

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

(Data summarized on February 7)

| Place of Sampling                | North of Unit 5-6 Discharge Channel at Fukushima Daiichi NPS<br>(Approx. 30m North of Unit 5-6 Discharge Channel) |                         | Around South Discharge Channel of Fukushima Daiichi NPS<br>(Approx. 1.3km South of Unit 1-4 Discharge Channel) |                         | Density Limit Specified by the Reactor Regulation (Bq/L)<br>(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   |                         |  |
|                                  | Feb 6, 2013<br>7:50 AM  |                         | Feb 6, 2013<br>Not Sampled   |                         |  |
| Detected Nuclides<br>(Half-life) | Density of Sample<br>(Bq/L)   | Scaling Factor<br>( / ) | Density of Sample<br>(Bq/L)  | Scaling Factor<br>( / ) |  |
| I-131<br>(Approx. 8 days)        | ND  | -                       | -  | -                       | 40   |
| Cs-134<br>(Approx. 2 years)      | ND  | -                       | -  | -                       | 60   |
| Cs-137<br>(Approx. 30 years)     | ND  | -                       | -  | -                       | 90   |

\* The density specified by the Reactor Regulation is converted from Bq/cm<sup>3</sup> 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. 0.41Bq/L, Cs-134: Approx. 0.94Bq/L, Cs-137: Approx. 1.3Bq/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.

Sampling were not conducted at 1 points (total: 2 points) due to bad weather.

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

(Data summarized on February 7)

| Place of Sampling<br>(Place No.) | 3km Offshore of Odaka Ward (T-14) |                            |                                |                            | 15km Offshore of Fukushima Daiichi NPS (T-5) |                            |                                |                            | 3km Offshore of Iwasawa Shore (T-11) |                            |                                |                            | Density Limit<br>Specified by the<br>Reactor Regulation<br>(Bq/L)   |
|----------------------------------|-----------------------------------|----------------------------|--------------------------------|----------------------------|--|----------------------------|--------------------------------|----------------------------|--------------------------------------|----------------------------|--------------------------------|----------------------------|---|
|                                  | Upper Layer                       |                            | Lower Layer                    |                            | Upper Layer                                  |                            | Lower Layer                    |                            | Upper Layer                          |                            | Lower Layer                    |                            |   |
| Time of Sampling                 | Jan 4, 2013<br>9:08 AM            |                            | Jan 4, 2013<br>9:08 AM         |                            | Jan 5, 2013<br>7:59 AM                       |                            | Jan 5, 2013<br>7:59 AM         |                            | Jan 5, 2013<br>10:18 AM              |                            | Jan 5, 2013<br>10:18 AM        |                            | (The density limit in the<br>water outside the<br>surrounding monitored<br>areas is provided in<br>section 6 of Appendix<br>2.) |
| Detected Nuclides<br>(Half-life) | Density of<br>Sample<br>(Bq/L)    | Scaling<br>Factor<br>( / ) | Density of<br>Sample<br>(Bq/L) | Scaling<br>Factor<br>( / ) | Density of<br>Sample<br>(Bq/L)               | Scaling<br>Factor<br>( / ) | Density of<br>Sample<br>(Bq/L) | Scaling<br>Factor<br>( / ) | Density of<br>Sample<br>(Bq/L)       | Scaling<br>Factor<br>( / ) | Density of<br>Sample<br>(Bq/L) | Scaling<br>Factor<br>( / ) |   |
| Cs-134<br>(Approx. 2 years)      | 0.0046                            | 0.00                       | 0.0090                         | 0.00                       | 0.0051                                       | 0.00                       | 0.0080                         | 0.00                       | 0.0085                               | 0.00                       | 0.0083                         | 0.00                       |   |
| Cs-137<br>(Approx. 30 years)     | 0.0097                            | 0.00                       | 0.016                          | 0.00                       | 0.011  | 0.00                       | 0.014                          | 0.00                       | 0.018                                | 0.00                       | 0.015                          | 0.00                       | 90  |

