

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

(Data summarized on November 29)

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.)
	Time of Sampling		Time of Sampling		
	Nov 28, 2013 7:20 AM		Nov 28, 2013 5:35 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	-	ND	-	40
Cs-134 (Approx. 2 years)	1.4	0.02	ND	-	60
Cs-137 (Approx. 30 years)	3.8	0.04	ND	-	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.

I-131: Approx. 1.2Bq/L, Cs-134: Approx. 1.3Bq/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 Radioactive Materials in the Seawater <Offshore 1/5>

(Data summarized on November 29)

Place of Sampling (Place No.)	3km Offshore of Odaka Ward (T-14)				3km Offshore of Odaka Ward (T-14)				3km Offshore of Odaka Ward (T-14)				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	Oct 4, 2013 11:04 AM		Oct 4, 2013 11:04 AM		Oct 8, 2013 9:39 AM		Oct 8, 2013 9:39 AM		Oct 18, 2013 10:01 AM		Oct 18, 2013 10:01 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)	0.0051	0.00	0.0048	0.00	0.0079	0.00	0.0067	0.00	0.092	0.00	0.014	0.00	60
Cs-137 (Approx. 30 years)	0.012	0.00	0.010	0.00	0.019	0.00	0.014	0.00	0.20	0.00	0.031	0.00	90

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	October (Not sampled)		October (Not sampled)		Oct 28, 2013 9:42 AM		Oct 28, 2013 9:42 AM		Oct 4, 2013 9:37 AM		Oct 4, 2013 9:37 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)	-	-	-	-	0.0078	0.00	0.0051	0.00	ND	-	0.0023	0.00	60
Cs-137 (Approx. 30 years)	-	-	-	-	0.020	0.00	0.015	0.00	0.0027	0.00	0.0053	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.0.0011Bq/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 <Offshore 2/5>

(Data summarized on November 29)

Place of Sampling (Place No.)	15km Offshore of Fukushima Daiichi NPS (T-5)				15km Offshore of Fukushima Daiichi NPS (T-5)				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	Oct 8, 2013 8:46 AM		Oct 8, 2013 8:46 AM		Oct 18, 2013 8:31 AM		Oct 18, 2013 8:31 AM		The 4th week of October (Not sampled)		The 4th week of October (Not sampled)		
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)	0.0032	0.00	0.0030	0.00	0.0021	0.00	0.012	0.00	-	-	-	-	60
Cs-137 (Approx. 30 years)	0.0073	0.00	0.0079	0.00	0.0051	0.00	0.027	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	Oct 28, 2013 8:45 AM		Oct 28, 2013 8:45 AM		Oct 5, 2013 7:49 AM		Oct 5, 2013 7:49 AM		Oct 8, 2013 11:20 AM		Oct 8, 2013 11:20 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)	0.0054	0.00	0.011	0.00	0.015	0.00	0.012	0.00	0.014	0.00	0.0050	0.00	60
Cs-137 (Approx. 30 years)	0.013	0.00	0.024	0.00	0.033	0.00	0.029	0.00	0.031	0.00	0.012	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.

* 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 <Offshore 3/5>

(Data summarized on November 29)

Place of Sampling (Place No.)	3km Offshore of Iwasawa Shore (T-11)				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	Oct 18, 2013 10:11 AM		Oct 18, 2013 10:11 AM		The 4th week of October (Not sampled)		The 4th week of October (Not sampled)		Oct 28, 2013 10:22 AM		Oct 28, 2013 10:22 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)	0.084	0.00	0.033	0.00	-	-	-	-	0.046	0.00	0.022	0.00	60
Cs-137 (Approx. 30 years)	0.18	0.00	0.071	0.00	-	-	-	-	0.098	0.00	0.050	0.00	90

Place of Sampling (Place No.)	3km Offshore of Northern Iwaki City (T-12)				1km Offshore of Natsui River (T-17-1)				3km Offshore of Toyoma (T-20)				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	Oct 7, 2013 6:14 AM		Oct 7, 2013 6:14 AM		Oct 7, 2013 6:36 AM		Oct 7, 2013 6:36 AM		Oct 7, 2013 6:59 AM		Oct 7, 2013 6:59 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)	0.0070	0.00	0.0059	0.00	0.025	0.00	0.0069	0.00	0.019	0.00	0.0032	0.00	60
Cs-137 (Approx. 30 years)	0.017	0.00	0.015	0.00	0.054	0.00	0.018	0.00	0.047	0.00	0.010	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.

* 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 <Offshore 4/5>

(Data summarized on November 29)

Place of Sampling (Place No.)	1km Offshore of Nida River (T-13-1)				3km Offshore of Soma (T-22)				5km Offshore of Kashima (T-MA)				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	Oct 15, 2013 6:09 AM		Oct 15, 2013 6:09 AM		Oct 15, 2013 4:59 AM		Oct 15, 2013 4:59 AM		Oct 15, 2013 5:30 AM		Oct 15, 2013 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)	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)	0.0076	0.00	0.0075	0.00	0.0084	0.00	0.0084	0.00	0.0058	0.00	0.0026	0.00	60
Cs-137 (Approx. 30 years)	0.017	0.00	0.018	0.00	0.020	0.00	0.021	0.00	0.014	0.00	0.0080	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)				Around 4km Offshore of Kumagawa (T-S8)				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	Oct 10, 2013 6:39 AM		Oct 10, 2013 6:39 AM		Oct 10, 2013 6:17 AM		Oct 10, 2013 6:17 AM		Oct 5, 2013 6:47 AM		Oct 5, 2013 6:47 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)	0.053	0.00	0.0084	0.00	0.024	0.00	0.0079	0.00	0.0067	0.00	0.0028	0.00	60
Cs-137 (Approx. 30 years)	0.13	0.00	0.020	0.00	0.053	0.00	0.021	0.00	0.014	0.00	0.0056	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.

* 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 <Offshore 5/5>

(Data summarized on November 29)

Place of Sampling (Place No.)	Arounmd 15km Offshore of Odaka Ward (T-B1)				Around 18km Offshore of Ukedo River (T-B2)				/				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	Oct 29, 2013 6:37 AM		Oct 29, 2013 6:37 AM		Oct 29, 2013 6:02 AM		Oct 29, 2013 6:02 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	0.0018	0.00	0.0041	0.00	0.0028	0.00	/	/	/	/	60
Cs-137 (Approx. 30 years)	0.011	0.00	0.0045	0.00	0.011	0.00	0.0060	0.00	/	/	/	/	90

Place of Sampling (Place No.)	/				/				/				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	/		/		/		/		/		/		
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)	/	/	/	/	/	/	/	/	/	/	/	/	60
Cs-137 (Approx. 30 years)	/	/	/	/	/	/	/	/	/	/	/	/	90

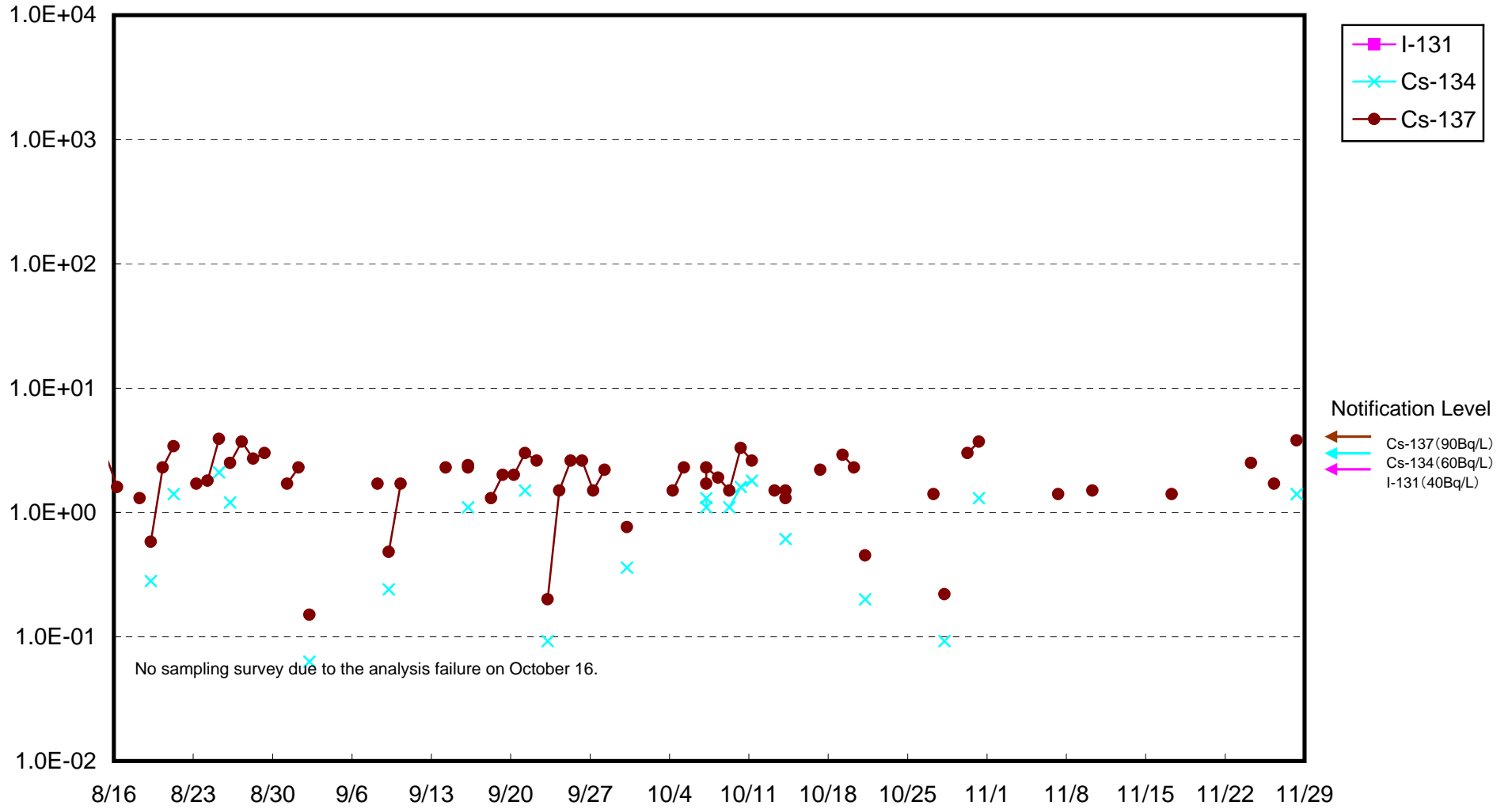
* The density specified by the Reactor Regulation is converted from Bq/cm³ to Bq/L.

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

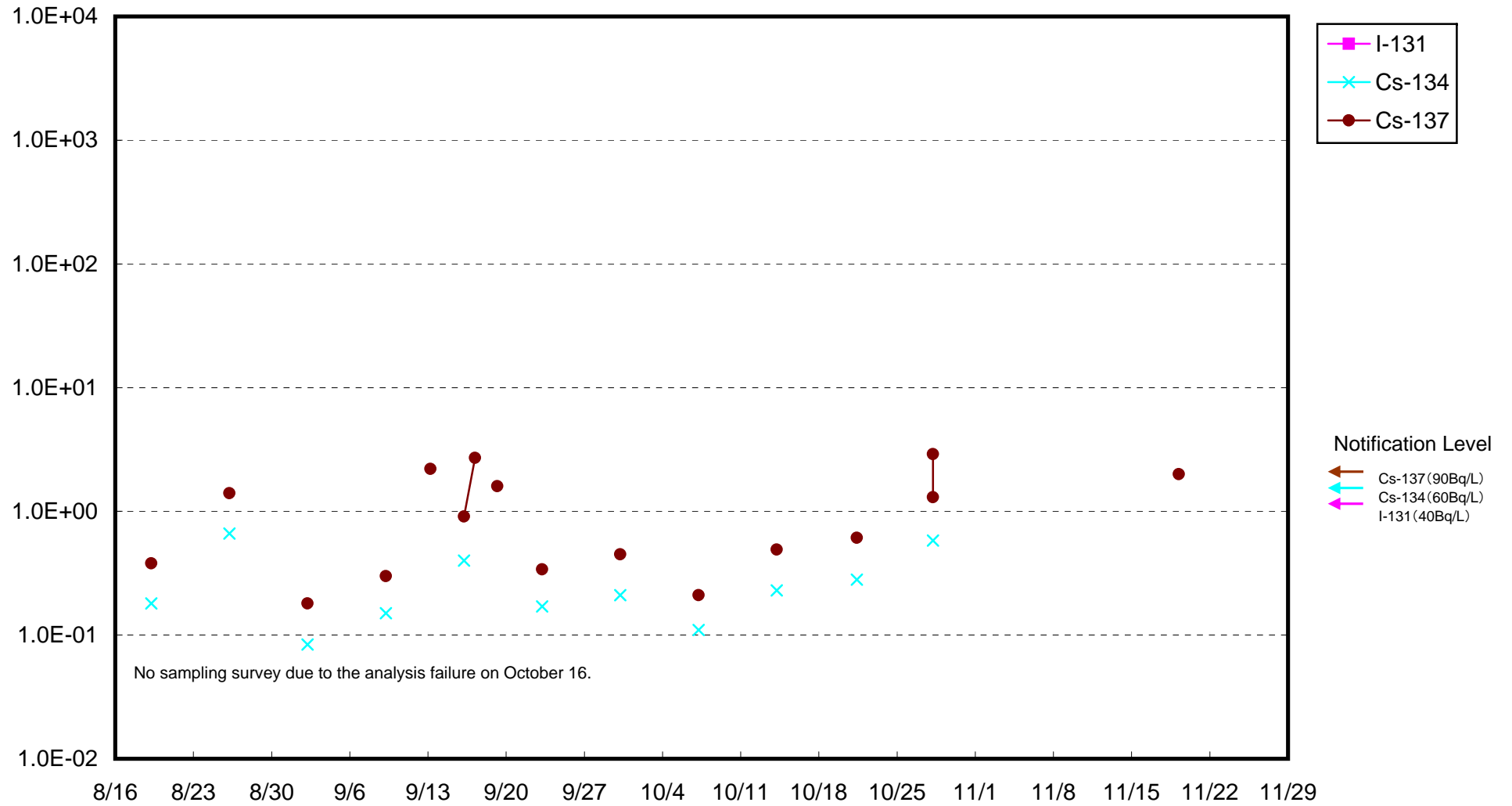
* Analysis results by detail analysis (Phosphomolybdic acid ammonium adsorption sampling method) are noted.

