

Nuclide Analysis Results of Radioactive Materials in Seawater <Coast>

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| Reference |
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(Data summarized on March 19)

| 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) | | 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 | Mar 18, 2012 08:40 am | | Mar 18, 2012 08:20 am | | Mar 18, 2012 08:25 am | | Mar 18, 2012 08:05 am | | |
| Detected Nuclides (Half-life) | Density of Sample (Bq/L) | Scaling Factor (/) | Density of Sample (Bq/L) | Scaling Factor (/) | Density of Sample (Bq/L) | Scaling Factor (/) | Density of Sample (Bq/L) | Scaling Factor (/) | |
| I-131 (about 8 days) | ND | - | ND | - | ND | - | ND | - | 40 |
| Cs-134 (about 2 years) | 2.3 | 0.04 | 1.1 | 0.02 | ND | - | ND | - | 60 |
| Cs-137 (about 30 years) | 3.3 | 0.04 | 1.9 | 0.02 | 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. 0.87Bq/L, Cs-137: approx. 0.97Bq/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>

Reference

(Data summarized on March 19)

| 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 | | 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 | | Time of Sampling | | Time of Sampling | | Time of Sampling | | Time of Sampling | | Time of Sampling | | |
| Detected Nuclides (Half-life) | Density of Sample (Bq/L) | Scaling Factor (/) | Density of Sample (Bq/L) | Scaling Factor (/) | Density of Sample (Bq/L) | Scaling Factor (/) | Density of Sample (Bq/L) | Scaling Factor (/) | Density of Sample (Bq/L) | Scaling Factor (/) | Density of Sample (Bq/L) | Scaling Factor (/) | |
| 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 | | / | | / | | 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 | | Time of Sampling | | Time of Sampling | | Time of Sampling | | Time of Sampling | | Time of Sampling | | |
| Detected Nuclides (Half-life) | Density of Sample (Bq/L) | Scaling Factor (/) | Density of Sample (Bq/L) | Scaling Factor (/) | Density of Sample (Bq/L) | Scaling Factor (/) | Density of Sample (Bq/L) | Scaling Factor (/) | Density of Sample (Bq/L) | Scaling Factor (/) | Density of Sample (Bq/L) | Scaling Factor (/) | |
| 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/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. 0.90Bq/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<Coast and Offshore>

(Data summarized on March 19)

| 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) | | 15 km offshore of Fukushima Daiichi Upper Layer | | 15 km offshore of Fukushima Daini Upper Layer | | 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) |
|----------------------------|---|--------------------------|---|--------------------------|---|--------------------------|---|--------------------------|--|
| | Date of sampling | 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) | |
| I-131 (about 8 days) | ND | - | ND | - | ND | - | ND | - | 40 |
| Cs-134 (about 2 years) | ND | - | 1.5 | 0.03 | ND | - | ND | - | 60 |
| Cs-137 (about 30 years) | 1.1 | 0.01 | 1.5 | 0.02 | ND | - | ND | - | 90 |
| H-3 (about 12 years) | ND | - | 5.1 | 0.00 | ND | - | ND | - | 60,000 |
| all α | ND | - | ND | - | ND | - | ND | - | - |
| all β | ND | - | ND | - | ND | - | ND | - | - |
| Sr-89 (about 51 days) | ND | - | 0.15 | 0.00 | ND | - | ND | - | 300 |
| Sr-90 (about 29 years) | 0.18 | 0.01 | 0.77 | 0.03 | ND | - | 0.014 | 0.00 | 30 |

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

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

* Analysis results on I-131, Cs-134 and Cs-137 were announced on February 14, 15 and 17.

* In the case the measurement is under the detection threshold, "ND" is marked.

I-131: approx. 0.77Bq/L , Cs-134: approx. 0.88Bq/L , Cs-137: approx. 1.0Bq/L , H-3: approx. 2.7Bq/L , All α : approx. 3.5Bq/L , All β : approx. 21Bq/L , Sr-89: approx. 0.04Bq/L , Sr-90: approx. 0.01Bq/L

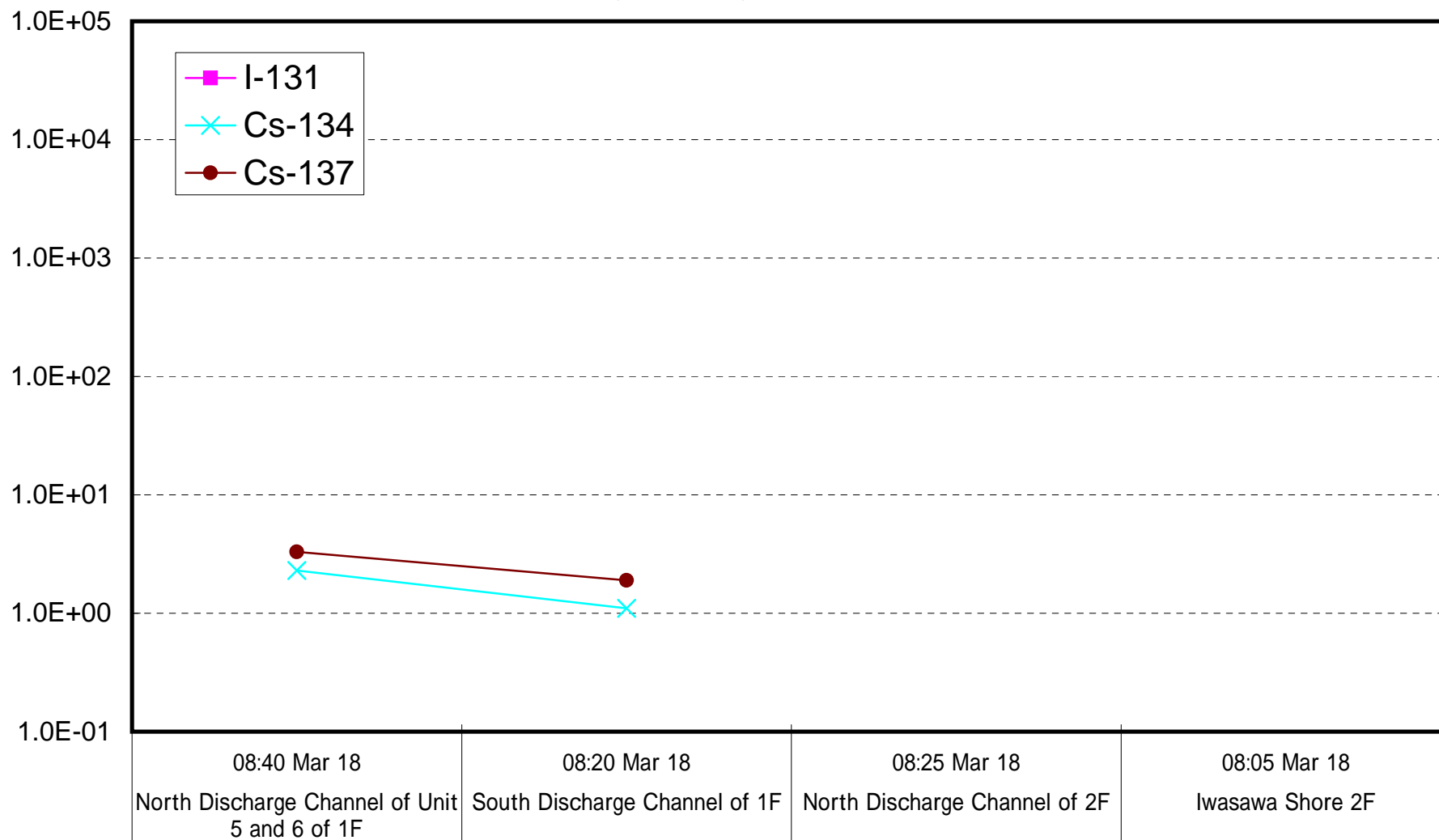
In addition, the detection threshold is different according to the detectors and the sample forms. So, it is possible to detect the nuclide under detection threshold

* Nuclide analysis was conducted by Japan Chemical Analysis Center.