| Place of Sampling<br>(Place No.) | /                              |                            |                                |                            | /                              |                            |                                |                            | /                              |                            |                                |                            | Density Limit<br>Specified by the<br>Reactor Regulation<br>(Bq/L)   |
|----------------------------------|--------------------------------|----------------------------|--------------------------------|----------------------------|--------------------------------|----------------------------|--------------------------------|----------------------------|--------------------------------|----------------------------|--------------------------------|----------------------------|---|
|                                  | Upper Layer                    |                            | Lower Layer                    |                            | Upper Layer                    |                            | Lower Layer                    |                            | Upper Layer                    |                            | Lower Layer                    |                            |   |
| Time of Sampling                 | /                              |                            | /                              |                            | /                              |                            | /                              |                            | /                              |                            | /                              |                            | (The density limit in the<br>water outside the<br>surrounding monitored<br>areas is provided in<br>section 6 of Appendix<br>2.) |
| Detected Nuclides<br>(Half-life) | Density of<br>Sample<br>(Bq/L) | Scaling<br>Factor<br>( / ) | Density of<br>Sample<br>(Bq/L) | Scaling<br>Factor<br>( / ) | Density of<br>Sample<br>(Bq/L) | Scaling<br>Factor<br>( / ) | Density of<br>Sample<br>(Bq/L) | Scaling<br>Factor<br>( / ) | Density of<br>Sample<br>(Bq/L) | Scaling<br>Factor<br>( / ) | Density of<br>Sample<br>(Bq/L) | Scaling<br>Factor<br>( / ) |   |
| Cs-134<br>(Approx. 2 years)      | /                              | /                          | /                              | /                          | /                              | /                          | /                              | /                          | /                              | /                          | /                              | /                          |   |
| Cs-137<br>(Approx. 30 years)     | /                              | /                          | /                              | /                          | /                              | /                          | /                              | /                          | /                              | /                          | /                              | /                          | 90  |

\* The density specified by the Reactor Regulation is converted from Bq/cm<sup>3</sup> 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.

## Analysis Result of Pu in the Seawater

1. Result of analysis:

(Unit: Bq/cm<sup>3</sup>)

| Place of Sampling                                 | Date of Sampling | Pu-238                         | Pu-239+Pu-240                  |
|---|------------------|--------------------------------|--------------------------------|
| Inside North Water Intake Canal of 1F's Units 1-4 | August 13, 2012  | N.D. [ $<1.7 \times 10^{-3}$ ] | N.D. [ $<1.5 \times 10^{-3}$ ] |

[ ] shows below the detection limit.

2. Analytical Institution:

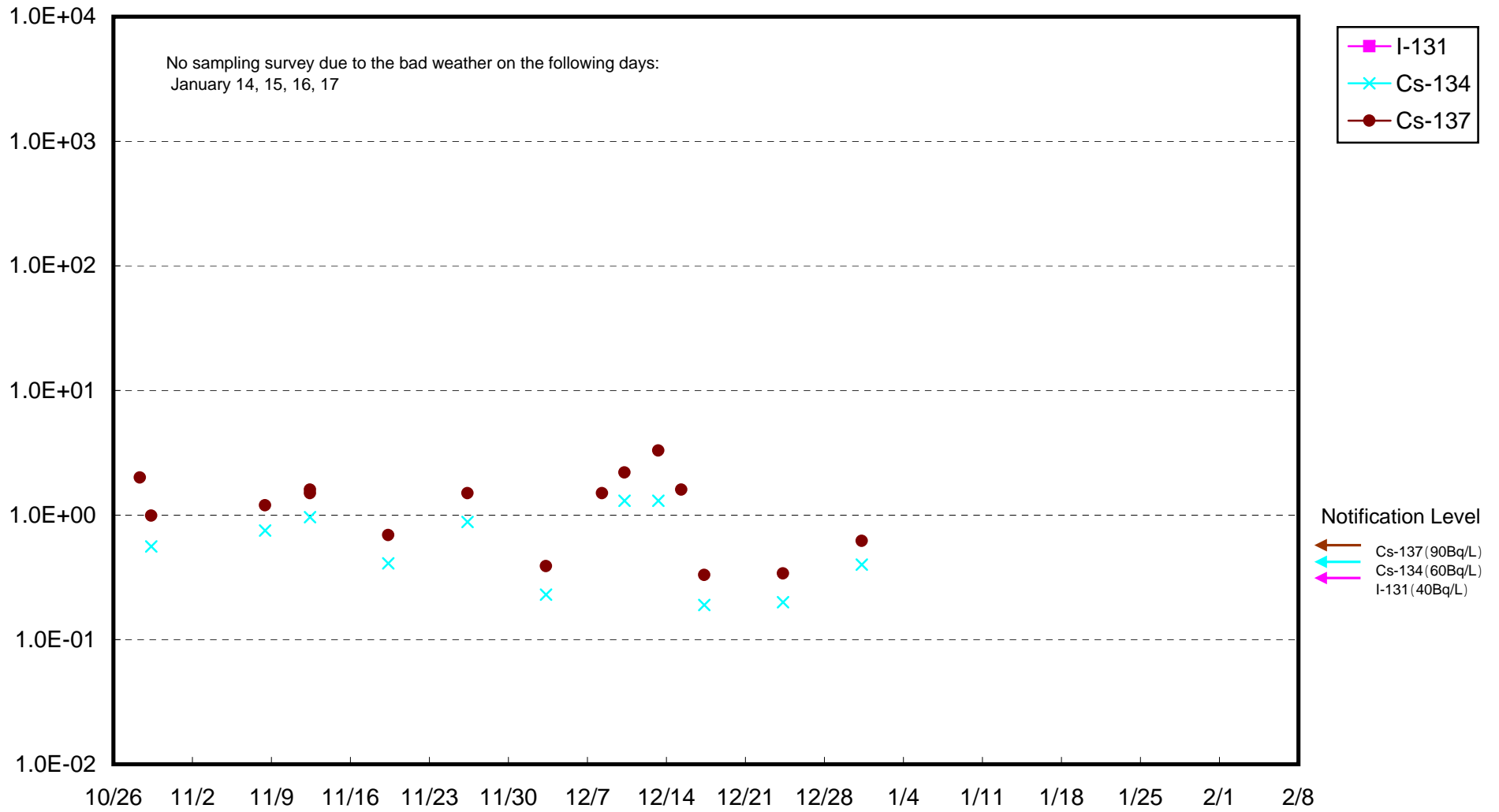
KAKEN Inc.

