Reference

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

(Data summarized on February 4)

Place of Sampling		(Approx. 5.		2 Density Limit Specified by the Reactor Regulation (Bq/L)			
Time of Sampling	Dec 24, 9:15 /		2014 AM	(The density limit in the water outside the surrounding monitored areas is provided in			
Detected Nuclides (Half-life)	①Density of Sample (Bq/L)	Scaling Factor (①/②)	①Density of Sample (Bq/L)	①Density of Sample (Bq/L)	Scaling Factor (①/②)	section 6 of Appendix 2.)	
Cs-134 (Approx. 2 years)	0.095	0.00	0.079	0.00	0.054	0.00	60
Cs-137 (Approx. 30 years)	0.21	0.00	0.22	0.00	0.12	0.00	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 Tokyo Power Technology Ltd.

Reference

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

(Data summarized on February 4)

Place of Sampling	North of Unit 5-6 Discharge Daiichi N (Approx. 30m North of Unit 5	IPS	Around South Discharge C Daiichi N (Appox. 1.3km South of Unit	NPS .	② Density Limit Specified by the Reactor Regulation (Bq/L)		
Time of Sampling	Feb 3, 20 6:45 A		Feb 3, 2 5:50 A	(The density limit in the water outside the surrounding monitored areas is provided in			
Detected Nuclides (Half-life)	①Density of Sample (Bq/L)	Scaling Factor (①/②)	①Density of Sample (Bq/L)	Scaling Factor (①/②)	section 6 of Appendix 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<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. 0.76Bq/L, Cs-134: Approx. 0.72Bq/L, Cs-137: Approx. 0.59Bq/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 February 4)

Place of Sampling			scharge Chanr North of Unit {						charge Channe South of Unit				② Density Limit Specified by the Reactor Regulation (Bq/L)
Time of Sampling		Dec 23, 2013         Dec 30, 2013         Jan 6, 2014           7:15 AM         6:45 AM         6:31 AM						Dec 23, 2013 Dec 30, 2013 6:00 AM 6:00 AM			Jan 6, 2 5:36 A		(The density limit in the water outside the surrounding monitored
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)	ng ①Density of Scaling ①Density of Scaling ①Density of Scaling ③Density of Scaling ③Density of Scaling ③Density of Scaling Sample Factor				areas is provided in section 6 of Appendix 2.)		
Cs-134 (Approx. 2 years)	Cs-134 0.30 0.01 0.34 0.0			0.01	1.0	0.02	0.42	0.01	0.18	0.00	0.13	0.00	60
Cs-137 (Approx. 30 years)			0.03	0.96	0.01	0.39	0.00	0.30	0.00	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: Tokyo Power Tecnology Ltd.

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

### (Data summarized on February 4)

Place of Sampling		(Around	id the North I I Unit 3-4 Dis Approx. 10kr	charge C	hannel)		(Appro	x. 11km S	the North Si South of Unit Approx. 23kr	1 & 2 Diso	charge Chan	nel)	② Density Limit Specified by the Reactor Regulation (Bq/L)
Time of Sampling		Dec 24, 2013         Dec 31, 2013         Jan 7, 201           3:20 PM         7:50 AM         10:00 AM					Dec 24, 7:20 /		Dec 31, 7:15 /		Jan 7, 2014 7:20 AM		(The density limit in the water outside the surrounding
Detected Nuclides (Half-life)	①Density of Sample (Bq/L)	Scaling Factor (①/②)	ng ①Density Scaling or of Sample Factor		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)	monitored areas is provided in section 6 of Appendix 2.)
Cs-134 (Approx. 2 years)	-134 0.32 0.01 0.14 0.00		0.00	0.065	0.00	0.26	0.00	0.11	0.00	0.043	0.00	60	
Cs-137 (Approx. 30 years)	0.72 0.01 0.32 0.00 0.15		0.15	0.00	0.59	0.01	0.27	0.00	0.10	0.00	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.

\* Analysis results by detail analysis (Phosphomolybdic acid ammonium adsorption sampling method) are noted. Analyzed by Tokyo Power Technology Ltd. Reference

### Nuclides Analysis Result of Radioactive Materials in the Seawater <Offshore 1/4>

(Data summarized on February 4)

Place of Sampling (Place No.)	3km Off	*1 3km Offshore of Odaka Ward (T-14)				shore of C	)daka Ward (T-	*1 14)	3km Off	shore of C	daka Ward (T-	*1 14)	② Density Limit Specified by the Reactor Regulation
	Upper Layer Lower Layer			ayer	Upper La	ayer	Lower Layer		Upper Layer		Lower Layer		(Bq/L)
Time of Sampling	Dec 17, 2 8:56 A		Dec 17, 2 8:56 A		Dec 23, 2 8:56 Al		3 Dec 23, 2013 Dec 29, 2013 8:56 AM 9:10 AM			Dec 29, 2 9:10 A	М	(The density limit in the water outside the surrounding monitored	
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)	Density of Scaling Sample Factor		Scaling Factor (①/②)	areas is provided in section 6 of Appendix 2.)
Cs-134 (Approx. 2 years)	0.0080	0.00	0.0095	0.00	0.016	0.00	0.027	0.00	0.013	0.00	0.025	0.00	60
Cs-137 (Approx. 30 years)	0.018	0.00	0.023	0.00	0.038	0.00	0.060	0.00	0.035	0.00	0.067	0.00	90

Place of Sampling (Place No.)	3km Offs	shore of U	kedo River (T-I	*2 D1)	3km Offs	shore of U	kedo River (T-I	*2 D1)	3km Offshore	of Fukush	ima Daiichi NP	*2 S (T-D5)	② Density Limit Specified by the Reactor Regulation
	Upper La	ayer	Lower La	ayer	Upper La	ayer	Lower Layer		Upper Layer		Lower Layer		(Bq/L)
Time of Sampling	Dec 23, 2 9:13 A		Dec 23, 2 9:13 Al		Dec 29, 2013         Dec 29, 2013         Dec 23, 2013           9:36 AM         9:36 AM         10:10 AM					Dec 23, 2 10:10 A		(The density limit in the water outside the surrounding monitored	
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)	areas is provided in section 6 of Appendix 2.)
Cs-134 (Approx. 2 years)	0.029	0.00	0.022	0.00	0.011	0.00	0.0099	0.00	0.057	0.00	0.029	0.00	60
Cs-137 (Approx. 30 years)	0.063	0.00	0.051	0.00	0.029	0.00	0.025	0.00	0.13	0.00	0.068	0.00	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: \*1 THE GENERAL ENVIRONMENTAL TECHNOS Co., LTD., \*2 Tokyo Power Technology Ltd.

#### Nuclides Analysis Result of Radioactive Materials in the Seawater <Offshore 2/4>

(Data summarized on February 4)

Place of Sampling (Place No.)	3km Offshore	of Fukush	iima Daiichi NP	*2 S (T-D5)	3km Offshore	e of Fukus	hima Daini NPS	*2 6 (T-D9)	3km Offshore	e of Fukus	hima Daini NPና	*2 6 (T-D9)	② Density Limit Specified by the Reactor Regulation
	Upper Layer Lower Layer				Upper La	ayer	Lower Layer		Upper Layer		Lower Layer		(Bq/L)
Time of Sampling	Dec 29, 2 9:22 A		,		Dec 23, 2013 9:49 AM		Dec 23, 2013 9:49 AM		Dec 29, 2013 8:49 AM		Dec 29, 2013 8:49 AM		(The density limit in the water outside the surrounding monitored
Detected Nuclides (Half-life)	①Density of Sample (Bq/L)	Scaling Factor (①/②)	areas is provided in section 6 of Appendix 2.)										
Cs-134 (Approx. 2 years)	0.016	0.00 0.014 0.0		0.00	0.14	0.00	0.041	0.00	0.017	0.00	0.015	0.00	60
Cs-137 (Approx. 30 years)	0.038	38 0.00 0.030 0.00		0.00	0.30	0.00	0.098	0.00	0.035	0.00	0.031	0.00	90

Place of Sampling (Place No.)	15km Offshor Upper La		shima Daiichi N Lower La	. ,	15km Offshor Upper La		shima Daiichi N Lower La	( )	3km Offsh Upper La		asawa Shore (T Lower La	,	② Density Limit Specified by the Reactor Regulation (Bq/L)
Time of Sampling	Dec 23-2	2013	Dec 23, 2 8:53 A	2013	The 5th weel *1 (Not sa	k of Dec	The 5th week of Dec *1 (Not sampled)		Dec 23, 2013 10:31 AM		Dec 23, 2013 10:31 AM		(The density limit in the water outside the surrounding monitored
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)	lling ①Density of Scaling ①Density of Scaling Sample Factor Sample Factor		Scaling Factor (①/②)	①Density of Sample (Bq/L)	Scaling Factor (①/②)	areas is provided in section 6 of Appendix 2.)	
Cs-134 (Approx. 2 years)	0.0013	0.00	0.0022 0.00		-	-	-	-	0.20	0.00	0.039	0.00	60
Cs-137 (Approx. 30 years)	0.0028	0.00	0.0065	0.00	-	-	-	-	0.45	0.01	0.086	0.00	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: \*1 THE GENERAL ENVIRONMENTAL TECHNOS Co., LTD., \*2 Tokyo Power Technology Ltd.