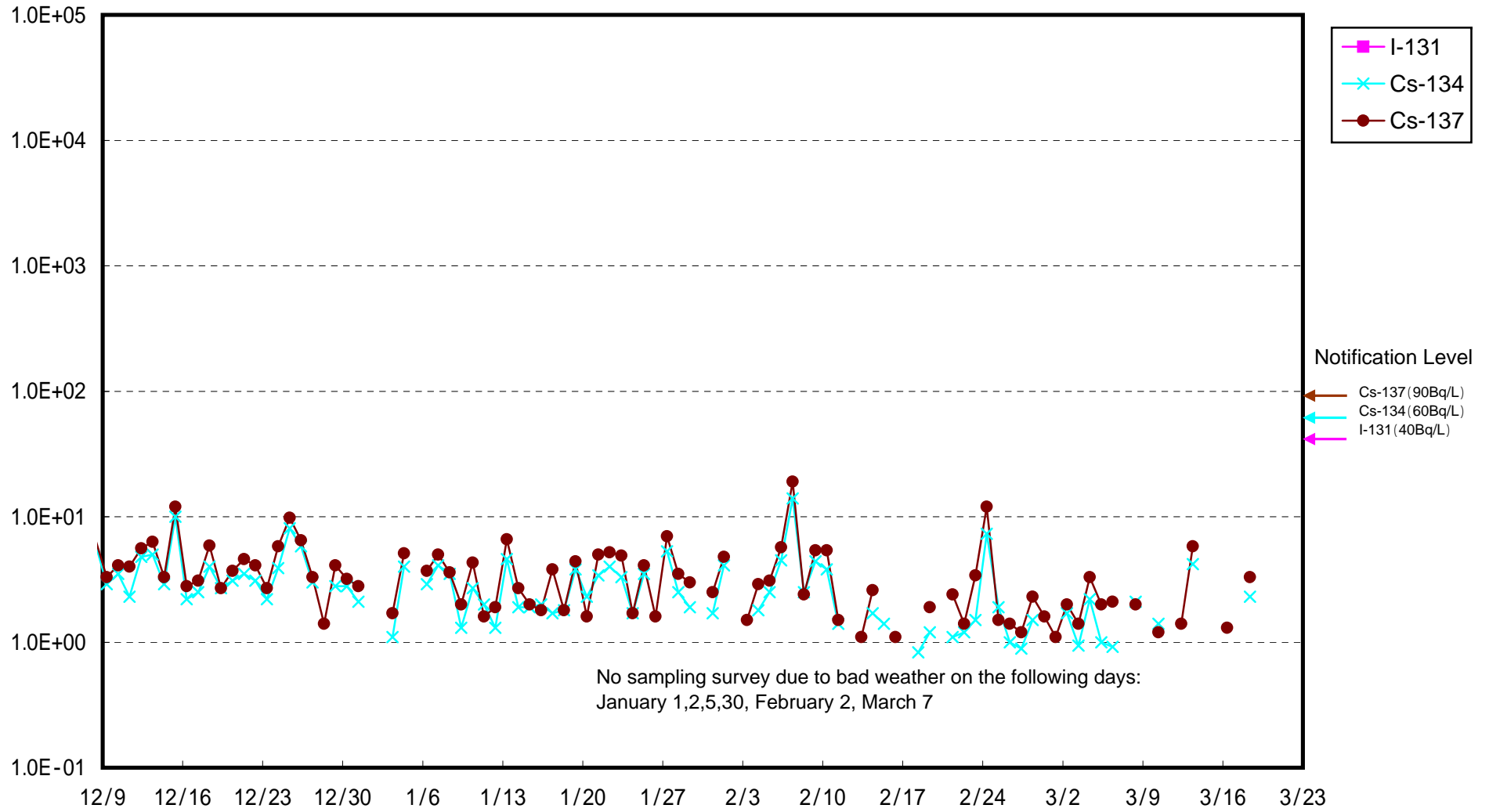
(Evaluation)

H-3, Sr-89 and Sr-90 were detected and it seems to be due to the effect of the accident, but the density of them are below density limit in the water specified in the density limit by the announcement of Reactor Regulation.

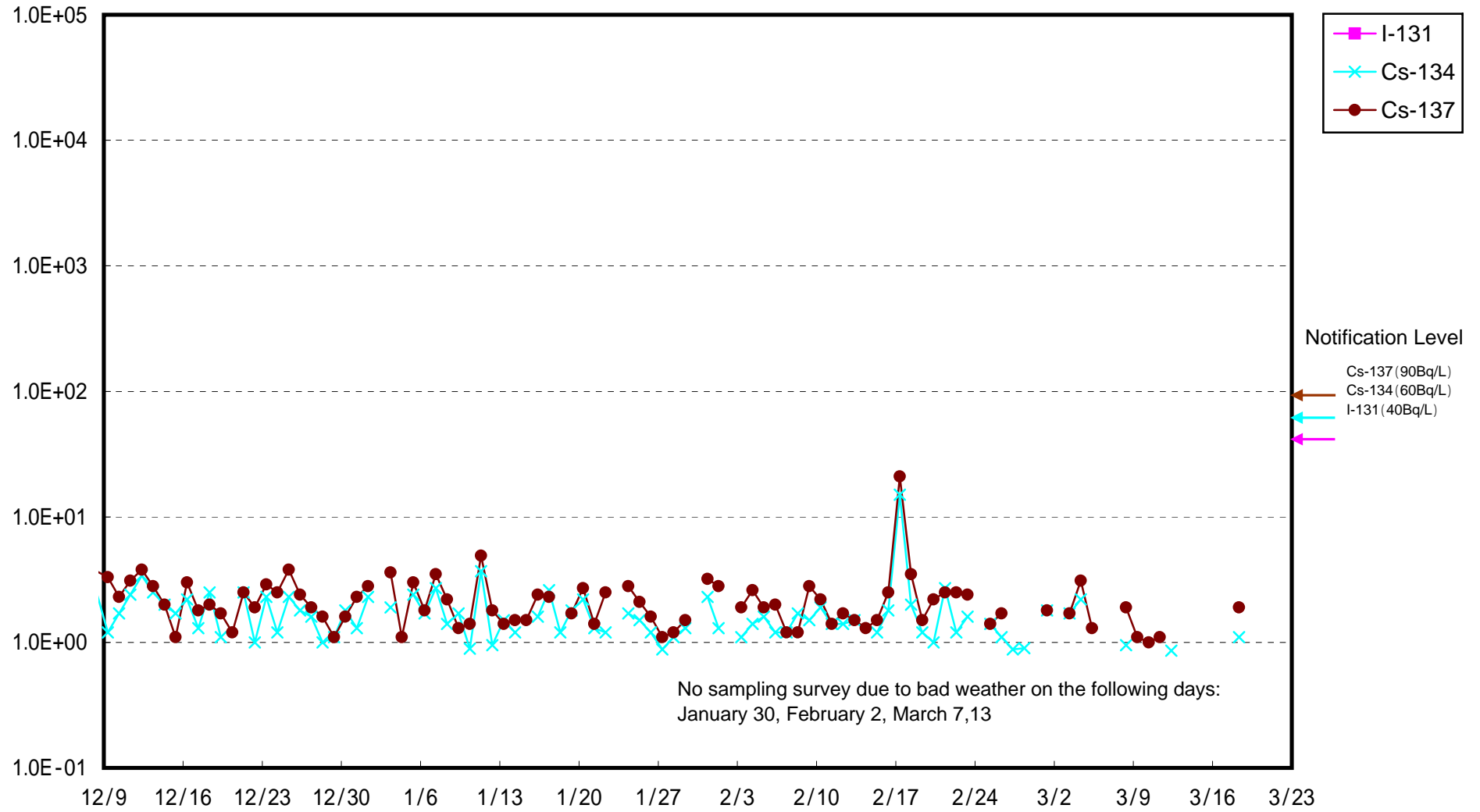
Radioactivity Density of Seawater (Bq/L)



