Nuclide Analysis Results of Radioactive Materials in Seawater <Coast>

Reference

(Data summarized on December 29)

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 (appox. 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 (appox. 7 km south of 1,2u Discharge Channel) (appox. 16 km from 1F)		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	Dec 28, 2011 08:35 am		Dec 28, 2011 08:15 am		Dec 28, 2011 08:15 am		Dec 28, 2011 07:55 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)	
I-131 (about 8 days)	ND	-	ND	-	ND	-	ND	-	40
Cs-134 (about 2 years)	ND	-	1.0	0.02	ND	-	ND	-	60
Cs-137 (about 30 years)	1.4	0.02	1.6	0.02	1.2	0.01	ND	-	90

* Density by the announcement of Reactor Regulation is stated with an amount converted from Bq/cm3 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. 0.71Bq/L, Cs-134: approx. 0.96Bq/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 1/3>

Reference

(Data summarized on December 29)

Place of Sampling	15 km offshore of Minami-Souma CityUpper Layer		15 km offshore of Minami-Souma CityLower 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	Dec 27, 2011 09:25 am		Dec 27, 2011 09:25 am		Dec 27, 2011 09:00 am		Dec 27, 2011 09:00 am		Dec 27, 2011 08:25 am		Dec 27, 2011 08:25 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	-	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	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	Dec 27, 2011 08:00 am		Dec 27, 2011 08:00 am		Dec 27, 2011 08:30 am		Dec 27, 2011 08:30 am		Dec 27, 2011 07:55 am		Dec 27, 2011 07:55 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	-	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

* Density by the announcement of Reactor Regulation is stated with an amount converted from Bq/cm3 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. 0.69Bq/L, Cs-134: approx. 0.95Bq/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 2/3>

Reference

(Data summarized on December 29)

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)
Time of Sampling	N/A		N/A		N/A		N/A		Dec 27, 2011 06:10 am		Dec 27, 2011 06:10 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)
Time of Sampling	Dec 27, 2011 06:20 am		Dec 27, 2011 06:20 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/cm3 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. 0.77Bq/L, Cs-134: approx. 0.92Bq/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 3/3>

Reference

(Data summarized on December 29)

Place of Sampling	3 km offshore of Souma City Upper Layer		3 km offshore of Souma City Lower Layer		5 km offshore of Souma City Upper Layer		5 km offshore of Souma City Lower Layer		5 km offshore of Kashima Upper Layer		5 km offshore of Kashima 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	Dec 27, 2011 07:40 am		Dec 27, 2011 07:40 am		Dec 27, 2011 07:15 am		Dec 27, 2011 07:15 am		Dec 27, 2011 06:55 am		Dec 27, 2011 06:55 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	-	ND	-	ND	-	40
Cs-134 (about 2 years)	ND	-	ND	-	ND	-	ND	-	ND	-	ND	-	60
Cs-137 (about 30 years)	ND	-	ND	-	0.96	0.01	ND	-	ND	-	ND	-	90

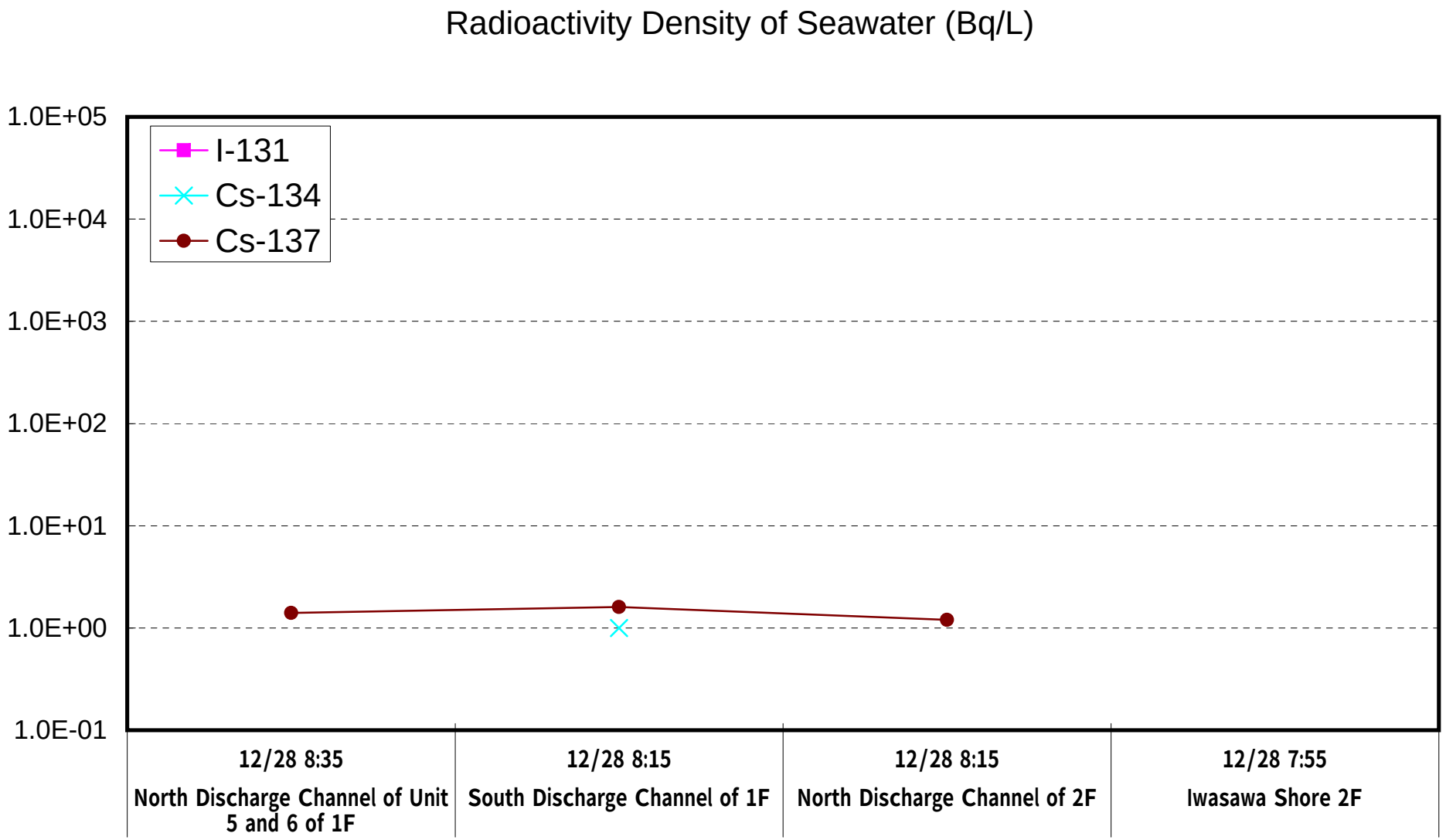
Place of Sampling	5km Offshore of Numanouchi Upper Layer		5km Offshore of Numanouchi Lower Layer										② Density limit by the announcement of Reactor Regulation (Bq/L) (the density limit in the water outside of surrounding monitored areas in the section 6 of the appendix 2)
Time of Sampling	Dec 27, 2011 07:00 am		Dec 27, 2011 07:00 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

* Density by the announcement of Reactor Regulation is stated with an amount converted from Bq/cm3 to Bq/L.

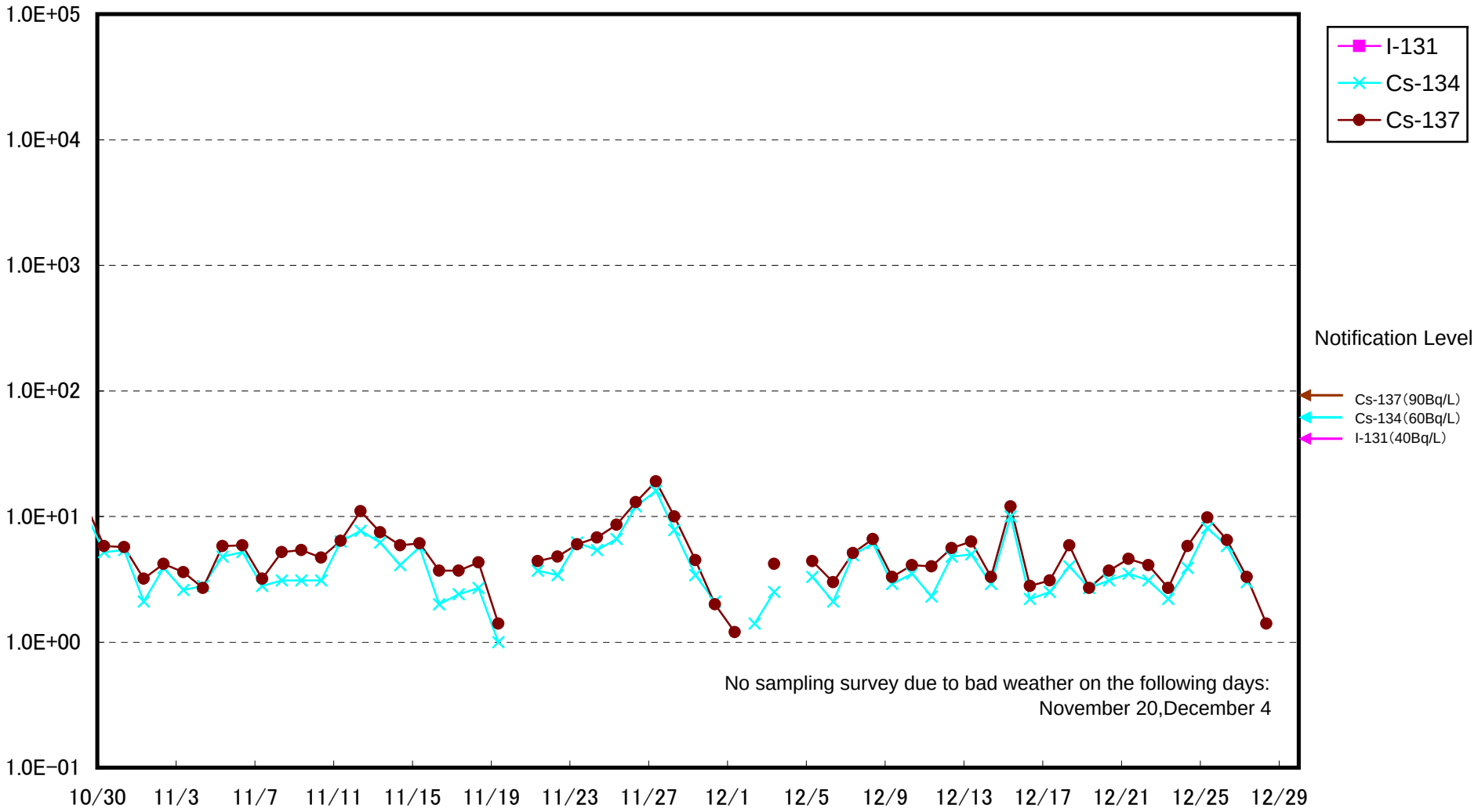
* Data of other nuclides are under evaluation.

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

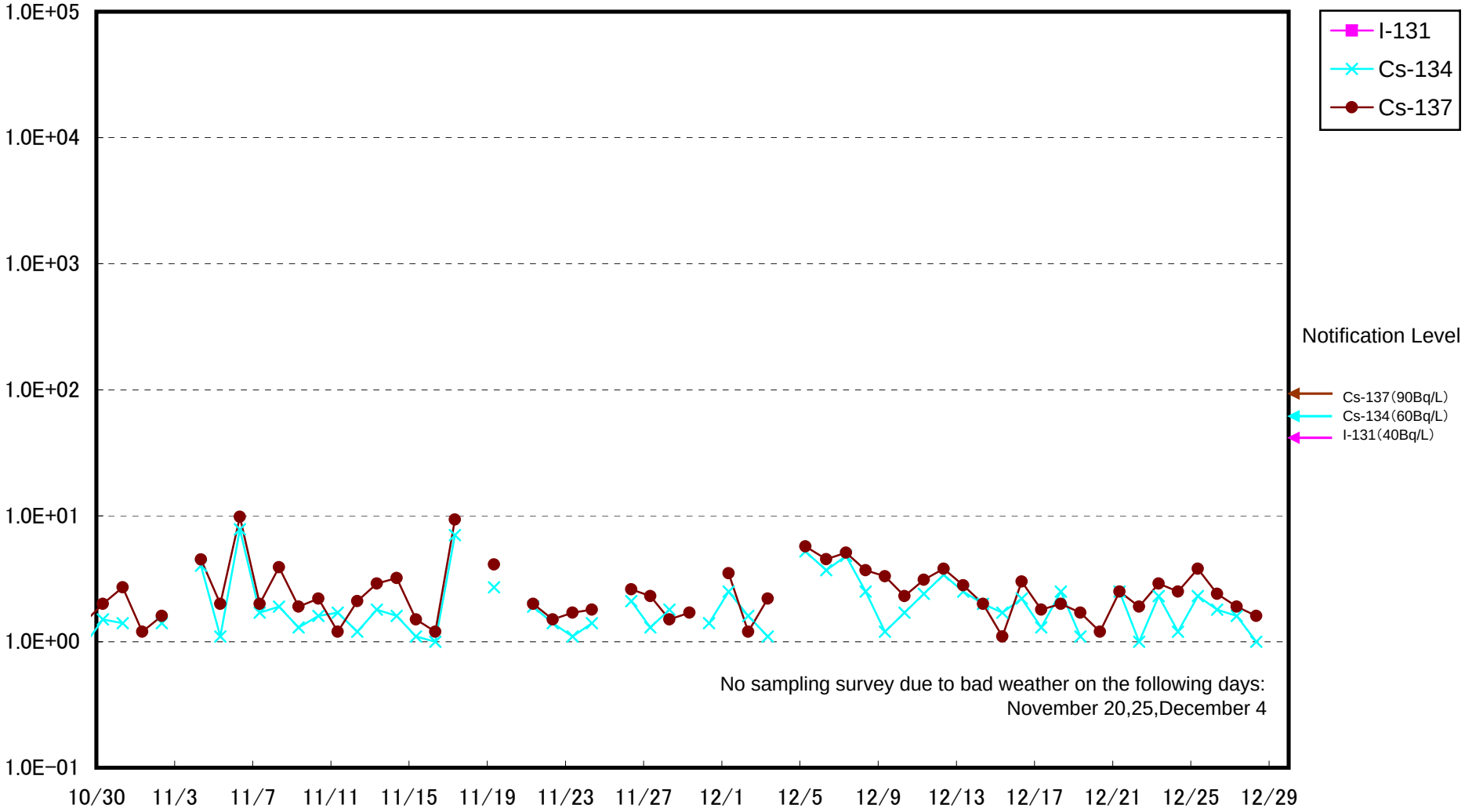
* "ND" means the sampled data is below measurable limit.
I-131: approx. 1.1Bq/L, Cs-134: approx. 0.93Bq/L, Cs-137: approx. 1.1Bq/L
Please note that these nuclides are sometimes detected even when they are below the limits, contingent on the detector or samples.


