

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

(Data summarized on December 27)

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 Dec 26, 2013 7:25 AM		Time of Sampling Dec 26, 2013 5:50 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)	0.94	0.02	ND	-	60
Cs-137 (Approx. 30 years)	2.1	0.02	0.79	0.01	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. 0.76Bq/L, Cs-134: Approx. 0.70Bq/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 December 27)

Place of Sampling (Place No.)	*1				*1				*2				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)		Upper Layer		Lower Layer		
Time of Sampling	Nov 20, 2013 9:56 AM		Nov 20, 2013 9:56 AM		Nov 27, 2013 10:17 AM		Nov 27, 2013 10:17 AM		Nov 27, 2013 9:54 AM		Nov 27, 2013 9:54 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)	0.0069	0.00	0.0057	0.00	0.0090	0.00	0.0065	0.00	0.025	0.00	0.014	0.00	60
Cs-137 (Approx. 30 years)	0.016	0.00	0.013	0.00	0.021	0.00	0.016	0.00	0.054	0.00	0.030	0.00	90

Place of Sampling (Place No.)	*2				*2				*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 Fukushima Daiichi NPS (T-D5)		3km Offshore of Fukushima Daini NPS (T-D9)		15km Offshore of Fukushima Daiichi NPS (T-5)		Upper Layer		Lower Layer				
Time of Sampling	Nov 27, 2013 8:39 AM		Nov 27, 2013 8:39 AM		Nov 29, 2013 9:59 AM		Nov 29, 2013 9:59 AM		Nov 22, 2013 9:15 AM		Nov 22, 2013 9:15 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)	0.0085	0.00	0.013	0.00	0.023	0.00	0.018	0.00	ND	-	ND	-	60
Cs-137 (Approx. 30 years)	0.020	0.00	0.028	0.00	0.052	0.00	0.044	0.00	0.0034	0.00	0.0035	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 (Phosphomolybdc acid ammonium adsorption sampling method) are noted.

* Analyzed by: *1 THE GENERAL ENVIRONMENTAL TECHNOS Co., LTD., *2 Tokyo Power Technology Ltd.

Nuclides Analysis Result of Radioactive Materials in the Seawater <Offshore 2/5>

(Data summarized on December 27)

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	Nov 29, 2013 8:58 AM		Nov 29, 2013 8:58 AM		Nov 22, 2013 7:46 AM		Nov 22, 2013 7:46 AM		Nov 29, 2013 10:39 AM		Nov 29, 2013 10:39 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)	0.0017	0.00	0.0016	0.00	0.017	0.00	0.015	0.00	0.017	0.00	0.013	0.00	60
Cs-137 (Approx. 30 years)	0.0059	0.00	0.0073	0.00	0.036	0.00	0.034	0.00	0.043	0.00	0.029	0.00	90

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	Nov 22, 2013 6:21 AM		Nov 22, 2013 6:21 AM		Nov 22, 2013 5:08 AM		Nov 22, 2013 5:08 AM		Nov 22, 2013 5:41 AM		Nov 22, 2013 5:41 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)	0.0064	0.00	0.0060	0.00	0.0059	0.00	0.0086	0.00	0.0031	0.00	0.0035	0.00	60
Cs-137 (Approx. 30 years)	0.017	0.00	0.016	0.00	0.017	0.00	0.022	0.00	0.0084	0.00	0.0086	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 December 27)

Place of Sampling (Place No.)	Around 1km Offshore of Ota River (T-S1)				Around 3km Offshore of Odaka Ward (T-S2)				Around 2km Offshore of Kido River(T-S5)				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	Nov 28, 2013 6:44 AM		Nov 28, 2013 6:44 AM		Nov 28, 2013 6:17 AM		Nov 28, 2013 6:17 AM		平成25年10月 *1 (Not sampled)		平成25年10月 *1 (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)	0.011	0.00	0.018	0.00	0.014	0.00	0.011	0.00	-	-	-	-	60
Cs-137 (Approx. 30 years)	0.026	0.00	0.045	0.00	0.032	0.00	0.030	0.00	-	-	-	-	90

Place of Sampling (Place No.)	Around 2km Offshore of Kido River(T-S5)				Around 2km Offshore of Fukushima Daini NPS (T-S7)				Around 2km Offshore of Fukushima Daini NPS (T-S7)				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	Nov 24, 2013 7:03 AM		Nov 24, 2013 7:03 AM		平成25年10月 *1 (Not sampled)		平成25年10月 *1 (Not sampled)		Nov 24, 2013 6:37 AM		Nov 24, 2013 6:37 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)	0.016	0.00	0.013	0.00	-	-	-	-	0.023	0.00	0.021	0.00	60
Cs-137 (Approx. 30 years)	0.038	0.00	0.033	0.00	-	-	-	-	0.052	0.00	0.052	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.

*1 Not sampled due to the bad weather.

Nuclides Analysis Result of Radioactive Materials in the Seawater <Offshore 4/5>

(Data summarized on December 27)

Place of Sampling (Place No.)	Around 4km Offshore of Kumagawa (T-S8)				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	Nov 17, 2013 6:45 AM		Nov 17, 2013 6:45 AM		Nov 21, 2013 7:11 AM		Nov 21, 2013 7:11 AM		Nov 21, 2013 6:30 AM		Nov 21, 2013 6:30 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)	0.012	0.00	0.0073	0.00	0.0044	0.00	ND	-	0.0035	0.00	0.0032	0.00	60
Cs-137 (Approx. 30 years)	0.032	0.00	0.017	0.00	0.012	0.00	0.0042	0.00	0.011	0.00	0.0090	0.00	90

Place of Sampling (Place No.)	Around 10km Offshore of 1F (T-B3)				Around 10km Offshore of 1F (T-B3)				Around 10km Offshore of 2F (T-B4)				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	平成25年10月 *1 (Not sampled)		平成25年10月 *1 (Not sampled)		Nov 23, 2013 5:50 AM		Nov 23, 2013 5:50 AM		平成25年10月 *1 (Not sampled)		平成25年10月 *1 (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)	-	-	-	-	0.0058	0.00	0.0037	0.00	-	-	-	-	60
Cs-137 (Approx. 30 years)	-	-	-	-	0.016	0.00	0.0083	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.

*1 Not sampled due to the bad weather.

Nuclides Analysis Result of Radioactive Materials in the Seawater <Offshore 5/5>

(Data summarized on December 27)

Place of Sampling (Place No.)	Around 10km Offshore of 2F (T-B4)												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	Nov 23, 2013 6:32 AM		Nov 23, 2013 6:32 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)	0.0014	0.00	0.0020	0.00									60
Cs-137 (Approx. 30 years)	0.0048	0.00	0.0048	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

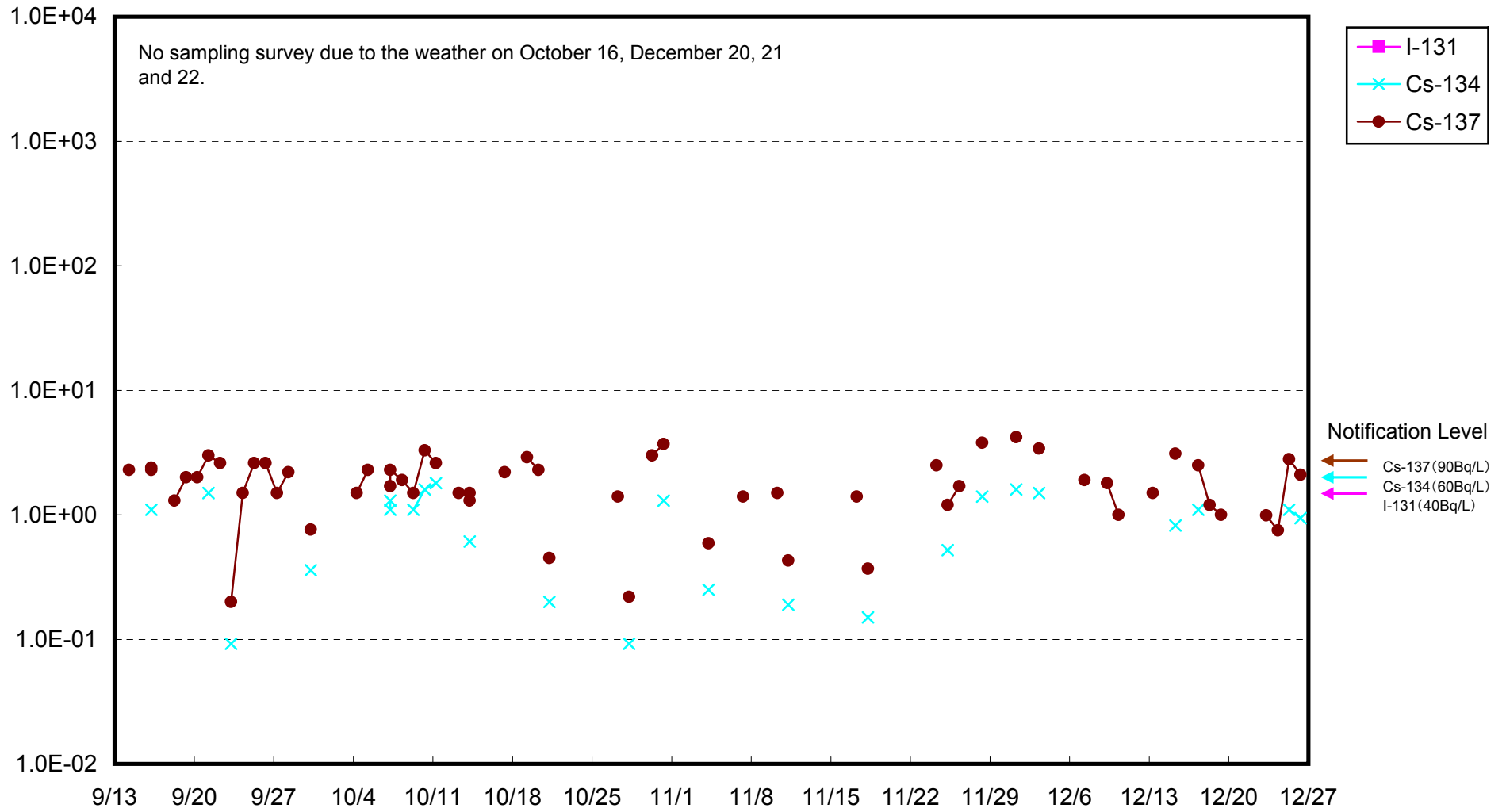
* The density specified by the Reactor Regulation is converted from Bq/cm³ to Bq/L.

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

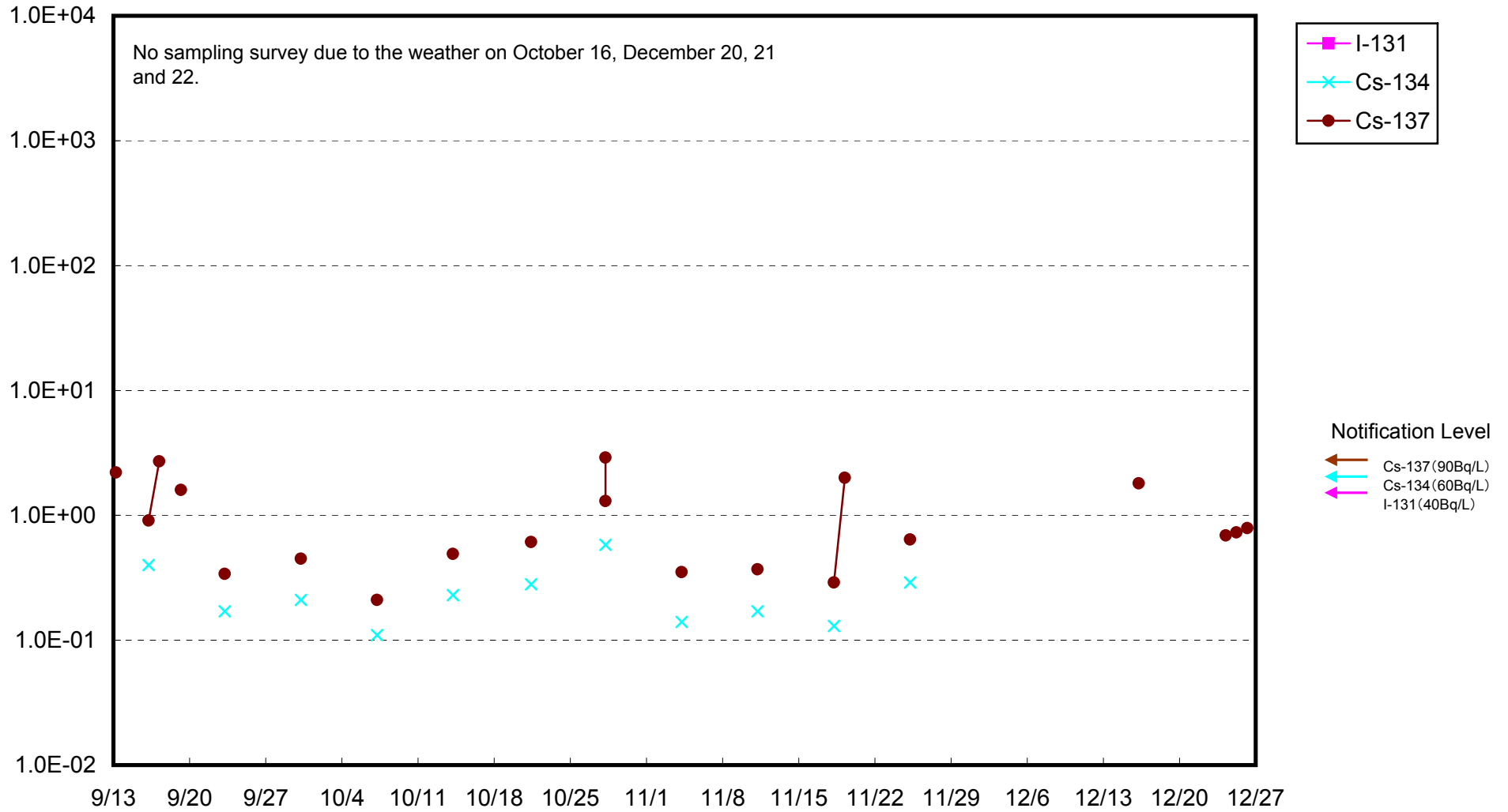
* Analysis results by detail analysis (Phosphomolybdic acid ammonium adsorption sampling method) are noted.

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

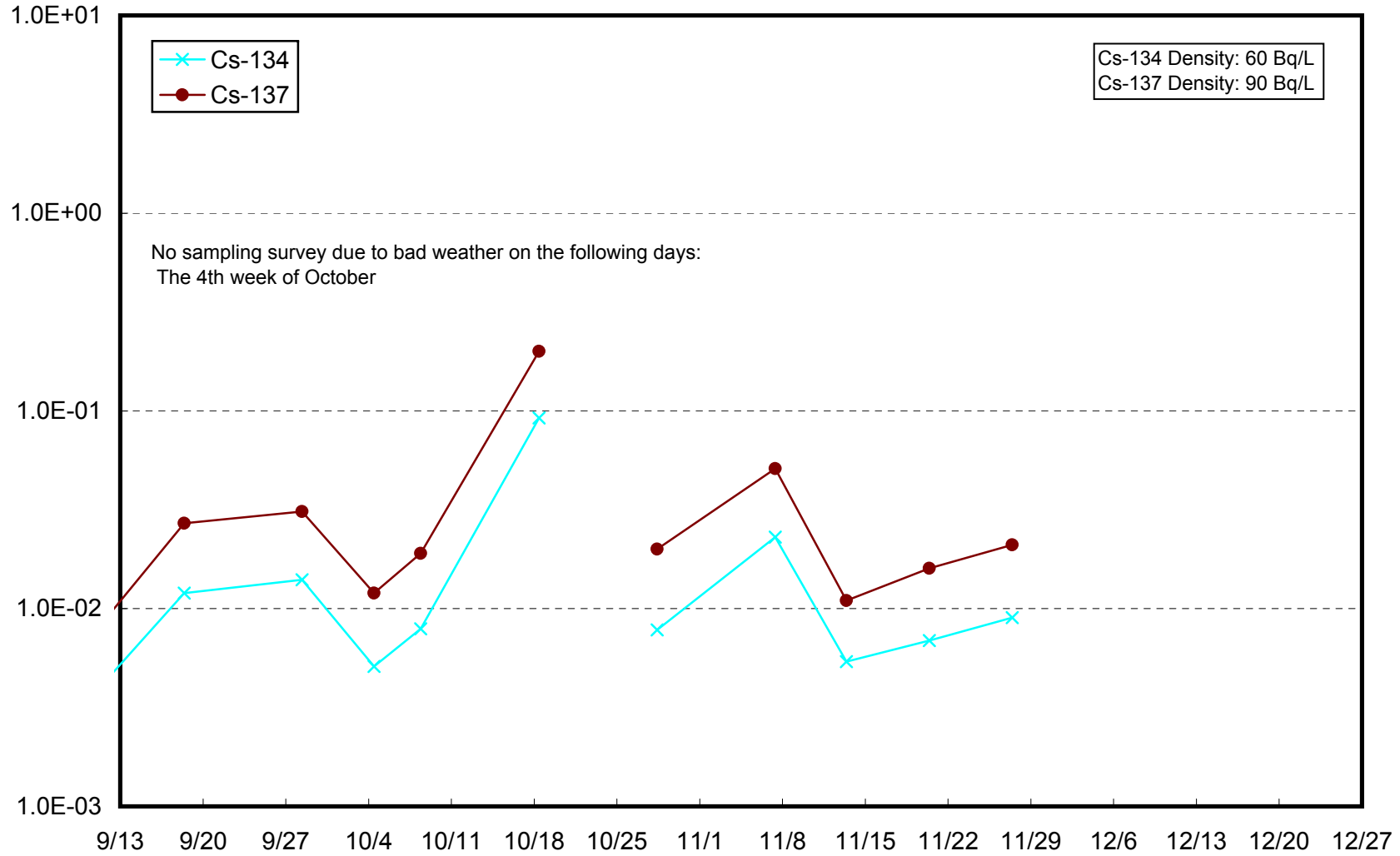
Radioactivity Density of the Seawater at 1F Units 5-6 North Discharge Channel (Bq/L)