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

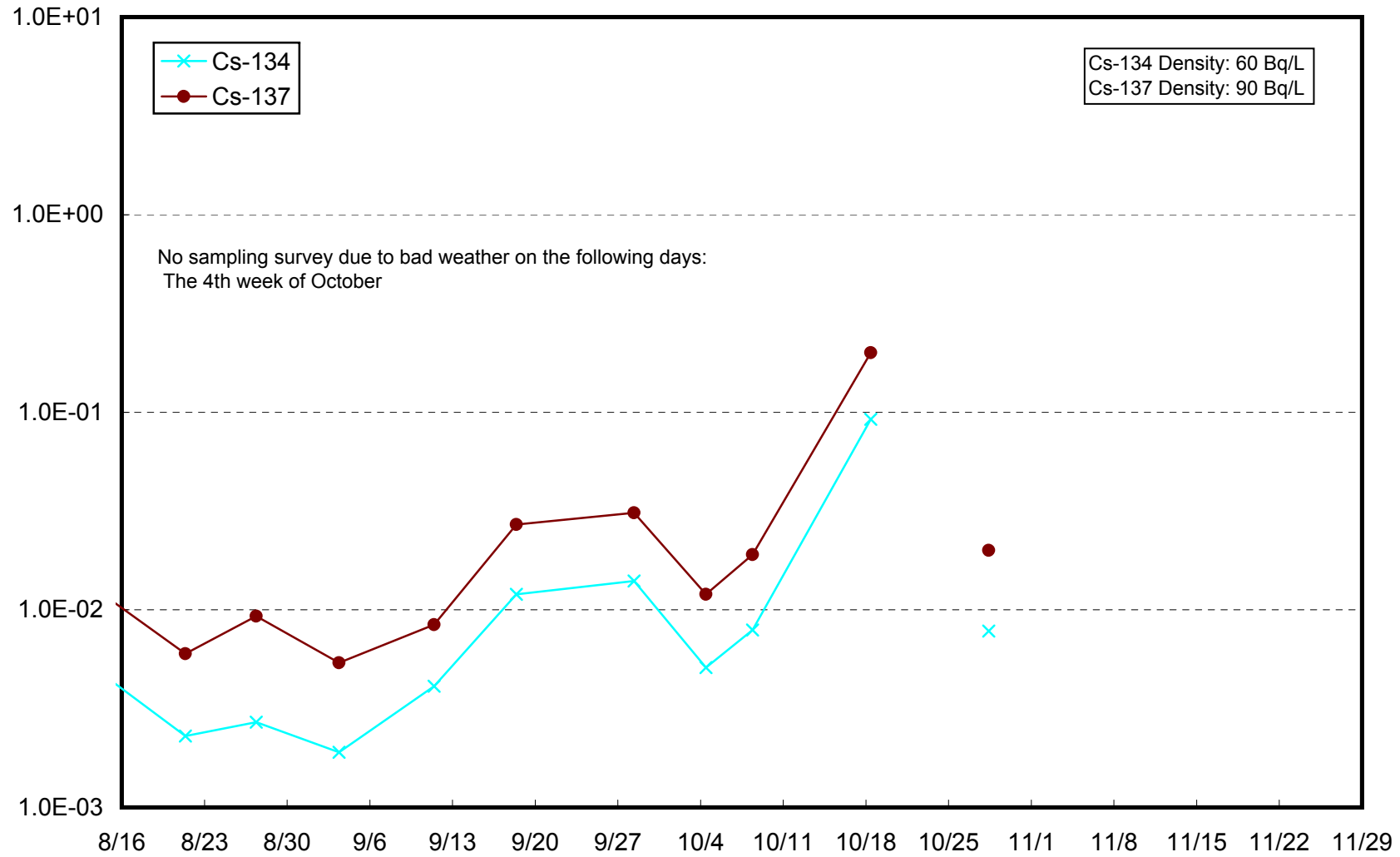
Radioactivity Density of the Seawater at 1F Units 5-6 North Discharge Channel (Bq/L)



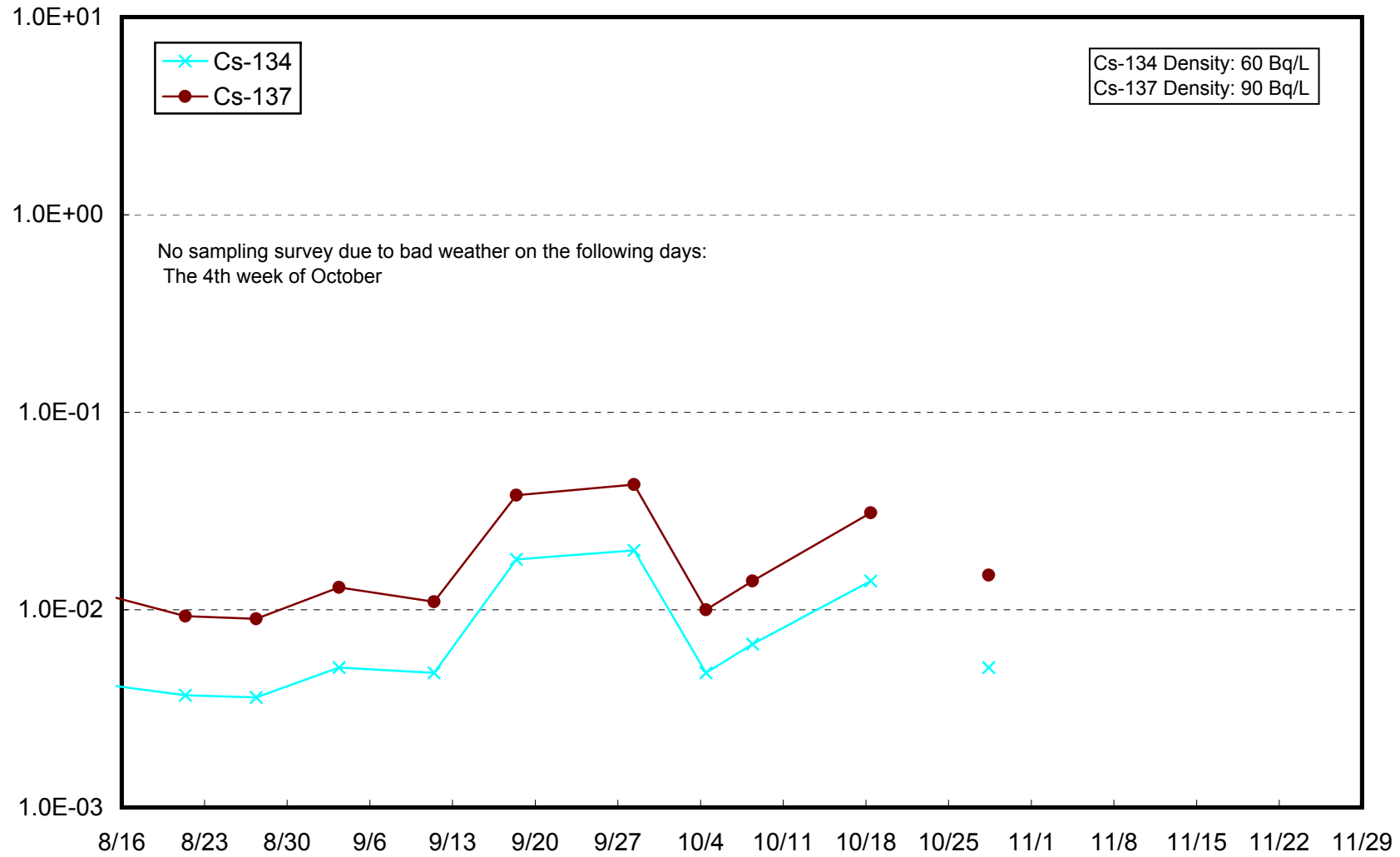
Radioactivity Density of the Seawater at 1F South Discharge Channel (Bq/L)



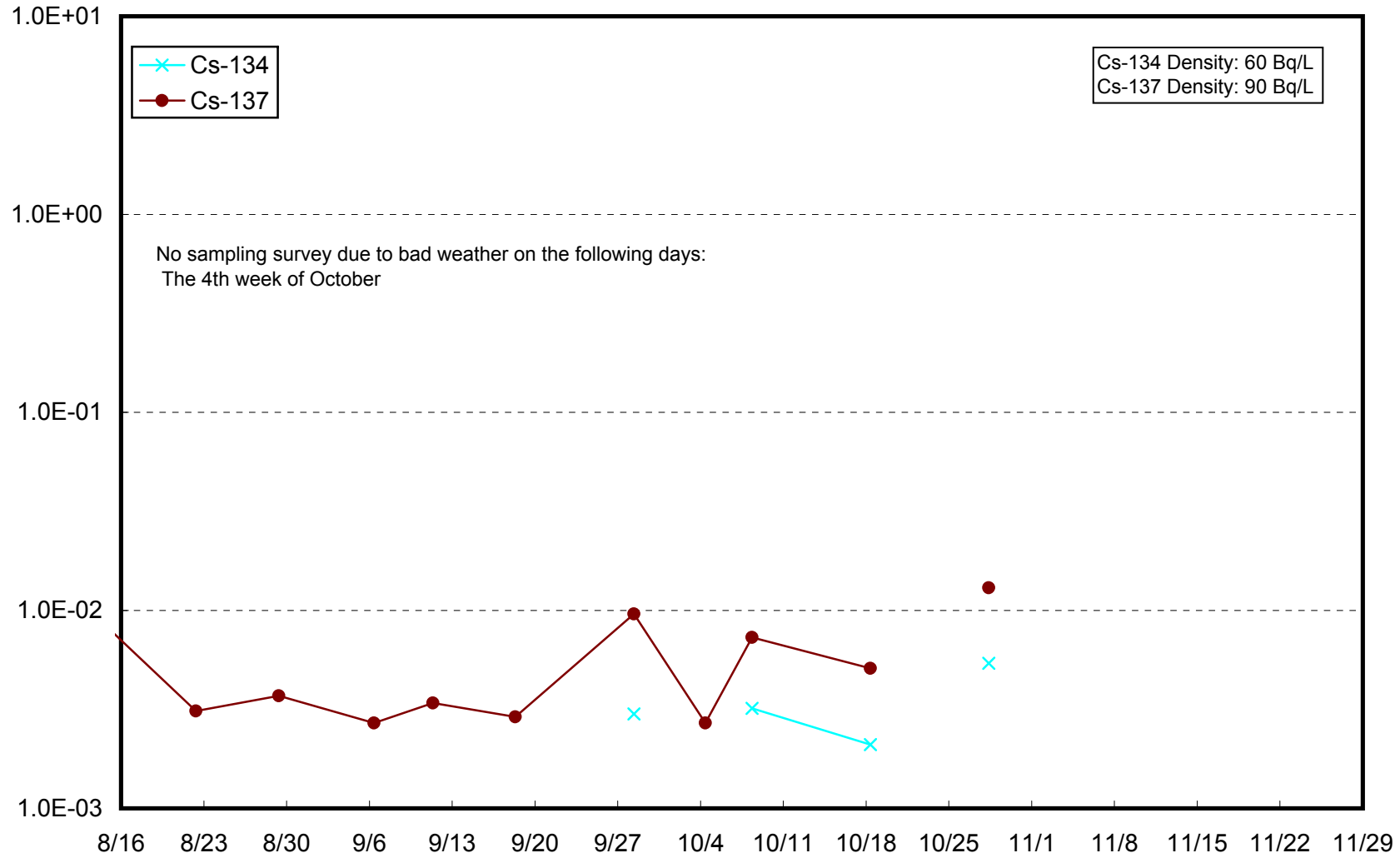
Radioactivity Density of the Seawater at 3km Offshore of Odaka Ward (T-14) Upper Layer (Bq/L)



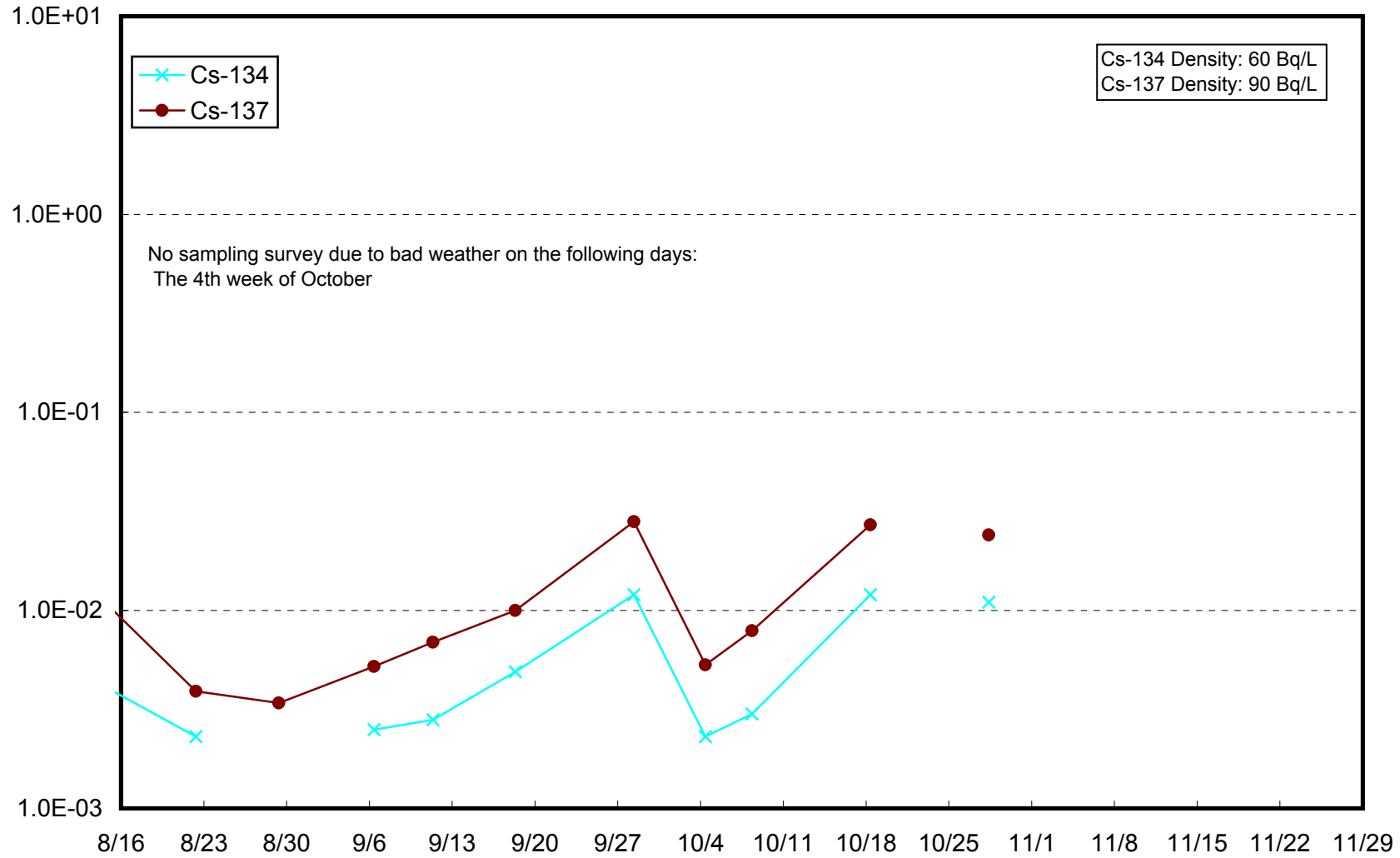
Radioactivity Density of the Seawater at 3km Offshore of Odaka Ward (T-14) Lower Layer (Bq/L)