Radioactivity Density of Seawater (Bq/L)
1.0E+05
1.0E+04
1.0E+03
1.0E+02
1.0E+01
1.0E+00
1.0E-01
I-131
Cs-134
Cs-137
12/28 8:35
North Discharge Channel of Unit 5 and 6 of 1F
12/28 8:15
South Discharge Channel of 1F
12/28 8:15
North Discharge Channel of 2F
12/28 7:55
Iwasawa Shore 2F

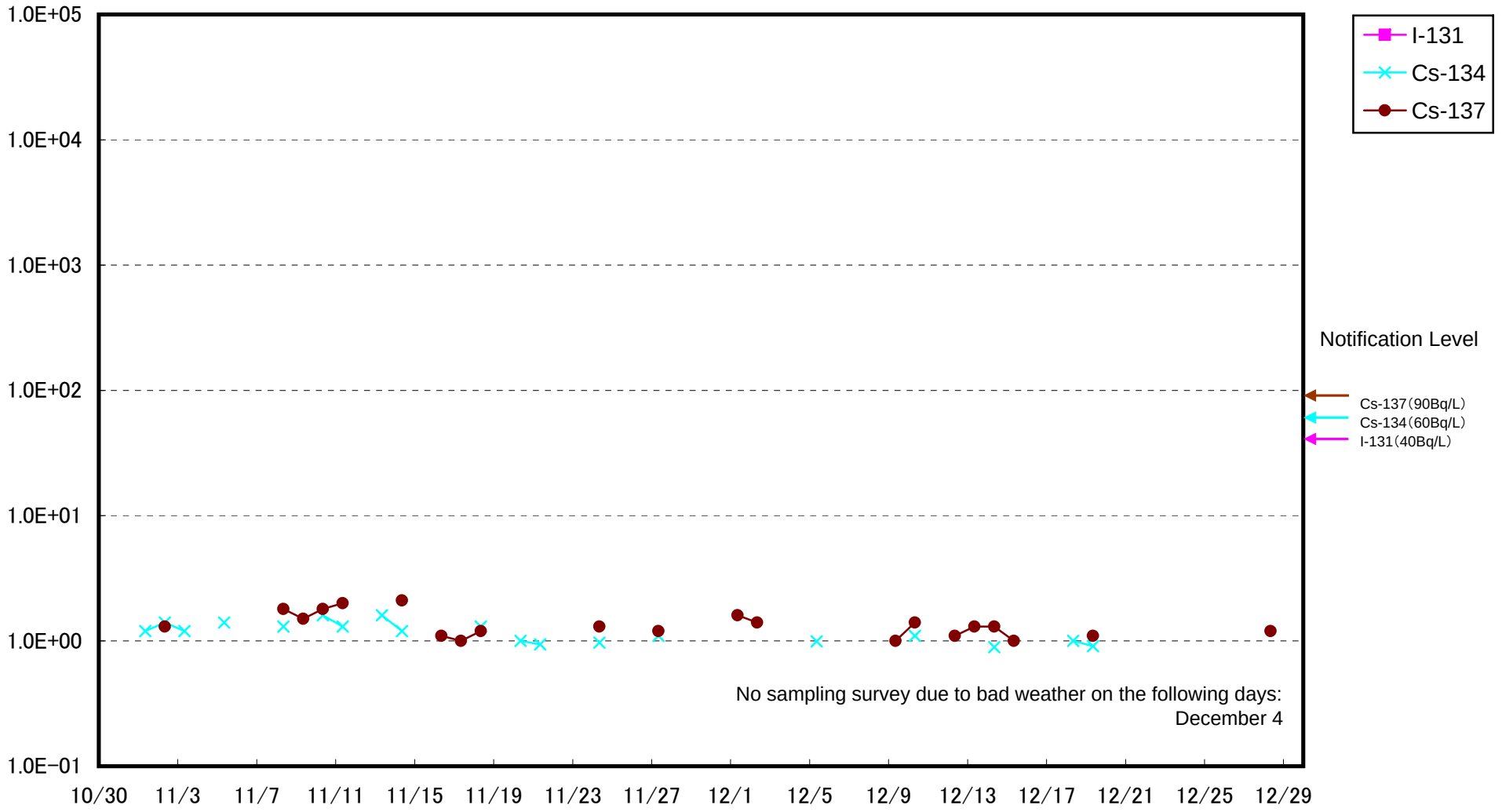
Radioactivity Density of Seawater at North of 1F5-6 Discharge Channel (Bq/L)



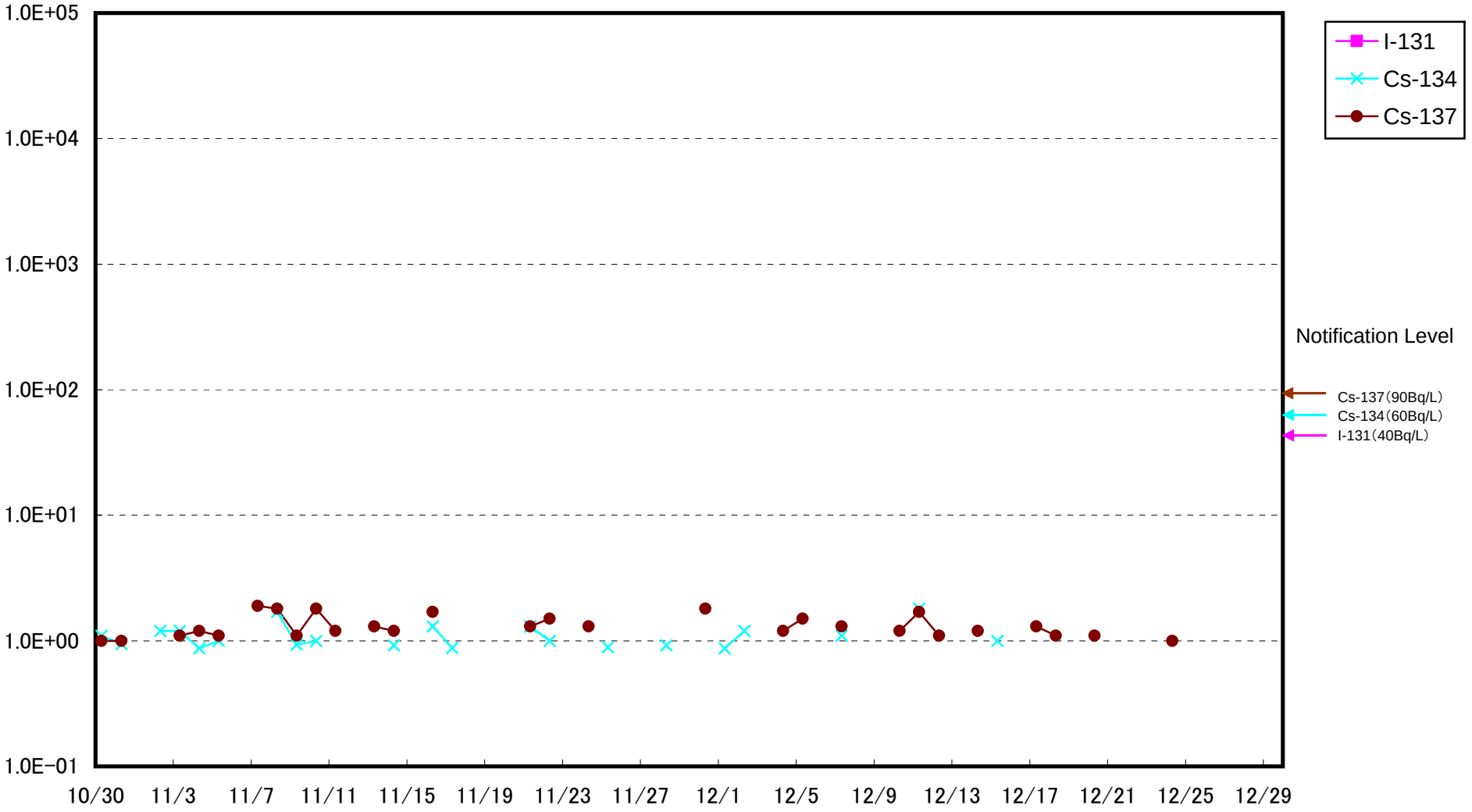
Radioactivity Density of Seawater at South Discharge Channel of 1F (Bq/L)



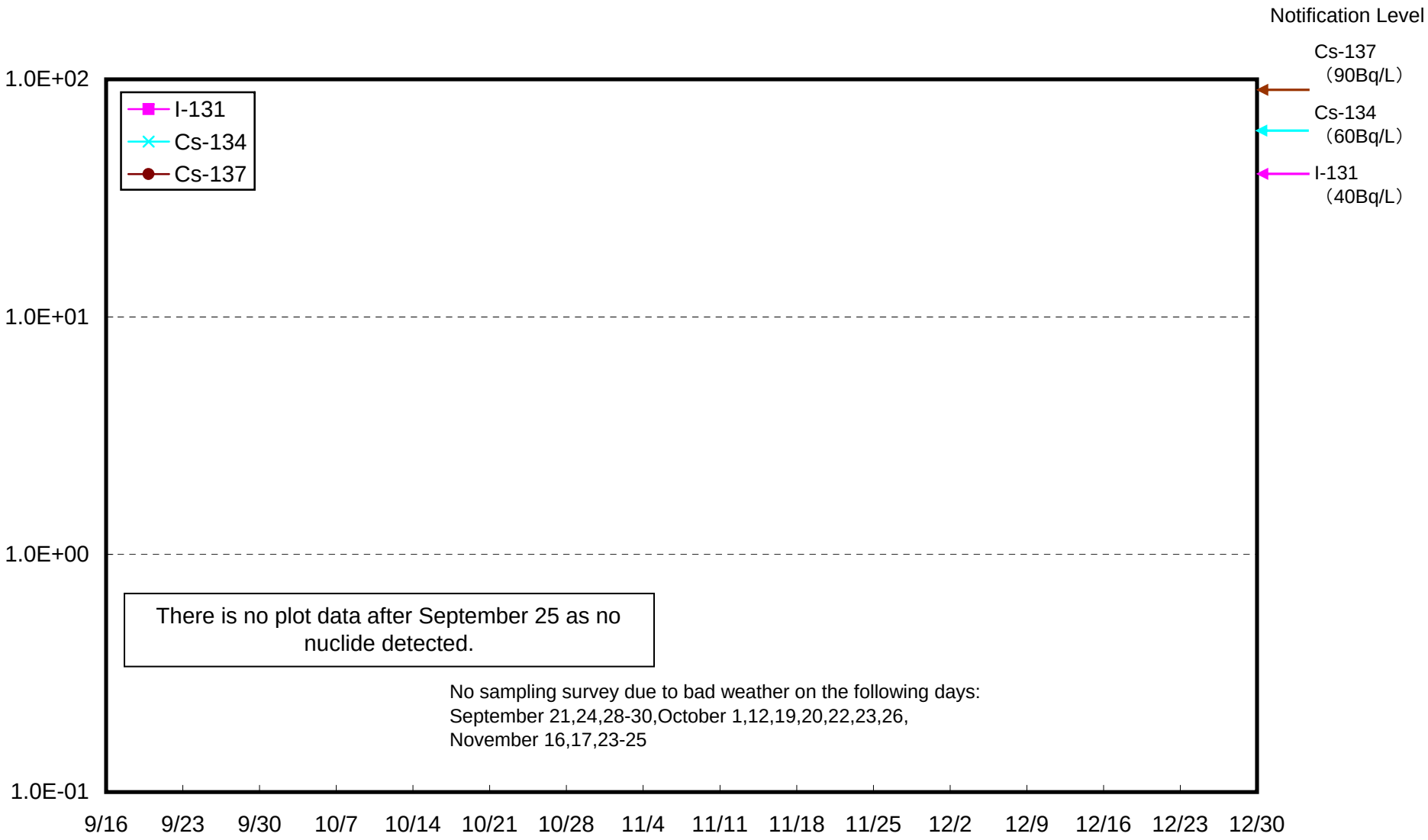
Radioactivity Density of Seawater at North Discharge Channel of 2F (Bq/L)

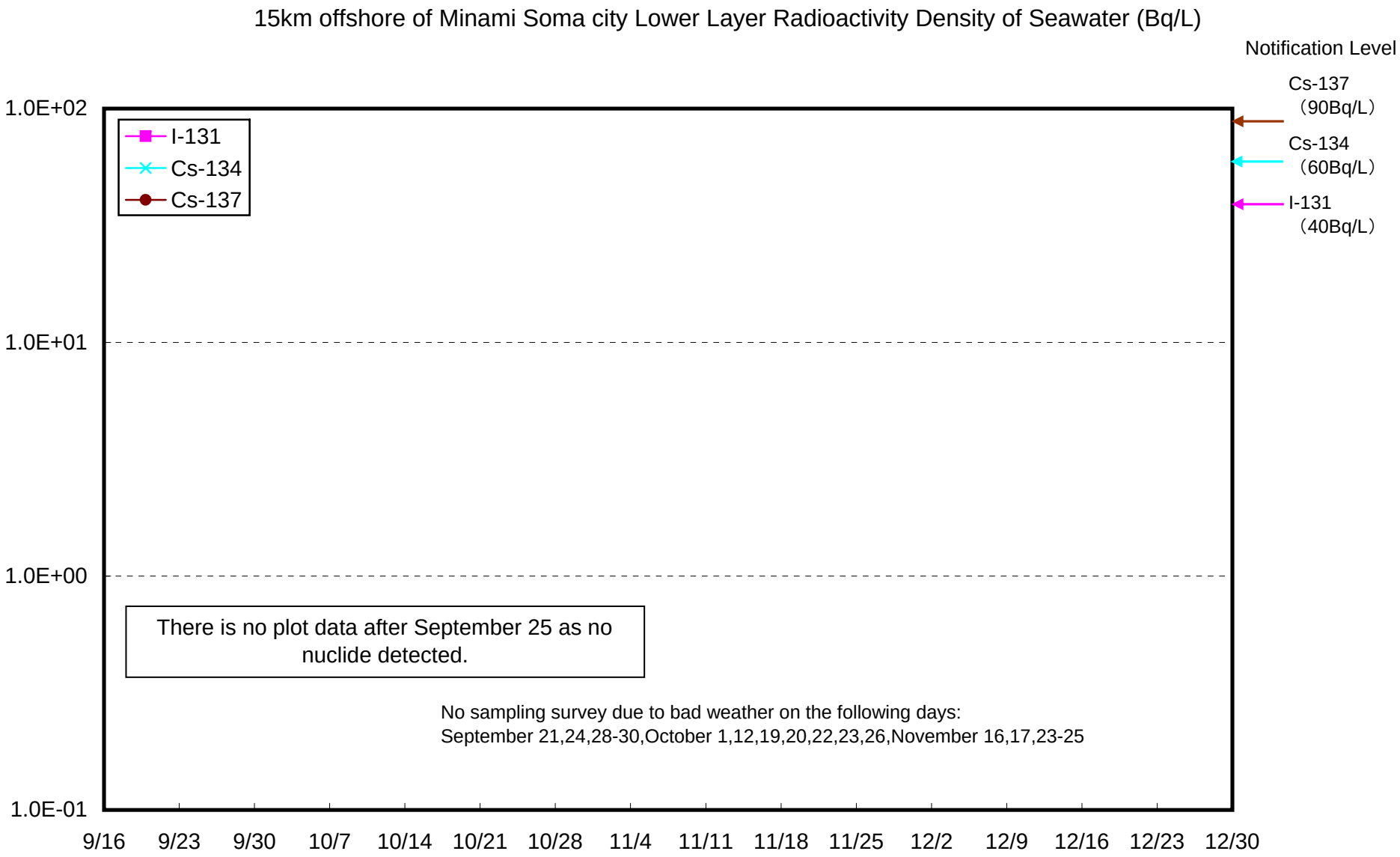


Radioactivity Density of Seawater at Iwasawa Shore 2F (Bq/L)