3. Evaluation:

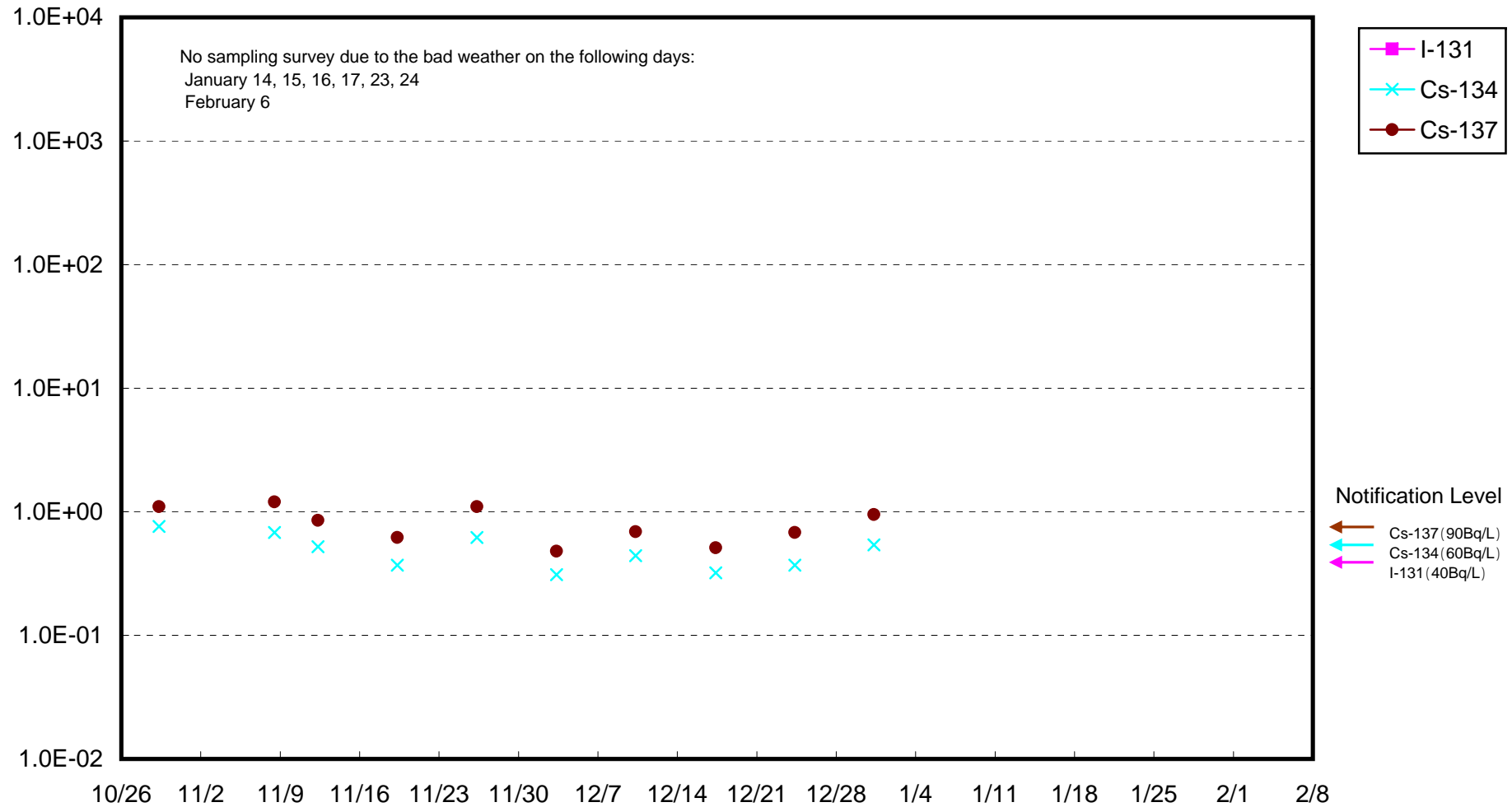
Pu-238 and Pu-239+Pu-240 were not detected in the sample collected this time.

