

## Nuclide Analysis Results of Radioactive Materials in Seawater <Coast>

Reference
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(Data summarized on January 15)

Place of Sampling	North of Discharge Channel of 5-6u of 1F (approx. 30m north of 5-6u discharge channel)	Around South Discharge Channel of 1F ( approx. 330m south of 1-4u Discharge Channel)	Around North Discharge Channel of 2F ( Around 3,4u Discharge Channel) ( approx. 10 km from 1F )	Around Iwasawa Shore of 2F ( approx. 7 km south of 1,2u Discharge Channel) ( approx. 16 km from 1F )						
Time of Sampling	Jan 14, 2012 08:45 am	Jan 14, 2012 08:20 am	Jan 14, 2012 08:05 am	Jan 14, 2012 07:45 am	Density limit by the announcement of Reactor Regulation (Bq/L)  (the density limit in the water outside of surrounding monitored areas in the section 6 of the appendix 2)					
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 ( / )	
I-131 (about 8 days)	ND	-	ND	-		ND	-	ND	-	40
Cs-134 (about 2 years)	1.9	0.03	1.2	0.02		ND	-	ND	-	60
Cs-137 (about 30 years)	2.7	0.03	1.5	0.02	1.5	0.02	ND	-	90	

\* Density by the announcement of Reactor Regulation is stated with an amount converted from Bq/cm<sup>3</sup> to Bq/L.

\* Data of other nuclides are under evaluation.

\* In the case that two or more kinds of nuclides exist, sum of each scaling factor to the density limit is compared with 1.

\* "ND" means the sampled data is below measurable limit.

I-131: approx. 0.76Bq/L, Cs-134: approx. 0.86Bq/L, Cs-137: approx. 0.98Bq/L

Please note that these nuclides are sometimes detected even when they are below the limits, contingent on the detector or samples.

## Nuclide Analysis Results of Radioactive Materials in Seawater <Offshore 1/3>

Reference

(Data summarized on January 15)

Place of Sampling	15 km offshore of Minami-Souma City Upper Layer	15 km offshore of Minami-Souma City Lower Layer	15 km offshore of Ukedo-gawa Upper Layer	15 km offshore of Ukedo-gawa Lower Layer	15 km offshore of Fukushima Daiichi Upper Layer	15 km offshore of Fukushima Daiichi Lower Layer	② Density limit by the announcement of Reactor Regulation (Bq/L) (the density limit in the water outside of surrounding monitored areas in the section 6 of the appendix 2)						
Time of Sampling	Jan 13, 2012 09:45 am	Jan 13, 2012 09:45 am	N/A	N/A	N/A	N/A							
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)
I-131 (about 8 days)	ND	-	ND	-	-	-	-	-	-	-	-	-	40
Cs-134 (about 2 years)	ND	-	ND	-	-	-	-	-	-	-	-	-	60
Cs-137 (about 30 years)	ND	-	ND	-	-	-	-	-	-	-	-	-	90

Place of Sampling	15 km offshore of Fukushima Daini Upper Layer	15 km offshore of Fukushima Daini Lower Layer	15 km offshore of Iwasawa Shore Upper Layer	15 km offshore of Iwasawa Shore Lower Layer	15 km offshore of Hirono-town Upper Layer	15 km offshore of Hirono-town Lower Layer	② Density limit by the announcement of Reactor Regulation (Bq/L) (the density limit in the water outside of surrounding monitored areas in the section 6 of the appendix 2)						
Time of Sampling	N/A	N/A	Jan 13, 2012 10:20 am	Jan 13, 2012 10:20 am	Jan 13, 2012 09:35 am	Jan 13, 2012 09:35 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)
I-131 (about 8 days)	-	-	-	-	ND	-	ND	-	ND	-	ND	-	40
Cs-134 (about 2 years)	-	-	-	-	ND	-	ND	-	ND	-	ND	-	60
Cs-137 (about 30 years)	-	-	-	-	ND	-	ND	-	ND	-	ND	-	90

\* Density by the announcement of Reactor Regulation is stated with an amount converted from Bq/cm<sup>3</sup> to Bq/L.

\* Data of other nuclides are under evaluation.

\* In the case that two or more kinds of nuclides exist, sum of each scaling factor to the density limit is compared with 1.

\* "ND" means the sampled data is below measurable limit.

I-131: approx. 0.74Bq/L, Cs-134: approx. 0.91Bq/L, Cs-137: approx. 1.0Bq/L

Please note that these nuclides are sometimes detected even when they are below the limits, contingent on the detector or samples.

## Nuclide Analysis Results of Radioactive Materials in Seawater <Offshore 2/3>

Reference

(Data summarized on January 15)

Place of Sampling	3 km offshore of Haramachi Ward Upper Layer	3 km offshore of Haramachi Ward Lower Layer	3 km offshore of Odaka Ward Upper Layer	3 km offshore of Odaka Ward Lower Layer	3 km offshore of Iwasawa shore Upper Layer	3 km offshore of Iwasawa shore Lower Layer							② Density limit by the announcement of Reactor Regulation (Bq/L) (the density limit in the water outside of surrounding monitored areas in the section 6 of the appendix 2)
Time of Sampling	Jan 13, 2012 10:30 am	Jan 13, 2012 10:30 am	Jan 13, 2012 10:40 am	Jan 13, 2012 10:40 am	Jan 13, 2012 11:20 am	Jan 13, 2012 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)	
I-131 (about 8 days)	ND	-	ND	-	ND	-	ND	-	ND	-	ND	-	40
Cs-134 (about 2 years)	ND	-	ND	-	ND	-	ND	-	ND	-	ND	-	60
Cs-137 (about 30 years)	ND	-	ND	-	ND	-	ND	-	ND	-	ND	-	90

Place of Sampling	8 km offshore of Odaka Ward Upper Layer	8 km offshore of Odaka Ward Lower Layer	8 km offshore of Iwasawa shore Upper Layer	8 km offshore of Iwasawa shore Lower Layer									② Density limit by the announcement of Reactor Regulation (Bq/L) (the density limit in the water outside of surrounding monitored areas in the section 6 of the appendix 2)
Time of Sampling	Jan 13, 2012 08:40 am	Jan 13, 2012 08:40 am	Jan 13, 2012 10:55 am	Jan 13, 2012 10:55 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)	
I-131 (about 8 days)	ND	-	ND	-	ND	-	ND	-	/	/	/	/	40
Cs-134 (about 2 years)	ND	-	ND	-	ND	-	ND	-	/	/	/	/	60
Cs-137 (about 30 years)	ND	-	ND	-	ND	-	ND	-	/	/	/	/	90

\* Density by the announcement of Reactor Regulation is stated with an amount converted from Bq/cm<sup>3</sup> to Bq/L.

\* Data of other nuclides are under evaluation.

\* In the case that two or more kinds of nuclides exist, sum of each scaling factor to the density limit is compared with 1.

\* "ND" means the sampled data is below measurable limit.

I-131: approx. 0.68Bq/L, Cs-134: approx. 0.91Bq/L, Cs-137: approx. 1.1Bq/L

Please note that these nuclides are sometimes detected even when they are below the limits, contingent on the detector or samples.

## Nuclide Analysis Results of Radioactive Materials in Seawater <Offshore 3/3>

Reference

(Data summarized on January 15)

Place of Sampling	3 km offshore of North of Iwaki Upper Layer		3 km offshore of North of Iwaki Lower Layer		3 km offshore of Natsui river Upper Layer		3 km offshore of Natsui river Lower Layer		3 km offshore of Onahama port Upper Layer		3 km offshore of Onahama port Lower Layer		② Density limit by the announcement of Reactor Regulation (Bq/L) (the density limit in the water outside of surrounding monitored areas in the section 6 of the appendix 2)
	N/A		N/A		N/A		N/A		Jan 13, 2012 06:25 am		Jan 13, 2012 06:25 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)	
I-131 (about 8 days)	-	-	-	-	-	-	-	-	ND	-	ND	-	40
Cs-134 (about 2 years)	-	-	-	-	-	-	-	-	ND	-	ND	-	60
Cs-137 (about 30 years)	-	-	-	-	-	-	-	-	ND	-	ND	-	90

Place of Sampling	3 km offshore of Ena Upper Layer		3 km offshore of Ena Lower Layer		3 km offshore of Numanouchi Upper Layer		3 km offshore of Numanouchi Lower Layer		3 km offshore of Toyoma Upper Layer		3 km offshore of Toyoma Lower Layer		② Density limit by the announcement of Reactor Regulation (Bq/L) (the density limit in the water outside of surrounding monitored areas in the section 6 of the appendix 2)
	Jan 13, 2012 07:30 am		Jan 13, 2012 07:30 am		N/A		N/A		N/A		N/A		
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)	
I-131 (about 8 days)	ND	-	ND	-	-	-	-	-	-	-	-	-	40
Cs-134 (about 2 years)	ND	-	ND	-	-	-	-	-	-	-	-	-	60
Cs-137 (about 30 years)	ND	-	ND	-	-	-	-	-	-	-	-	-	90

\* Density by the announcement of Reactor Regulation is stated with an amount converted from Bq/cm<sup>3</sup> to Bq/L.

\* Data of other nuclides are under evaluation.

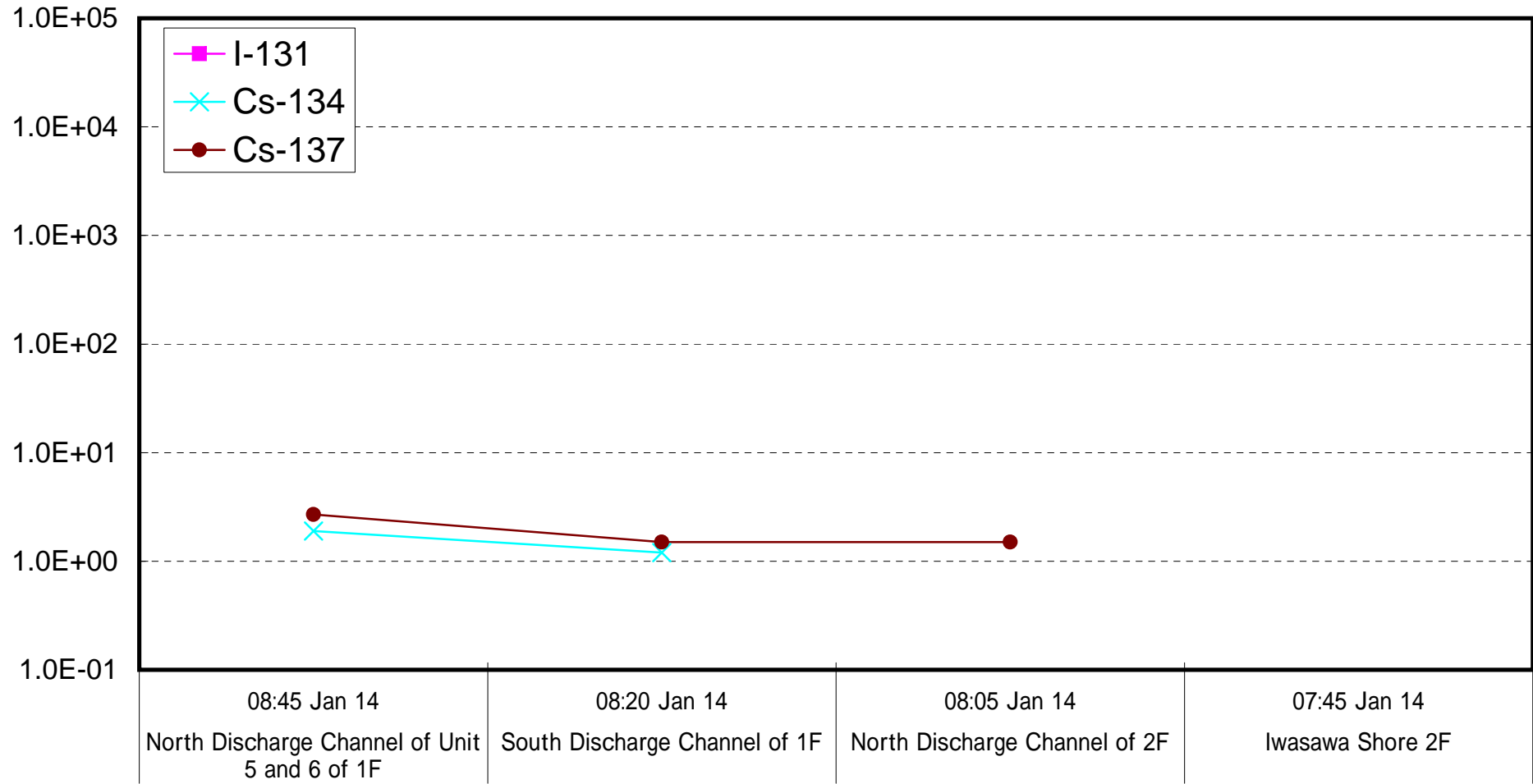
\* In the case that two or more kinds of nuclides exist, sum of each scaling factor to the density limit is compared with 1.

