

Reference

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

(Data summarized on August 23)

Place of Sampling	North of Unit 5-6 Discharge Channel at 1F (Approx. 30m North of Unit 5-6 Discharge Channel)		Around 1F South Discharge Channel of 1F (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.)
Time of Sampling	Aug 22, 2012 7:20 AM		Aug 22, 2012 7:05 AM		
Detected Nuclides (Half-life)	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

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

I-131: Approx. 0.48Bq/L, Cs-134: Approx.1.1Bq/L, Cs-137: Approx.1.4Bq/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.

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

(Data summarized on August 23)

Place of Sampling (Place No.)	*1				*1				*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.)
	3km Offshore of Odaka Ward (T-14)		3km Offshore of Odaka Ward (T-14)		3km Offshore of Odaka Ward (T-14)		3km Offshore of Ukedo River (T-D1)		3km Offshore of Ukedo River (T-D1)		3km Offshore of Ukedo River (T-D1)		
Time of Sampling	Upper Layer	Lower Layer	Upper Layer	Lower Layer	Upper Layer	Lower Layer	Upper Layer	Lower Layer	Upper Layer	Lower Layer	Upper Layer	Lower Layer	
	Jul 17, 2012 8:20 AM		Jul 17, 2012 8:20 AM		Jul 25, 2012 7:50 AM		Jul 25, 2012 7:50 AM		Jul 25, 2012 7:30 AM		Jul 25, 2012 7:30 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)	0.016	0.00	0.068	0.00	0.021	0.00	0.039	0.00	0.040	0.00	0.082	0.00	60
Cs-137 (Approx. 30 years)	0.024	0.00	0.10	0.00	0.035	0.00	0.059	0.00	0.069	0.00	0.13	0.00	90

Place of Sampling (Place No.)	*2				*2				*1				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.)
	3km Offshore of Fukushima Daiichi NPS (T-D5)		3km Offshore of Fukushima Daiichi NPS (T-D5)		3km Offshore of Fukushima Daiichi NPS (T-D9)		3km Offshore of Fukushima Daiichi NPS (T-D9)		15km Offshore of Fukushima Daiichi NPS (T-5)		15km Offshore of Fukushima Daiichi NPS (T-5)		
Time of Sampling	Upper Layer	Lower Layer	Upper Layer	Lower Layer	Upper Layer	Lower Layer	Upper Layer	Lower Layer	Upper Layer	Lower Layer	Upper Layer	Lower Layer	
	Jul 25, 2012 7:00 AM		Jul 25, 2012 7:00 AM		Jul 26, 2012 8:30 AM		Jul 26, 2012 8:30 AM		Jul 18, 2012 7:30 AM		Jul 18, 2012 7:30 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)	0.098	0.00	0.020	0.00	0.014	0.00	0.025	0.00	0.012	0.00	0.0039	0.00	60
Cs-137 (Approx. 30 years)	0.15	0.00	0.030	0.00	0.019	0.00	0.035	0.00	0.018	0.00	0.0078	0.00	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 : \*1 THE GENERAL ENVIRONMENTAL TECHNOS Co., LTD., \*2 Tokyo Electric Power Environmental Engineering Co., Inc.

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

(Data summarized on August 23)

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)				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 26, 2012 7:40 AM		Jul 26, 2012 7:40 AM		Jul 18, 2012 6:20 AM		Jul 18, 2012 6:20 AM		Jul 26, 2012 9:15 AM		Jul 26, 2012 9:15 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)	0.0042	0.00	0.0067	0.00	0.030	0.00	0.045	0.00	0.16	0.00	0.051	0.00	60
Cs-137 (Approx. 30 years)	0.0074	0.00	0.012	0.00	0.045	0.00	0.066	0.00	0.23	0.00	0.076	0.00	90

Place of Sampling (Place No.)	15km Offshore of Iwasawa Shore (T-7)				3km Offshore of Onahama Port (T-18)				5km Offshore of Natsui River (T-M10)				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 20, 2012 7:30 AM		Jul 20, 2012 7:30 AM		Jul 20, 2012 5:20 AM		Jul 20, 2012 5:20 AM		Jul 20, 2012 8:50 AM		Jul 20, 2012 8:50 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)	0.0073	0.00	0.0042	0.00	0.0085	0.00	0.024	0.00	0.013	0.00	0.0034	0.00	60
Cs-137 (Approx. 30 years)	0.014	0.00	0.0057	0.00	0.012	0.00	0.038	0.00	0.020	0.00	0.0075	0.00	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 : THE GENERAL ENVIRONMENTAL TECHNOS Co., LTD.

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

(Data summarized on August 23)

Place of Sampling (Place No.)	Around 4km Offshore of Kumagawa (T-S8)												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, 2012 6:36 AM		Jul 22, 2012 6:36 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)	0.028	0.00	0.032	0.00									60
Cs-137 (Approx. 30 years)	0.040	0.00	0.047	0.00									90

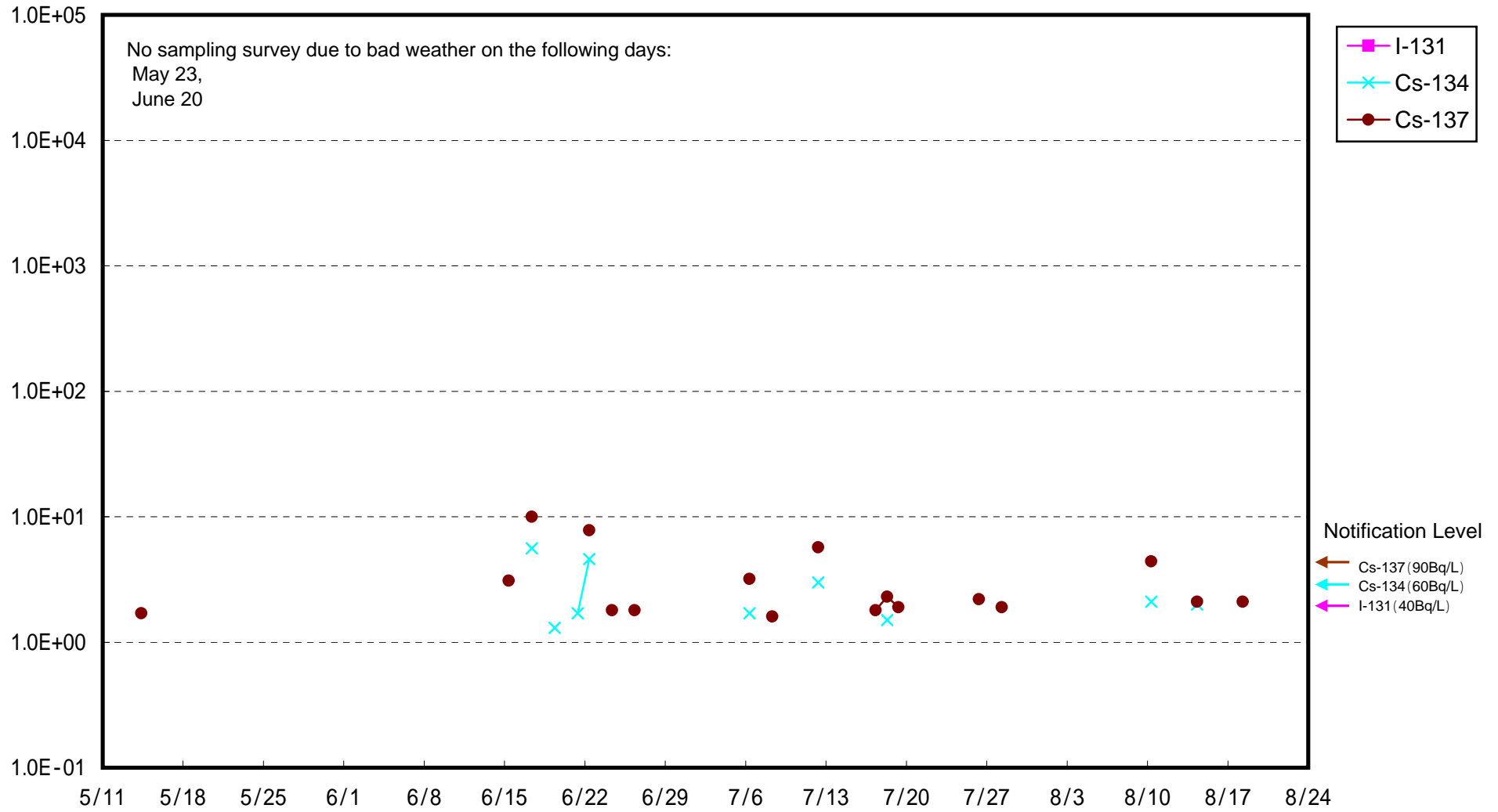
Place of Sampling (Place No.)													Density Limit Specified by the Reactor Regulation (Bq/L) (The density limit in the water outside the surrounding monitored areas is provided in section 6 of Appendix 2.)
	Upper Layer		Lower Layer		Upper Layer		Lower Layer		Upper Layer		Lower Layer		
Time of Sampling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