End

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

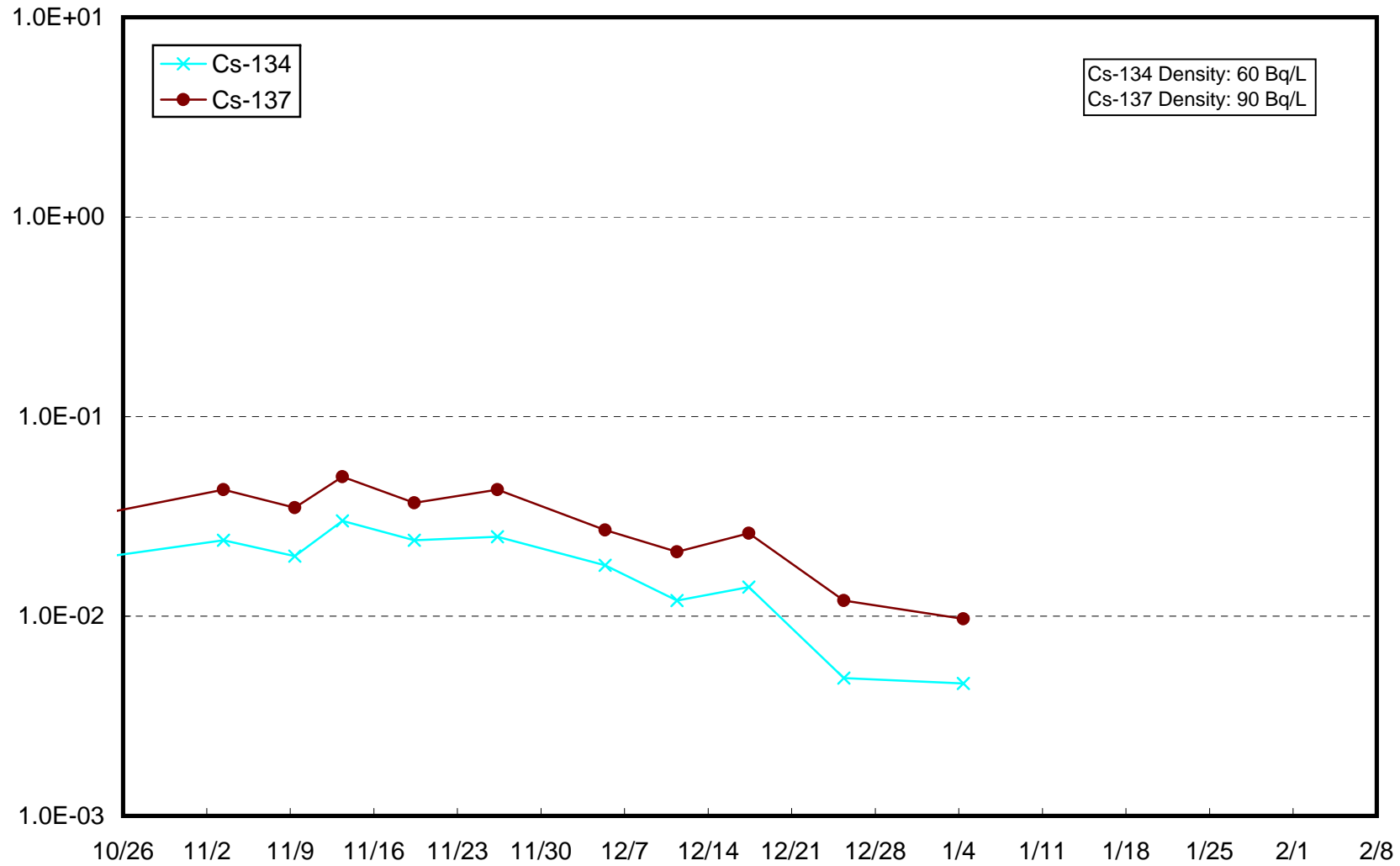


### Radioactivity Density of the Seawater at 1F South Discharge Channel (Bq/L)

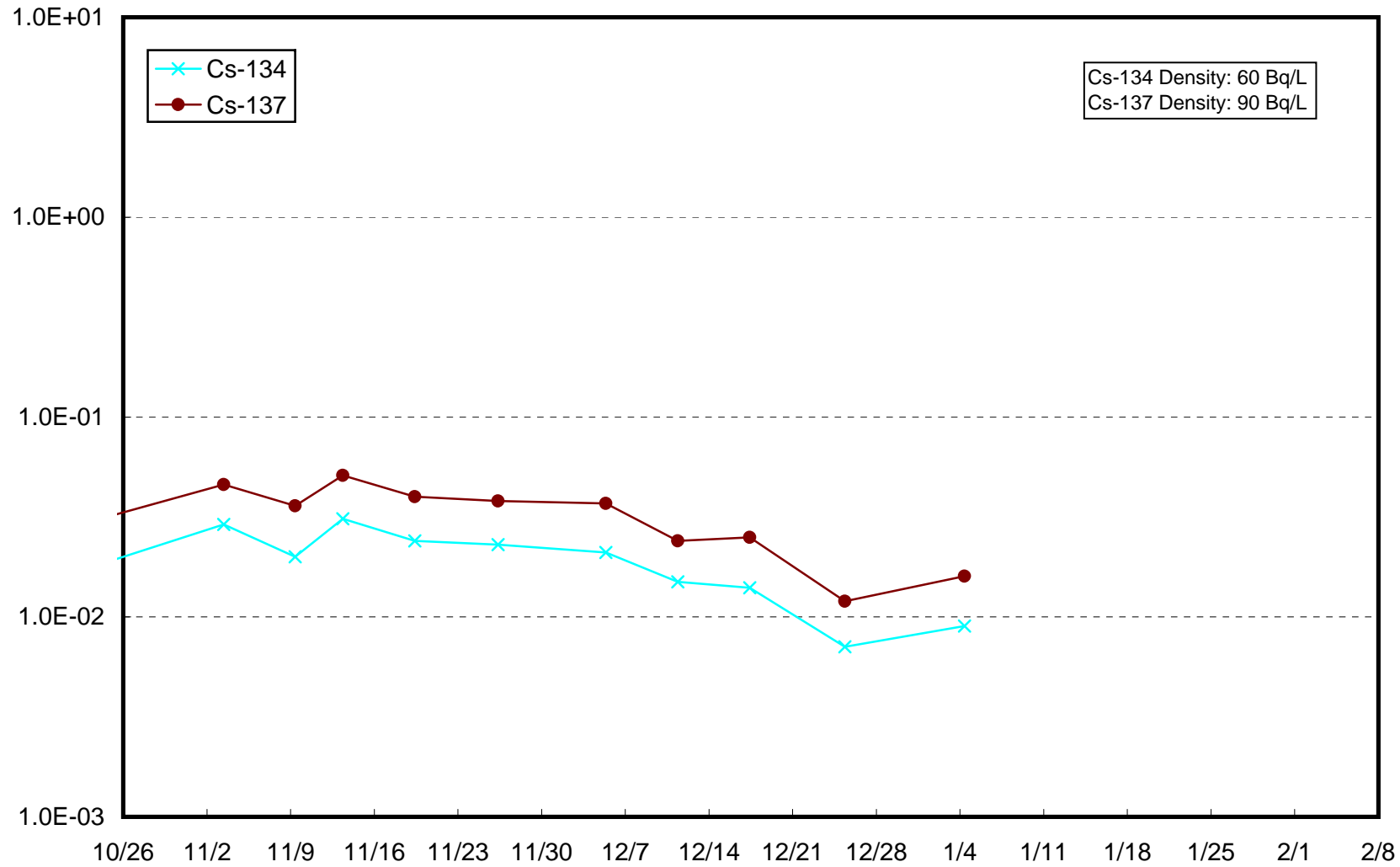


Sampling was conducted at around South Discharge Channel of Fukushima Daiichi NPS (approx. 330m south of Units 1-4 Discharge