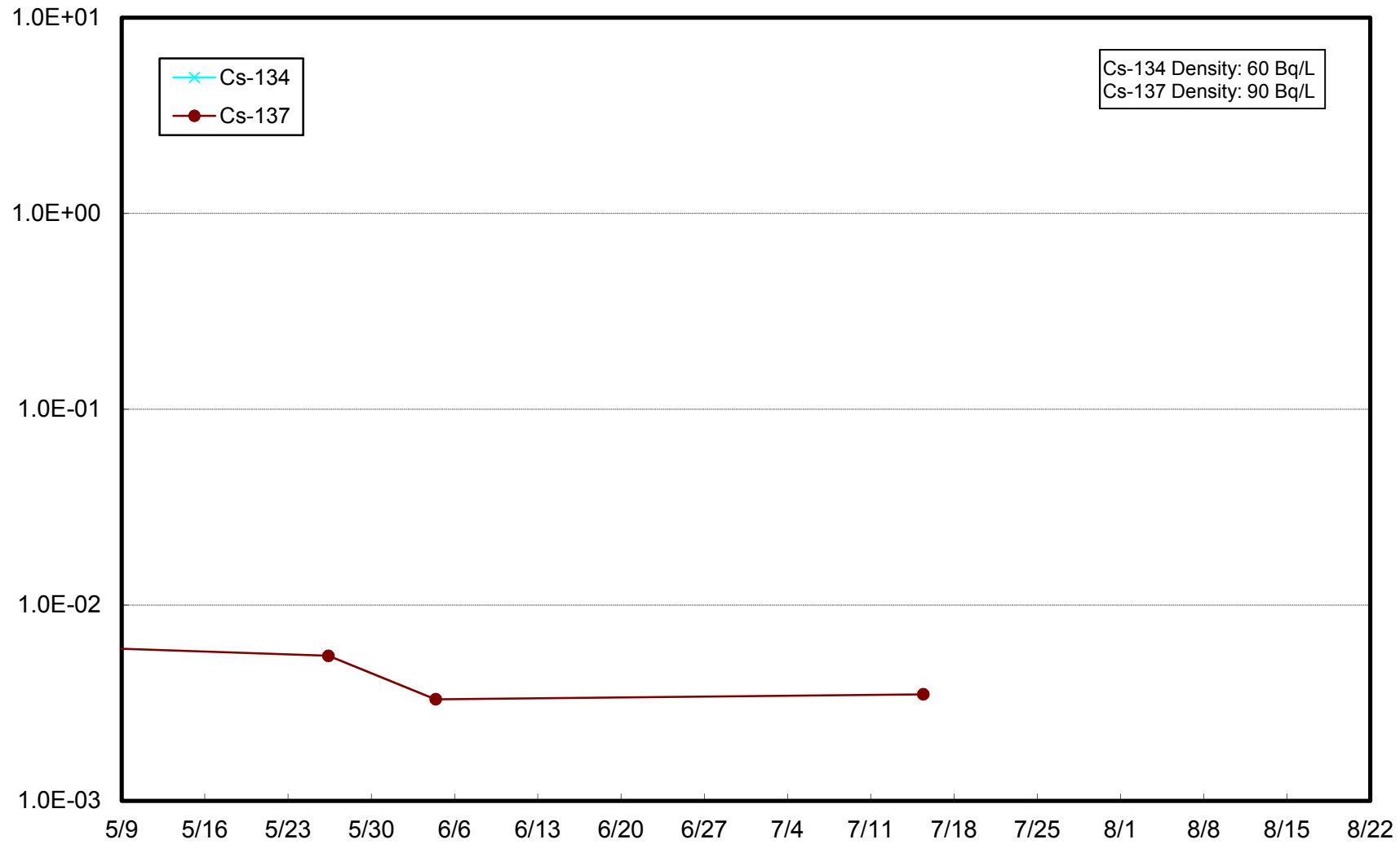
Radioactivity Density of the Seawater at 3km Offshore of Onahama Port (T-18) Lower Layer (Bq/L)



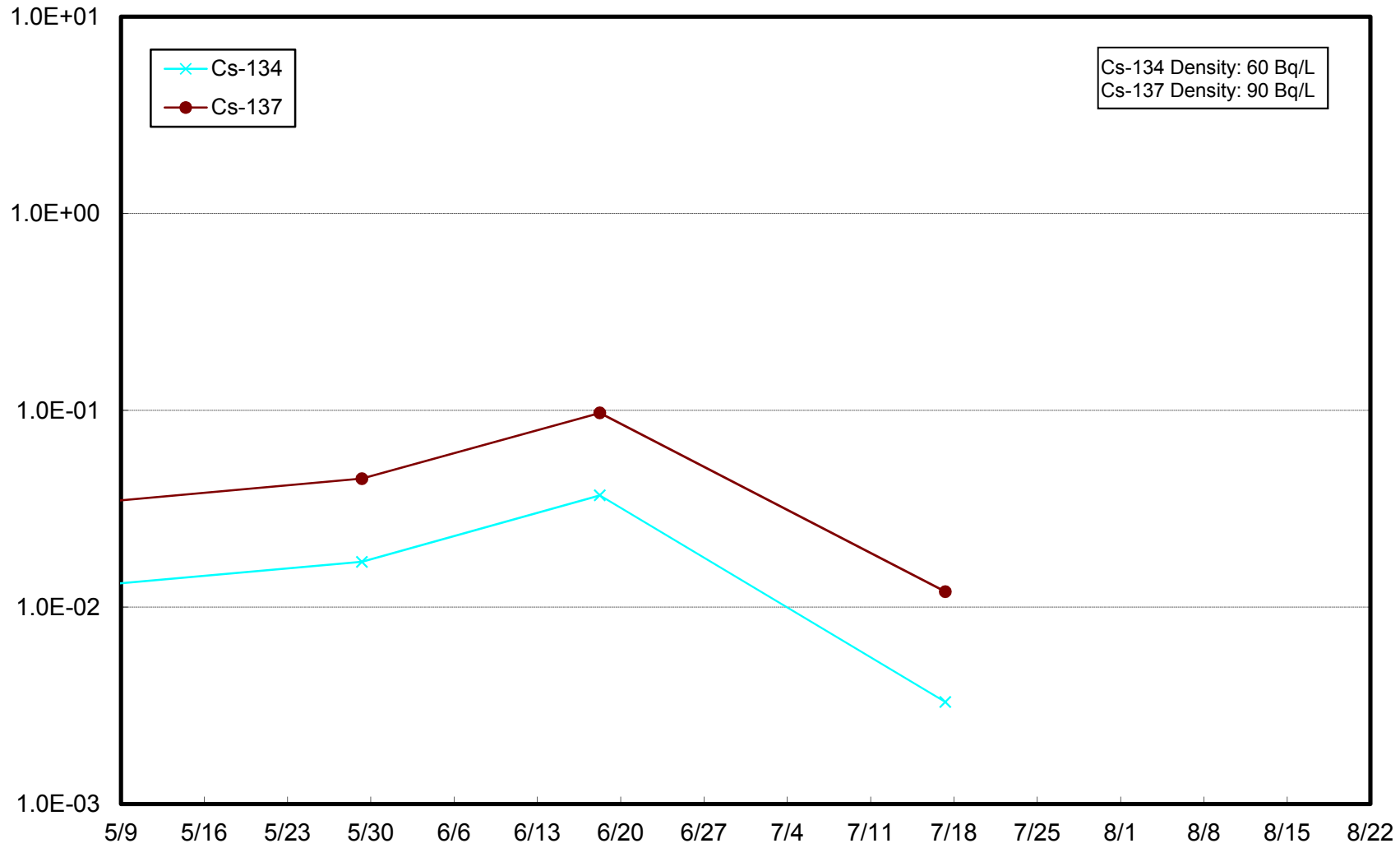
Radioactivity Density of the Seawater at 