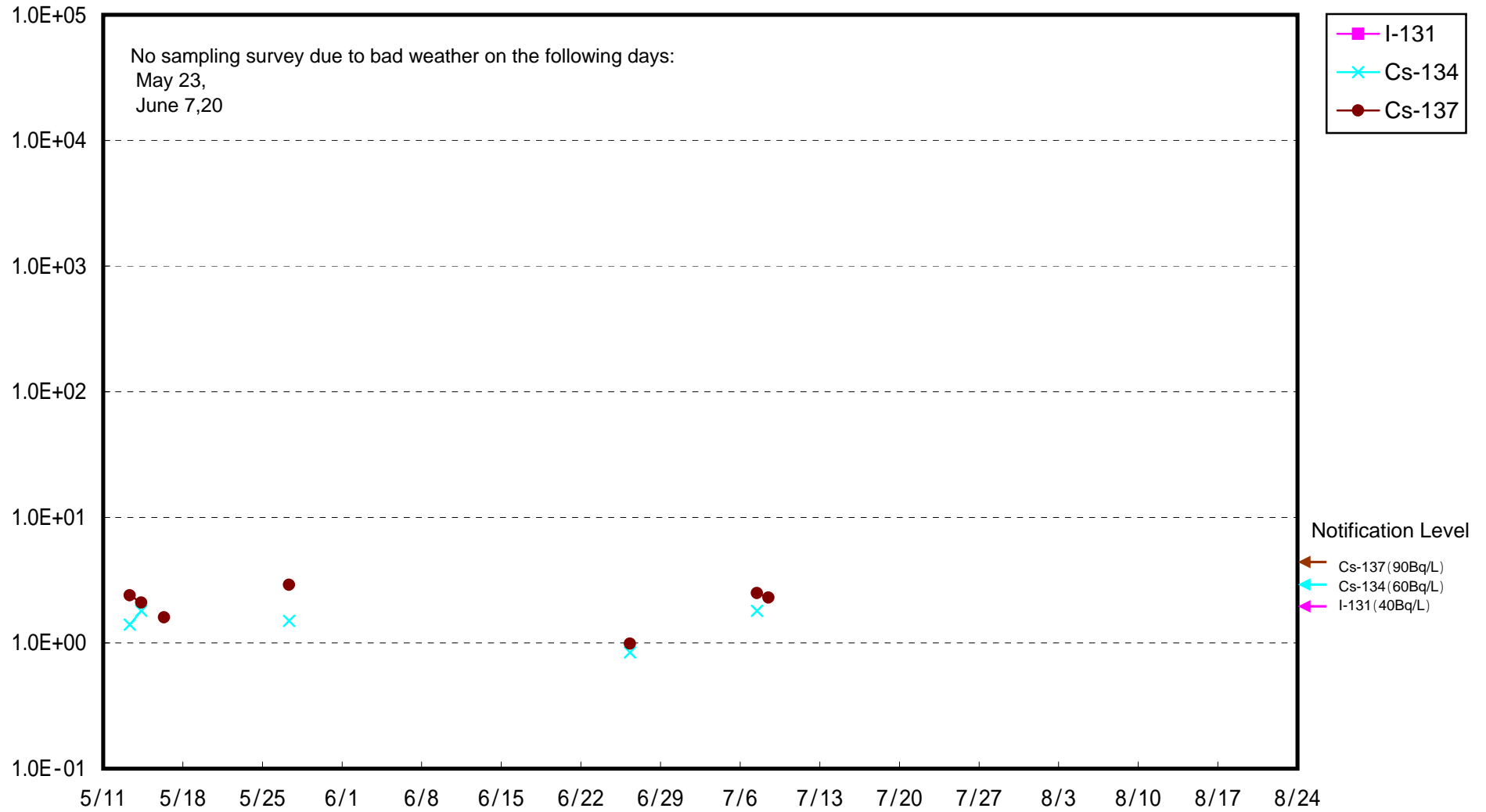
\* In the case of more than 2 nuclides, the sum of scaling factors to density limits is compared to 1.

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

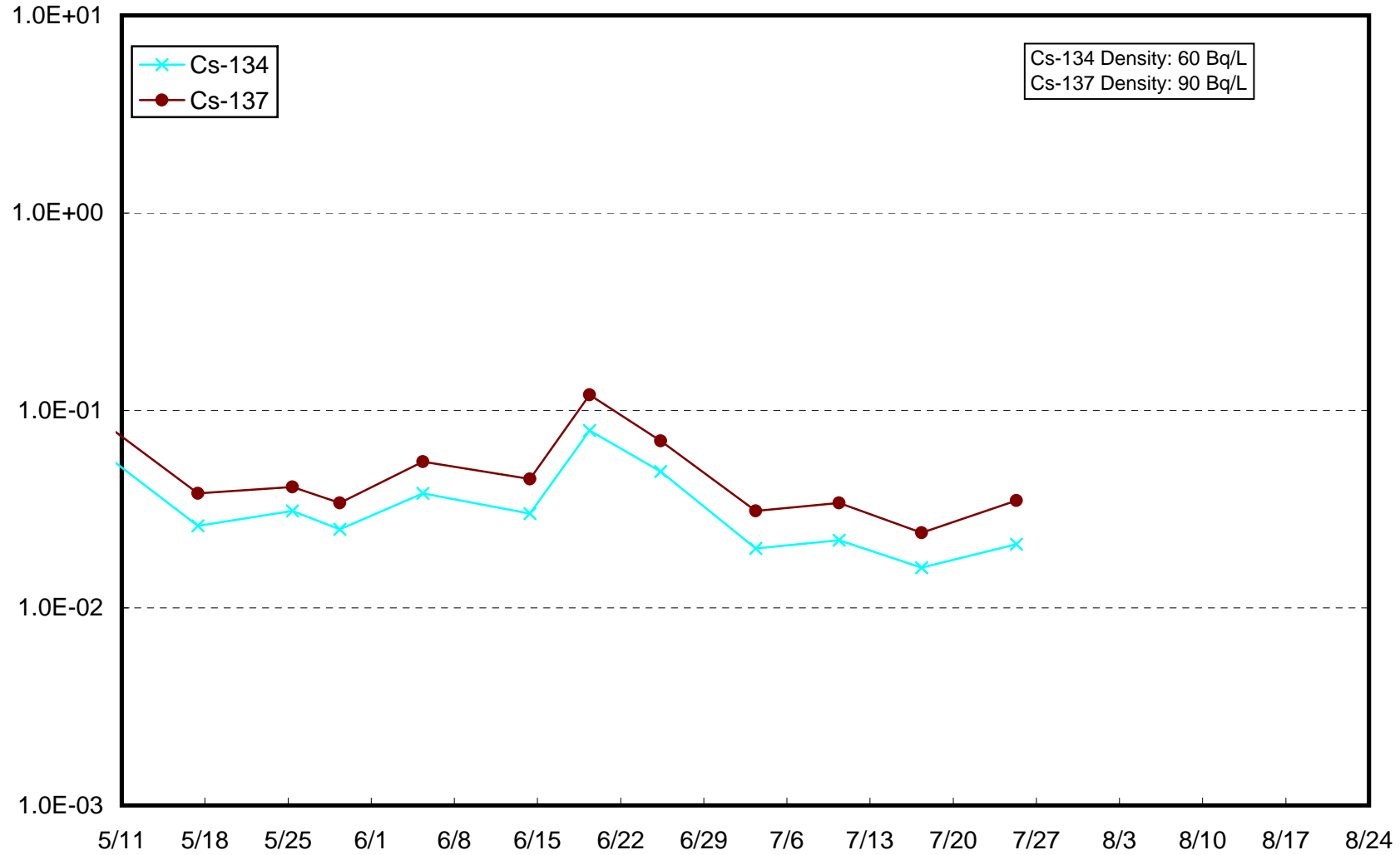
### Radioactivity Density of the Seawater at the North of 1F Unit 5-6 Discharge Channel (Bq/L)



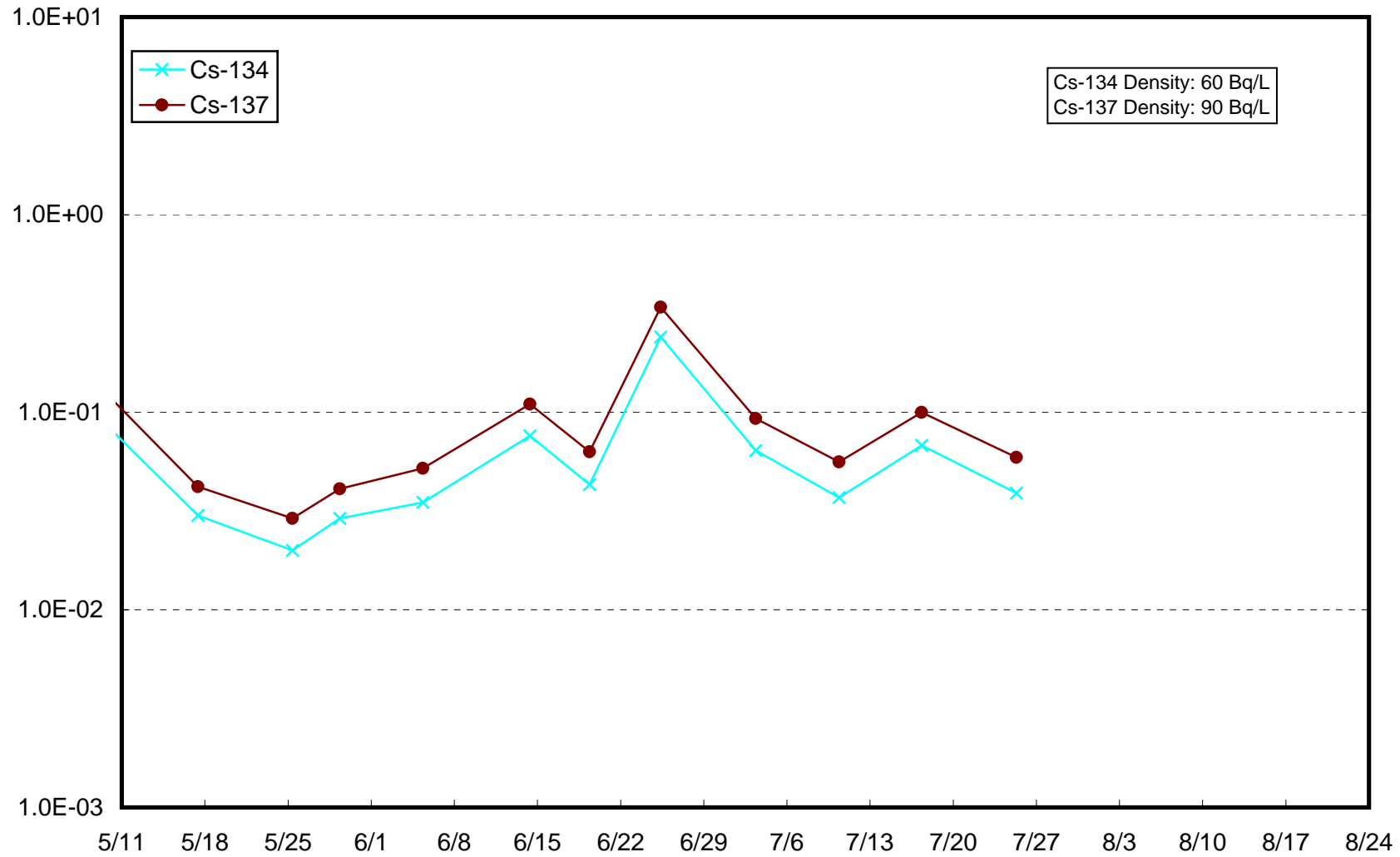
# Radioactivity Density of the Seawater at 1F South Discharge Channel (Bq/L)