\*1 The sampling could not be performed due to the bad weather.

#### Nuclides Analysis Result of Radioactive Materials in the Seawater <Offshore 3/4>

(Data summarized on February 4)

Place of Sampling (Place No.)	3km Offsi	3km Offshore of Iwasawa Shore (T-11) Upper Layer Lower Layer					nahama Port (T-	,			ımanouchi (T-M	,	<ul> <li>② Density Limit</li> <li>Specified by the</li> <li>Reactor Regulation</li> </ul>
	Upper La	ayer	Lower La	iyer	Upper La	iyer	Lower Layer		Upper Layer		Lower La	ayer	(Bq/L)
Time of Sampling	Dec 29, 2 8:01 A		Dec 29, 2 8:01 Al		Dec 28, 2 6:04 Al	18, 2013         Dec 28, 2013         Dec 29, 2013			Dec 29, 2 6:35 A		(The density limit in the water outside the surrounding monitored		
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)	①Density of Scaling Factor		Scaling Factor (①/②)	areas is provided in section 6 of Appendix 2.)
Cs-134 (Approx. 2 years)	0.039			0.00	0.031	0.00	0.031	0.00	0.0074	0.00	0.0087	0.00	60
Cs-137 (Approx. 30 years)	0.093	0.00	0.070	0.00	0.072	0.00	0.080	0.00	0.020	0.00	0.025	0.00	90

Place of Sampling (Place No.)	Around 1ki		e of Ota River ( <sup>-</sup> Lower La	,	Around 3km Upper La		of Odaka Ward Lower La	· · /	Arounmd 15kı Upper La		e of Odaka War Lower La	( )	② Density Limit Specified by the Reactor Regulation (Bq/L)
Time of Sampling	Dec 26, 2 6:48 Al		,	Dec 26, 2013 6:48 AM		2013 M	Dec 26, 2013 6:25 AM		Dec 24, 2013 5:55 AM		Dec 24, 2013 5:55 AM		(The density limit in the water outside the surrounding monitored
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         Scaling Factor         ①Density of Sample         Scaling Factor		Scaling Factor (①/②)	①Density of Sample (Bq/L)	Scaling Factor (①/②)	areas is provided in section 6 of Appendix 2.)	
Cs-134 (Approx. 2 years)	0.020	0.00	0.017	0.00	0.014	0.00	0.032	0.00	ND	-	0.0039	0.00	60
Cs-137 (Approx. 30 years)	0.050	0.00	0.040	0.00	0.035	0.00	0.076	0.00	0.0046	0.00	0.010	0.00	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.

\* "ND" indicates that the measurement result is below the detection limit.

Cs-134: Approx.0.0014Bq/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.

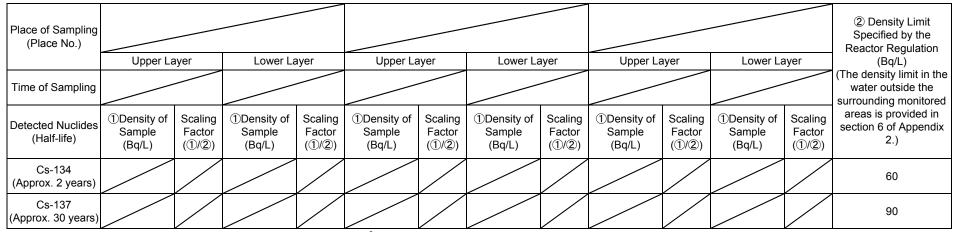
\* Analysis results by detail analysis (Phosphomolybdic acid ammonium adsorption sampling method) are noted.

\* Analyzed by: THE GENERAL ENVIRONMENTAL TECHNOS Co., LTD.

#### Nuclides Analysis Result of Radioactive Materials in the Seawater <Offshore 4/4>

(Data summarized on February 4)

Place of Sampling (Place No.)	Around 18km	Around 18km Offshore of Ukedo River (T-B2)				10km Offs	hore of 1F (T-E	33)	Around	10km Offs	shore of 2F (T-E	34)	② Density Limit Specified by the Reactor Regulation
	Upper Layer Lower Layer			iyer	Upper La	iyer	Lower Layer		Upper Layer		Lower Layer		(Bq/L)
Time of Sampling	Dec 24, 2 6:29 Al		Dec 24, 2 6:29 Al		,	Dec 14, 2013         Dec 14, 2013         Dec 14, 2013           8:14 AM         8:14 AM         8:53 AM			Dec 14, 2013 8:53 AM		(The density limit in the water outside the surrounding monitored		
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)	areas is provided in section 6 of Appendix 2.)
Cs-134 (Approx. 2 years)	ND	-	0.0045	0.00	0.0024	0.00	0.0014	0.00	ND	-	ND	-	60
Cs-137 (Approx. 30 years)	0.0047	0.00	0.0096	0.00	0.0060	0.00	0.0045	0.00	0.0045	0.00	0.0041	0.00	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.

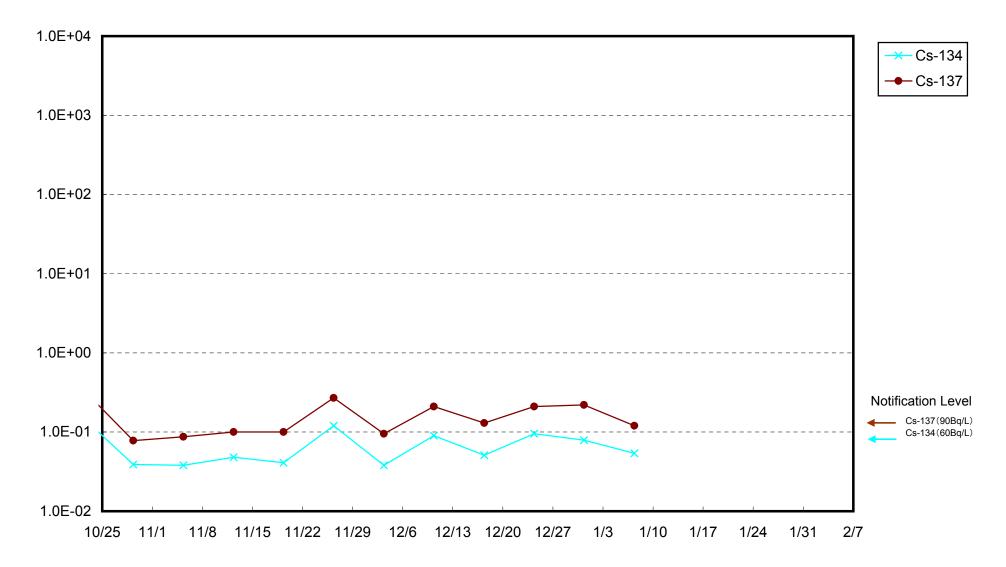
\* "ND" indicates that the measurement result is below the detection limit.

Cs-134: Approx.0.0014Bq/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.

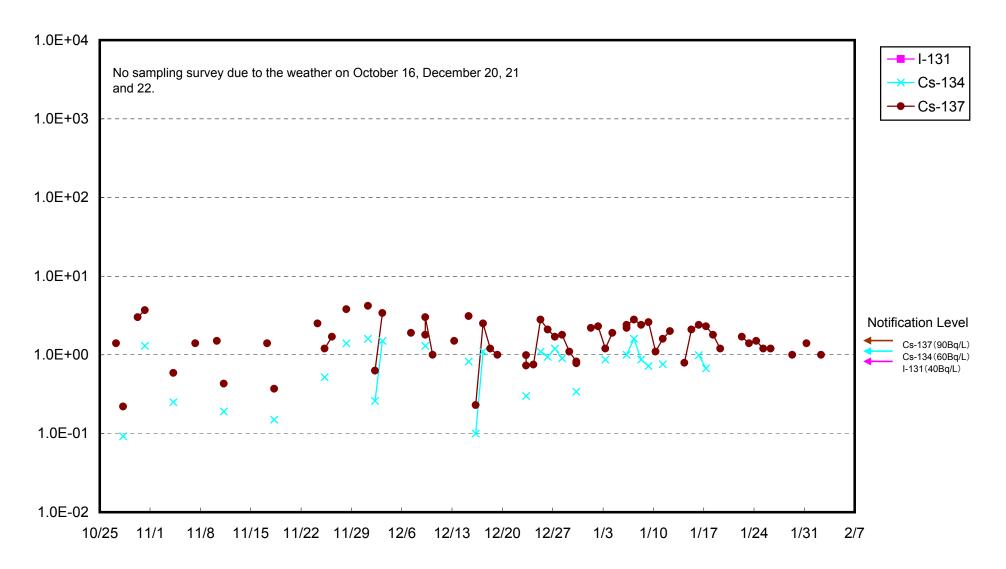
\* Analysis results by detail analysis (Phosphomolybdic acid ammonium adsorption sampling method) are noted.

\* Analyzed by: THE GENERAL ENVIRONMENTAL TECHNOS Co., LTD.