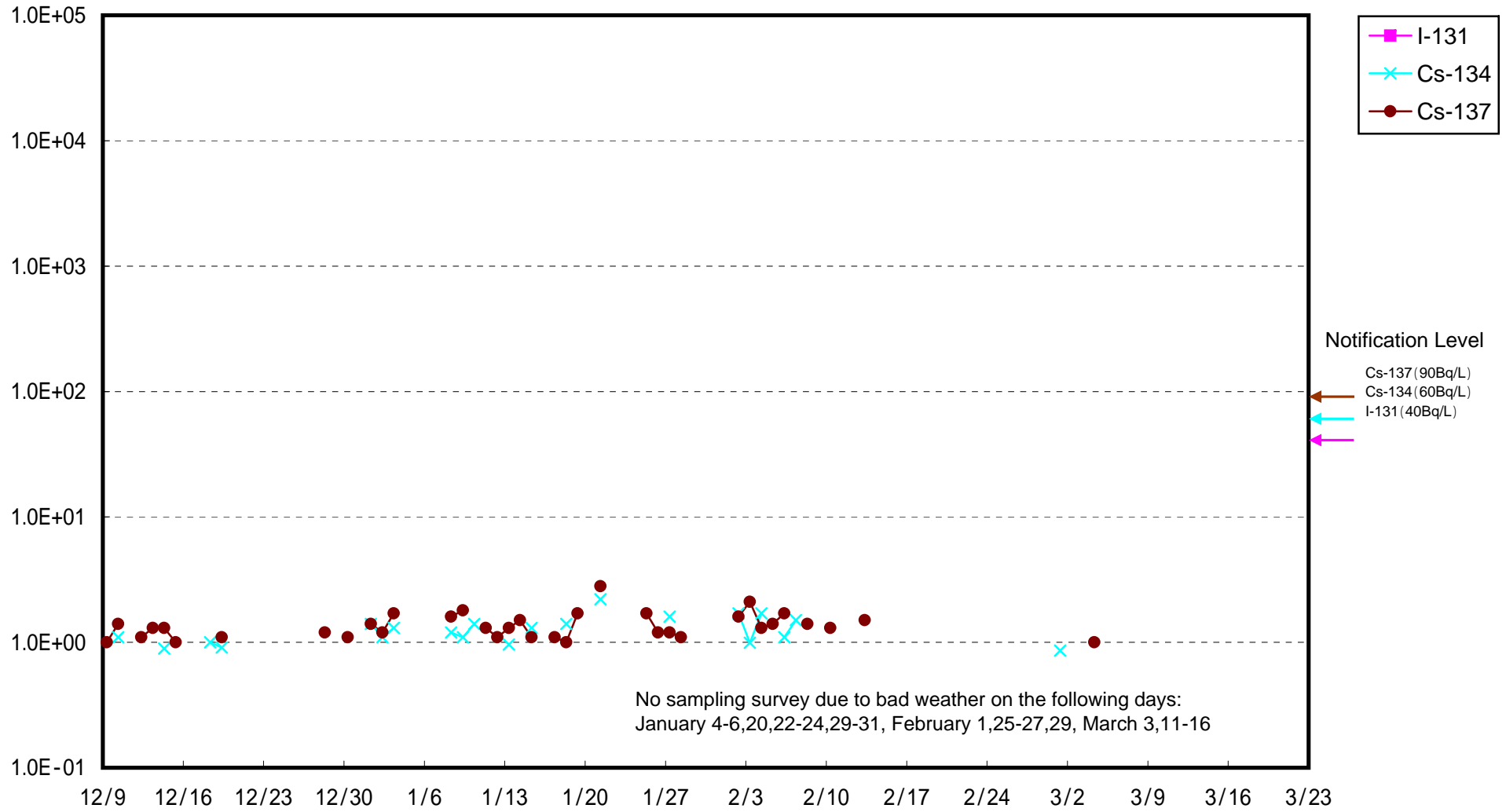
Radioactivity Density of Seawater at North of 1F5-6 Discharge Channel (Bq/L)



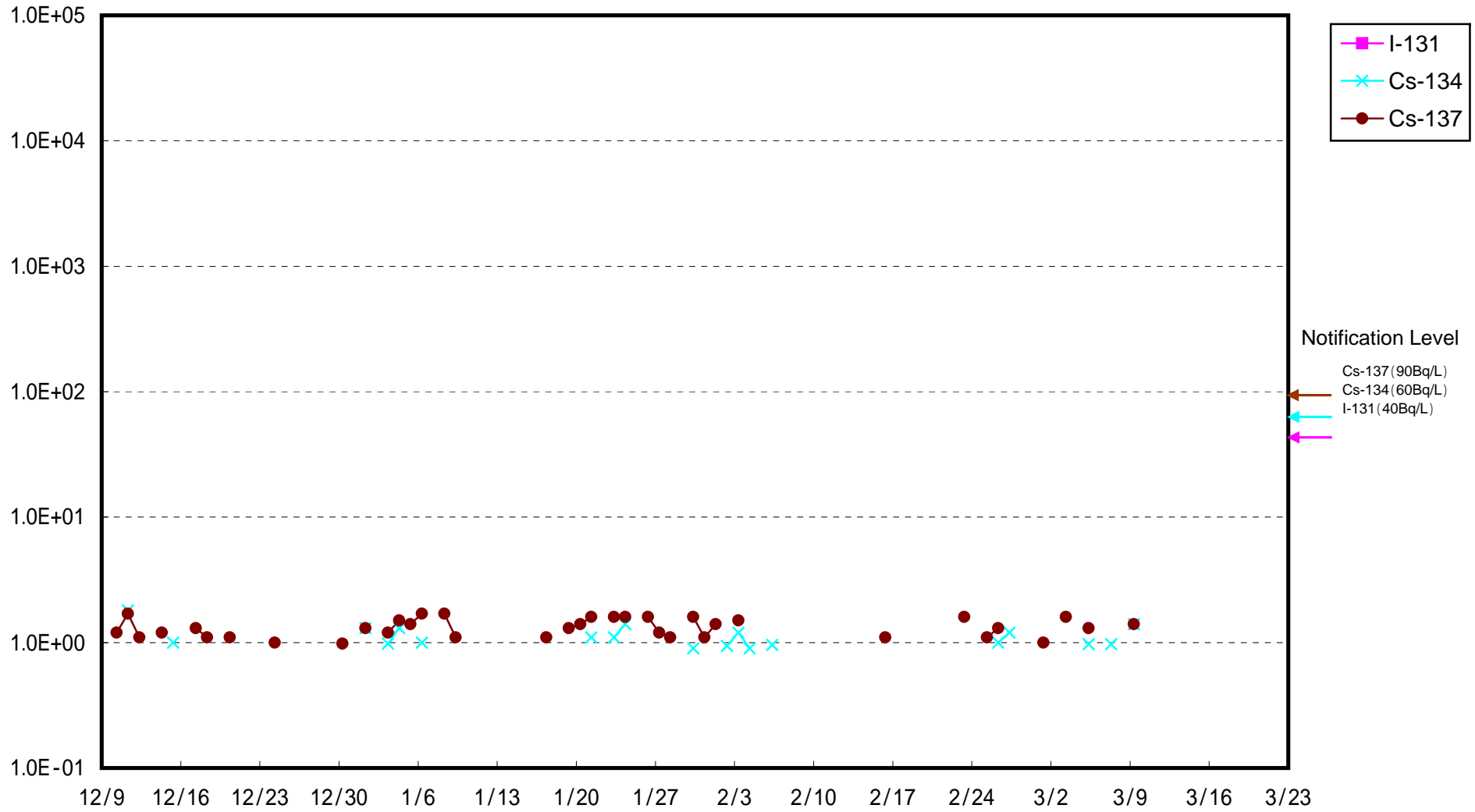
Radioactivity Density of Seawater at South Discharge Channel of 1F (Bq/L)



