

Detailed Analysis Results in the Port of Fukushima Daiichi NPS, around Discharge Channel and Bank Protection (1/12)
Underground Water Obtained at Bank Protection

Unit: Bq/L

	Underground water observation hole No.1		Underground water observation hole No.1	Underground water observation hole No.1-1	Underground water observation hole No.2	Underground water observation hole No.3
Date of sampling	Jun 14, 2013		Jun 21, 2013	Jun 28, 2013	Jun 21, 2013	Jun 21, 2013
Time of sampling	14:29	14:29	9:01	16:40	17:44	17:01
Cs-134 (Approx. 2 years)	ND(0.37)	ND(0.37)	ND(0.36)	ND(0.41)	ND(0.32)	1.7
Cs-137 (Approx.30 years)	ND(0.43)	0.51	0.53	ND(0.51)	ND(0.37)	2.9
The other γ	Mn-54 (Approx. 310 days)	ND	ND	ND	0.52	ND
	Ru-106 (Approx. 370 days)	18	19	16	ND	ND
Gross α	ND(10)	ND(10)	—	—	—	—
Gross β	1,200	1,300	1,500	3,000	53	ND(17)
H-3 (Approx. 12 years)	450,000	440,000	430,000	430,000	560	1,600
Sr-90 (Approx. 29 years)	1,100	1,100	Under analysis	Under analysis	Under analysis	Under analysis

* Data announced this time is provided in a thick-frame. The other data was announced in June.

* "ND" indicates that the measurement result is below the detection limit, and the detection limit of each nuclide is provided in parentheses except for "The other γ "

* "-" indicates that the measurement was out of range.

Detailed Analysis Results in the Port of Fukushima Daiichi NPS, around Discharge Channel and Bank Protection (2/12)
Underground Water Obtained at Bank Protection

Unit: Bq/L

	Underground water observation hole No.1	Underground water observation hole No.1-2	Underground water observation hole No.1-3	Underground water observation hole No.1-4	Underground water observation hole No.1-5	Underground water observation hole No.2	Underground water observation hole No.2-1	Underground water observation hole No.3	Underground water observation hole No.3-1
Date of sampling	Jul 25, 2013	Jul 5, 2013	Jul 12, 2013	Jul 8, 2013	Jul 31, 2013		Jul 25, 2013		Jul 23, 2013
Time of sampling	13:15	12:10	12:20	15:30	13:05		11:28		11:10
Cs-134 (Approx. 2 years)	ND(0.42)	99	ND(0.66)	1.5	21		ND(0.42)		1.1
Cs-137 (Approx.30 years)	ND(0.55)	210	1.4	3.6	44		0.69		2.2
The other γ	Mn-54 (Approx. 310 days)	ND	62	ND	ND		ND		ND
	Co-60 (Approx. 5 years)	ND	1.2	ND	ND		ND		ND
	Ru-106 (Approx. 370 days)	12	95	16	ND		ND		ND
	Sb-125 (Approx. 3 years)	ND	35	1.4	ND		ND		ND
Gross β	1,400	900,000	92,000	330	1,200		ND(17)		ND(19)
H-3 (Approx. 12 years)	430,000	380,000	290,000	69,000	28,000		120		290
Sr-90 (Approx. 29 years)	1,100	Under analysis	Under analysis	Under analysis	910		Under analysis		Under analysis

* Data announced this time is provided in a thick-frame. The other data was announced in July and August.

* "ND" indicates that the measurement result is below the detection limit, and the detection limit of each nuclide is provided in parentheses except for "The other γ "

* "-" indicates that the measurement was out of range.

Detailed Analysis Results in the Port of Fukushima Daiichi NPS, around Discharge Channel and Bank Protection (3/12) Underground Water Obtained at Bank Protection

Unit: Bq/L

	Underground water observation hole No.0-1	Underground water observation hole No.1	Underground water observation hole No.1-2	Underground water observation hole No.1-3	Underground water observation hole No.1-4	Underground water observation hole No.1-5	Underground water observation hole No.1-8	Groundwater pumped up from the well point	Underground water observation hole No.2	Underground water observation hole No.2-1	Underground water observation hole No.3	Underground water observation hole No.3-1
Date of sampling	Aug 8, 2013	Aug 22, 2013	Aug 8, 2013	Aug 8, 2013	Aug 8, 2013	Aug 22, 2013	Aug 20, 2013					
Time of sampling	14:15	10:58	13:38	12:18	11:00	12:00	9:40					
Cs-134 (Approx. 2 years)	0.61	ND(0.57)	200	ND(0.55)	0.55	91	21					
Cs-137 (Approx.30 years)	1.6	0.66	450	1.0	1.2	190	45					
The other γ	Ru-106 (Approx. 370 days)	ND	7.9	ND	17	3.1	ND	ND				
	Sb-125 (Approx. 3 years)	ND	ND	170	ND	ND	ND	ND				
Gross β	210	1,500	880,000	150,000	170	6,200	1,100					
H-3 (Approx. 12 years)	23,000	430,000	170,000	240,000	76,000	28,000	950					
Sr-90 (Approx. 29 years)	Under analysis	1,300	Under analysis	Under analysis	Under analysis	5,100	610					

* Data announced this time is provided in a thick-frame. The other data was announced in August.