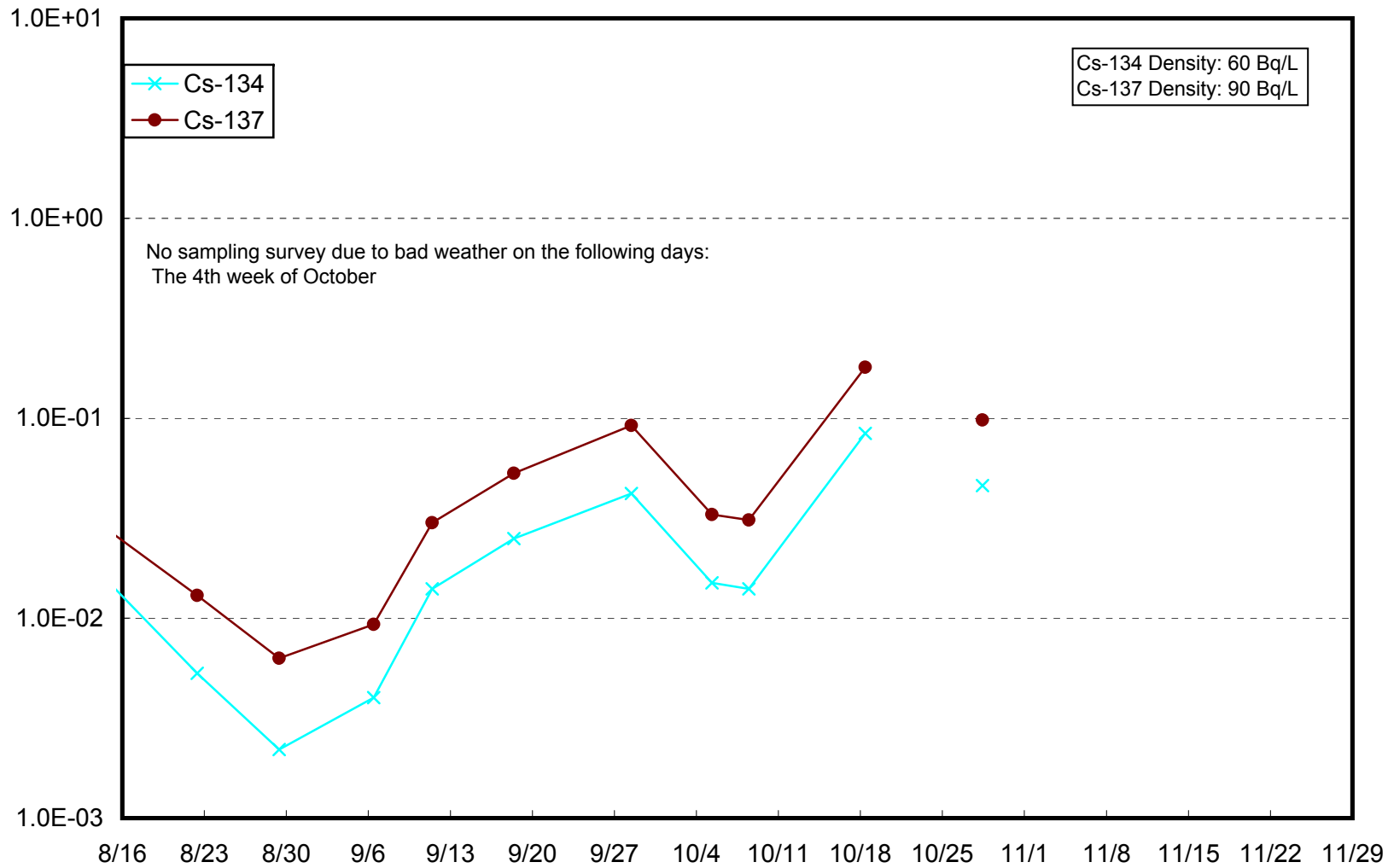
Radioactivity Density of the Seawater at 15km Offshore of Fukushima Daiichi NPS (T-5) Upper Layer (Bq/L)



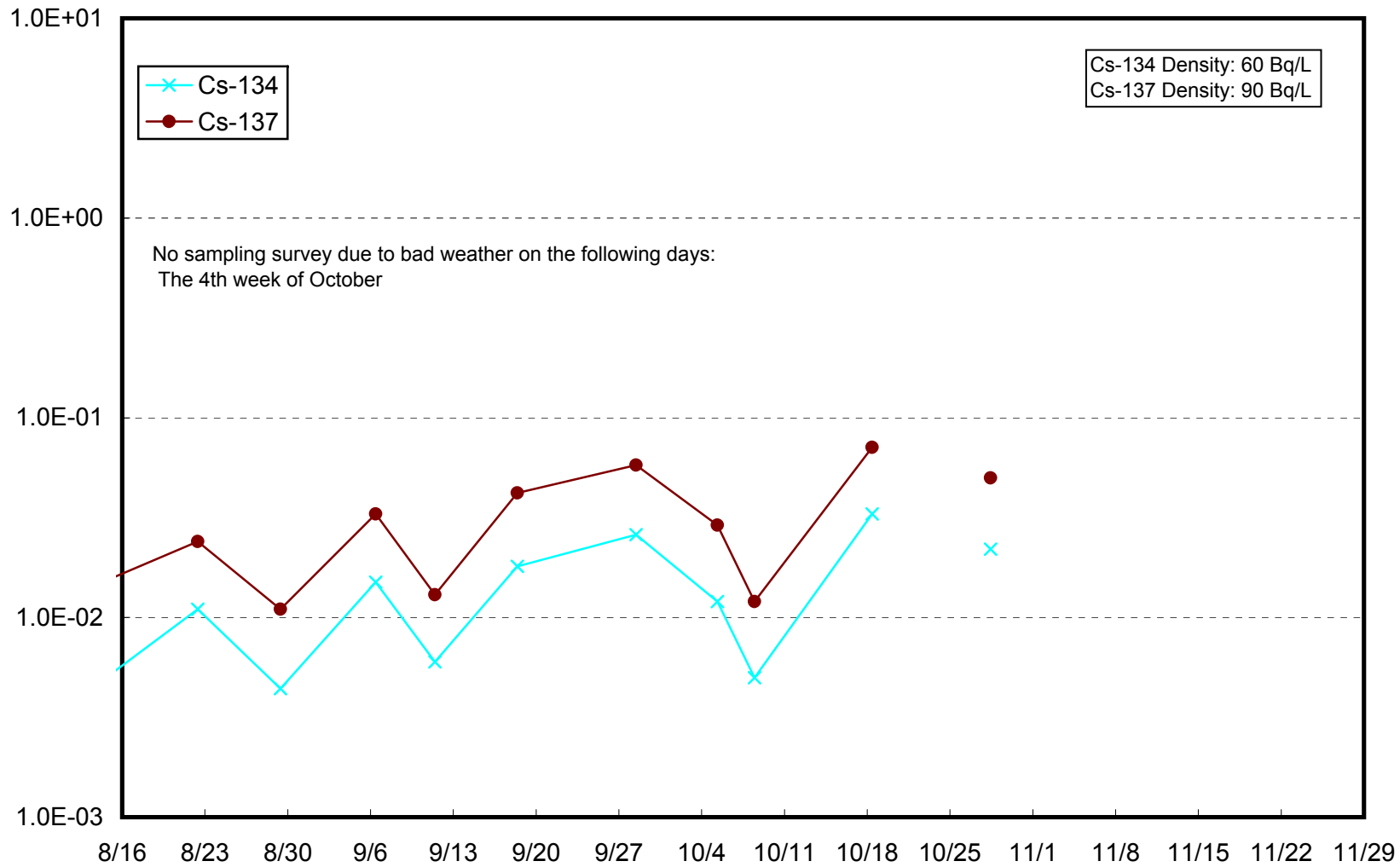
Radioactivity Density of the Seawater at 15km Offshore of Fukushima Daiichi NPS (T-5) Lower Layer (Bq/L)



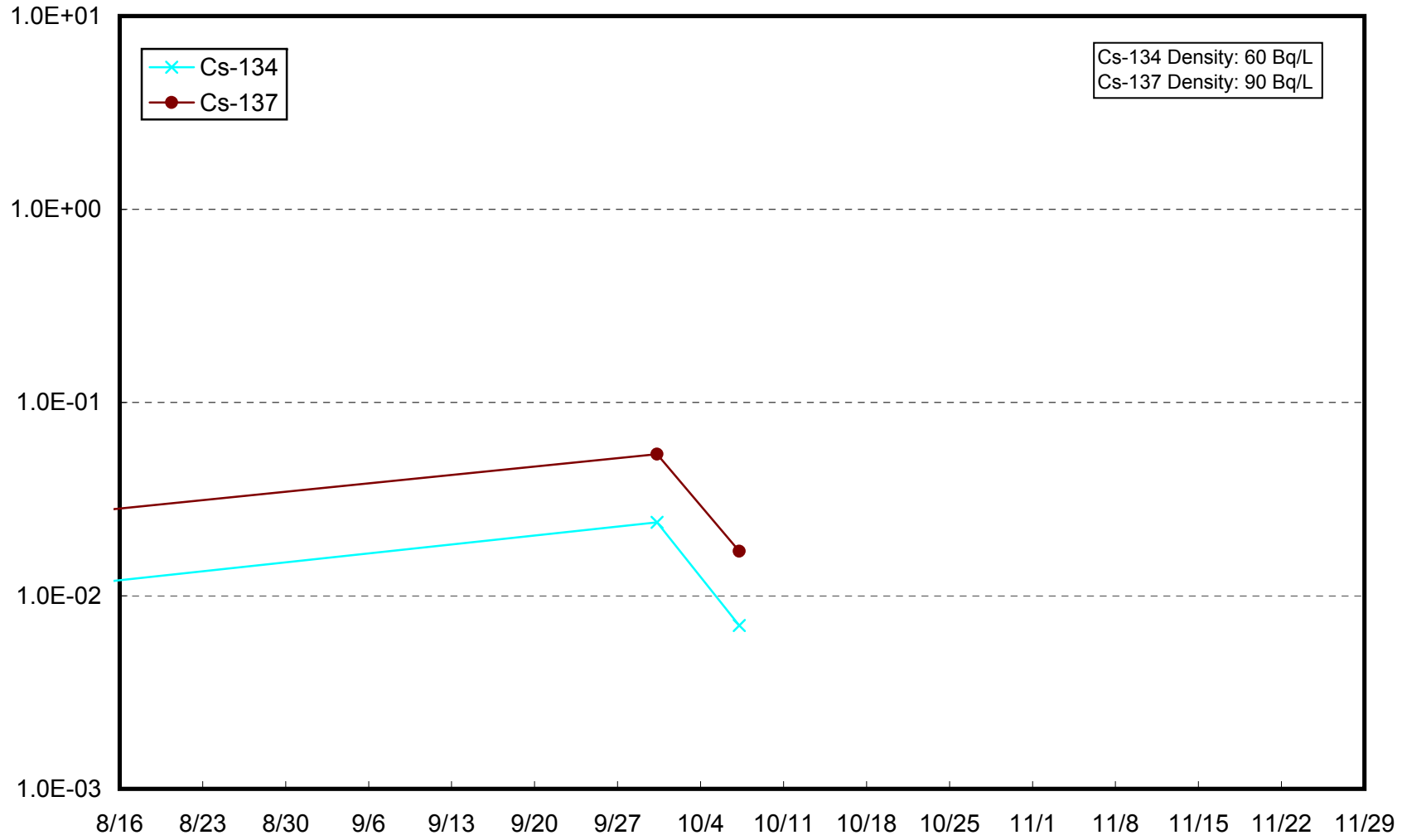
Radioactivity Density of the Seawater at 3km Offshore of Iwasawa Shore (T-11) Upper Layer (Bq/L)



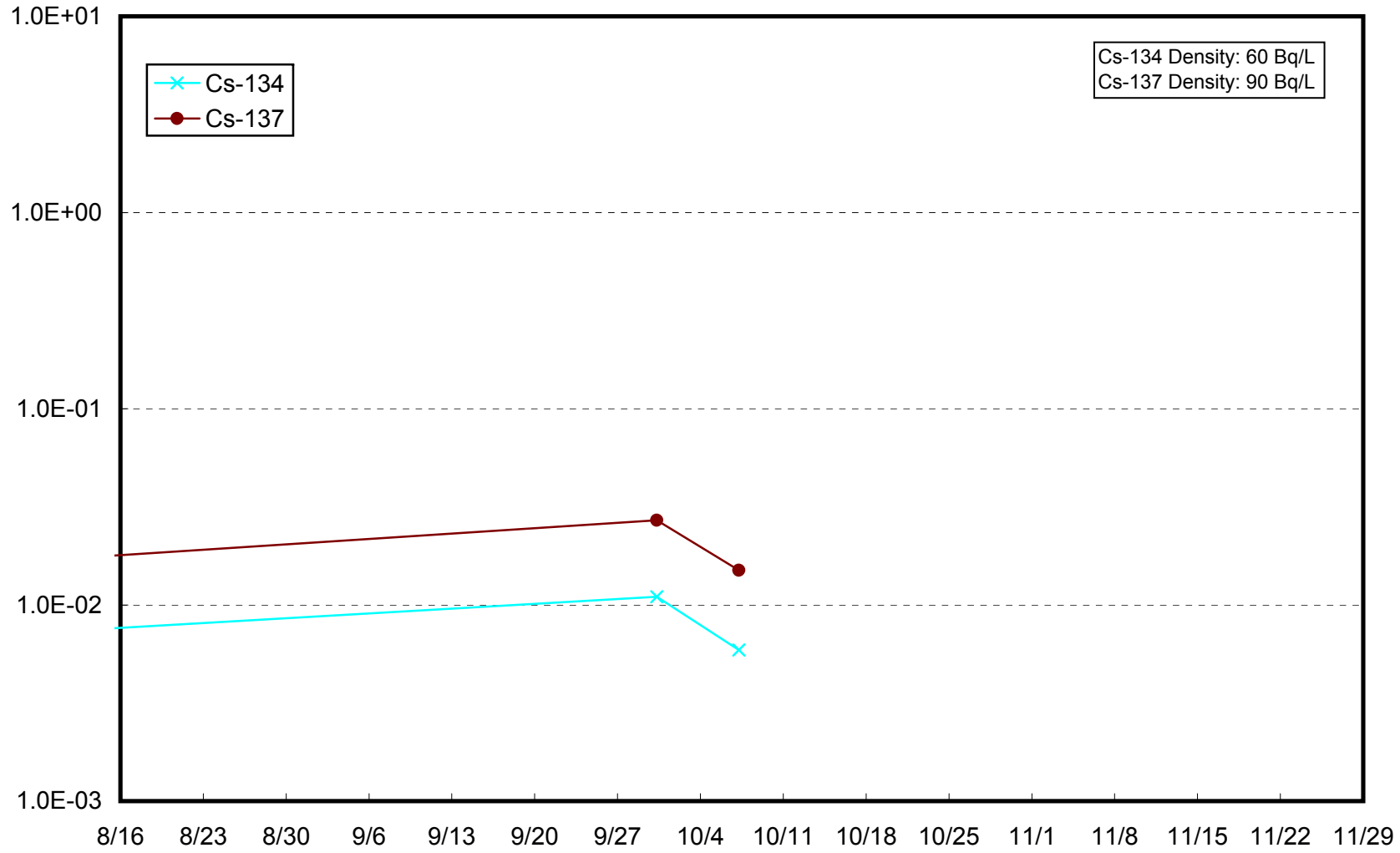
Radioactivity Density of the Seawater at 3km Offshore of Iwasawa Shore (T-11) Lower Layer (Bq/L)