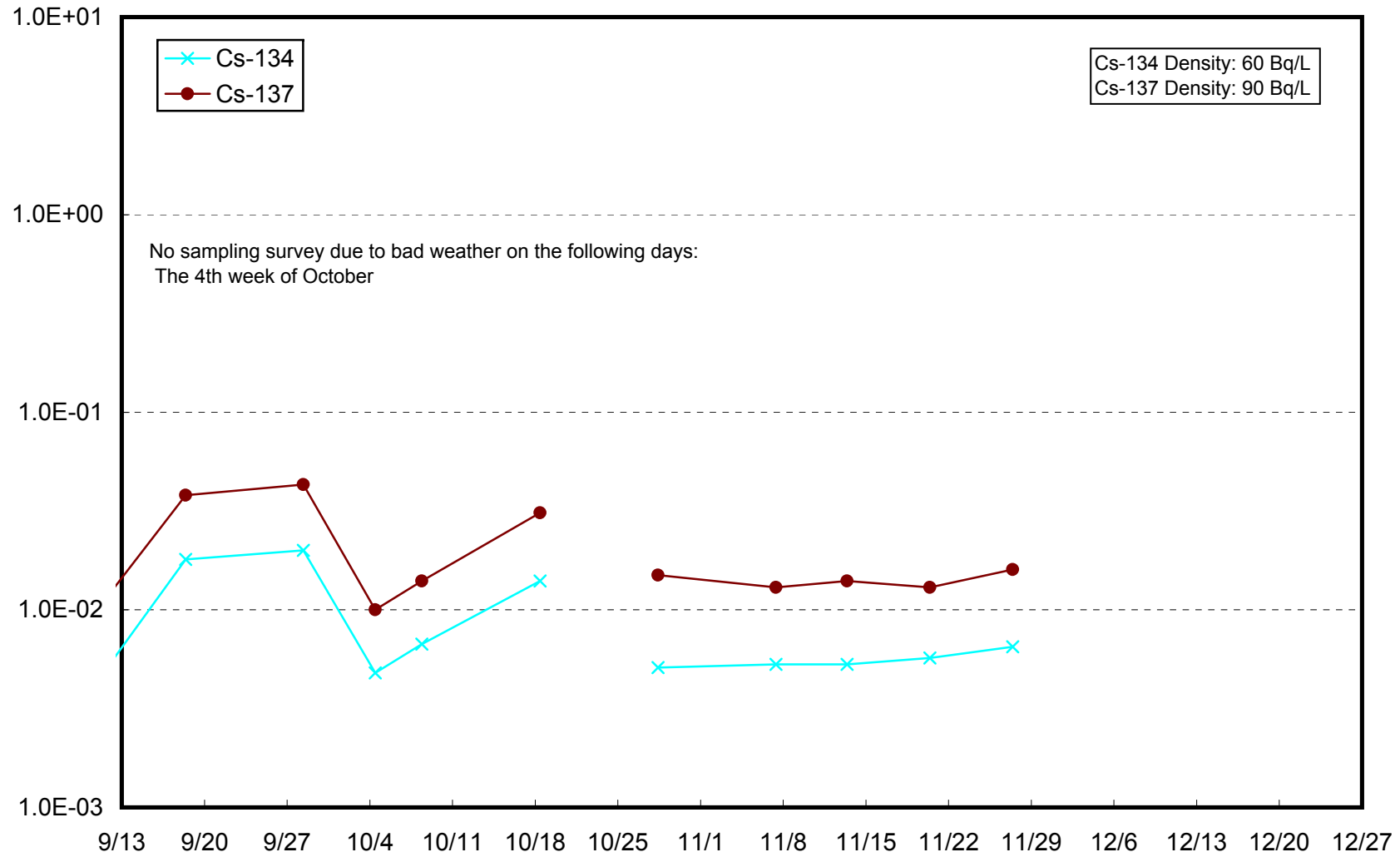
Radioactivity Density of the Seawater at 1F South Discharge Channel (Bq/L)



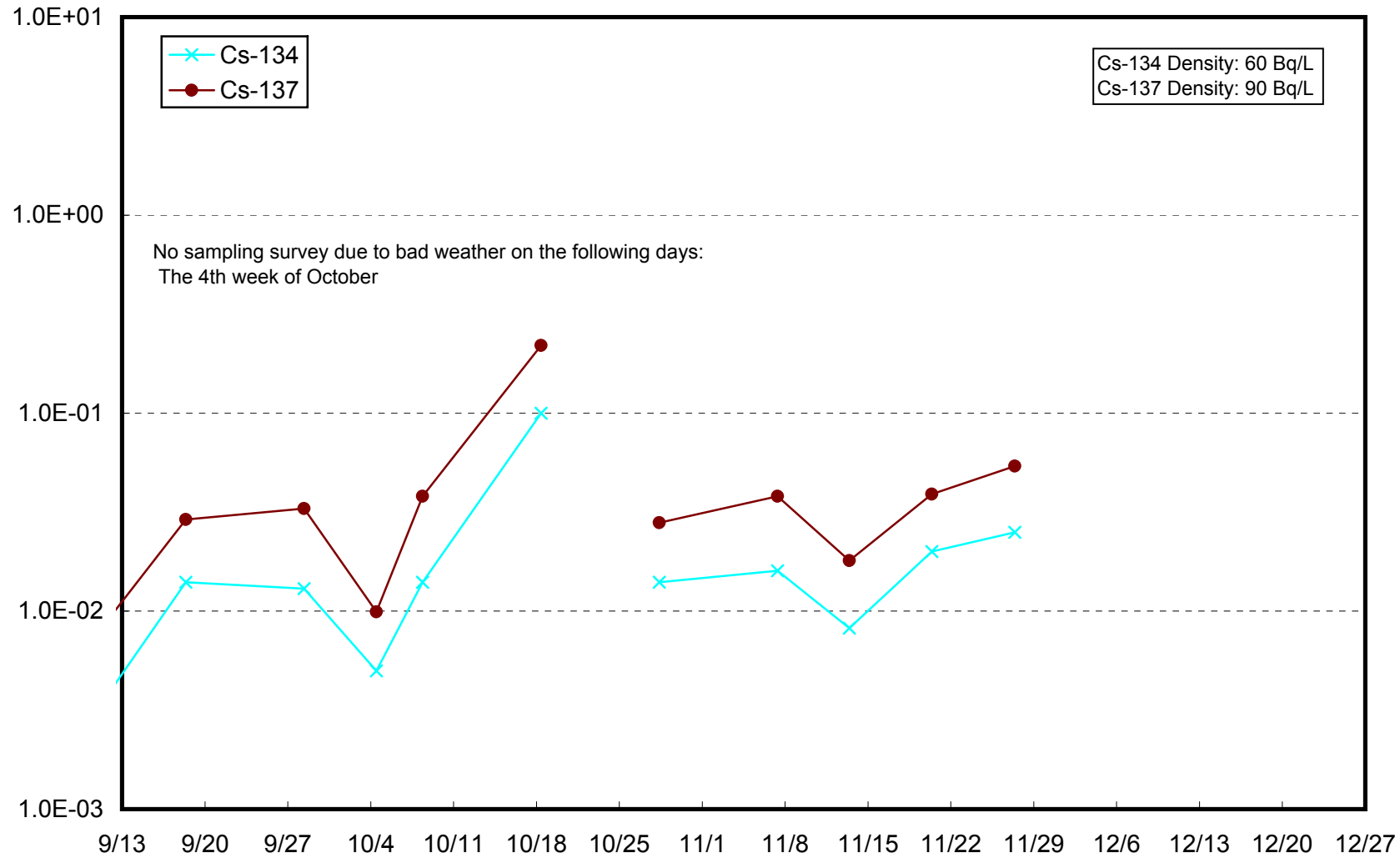
Radioactivity Density of the Seawater at 3km Offshore of Odaka Ward (T-14) Upper Layer (Bq/L)



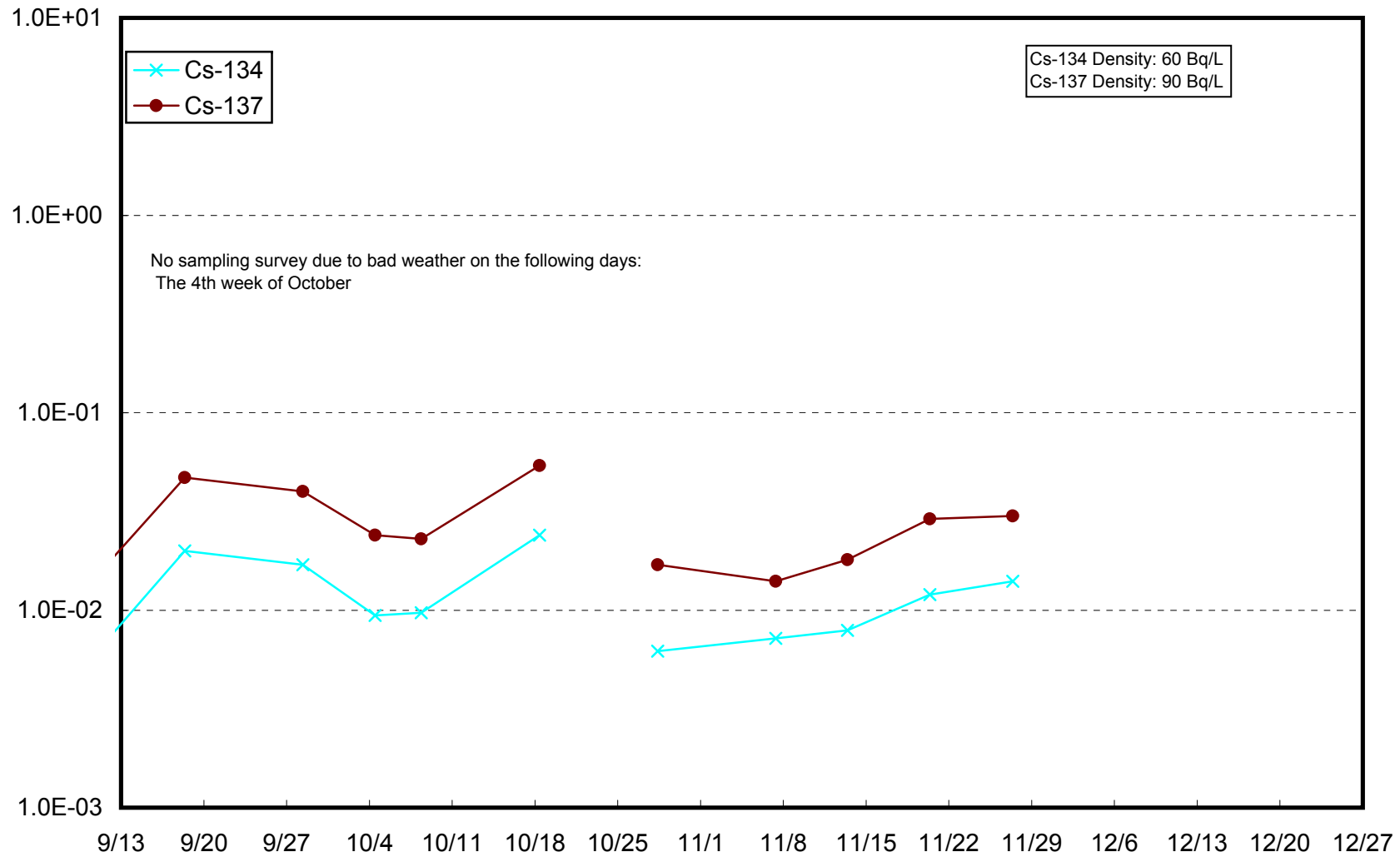
Radioactivity Density of the Seawater at 3km Offshore of Odaka Ward (T-14) Lower Layer (Bq/L)



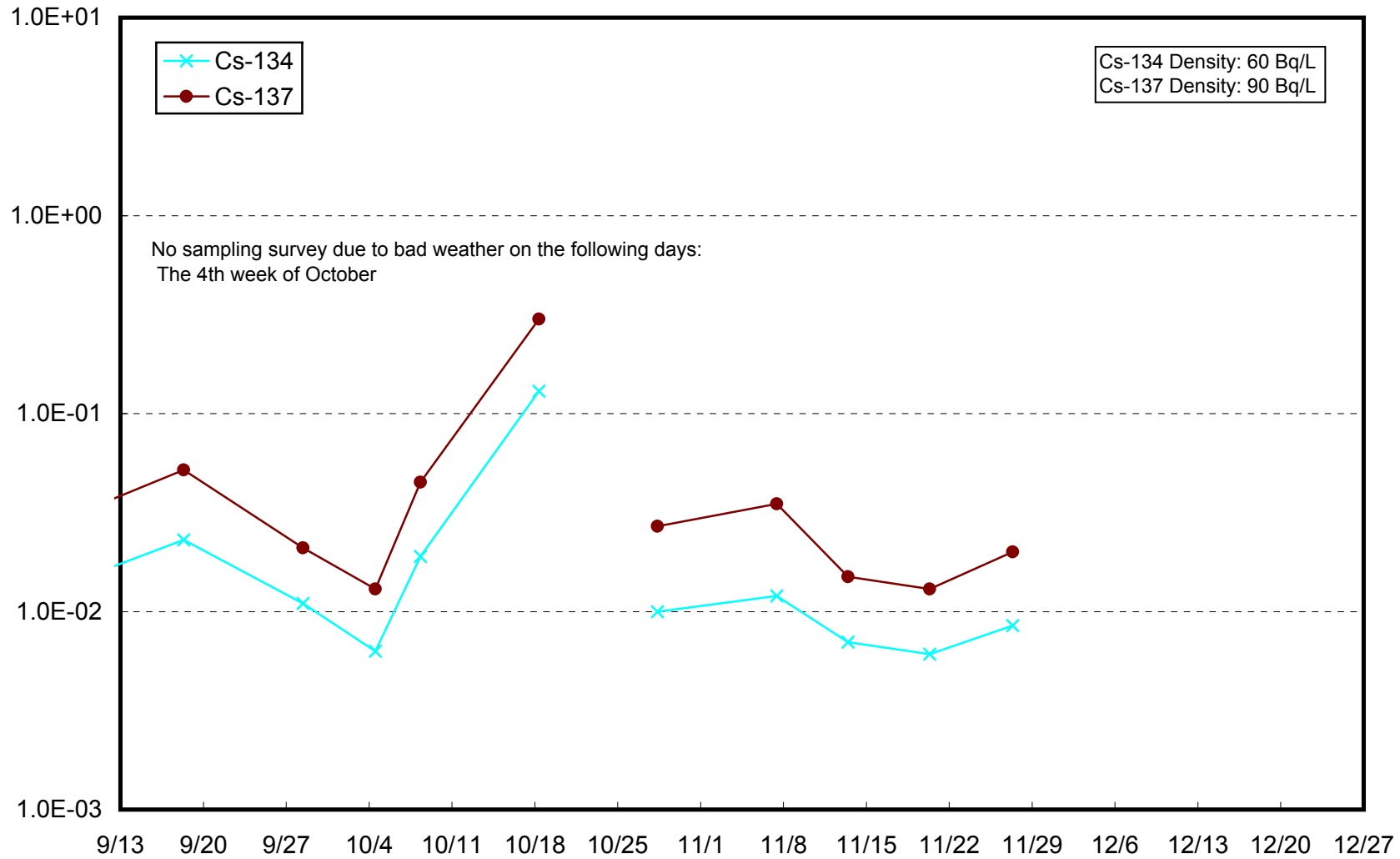
Radioactivity Density of the Seawater at 3km Offshore of Ukedo River (T-D1) Upper Layer (Bq/L)



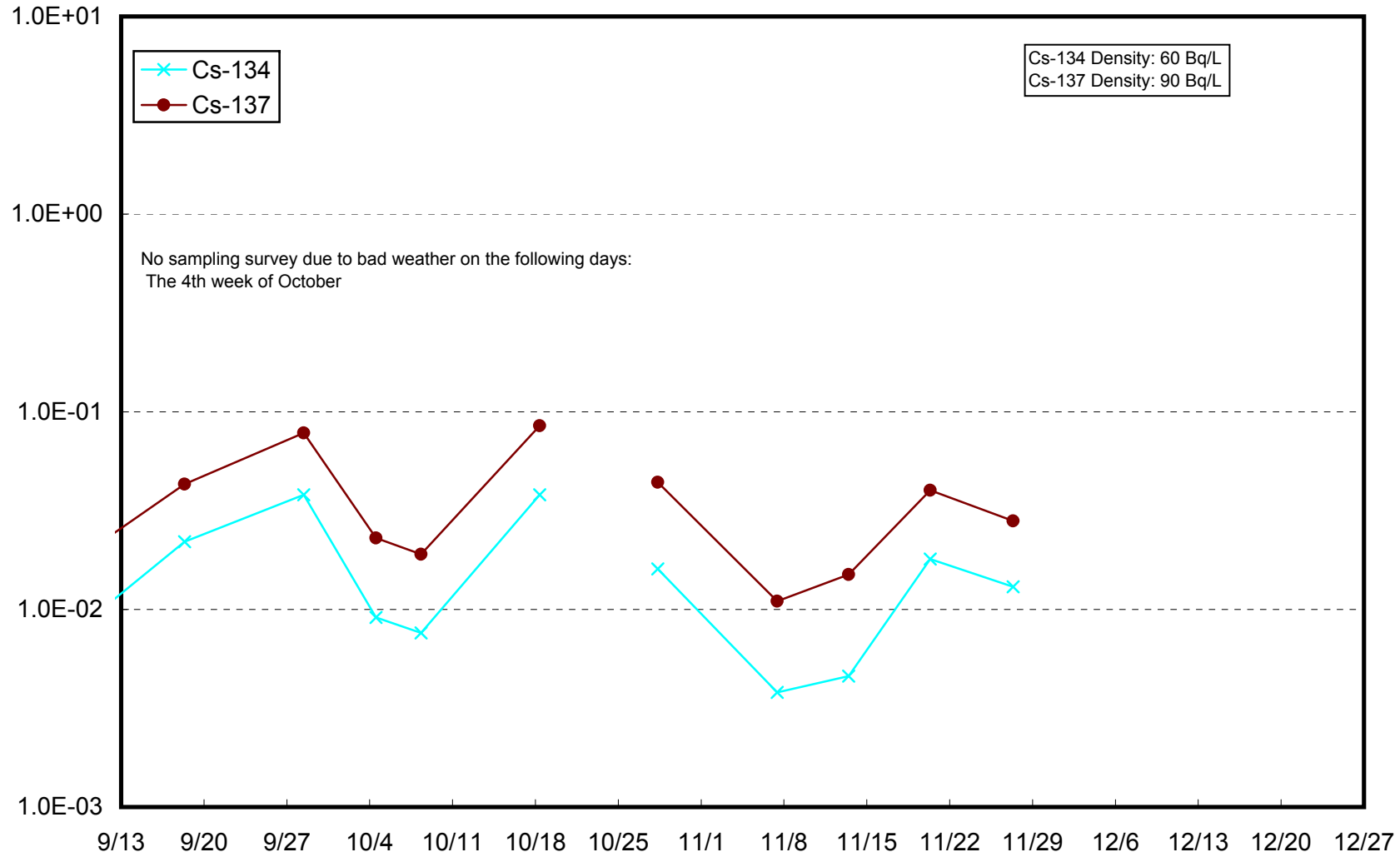
Radioactivity Density of the Seawater at 3km Offshore of Ukedo River (T-D1) Lower Layer (Bq/L)