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

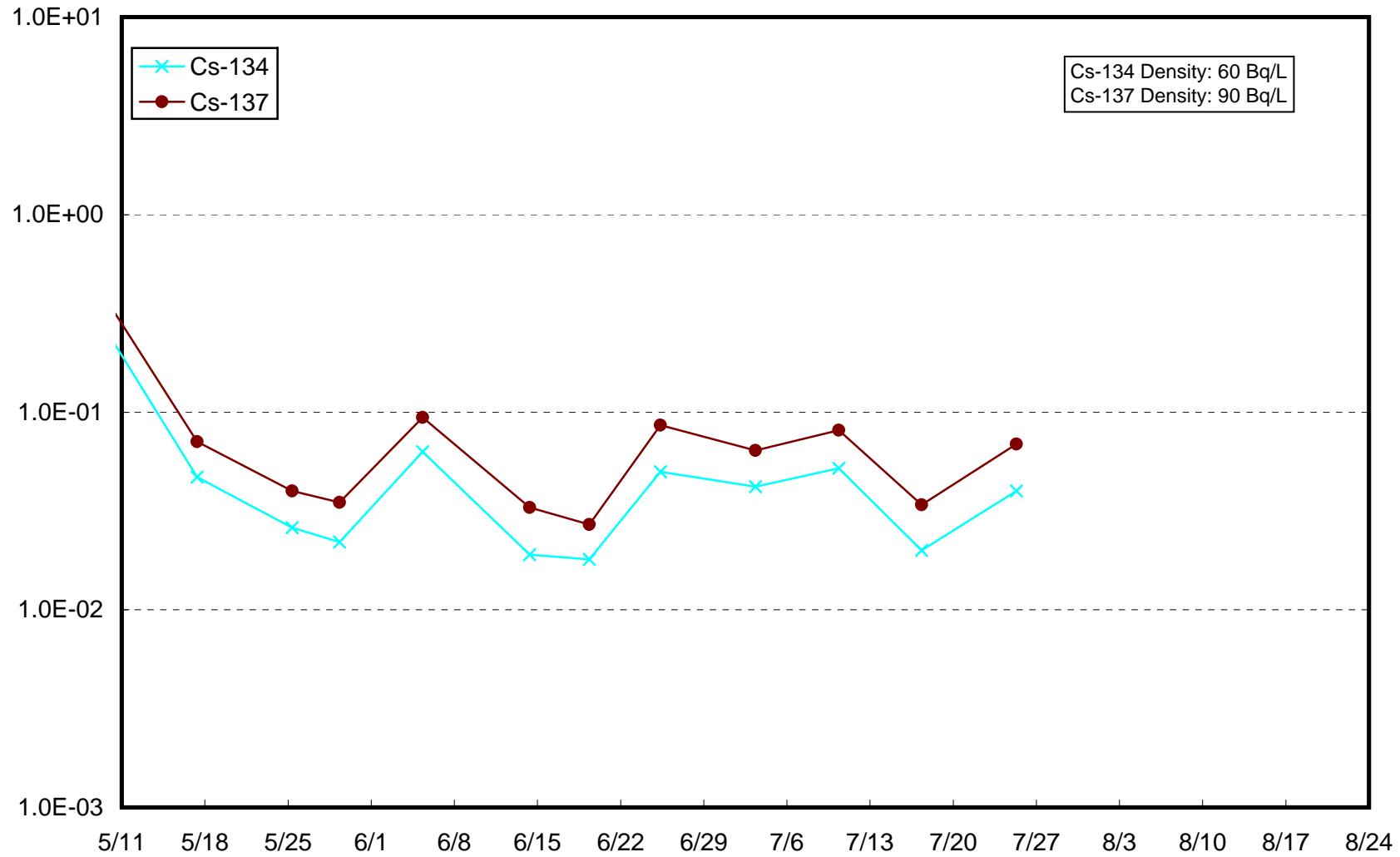


Radioactivity Density of the Seawater at 3km Offshore of Odaka Ward (T-14) Lower Layer (Bq/L)