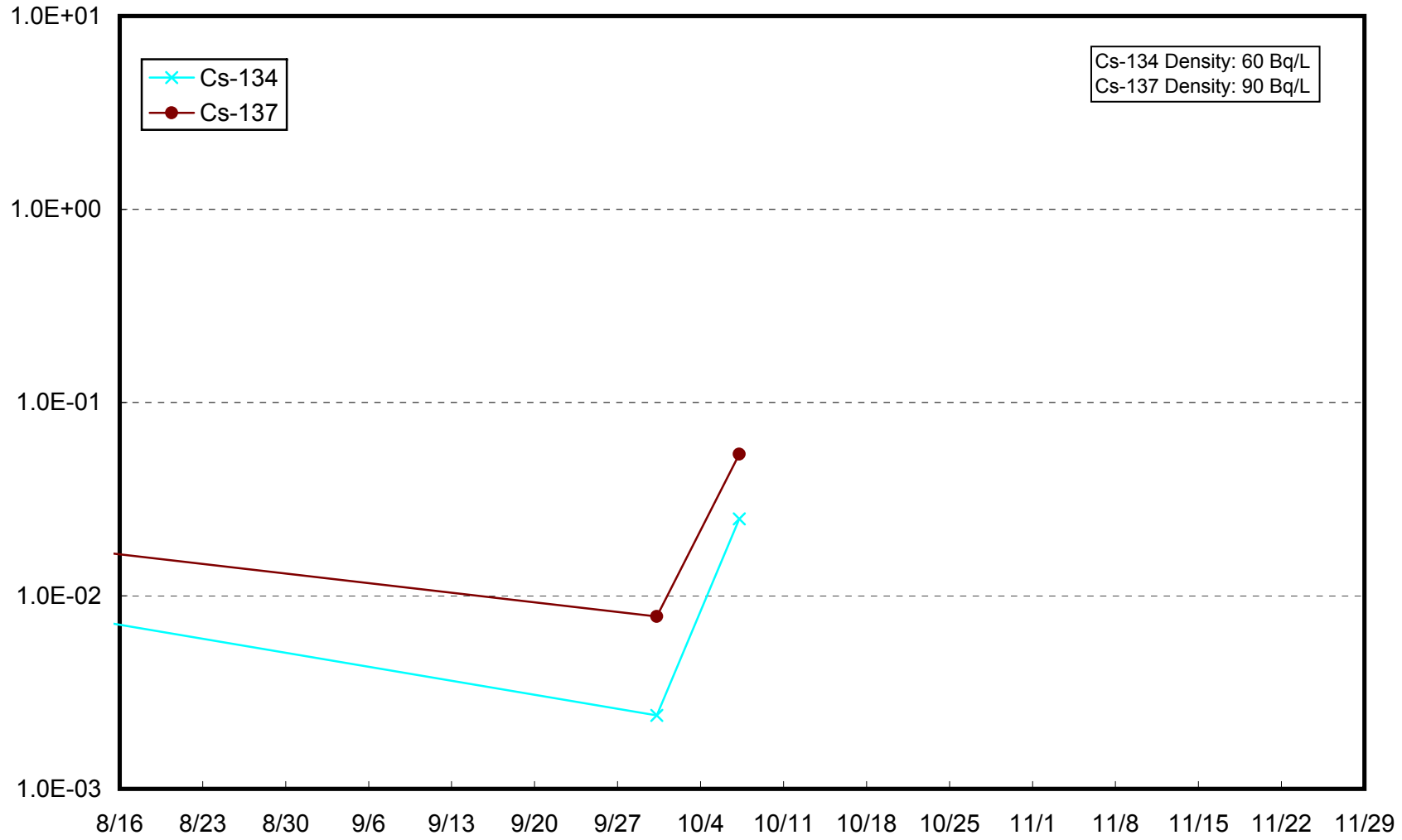
Radioactivity Density of the Seawater at 3km Offshore of North of Iwaki City(T-12) Upper Layer (Bq/L)



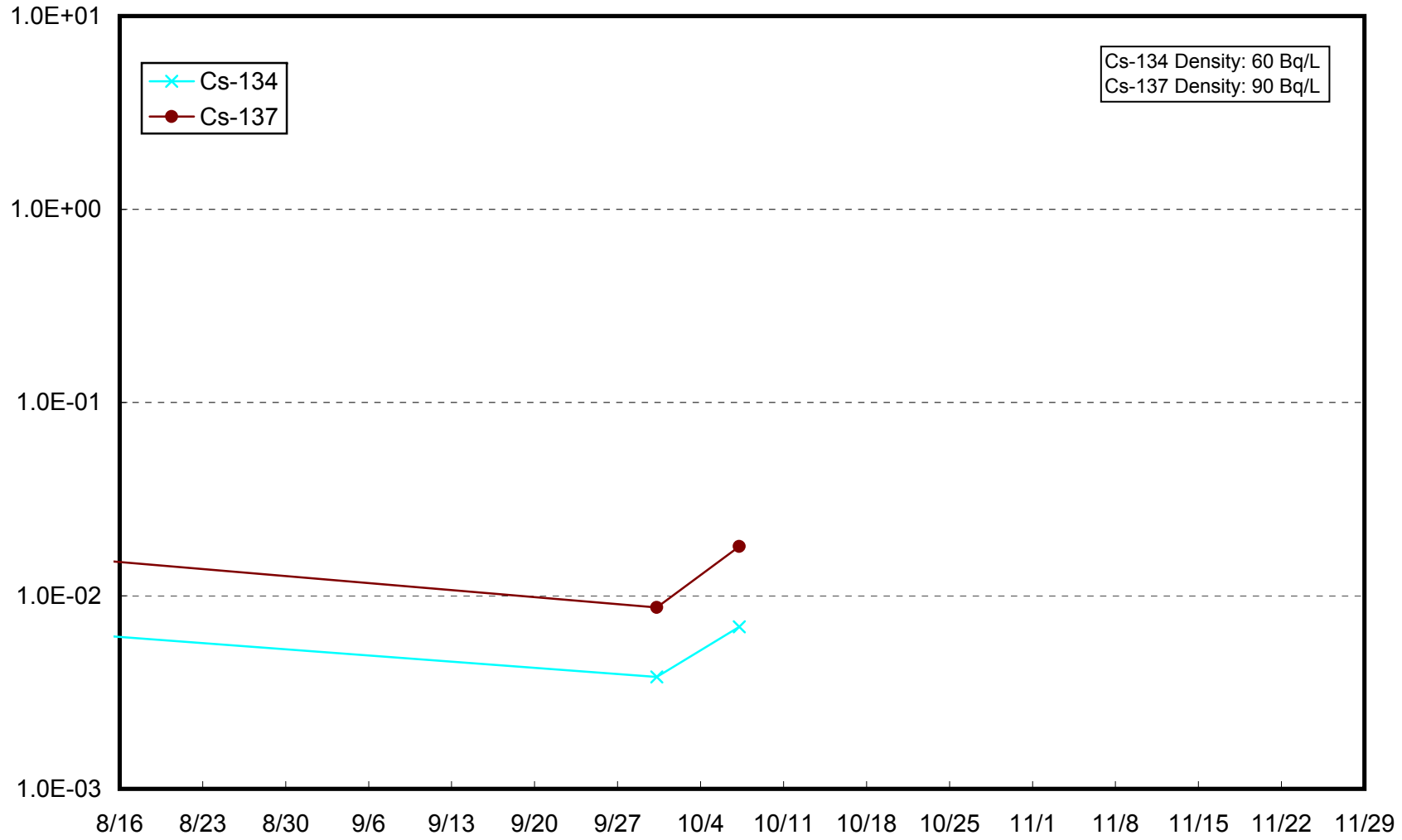
Radioactivity Density of the Seawater at 3km Offshore of North of Iwaki City(T-12) Lower Layer (Bq/L)



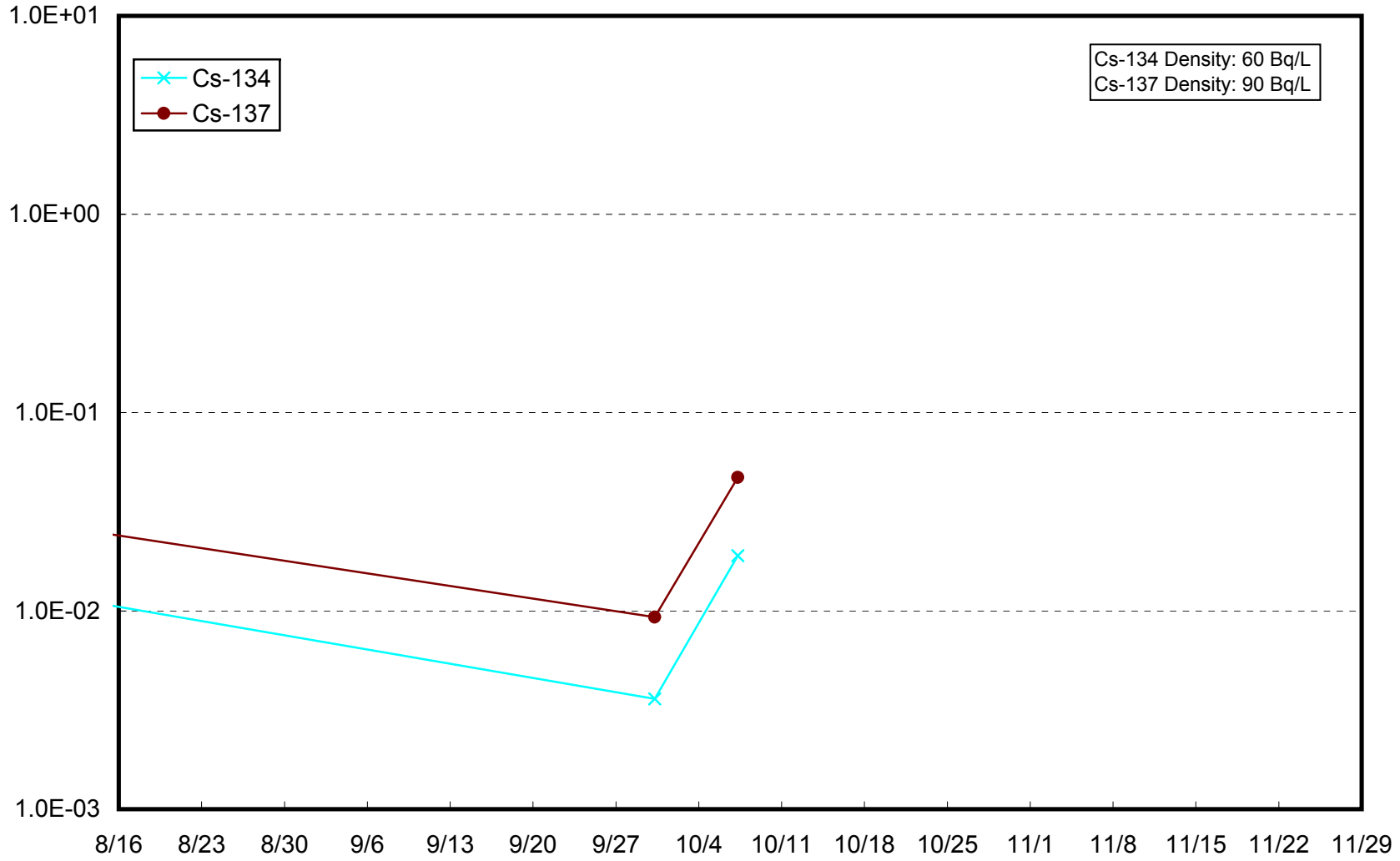
Radioactivity Density of the Seawater at 1km Offshore of Natsui River (T-17-1) Upper Layer (Bq/L)



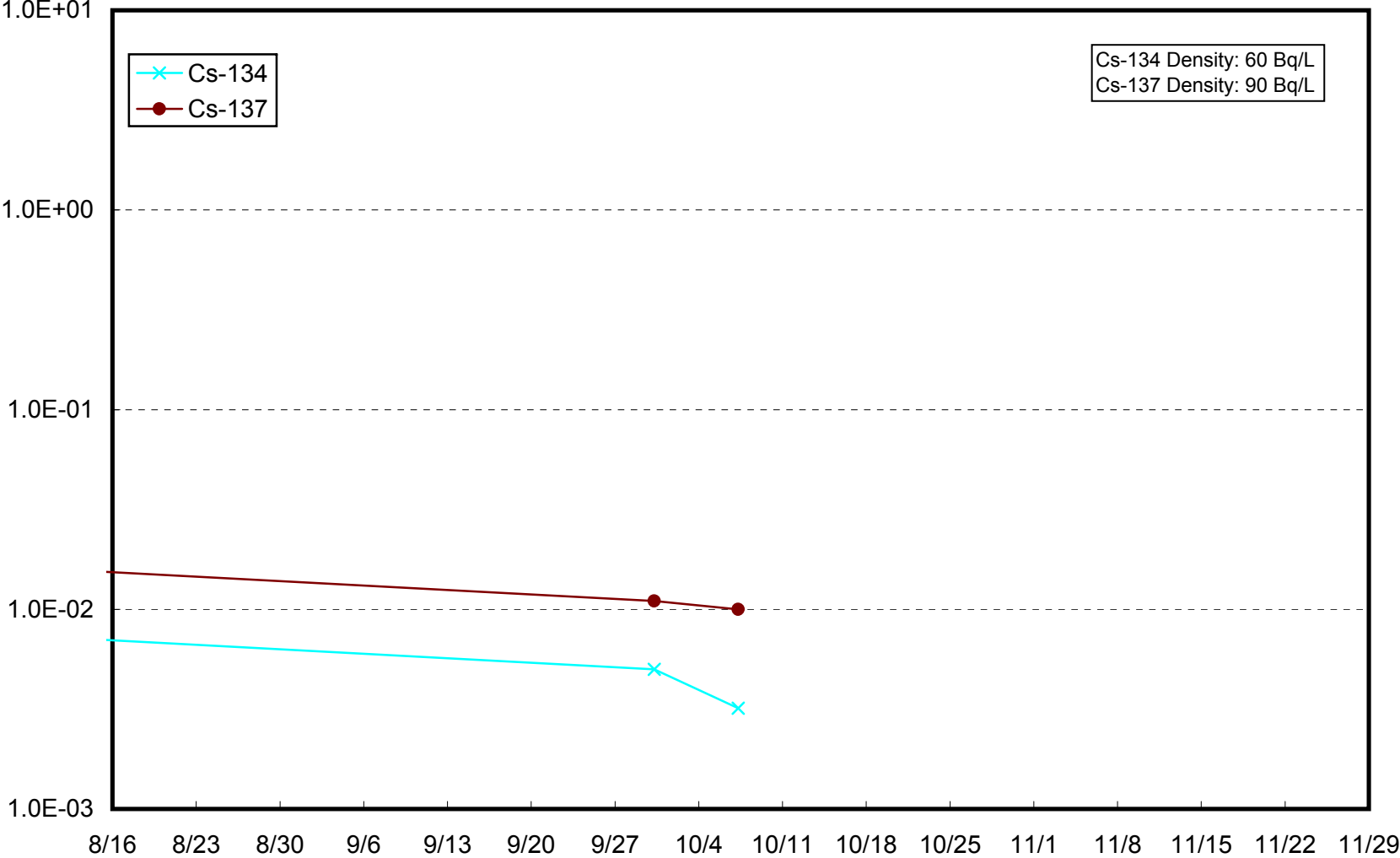
Radioactivity Density of the Seawater at 1km Offshore of Natsui River (T-17-1) Lower Layer (Bq/L)