5km Offshore of Numanouchi (T-M10) Upper Layer (Bq/L)



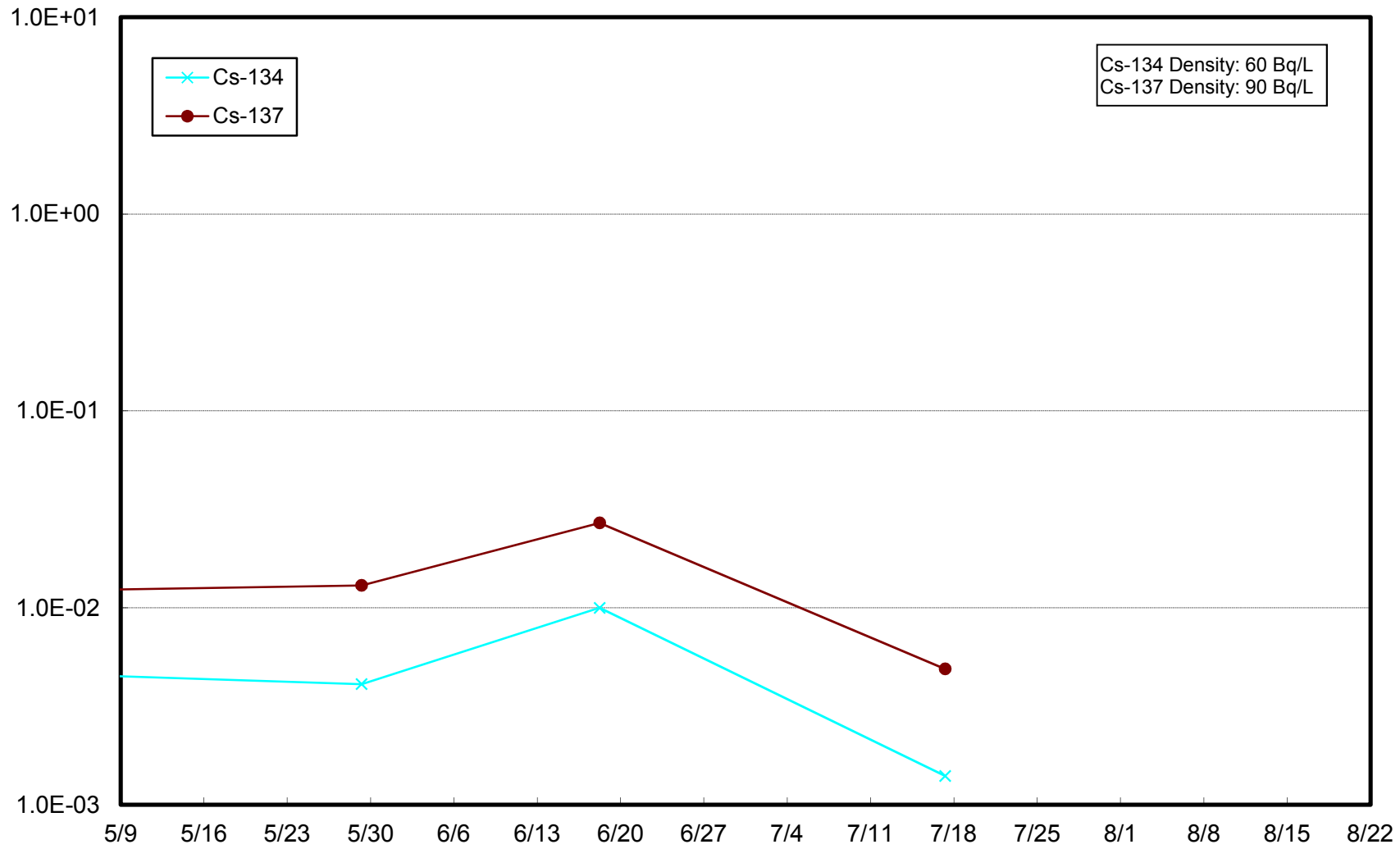
Radioactivity Density of the Seawater at 5km Offshore of Numanouchi (T-M10) Lower Layer (Bq/L)



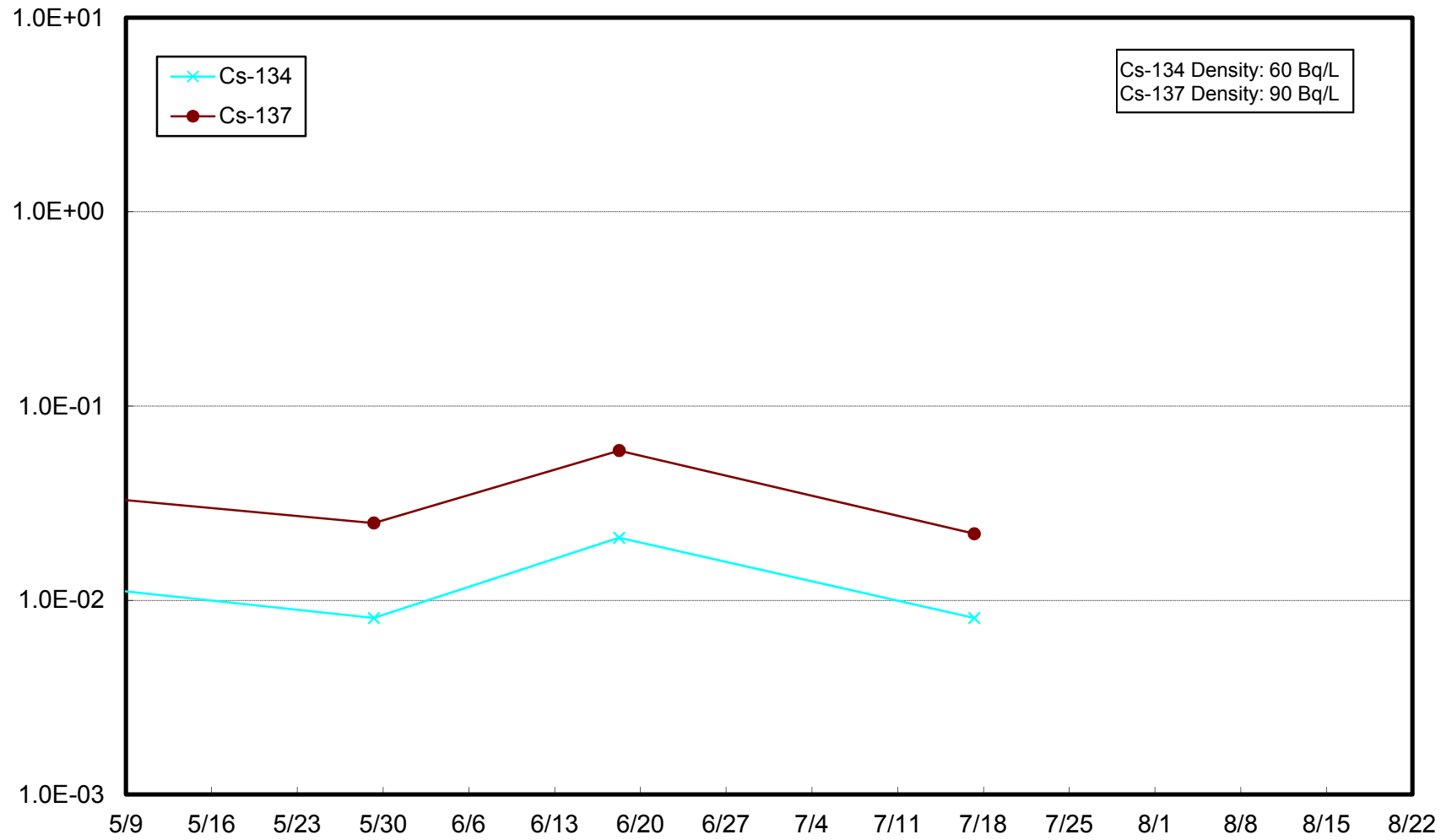
Radioactivity Density of the Seawater Around 3km Offshore of Ukedo River (T-S3) Upper Layer (Bq/L)



Radioactivity Density of the Seawater Around 3km Offshore of Ukedo River (T-S3) Lower Layer (Bq/L)



Radioactivity Density of the Seawater Around 3km Offshore of Fukushima Daiichi NPS (T-S4) Upper Layer (Bq/L)



Radioactivity Density of the Seawater Around 3km Offshore of Fukushima Daiichi NPS (T-S4) Lower Layer (Bq/L)