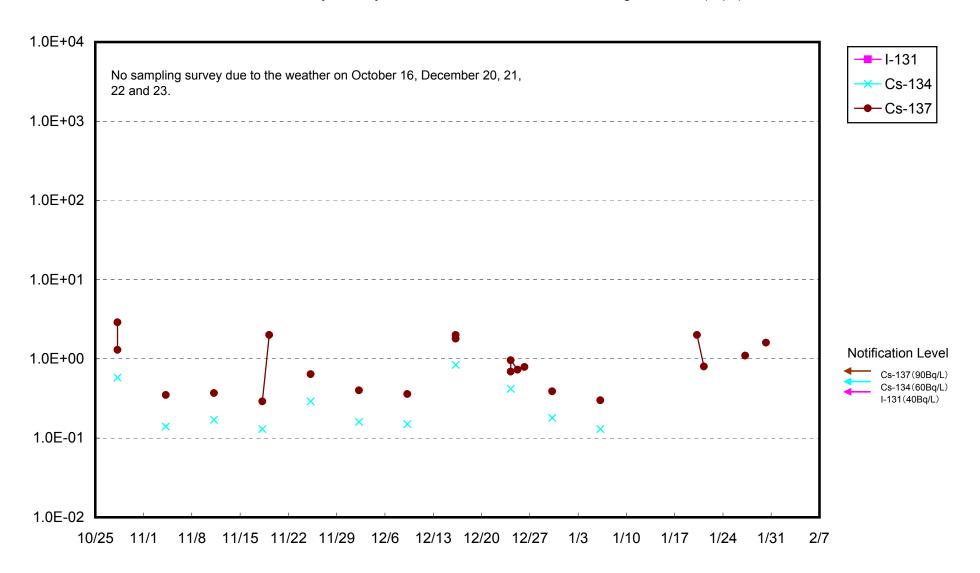
Radioactivity Density of the South Side of the Ukedo Port (Bq/L)



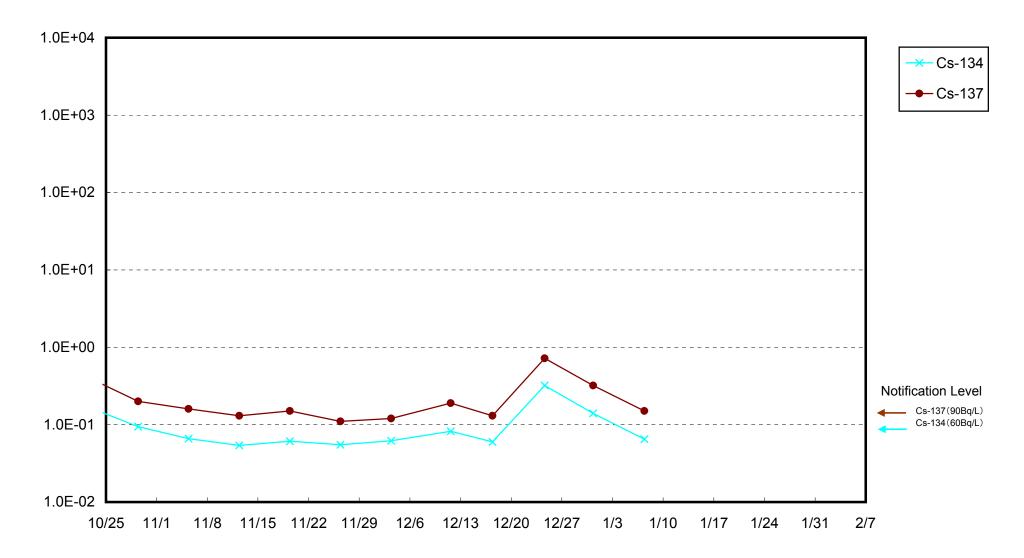
Radioactivity Density of the Seawater at 1F Units 5-6 North Discharge Channel (Bq/L)



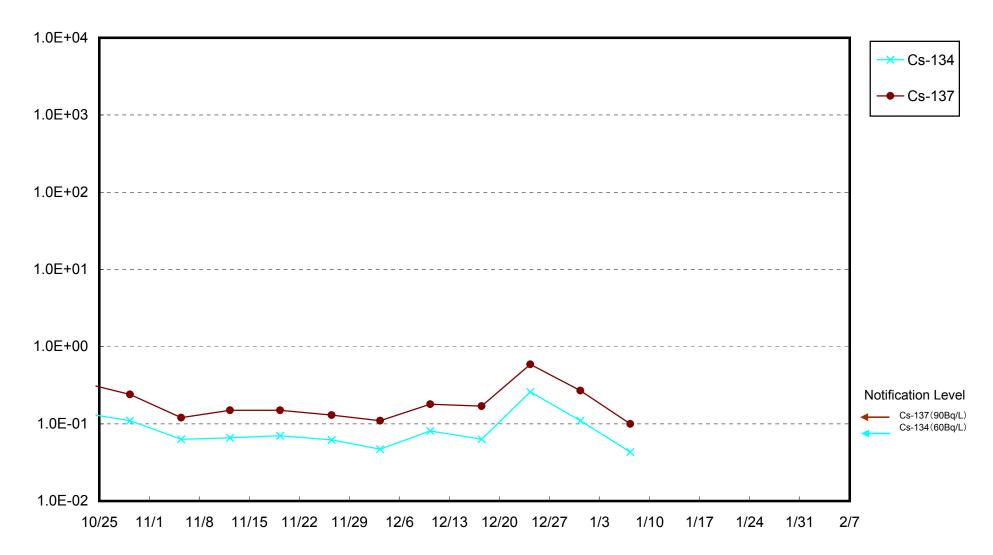
Radioactivity Density of the Seawater at 1F South Discharge Channel (Bq/L)



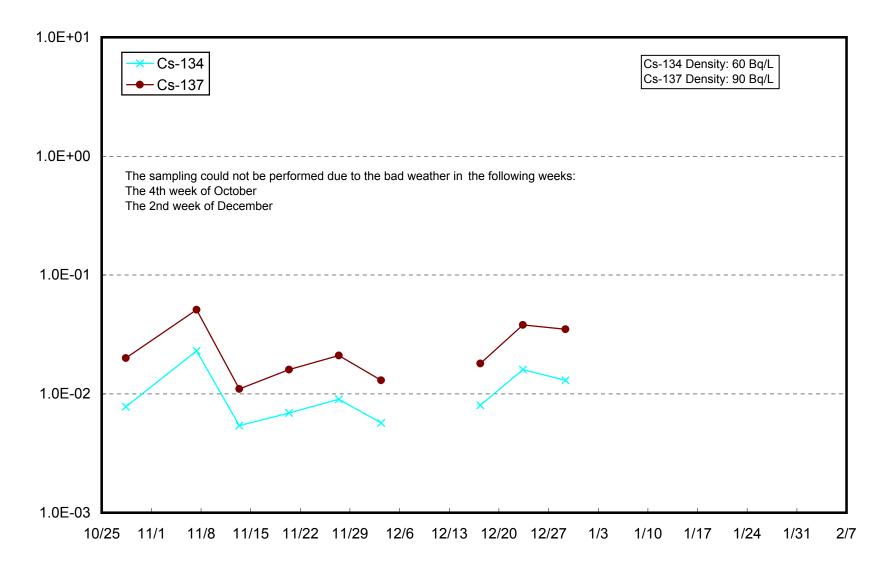
Radioactivity Density of the Seawater at 2F North Discharge Channel (Bq/L)



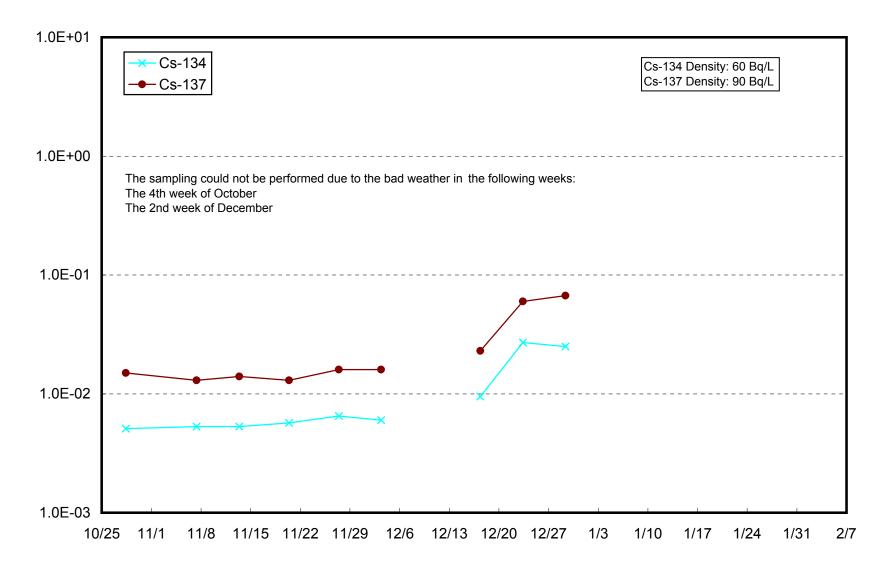
Radioactivity Density of the Seawater Around the Iwasawa Shore of 2F (Bq/L)