\* "ND" means the sampled data is below measurable limit.

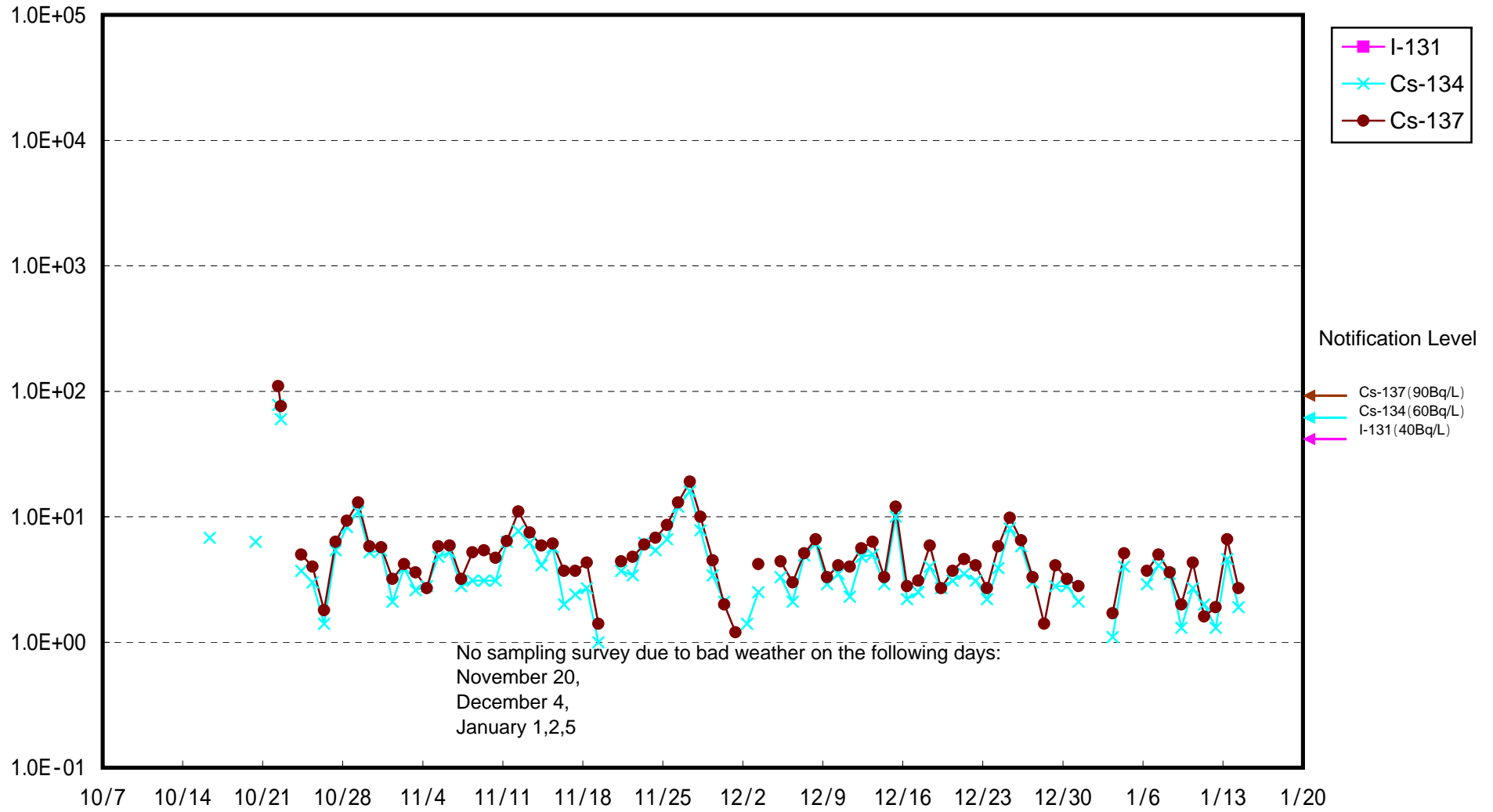
I-131: approx. 0.67Bq/L, Cs-134: approx. 0.93Bq/L, Cs-137: approx. 1.1Bq/L

Please note that these nuclides are sometimes detected even when they are below the limits, contingent on the detector or samples.

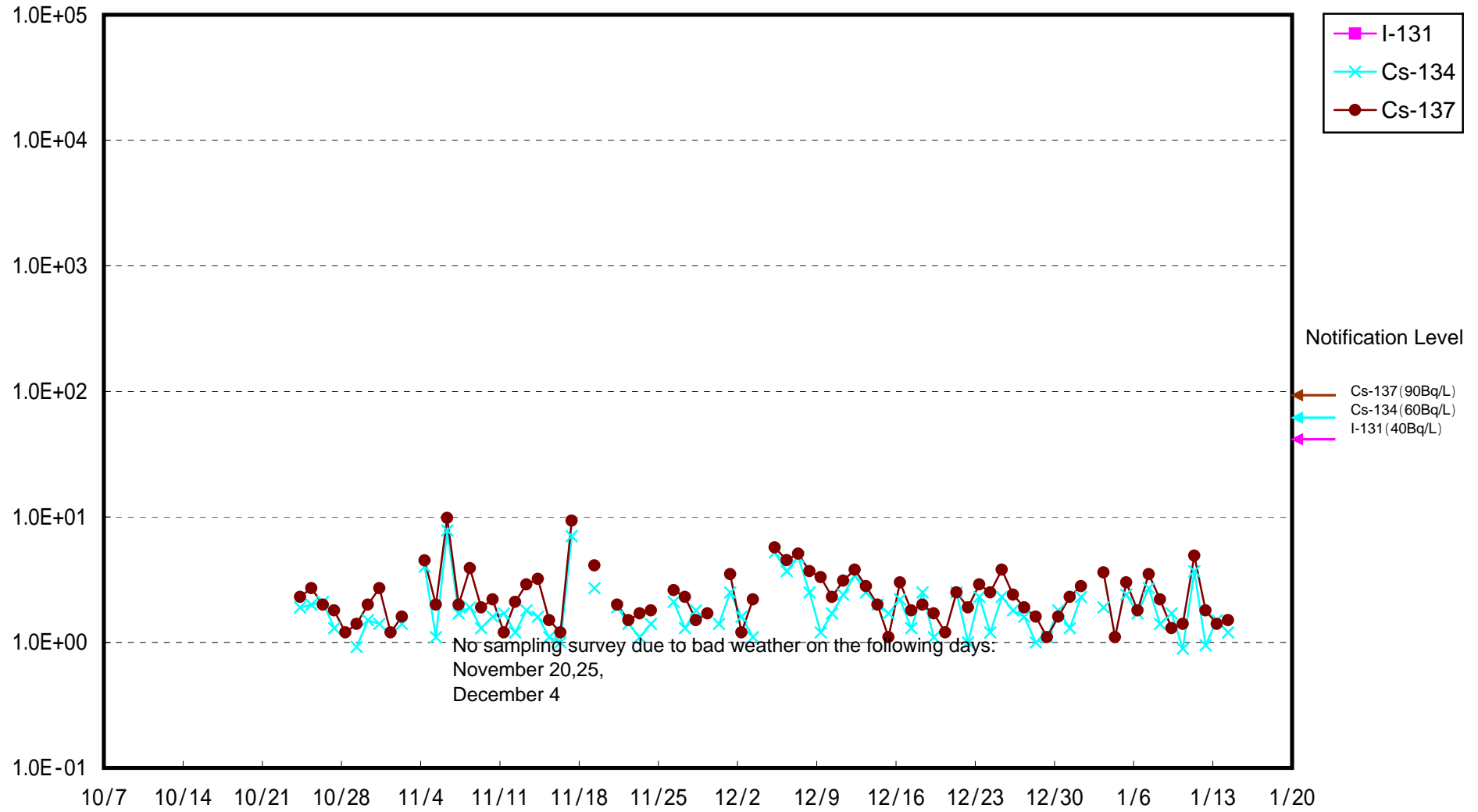
# Radioactivity Density of Seawater (Bq/L)



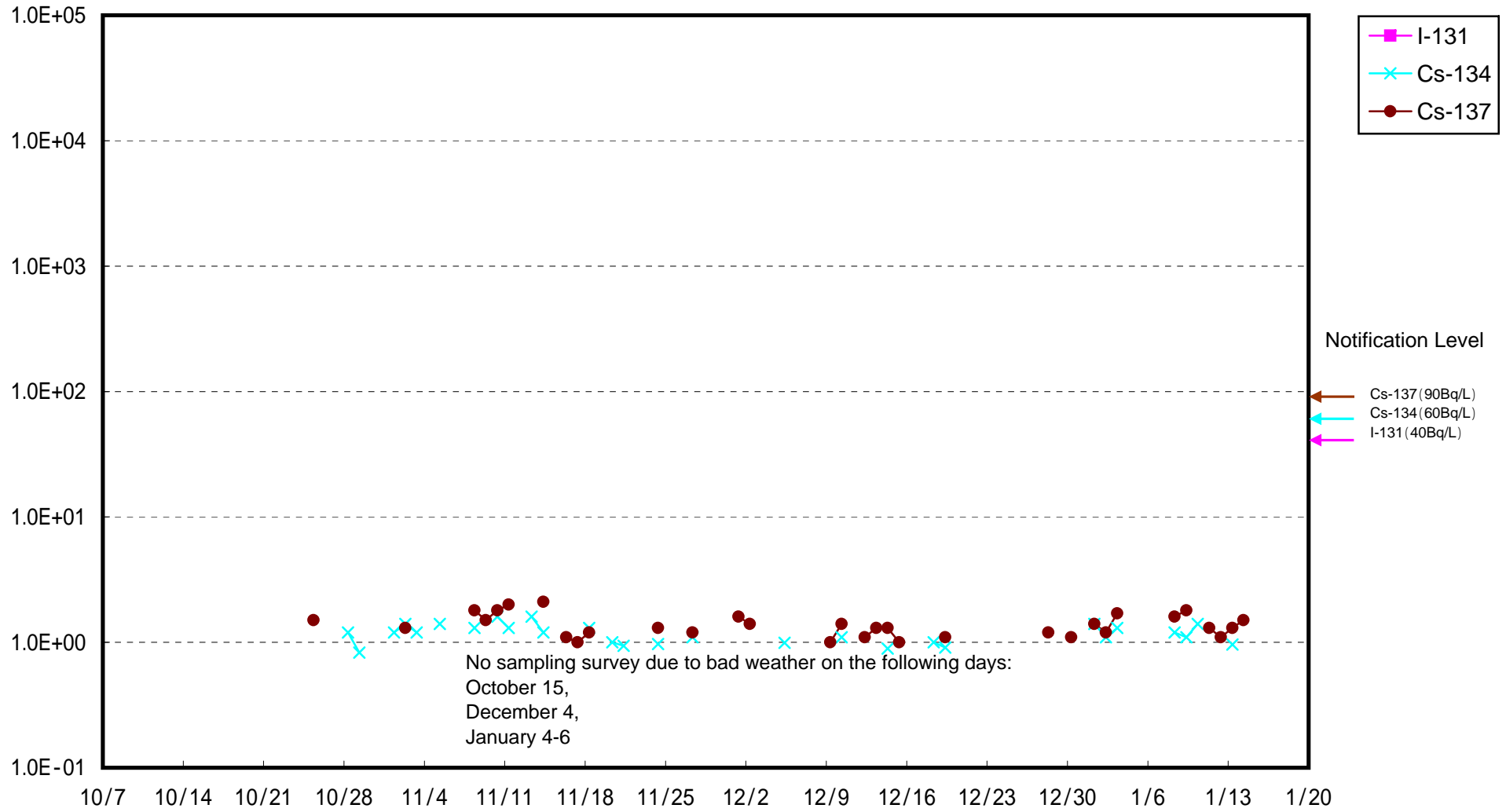
Radioactivity Density of Seawater at North of 1F5-6 Discharge Channel (Bq/L)