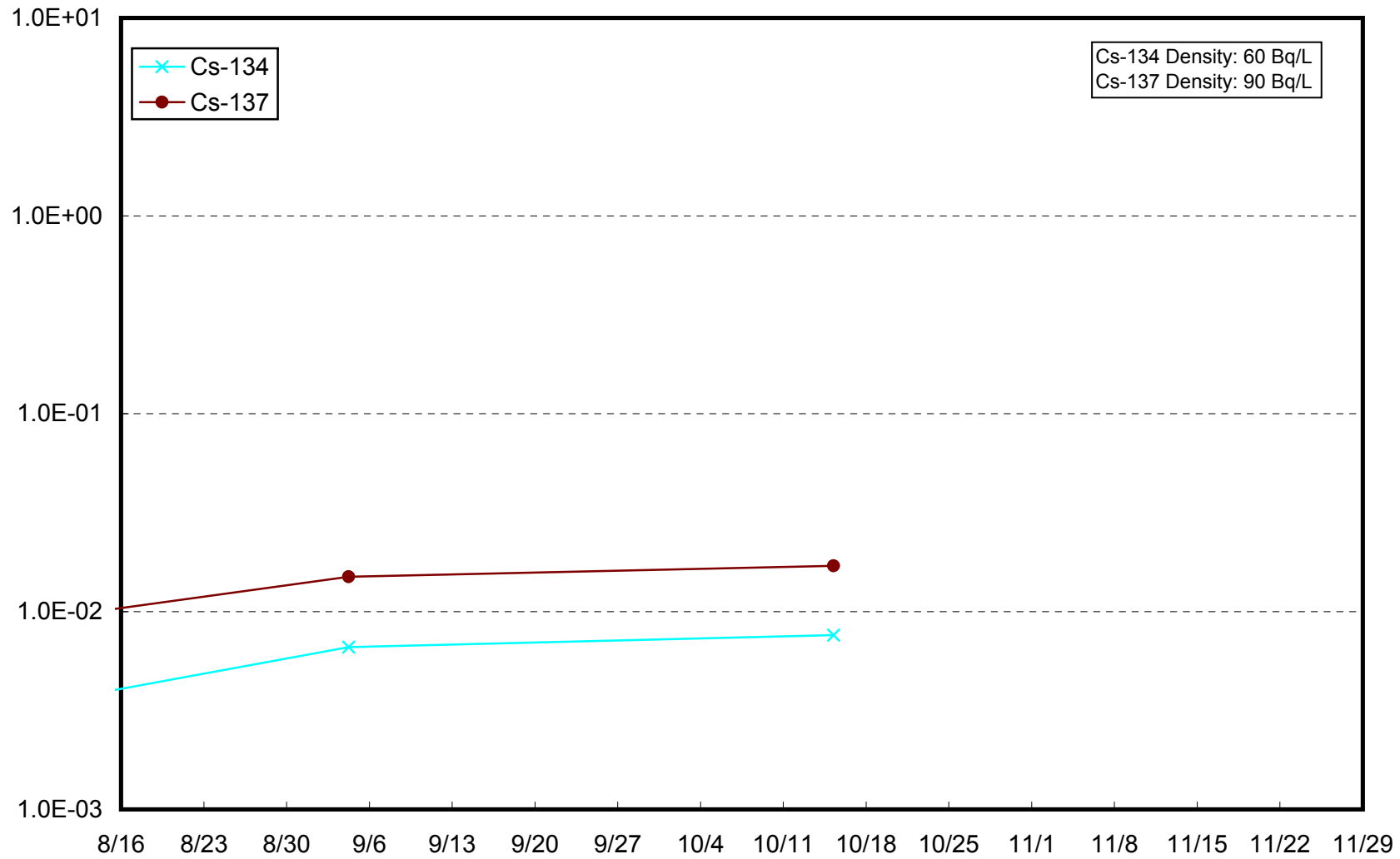
Radioactivity Density of the Seawater at 3km Offshore of Toyoma (T-20) Upper Layer (Bq/L)



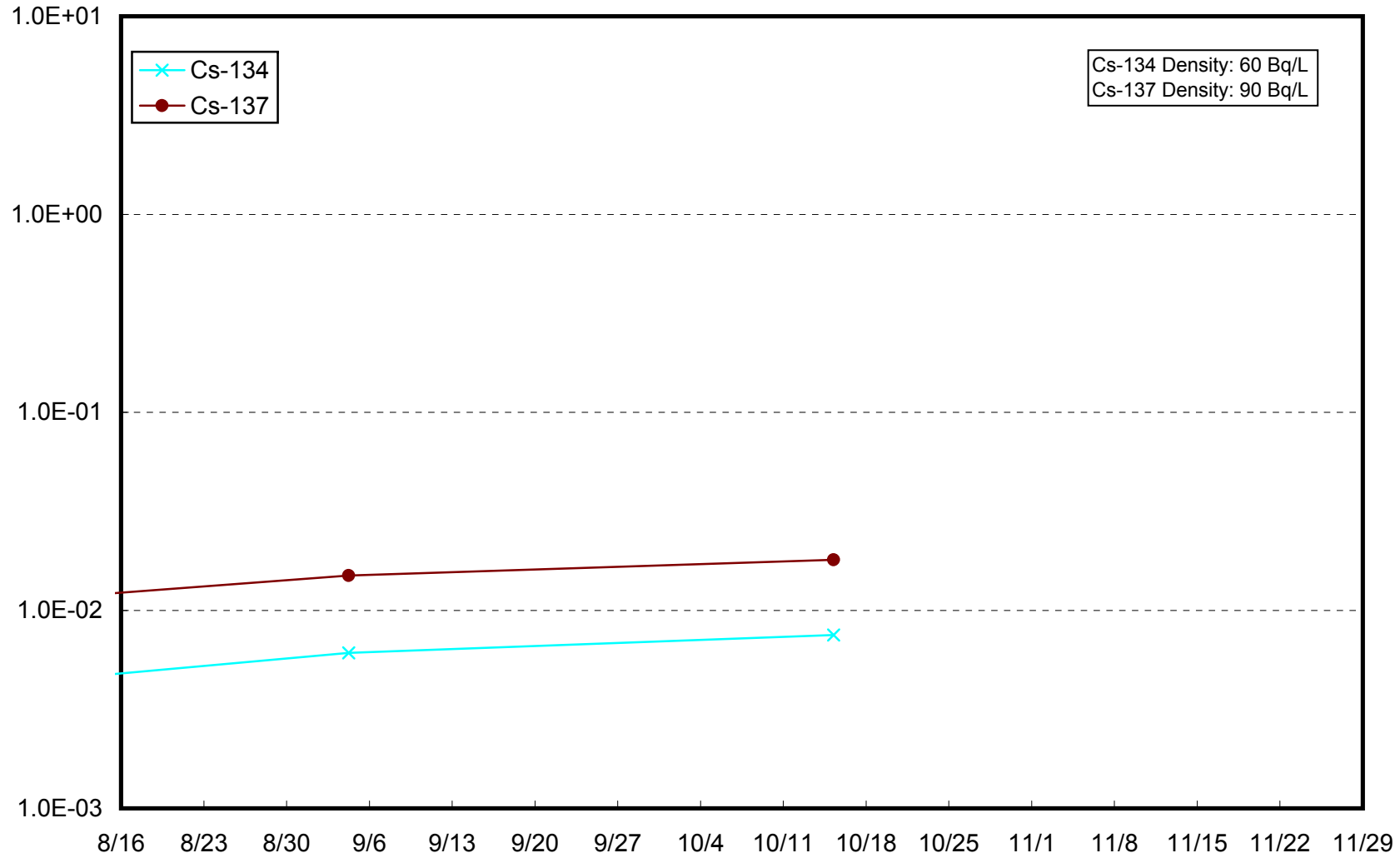
Radioactivity Density of the Seawater at 3km Offshore of Toyoma (T-20) Upper Layer (Bq/L)



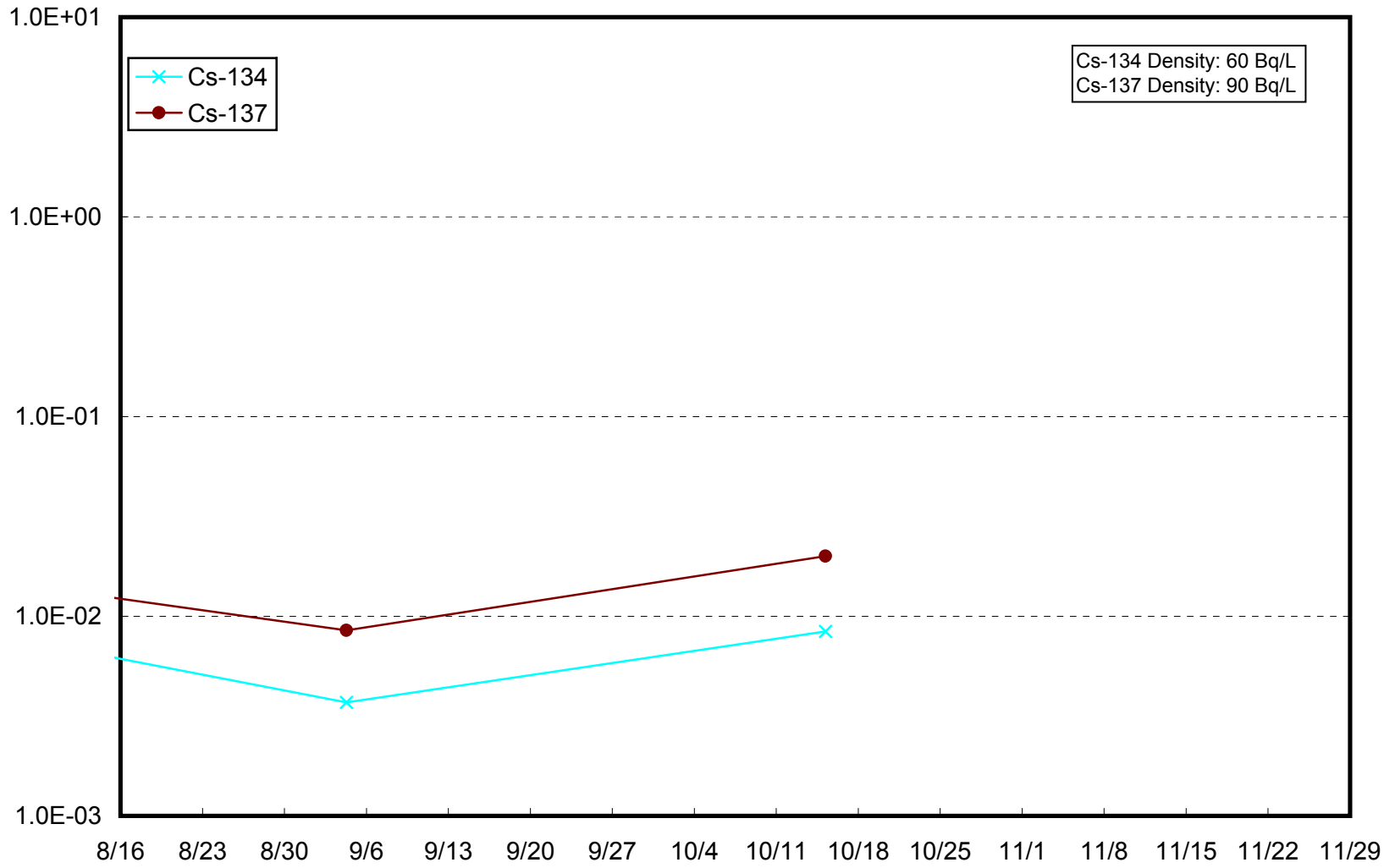
Radioactivity Density of the Seawater at 1km Offshore of Nida River (T-13-1) Upper Layer (Bq/L)



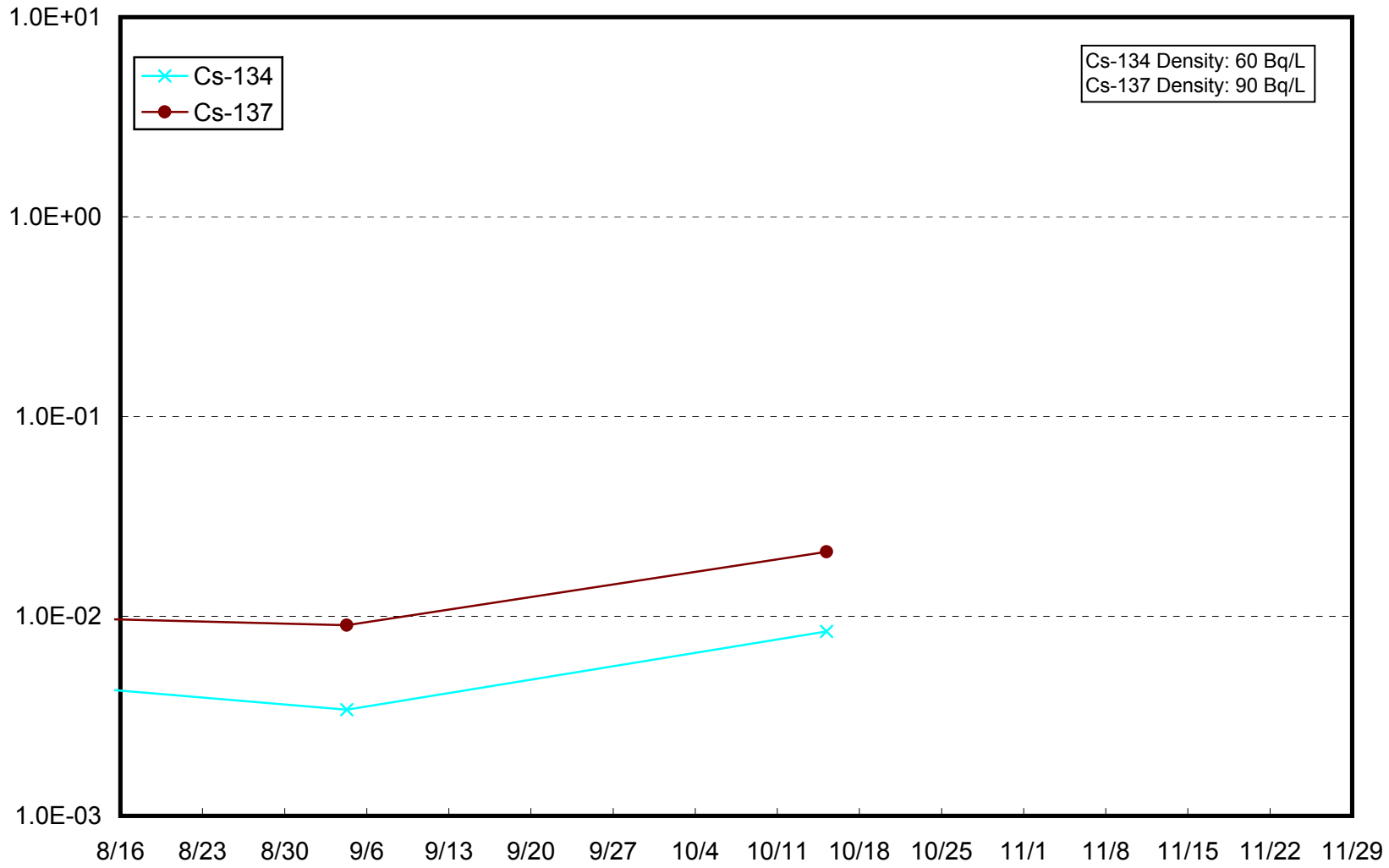
Radioactivity Density of the Seawater at 1km Offshore of Nida River (T-13-1) Lower Layer (Bq/L)