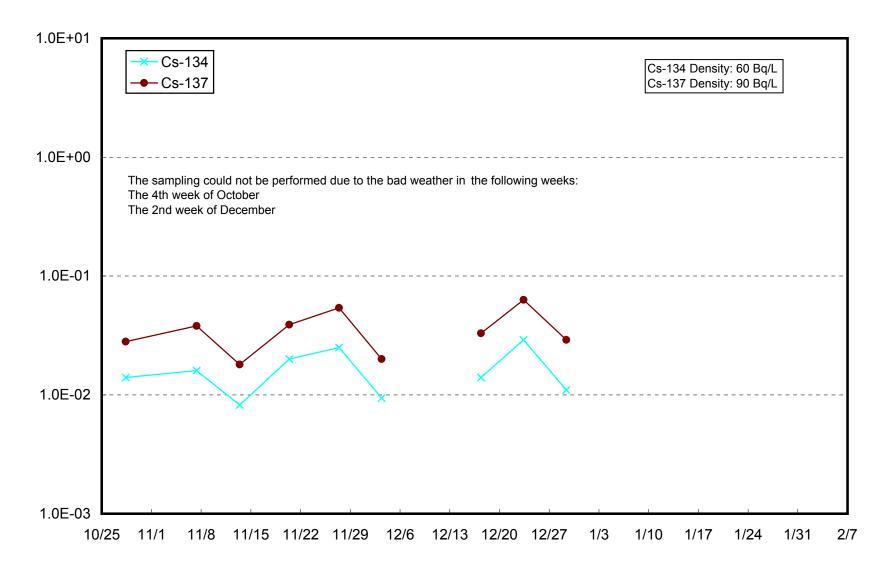
Radioactivity Density of the Seawater at 3km Offshore of Odaka Ward (T-14) Upper Layer (Bq/L)



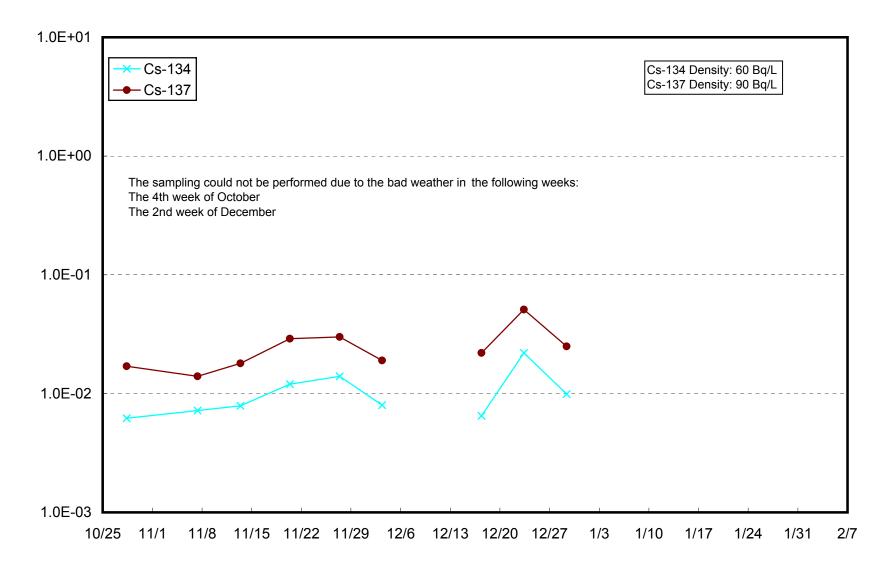
Radioactivity Density of the Seawater at 3km Offshore of Odaka Ward (T-14) Lower Layer (Bq/L)



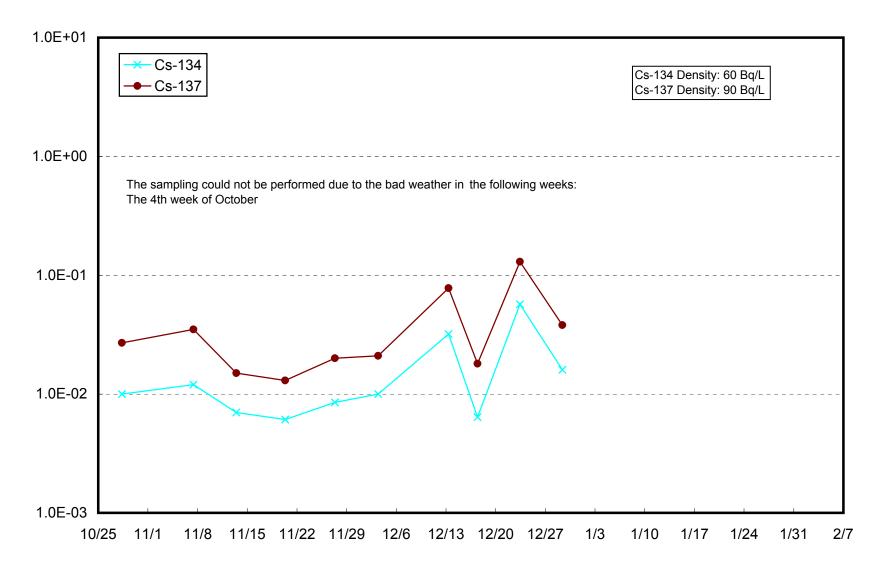
Radioactivity Density of the Seawater at 3km Offshore of Ukedo River (T-D1) Upper Layer (Bq/L)



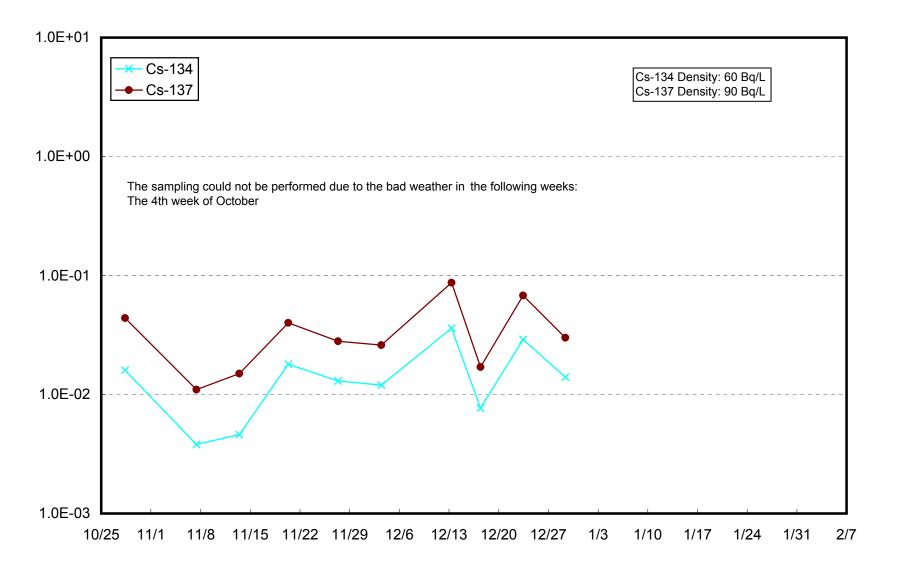
Radioactivity Density of the Seawater at 3km Offshore of Ukedo River (T-D1) Lower Layer (Bq/L)



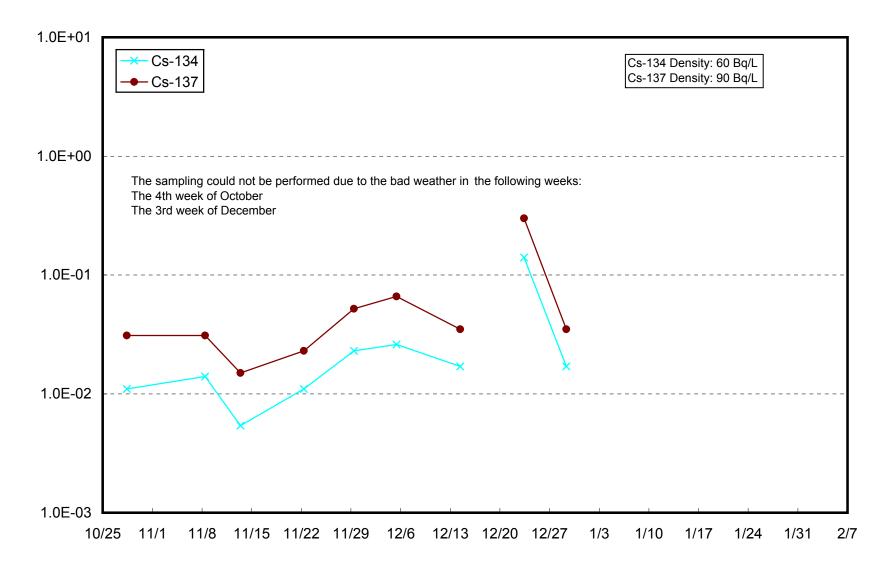
Radioactivity Density of the Seawater at 3km Offshore of Fukushima Daiichi NPS (T-D5) Upper Layer (Bq/L)