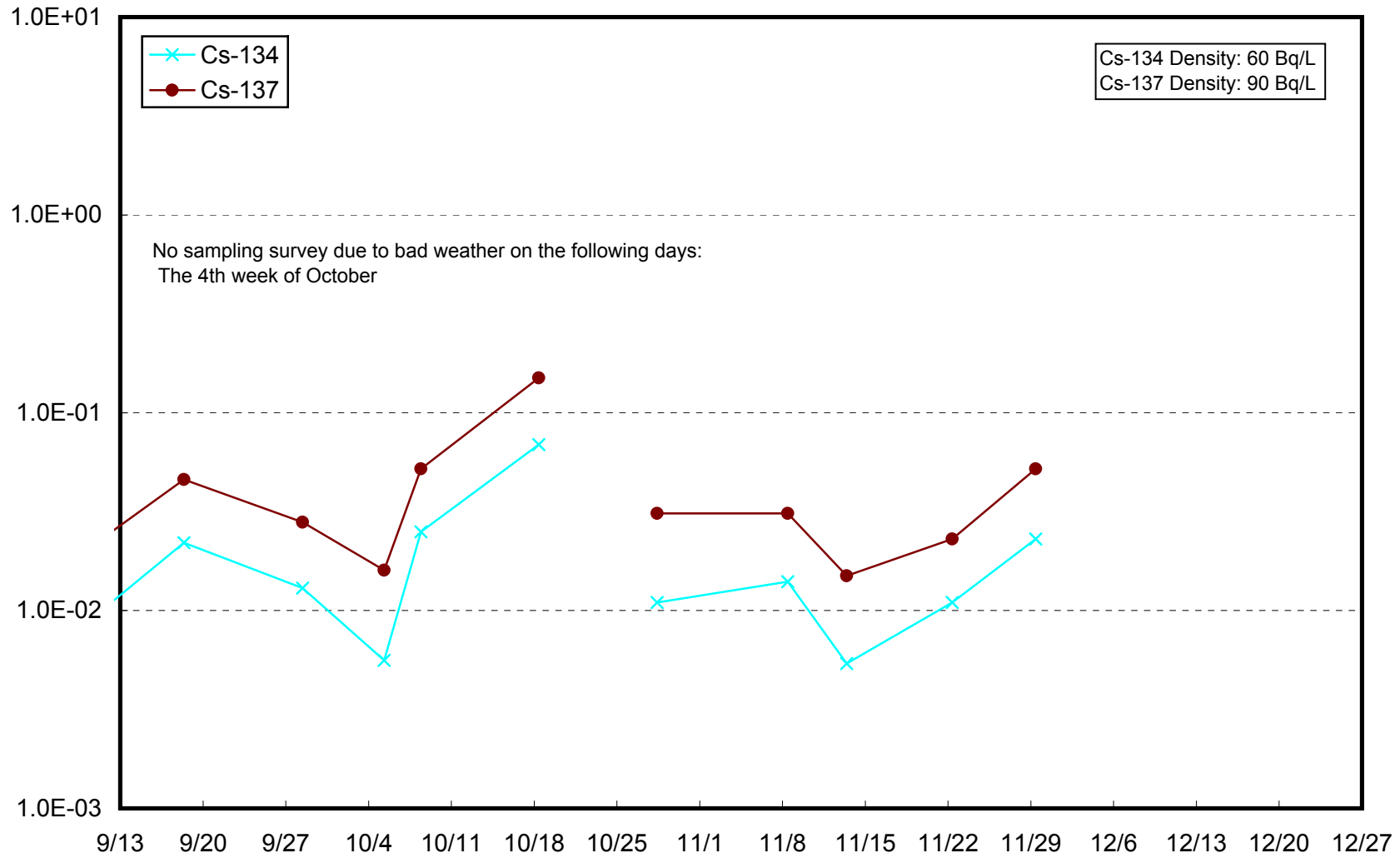
Radioactivity Density of the Seawater at 3km Offshore of Fukushima Daiichi NPS (T-D5) Upper Layer (Bq/L)



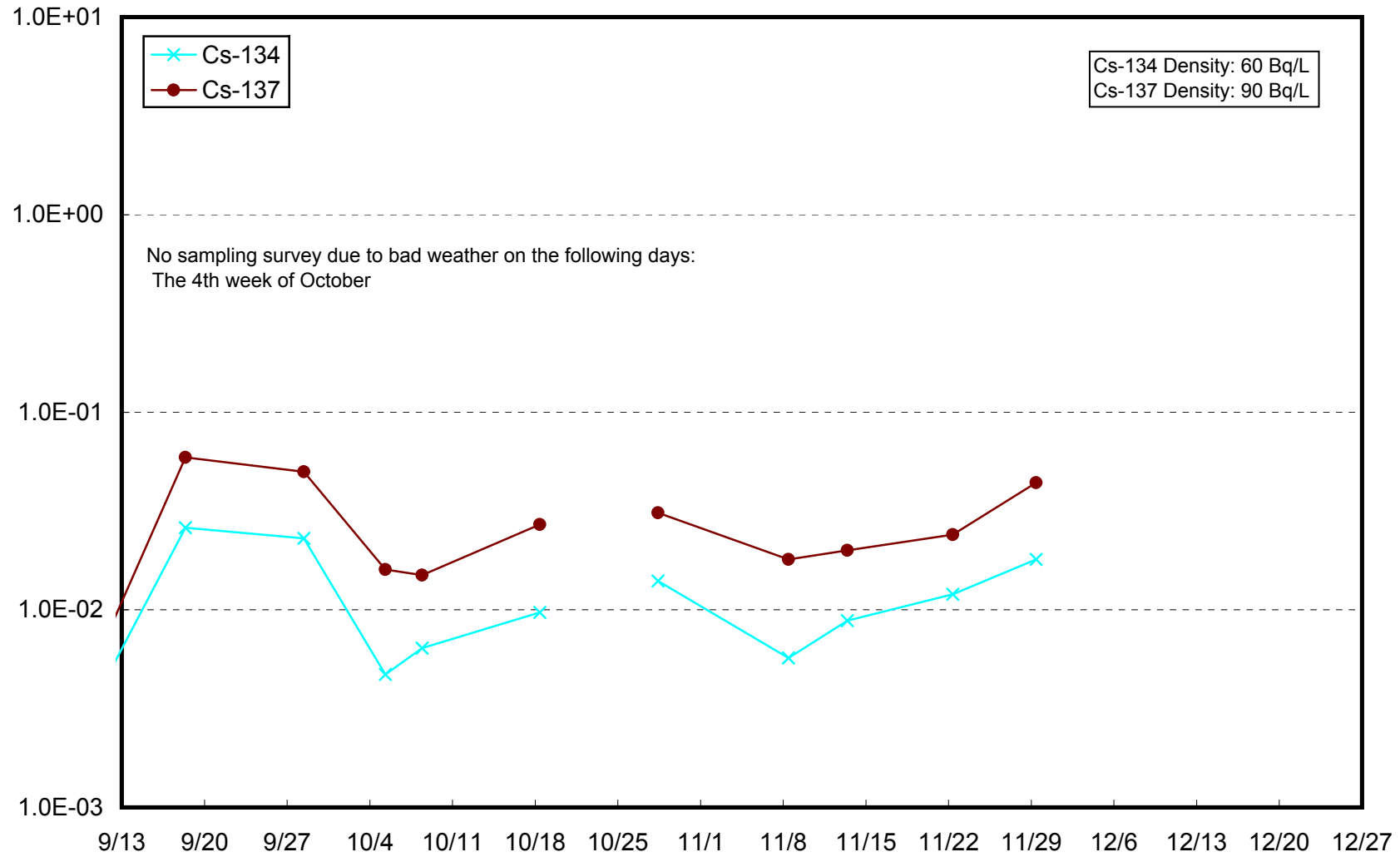
Radioactivity Density of the Seawater at 3km Offshore of Fukushima Daiichi NPS (T-D5) Lower Layer (Bq/L)



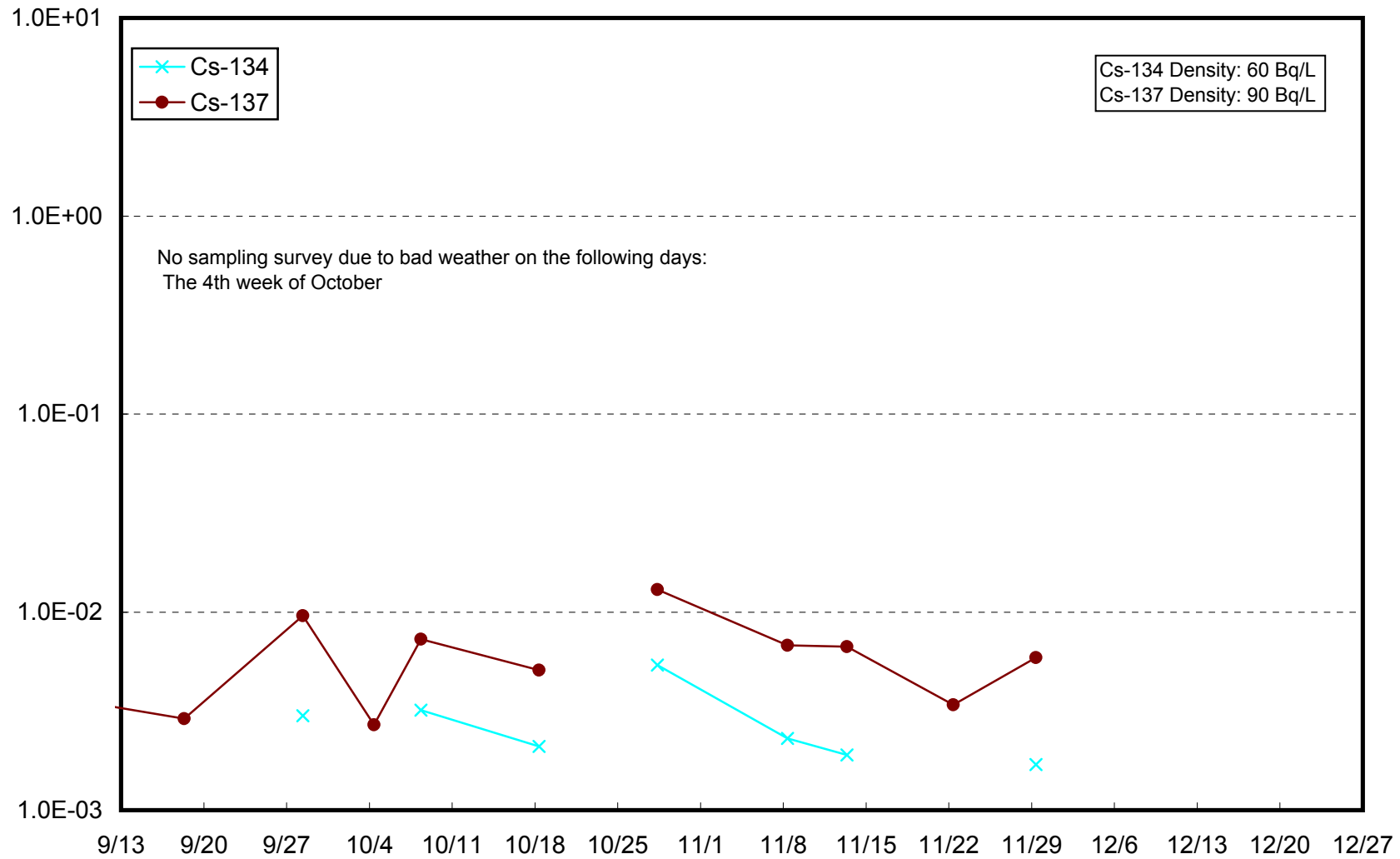
Radioactivity Density of the Seawater at 3km Offshore of Fukushima Daini NPS (T-D9) Upper Layer (Bq/L)



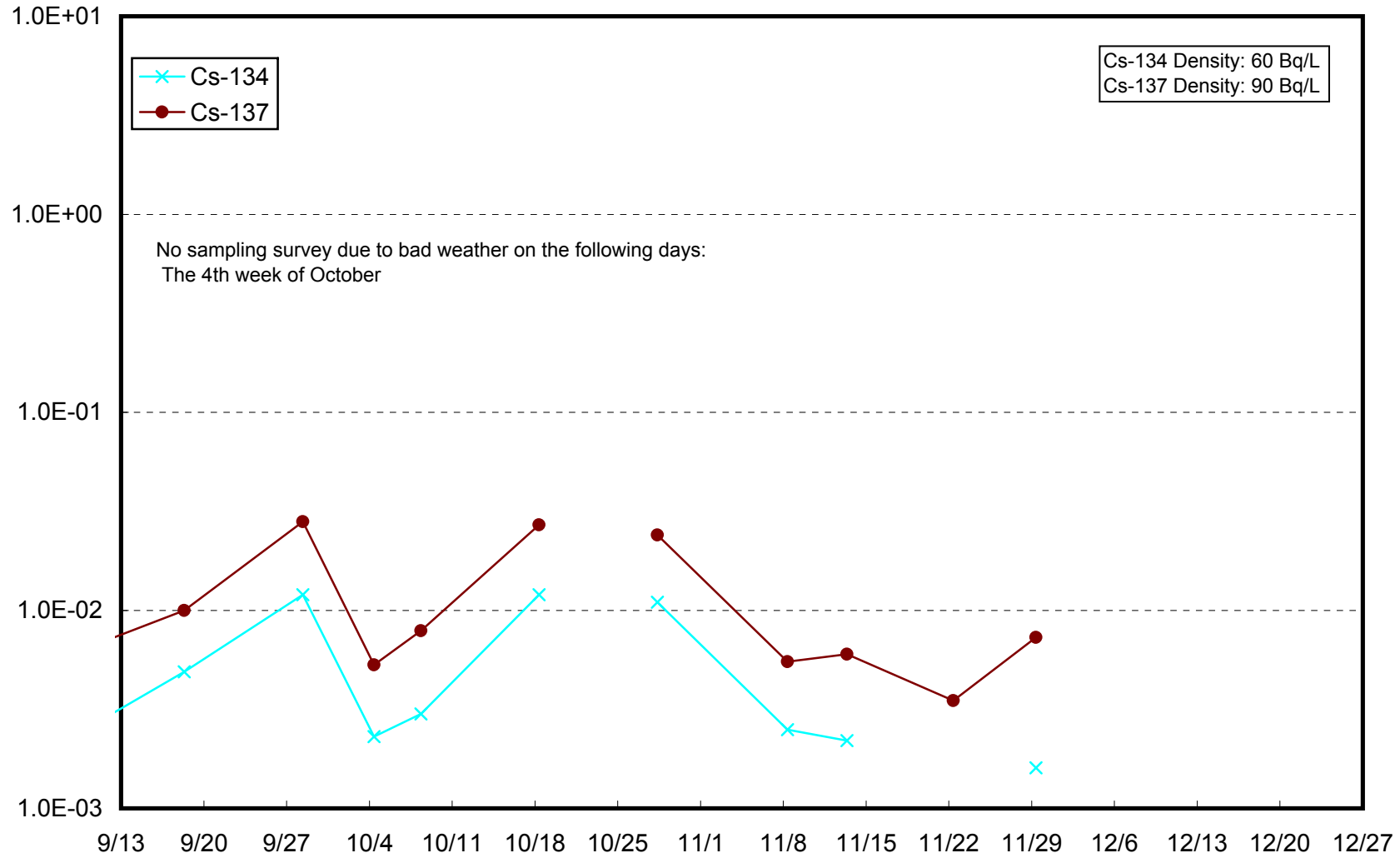
Radioactivity Density of the Seawater at 3km Offshore of Fukushima Daini NPS (T-D9) Lower Layer (Bq/L)



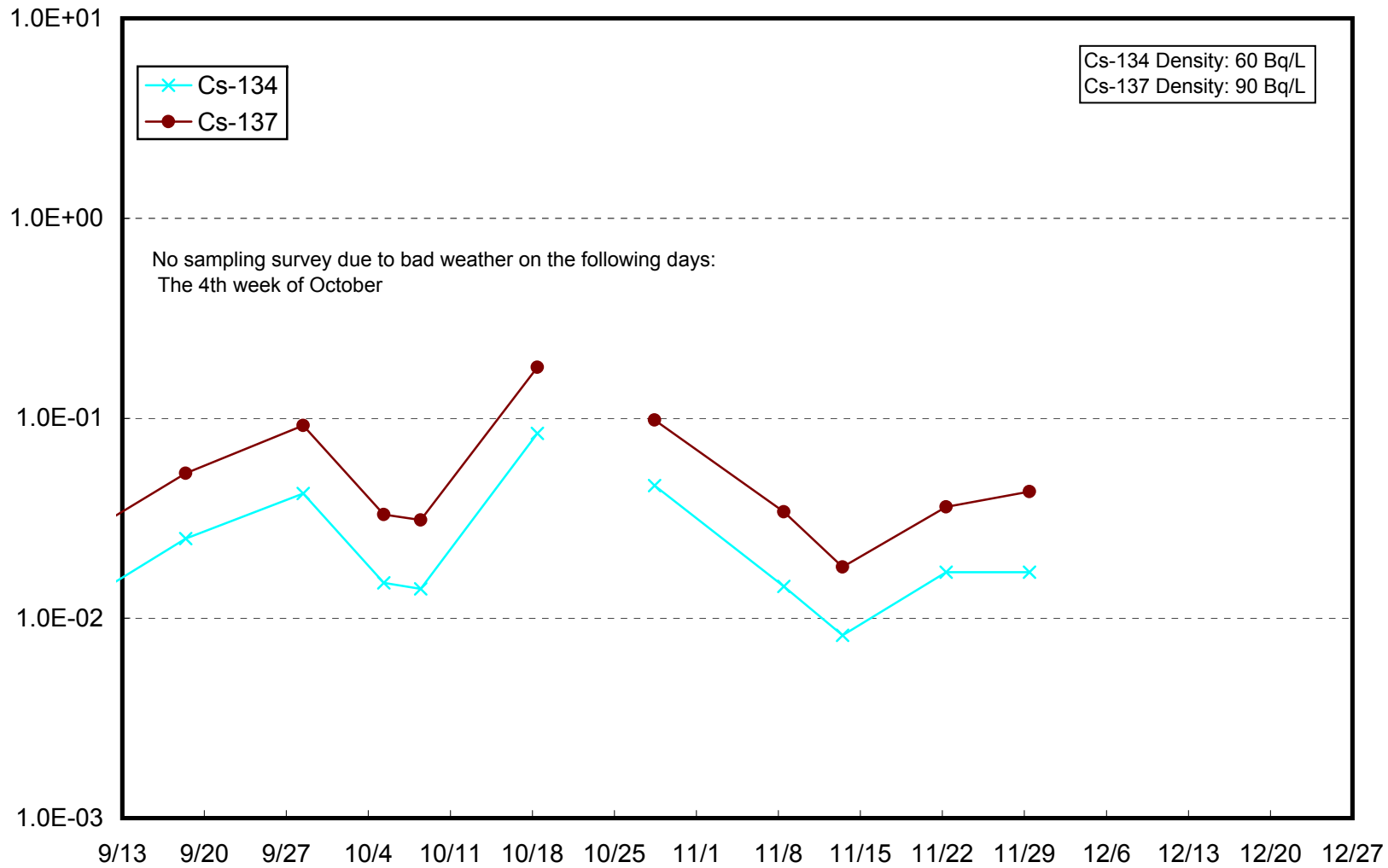
Radioactivity Density of the Seawater at 15km Offshore of Fukushima Daiichi NPS (T-5) Upper Layer (Bq/L)