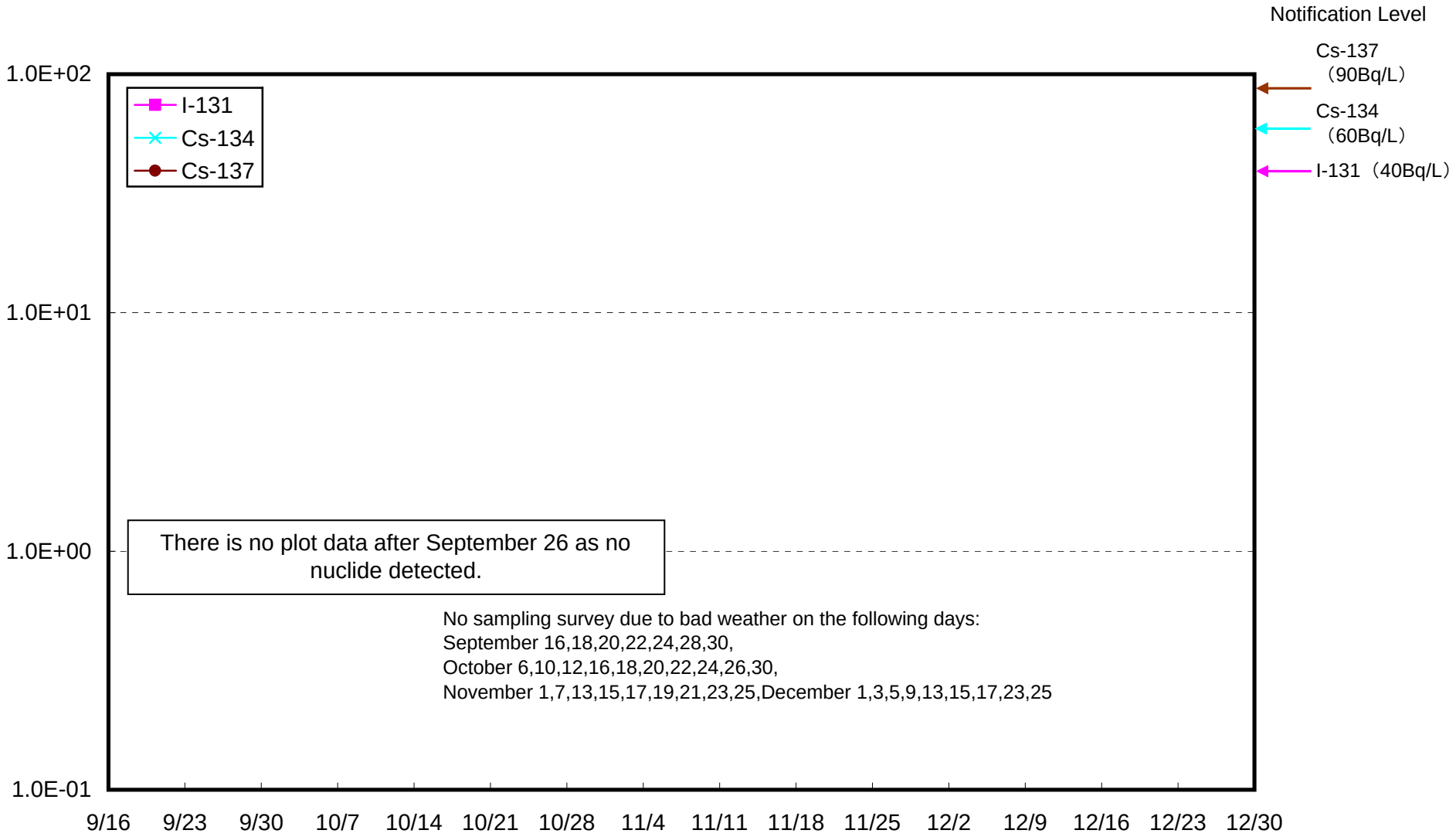


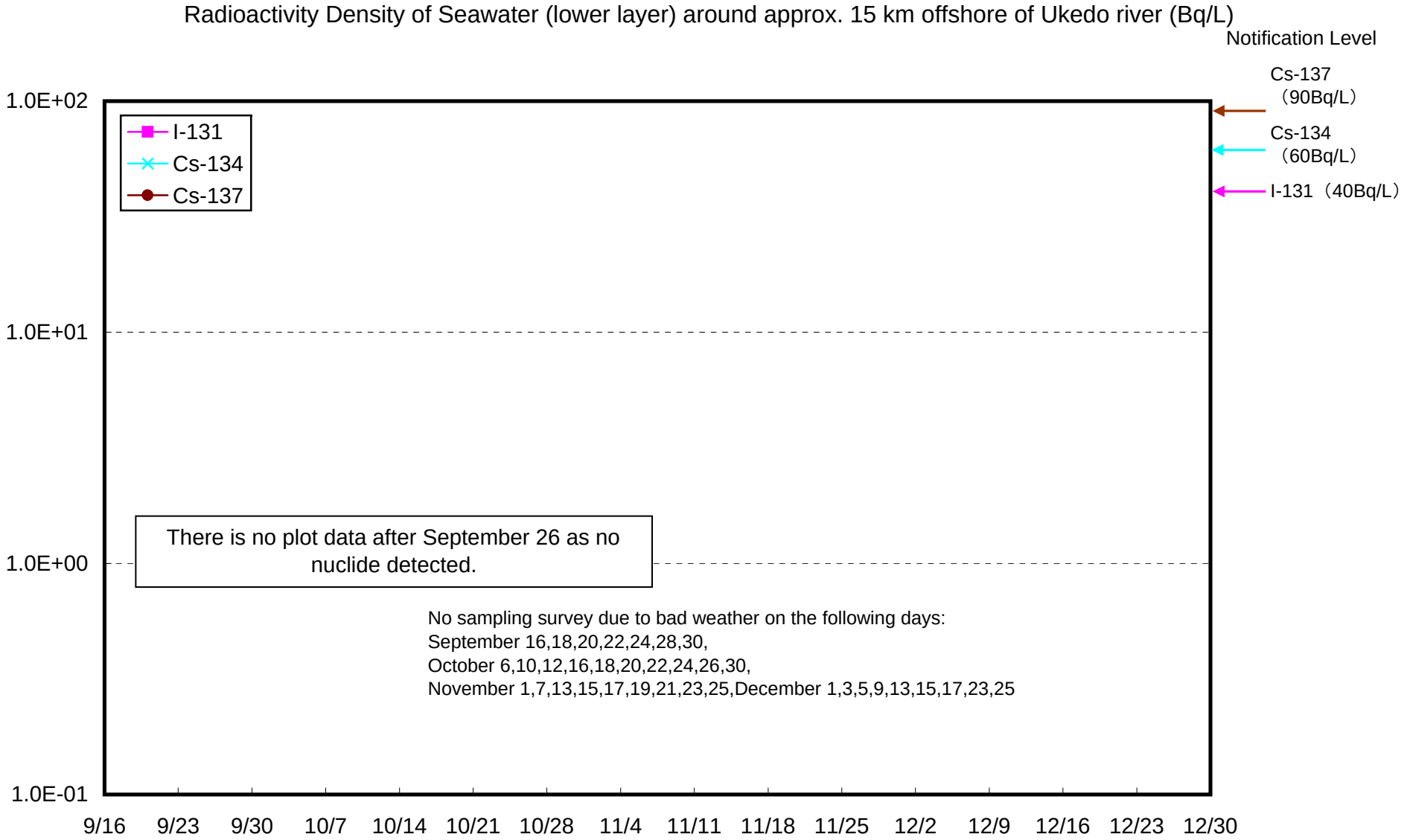
15km offshore of Minami Soma city Upper Layer Radioactivity Density of Seawater (Bq/L)



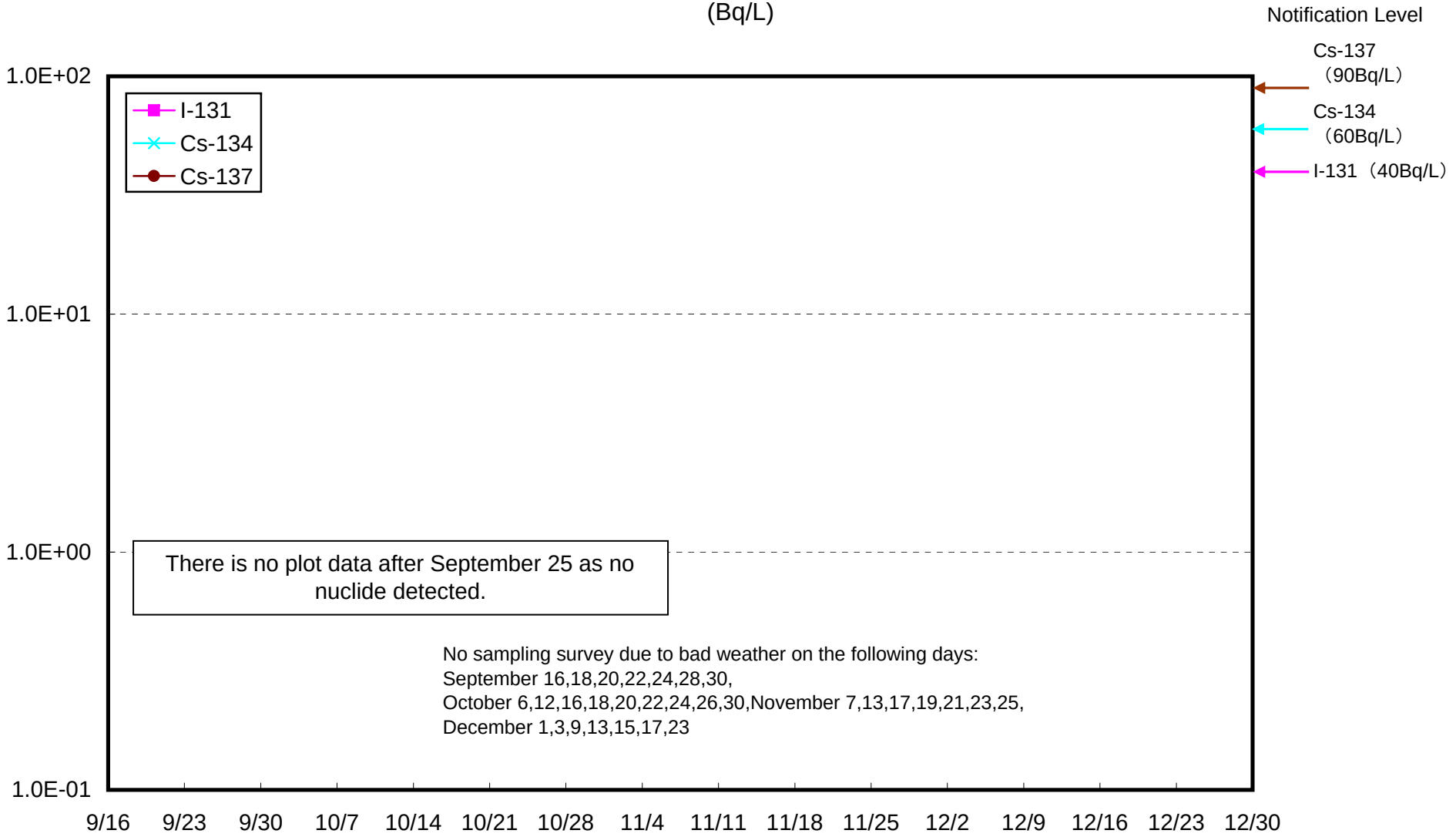

15km offshore of Minami Soma city Lower Layer Radioactivity Density of Seawater (Bq/L)
Notification Level
Cs-137
（90Bq/L）
Cs-134
（60Bq/L）
I-131
（40Bq/L）
1.0E+02
1.0E+01
1.0E+00
1.0E-01
I-131
Cs-134
Cs-137
There is no plot data after September 25 as no nuclide detected.
No sampling survey due to bad weather on the following days:
September 21,24,28-30,October 1,12,19,20,22,23,26,November 16,17,23-25
9/16
9/23
9/30
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

Radioactivity Density of Seawater (upper layer) around approx. 15 km offshore of Ukedo river (Bq/L)

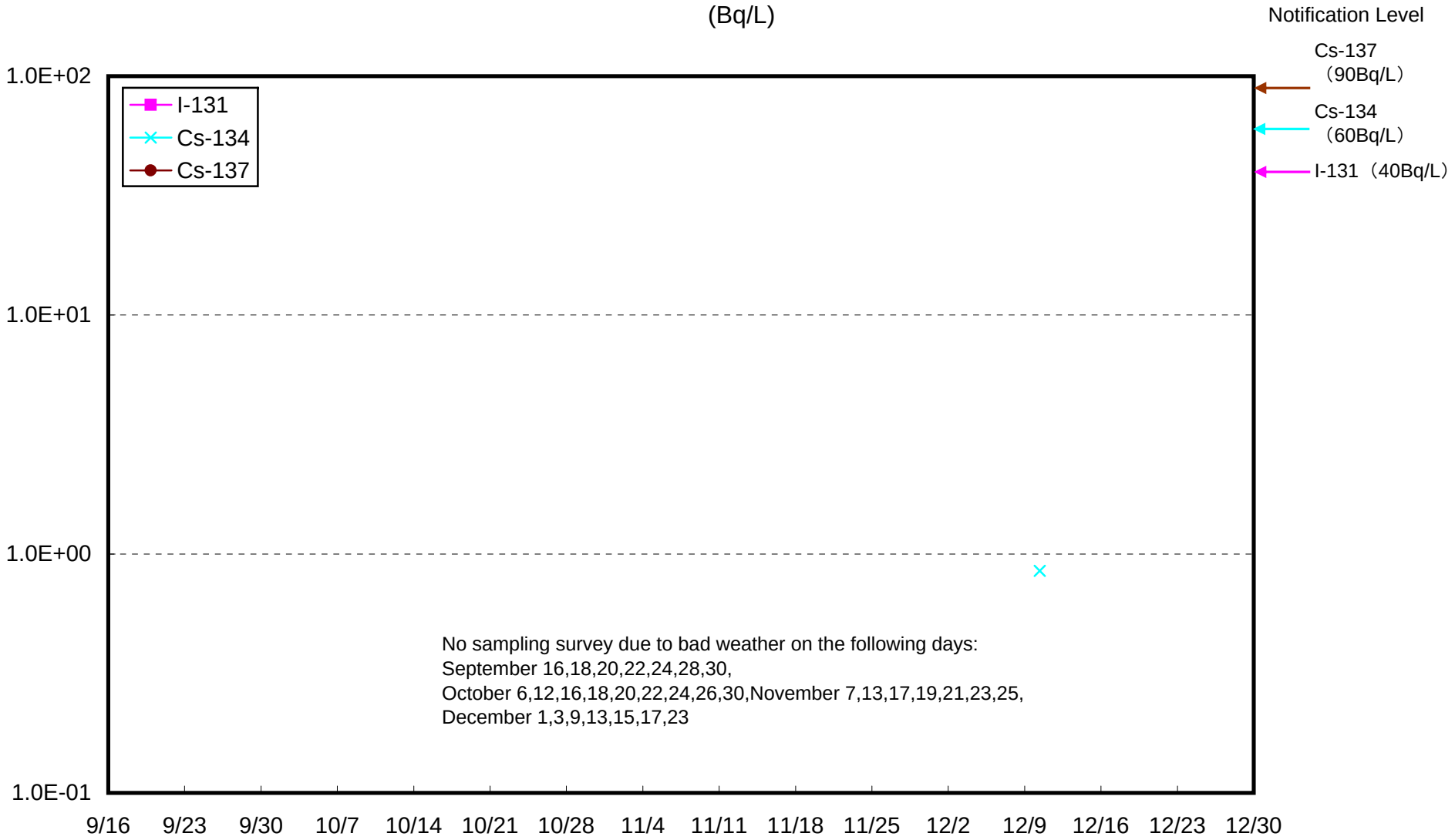



Radioactivity Density of Seawater (lower layer) around approx. 15 km offshore of Ukedo river (Bq/L)
Notification Level
Cs-137
（90Bq/L）
Cs-134
（60Bq/L）
I-131（40Bq/L）
1.0E+02
1.0E+01
1.0E+00
1.0E-01
I-131
Cs-134
Cs-137
There is no plot data after September 26 as no nuclide detected.
No sampling survey due to bad weather on the following days:
September 16,18,20,22,24,28,30,
October 6,10,12,16,18,20,22,24,26,30,
November 1,7,13,15,17,19,21,23,25,December 1,3,5,9,13,15,17,23,25
9/16
9/23
9/30
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