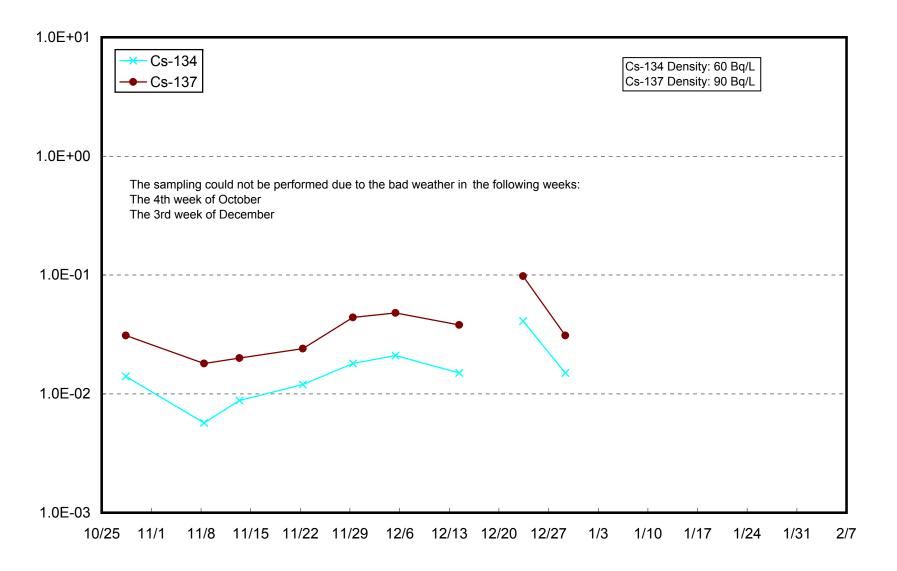
Radioactivity Density of the Seawater at 3km Offshore of Fukushima Daiichi NPS (T-D5) Lower Layer (Bq/L)



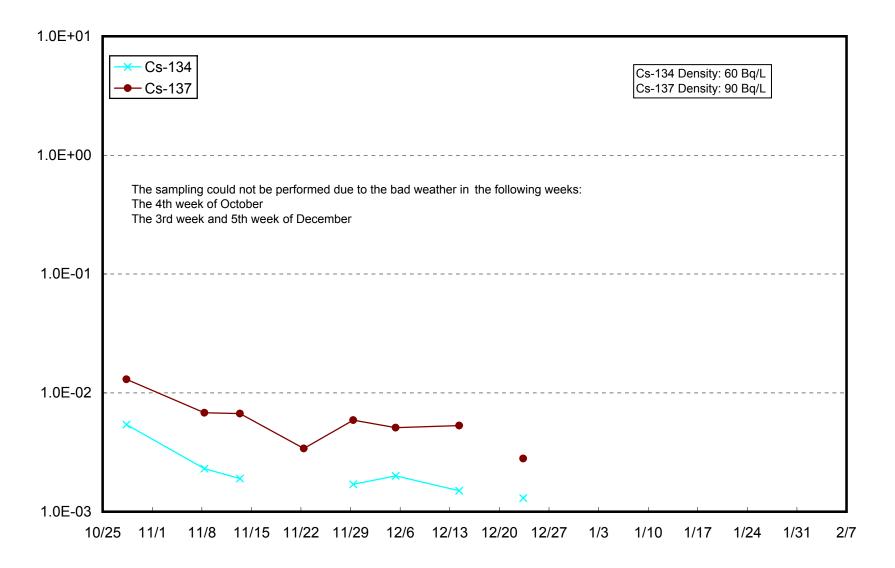
Radioactivity Density of the Seawater at 3km Offshore of Fukushima Daini NPS (T-D9) Upper Layer (Bq/L)



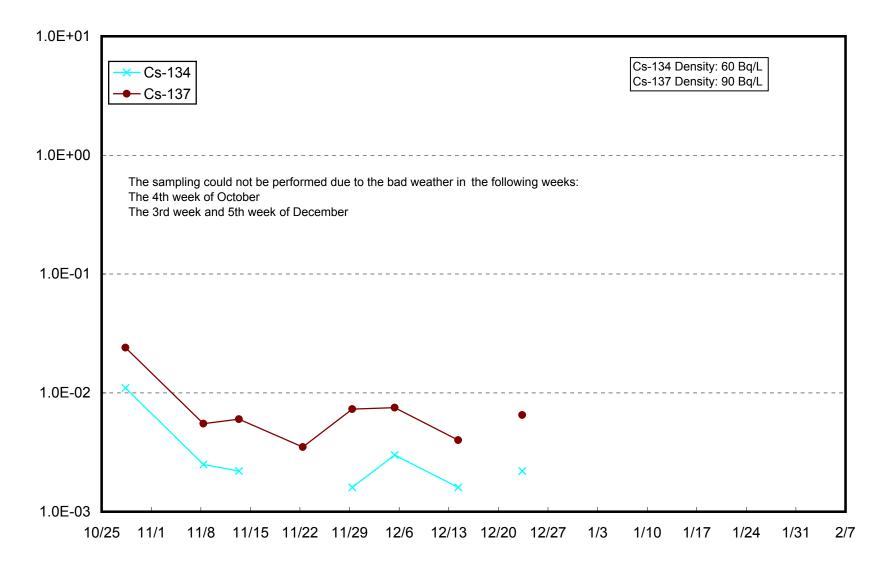
Radioactivity Density of the Seawater at 3km Offshore of Fukushima Daini NPS (T-D9) Lower Layer (Bq/L)



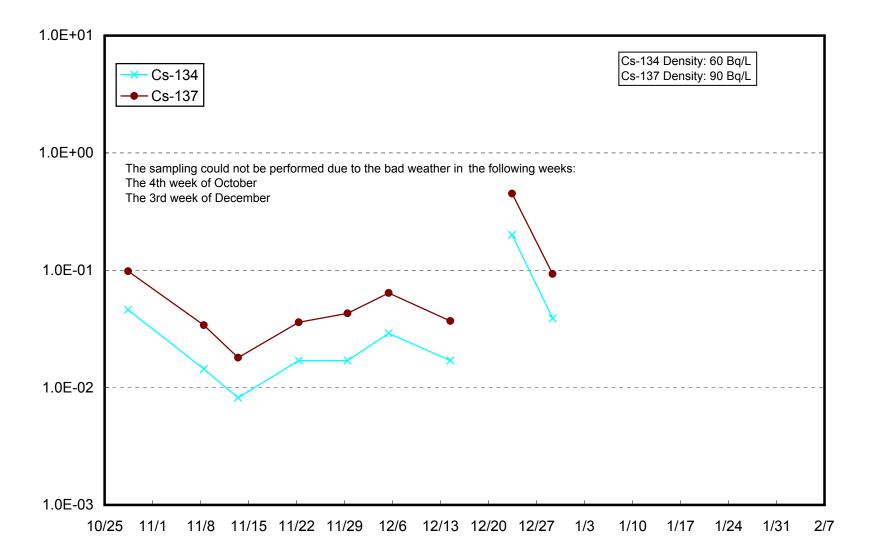
Radioactivity Density of the Seawater at 15km Offshore of Fukushima Daiichi NPS (T-5) Upper Layer (Bq/L)



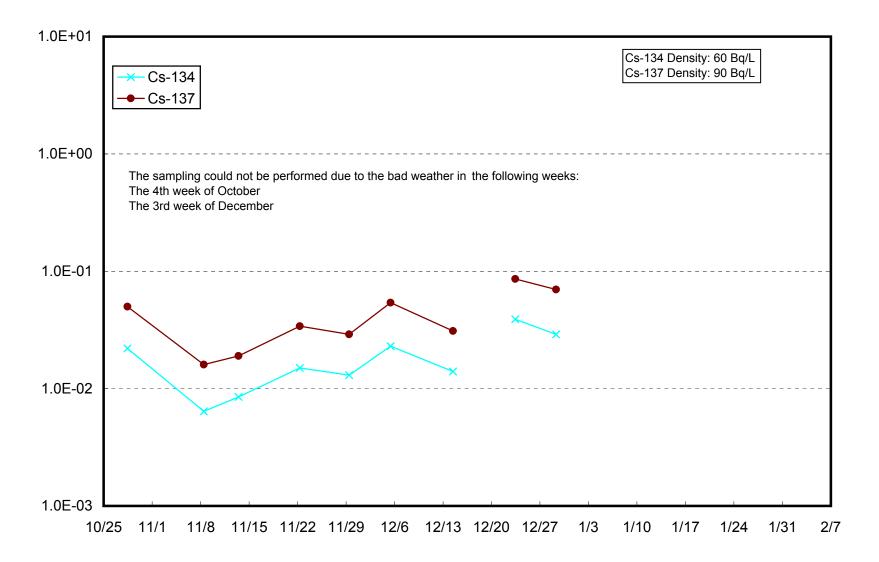
Radioactivity Density of the Seawater at 15km Offshore of Fukushima Daiichi NPS (T-5) Lower Layer (Bq/L)