Channel) until November 25, 2012.

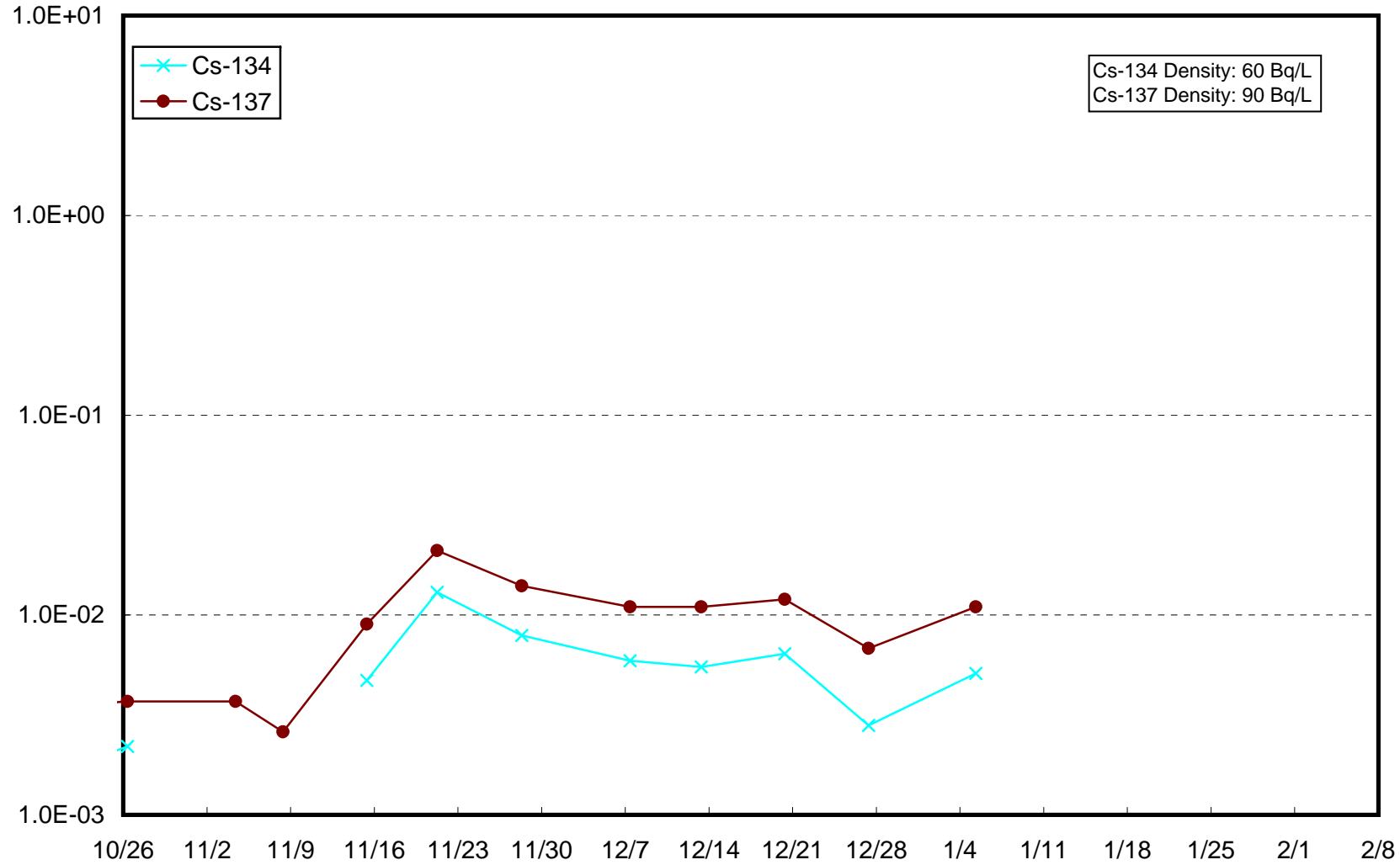
Radioactivity Density of the Seawater at 3km Offshore of Odaka Ward (T-14) Upper Layer (Bq/L)