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

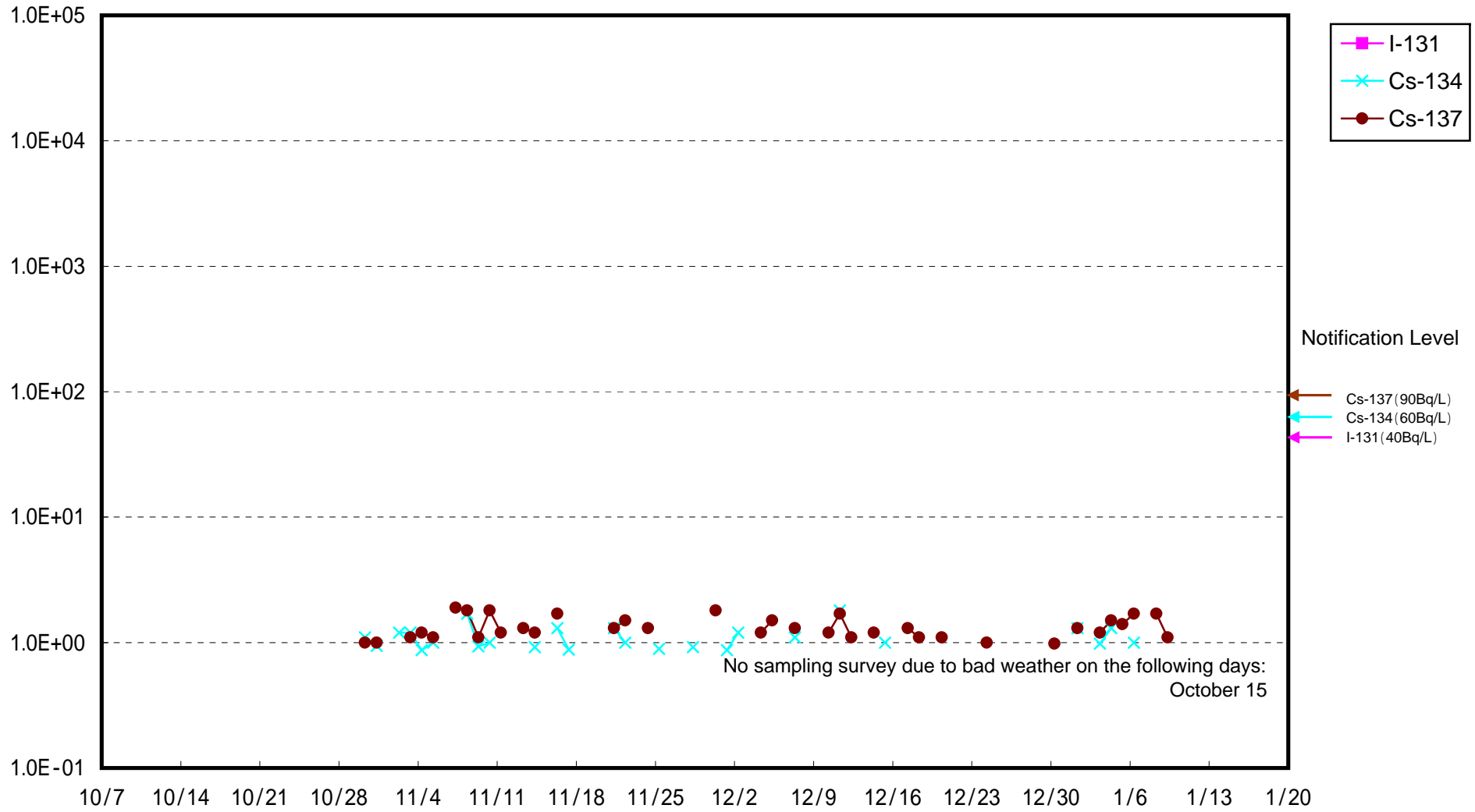


Radioactivity Density of Seawater at North Discharge Channel of 2F (Bq/L)

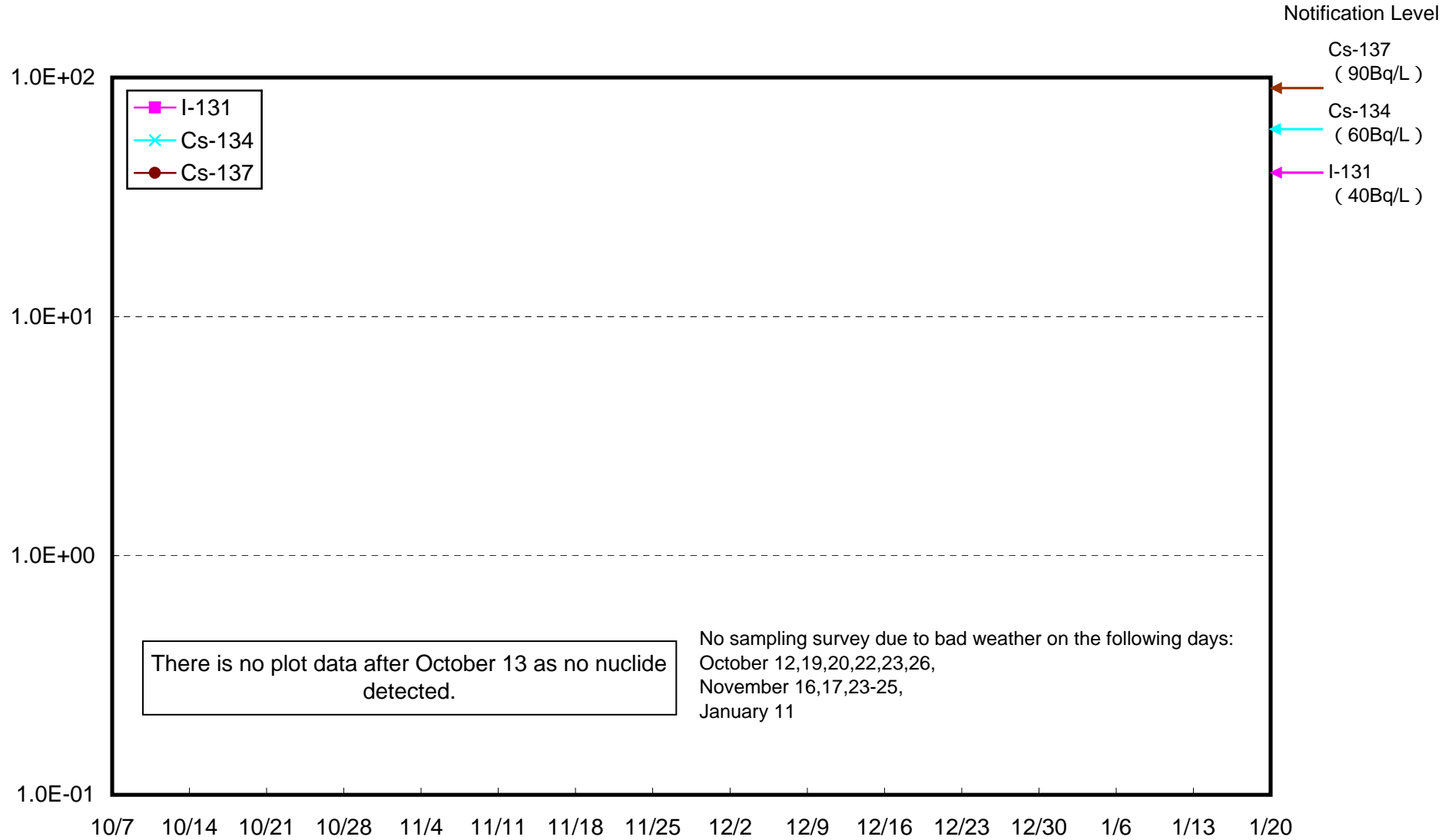




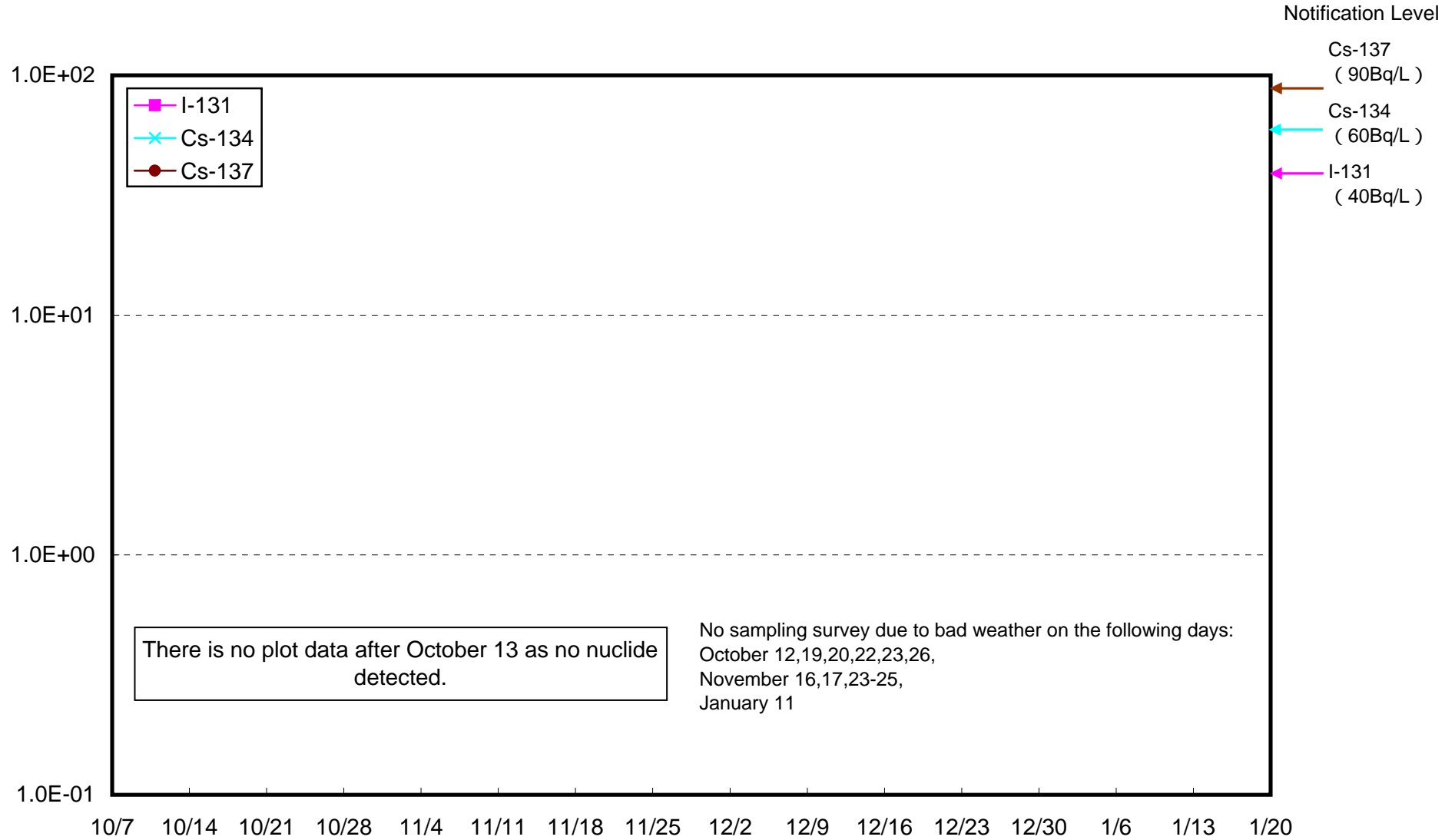
Radioactivity Density of Seawater at Iwasawa Shore 2F (Bq/L)