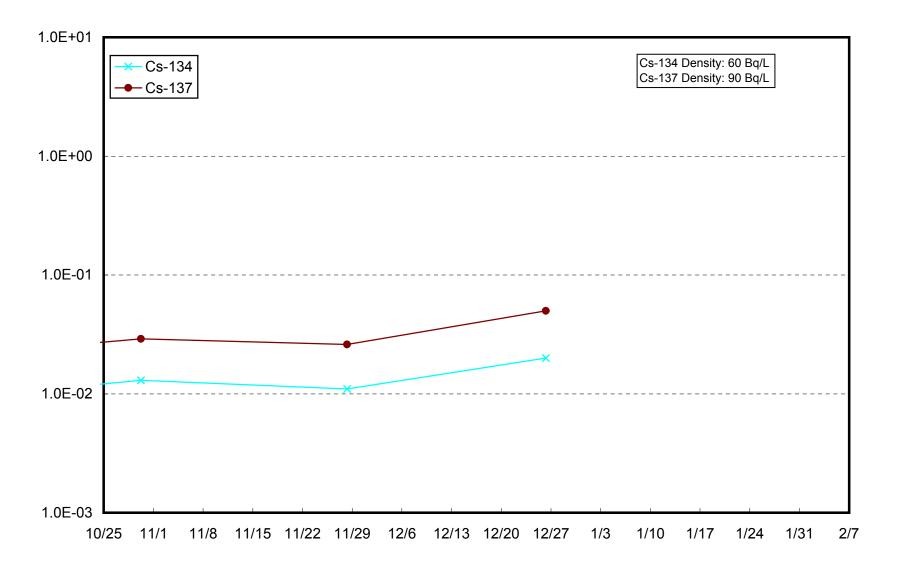
Radioactivity Density of the Seawater at 3km Offshore of Iwasawa Shore (T-11) Upper Layer (Bq/L)



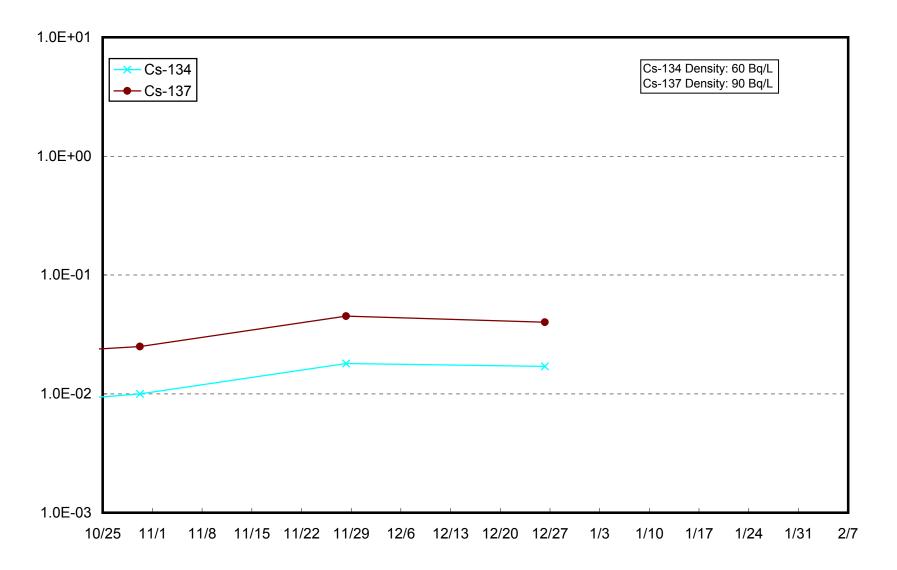
Radioactivity Density of the Seawater at 3km Offshore of Iwasawa Shore (T-11) Lower Layer (Bq/L)



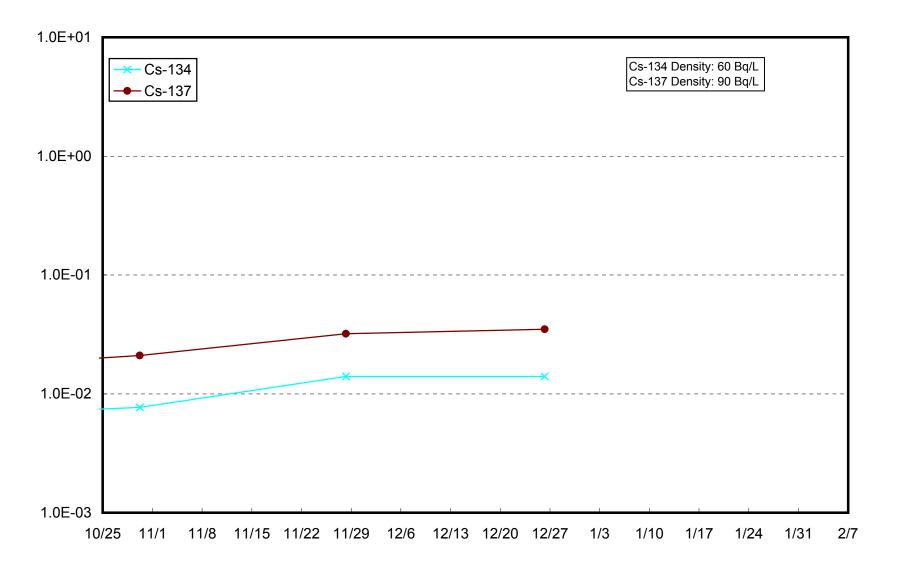
Radioactivity Density of the Seawater Around 1km Offshore of Ota River (T-S1) Upper Layer (Bq/L)



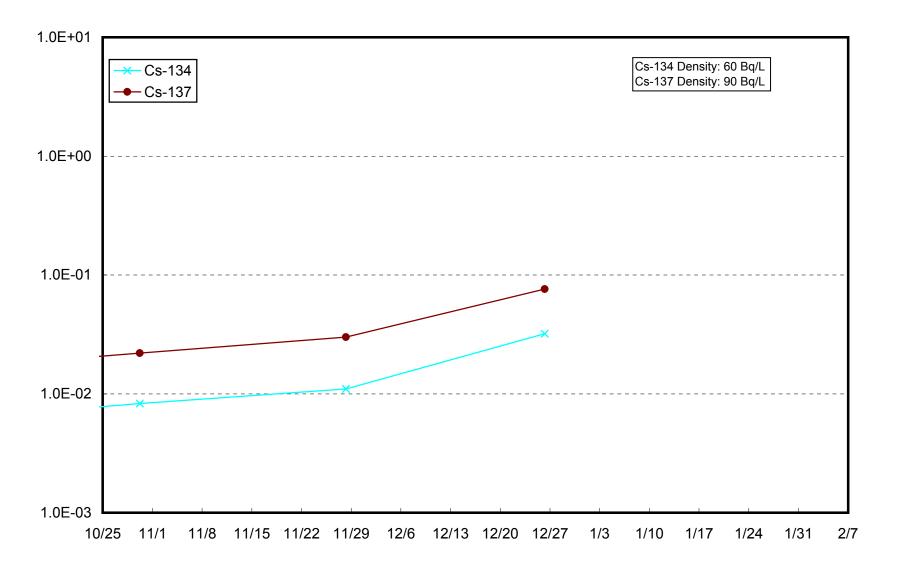
Radioactivity Density of the Seawater Around 1km Offshore of Ota River (T-S1) Lower Layer (Bq/L)



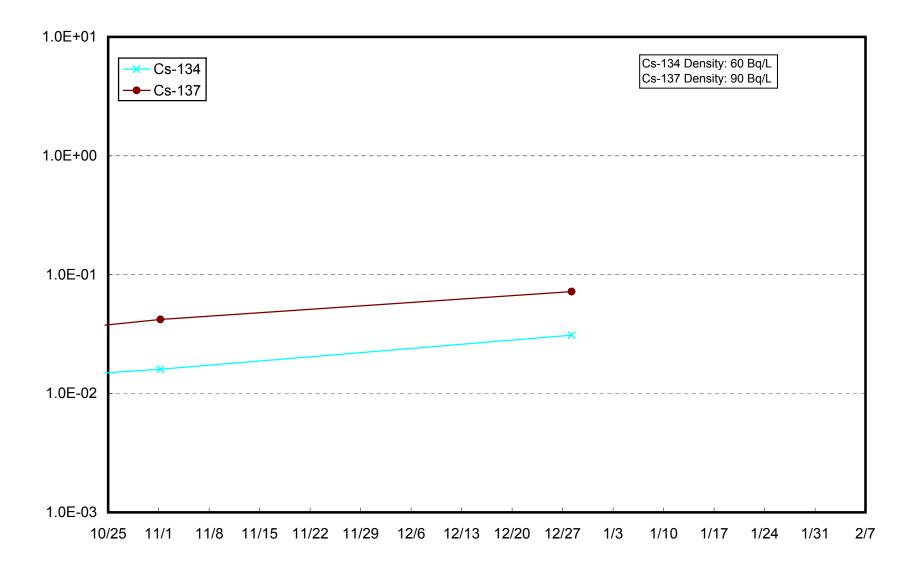
Radioactivity Density of the Seawater Around 3km Offshore of Odaka Ward (T-S2) Upper Layer (Bq/L)