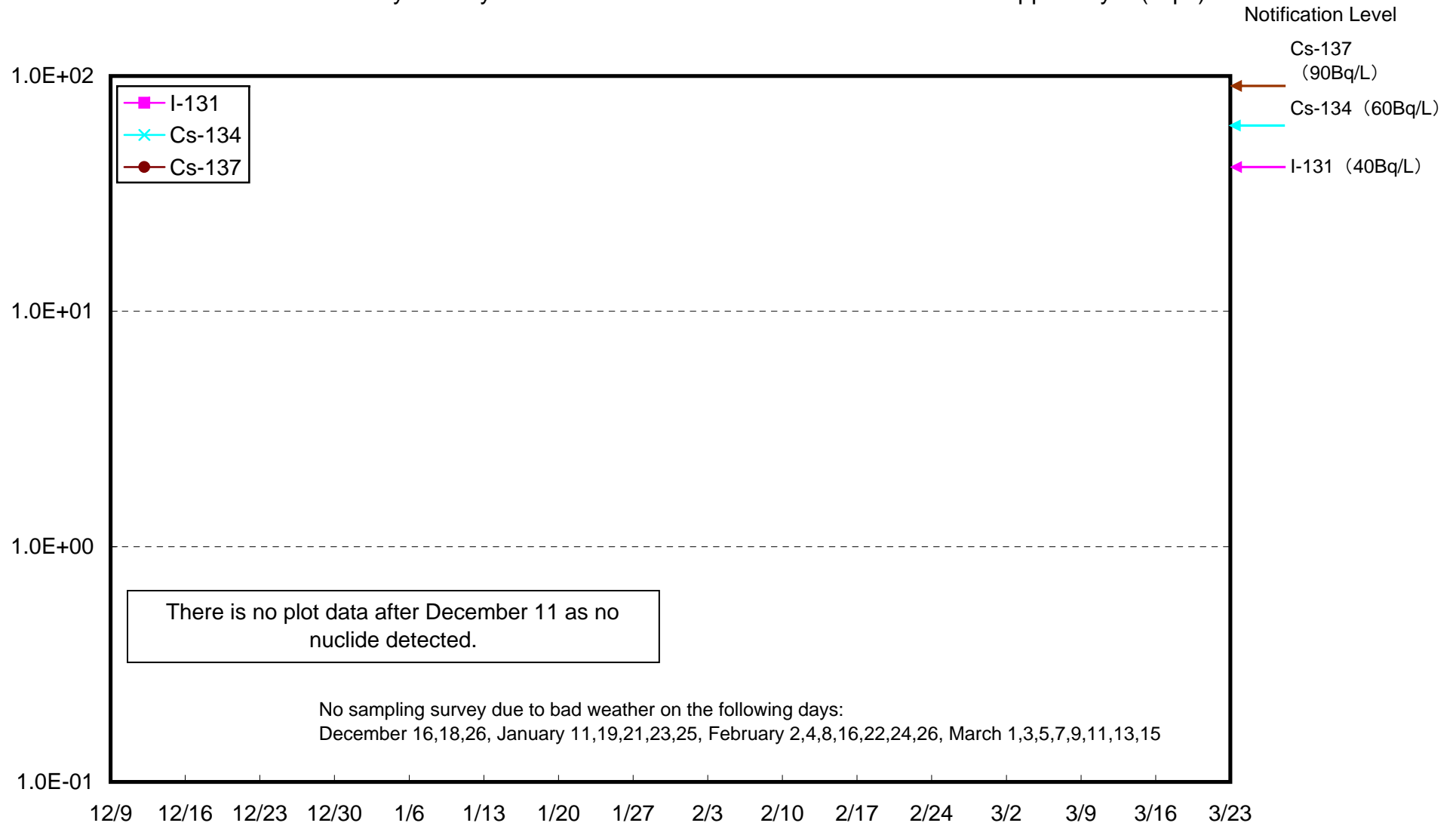
Radioactivity Density of Seawater at North Discharge Channel of 2F (Bq/L)



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



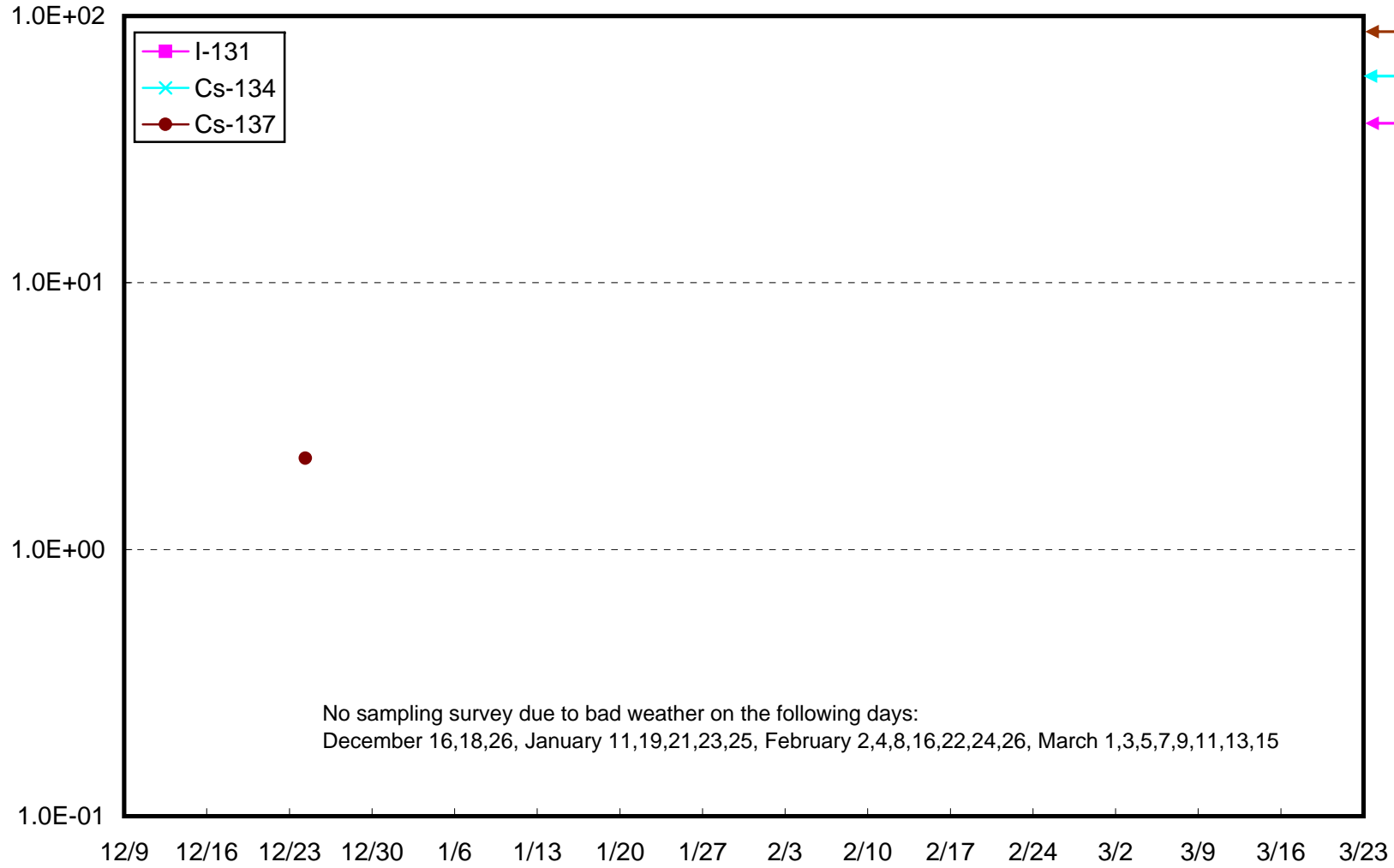
Radioactivity Density of Seawater 3km Offshore of Haramachi Ward Upper Layer (Bq/L)



