Reference

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

(Data summarized on November 28)

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 (Appox. 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	Nov 27, 2013 6:50 AM		Nov 27, 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)	ND	-	ND	-	60
Cs-137 (Approx. 30 years)	ND	-	ND	-	90

* The density specified by the Reactor Regulation is converted from Bq/cm^3 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. 1.0Bq/L, Cs-134: Approx. 1.3Bq/L, Cs-137: Approx. 1.6Bq/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.

Reference

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

(Data summarized on November 28)

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 (Appox. 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	Oct 28, 2013 6:10 AM		Oct 28, 2013 5:20 AM		
Detected Nuclides (Half-life)	①Density of Sample (Bq/L)	Scaling Factor (①/②)	①Density of Sample (Bq/L)	Scaling Factor (①/②)	
Cs-134 (Approx. 2 years)	0.092	0.00	0.58	0.01	60
Cs-137 (Approx. 30 years)	0.22	0.00	1.3	0.01	90

* The density specified by the Reactor Regulation is converted from Bq/cm^3 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: Tokyo Power Tecnology Ltd.

Nuclides Analysis Result of Radioactive Materials in the Seawater

(Data summarized on November 28)

Place of Sampling (Place No.)	North of Unit 5-6 Discharge Channel at Fukushima Daiichi NPS (Approx. 30m North of Unit 5-6 Discharge Channel) (T-1)		Around South Discharge Channel of Fukushima Daiichi NPS (Appox. 1.3km South of Unit 1-4 Discharge Channel) (T-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.)
Date of Sampling	Aug 12, 2013		Aug 12, 2013				
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)	
I-131 (Approx. 8 days)	ND	—	ND	—			40
Cs-134 (Approx. 2 years)	ND	—	ND	—			60
Cs-137 (Approx. 30 years)	1.4	0.02	ND	—			90
H-3 (approx. 12yrs)	4.7	0.00	ND	—			60,000
All α	ND	—	ND	—			—
All β	ND	—	ND	—			—
Sr-90 (Approx. 29 years)	1.2	—	0.16	—			30

* The density specified by the Reactor Regulation is converted from Bq/cm^3 to Bq/L.
* In the case of more than 2 nuclides, the sum of scaling factors to density limits is compared to 1.
* Nuclide analysis results of I-131, Cs-134, Cs-137 and All β were announced on August 13, while those of H-3 were announced on August 16 and those of All α were announced on October 24.
* When the measurement value is below the detection limit, "ND" is marked. The detection limits are as follows.
  I-131: Approx. 1.1Bq/L, Cs-134: Approx. 1.2Bq/L, Cs-137: Approx. 1.4Bq/L,
  H-3: Approx. 2.9Bq/L, All α: Approx. 0.12Bq/L, All β: Approx. 19Bq/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 of Sr-89 and Sr-90 were done by Japan Chemical Analysis Center.

(Evaluation)
Although H-3 and Sr-90 were detected supposedly as a result of this accident, they are less than the density limit in the water which is specified by the announcement.

Reference

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

(Data summarized on November 28)

Place of Sampling	2F Around the North Discharge Channel (Around Unit 3-4 Discharge Channel) (Approx. 10km from 1F)		Around the North Side of Asamigawa (Approx. 11km South of Unit 1 & 2 Discharge Channel) (Approx. 23km from 1F)		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	Oct 29, 2013 10:30 AM		Oct 29, 2013 7:20 AM		
Detected Nuclides (Half-life)	①Density of Sample (Bq/L)	Scaling Factor (①/②)	①Density of Sample (Bq/L)	Scaling Factor (①/②)	
Cs-134 (Approx. 2 years)	0.094	0.00	0.11	0.00	60
Cs-137 (Approx. 30 years)	0.20	0.00	0.24	0.00	90

* The density specified by the Reactor Regulation is converted from Bq/cm^3 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.
* Analysis results by detail analysis (Phosphomolybdic acid ammonium adsorption sampling method) are noted.
  Analyzed by Tokyo Power Technology Ltd.

Reference

Nuclides Analysis Result of the Radioactive Materials in the Seawater
< Coast, Fukushima Daiichi Nuclear Power Station, Within 20km Radius >

(Data summarized on November 28)

Place of Sampling	South side of the Ukedo Port (Approx. 5.5km north of Unit 5-6 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	Oct 29, 2013 8:25 AM				
Detected Nuclides (Half-life)	①Density of Sample (Bq/L)	Scaling Factor (①/②)	①Density of Sample (Bq/L)	Scaling Factor (①/②)	
Cs-134 (Approx. 2 years)	0.039	0.00			60
Cs-137 (Approx. 30 years)	0.078	0.00			90

* The density specified by the Reactor Regulation is converted from Bq/cm^3 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: Tokyo Power Tecnology Ltd.