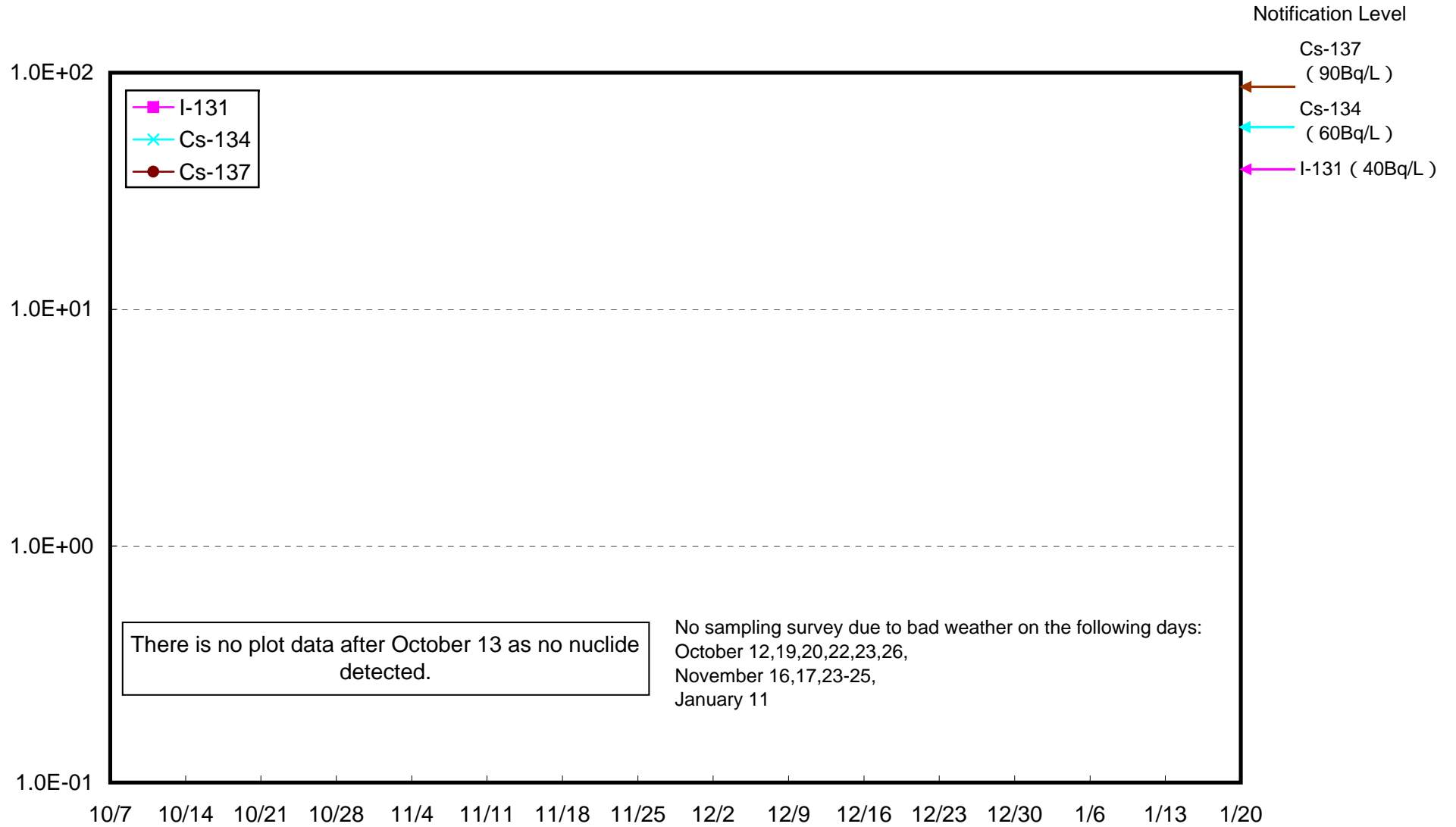
15km offshore of Minami Soma city Upper Layer Radioactivity Density of Seawater (Bq/L)



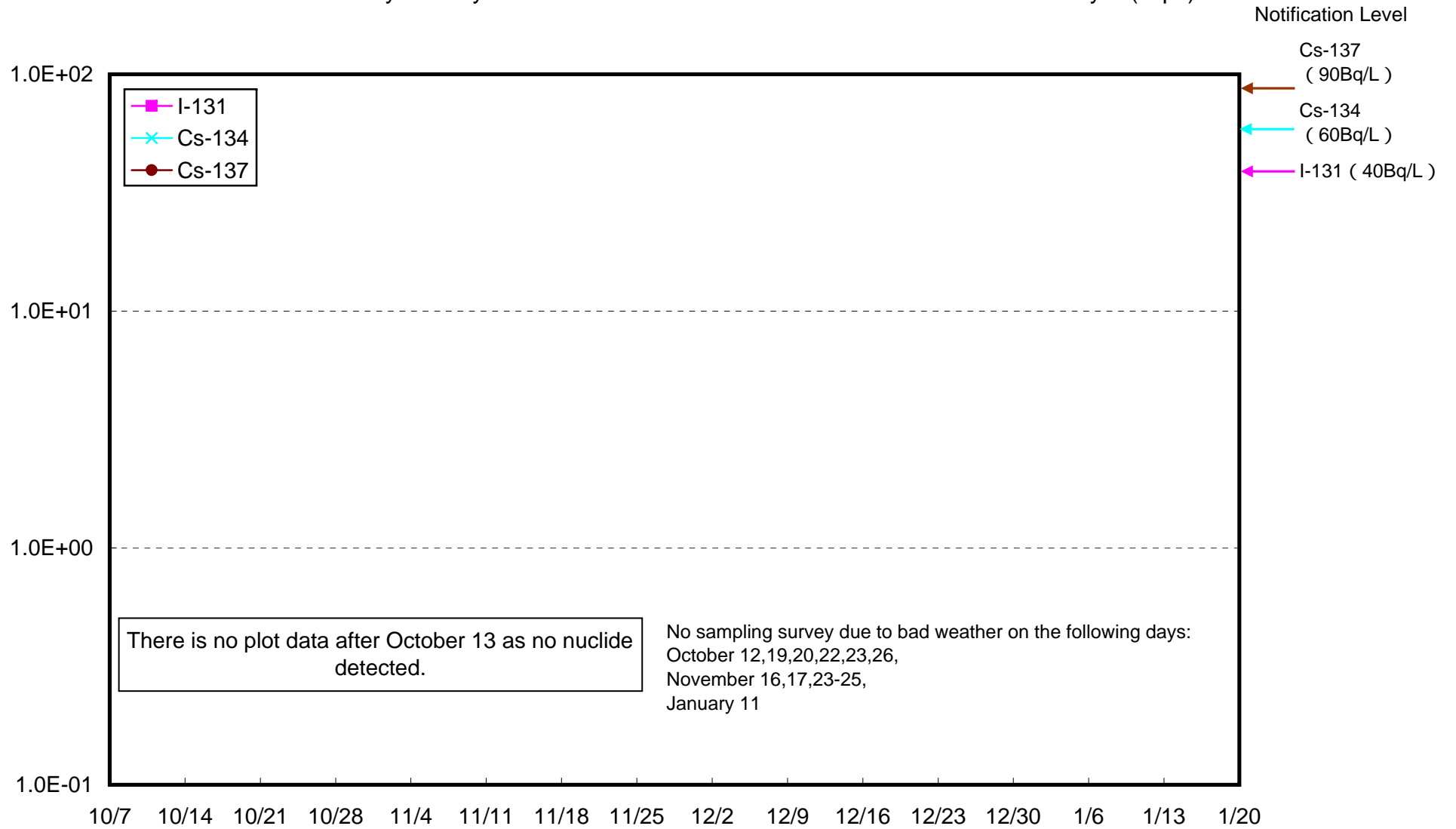
15km offshore of Minami Soma city Lower Layer Radioactivity Density of Seawater (Bq/L)



# Radioactivity Density of Seawater 15km Offshore of Iwasawa Shore Upper Layer (Bq/L)

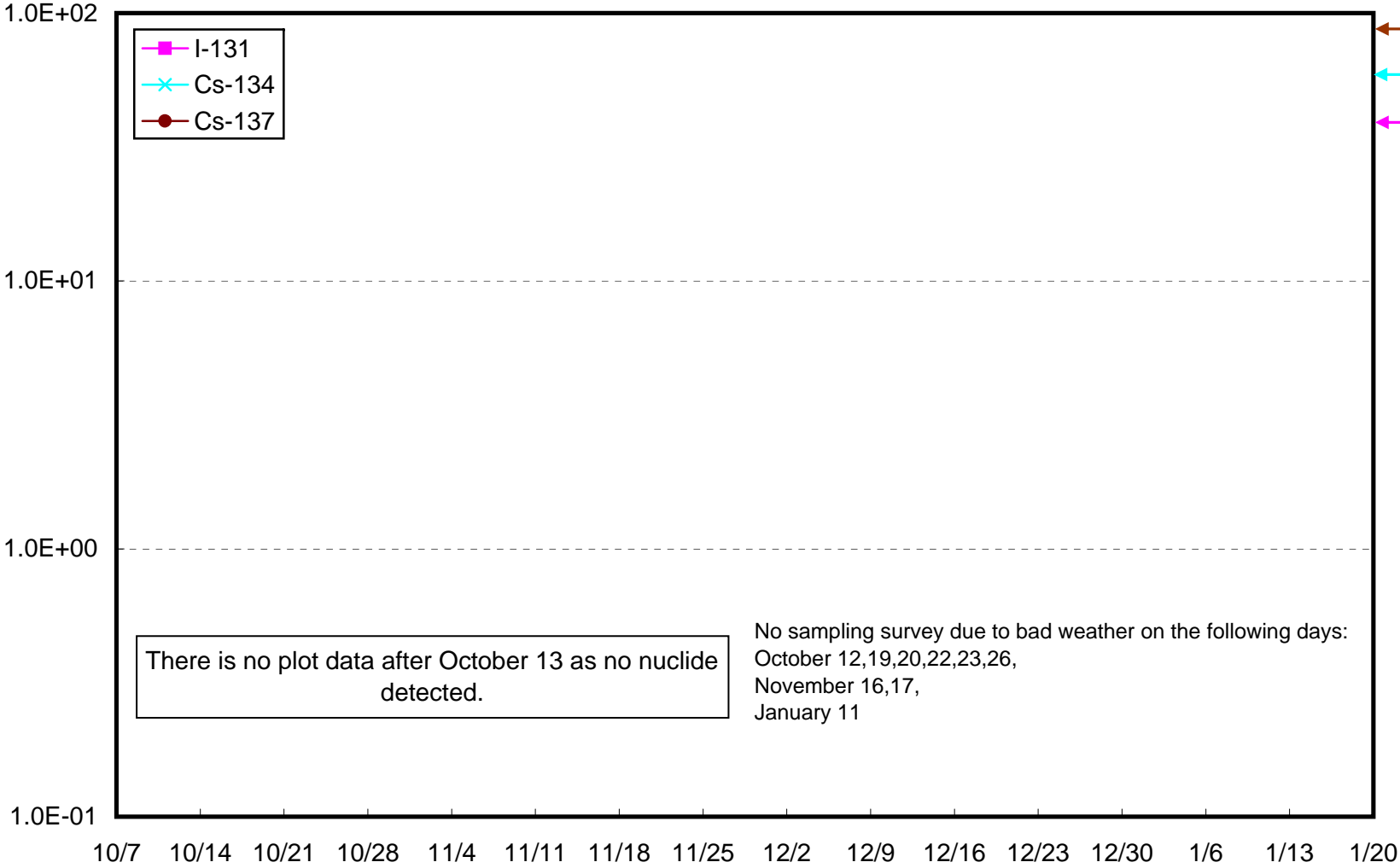


Radioactivity Density of Seawater 15km Offshore of Iwasawa Shore Lower Layer (Bq/L)



15km offshore of Hirono town Upper Layer Radioactivity Density of Seawater (Bq/L)

Notification Level  
Cs-137 ( 90Bq/L )  
Cs-134 ( 60Bq/L )  
I-131 ( 40Bq/L )