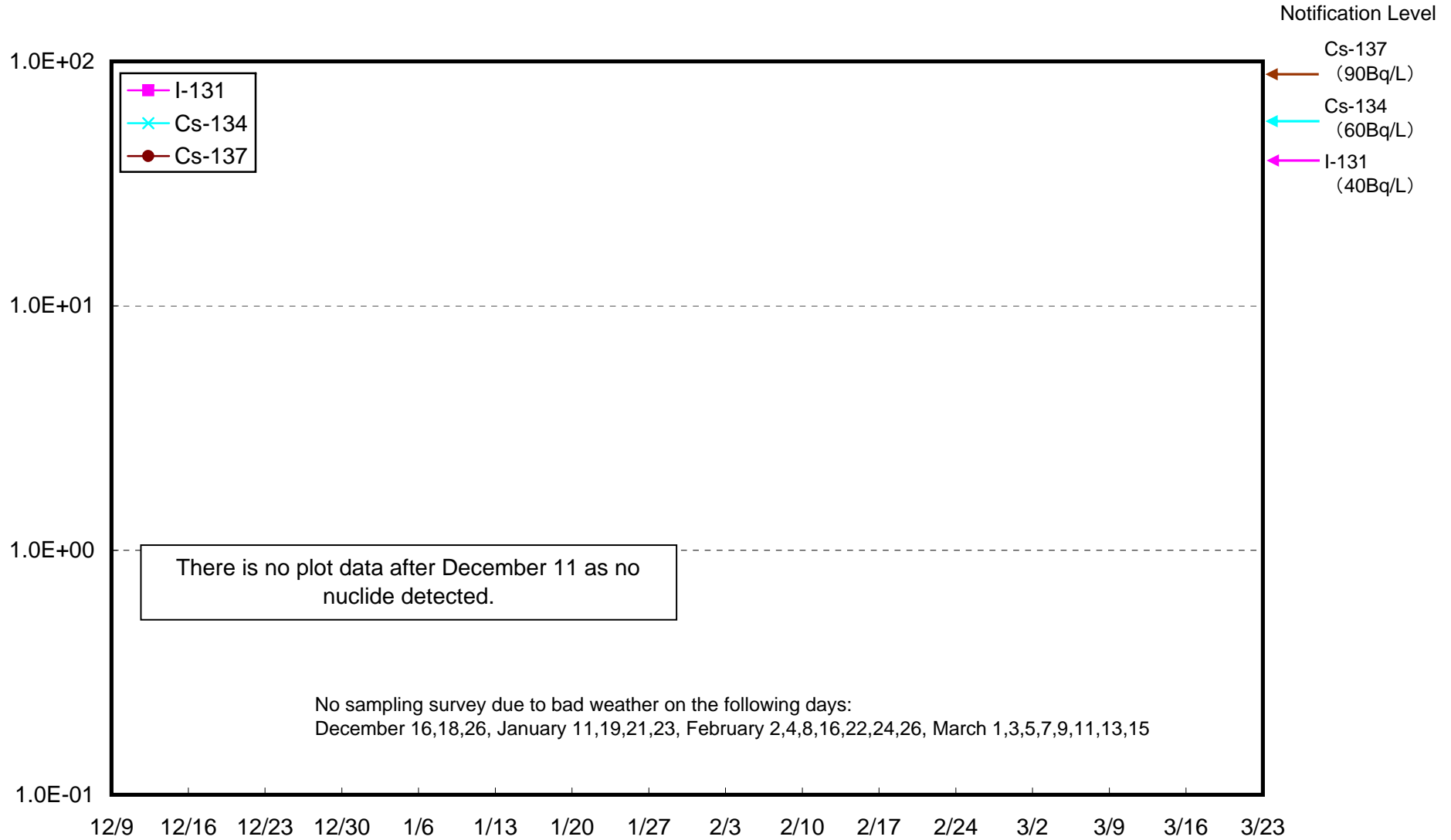
Radioactivity Density of Seawater 3km Offshore of Haramachi Ward Lower Layer (Bq/L)