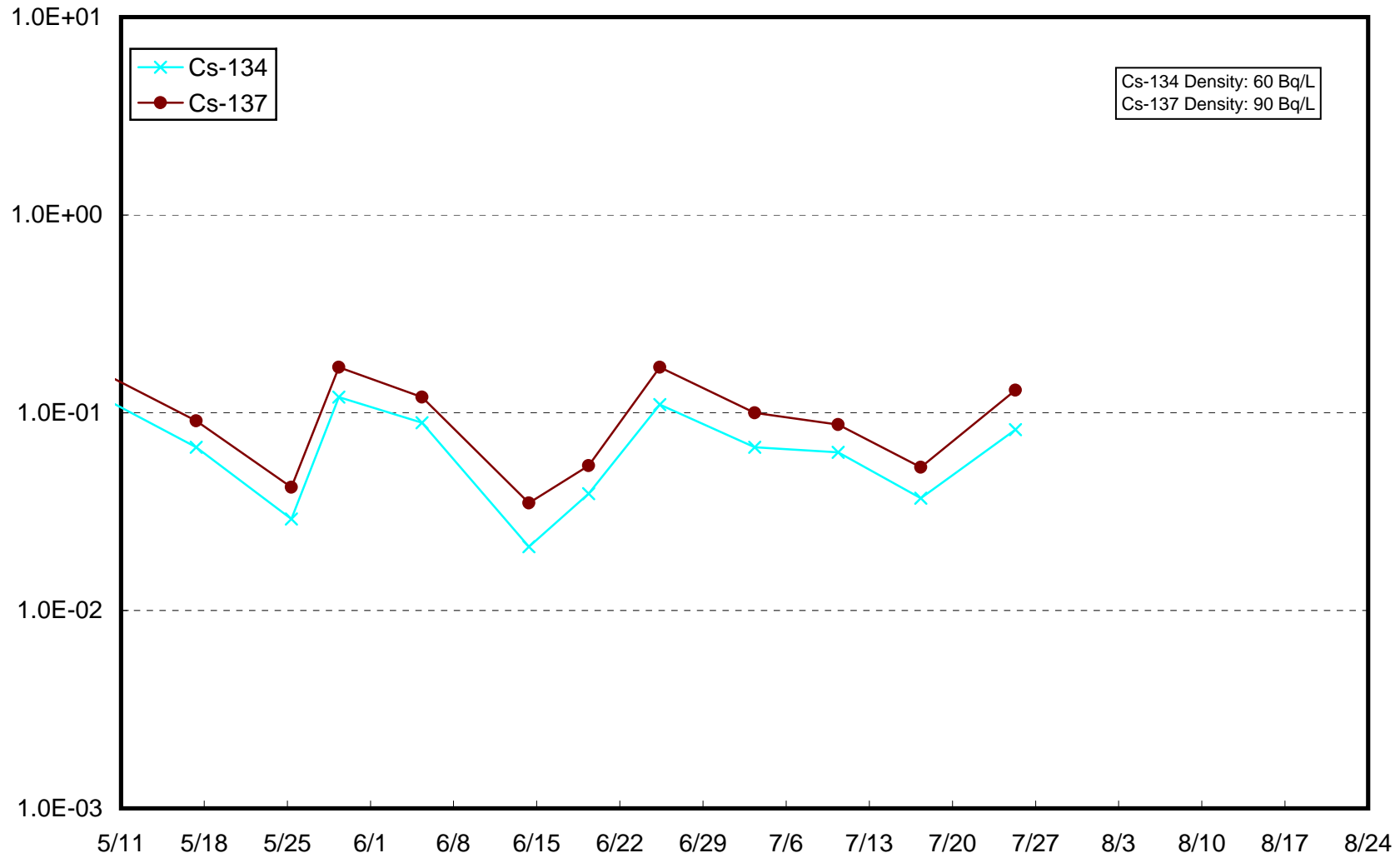




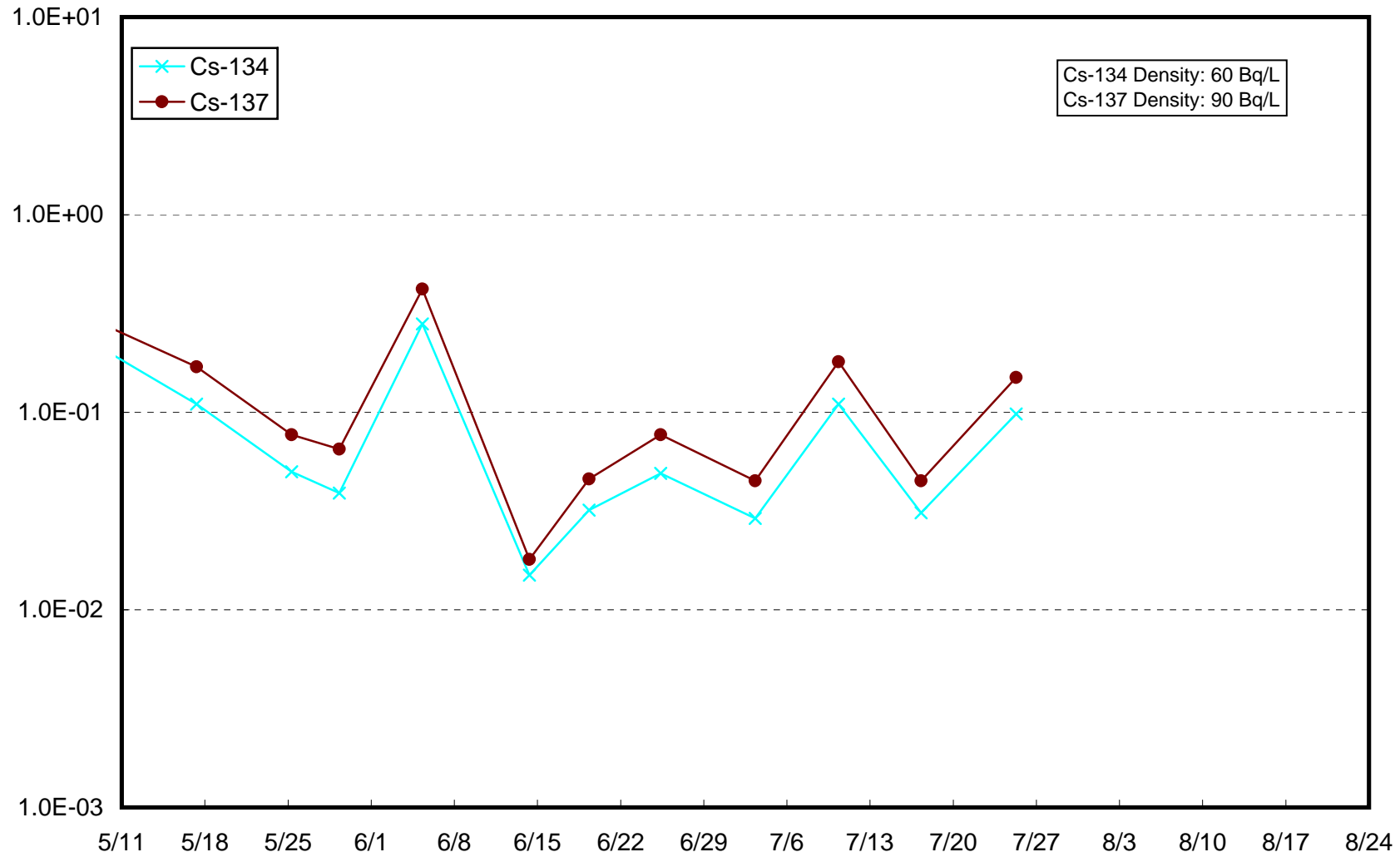
Radioactivity Density of the Seawater at 3km Offshore of Ukedo River (T-D1) Upper Layer (Bq/L)



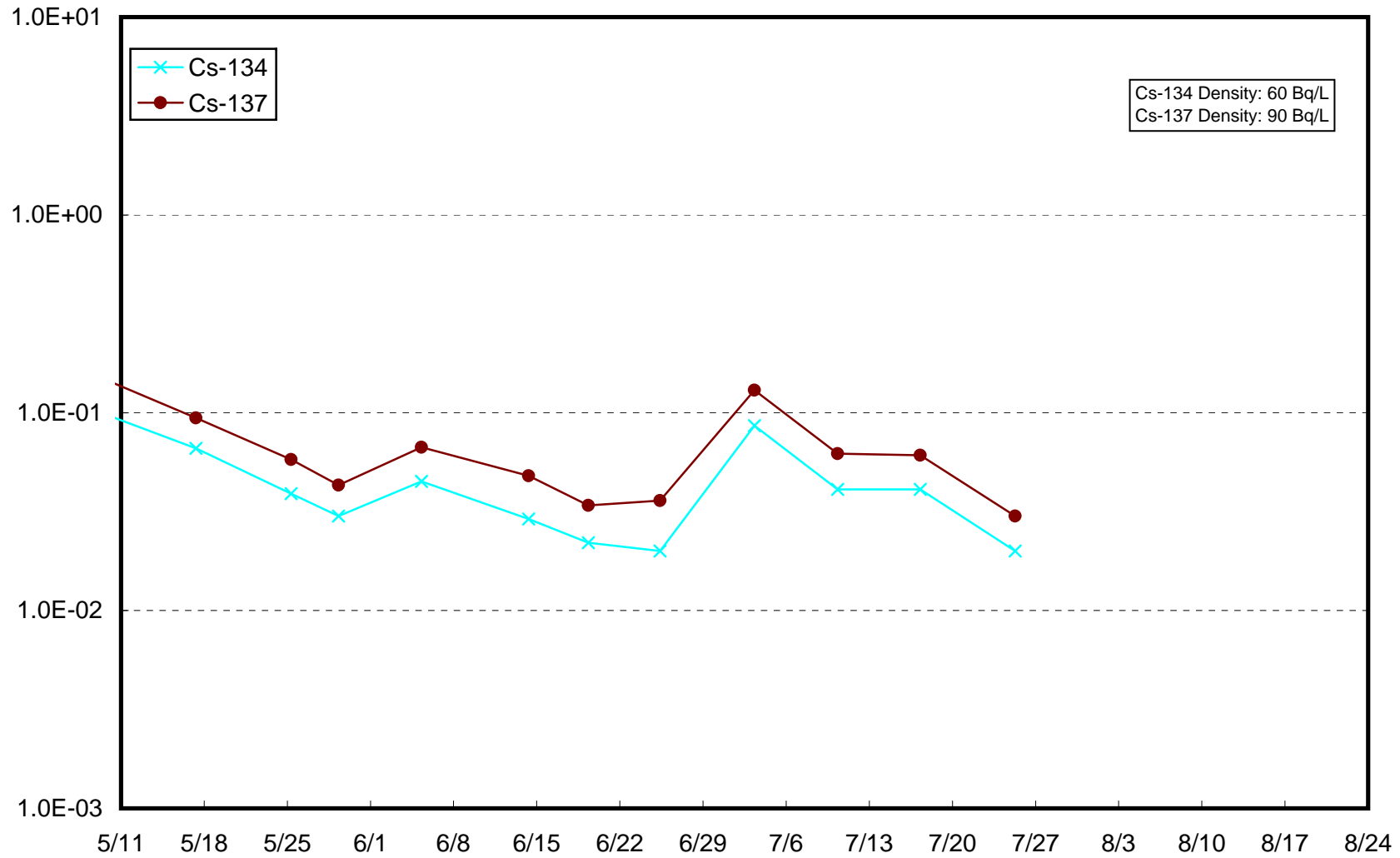
Radioactivity Density of the Seawater at 3km Offshore of Ukedo River (T-D1) Lower Layer (Bq/L)



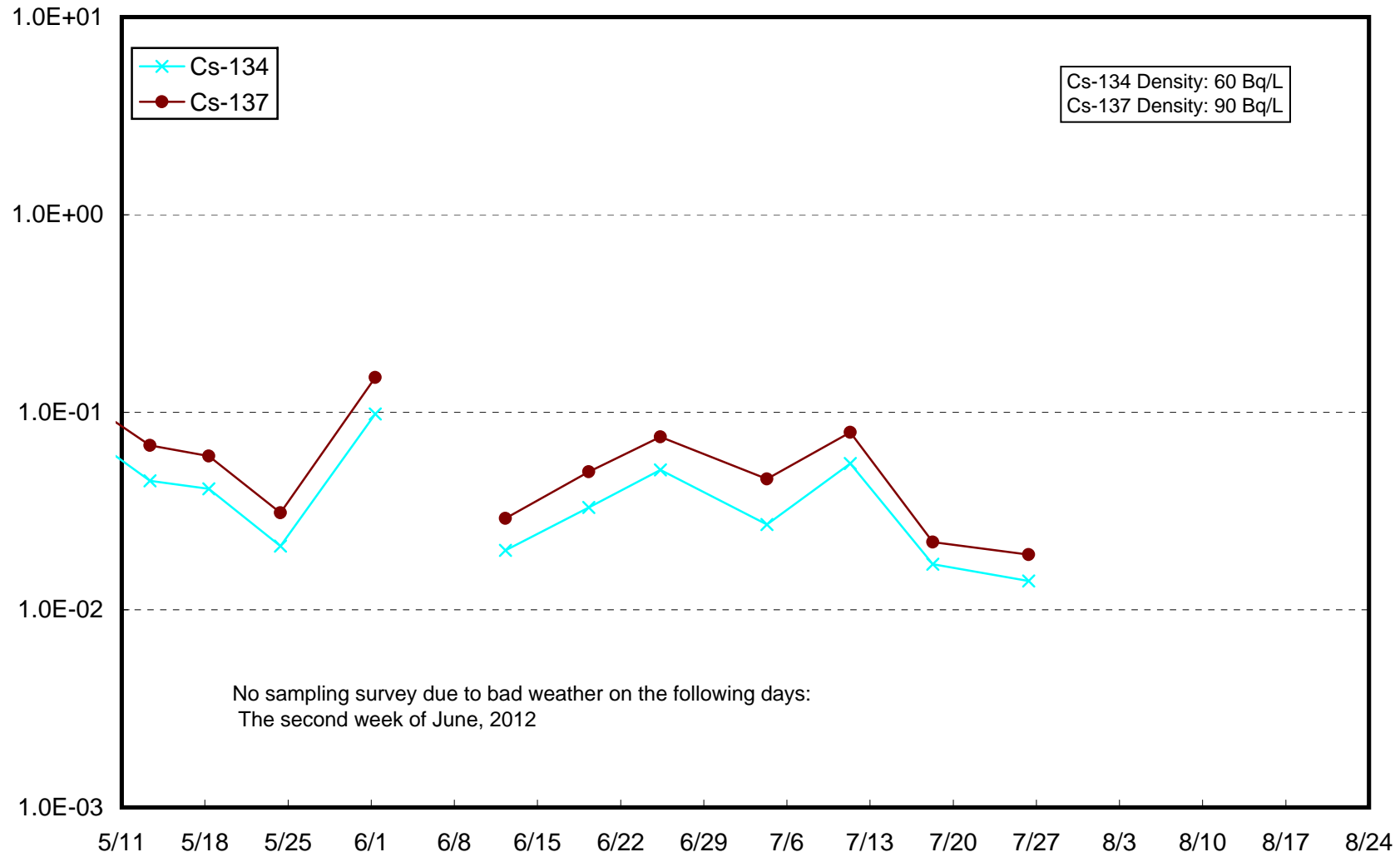
Radioactivity Density of the Seawater at 3km Offshore of Fukushima Daiichi NPS (T-D5) Upper Layer (Bq/L)