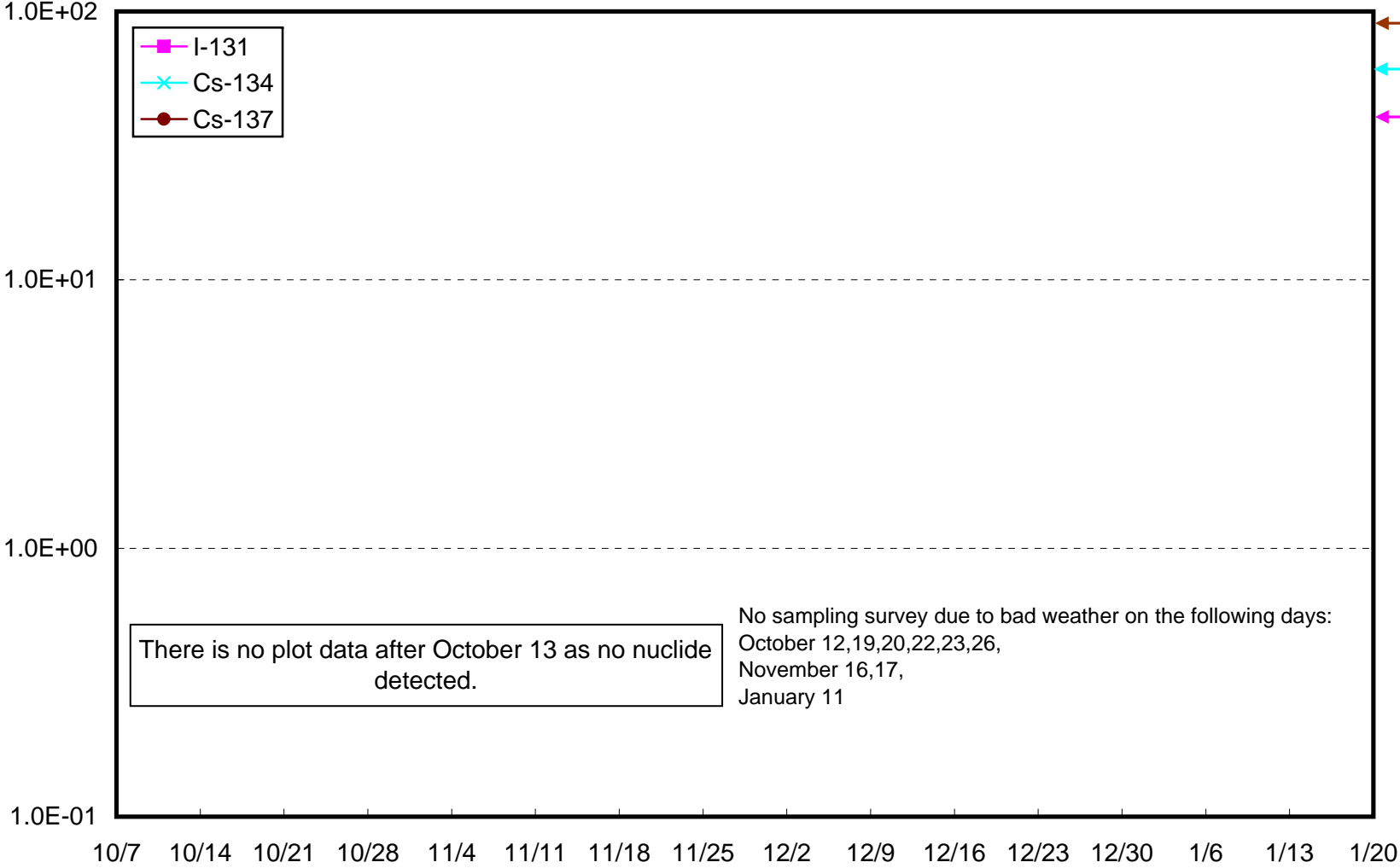


There is no plot data after October 13 as no nuclide detected.

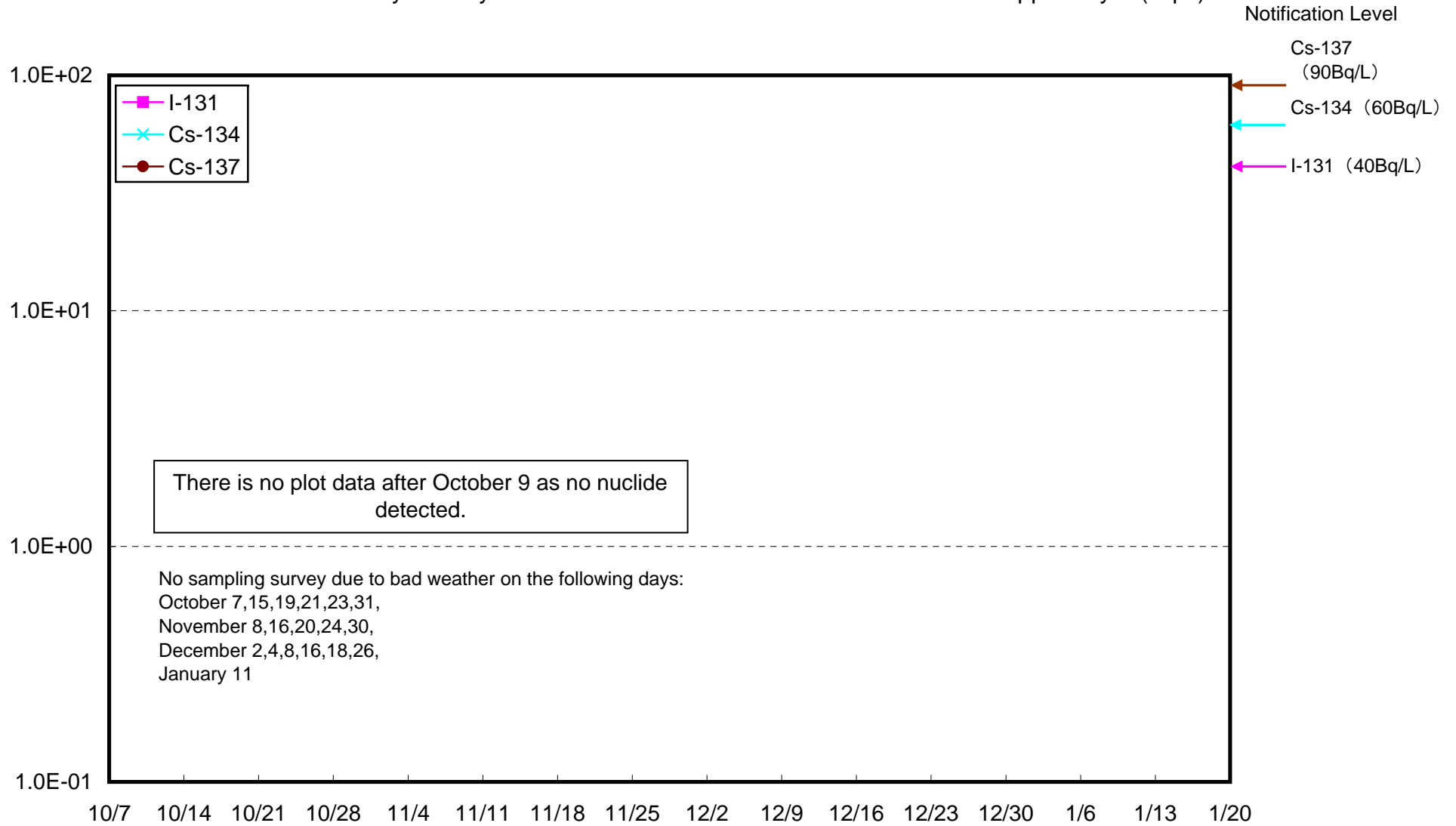
No sampling survey due to bad weather on the following days:  
October 12,19,20,22,23,26,  
November 16,17,  
January 11

15km offshore of Hirono town Lower Layer Radioactivity Density of Seawater (Bq/L)

Notification Level  
Cs-137 ( 90Bq/L )  
Cs-134 ( 60Bq/L )  
I-131 ( 40Bq/L )



# Radioactivity Density of Seawater 3km Offshore of Haramachi Ward Upper Layer (Bq/L)

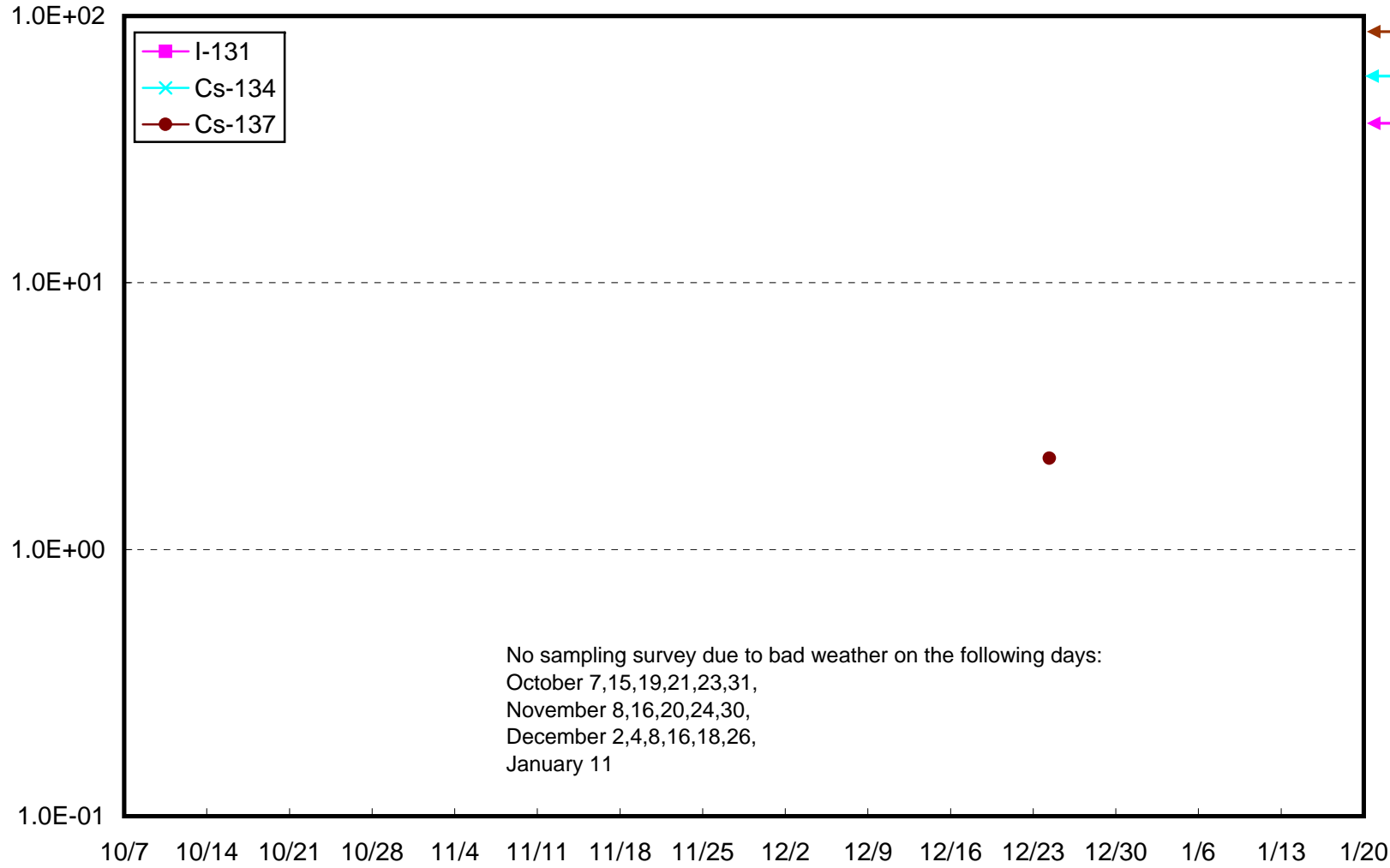




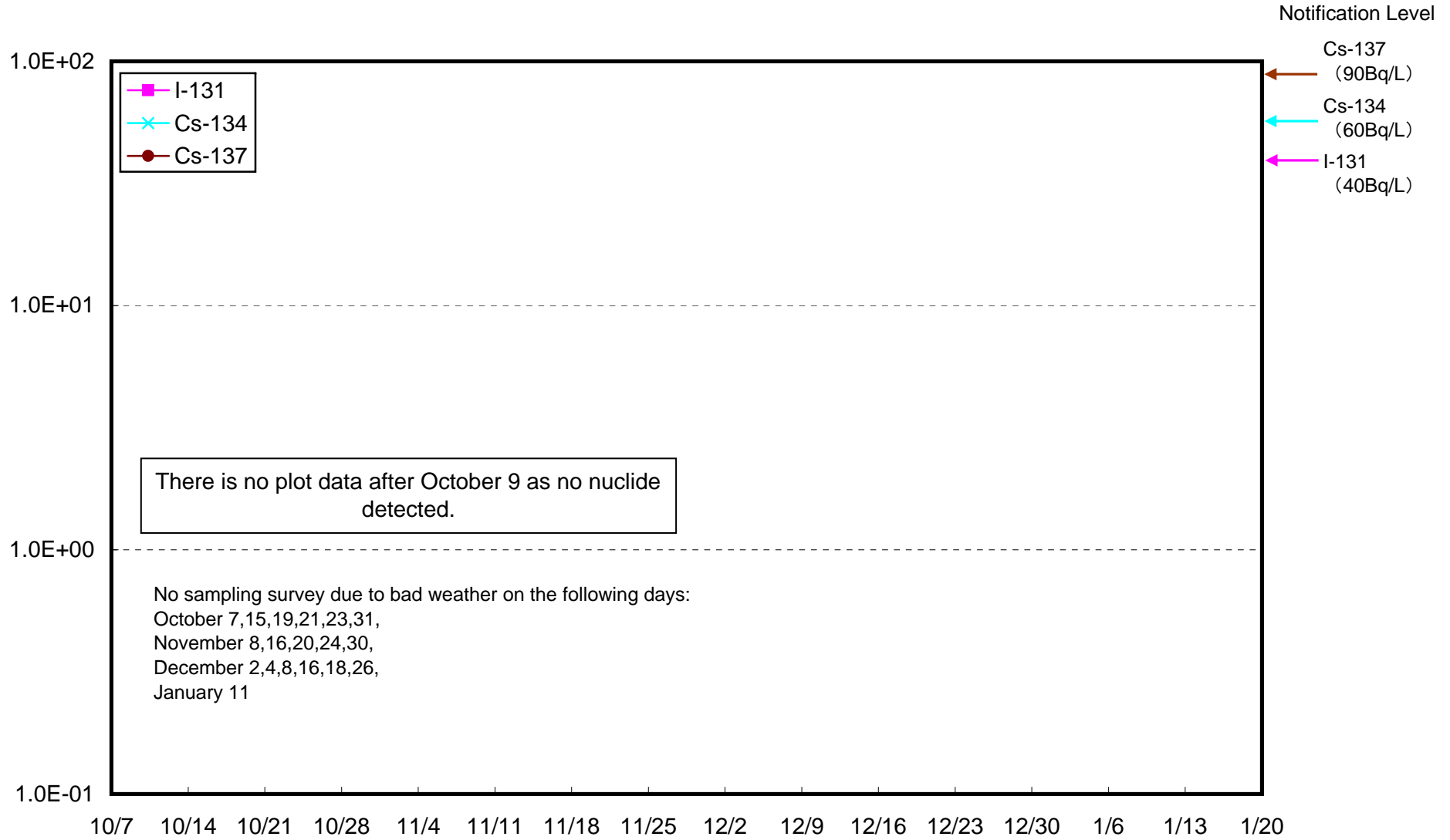
# Radioactivity Density of Seawater 3km Offshore of Haramachi Ward Lower Layer (Bq/L)