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

Reference

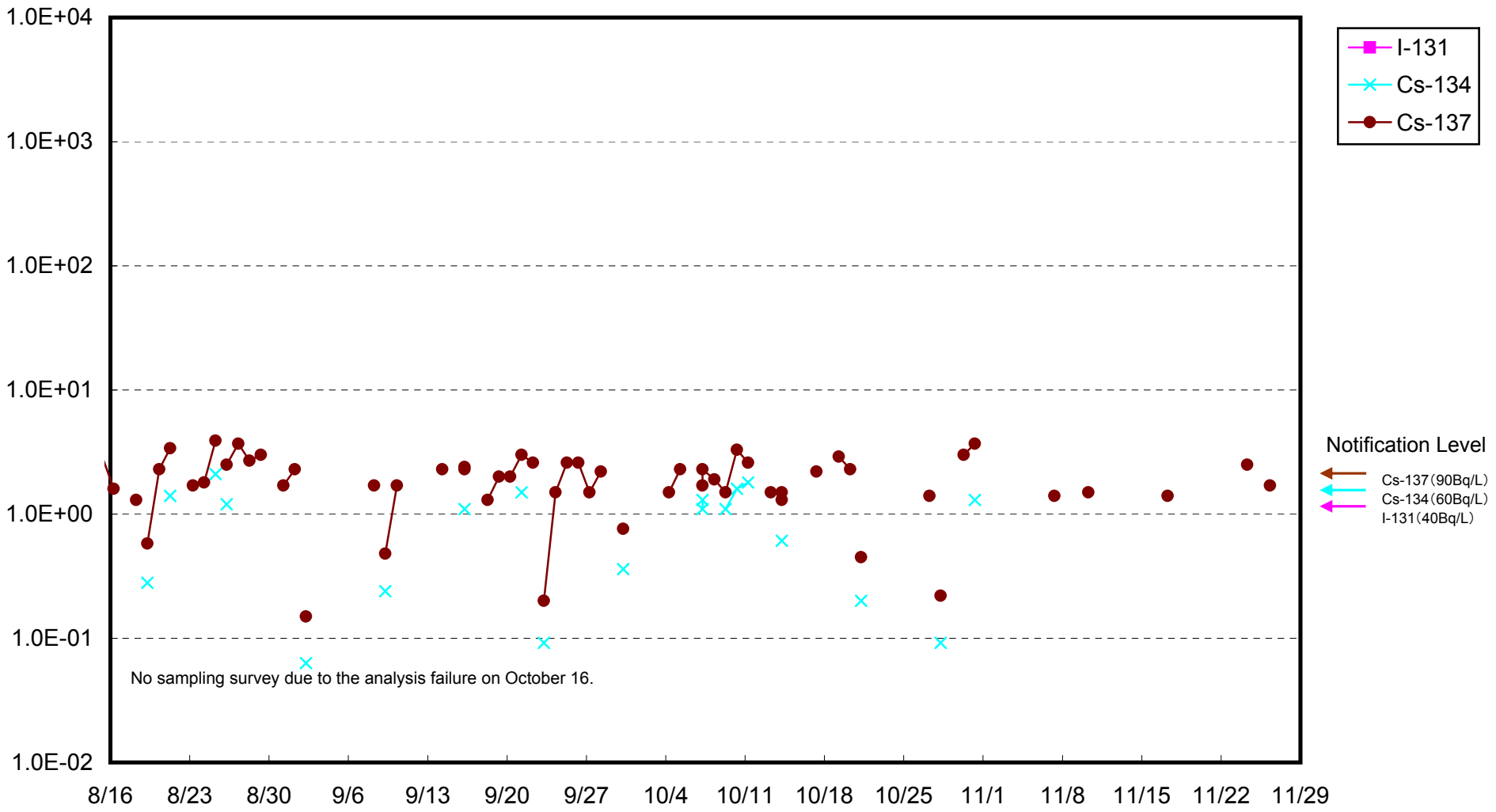
(Data summarized on November 28)