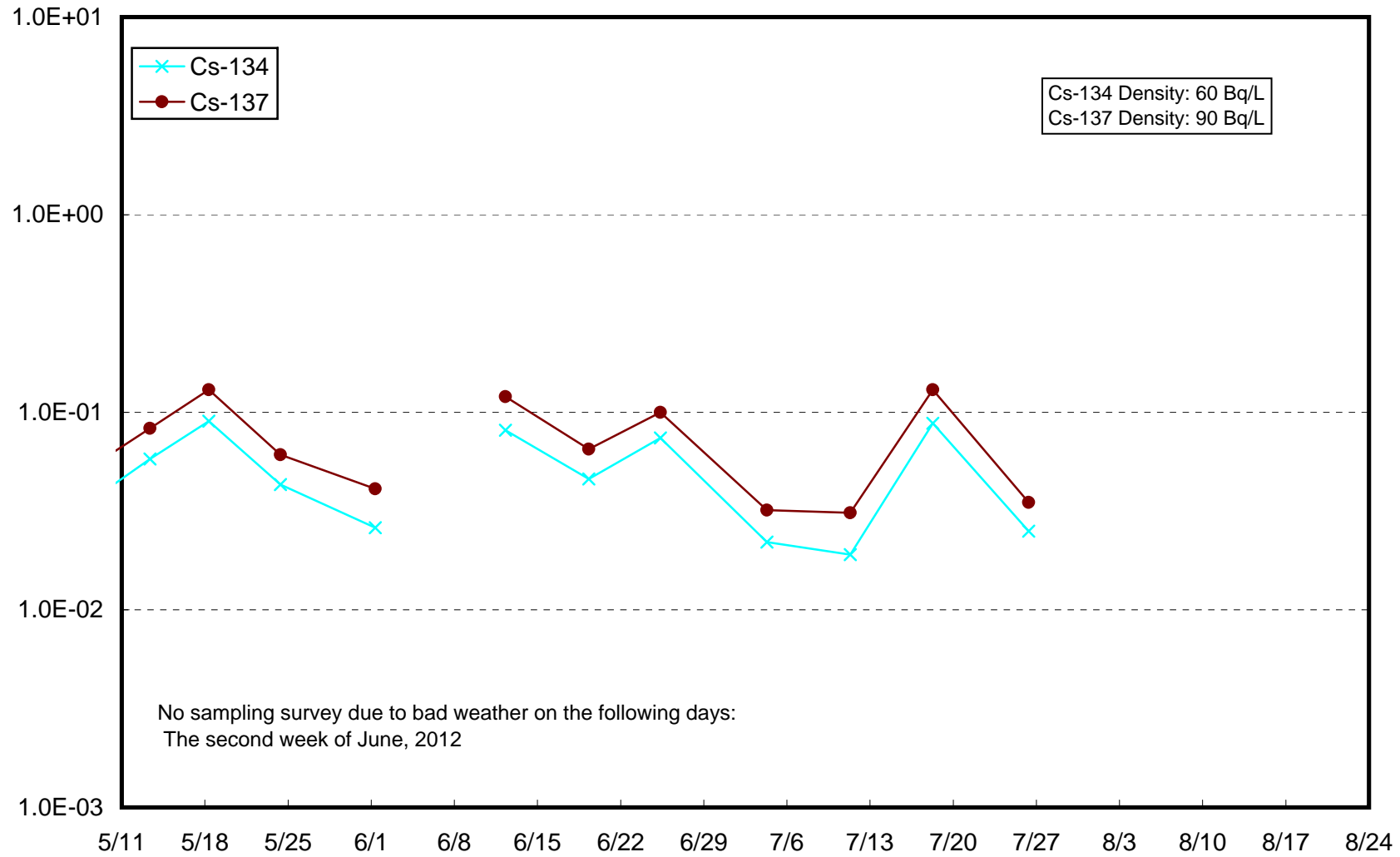
Radioactivity Density of the Seawater at 3km Offshore of Fukushima Daiichi NPS (T-D5) Lower Layer (Bq/L)



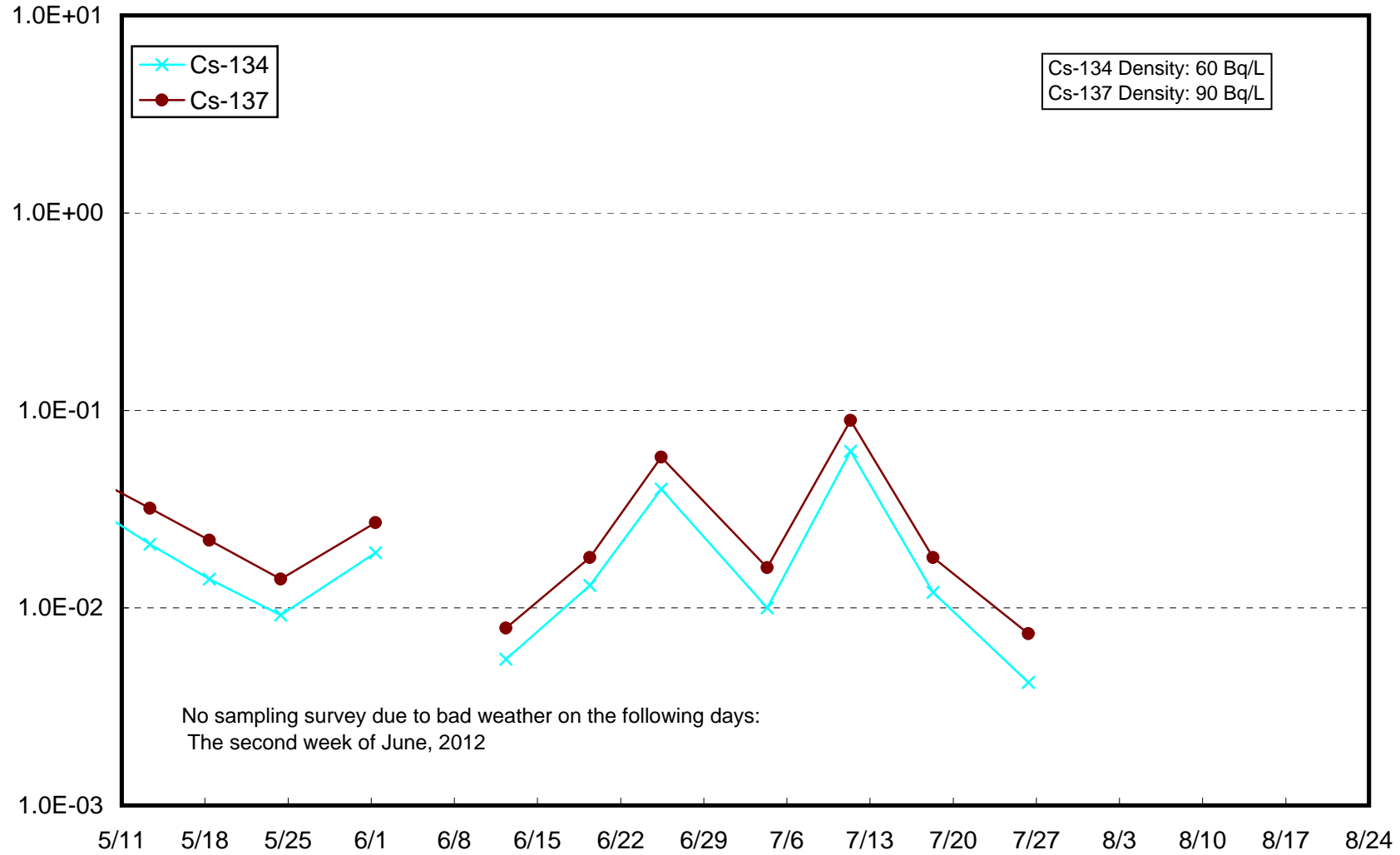
Radioactivity Density of the Seawater at 3km Offshore of Fukushima Daini NPS (T-D9) Upper Layer (Bq/L)