Radioactivity Density of Seawater (upper layer) around approx. 15 km offshore of Fukushima Daiichi NPS
(Bq/L)

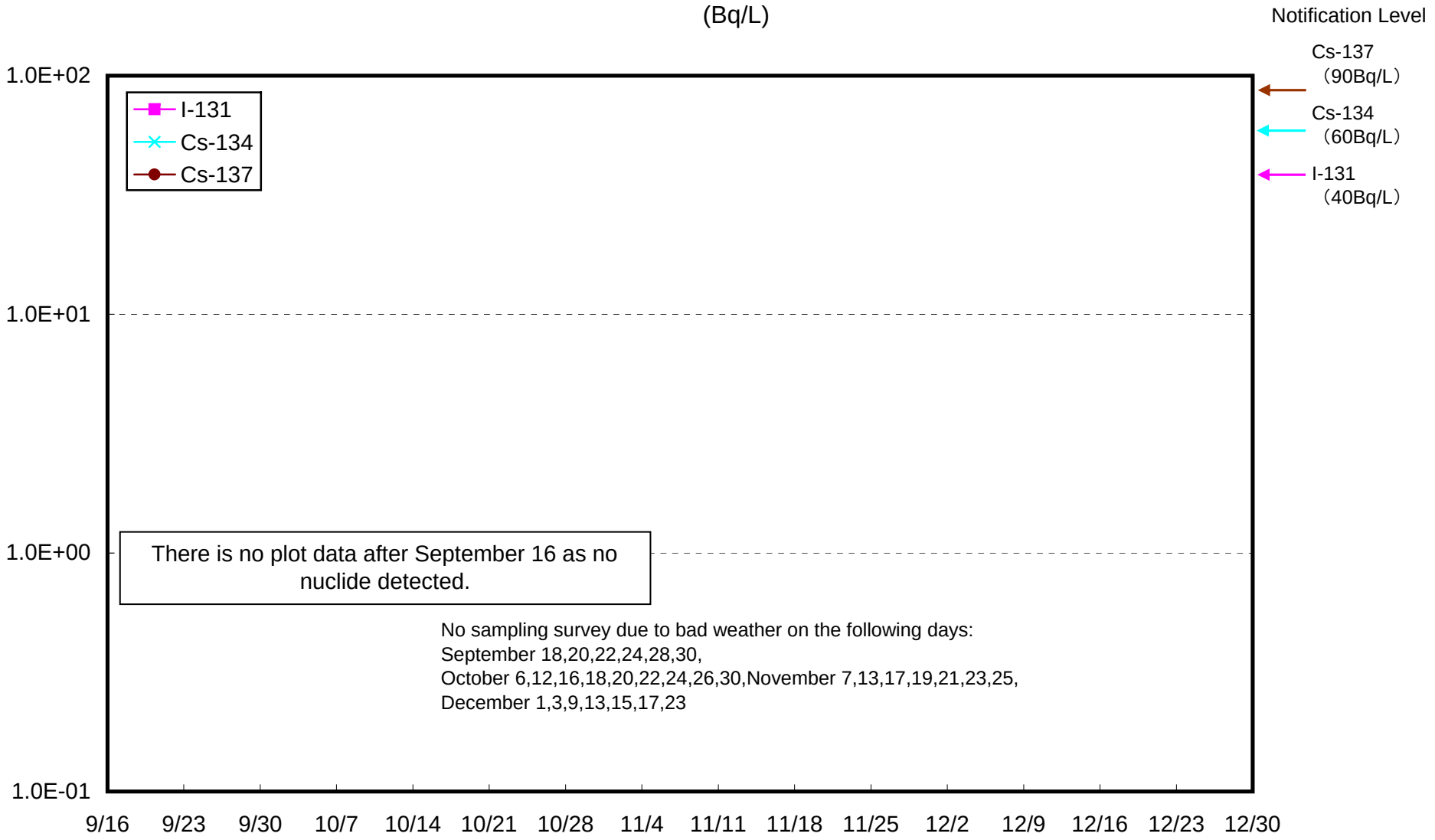


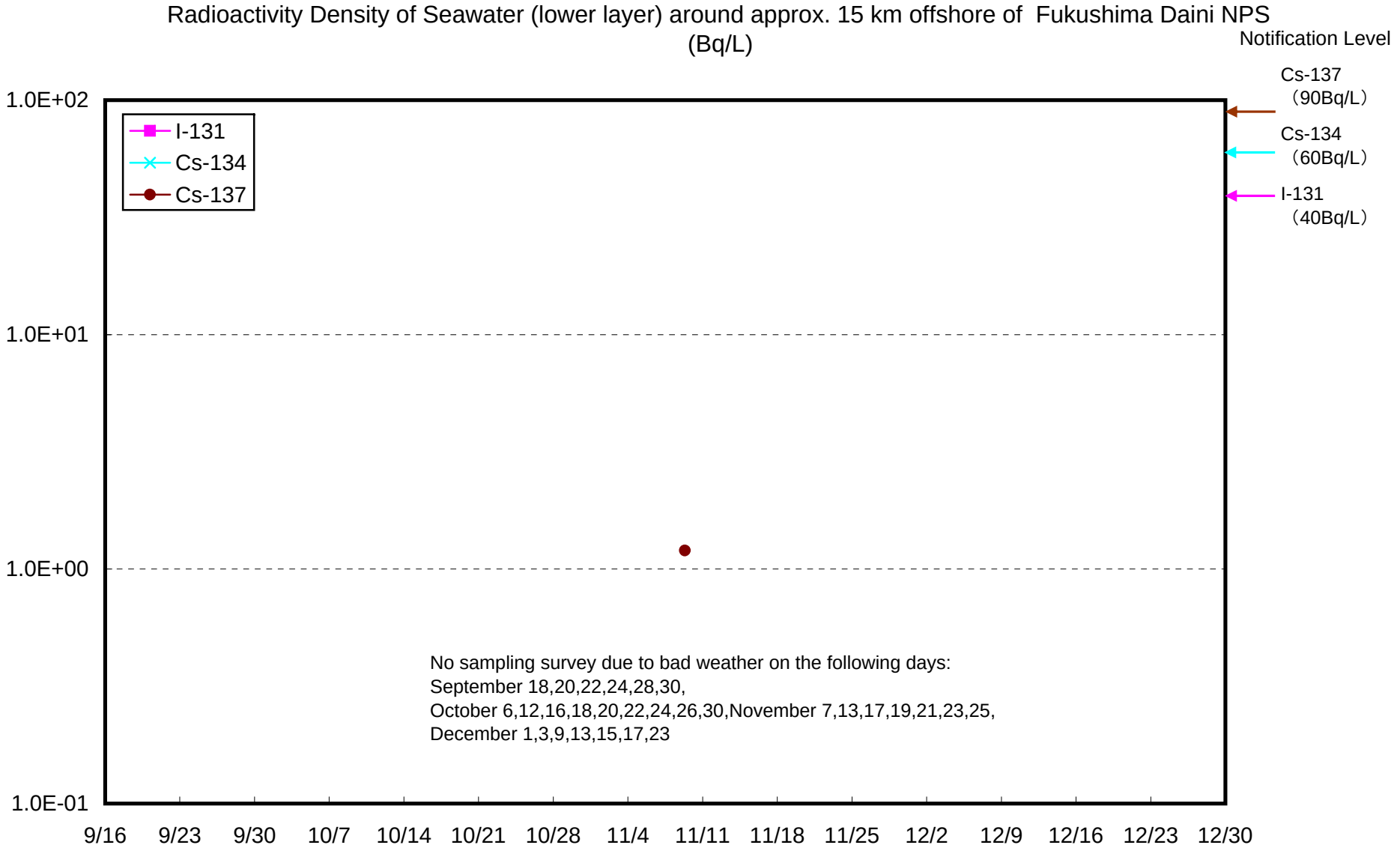
Radioactivity Density of Seawater (lower layer) around approx. 15 km offshore of Fukushima Daiichi NPS
(Bq/L)



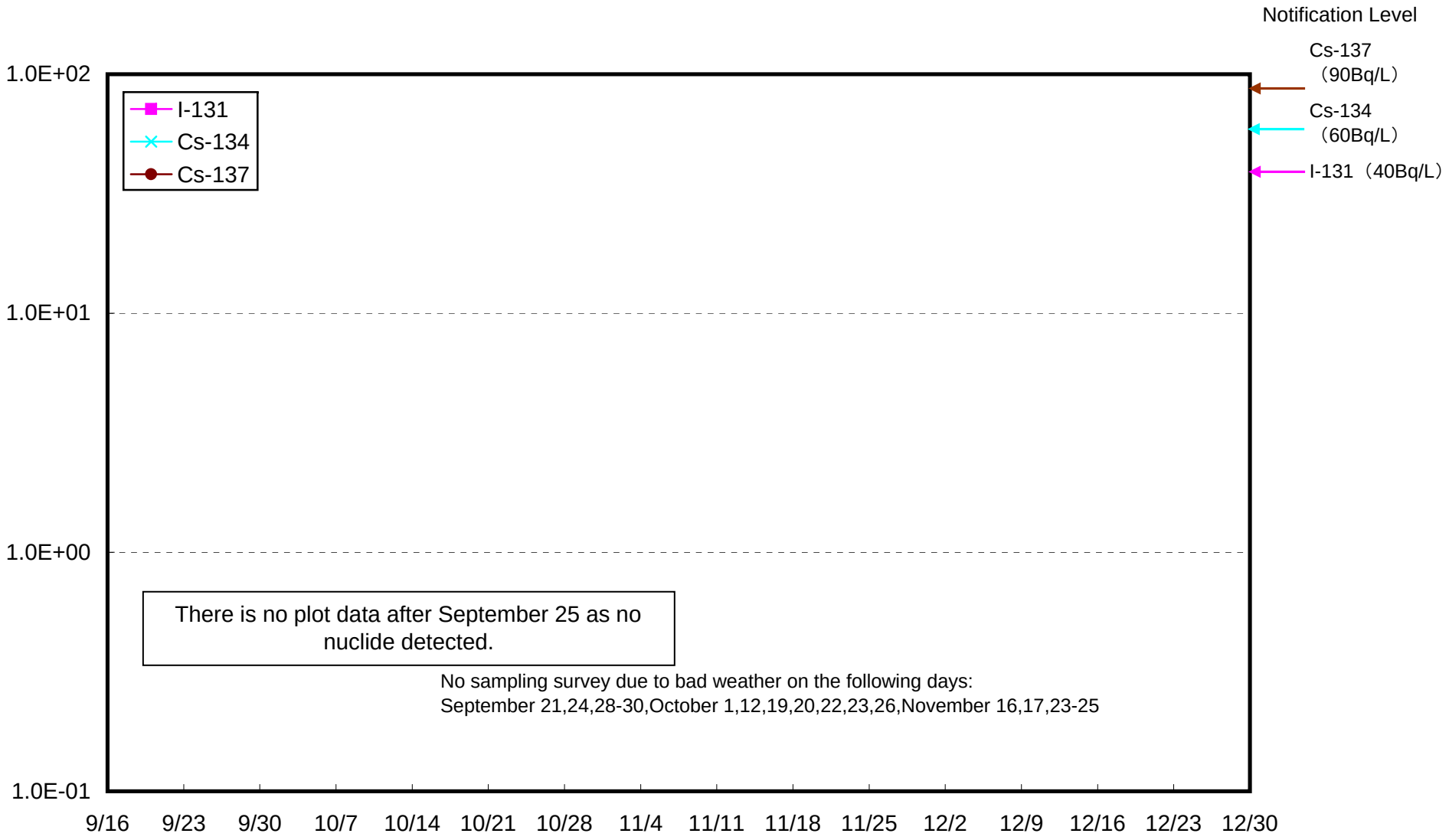
Radioactivity Density of Seawater (upper layer) around approx. 15 km offshore of Fukushima Daini NPS

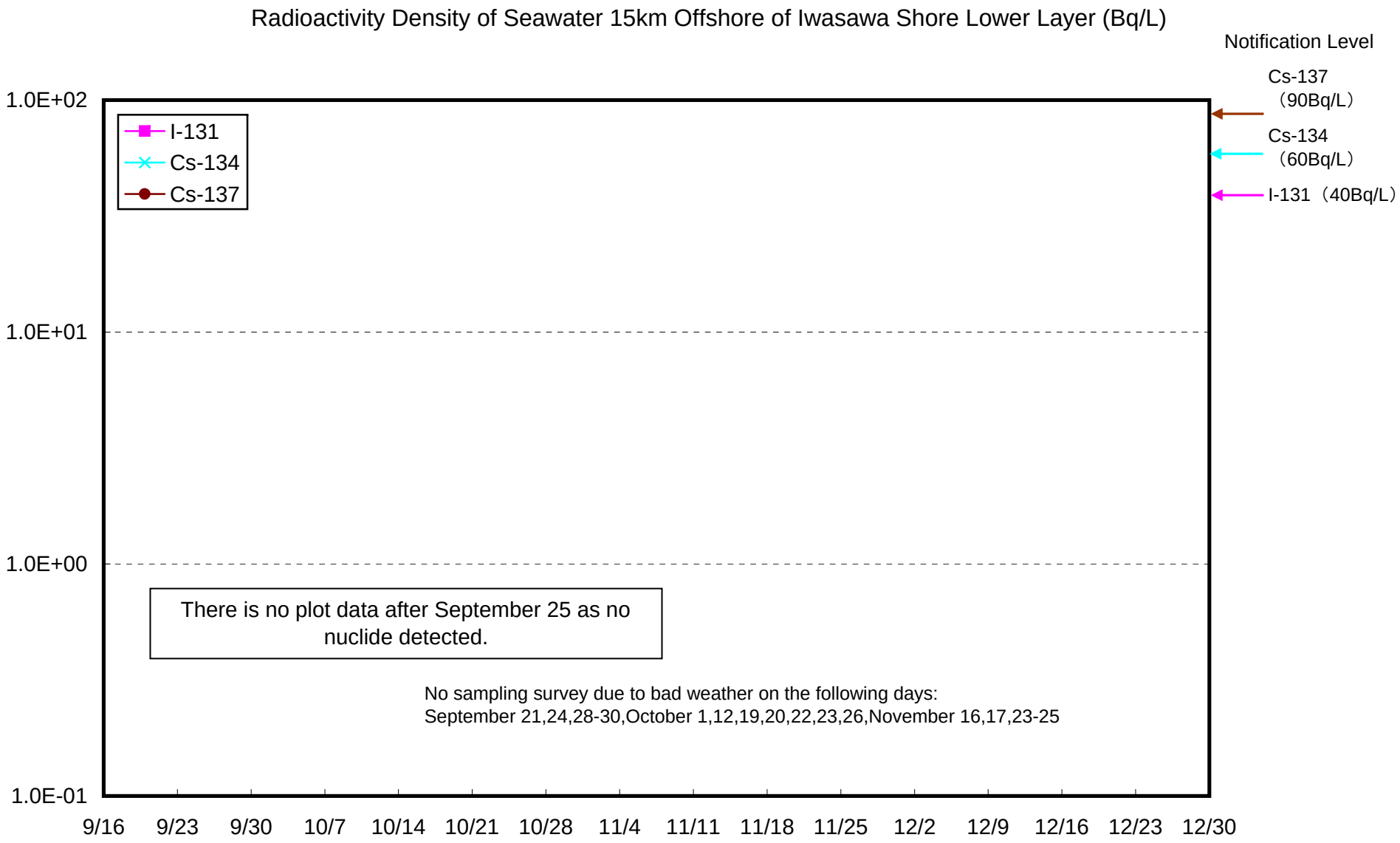
(Bq/L)