Notification Level

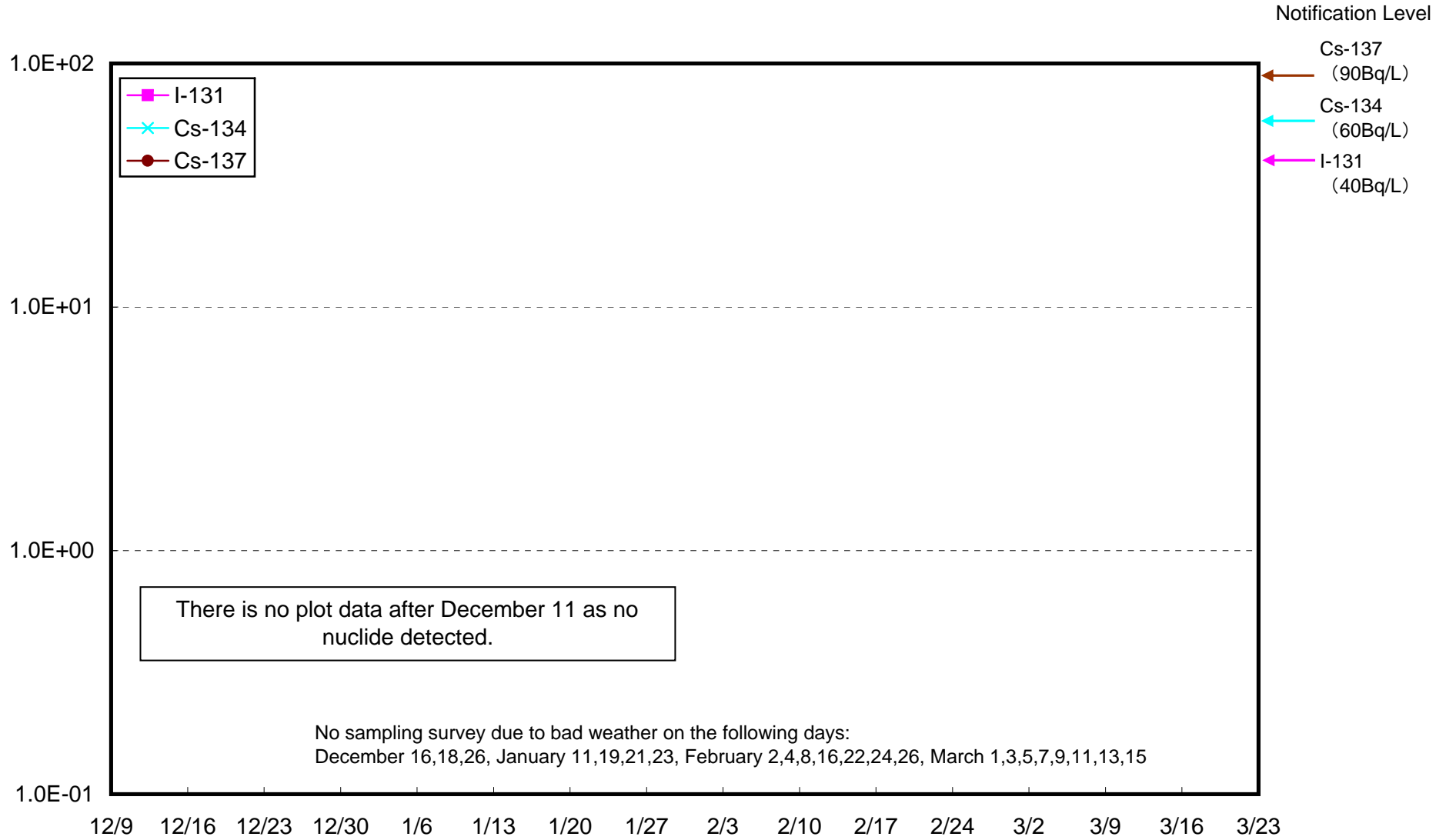
- Cs-137 (90Bq/L)
- Cs-134 (60Bq/L)
- I-131 (40Bq/L)



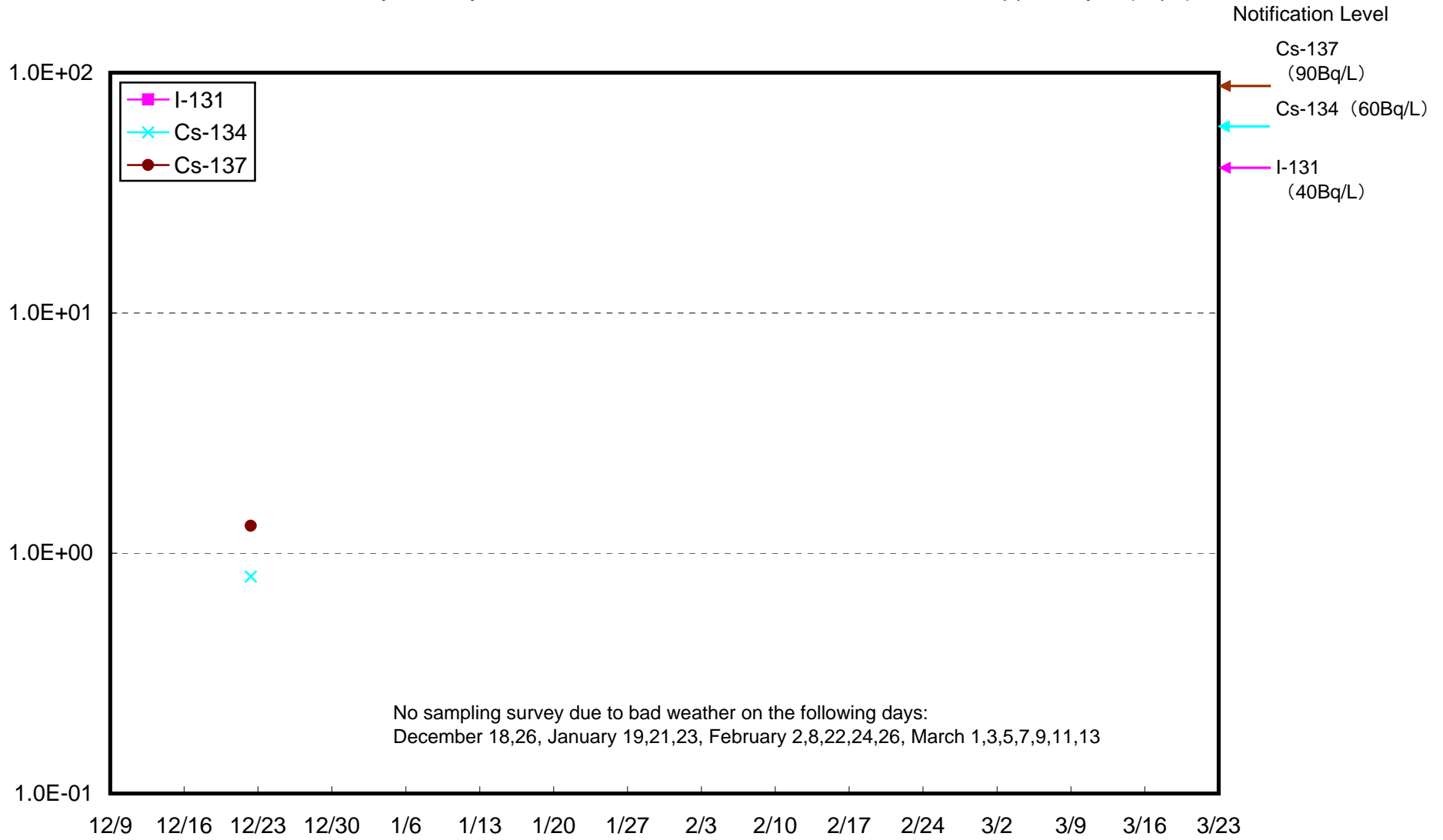
Radioactivity Density of Seawater 3km Offshore of Odaka Ward Upper Layer (Bq/L)