Place of Sampling (Place No.)	3km Offshore of Takadokobama Shore (T-A)				3km Offshore of Kujihama Shore (T-B)				3km Offshore of Oarai Shore (T-C)				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 11, 2013 9:18 AM		Nov 11, 2013 9:18 AM		Nov 13, 2013 8:19 AM		Nov 13, 2013 8:22 AM		Nov 13, 2013 8:31 AM		Nov 13, 2013 8:35 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)	
Cs-134 (Approx. 2 years)	ND	-	ND	-	ND	-	ND	-	ND	-	ND	-	60
Cs-137 (Approx. 30 years)	ND	-	ND	-	ND	-	ND	-	ND	-	ND	-	90

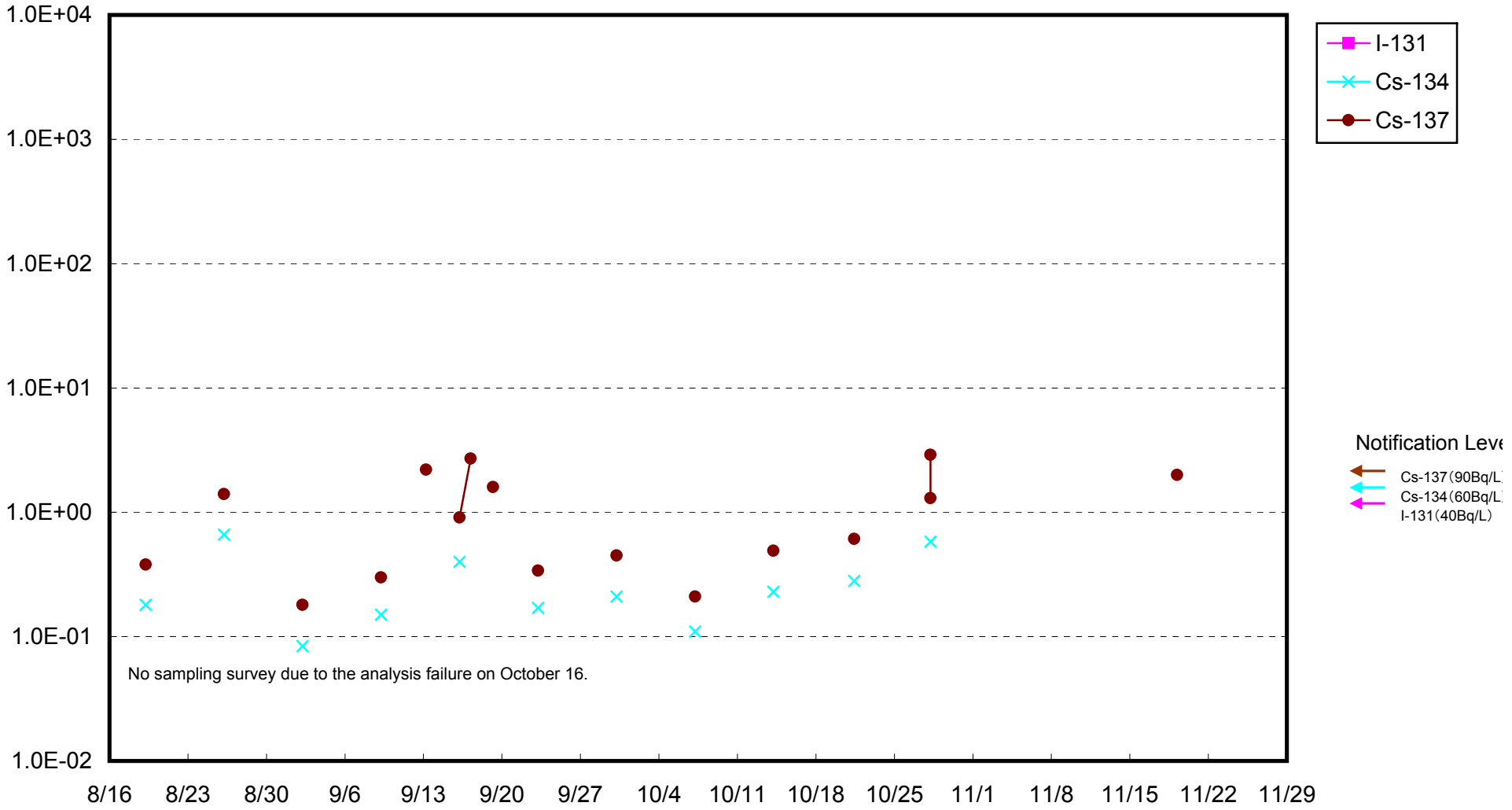
Place of Sampling (Place No.)	3km Offshore of Hirai Shore (T-D)				3km Offshore of Hasaki Shore (T-E)				3km Offshore of Isohara Shore (T-Z)				② Density Limit Specified by the Reactor Regulation (Bq/L) (The density limit in the water outside the surrounding monitored areas is provided in section 6 of Appendix 2.)
	Upper Layer		Lower Layer		Upper Layer		Lower Layer		Upper Layer		Lower Layer		
Time of Sampling	Nov 12, 2013 1:51 PM		Nov 12, 2013 1:53 PM		Nov 12, 2013 2:32 PM		Nov 12, 2013 2:28 PM		Nov 11, 2013 7:37 AM		Nov 11, 2013 7:37 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)	ND	-	ND	-	ND	-	ND	-	ND	-	ND	-	60
Cs-137 (Approx. 30 years)	ND	-	ND	-	ND	-	ND	-	ND	-	ND	-	90