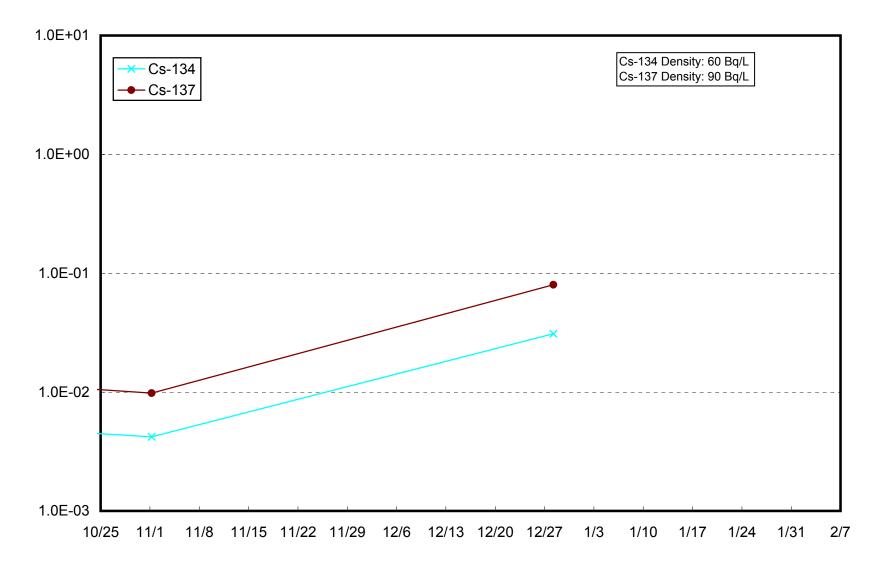
Radioactivity Density of the Seawater Around 3km Offshore of Odaka Ward (T-S2) Lower Layer (Bq/L)



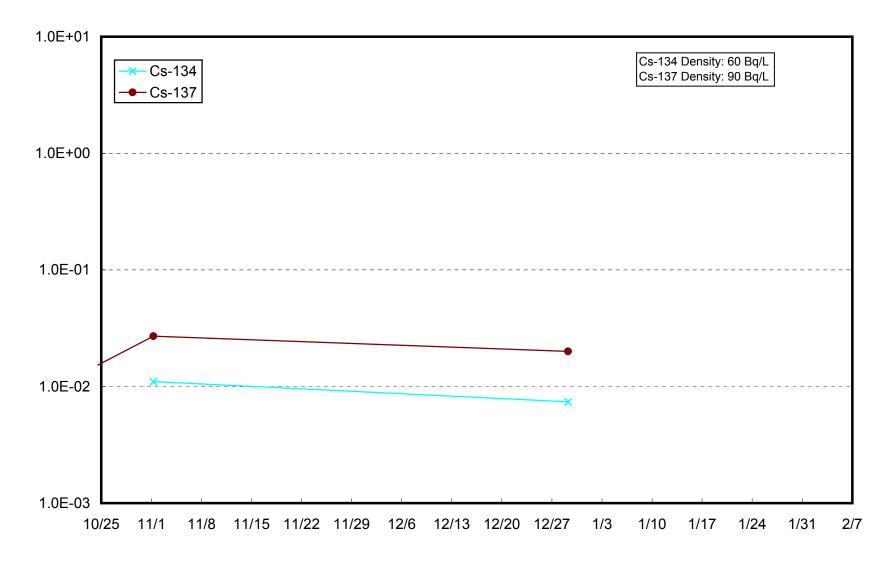
Radioactivity Density of the Seawater at 3km Offshore of Onahama Port (T-18) Upper Layer (Bq/L)



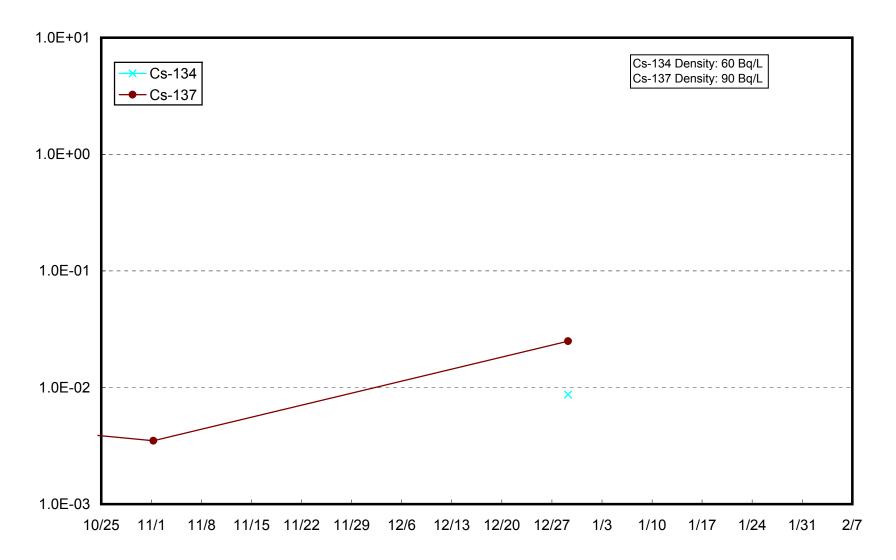
Radioactivity Density of the Seawater at 3km Offshore of Onahama Port (T-18) Lower Layer (Bq/L)



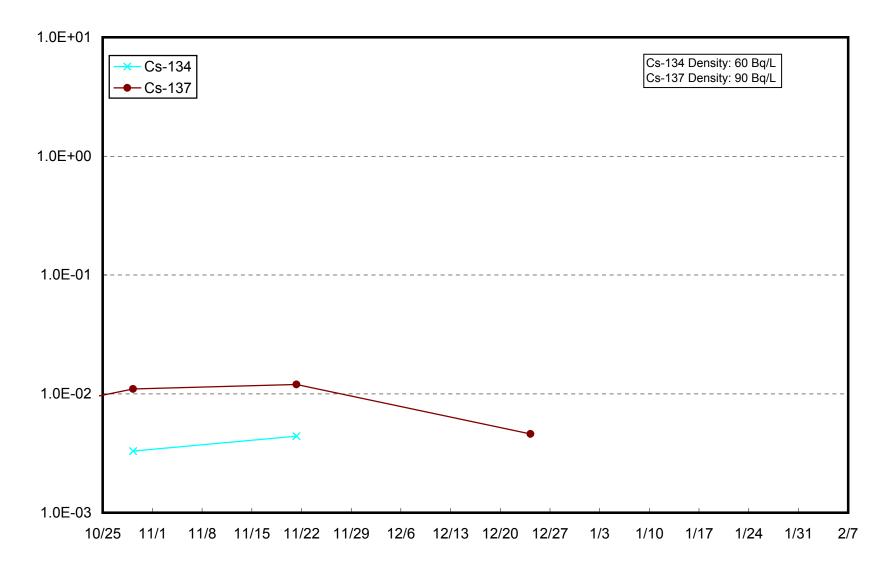
Radioactivity Density of the Seawater at 5km Offshore of Numanouchi (T-M10) Upper Layer (Bq/L)



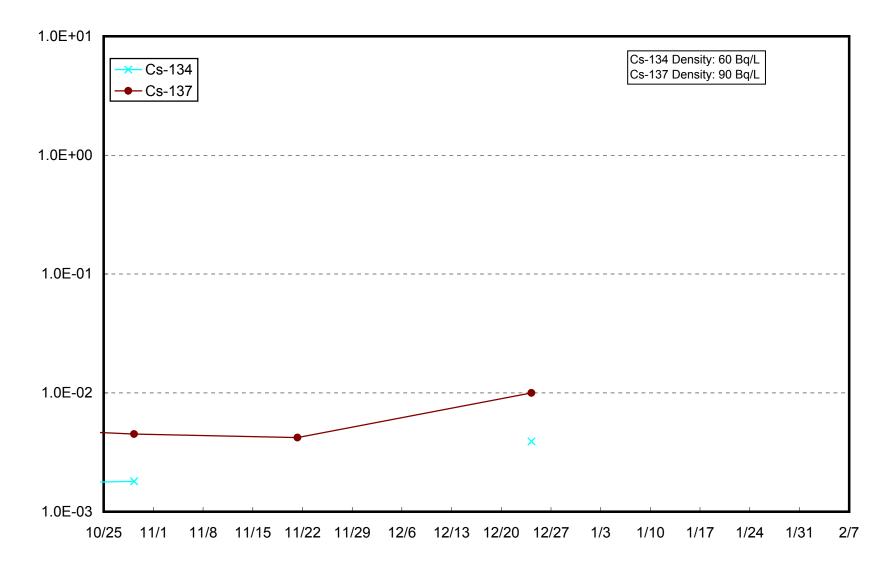
Radioactivity Density of the Seawater at 5km Offshore of Numanouchi (T-M10) Lower Layer (Bq/L)