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

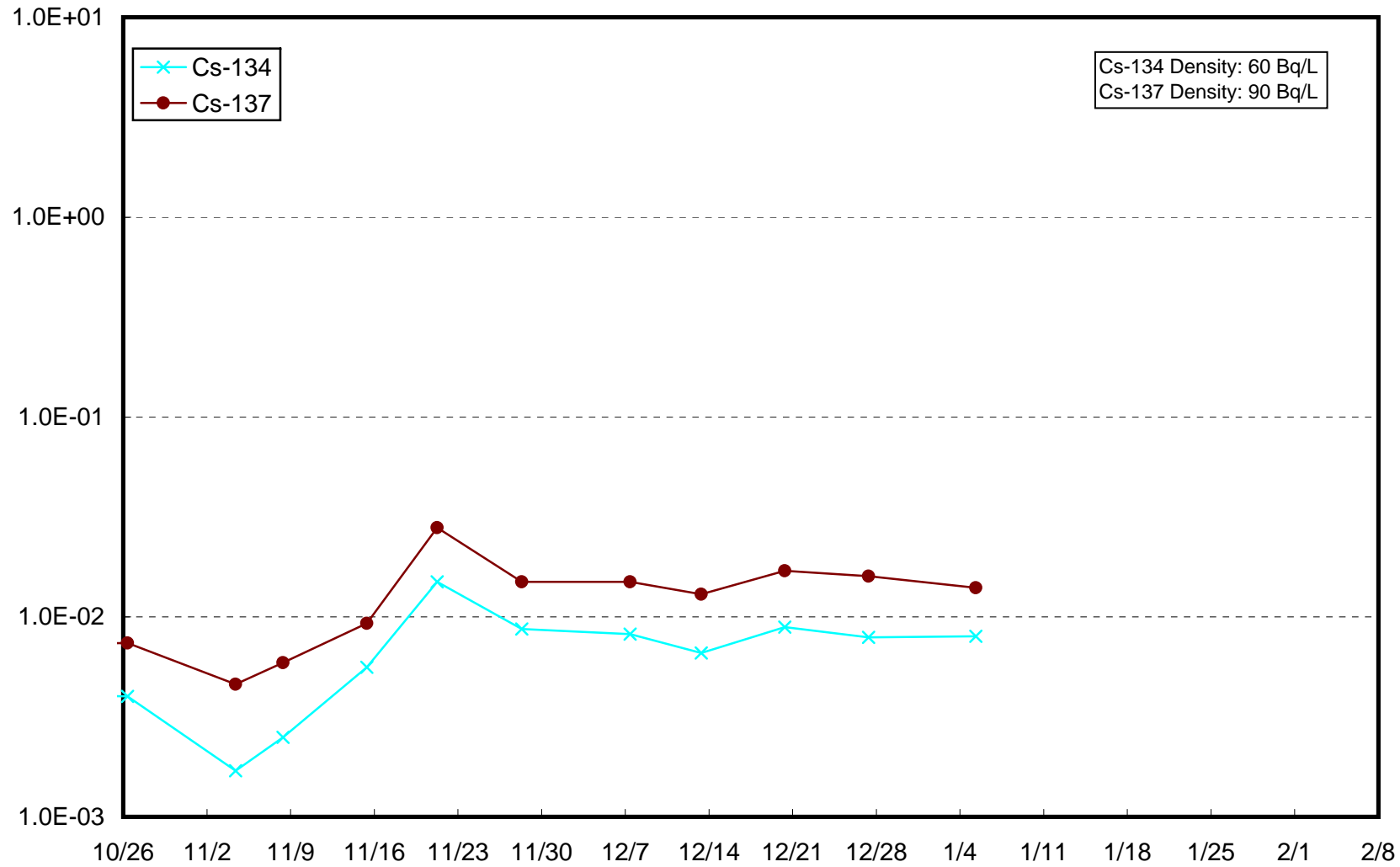


Radioactivity Density of the Seawater at 15km Offshore of Fukushima Daiichi NPS (T-5) Upper Layer (Bq/L)