* The density specified by the Reactor Regulation is converted from Bq/cm^3 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.
  Cs-134: Approx.1.1Bq/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.

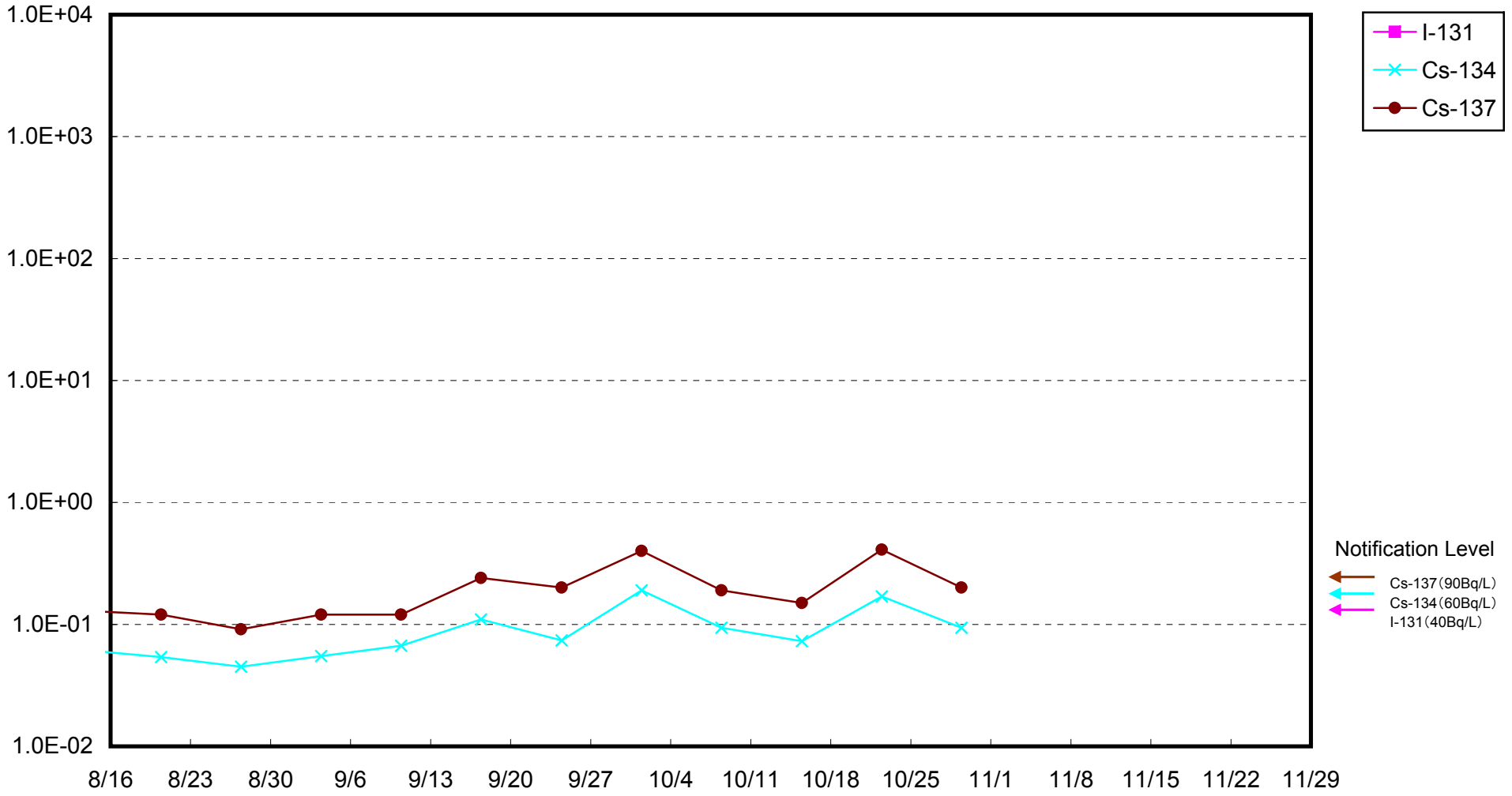
Radioactivity Density of the Seawater at 1F Units 5-6 North Discharge Channel (Bq/L)