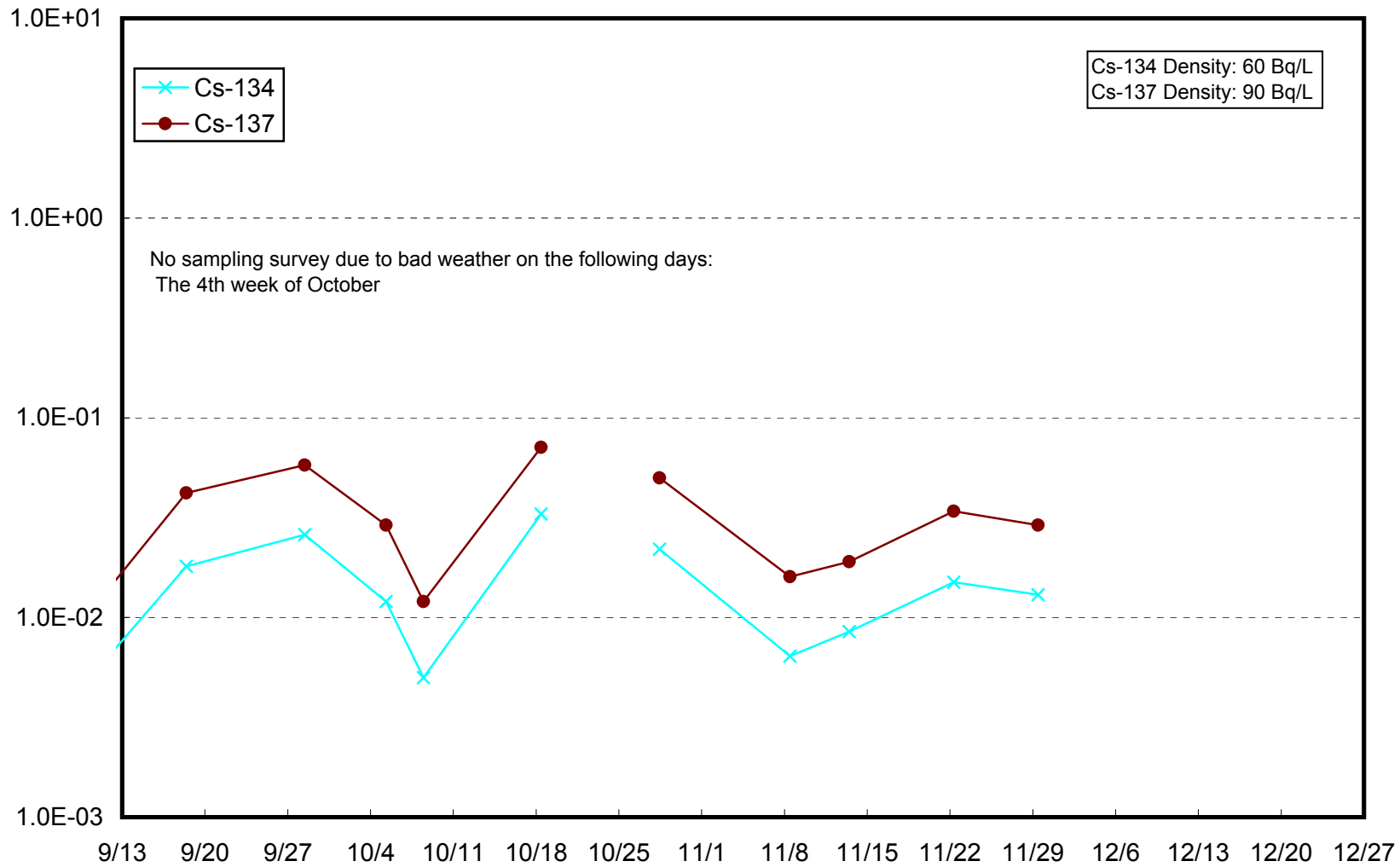
Radioactivity Density of the Seawater at 15km Offshore of Fukushima Daiichi NPS (T-5) Lower Layer (Bq/L)



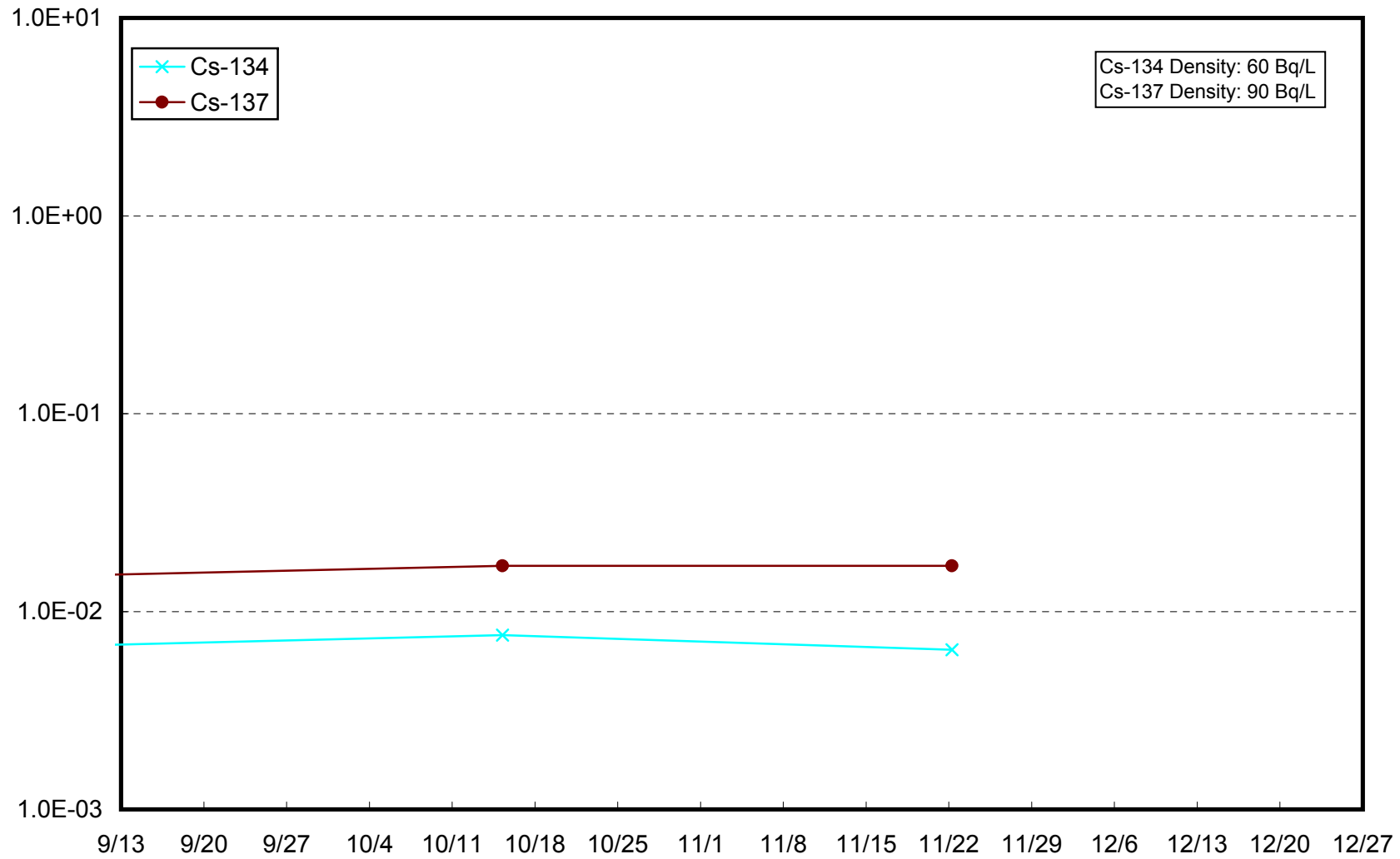
Radioactivity Density of the Seawater at 3km Offshore of Iwasawa Shore (T-11) Upper Layer (Bq/L)



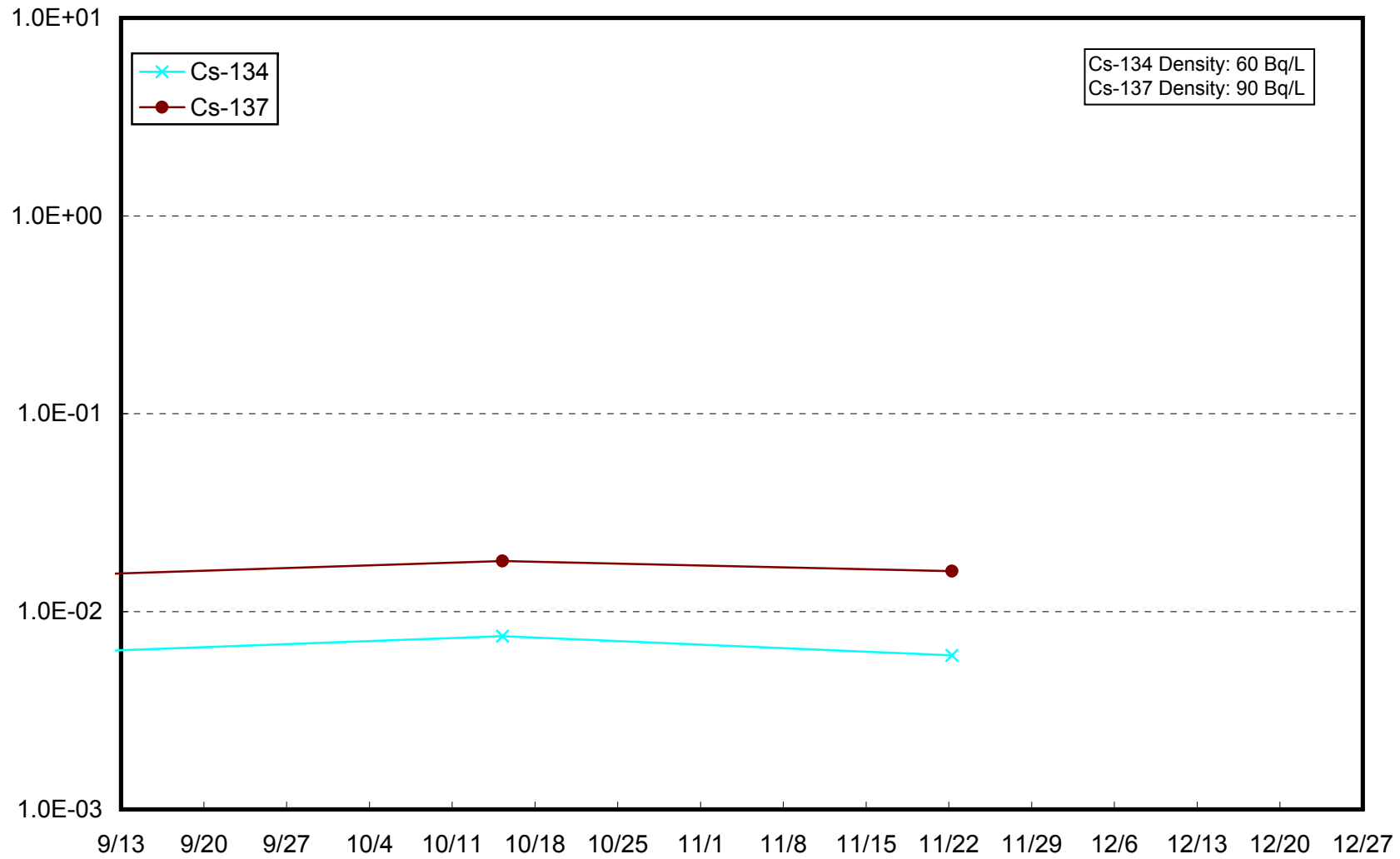
Radioactivity Density of the Seawater at 3km Offshore of Iwasawa Shore (T-11) Lower Layer (Bq/L)



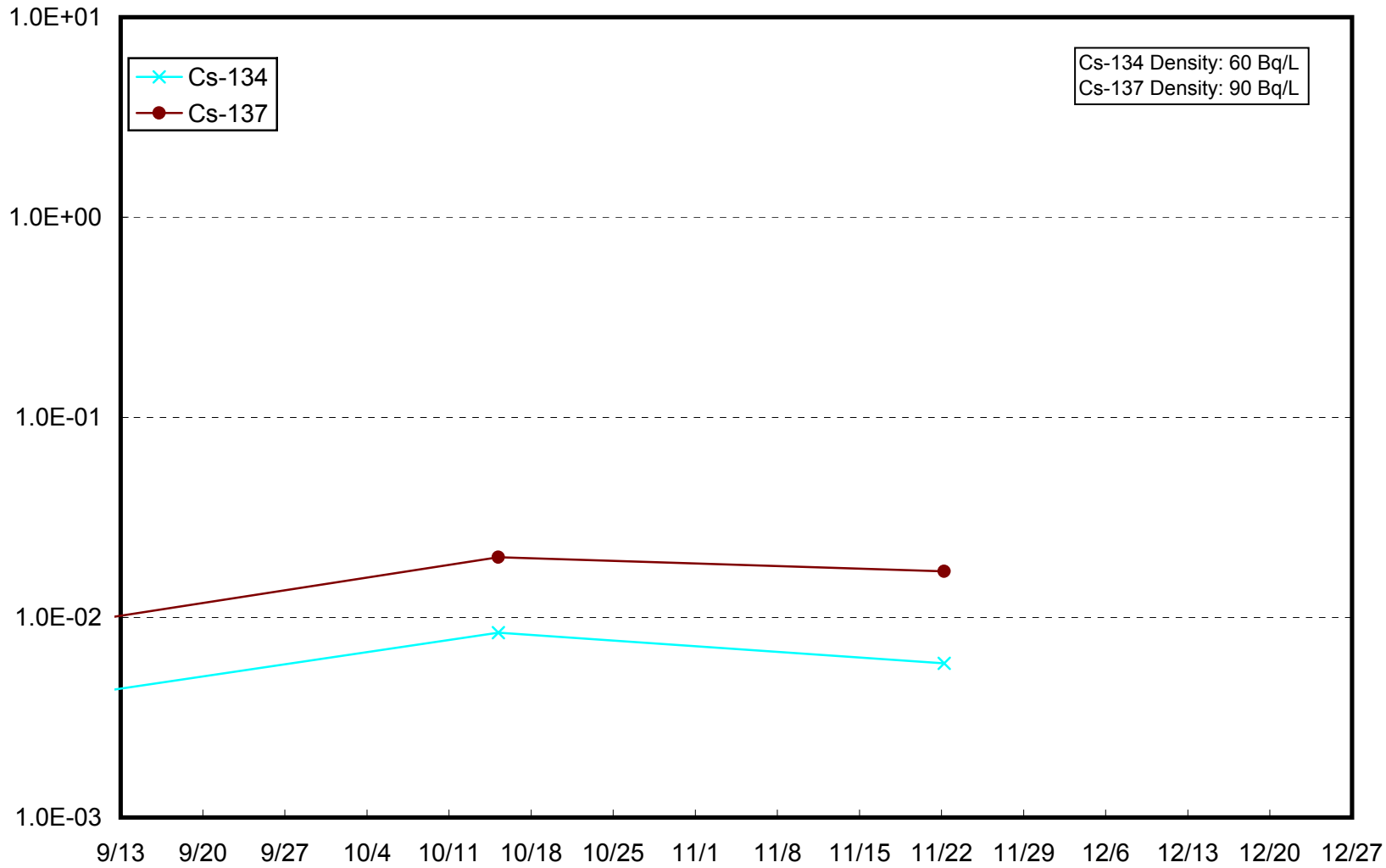
Radioactivity Density of the Seawater at 1km Offshore of Nida River (T-13-1) Upper Layer (Bq/L)



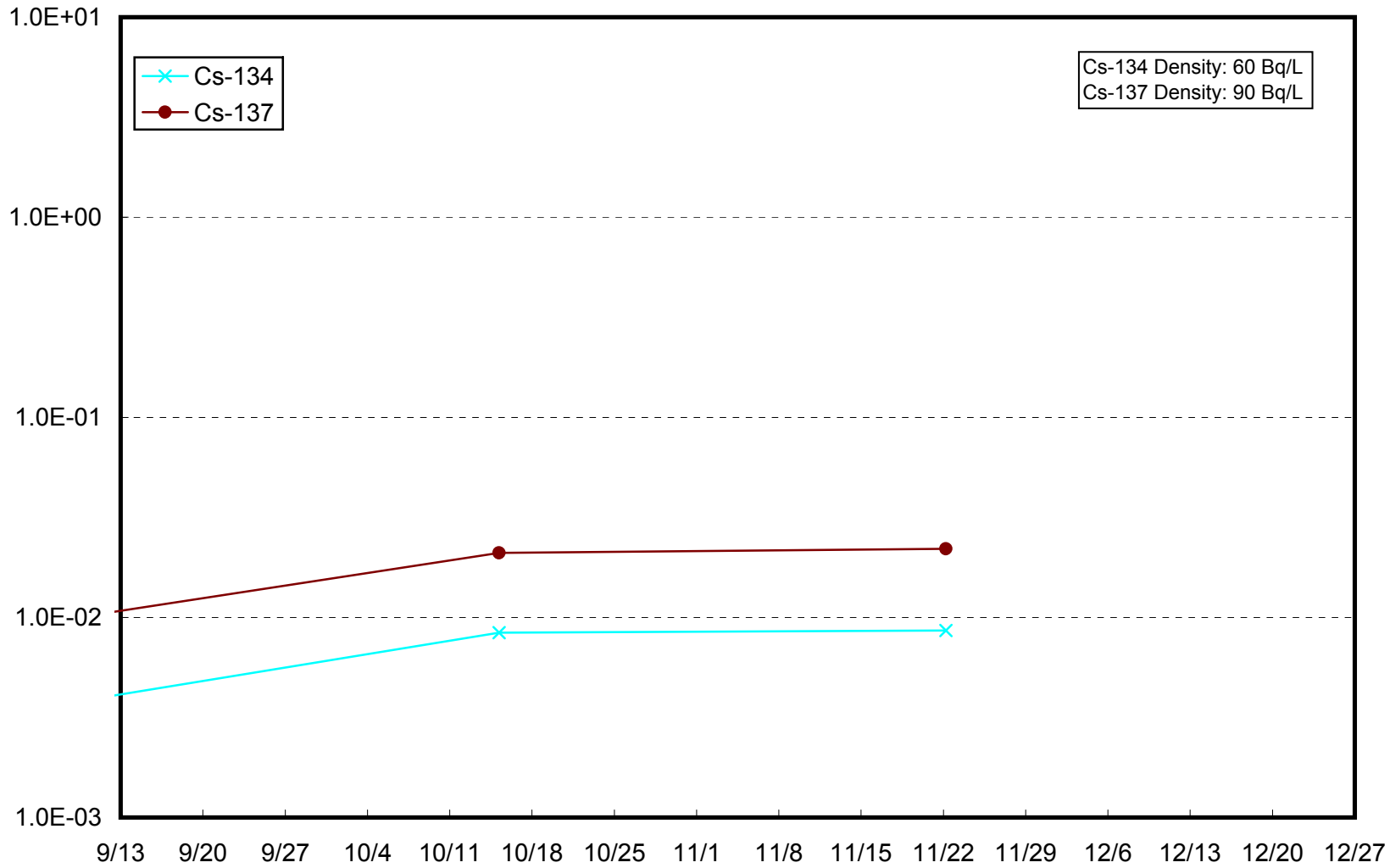
Radioactivity Density of the Seawater at 1km Offshore of Nida River (T-13-1) Lower Layer (Bq/L)