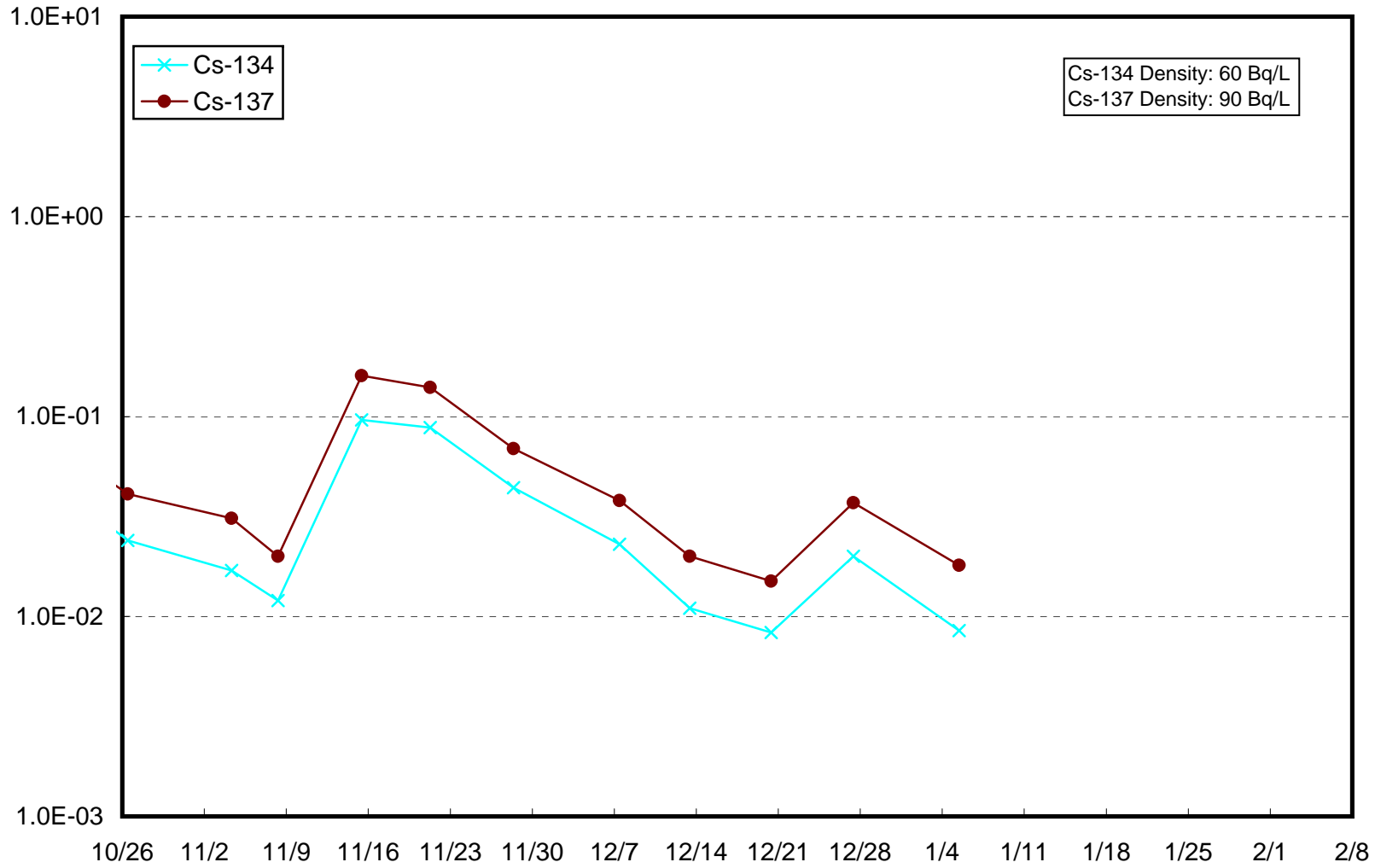




Radioactivity Density of the Seawater at 15km Offshore of Fukushima Daiichi NPS (T-5) Lower Layer (Bq/L)



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)