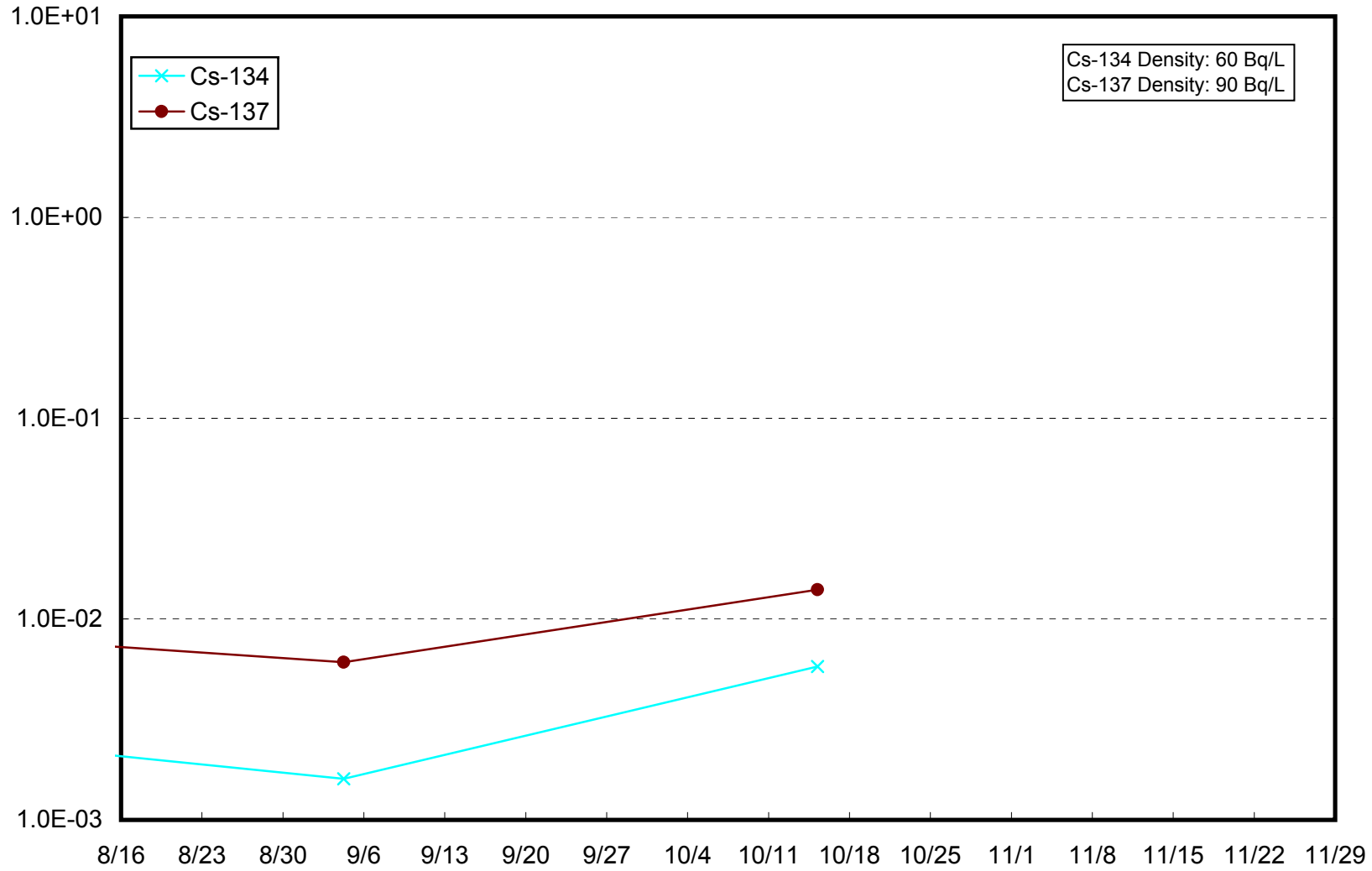
Radioactivity Density of the Seawater at 3km Offshore of Soma (T-22) Upper Layer (Bq/L)



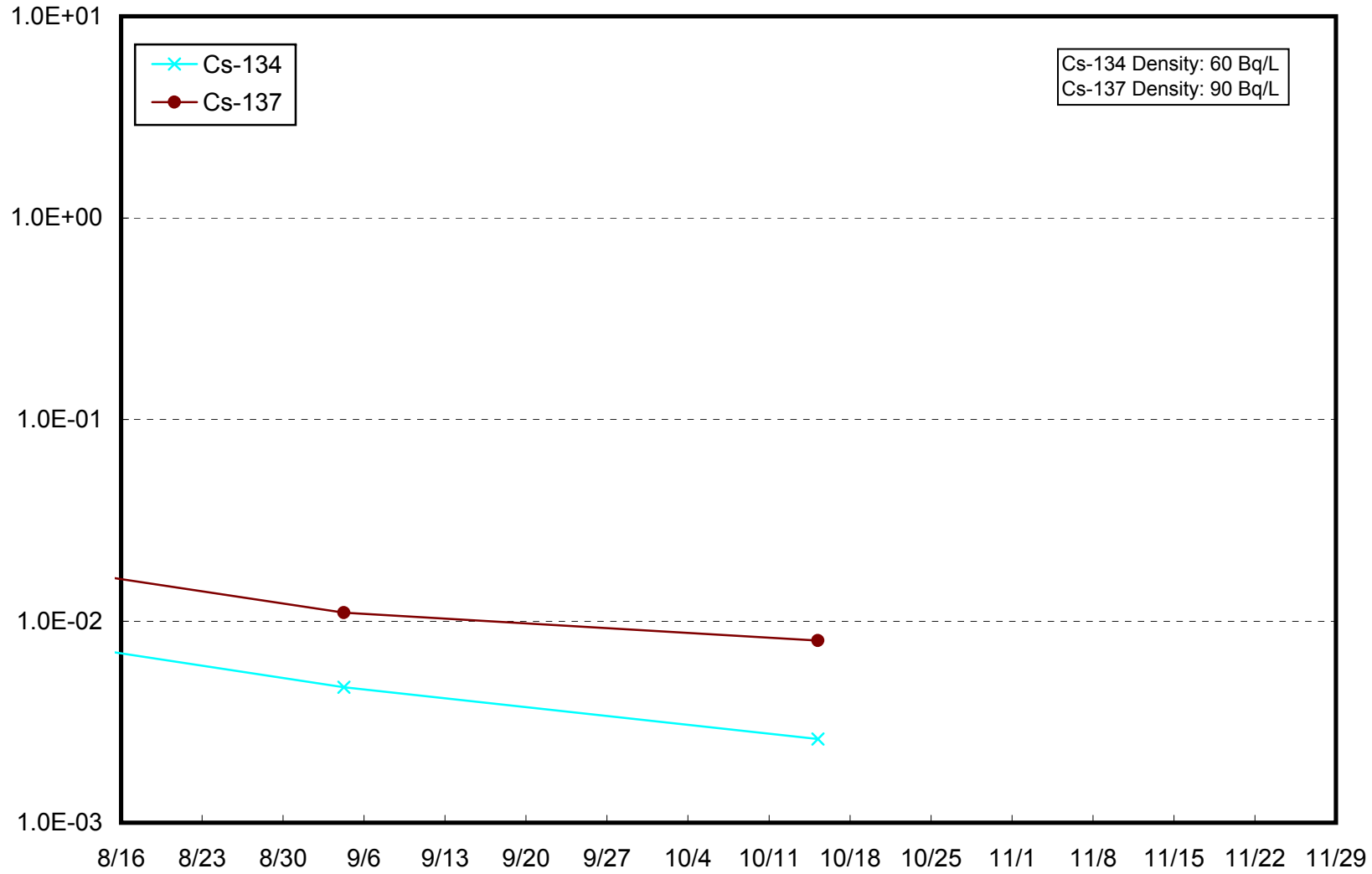
Radioactivity Density of the Seawater at 3km Offshore of Soma (T-22) Lower Layer (Bq/L)



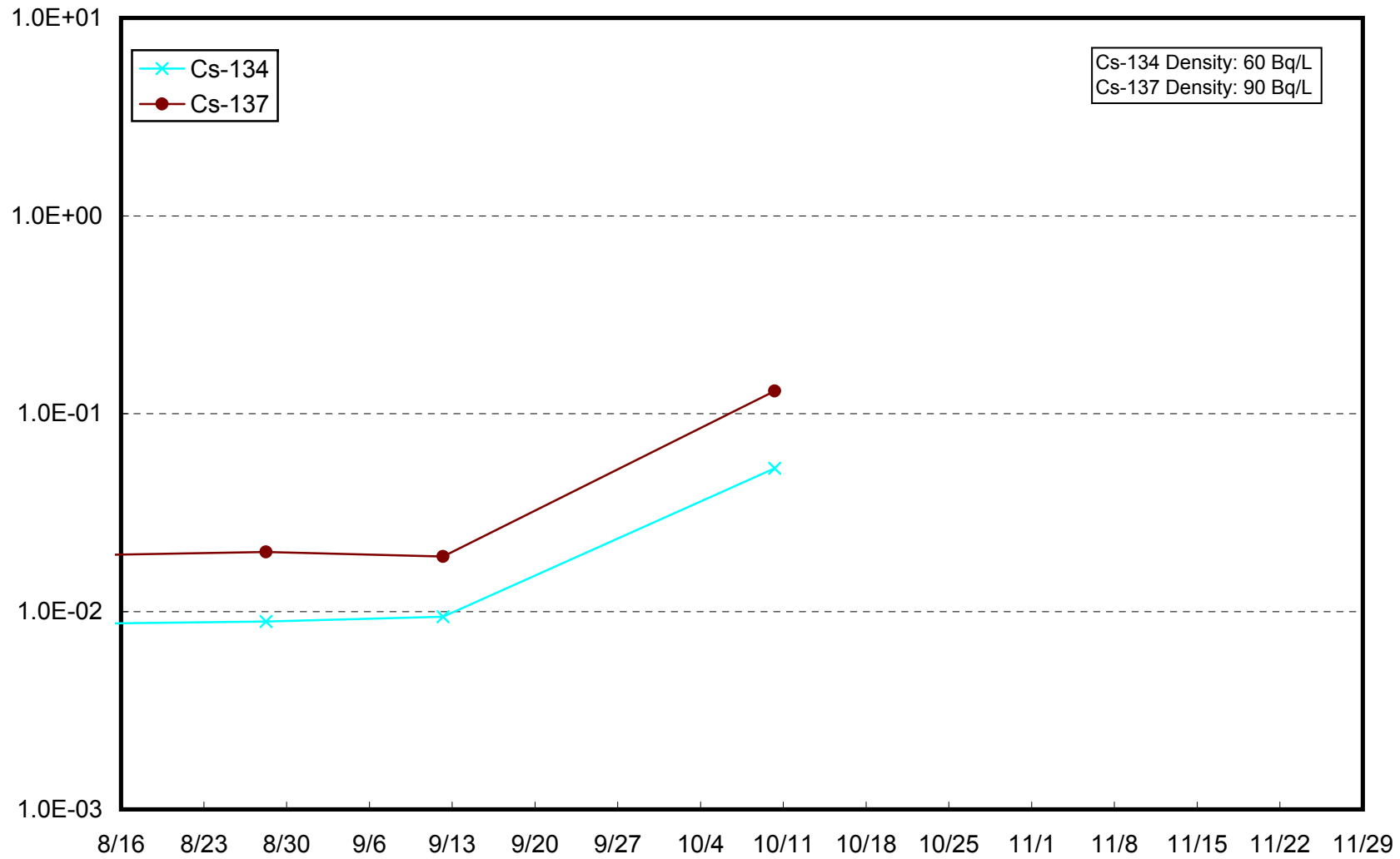
Radioactivity Density of the Seawater at 5km Offshore of Kashima (T-MA) Upper Layer (Bq/L)