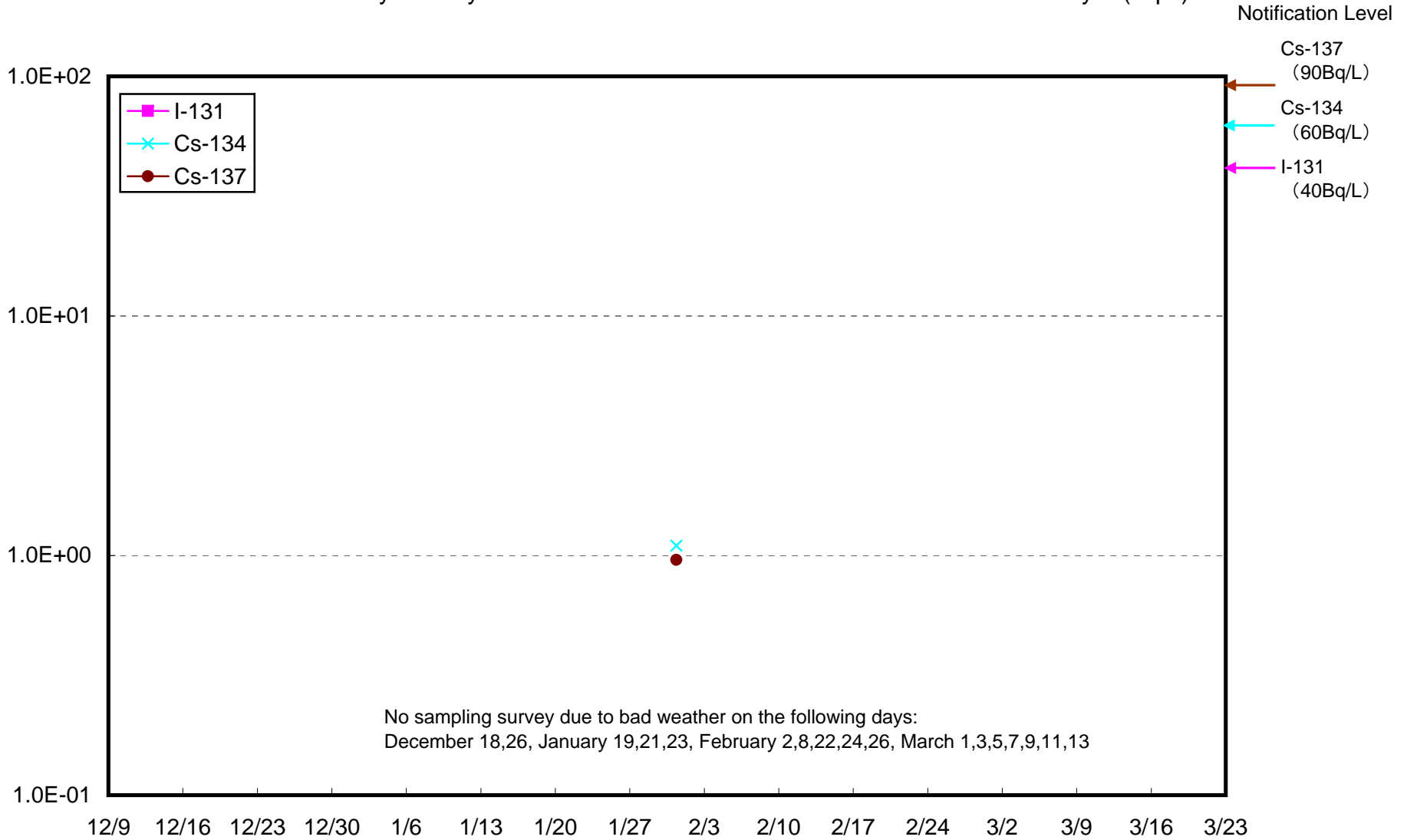
Radioactivity Density of Seawater 3km Offshore of Odaka Ward Lower Layer (Bq/L)



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

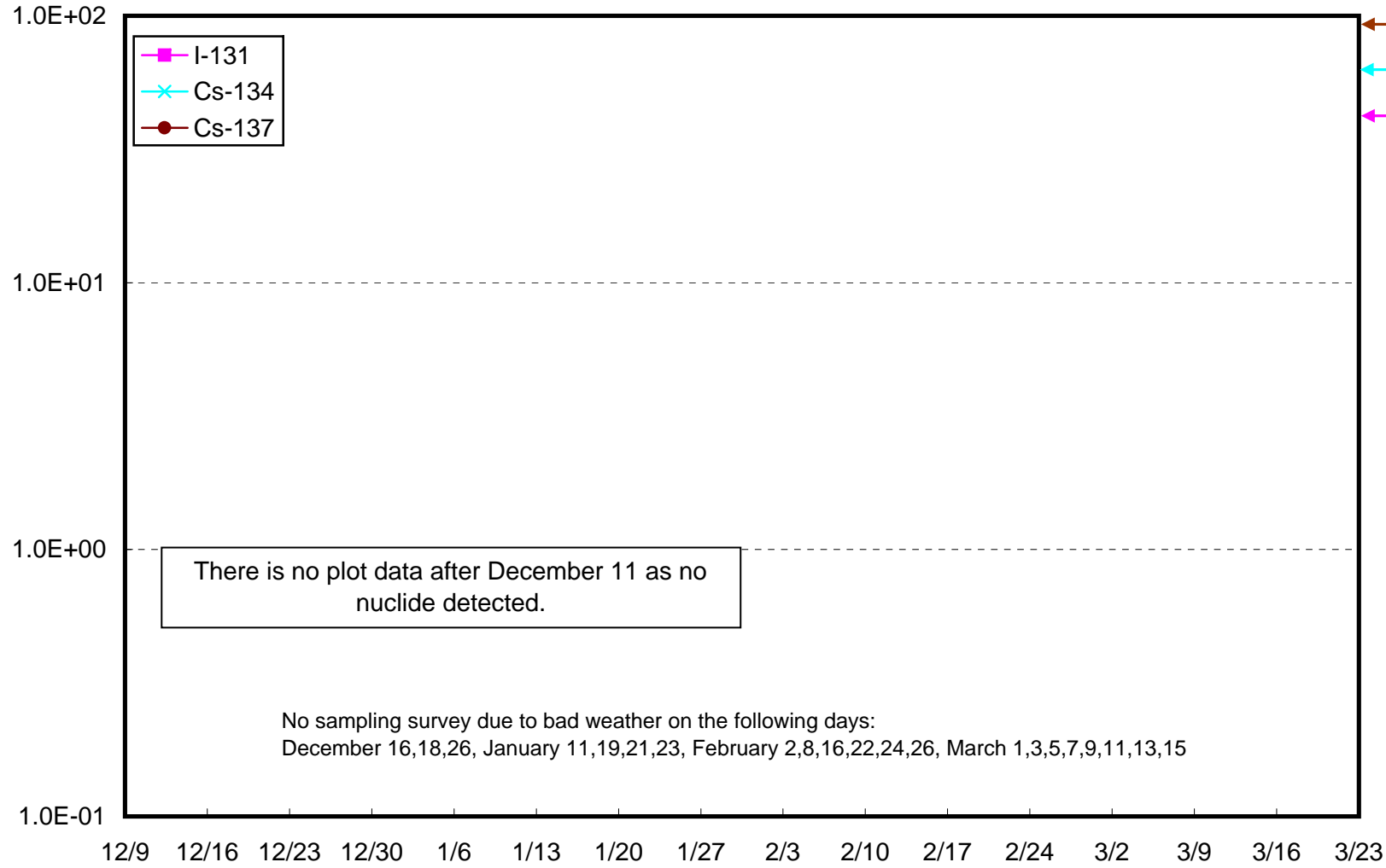


Radioactivity Density of Seawater 3km Offshore of Iwasawa Shore Lower Layer (Bq/L)