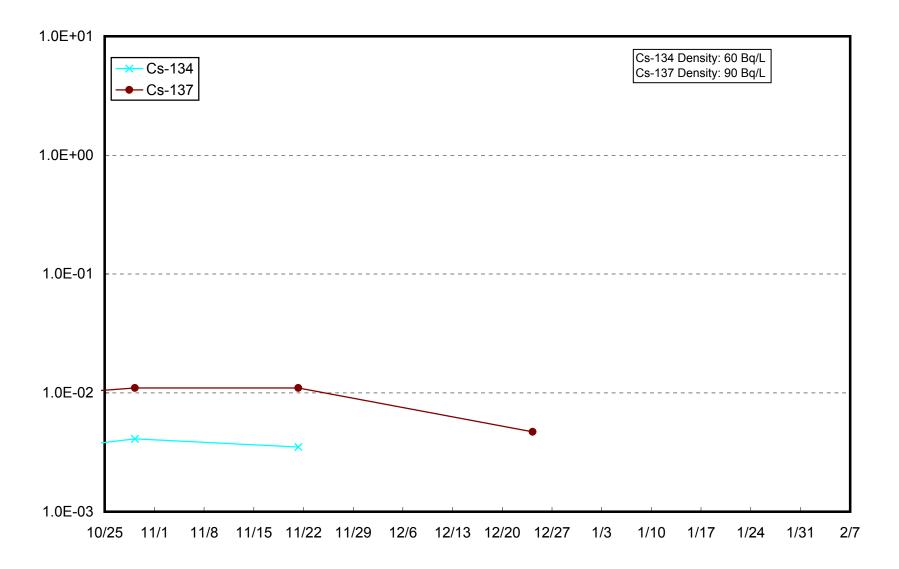
Radioactivity Density of the Seawater at 15km Offshore of Odaka Ward (T-B1) Upper Layer (Bq/L)



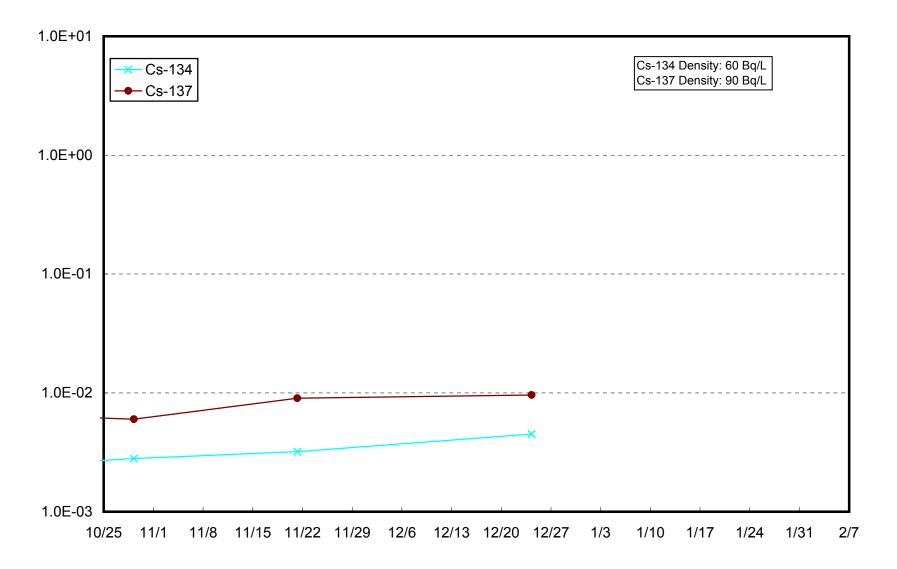
Radioactivity Density of the Seawater at 15km Offshore of Odaka Ward (T-B1) Lower Layer (Bq/L)



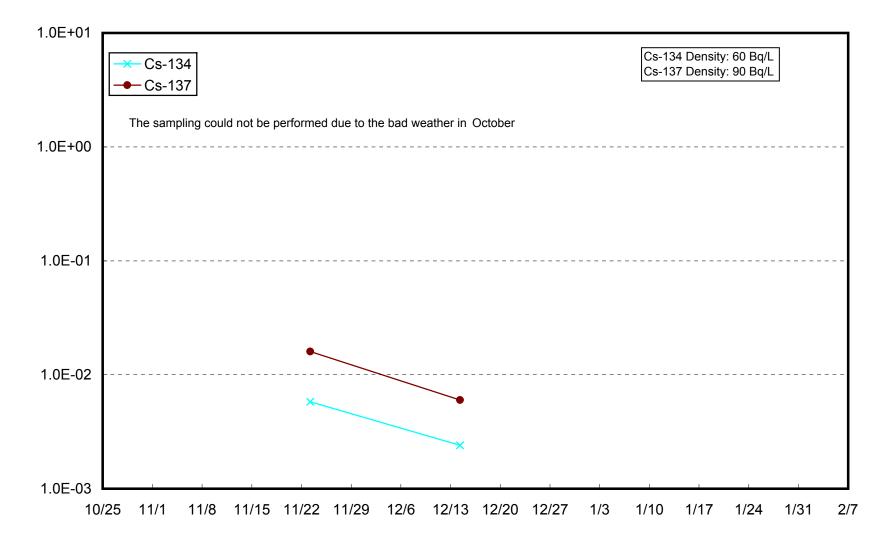
Radioactivity Density of the Seawater at 18km Offshore of Ukedo River (T-B2) Upper Layer (Bq/L)



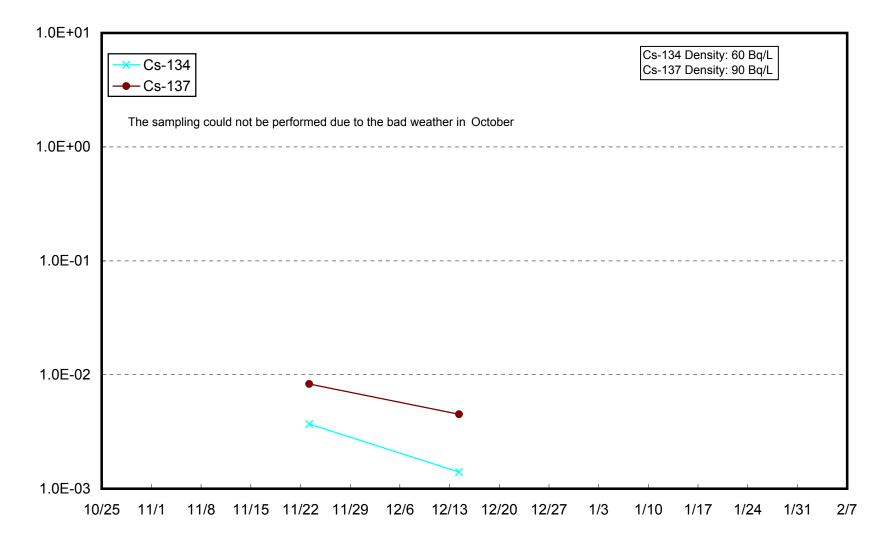
Radioactivity Density of the Seawater at 18km Offshore of Ukedo River (T-B2) Lower Layer (Bq/L)



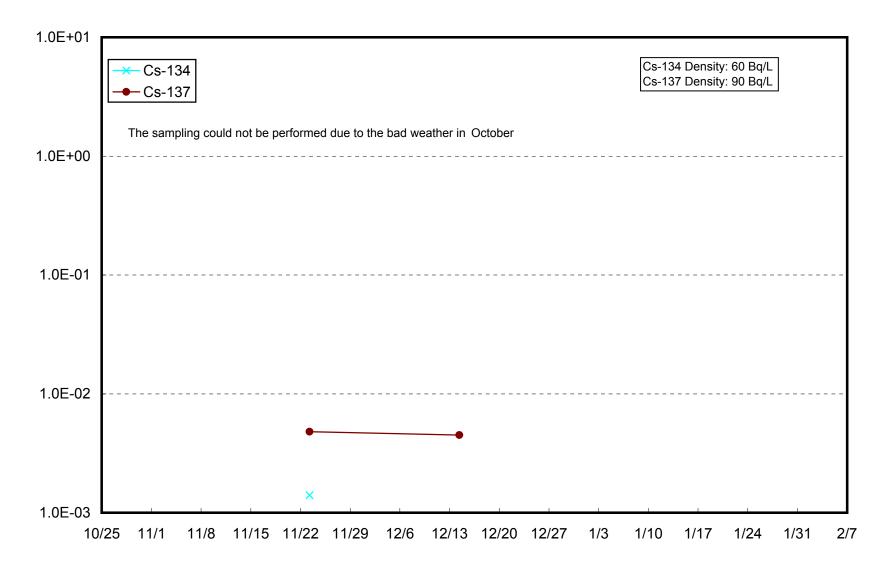
# Radioactivity Density of the Seawater Around 10km Offshore of Fukushima Daiichi NPS (T-B3) Upper Layer (Bq/L)



# Radioactivity Density of the Seawater Around 10km Offshore of Fukushima Daiichi NPS (T-B3) Lower Layer (Bq/L)



Radioactivity Density of the Seawater Around 10km Offshore of Fukushima Daini (T-B4) Upper Layer (Bq/L)



Radioactivity Density of the Seawater Around 10km Offshore of Fukushima Daini (T-B4) Lower Layer (Bq/L)