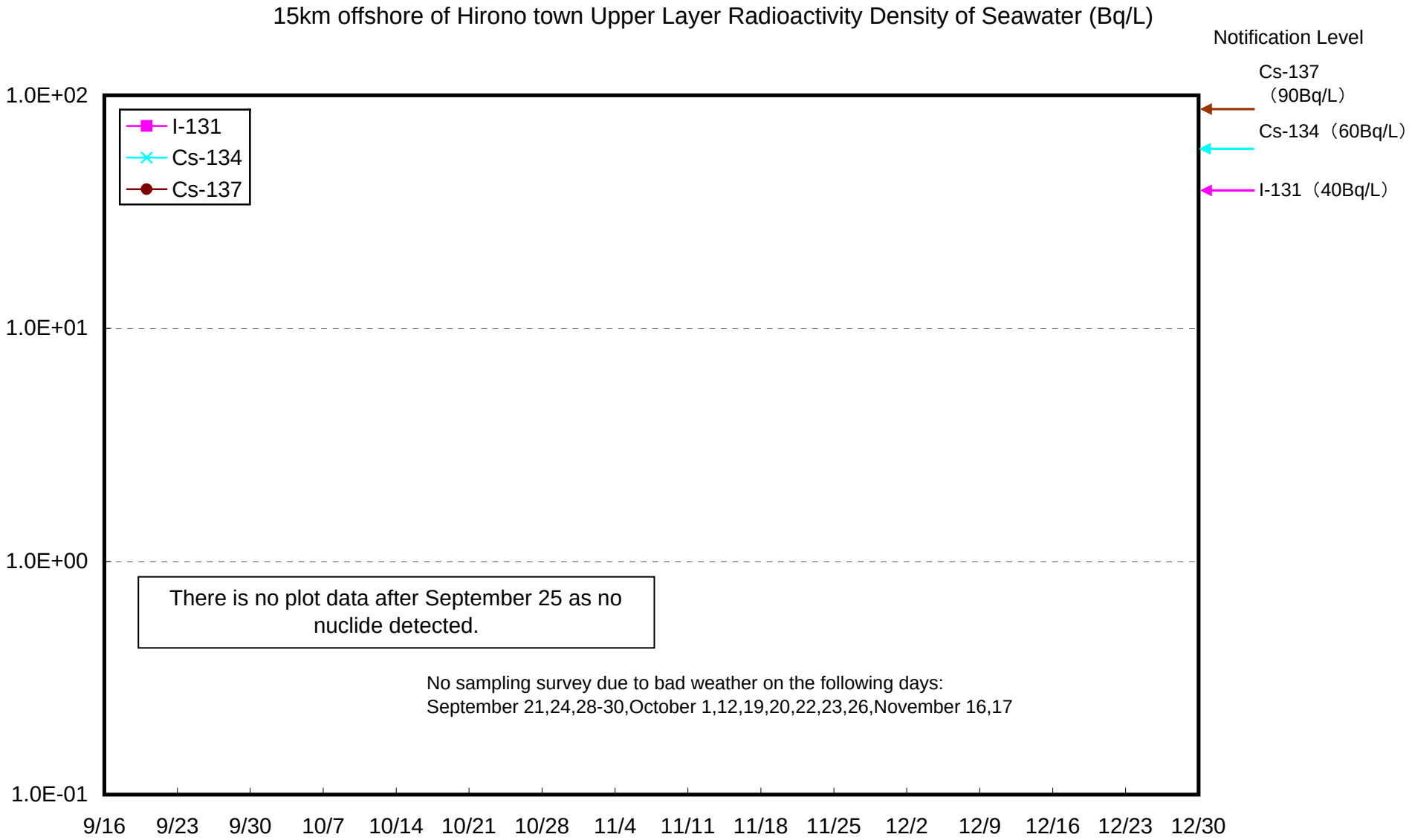


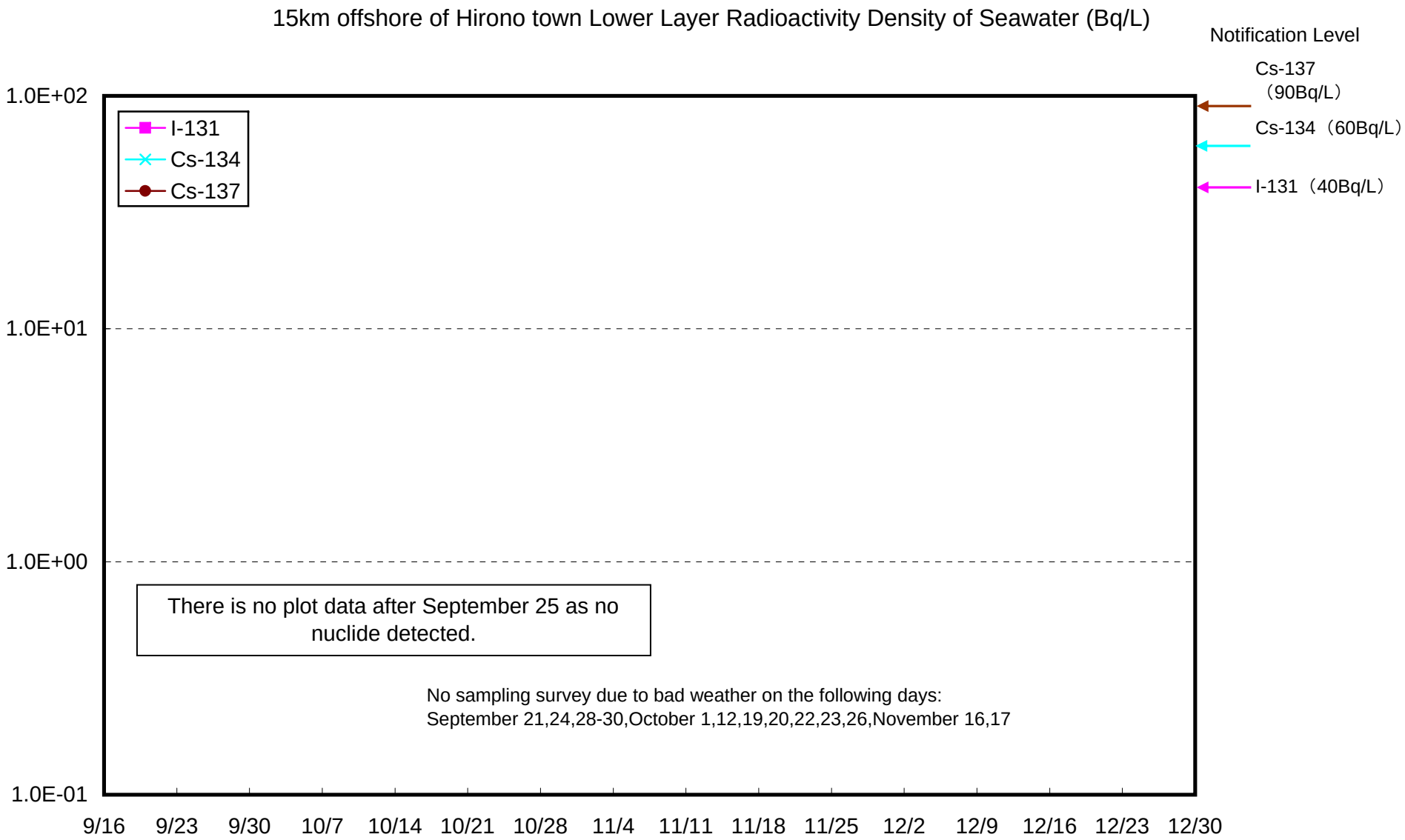

Radioactivity Density of Seawater (lower layer) around approx. 15 km offshore of Fukushima Daini NPS
(Bq/L)
Notification Level
Cs-137
（90Bq/L）
Cs-134
（60Bq/L）
I-131
（40Bq/L）
I-131
Cs-134
Cs-137
1.0E+02
1.0E+01
1.0E+00
1.0E-01
No sampling survey due to bad weather on the following days:
September 18,20,22,24,28,30,
October 6,12,16,18,20,22,24,26,30,November 7,13,17,19,21,23,25,
December 1,3,9,13,15,17,23
9/16
9/23
9/30
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

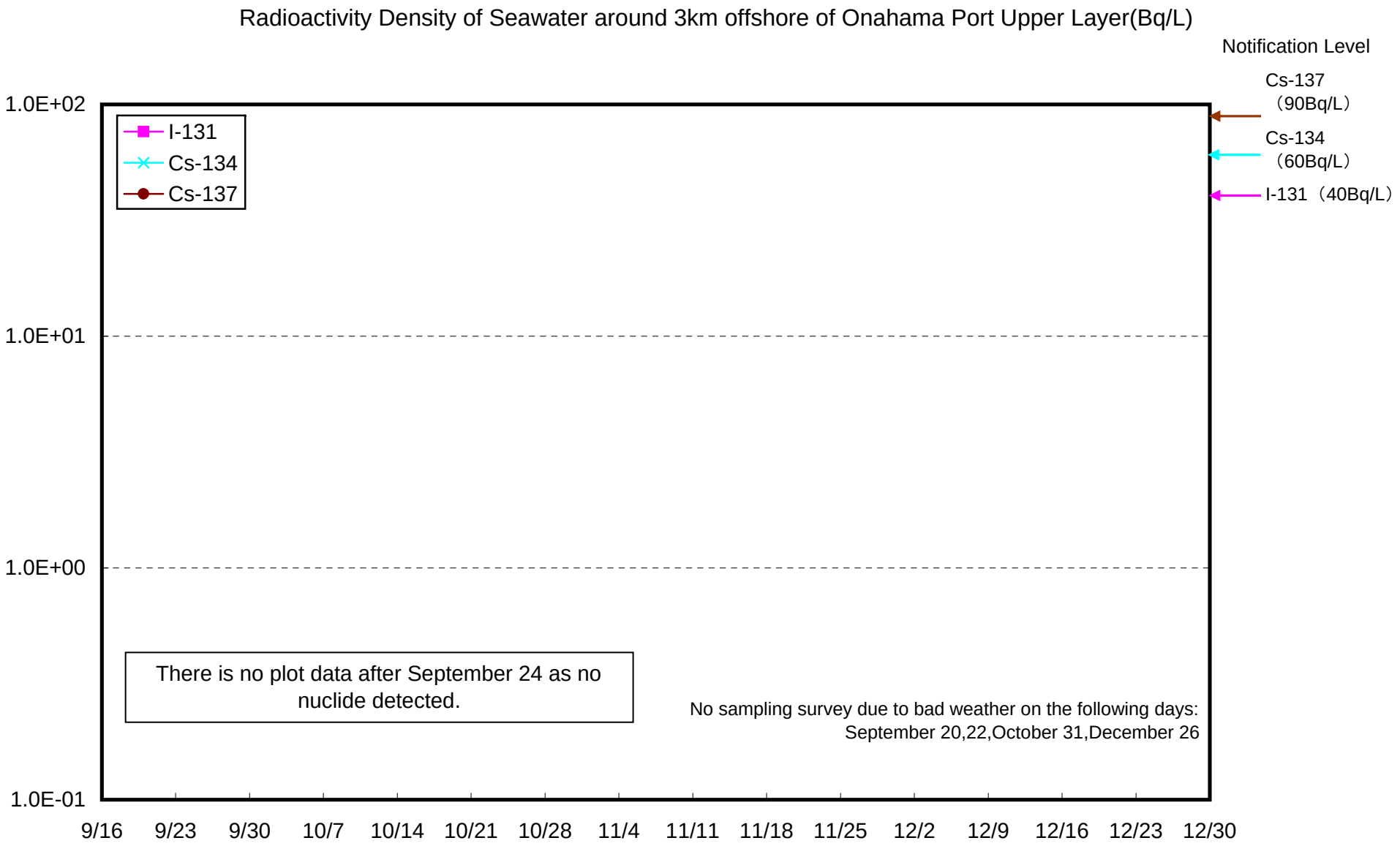
Radioactivity Density of Seawater 15km Offshore of Iwasawa Shore Upper Layer (Bq/L)