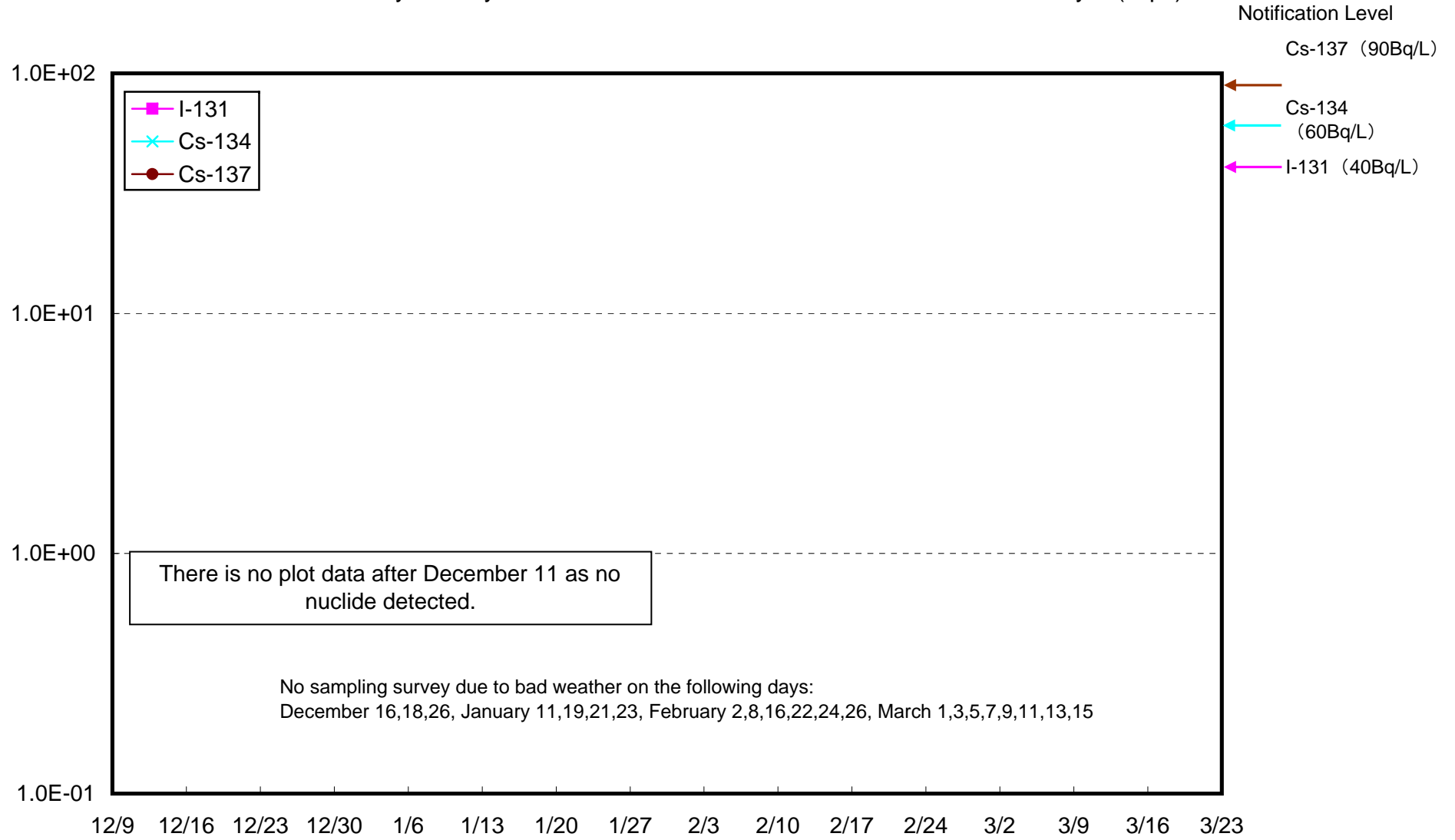


Radioactivity Density of Seawater 8km Offshore of Odaka Ward Upper Layer (Bq/L)

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

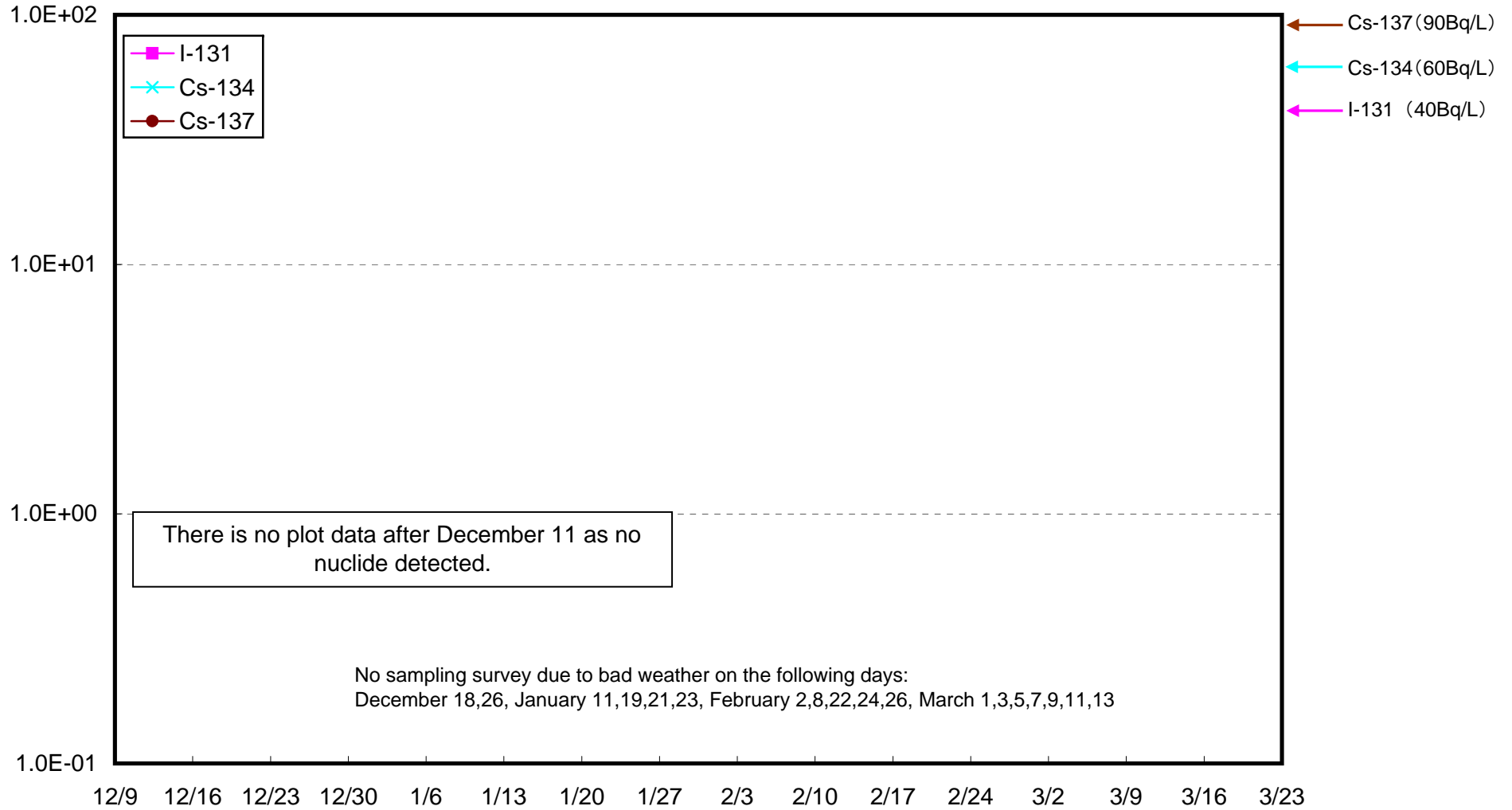


Radioactivity Density of Seawater 8km Offshore of Odaka Ward Lower Layer (Bq/L)



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

Notification Level



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

Notification Level