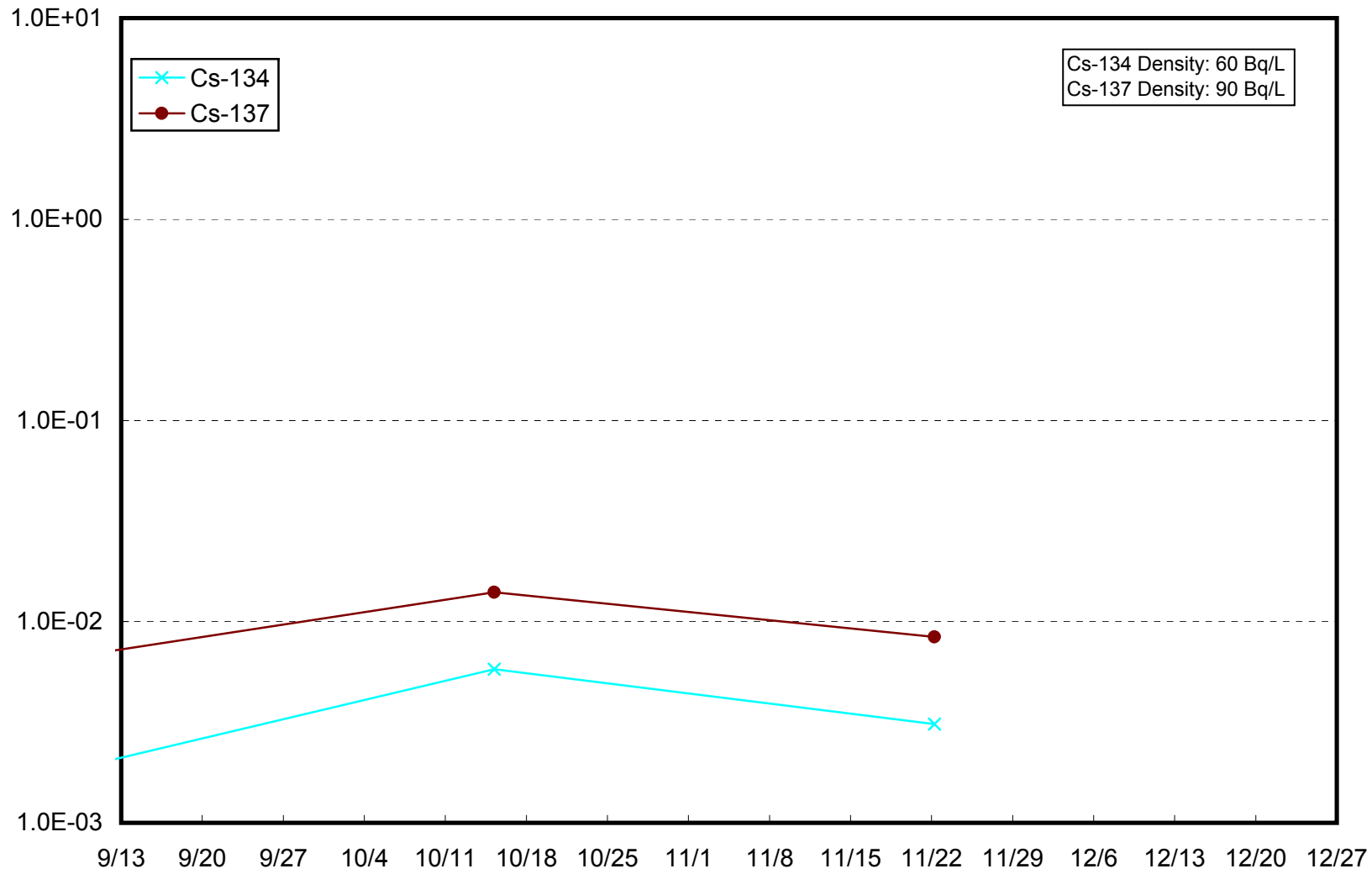
Radioactivity Density of the Seawater at 3km Offshore of Soma (T-22) Upper Layer (Bq/L)



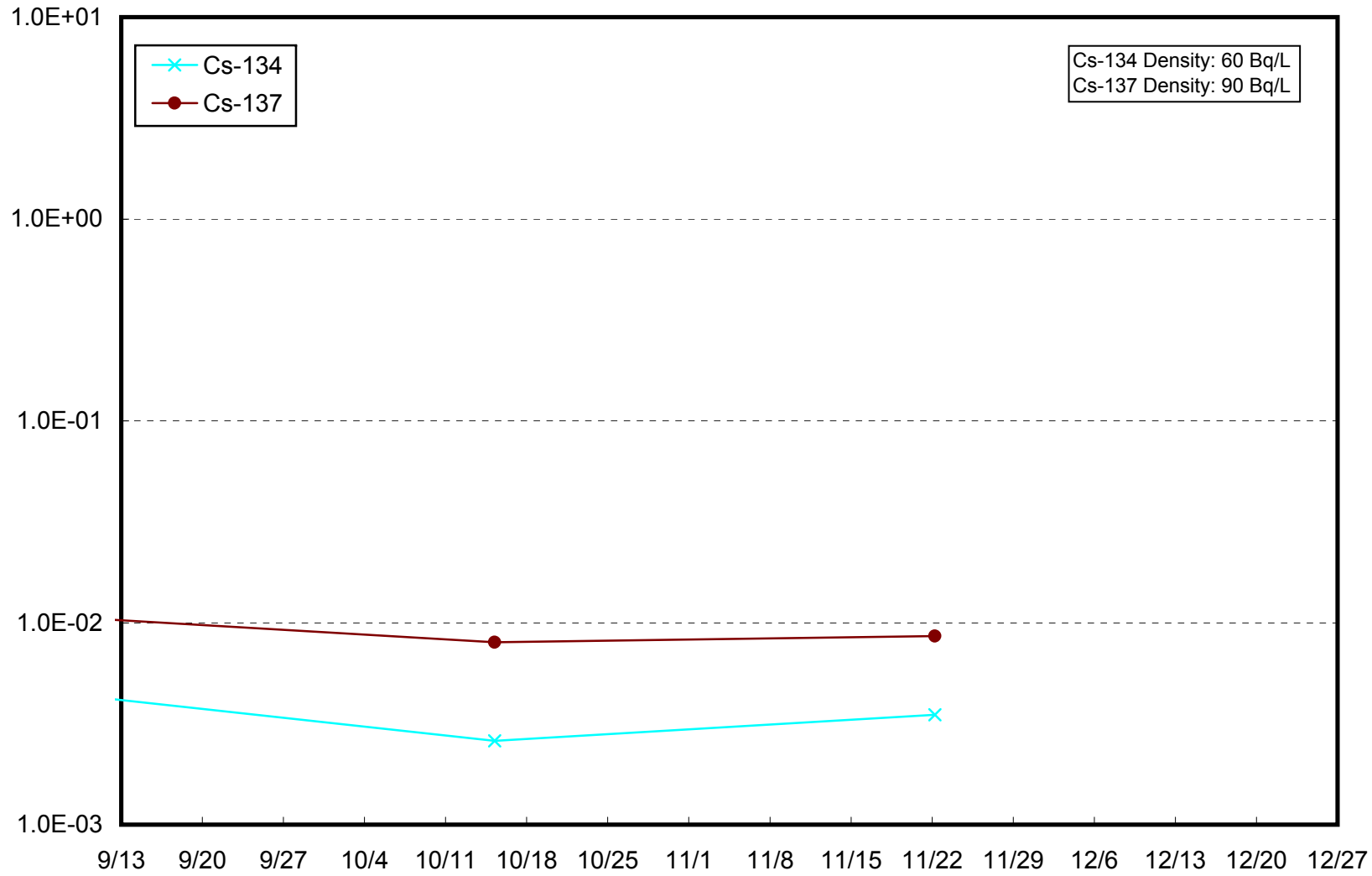
Radioactivity Density of the Seawater at 3km Offshore of Soma (T-22) Lower Layer (Bq/L)



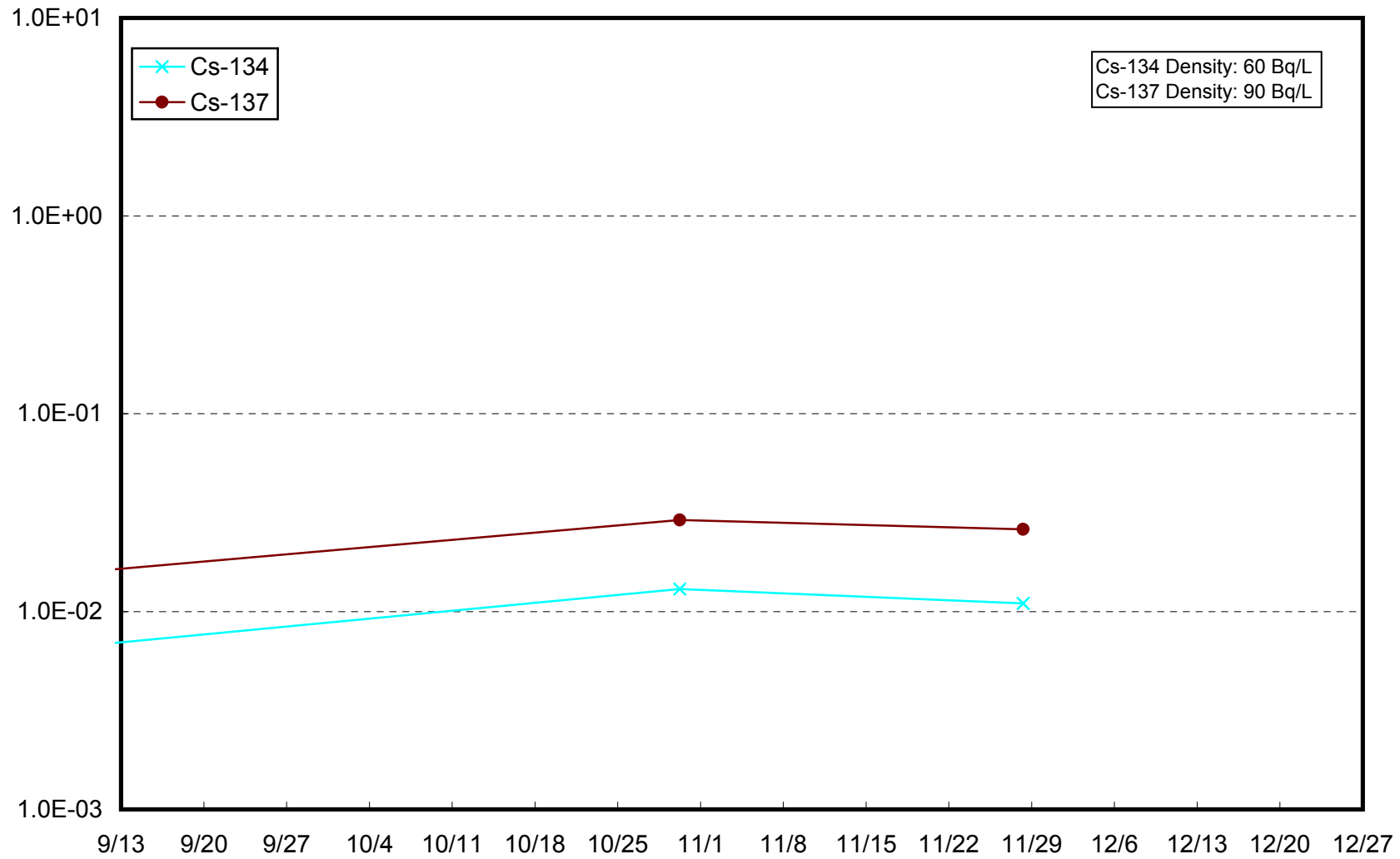
Radioactivity Density of the Seawater at 5km Offshore of Kashima (T-MA) Upper Layer (Bq/L)



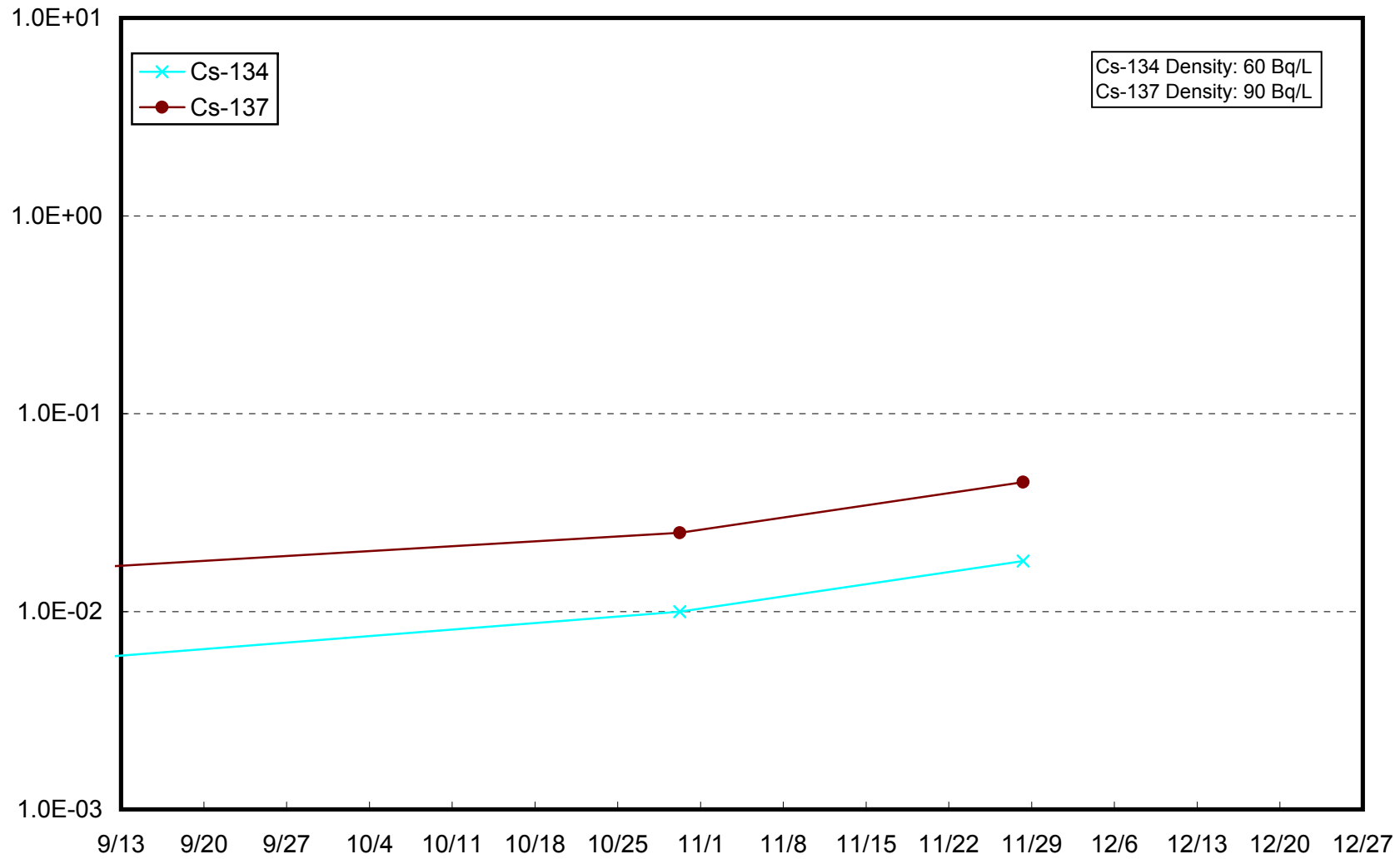
Radioactivity Density of the Seawater at 5km Offshore of Kashima (T-MA) Lower Layer (Bq/L)



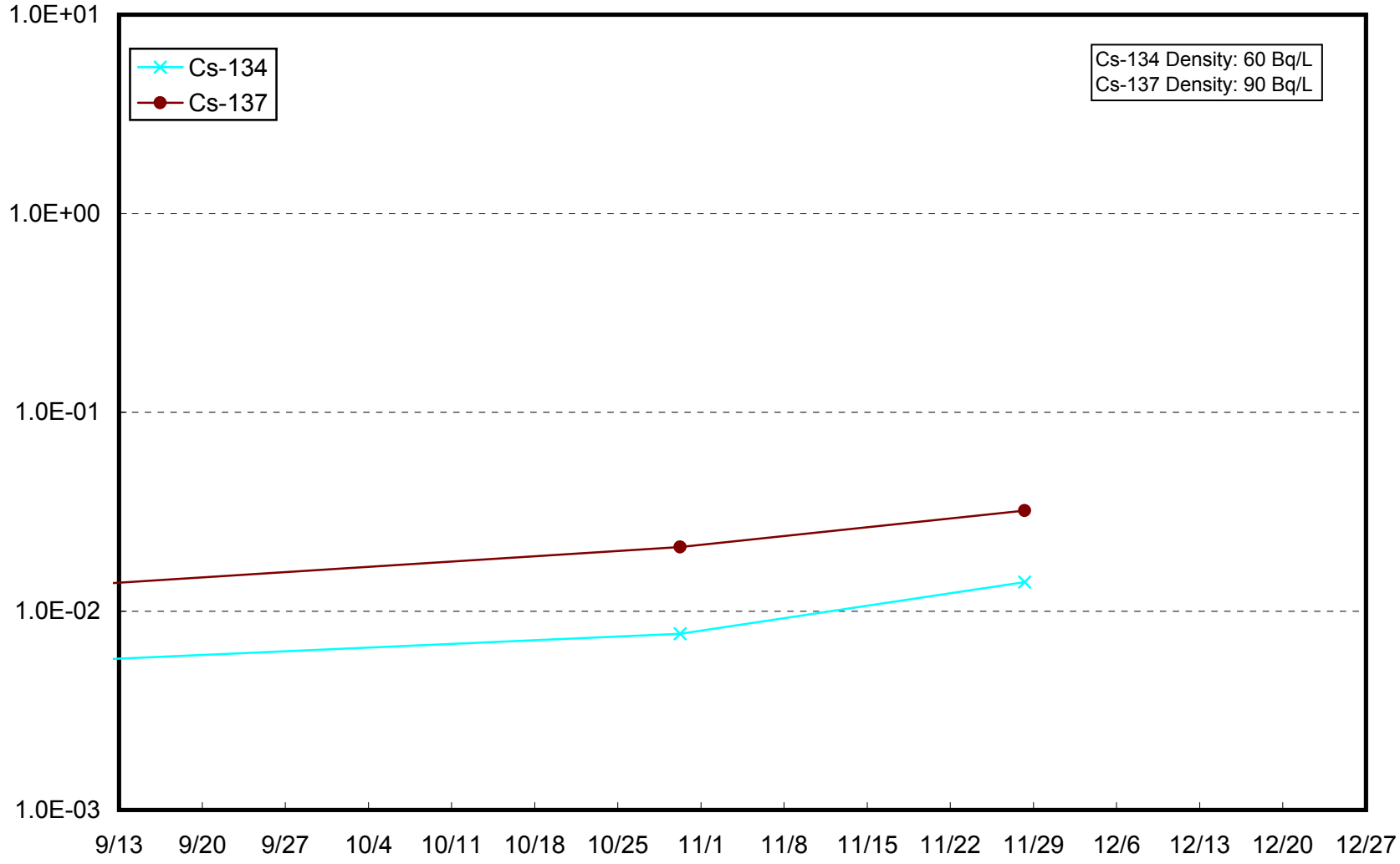
Radioactivity Density of the Seawater Around 1km Offshore of Ota River (T-S1) Upper Layer (Bq/L)