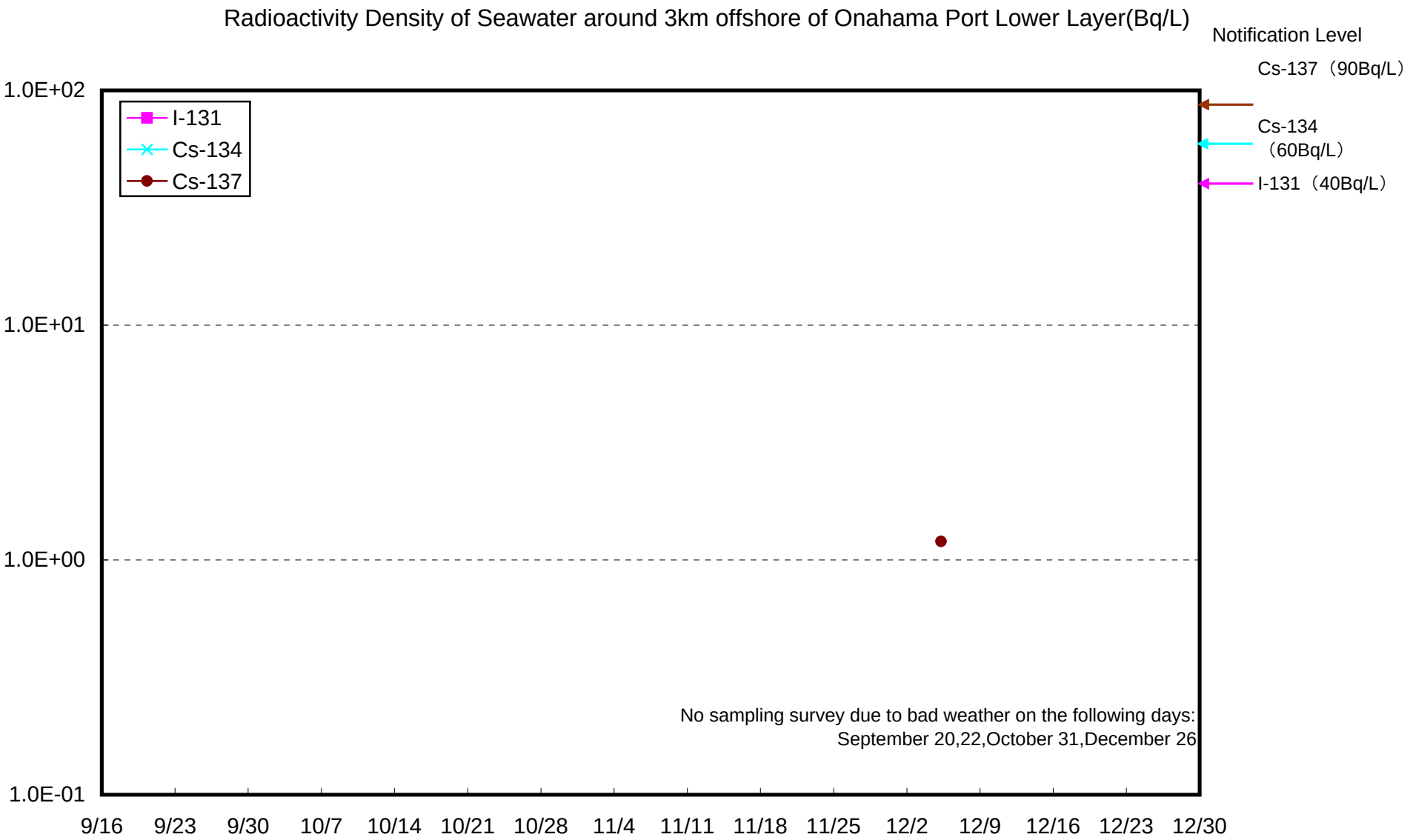


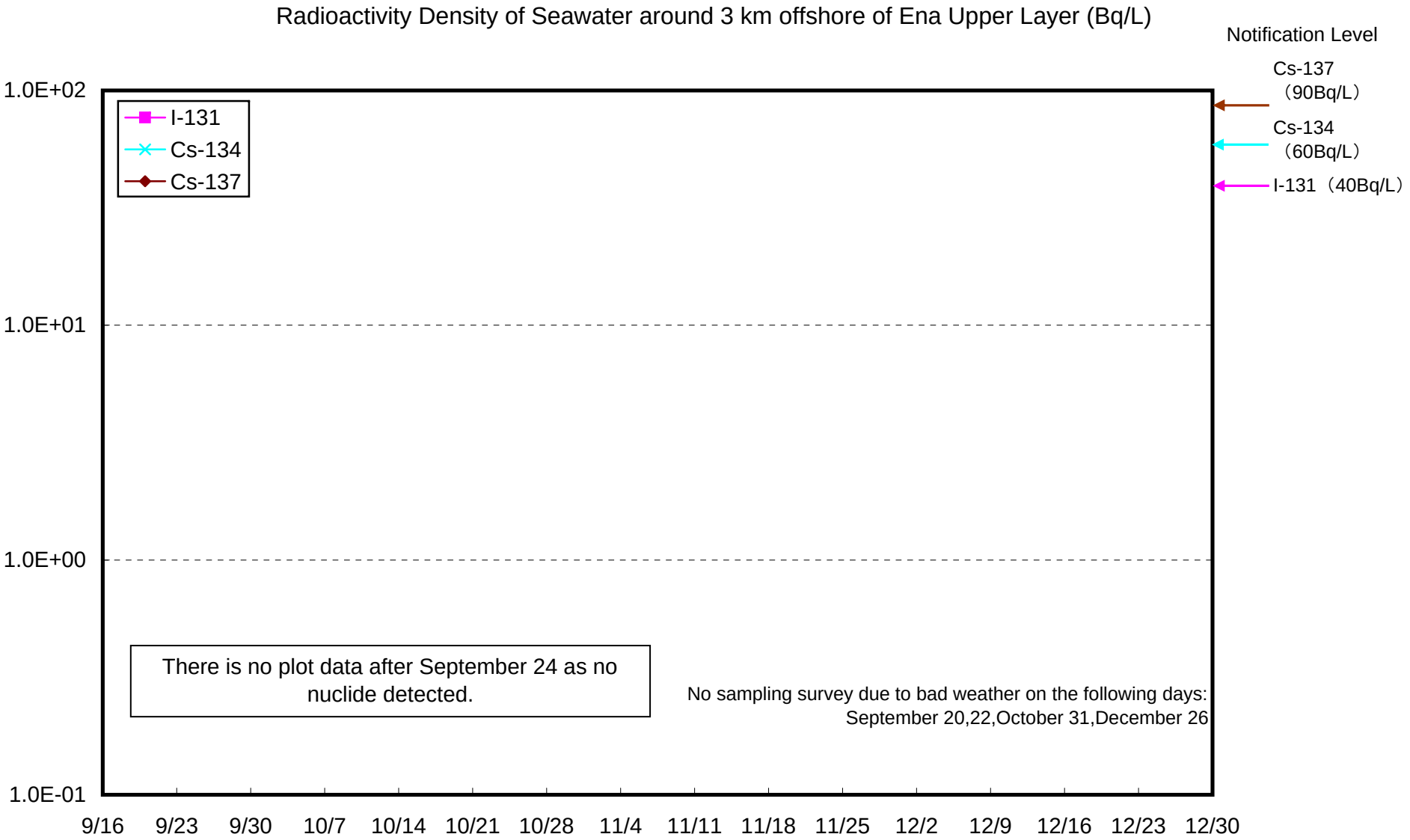

Radioactivity Density of Seawater 15km Offshore of Iwasawa Shore Lower Layer (Bq/L)
Notification Level
Cs-137
（90Bq/L）
Cs-134
（60Bq/L）
I-131（40Bq/L）
1.0E+02
1.0E+01
1.0E+00
1.0E-01
I-131
Cs-134
Cs-137
There is no plot data after September 25 as no nuclide detected.
No sampling survey due to bad weather on the following days:
September 21,24,28-30,October 1,12,19,20,22,23,26,November 16,17,23-25
9/16
9/23
9/30
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

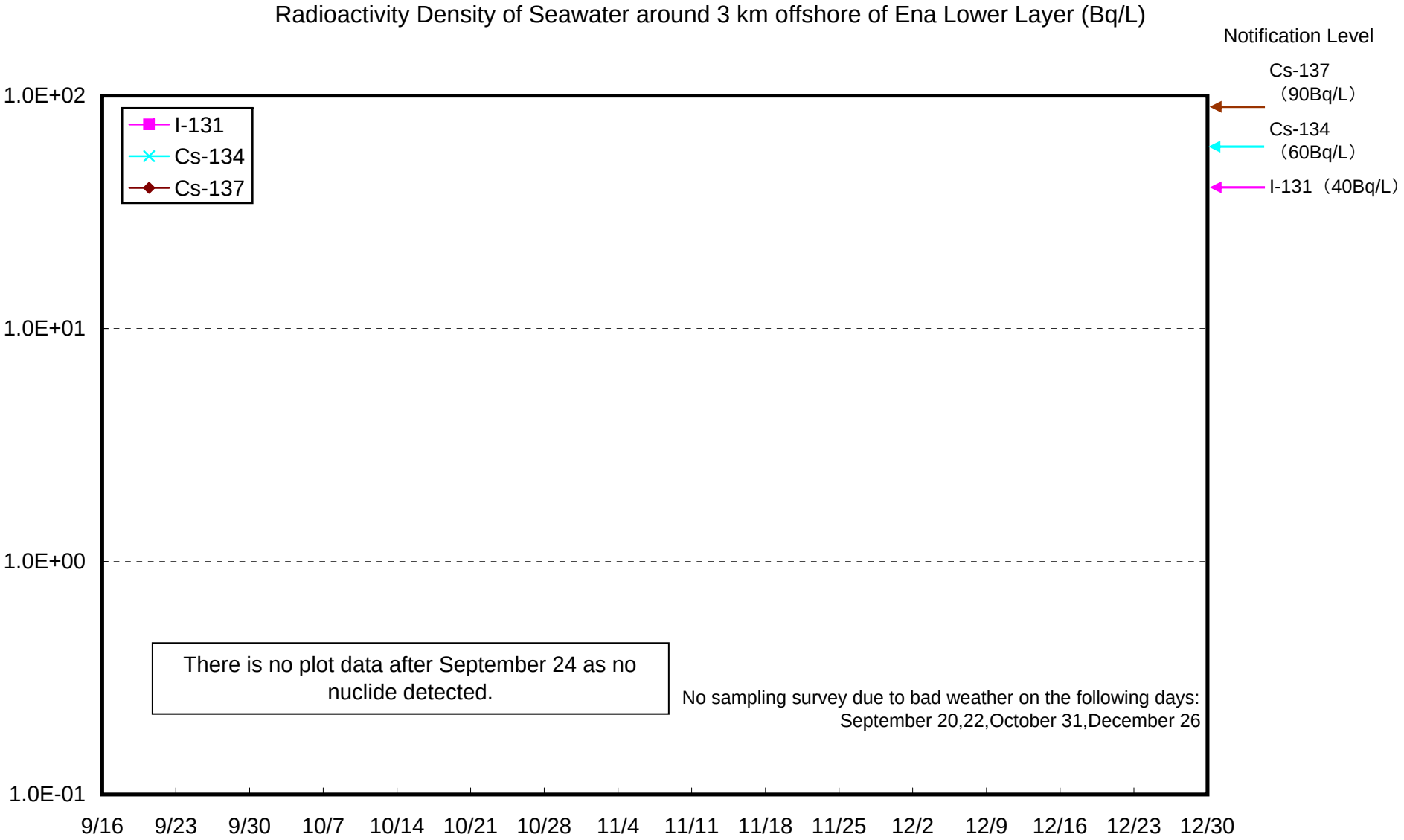

15km offshore of Hirono town Upper Layer Radioactivity Density of Seawater (Bq/L)
Notification Level
Cs-137
（90Bq/L）
Cs-134（60Bq/L）
I-131（40Bq/L）
I-131
Cs-134
Cs-137
1.0E+02
1.0E+01
1.0E+00
1.0E-01
There is no plot data after September 25 as no nuclide detected.
No sampling survey due to bad weather on the following days:
September 21,24,28-30,October 1,12,19,20,22,23,26,November 16,17
9/16
9/23
9/30
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


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）
I-131
Cs-134
Cs-137
1.0E+02
1.0E+01
1.0E+00
1.0E-01
There is no plot data after September 25 as no nuclide detected.
No sampling survey due to bad weather on the following days:
September 21,24,28-30,October 1,12,19,20,22,23,26,November 16,17
9/16
9/23
9/30
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

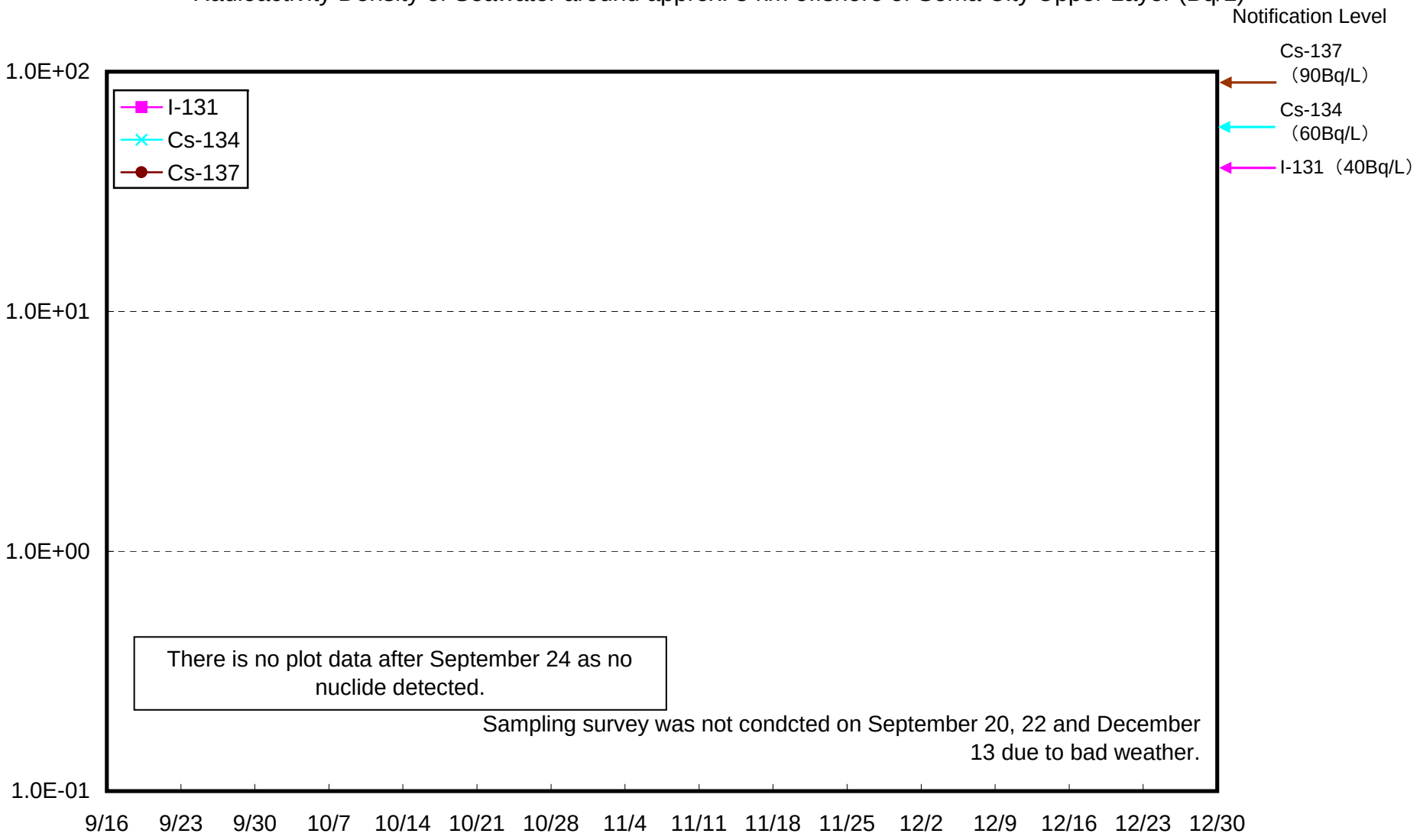

Radioactivity Density of Seawater around 3km offshore of Onahama Port Upper Layer(Bq/L)
Notification Level
Cs-137
（90Bq/L）
Cs-134
（60Bq/L）
I-131（40Bq/L）
1.0E+02
1.0E+01
1.0E+00
1.0E-01
I-131
Cs-134
Cs-137
There is no plot data after September 24 as no nuclide detected.
No sampling survey due to bad weather on the following days:
September 20,22,October 31,December 26
9/16
9/23
9/30
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