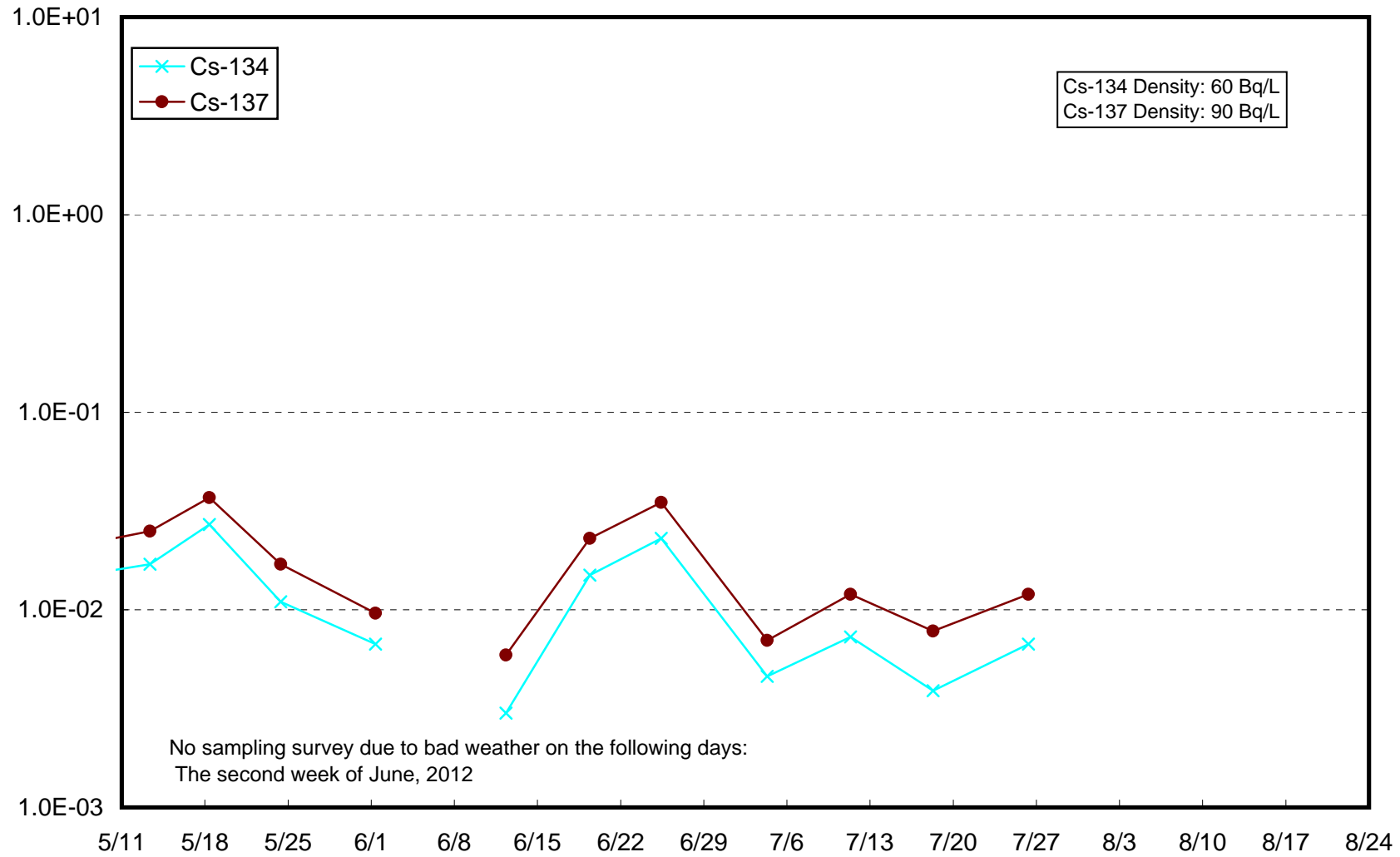
Radioactivity Density of the Seawater at 3km Offshore of Fukushima Daini NPS (T-D9) Lower Layer (Bq/L)



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

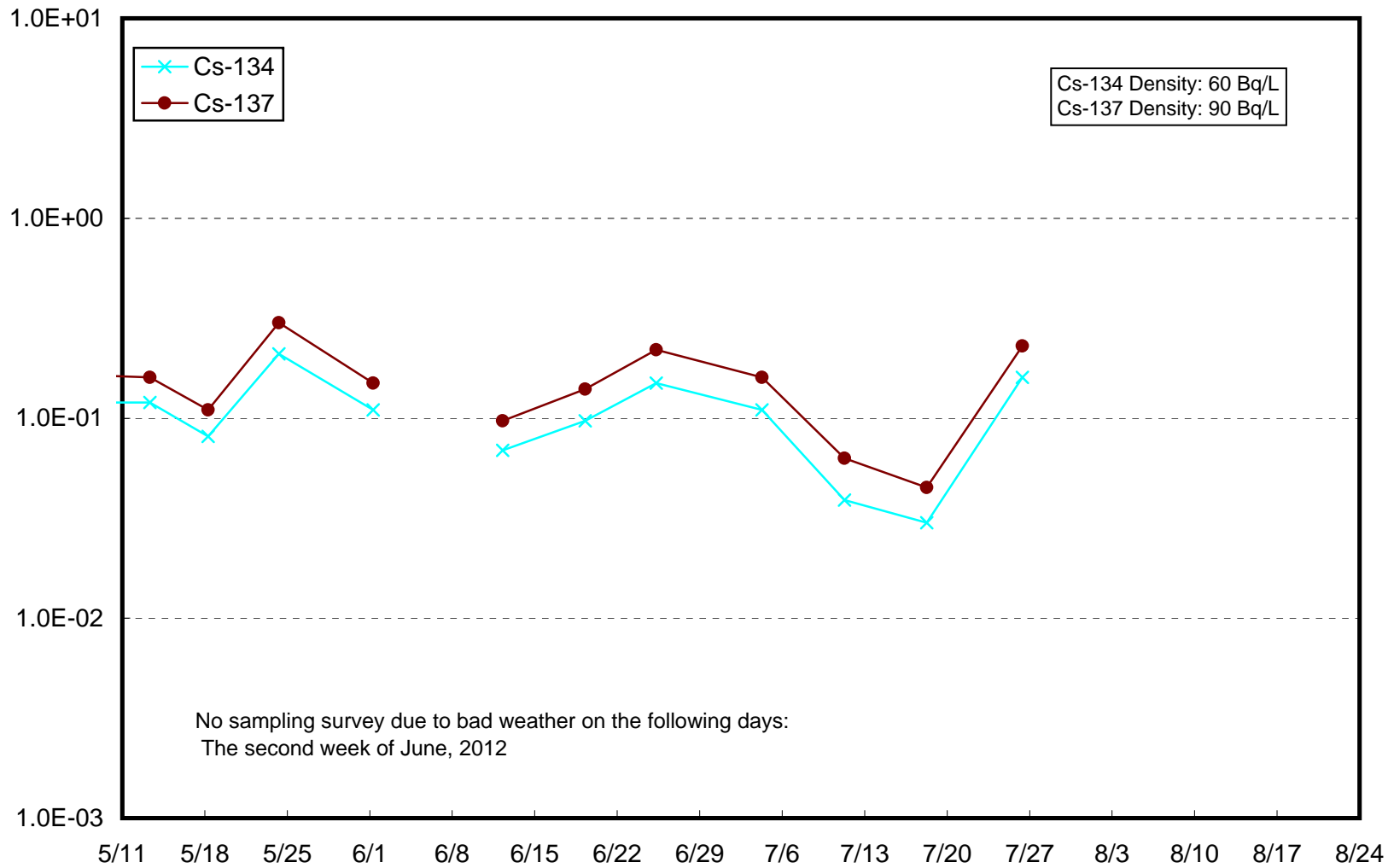


Radioactivity Density of the Seawater at 15km Offshore of Fukushima Daiichi NPS (T-5) Lower Layer (Bq/L)