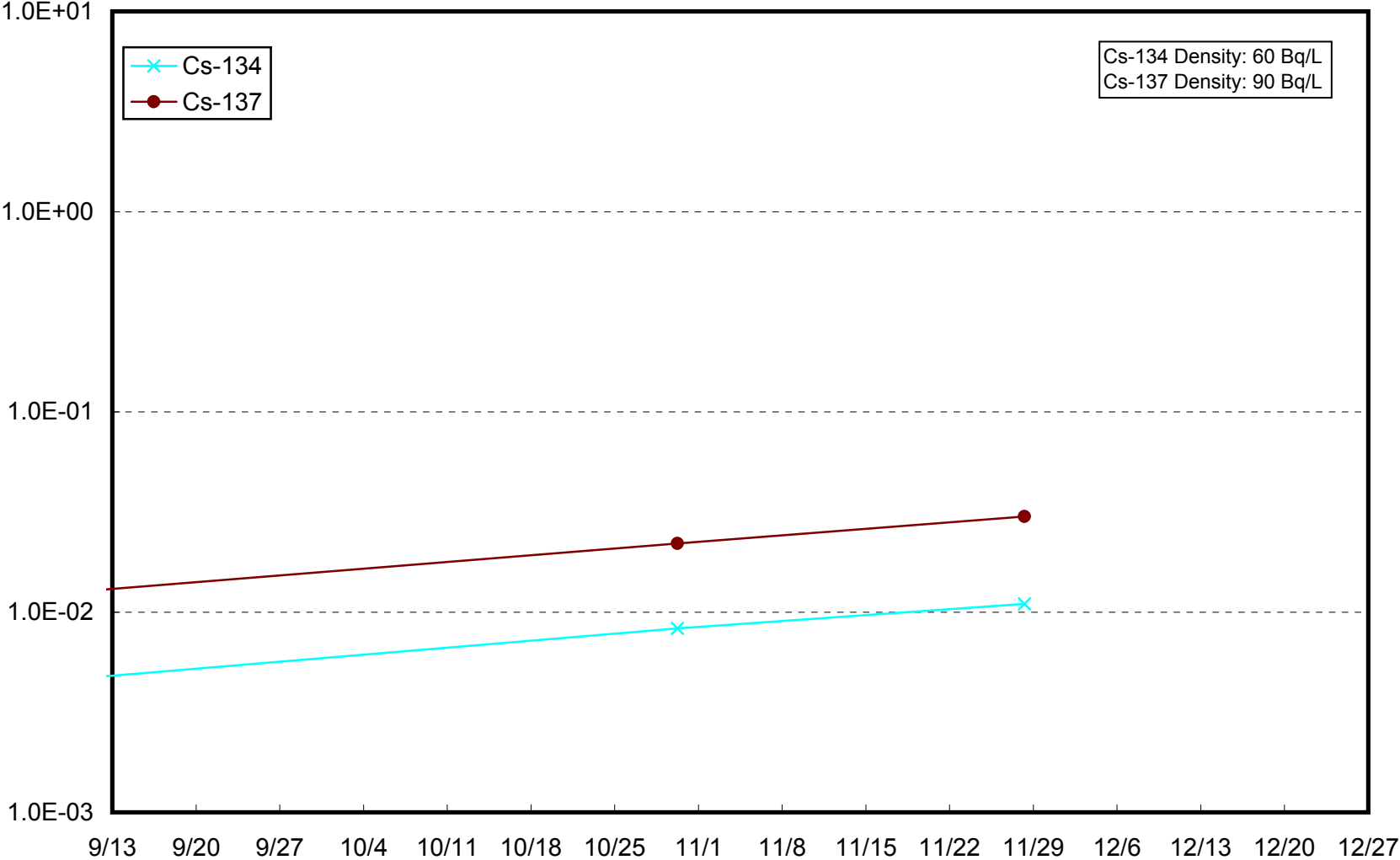
Radioactivity Density of the Seawater Around 1km Offshore of Ota River (T-S1) Lower Layer (Bq/L)



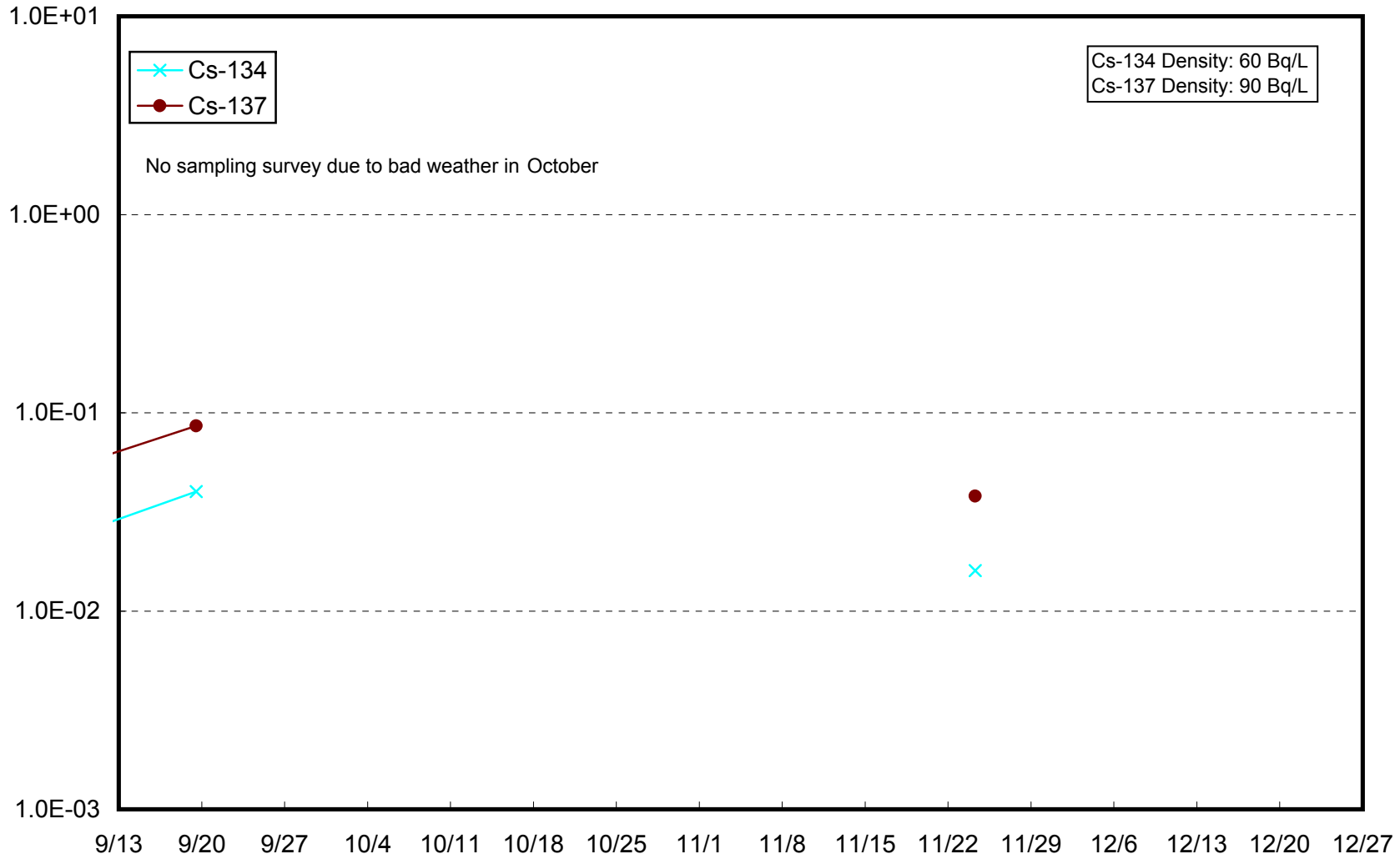
Radioactivity Density of the Seawater Around 3km Offshore of Odaka Ward (T-S2) Upper Layer (Bq/L)



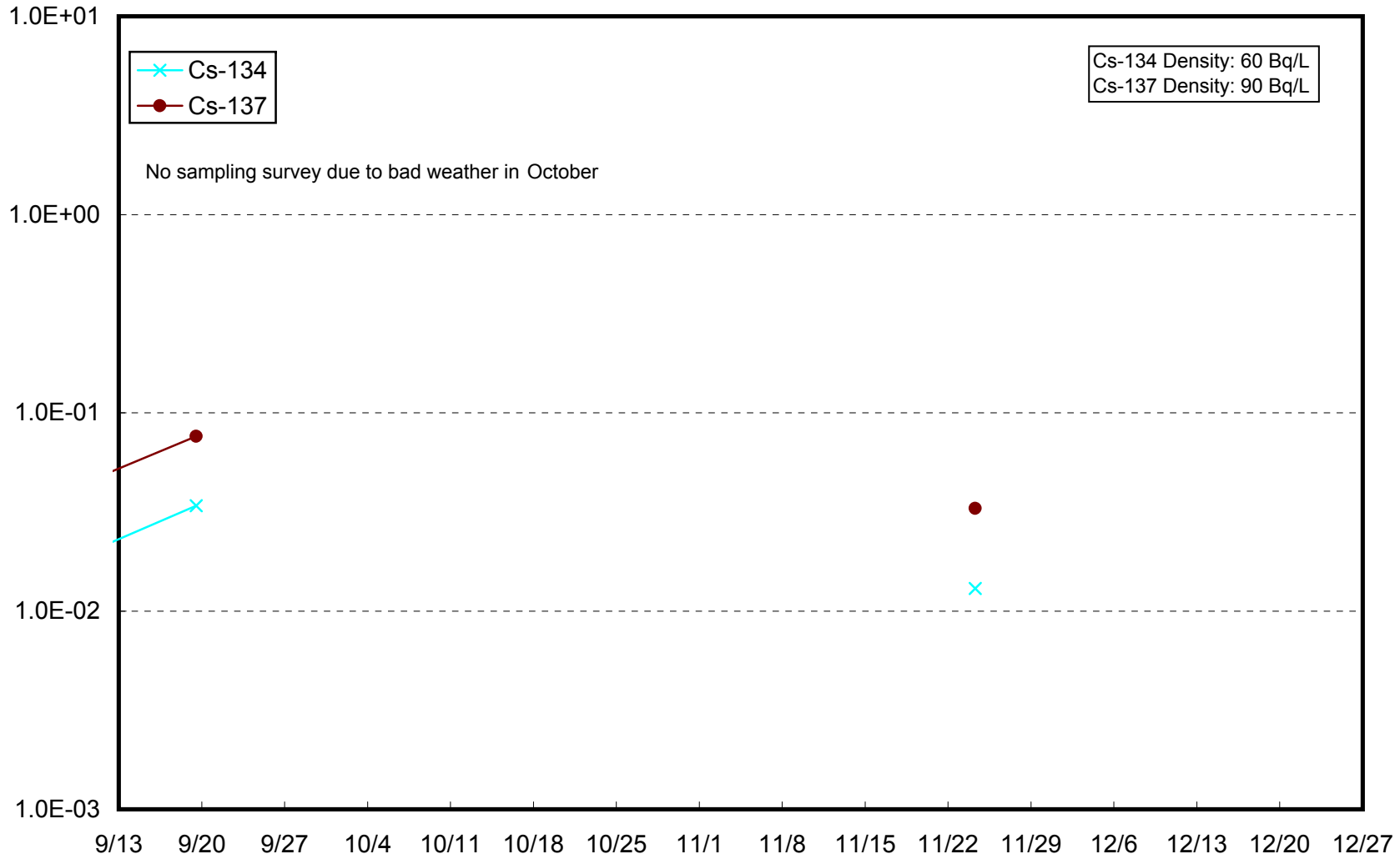
Radioactivity Density of the Seawater Around 3km Offshore of Odaka Ward (T-S2) Lower Layer (Bq/L)



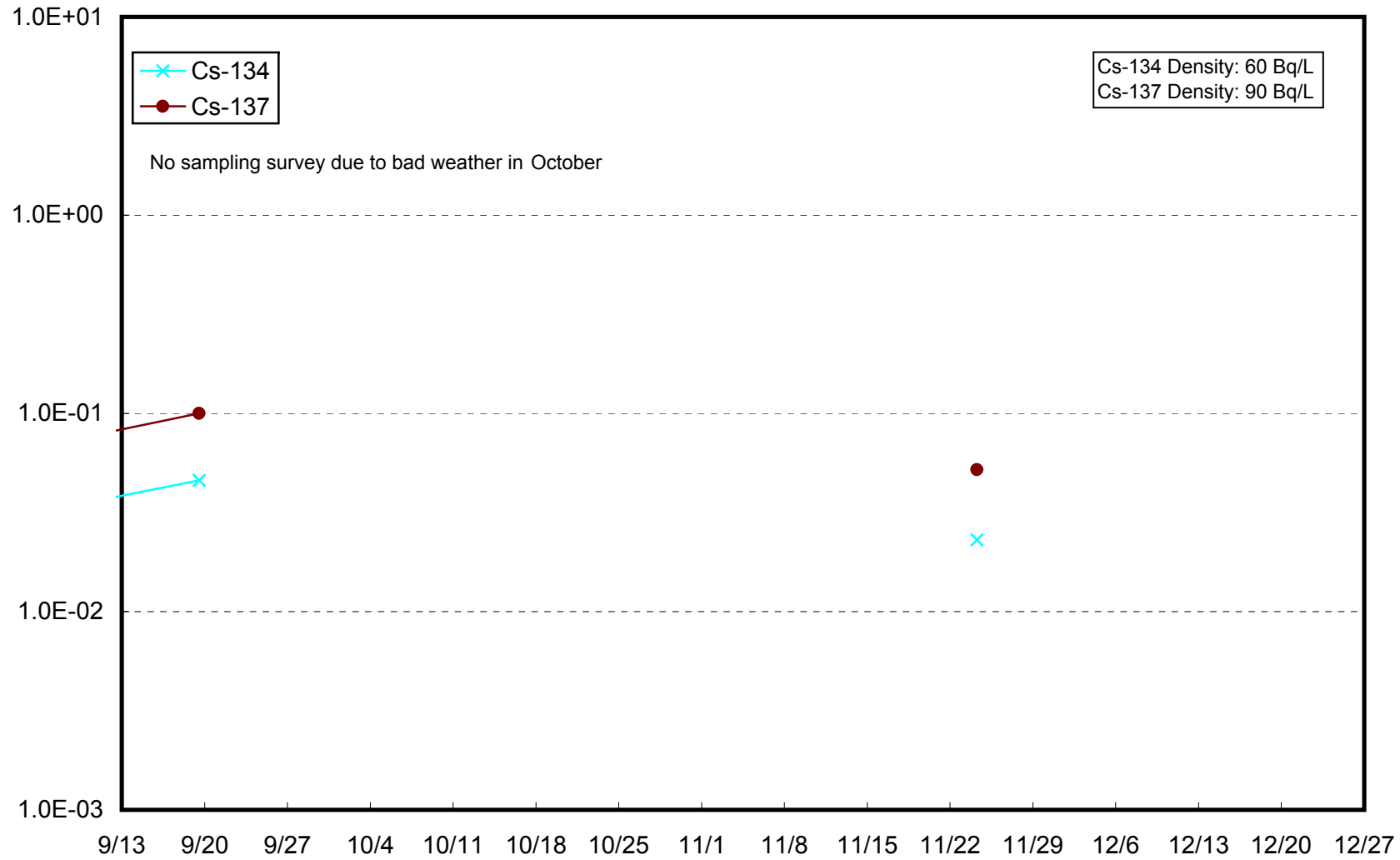
Radioactivity Density of the Seawater at 2km Offshore of Kido River (T-S5) Upper Layer (Bq/L)