Notification Level

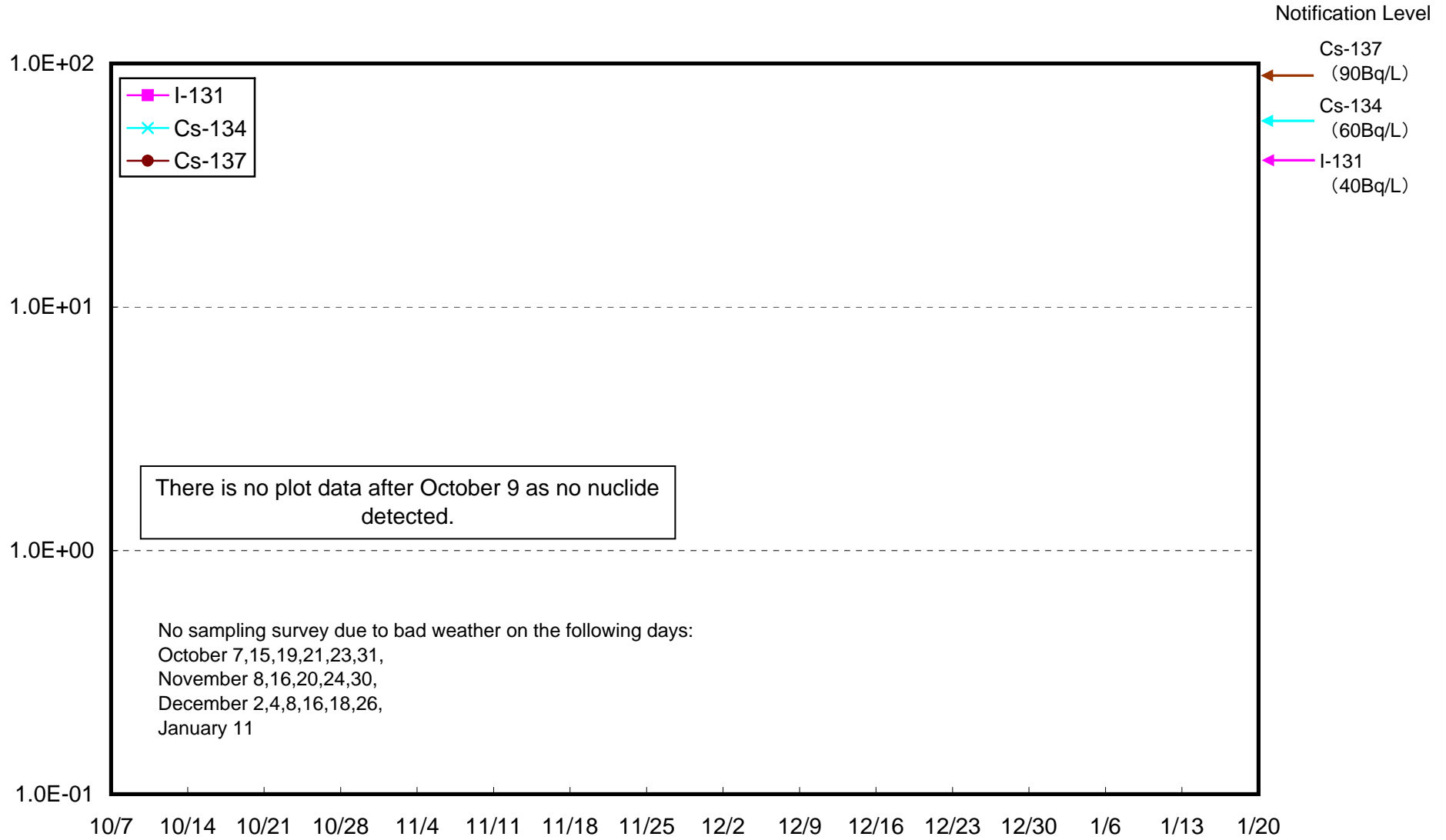
- Cs-137 (90Bq/L)
- Cs-134 (60Bq/L)
- I-131 (40Bq/L)



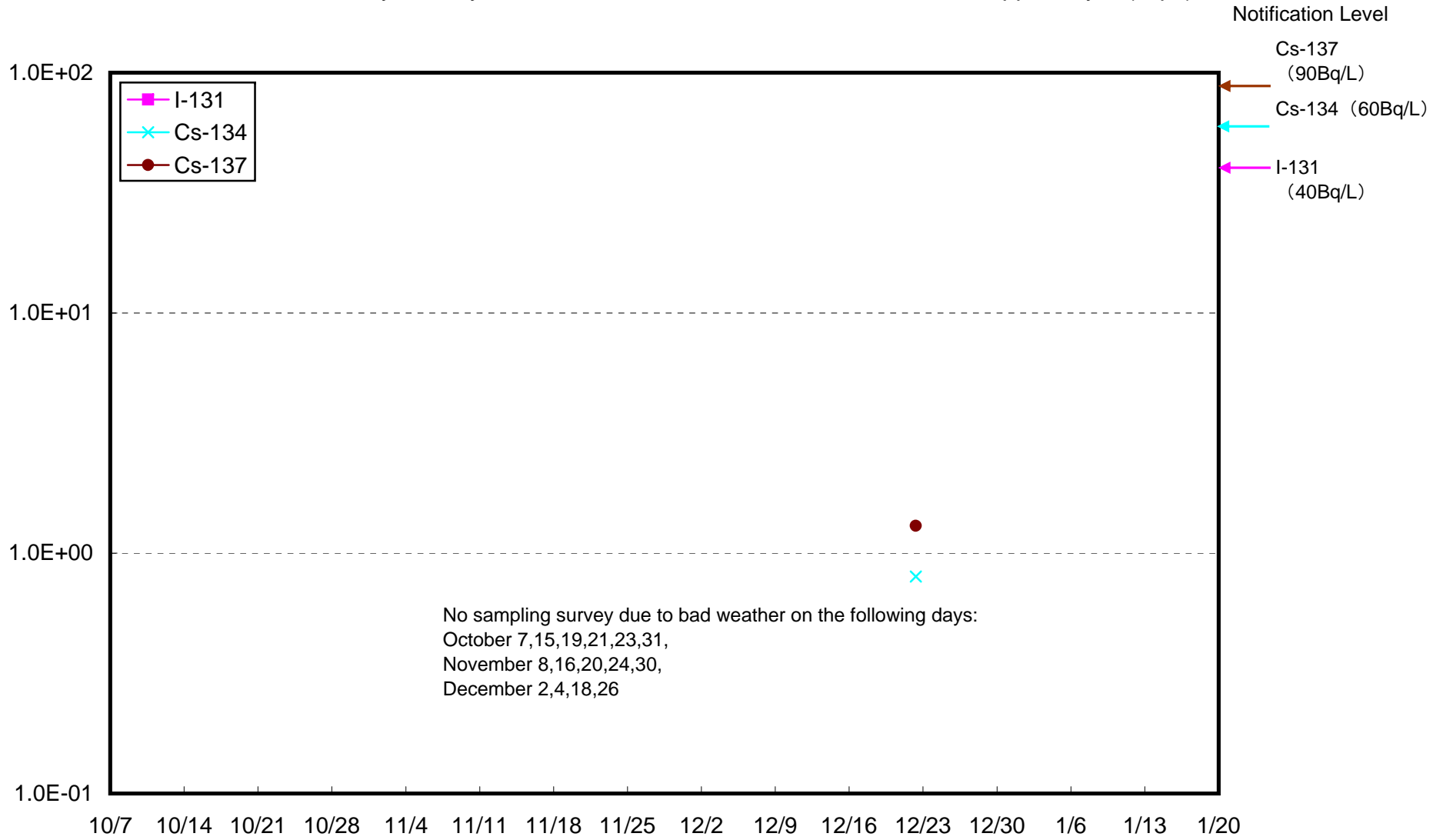
# Radioactivity Density of Seawater 3km Offshore of Odaka Ward Upper Layer (Bq/L)



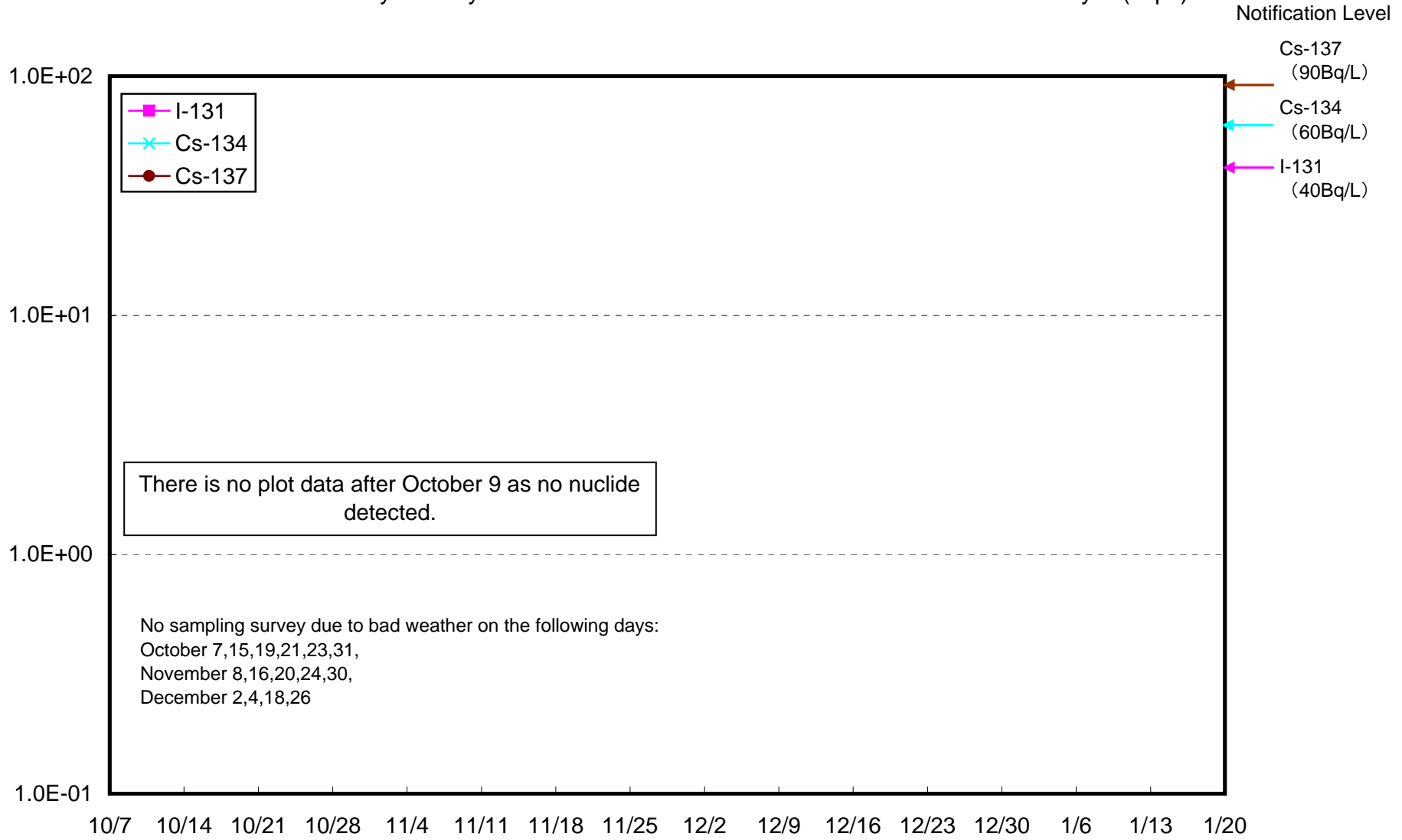
Radioactivity Density of Seawater 3km Offshore of Odaka Ward Lower Layer (Bq/L)