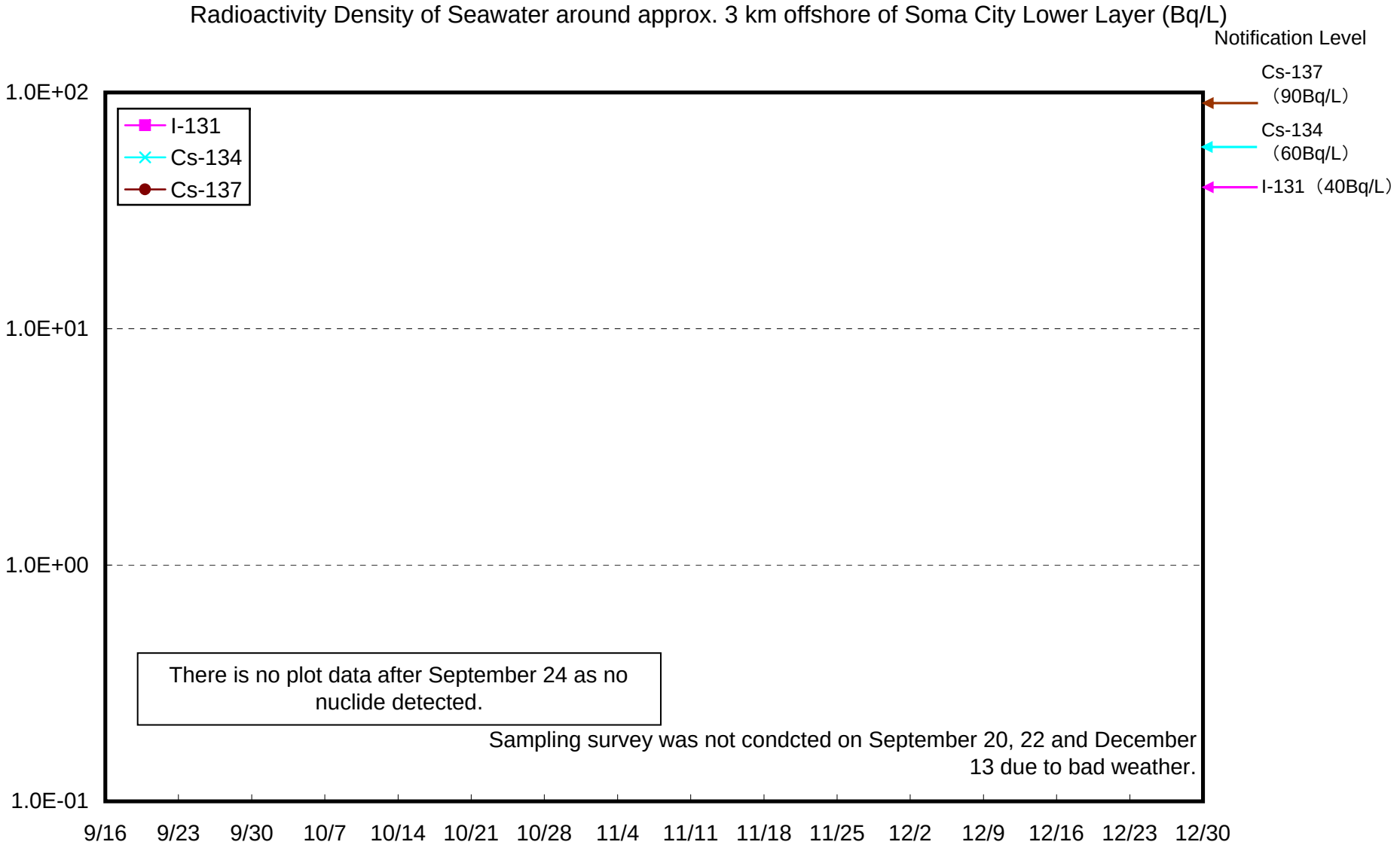

Radioactivity Density of Seawater around 3km offshore of Onahama Port Lower Layer(Bq/L)
Notification Level
Cs-137（90Bq/L）
Cs-134
（60Bq/L）
I-131（40Bq/L）
I-131
Cs-134
Cs-137
1.0E+02
1.0E+01
1.0E+00
1.0E-01
No sampling survey due to bad weather on the following days:
September 20,22,October 31,December 26
9/16
9/23
9/30
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

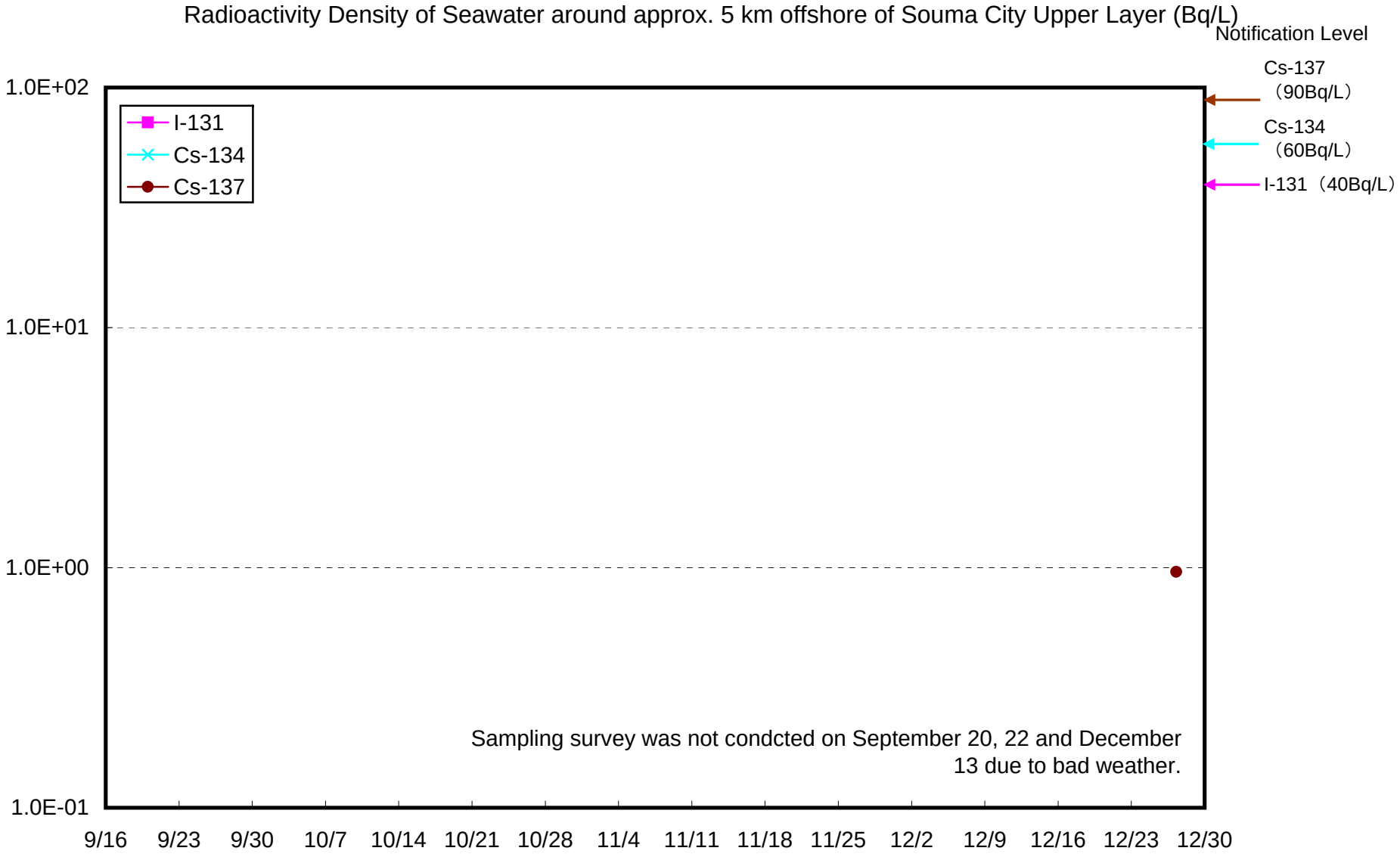

Radioactivity Density of Seawater around 3 km offshore of Ena Upper Layer (Bq/L)
Notification Level
Cs-137
（90Bq/L）
Cs-134
（60Bq/L）
I-131（40Bq/L）
1.0E+02
1.0E+01
1.0E+00
1.0E-01
I-131
Cs-134
Cs-137
There is no plot data after September 24 as no nuclide detected.
No sampling survey due to bad weather on the following days:
September 20,22,October 31,December 26
9/16
9/23
9/30
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

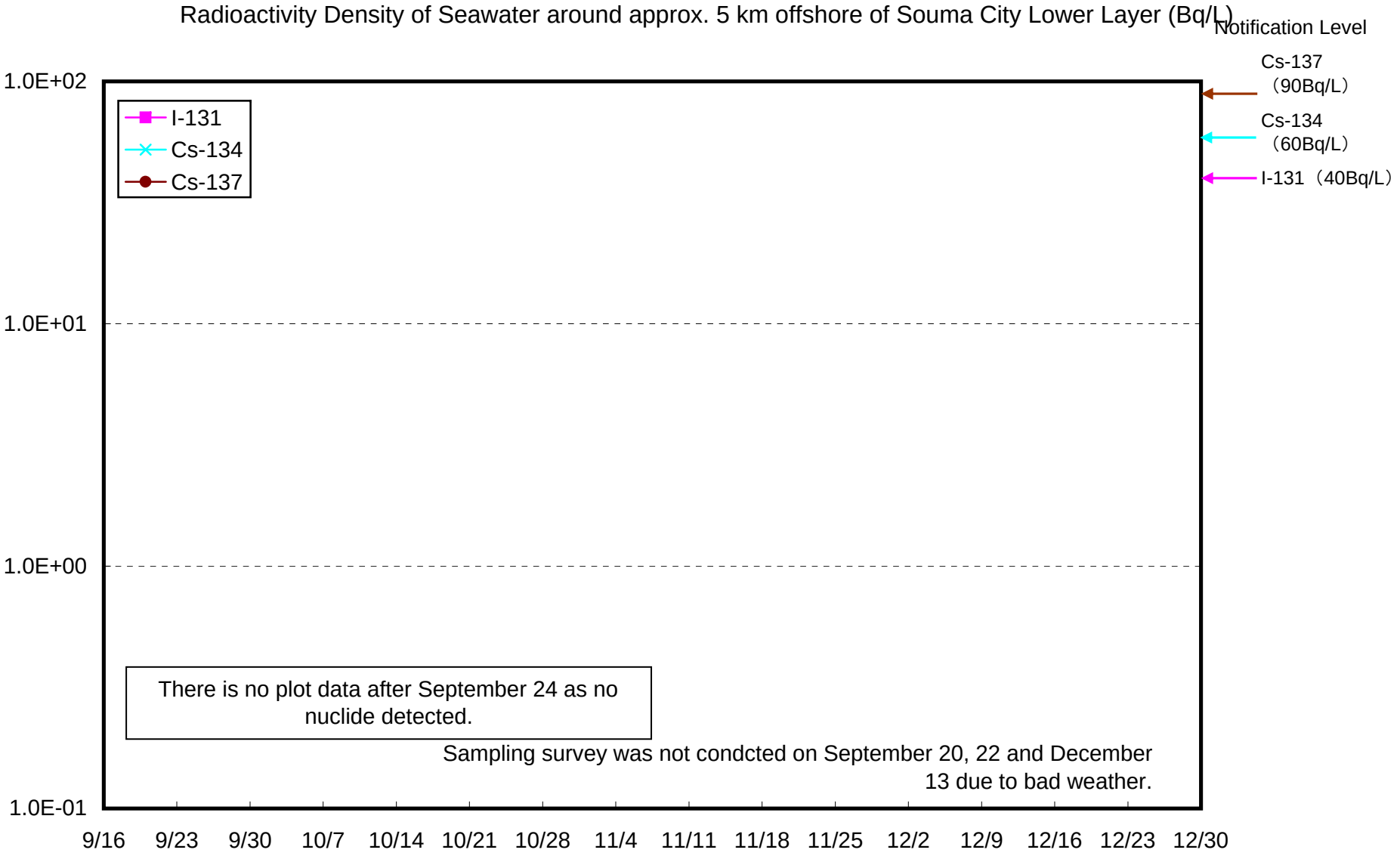

Radioactivity Density of Seawater around 3 km offshore of Ena Lower Layer (Bq/L)
Notification Level
Cs-137
（90Bq/L）
Cs-134
（60Bq/L）
I-131（40Bq/L）
1.0E+02
1.0E+01
1.0E+00
1.0E-01
I-131
Cs-134
Cs-137
There is no plot data after September 24 as no nuclide detected.
No sampling survey due to bad weather on the following days:
September 20,22,October 31,December 26
9/16
9/23
9/30
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

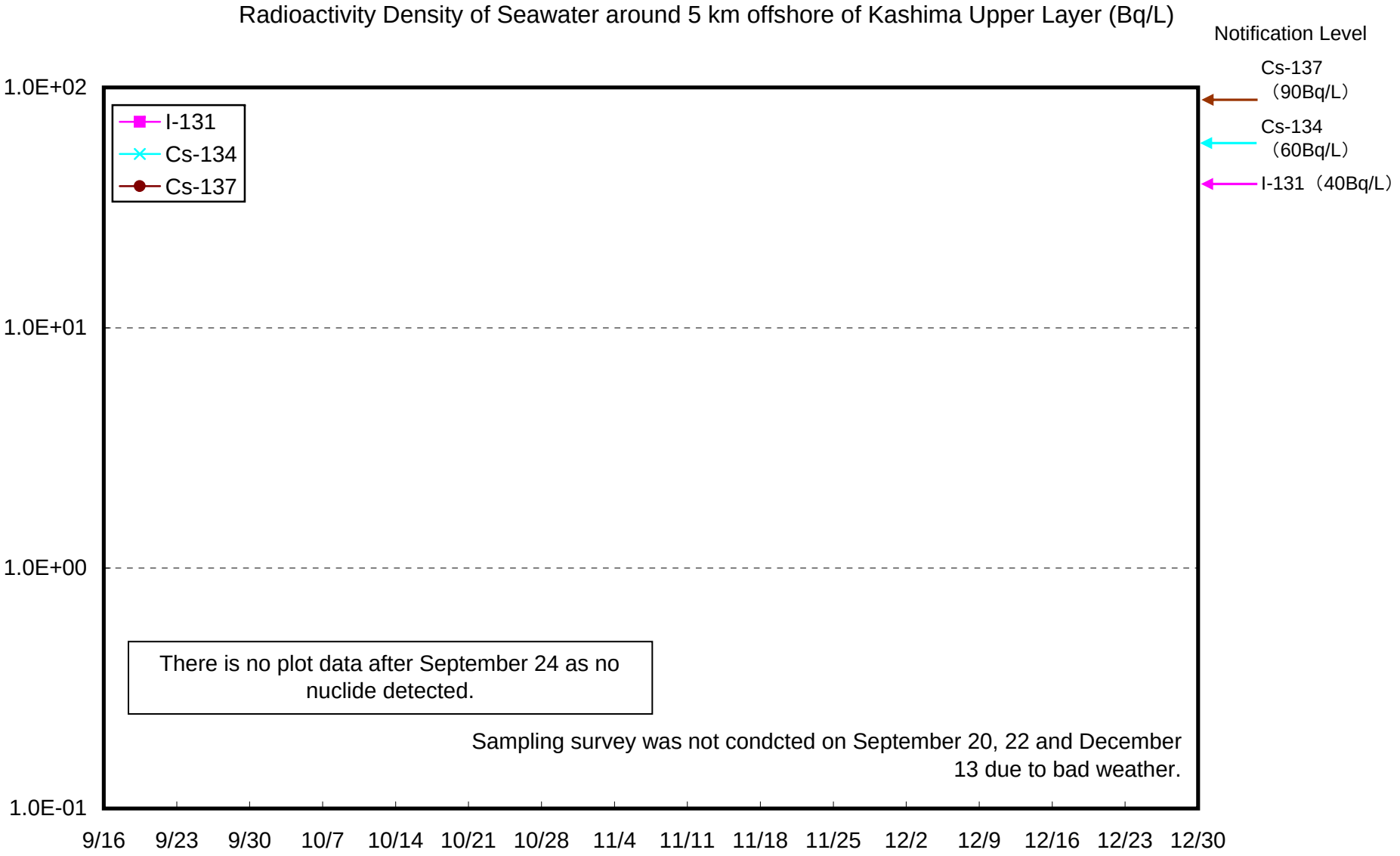
Radioactivity Density of Seawater around approx. 3 km offshore of Soma City Upper Layer (Bq/L)