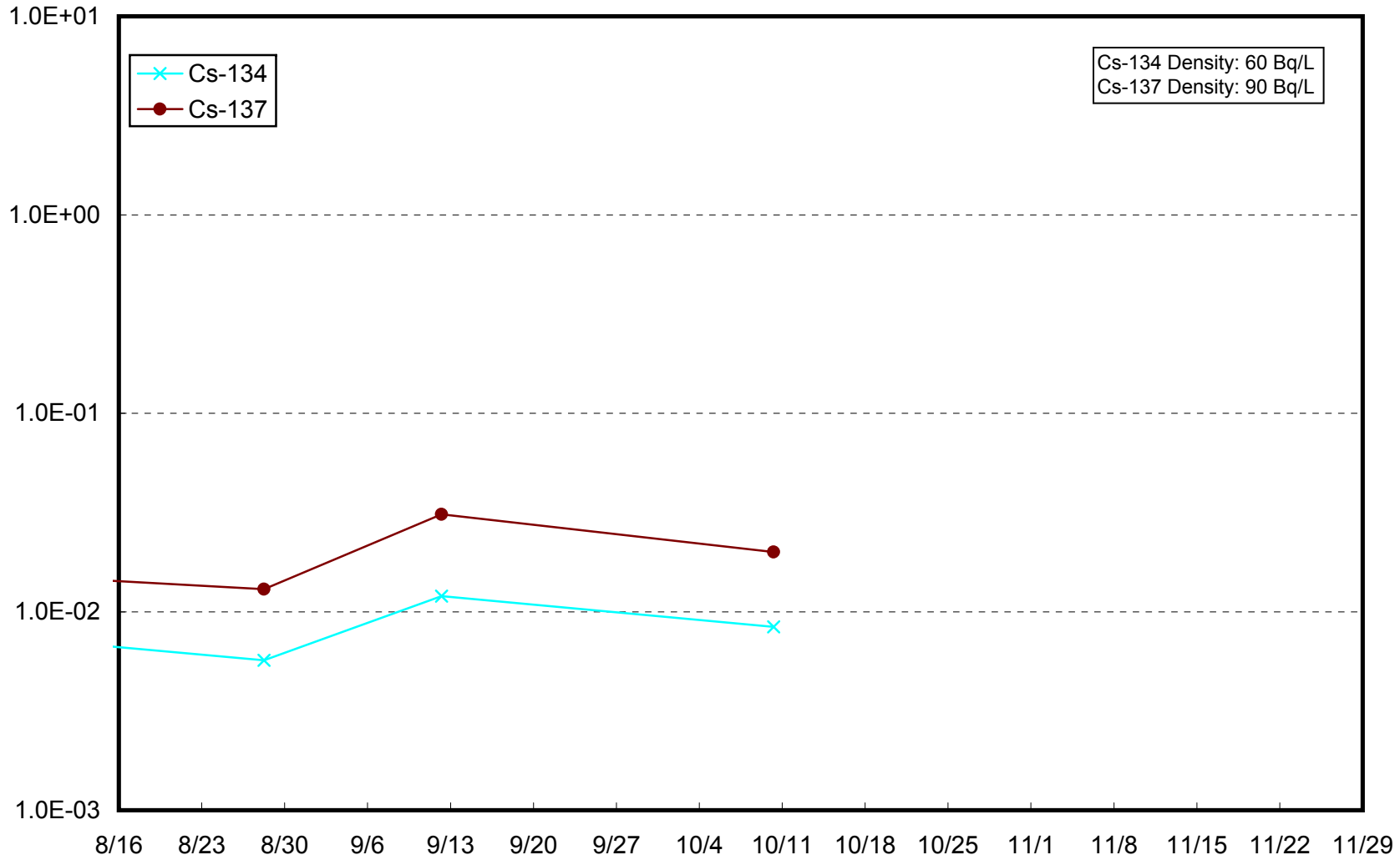
Radioactivity Density of the Seawater at 5km Offshore of Kashima (T-MA) Lower Layer (Bq/L)



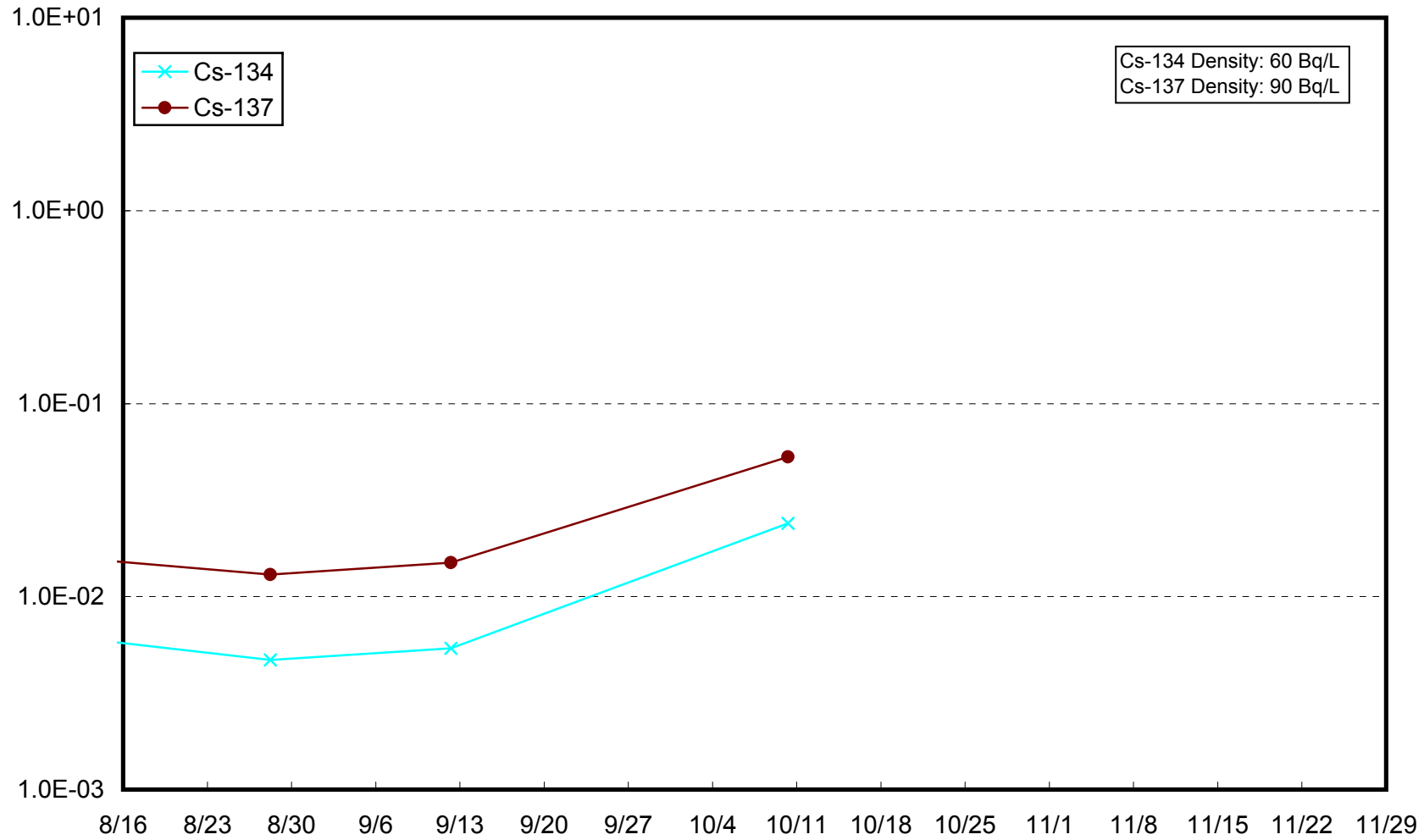
Radioactivity Density of the Seawater Around 3km Offshore of Ukedo River (T-S3) Upper Layer (Bq/L)



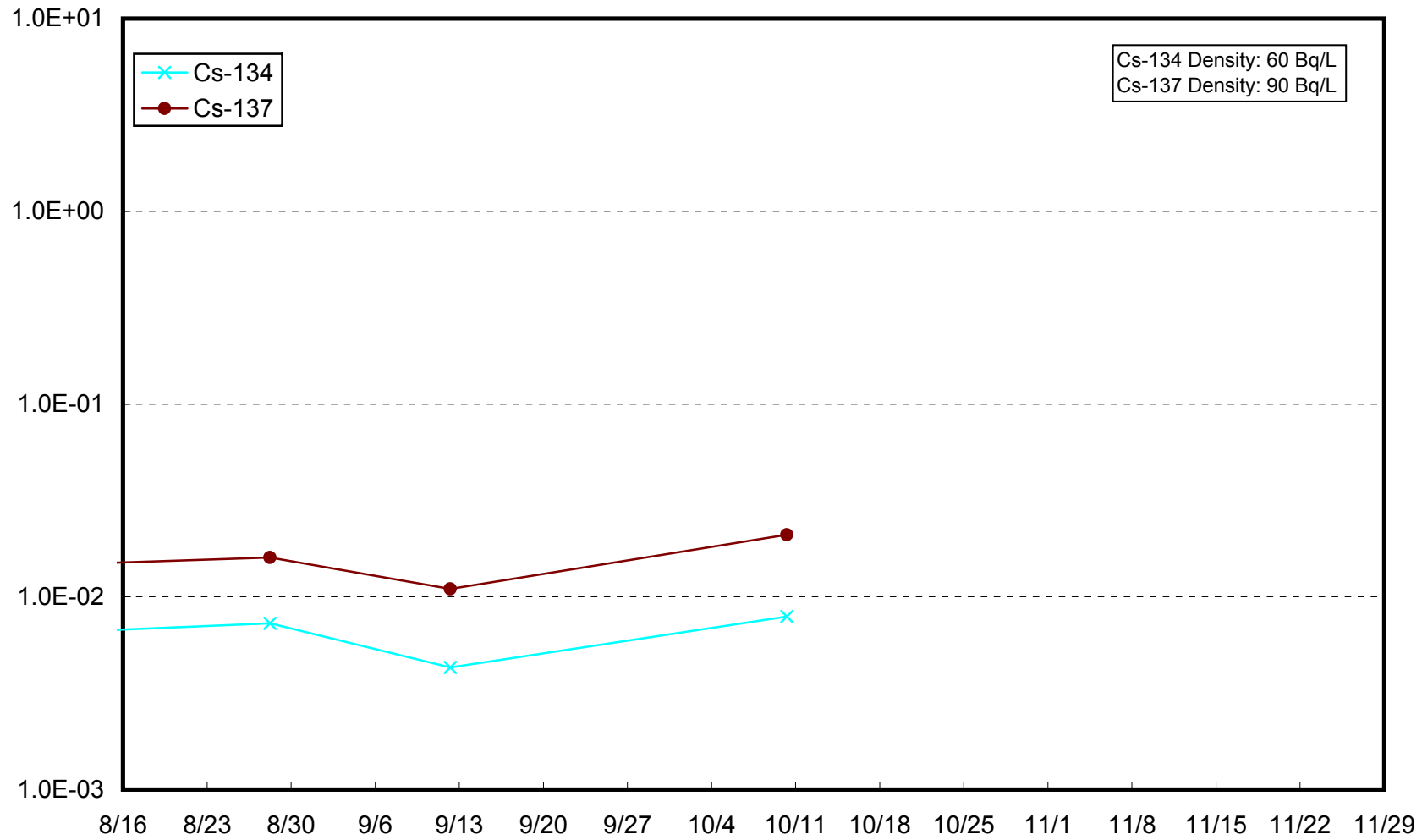
Radioactivity Density of the Seawater Around 3km Offshore of Ukedo River (T-S3) Lower Layer (Bq/L)



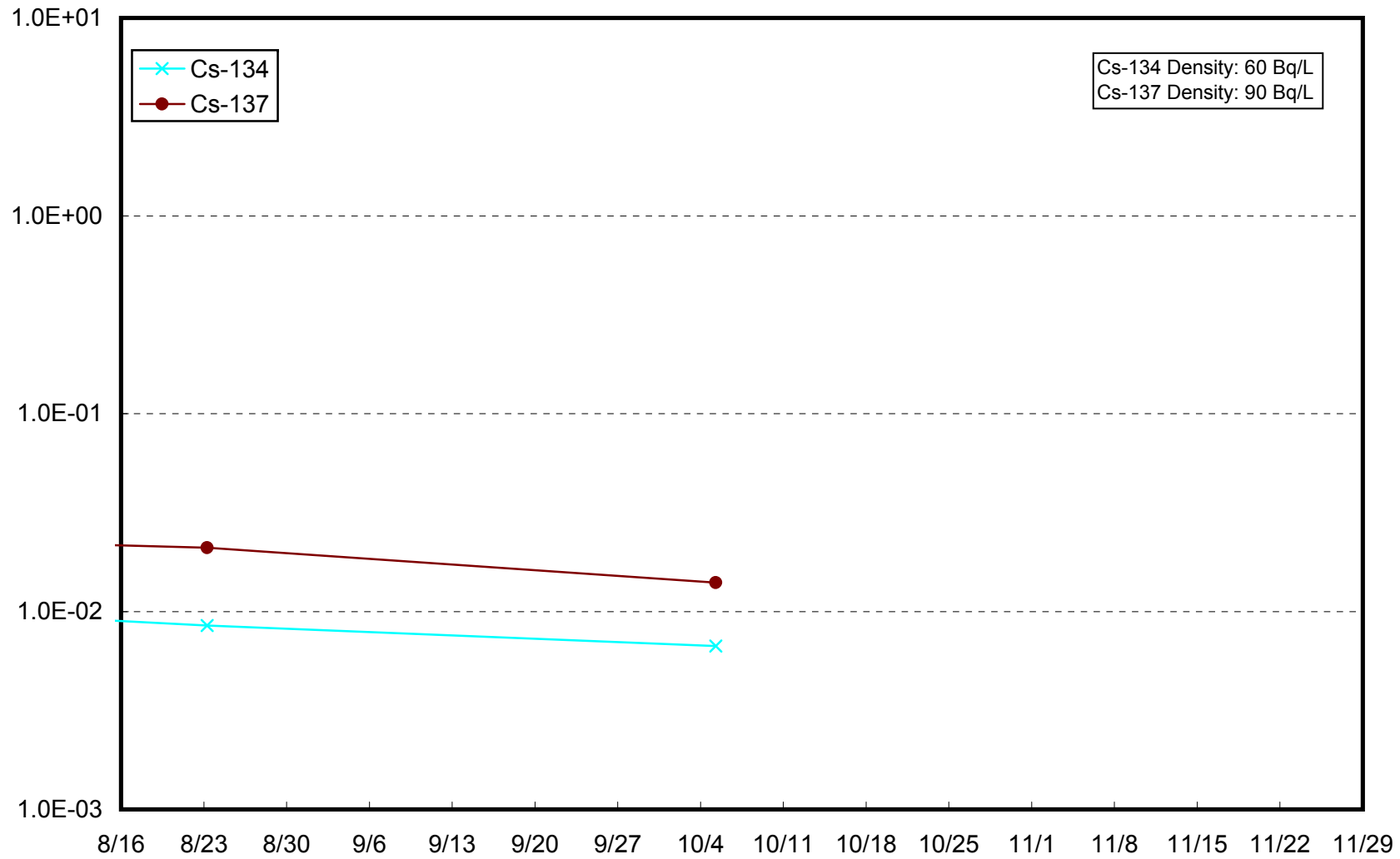
Radioactivity Density of the Seawater Around 3km Offshore of Fukushima Daiichi NPS (T-S4) Upper Layer (Bq/L)