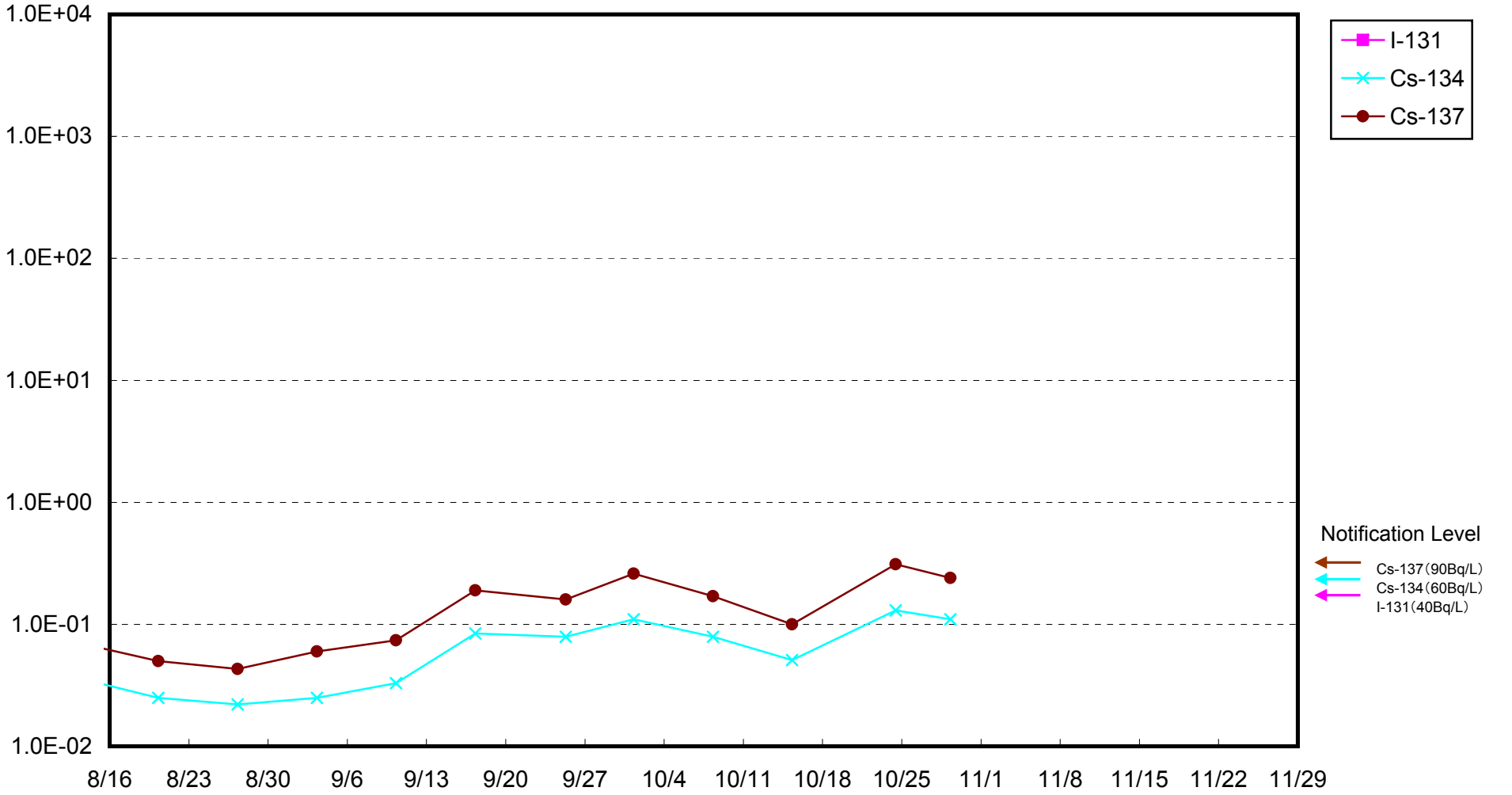
Radioactivity Density of the Seawater at 1F South Discharge Channel (Bq/L)



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



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



Sampling had been performed around the south side of Kitasakogawa since Octob

Radioactivity Density of the South Side of the Ukedo Port (Bq/L)