* "ND" indicates that the measurement result is below the detection limit, and the detection limit of each nuclide is provided in parentheses except for "The other γ "

* "-" indicates that the measurement was out of range.

Detailed Analysis Results in the Port of Fukushima Daiichi NPS, around Discharge Channel and Bank Protection (4/12) Underground Water Obtained at Bank Protection

Unit: Bq/L (exclude chloride)

		Underground water observation hole No.0-1	Underground water observation hole No.0-2	Underground water observation hole No.1	Underground water observation hole No.1-2	Underground water observation hole No.1-8	Underground water observation hole No.1-9	Underground water observation hole No.1-11	Underground water observation hole No.1-16	Groundwater pumped up from the well point
Date of sampling			Sep 2, 2013	Sep 19, 2013	Sep 5, 2013	Sep 16, 2013	Sep 3, 2013	Sep 13, 2013	Sep 26, 2013	
Time of sampling			9:51	10:02	13:40	10:00	10:20	10:35	11:30	
Cs-134 (Approx. 2 years)			ND(0.47)	ND(0.43)	82	31	170	ND(0.36)	ND(0.99)	
Cs-137 (Approx.30 years)			0.75	ND(0.57)	180	67	380	0.48	2.1	
The other γ	Mn-54 (Approx. 310 days)		ND	ND	ND	0.76	ND	ND	ND	
	Ru-106 (Approx. 370 days)		ND	7.0	ND	ND	ND	ND	ND	
	Sb-125 (Approx. 3 years)		ND	ND	ND	ND	ND	ND	ND	
Gross β			ND(24)	770	500,000	2,100	470	43	400,000	
H-3 (Approx. 12 years)			ND(120)	330000	310000	1900	670	85000	43000	
Sr-90 (Approx. 29 years)			0.73	Under analysis	Under analysis	1,300	170	17	Under analysis	

		Underground water observation hole No.2	Underground water observation hole No.2-1	Underground water observation hole No.2-5	Underground water observation hole No.2-6	Underground water observation hole No.3	Underground water observation hole No.3-4
Date of sampling				Sep 29, 2013	Sep 20, 2013		Sep 12, 2013
Time of sampling				9:50	10:53		13:20
Cs-134 (Approx. 2 years)				3.7	ND(0.39)		0.52
Cs-137 (Approx.30 years)				10	ND(0.45)		1.3
The other γ	Mn-54 (Approx. 310 days)			0.77	ND		ND
	Ru-106 (Approx. 370 days)			ND	ND		ND
	Sb-125 (Approx. 3 years)			18	ND		ND
Gross β				46000	ND(18)		ND(17)
H-3 (Approx. 12 years)				1500	200		ND(110)
Sr-90 (Approx. 29 years)				—	Under analysis		ND(0.34)

* Data announced this time is provided in a thick-frame. The other data was announced in September and October.

* "ND" indicates that the measurement result is below the detection limit, and the detection limit of each nuclide is provided in parentheses except for "The other γ"

* "-" indicates that the measurement was out of range.

Detailed Analysis Results in the Port of Fukushima Daiichi NPS, around Discharge Channel and Bank Protection (5/12) Underground Water Obtained at Bank Protection

Unit: Bq/L (exclude chloride)

		Underground water observation hole No.0-1	Underground water observation hole No.0-2	Underground water observation hole No.1	Underground water observation hole No.1-2	Underground water observation hole No.1-8	Underground water observation hole No.1-9	Underground water observation hole No.1-11	Underground water observation hole No.1-12	Underground water observation hole No.1-16	Groundwater pumped up from the well point
Date of sampling				Oct 14, 2013	Oct 7, 2013	Oct 14, 2013	Oct 3, 2013	Oct 14, 2013	Oct 21, 2013	Oct 14, 2013	
Time of sampling				13:05	12:06	9:30	6:15	9:57	11:22	12:43	
Chloride (unit: ppm)				—	—	—	530	—	—	—	
Cs-134 (Approx. 2 years)				ND(0.39)	1400	24	9.5	0.92	74	ND(0.96)	
Cs-137 (Approx.30 years)				0.74	2800	53	25	1.8	170	2.1	
The other γ	Mn-54 (Approx. 310 days)			ND	ND	0.67	ND	ND	ND	ND	
	Ru-106 (Approx. 370 days)			5.6	ND	ND	ND	ND	ND	ND	
	Sb-125 (Approx. 3 years)			ND	ND	ND	ND	ND	61	ND	
Gross β				670	250,000	2,500	83	49	730	880,000	
H-3 (Approx. 12 years)				260,000	54,000	2,500	690	33,000	350,000	30,000	
Sr-90 (Approx. 29 years)				Under analysis	Under analysis	Under analysis	Under analysis	Under analysis	Under analysis	Under analysis	