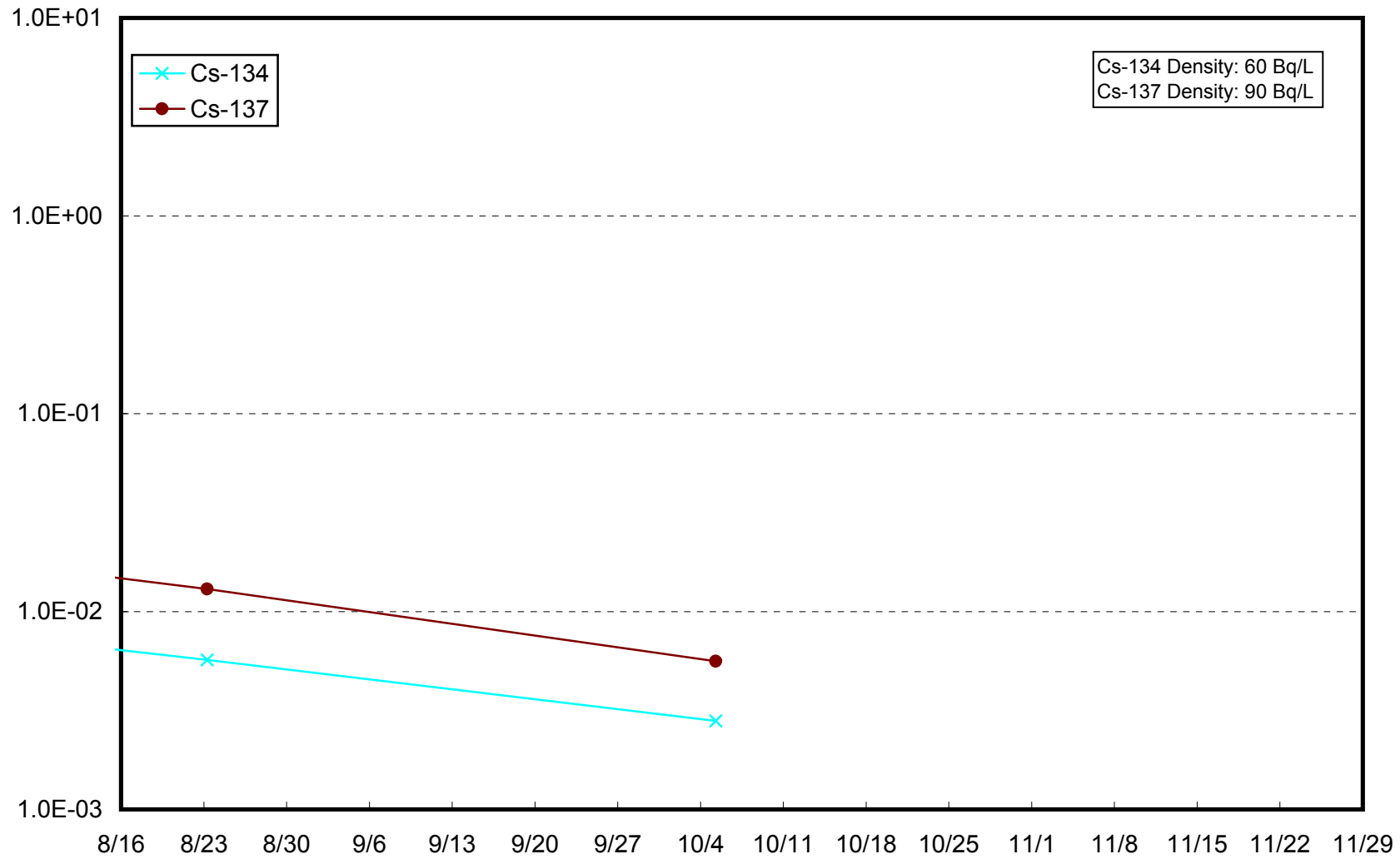
Radioactivity Density of the Seawater Around 3km Offshore of Fukushima Daiichi NPS (T-S4) Lower Layer (Bq/L)



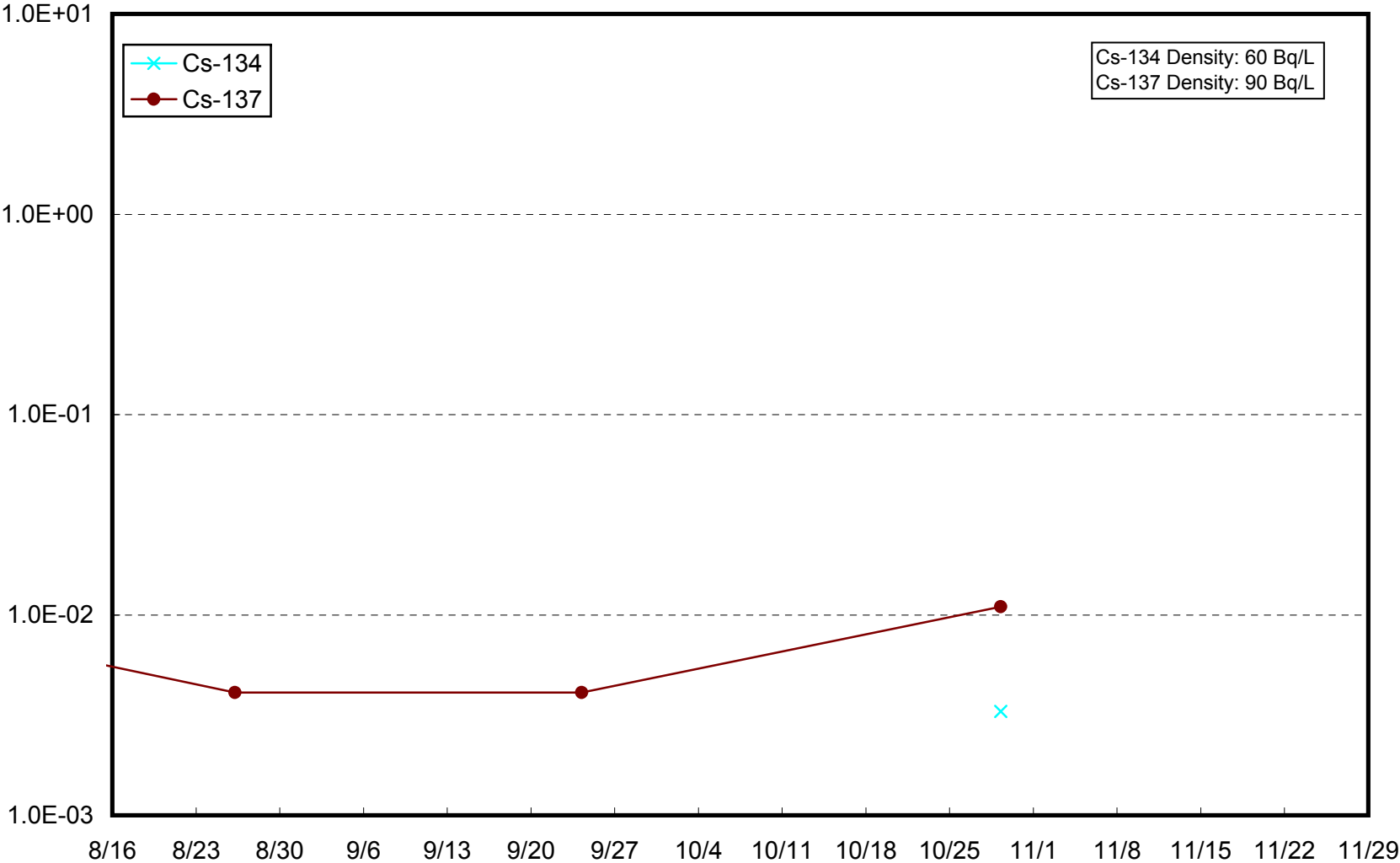
Radioactivity Density of the Seawater Around 4km Offshore of Kumagawa (T-S8) Upper Layer (Bq/L)



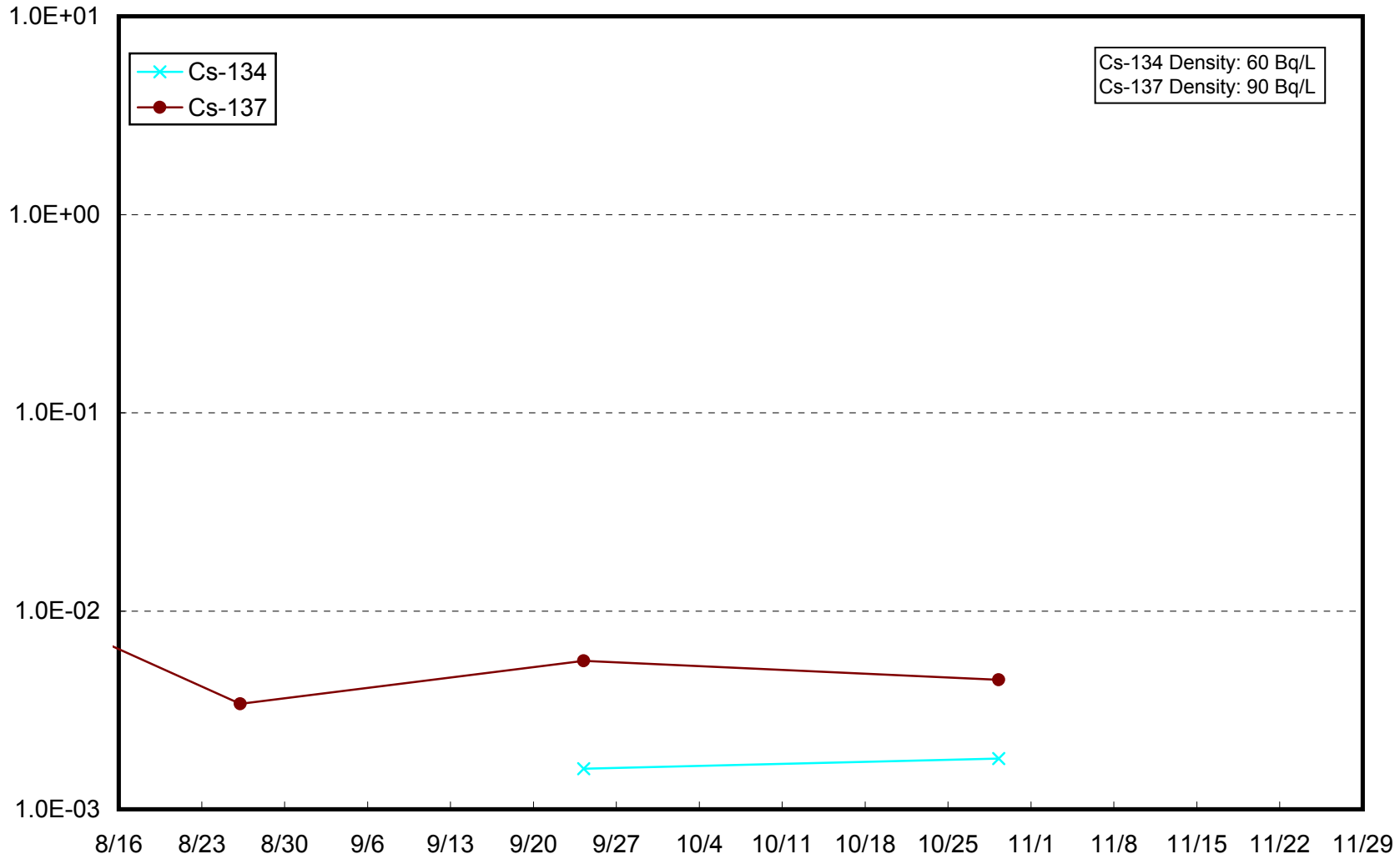
Radioactivity Density of the Seawater Around 4km Offshore of Kumagawa (T-S8) Lower Layer (Bq/L)



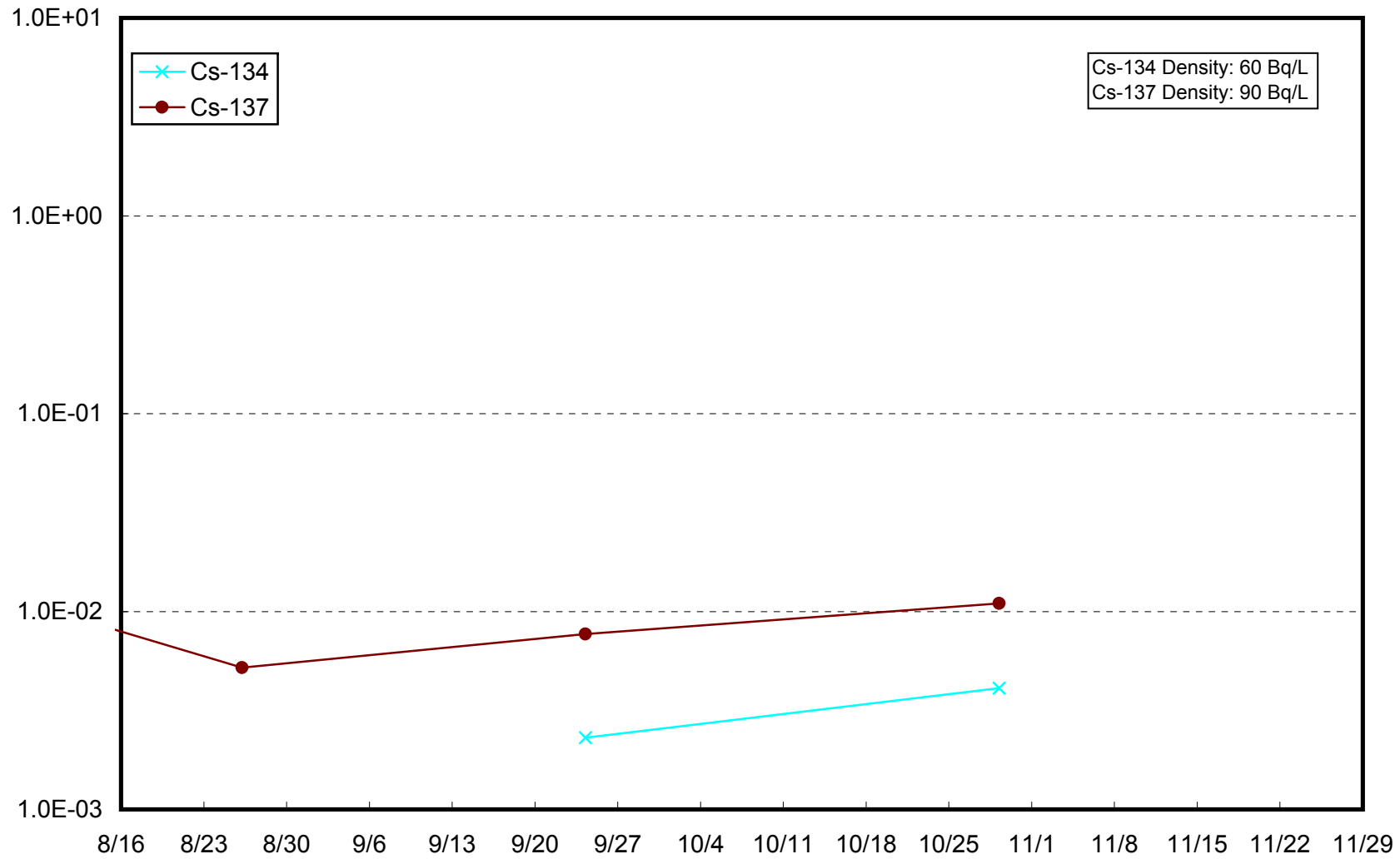
Radioactivity Density of the Seawater at 15km Offshore of Odaka Ward (T-B1) Upper Layer (Bq/L)



Radioactivity Density of the Seawater at 15km Offshore of Odaka Ward (T-B1) Lower Layer (Bq/L)



Radioactivity Density of the Seawater at 18km Offshore of Ukedo River (T-B2) Upper Layer (Bq/L)



Radioactivity Density of the Seawater at 18km Offshore of Ukedo River (T-B2) Lower Layer (Bq/L)