Radioactivity Density of Seawater 3km Offshore of Iwasawa Shore Upper Layer (Bq/L)

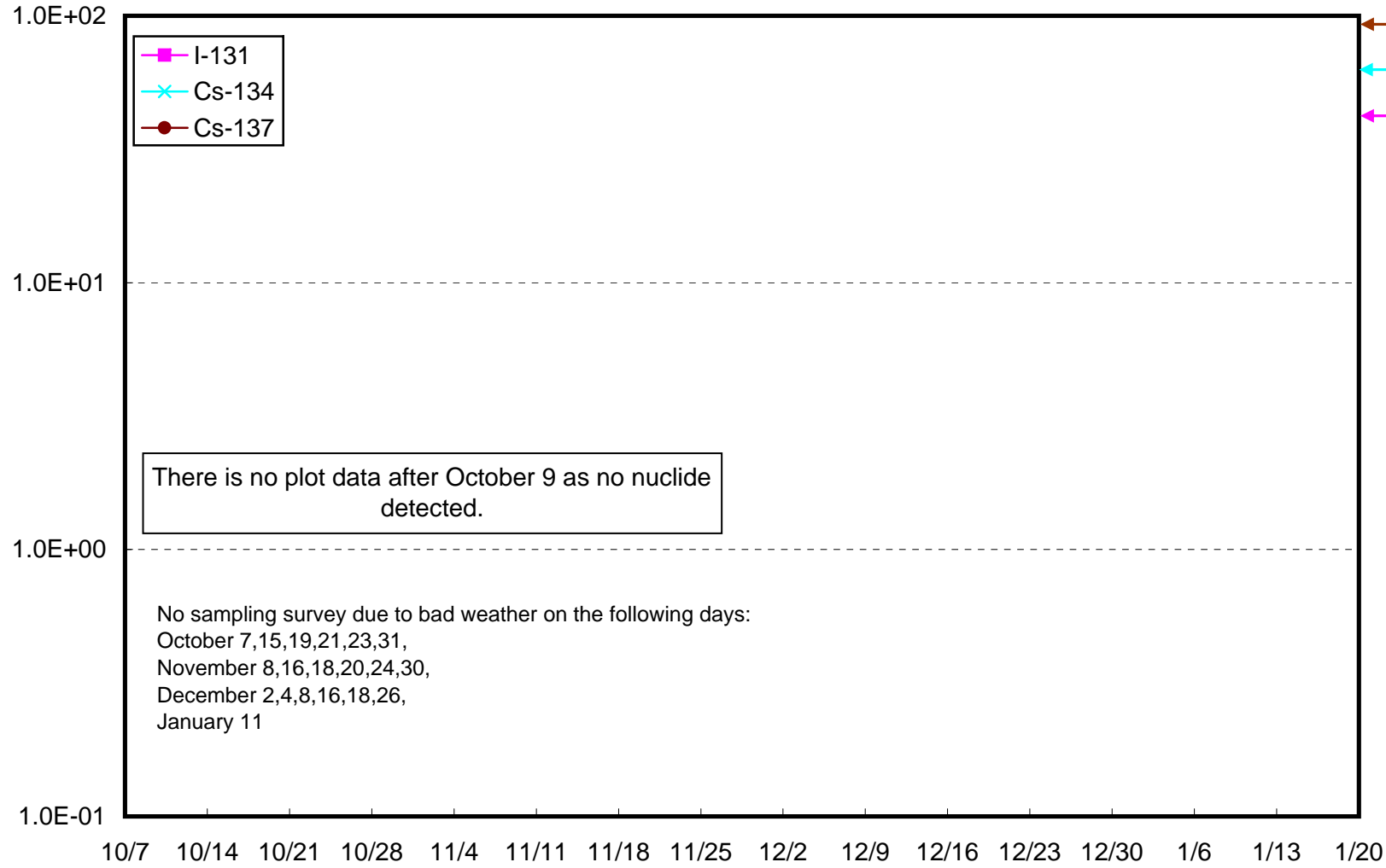


Radioactivity Density of Seawater 3km Offshore of Iwasawa Shore Lower Layer (Bq/L)

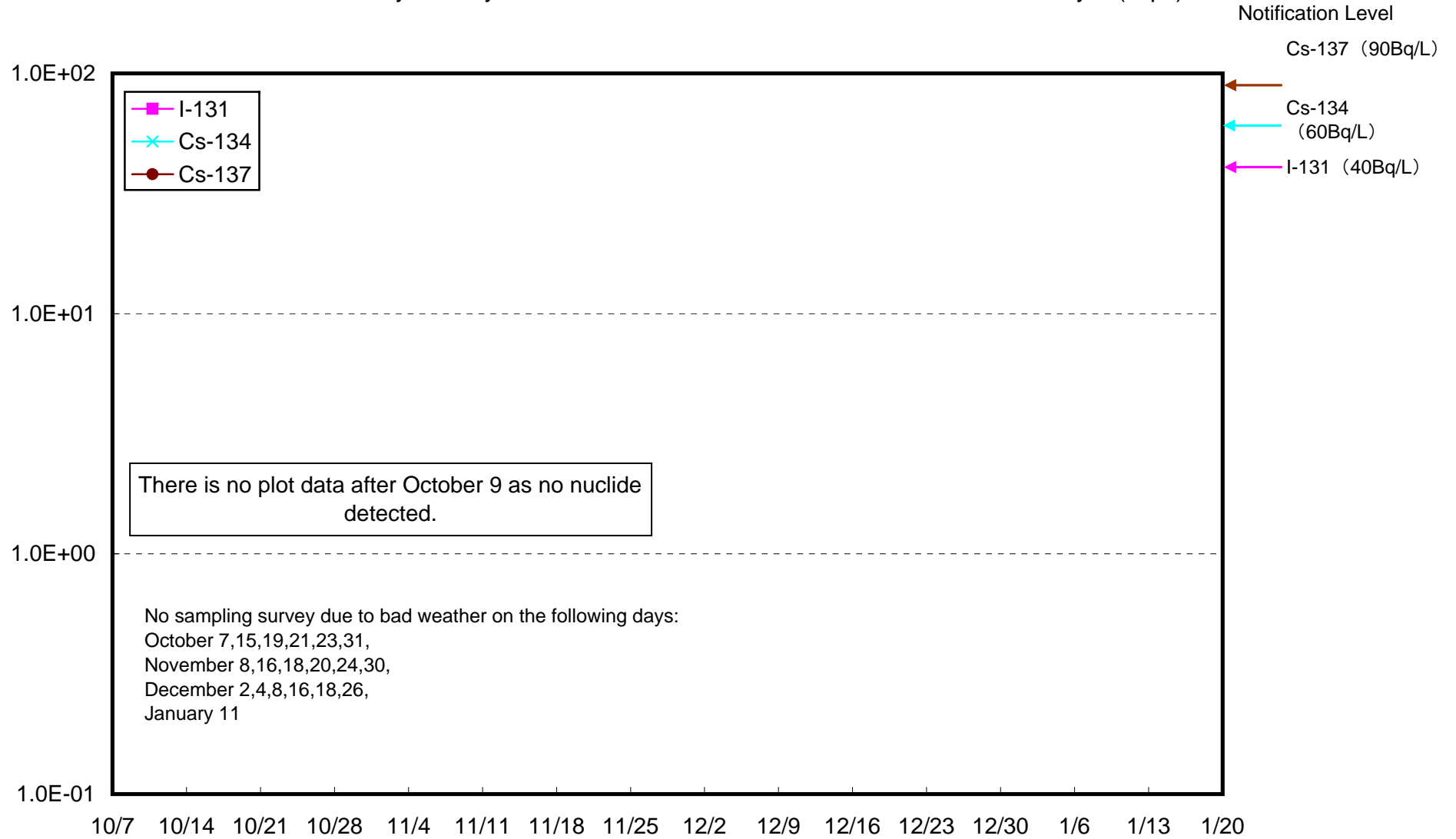


# Radioactivity Density of Seawater 8km Offshore of Odaka Ward Upper Layer (Bq/L)

Notification Level  
Cs-137 (90Bq/L)  
Cs-134 (60Bq/L)  
I-131 (40Bq/L)



Radioactivity Density of Seawater 8km Offshore of Odaka Ward Lower Layer (Bq/L)



Radioactivity Density of Seawater 8km Offshore of Iwasawa Shore Upper Layer (Bq/L)

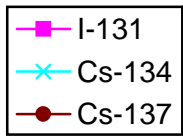
Notification Level

Cs-137  
(90Bq/L)

Cs-134  
(60Bq/L)

I-131 (40Bq/L)

1.0E+02



1.0E+01

There is no plot data after October 9 as no nuclide detected.

1.0E+00

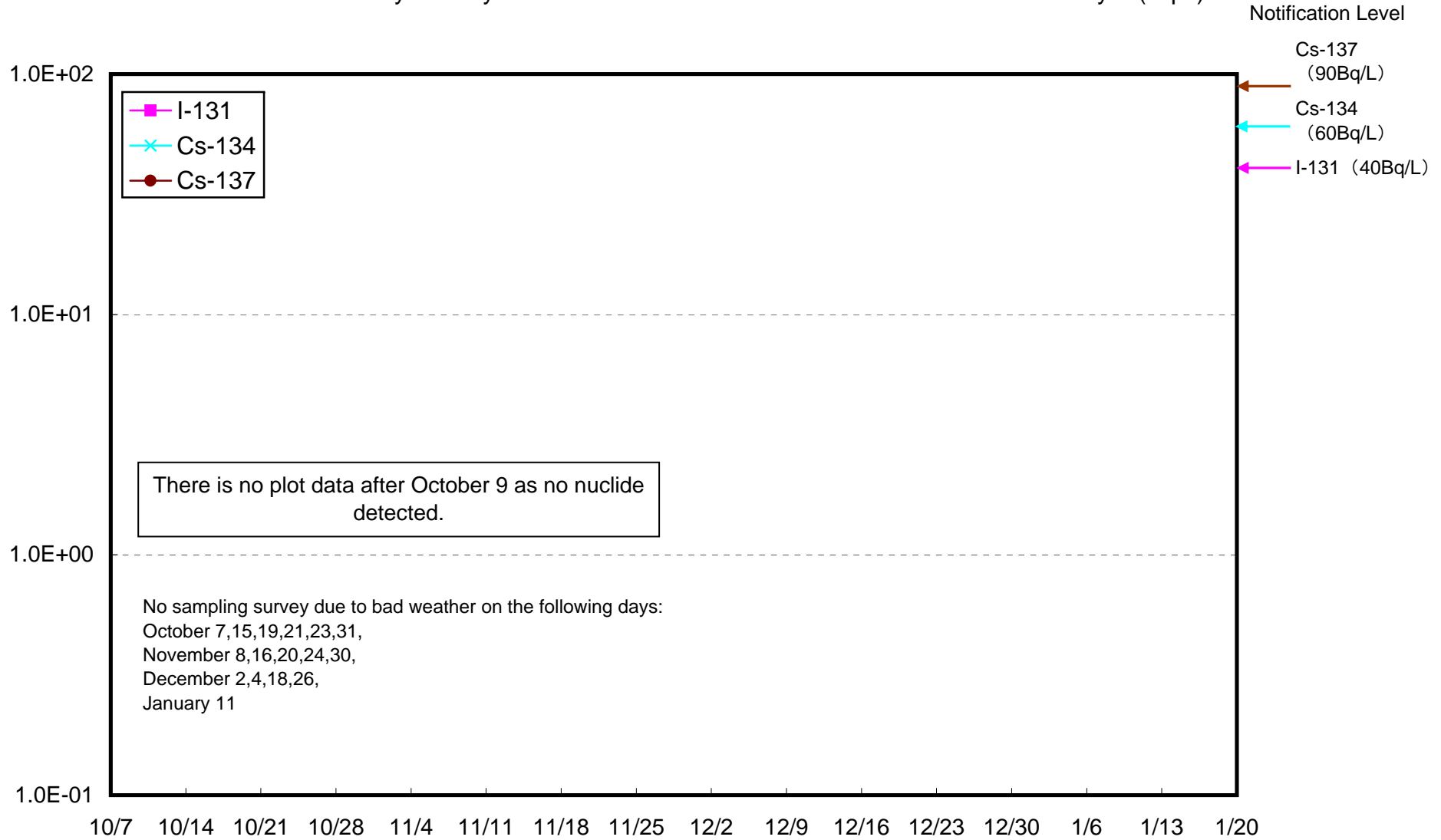
No sampling survey due to bad weather on the following days:  
October 7,15,19,21,23,31,  
November 8,16,20,24,30,  
December 2,4,18,26,  
January 11