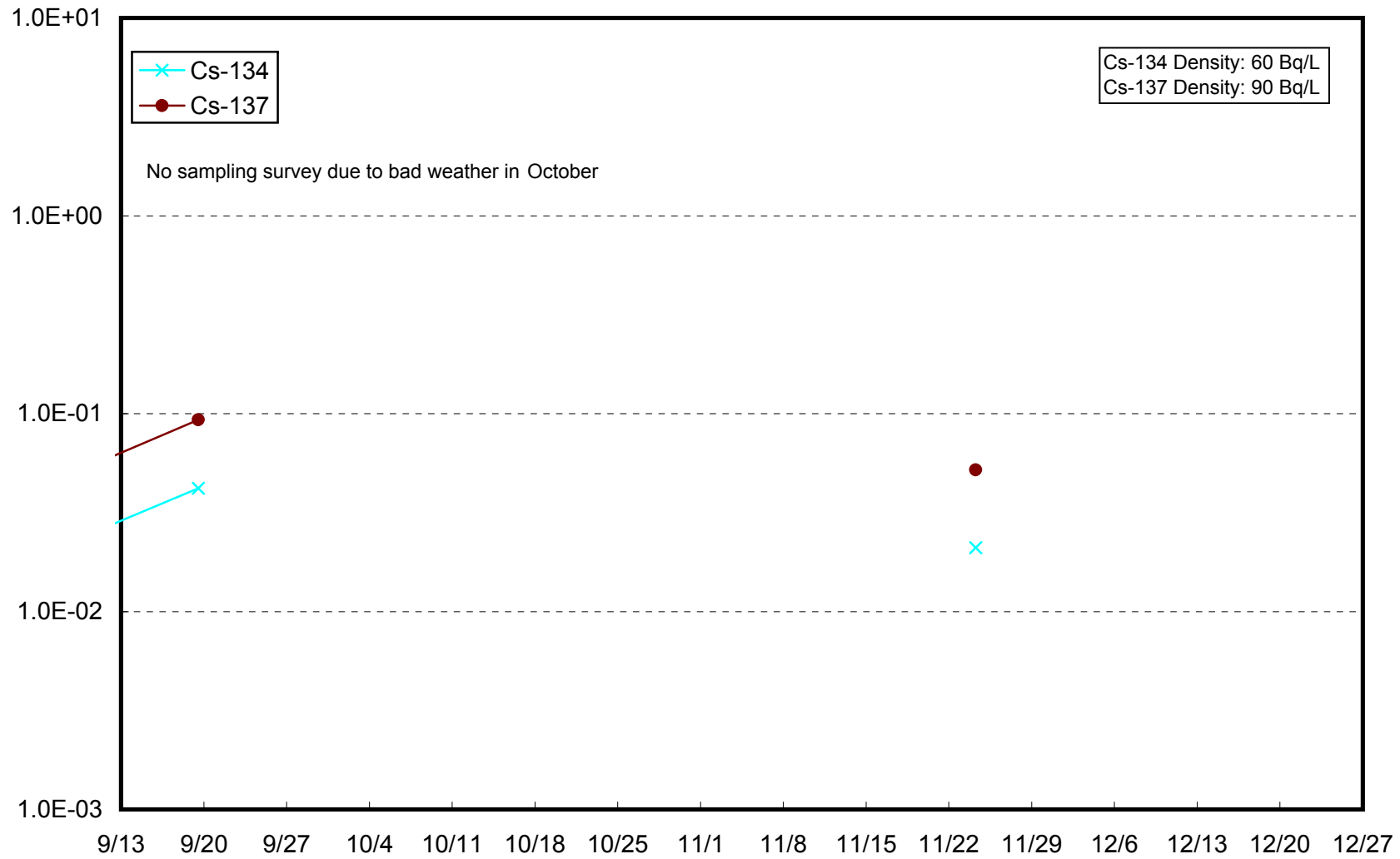
Radioactivity Density of the Seawater at 2km Offshore of Kido River (T-S5) Lower Layer (Bq/L)



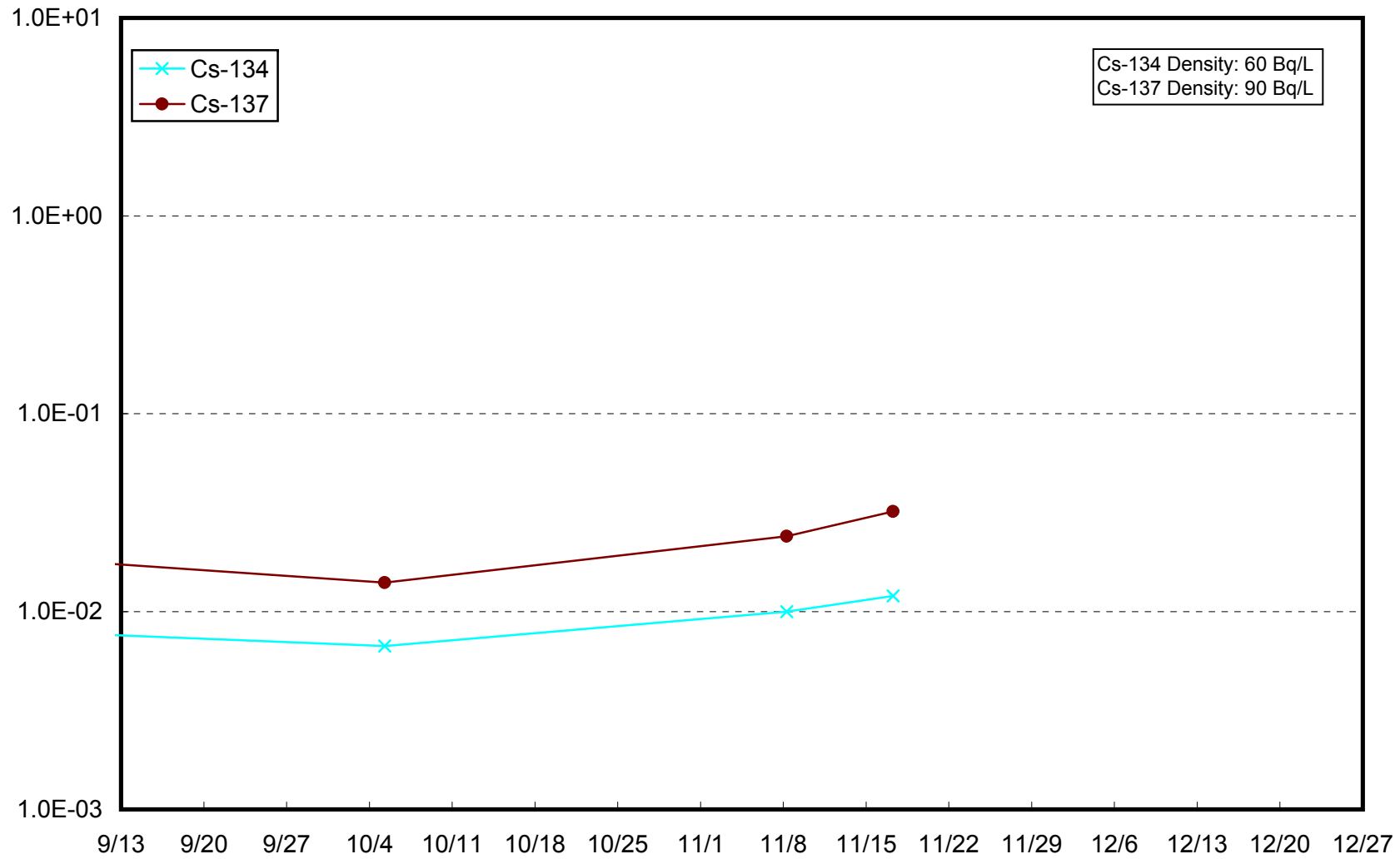
Radioactivity Density of the Seawater at 2km Offshore of Fukushima Daini NPS (T-S7) Upper Layer (Bq/L)



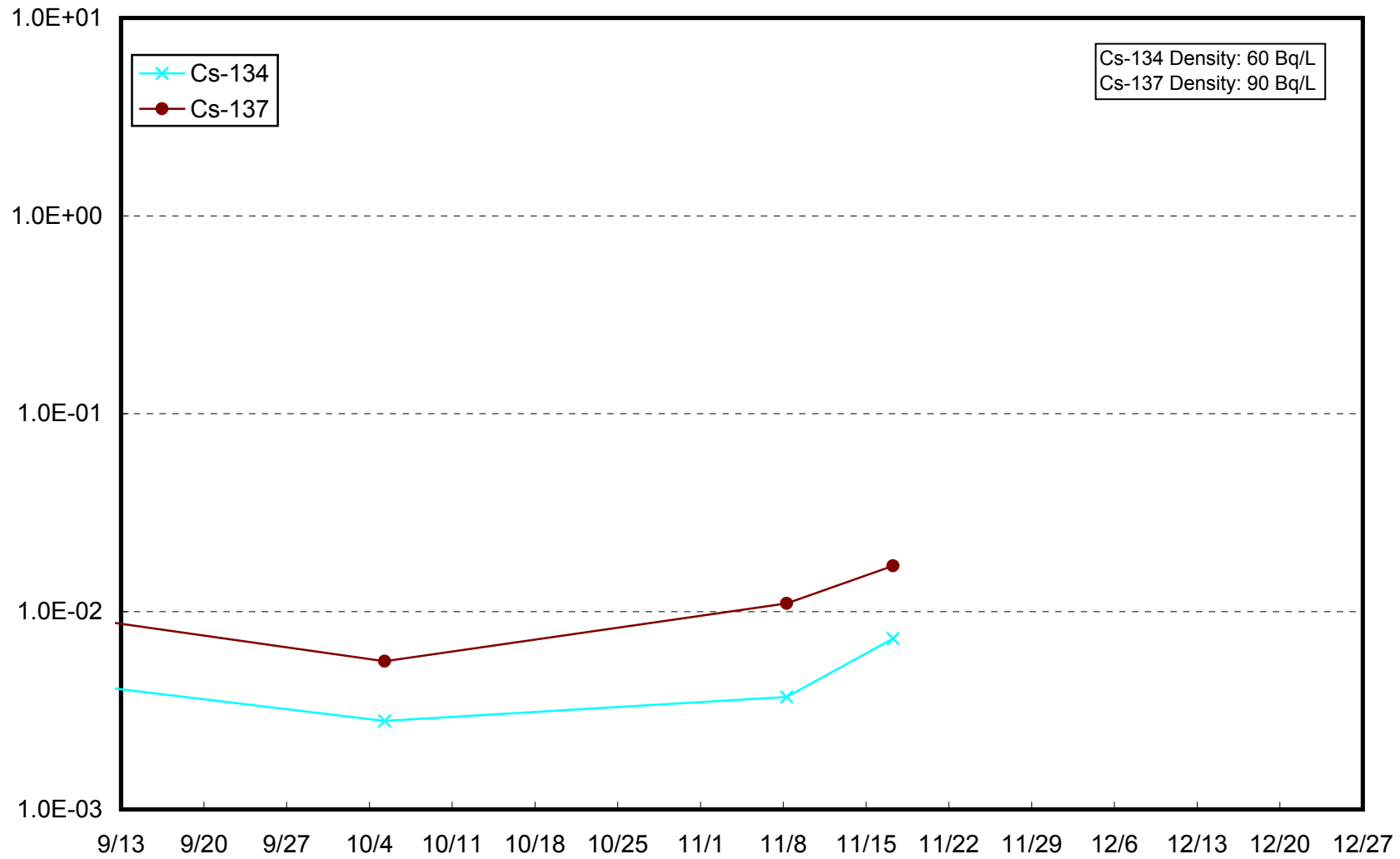
Radioactivity Density of the Seawater at 2km Offshore of Fukushima Daini NPS (T-S7) Lower Layer (Bq/L)



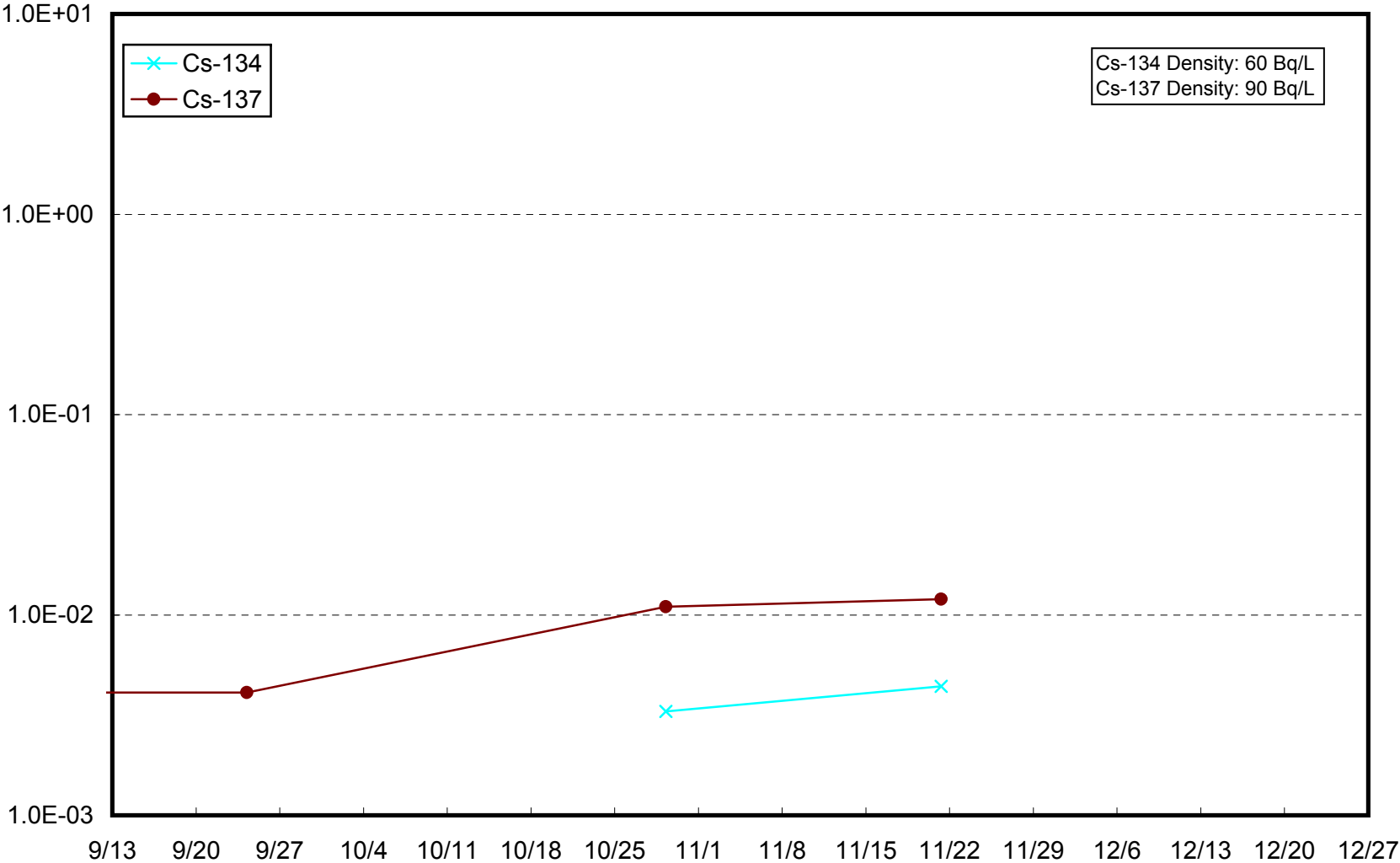
Radioactivity Density of the Seawater Around 4km Offshore of Kumagawa (T-S8) Upper Layer (Bq/L)



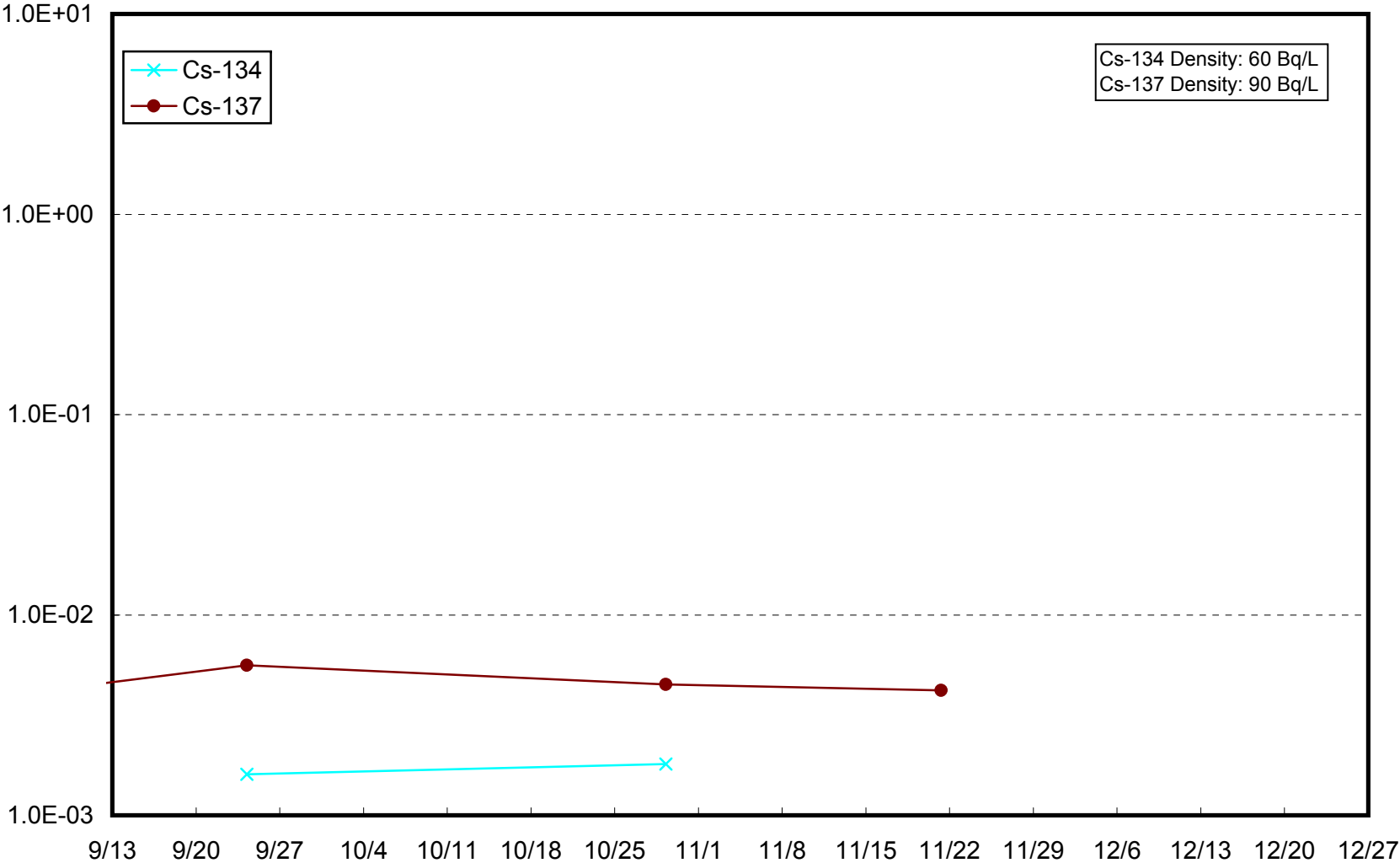
Radioactivity Density of the Seawater Around 4km Offshore of Kumagawa (T-S8) Lower Layer (Bq/L)