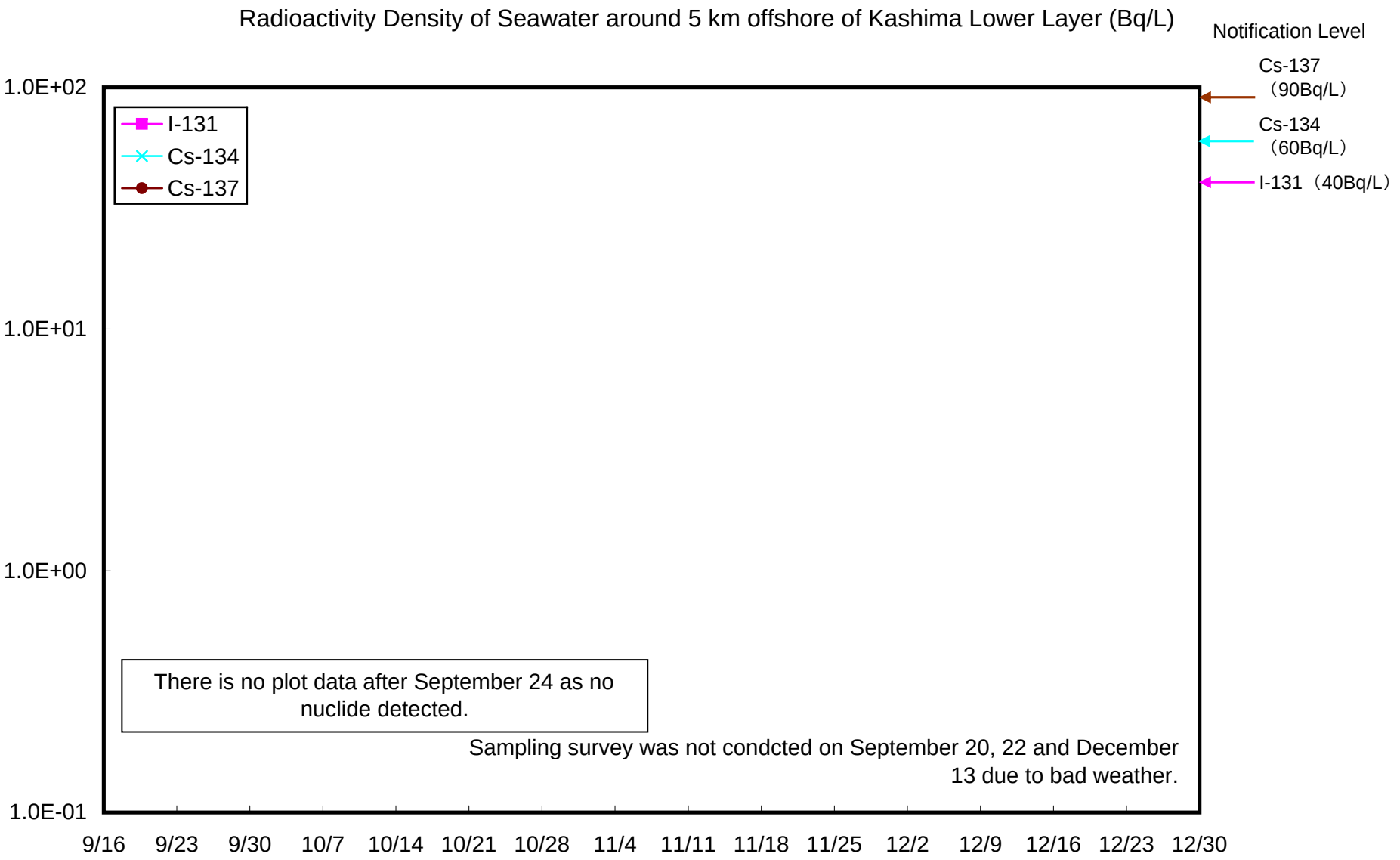



Radioactivity Density of Seawater around approx. 3 km offshore of Soma City Lower Layer (Bq/L)
Notification Level
Cs-137
（90Bq/L）
Cs-134
（60Bq/L）
I-131（40Bq/L）
1.0E+02
1.0E+01
1.0E+00
1.0E-01
I-131
Cs-134
Cs-137
There is no plot data after September 24 as no nuclide detected.
Sampling survey was not condcted on September 20, 22 and December 13 due to bad weather.
9/16
9/23
9/30
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

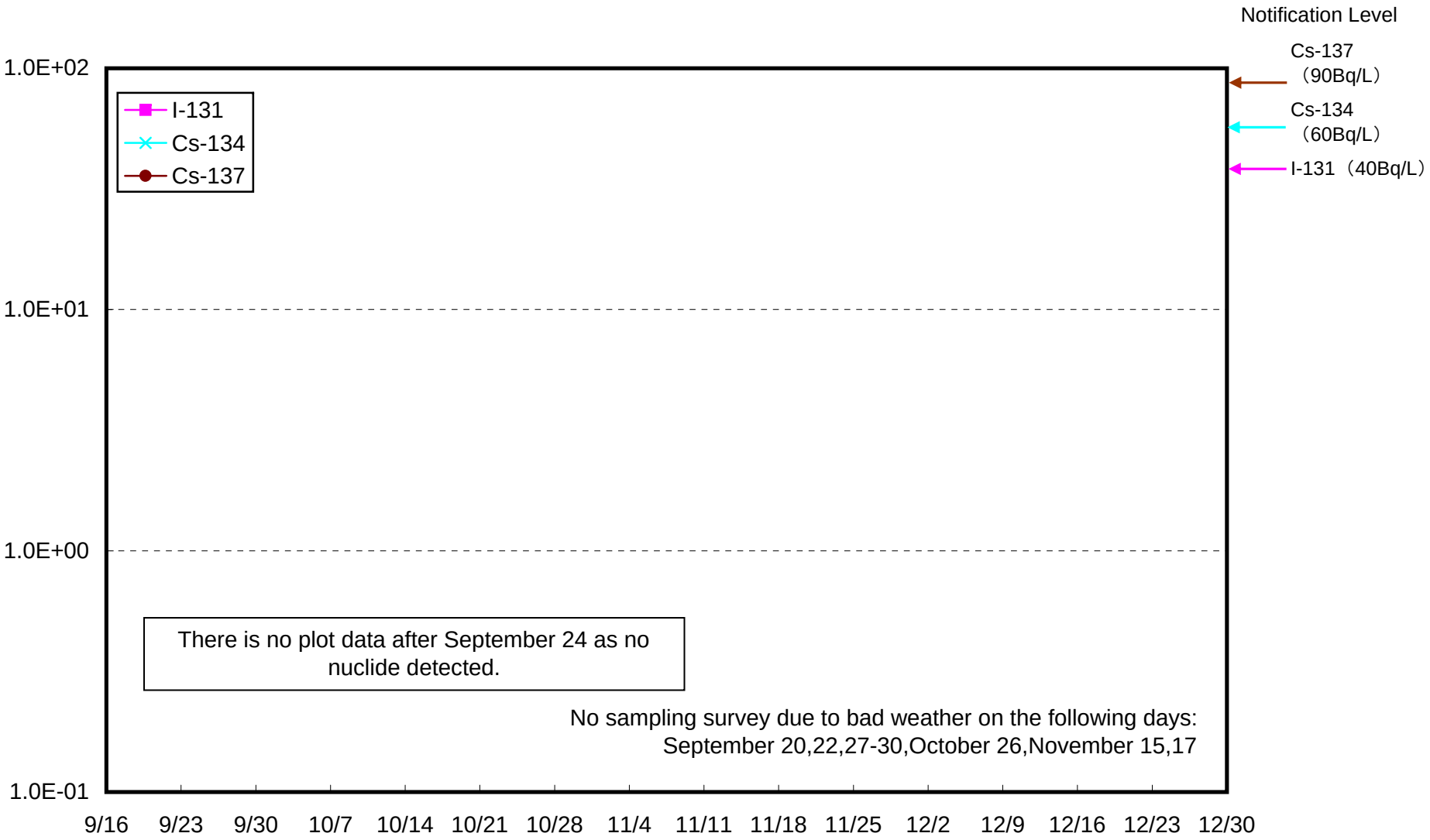

Radioactivity Density of Seawater around approx. 5 km offshore of Souma City Upper Layer (Bq/L)
Notification Level
Cs-137
（90Bq/L）
Cs-134
（60Bq/L）
I-131（40Bq/L）
I-131
Cs-134
Cs-137
1.0E+02
1.0E+01
1.0E+00
1.0E-01
Sampling survey was not condcted on September 20, 22 and December 13 due to bad weather.
9/16
9/23
9/30
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

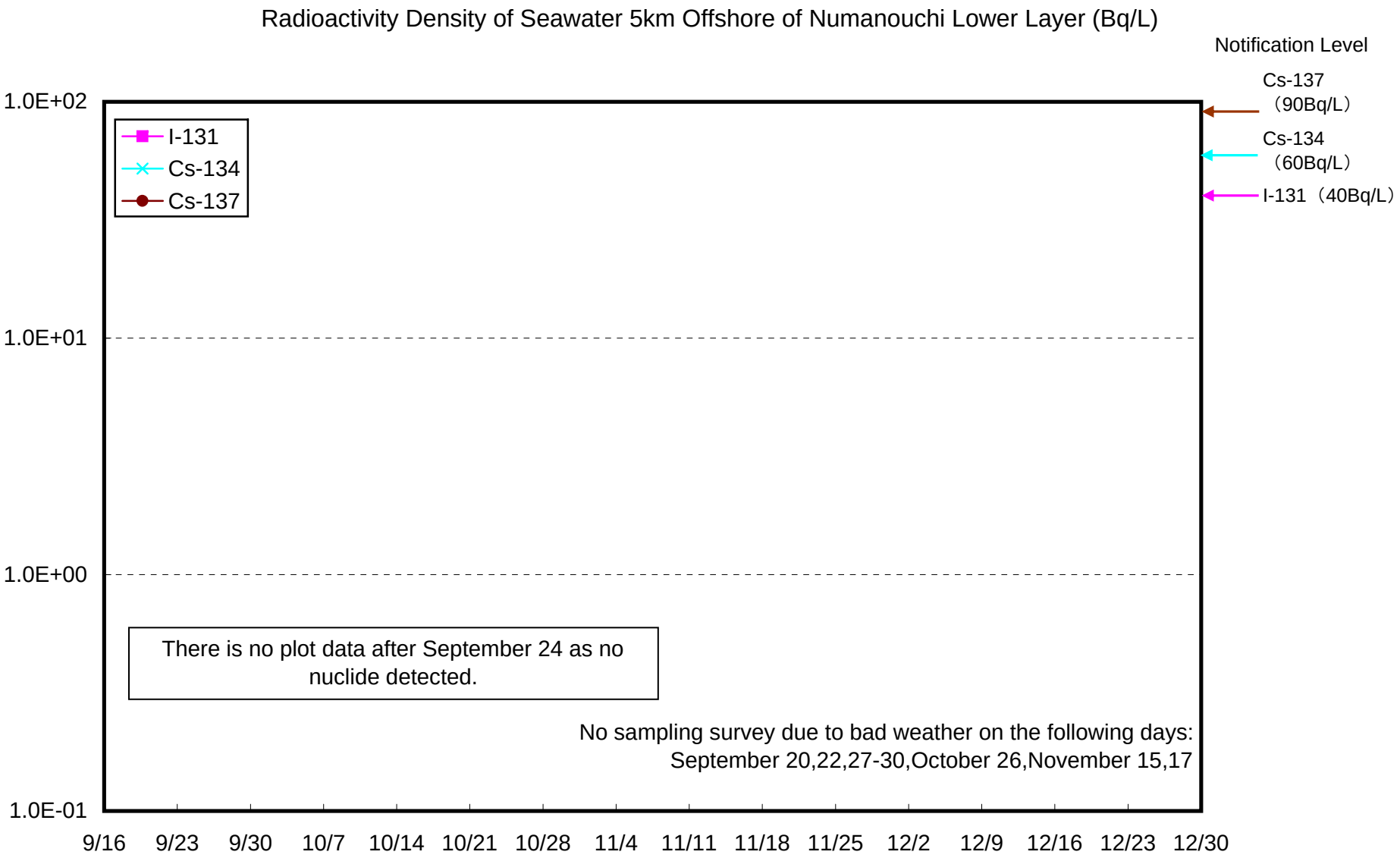

Radioactivity Density of Seawater around approx. 5 km offshore of Souma City Lower Layer (Bq/L)
Notification Level
Cs-137
（90Bq/L）
Cs-134
（60Bq/L）
I-131（40Bq/L）
1.0E+02
1.0E+01
1.0E+00
1.0E-01
I-131
Cs-134
Cs-137
There is no plot data after September 24 as no nuclide detected.
Sampling survey was not condcted on September 20, 22 and December 13 due to bad weather.
9/16
9/23
9/30
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


Radioactivity Density of Seawater around 5 km offshore of Kashima Upper Layer (Bq/L)
Notification Level
Cs-137
（90Bq/L）
Cs-134
（60Bq/L）
I-131（40Bq/L）
1.0E+02
1.0E+01
1.0E+00
1.0E-01
I-131
Cs-134
Cs-137
There is no plot data after September 24 as no nuclide detected.
Sampling survey was not condcted on September 20, 22 and December 13 due to bad weather.
9/16
9/23
9/30
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


Radioactivity Density of Seawater around 5 km offshore of Kashima Lower Layer (Bq/L)
Notification Level
Cs-137
（90Bq/L）
Cs-134
（60Bq/L）
I-131（40Bq/L）
1.0E+02
1.0E+01
1.0E+00
1.0E-01
I-131
Cs-134
Cs-137
There is no plot data after September 24 as no nuclide detected.
Sampling survey was not condcted on September 20, 22 and December 13 due to bad weather.
9/16
9/23
9/30
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

Radioactivity Density of Seawater 5km Offshore of Numanouchi Upper Layer (Bq/L)




Radioactivity Density of Seawater 5km Offshore of Numanouchi Lower Layer (Bq/L)
Notification Level
Cs-137
（90Bq/L）
Cs-134
（60Bq/L）
I-131（40Bq/L）
1.0E+02
1.0E+01
1.0E+00
1.0E-01
I-131
Cs-134
Cs-137
There is no plot data after September 24 as no nuclide detected.
No sampling survey due to bad weather on the following days:
September 20,22,27-30,October 26,November 15,17
9/16
9/23
9/30
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