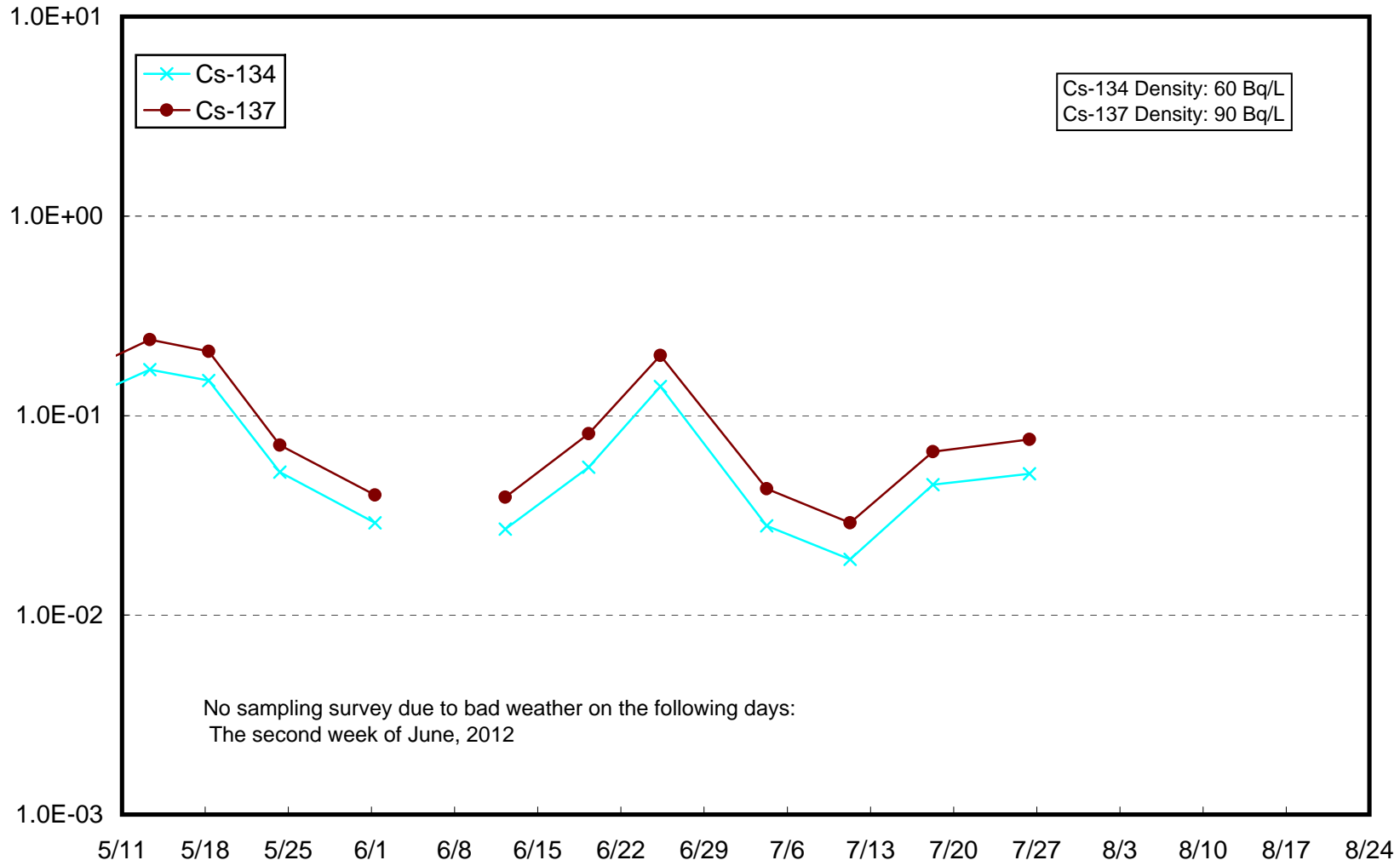




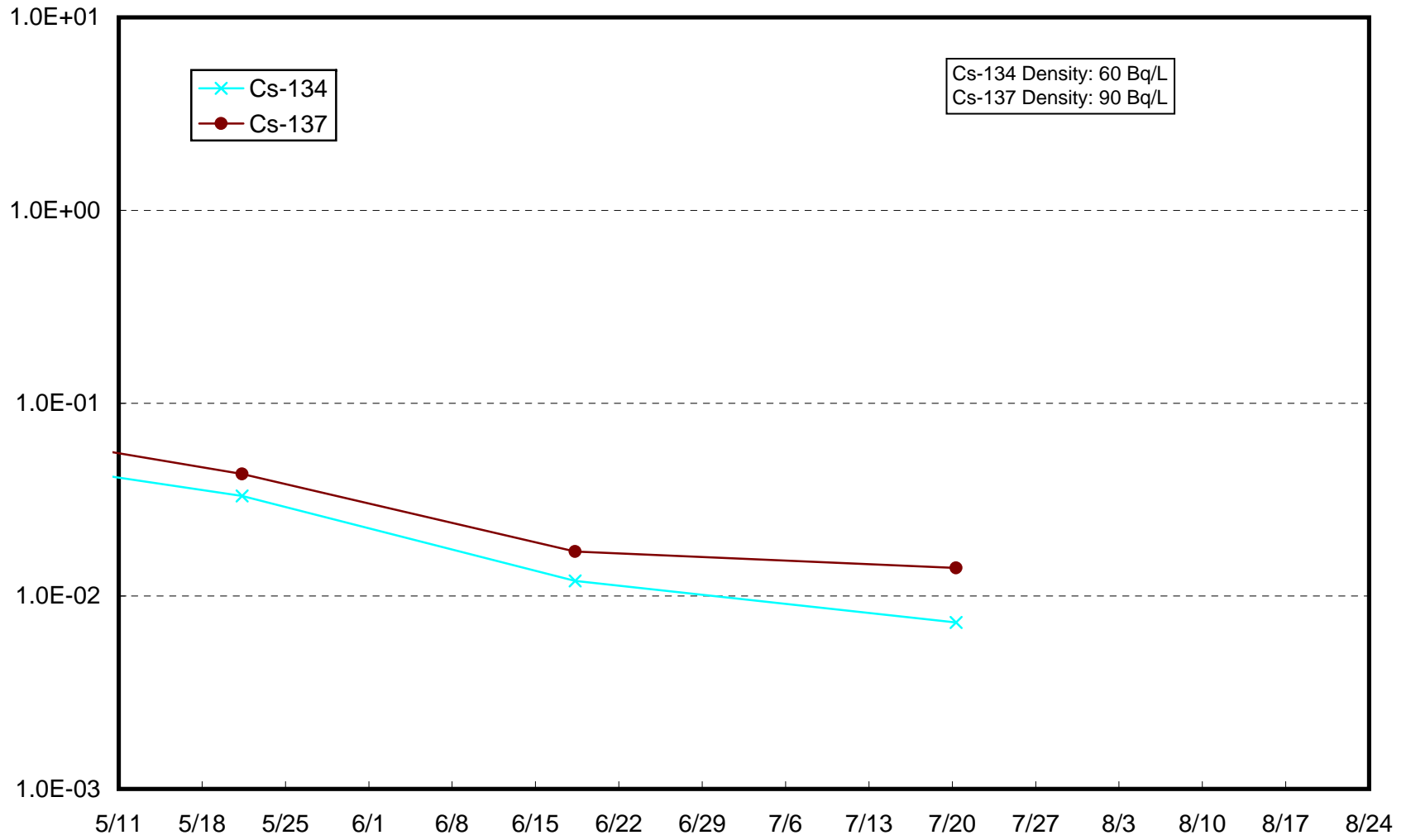
Radioactivity Density of the Seawater at 3km Offshore of Iwasawa Shore (T-11) Upper Layer (Bq/L)



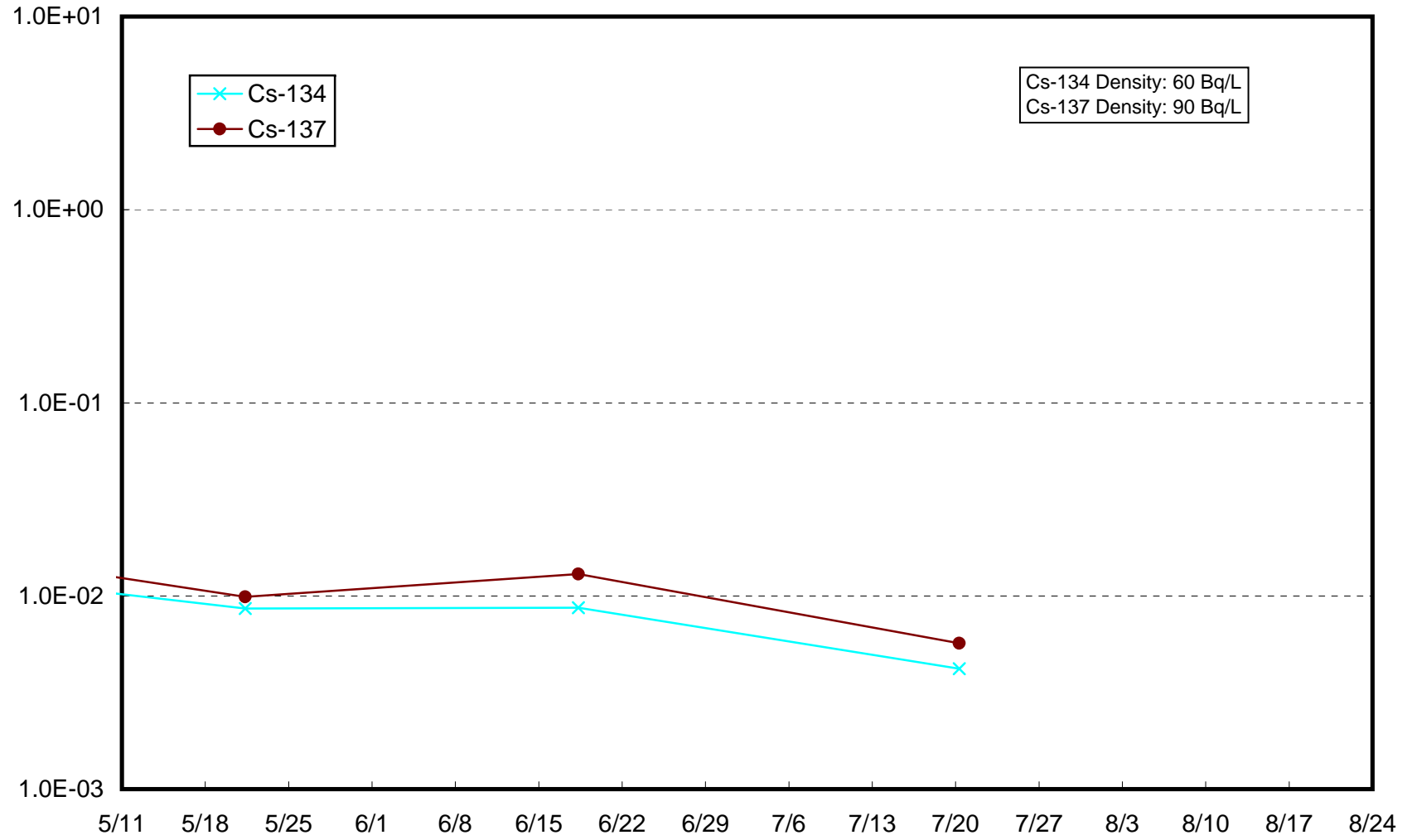
Radioactivity Density of the Seawater at 3km Offshore of Iwasawa Shore (T-11) Lower Layer (Bq/L)