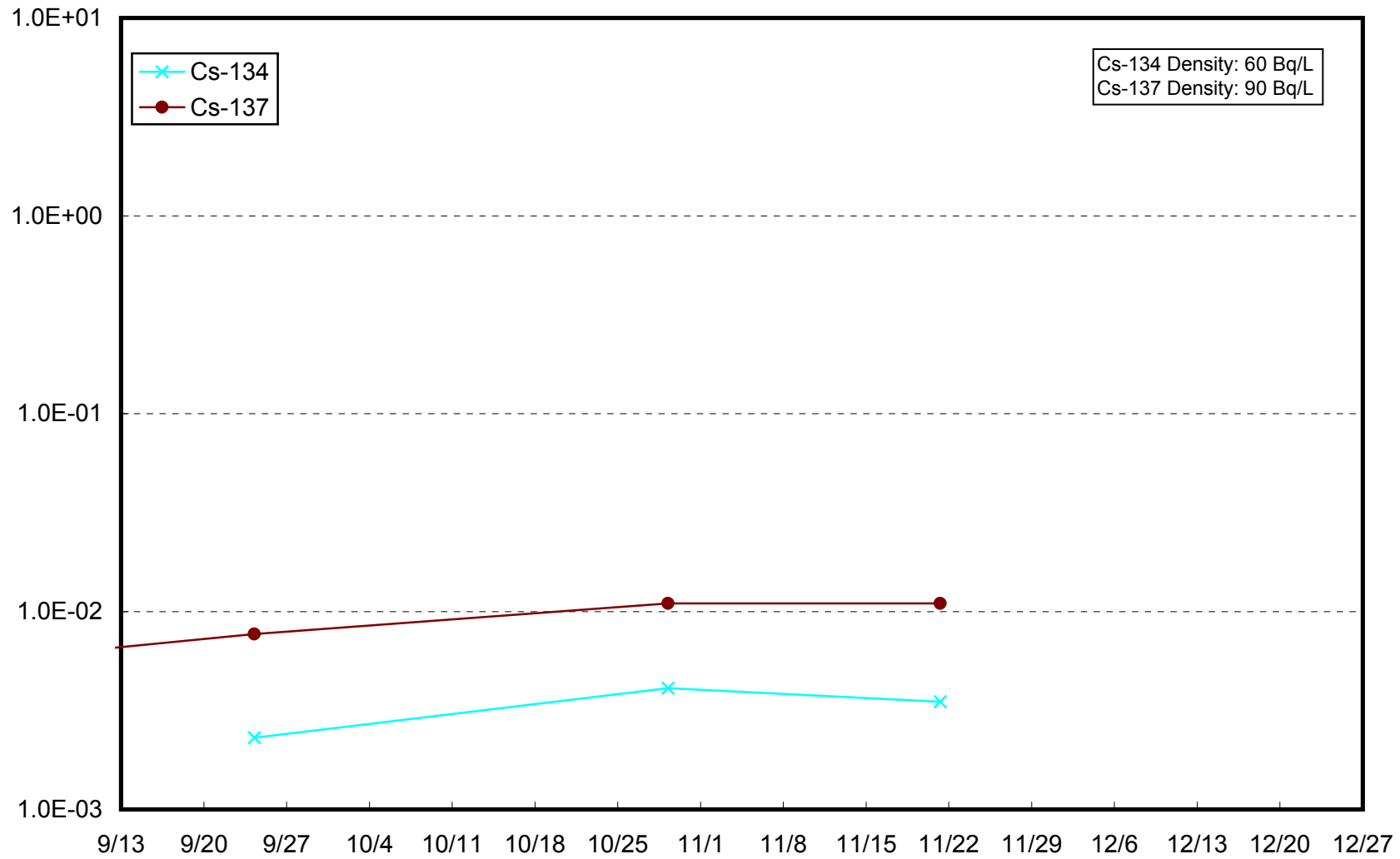
Radioactivity Density of the Seawater at 15km Offshore of Odaka Ward (T-B1) Upper Layer (Bq/L)



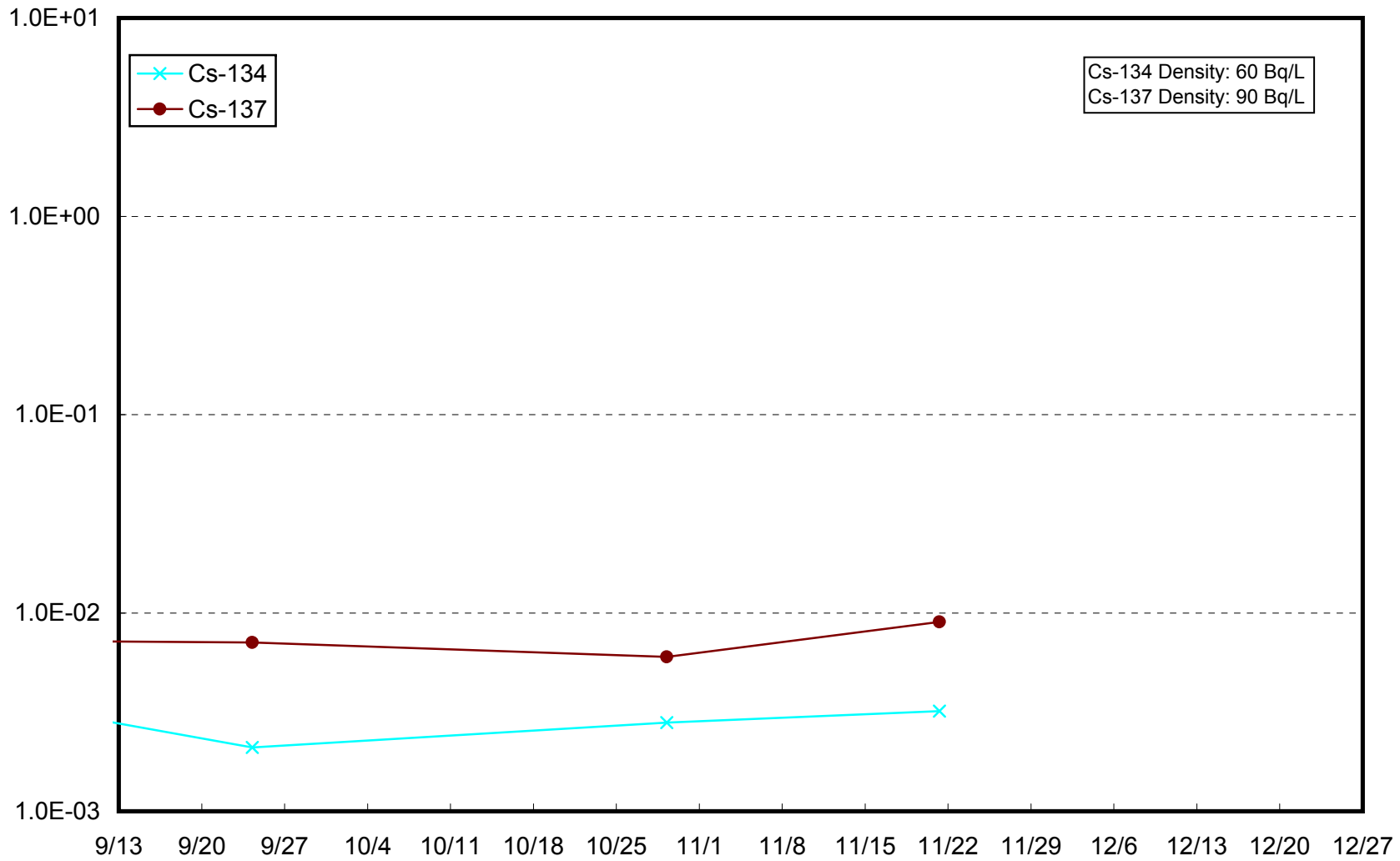
Radioactivity Density of the Seawater at 15km Offshore of Odaka Ward (T-B1) Lower Layer (Bq/L)



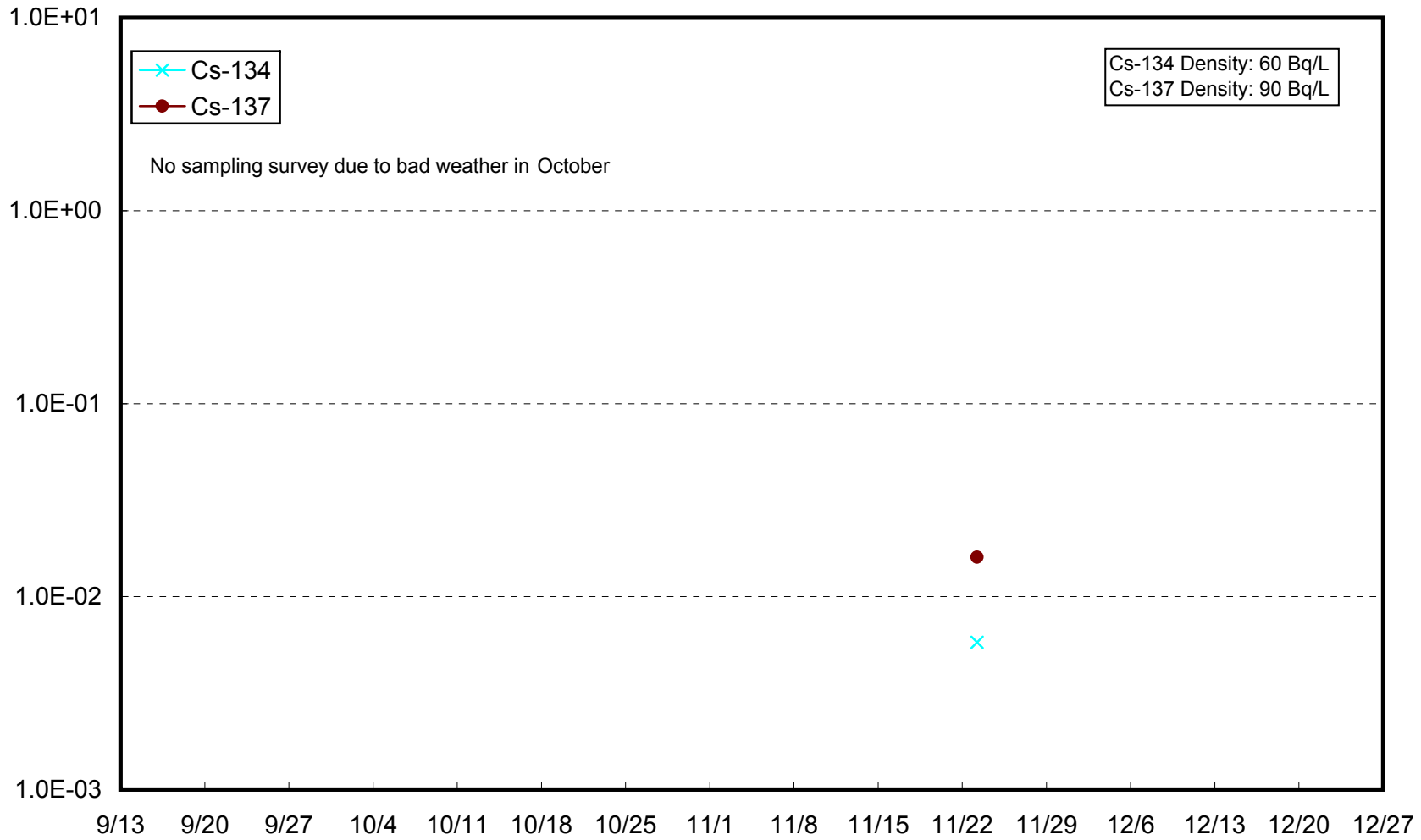
Radioactivity Density of the Seawater at 18km Offshore of Ukedo River (T-B2) Upper Layer (Bq/L)



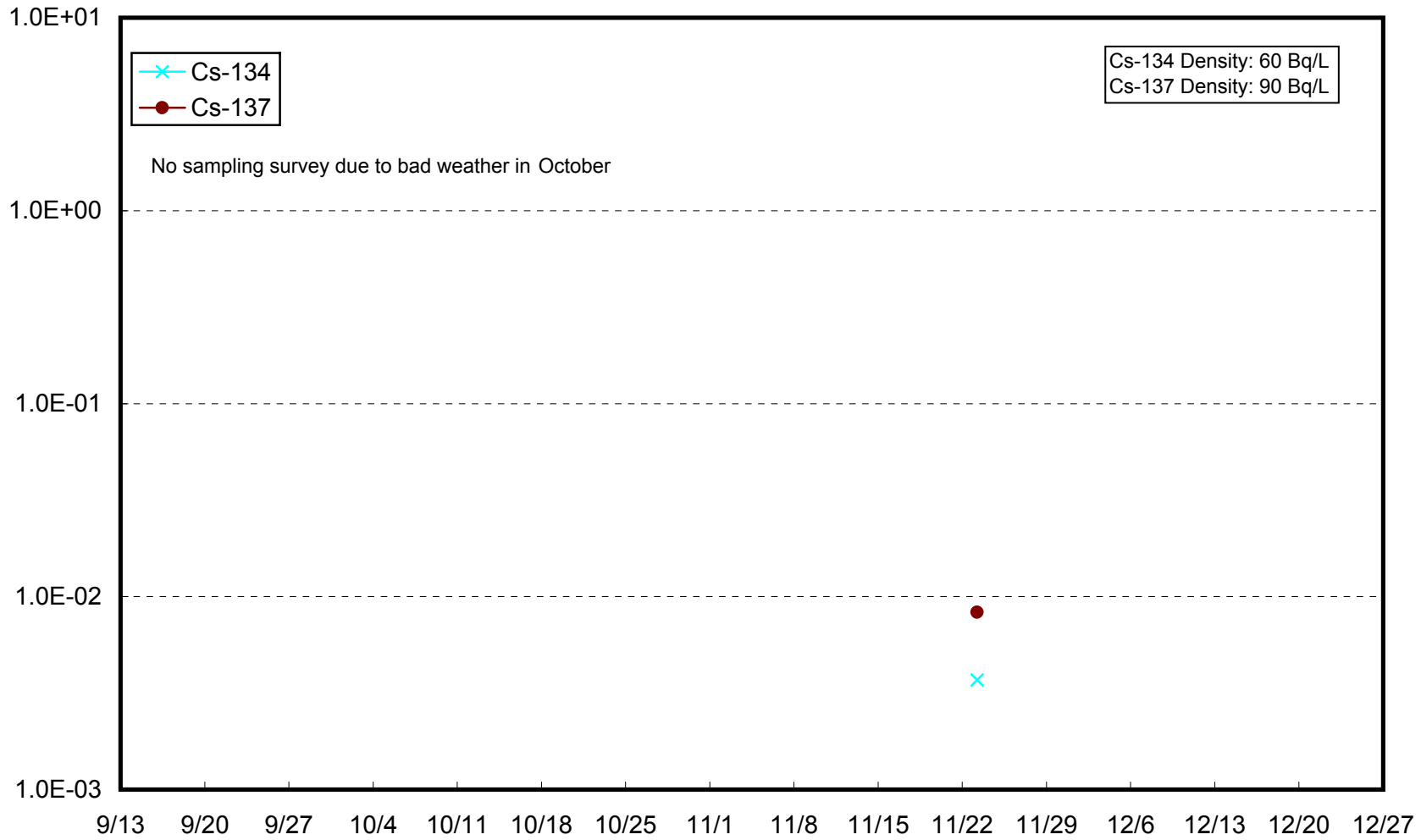
Radioactivity Density of the Seawater at 18km Offshore of Ukedo River (T-B2) Lower Layer (Bq/L)



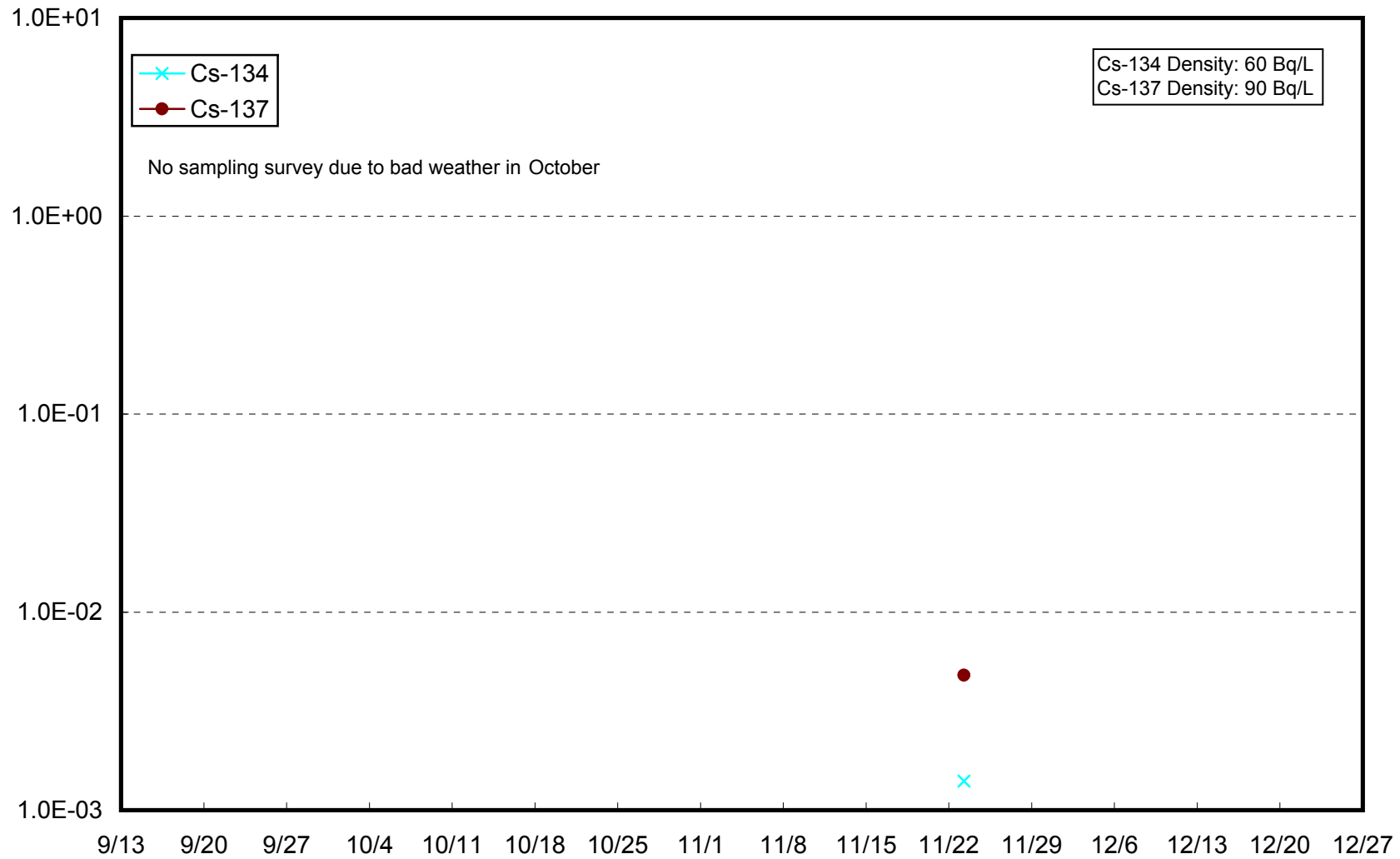
Radioactivity Density of the Seawater Around 10km Offshore of Fukushima Daiichi NPS (T-B3) Upper Layer (Bq/L)



Radioactivity Density of the Seawater Around 10km Offshore of Fukushima Daiichi NPS (T-B3) Lower Layer (Bq/L)



Radioactivity Density of the Seawater Around 10km Offshore of Fukushima Daini (T-B4) Upper Layer (Bq/L)



Radioactivity Density of the Seawater Around 10km Offshore of Fukushima Daini (T-B4) Lower Layer (Bq/L)