1.0E-01

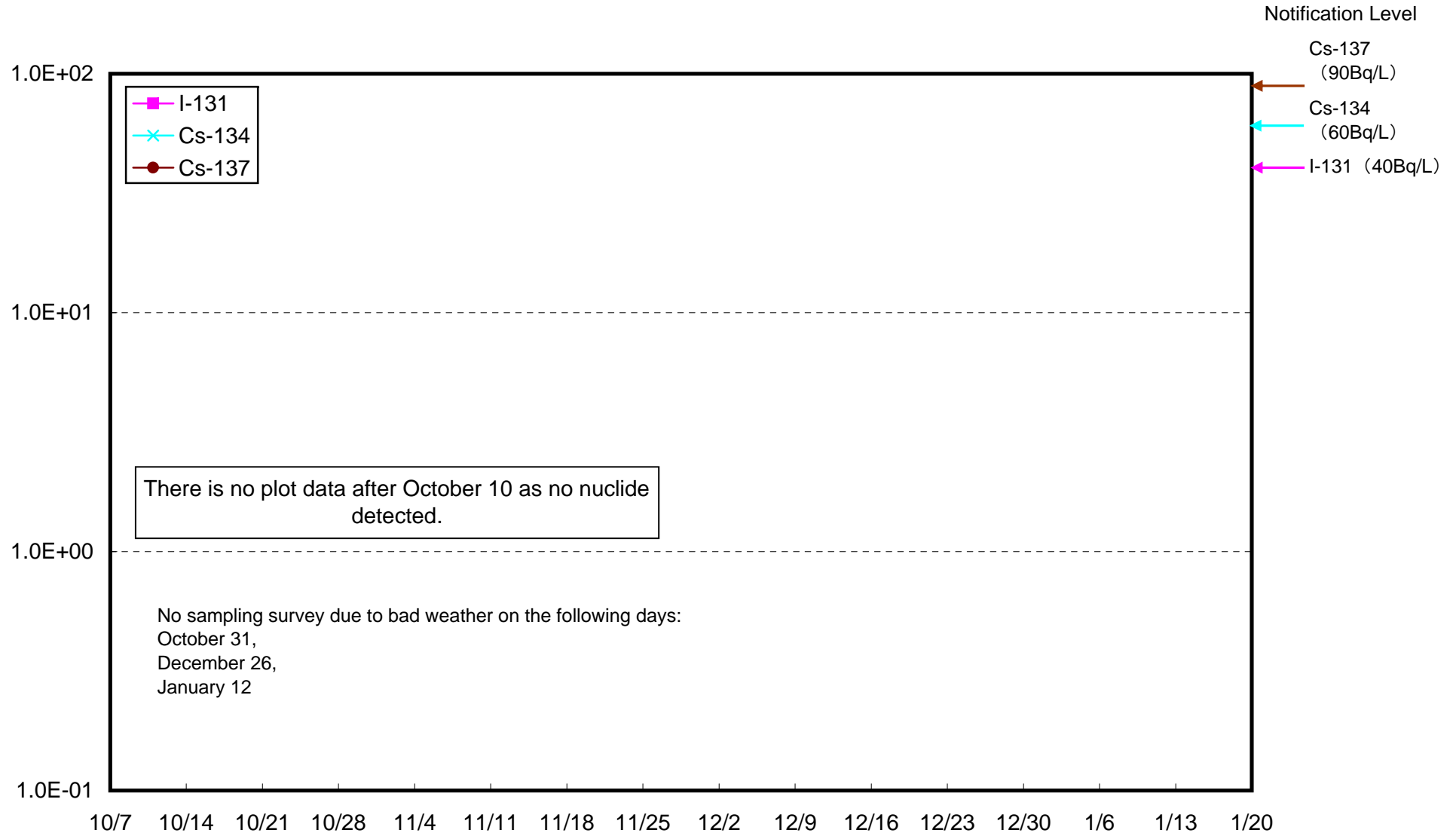
10/7 10/14 10/21 10/28 11/4 11/11 11/18 11/25 12/2 12/9 12/16 12/23 12/30 1/6 1/13 1/20



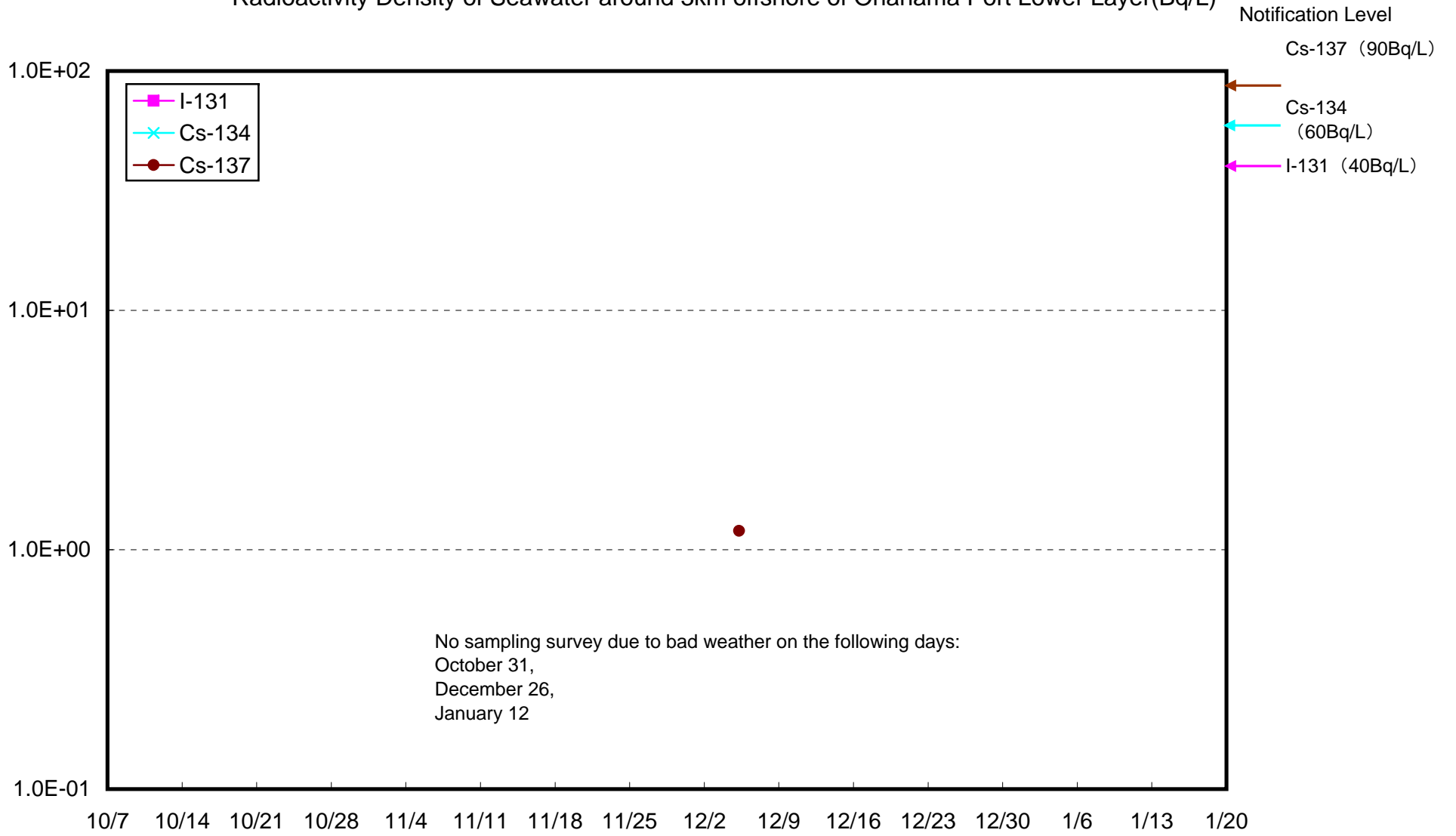
Radioactivity Density of Seawater 8km Offshore of Iwasawa Shore Lower Layer (Bq/L)



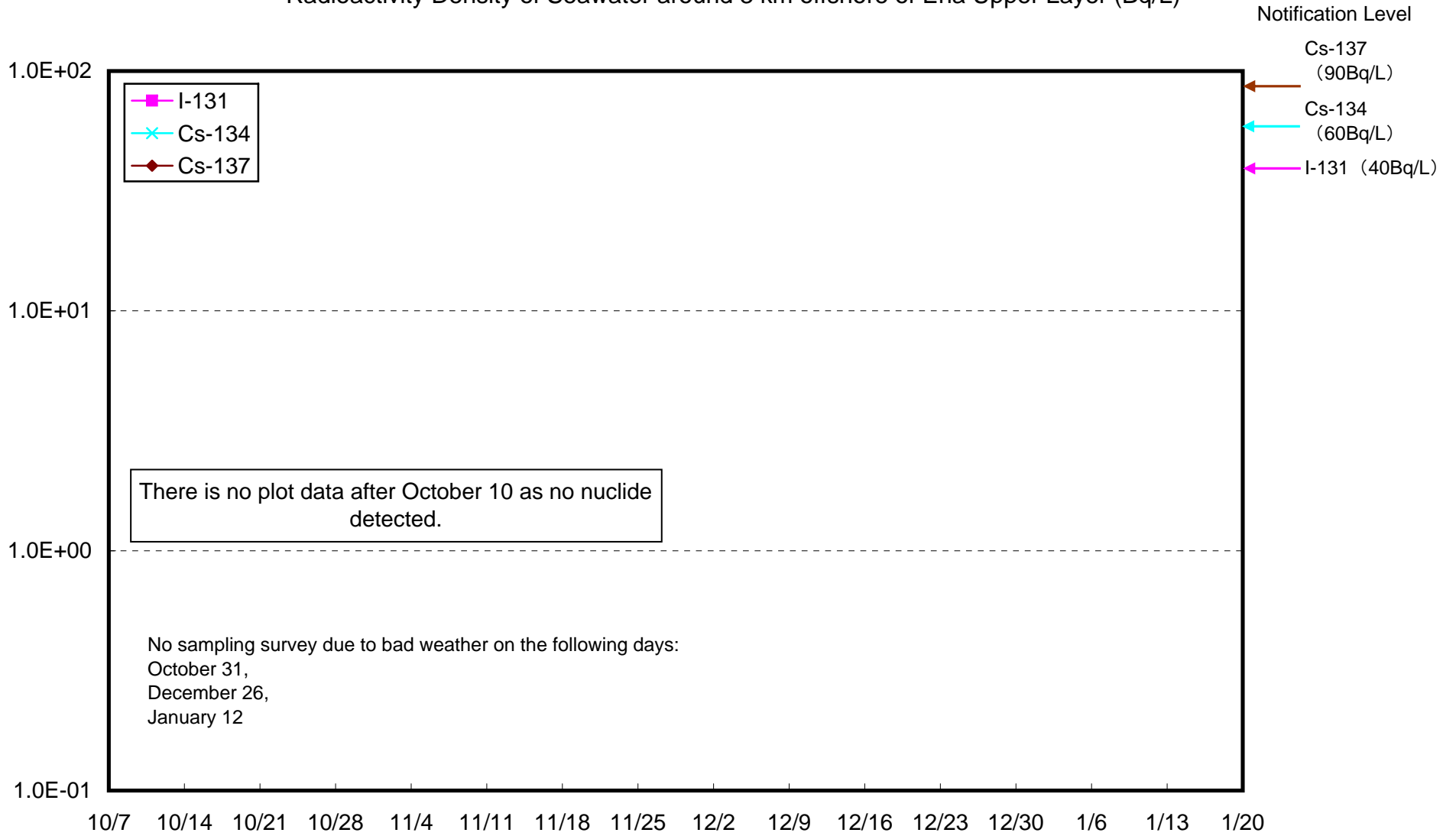
# Radioactivity Density of Seawater around 3km offshore of Onahama Port Upper Layer(Bq/L)



# Radioactivity Density of Seawater around 3km offshore of Onahama Port Lower Layer(Bq/L)



# Radioactivity Density of Seawater around 3 km offshore of Ena Upper Layer (Bq/L)



# Radioactivity Density of Seawater around 3 km offshore of Ena Lower Layer (Bq/L)