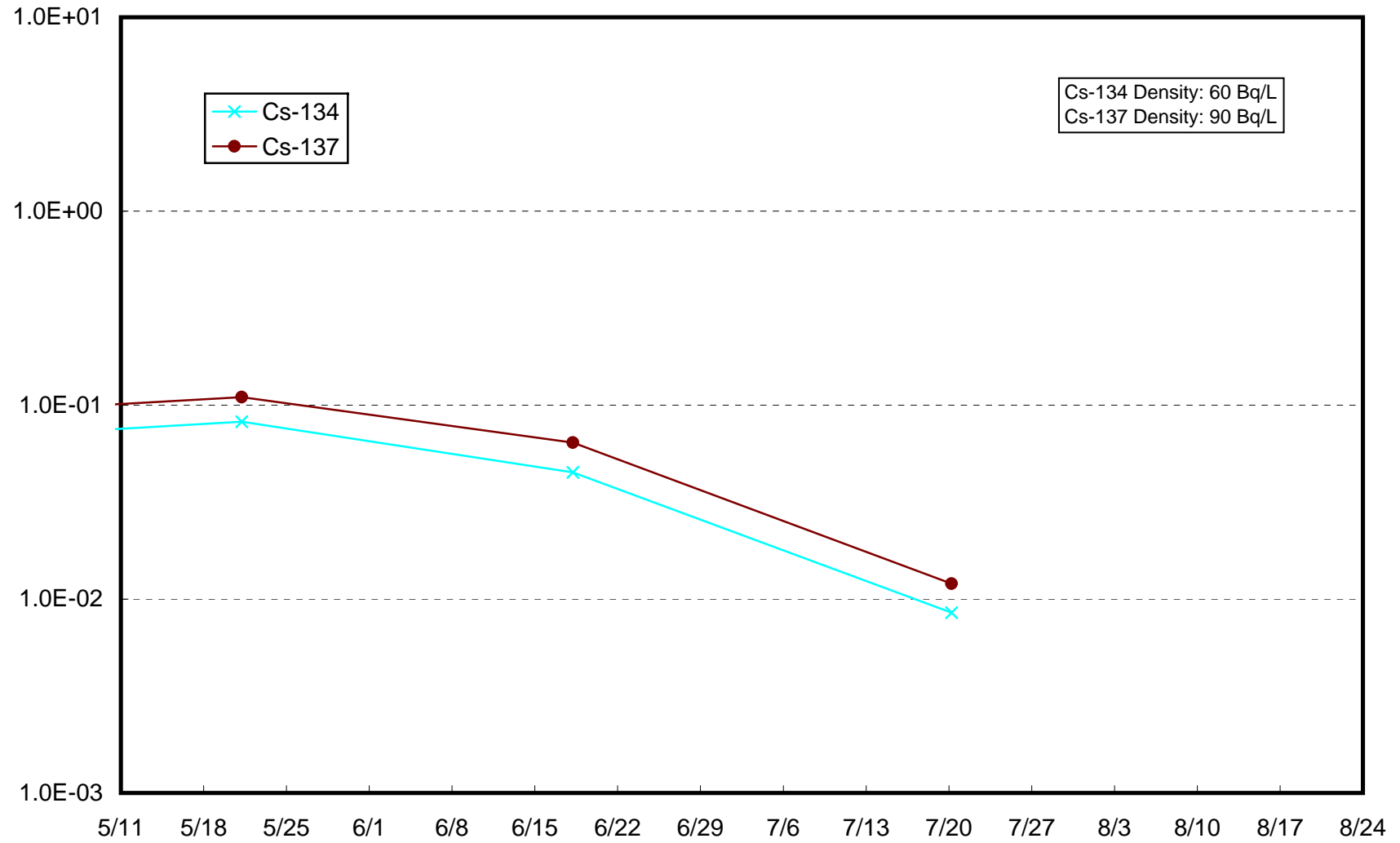
Radioactivity Density of the Seawater at 15km Offshore of Iwasawa Shore (T-7) Upper Layer (Bq/L)



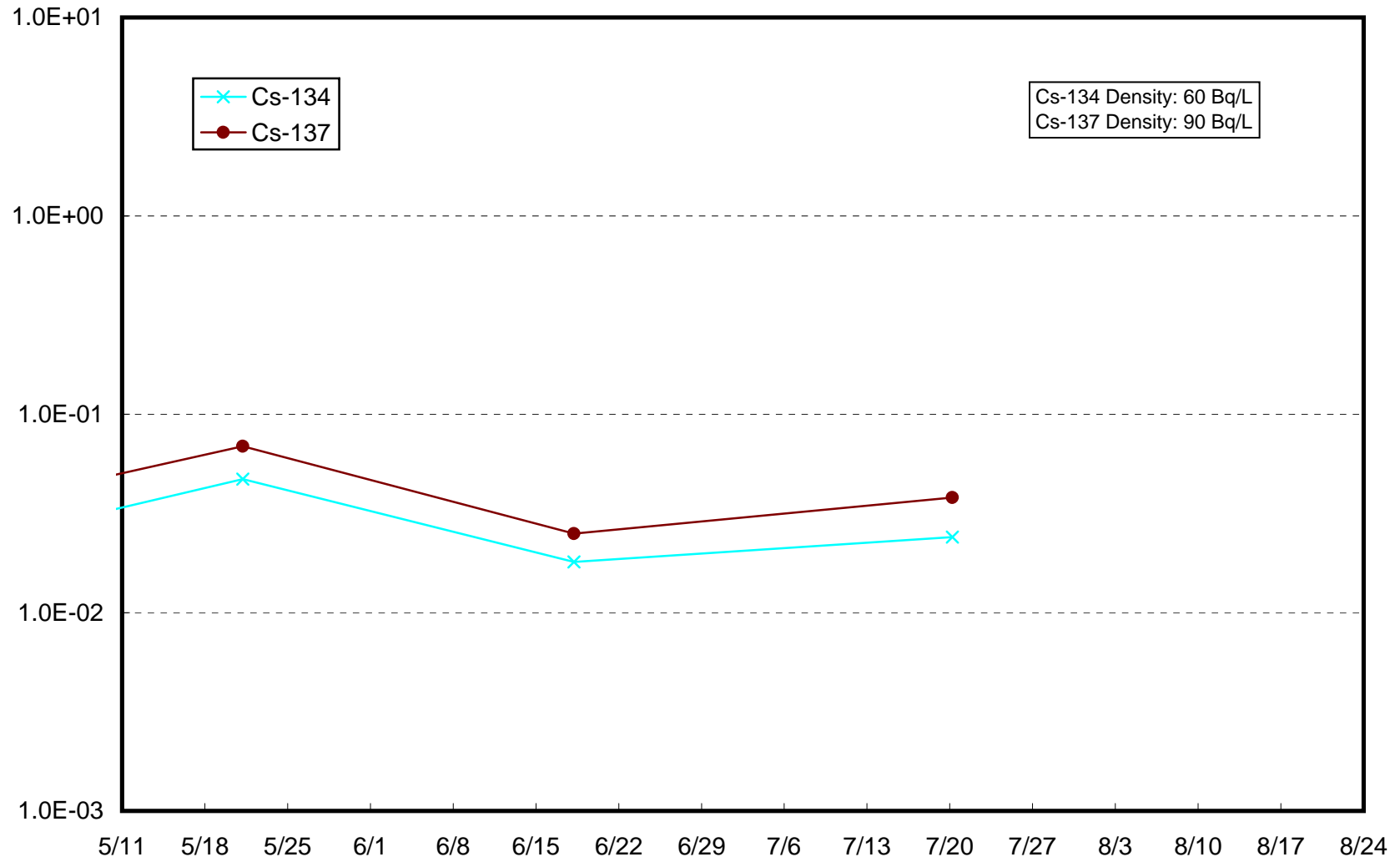
Radioactivity Density of the Seawater at 15km Offshore of Iwasawa Shore (T-7) Lower Layer (Bq/L)



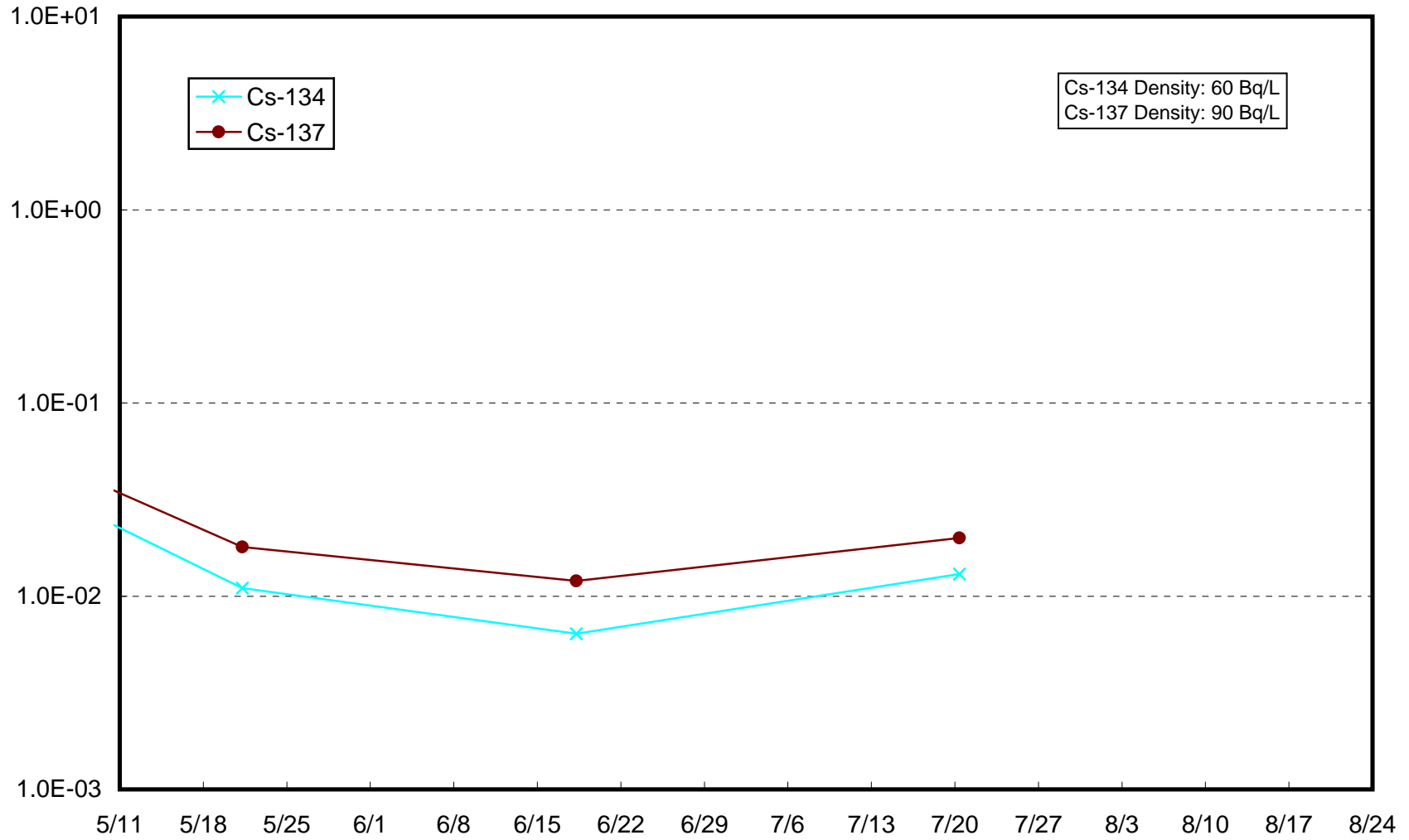
Radioactivity Density of the Seawater at 3km Offshore of Onahama Port (T-18) Upper Layer (Bq/L)



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)