		Underground water observation hole No.2	Underground water observation hole No.2-1	Underground water observation hole No.2-5	Underground water observation hole No.2-6	Underground water observation hole No.3	Underground water observation hole No.3-4
Date of sampling							
Time of sampling							
Cs-134 (Approx. 2 years)							
Cs-137 (Approx.30 years)							
The other γ							
Gross β							
H-3 (Approx. 12 years)							
Sr-90 (Approx. 29 years)							

* Data announced this time is provided in a thick-frame. The other data was announced in October.

* "ND" indicates that the measurement result is below the detection limit, and the detection limit of each nuclide is provided in parentheses except for "The other γ"

* "-" indicates that the measurement was out of range.

Detailed Analysis Results in the Port of Fukushima Daiichi NPS, around Discharge Channel and Bank Protection (6/12)
Underground Water Obtained at Bank Protection

Unit: Bq/L (exclude chloride)

	Underground water observation hole No.0-1	Underground water observation hole No.0-1-2	Underground water observation hole No.0-2	Underground water observation hole No.0-3-1	Underground water observation hole No.0-4	Underground water observation hole No.1	Underground water observation hole No.1-8	Underground water observation hole No.1-9	Underground water observation hole No.1-11	Underground water observation hole No.1-12	Underground water observation hole No.1-14	Underground water observation hole No.1-16	Underground water observation hole No.1-17
Date of sampling		Nov 10, 2013		Nov 20, 2013		Nov 11, 2013	Nov 11, 2013	Nov 14, 2013	Nov 11, 2013	Nov 11, 2013	Nov 10, 2013	Nov 11, 2013	Nov 22, 2013
Time of sampling		12:42		12:44		10:02	9:10	6:27	9:36	9:11	12:30	9:35	9:23
Chloride (unit: ppm)		—		—		—	—	350	—	—	—	—	—
Cs-134 (Approx. 2 years)		ND(0.42)		ND(0.42)		ND(0.36)	31	3.4	0.75	9.0	0.84	ND(1.4)	ND(0.49)
Cs-137 (Approx.30 years)		ND(0.52)		0.86		0.66	69	8.8	2.0	21	2.0	2.0	ND(0.48)
The other γ	Mn-54 (Approx. 310 days)	ND		ND		ND	3.6	ND	ND	ND	ND	ND	ND
	Co-60 (Approx. 5 years)	ND		ND		ND	ND	ND	ND	ND	ND	0.53	0.41
	Ru-106 (Approx. 370 days)	ND		ND		ND	ND	ND	ND	ND	ND	ND	4.0
	Sb-125 (Approx. 3 years)	ND		ND		ND	ND	ND	ND	ND	ND	7.5	ND
Gross β		21		ND(21)		440	11,000	76	42	160	33	650,000	44
H-3 (Approx. 12 years)		36,000		ND(120)		220,000	2,700	860	17,000	390,000	2,600	20,000	9,800
Sr-90 (Approx. 29 years)		Under analysis		Under analysis		Under analysis	Under analysis	Under analysis	Under analysis	Under analysis	Under analysis	Under analysis	Under analysis

	Groundwater pumped up from the well point	Underground water observation hole No.2	Underground water observation hole No.2-5	Underground water observation hole No.2-6	Underground water observation hole No.2-7	Underground water observation hole No.3	Underground water observation hole No.3-4	Underground water observation hole No.3-5
Date of sampling					Nov 21, 2013			
Time of sampling					10:35			
Chloride (unit: ppm)					730 **			
Cs-134 (Approx. 2 years)					1.3			
Cs-137 (Approx.30 years)					3.1			
The other γ	Mn-54 (Approx. 310 days)				ND			
	Co-60 (Approx. 5 years)				ND			
	Ru-106 (Approx. 370 days)				ND			
	Sb-125 (Approx. 3 years)				ND			
Gross β					18			
H-3 (Approx. 12 years)					1,000			
Sr-90 (Approx. 29 years)					Under analysis			

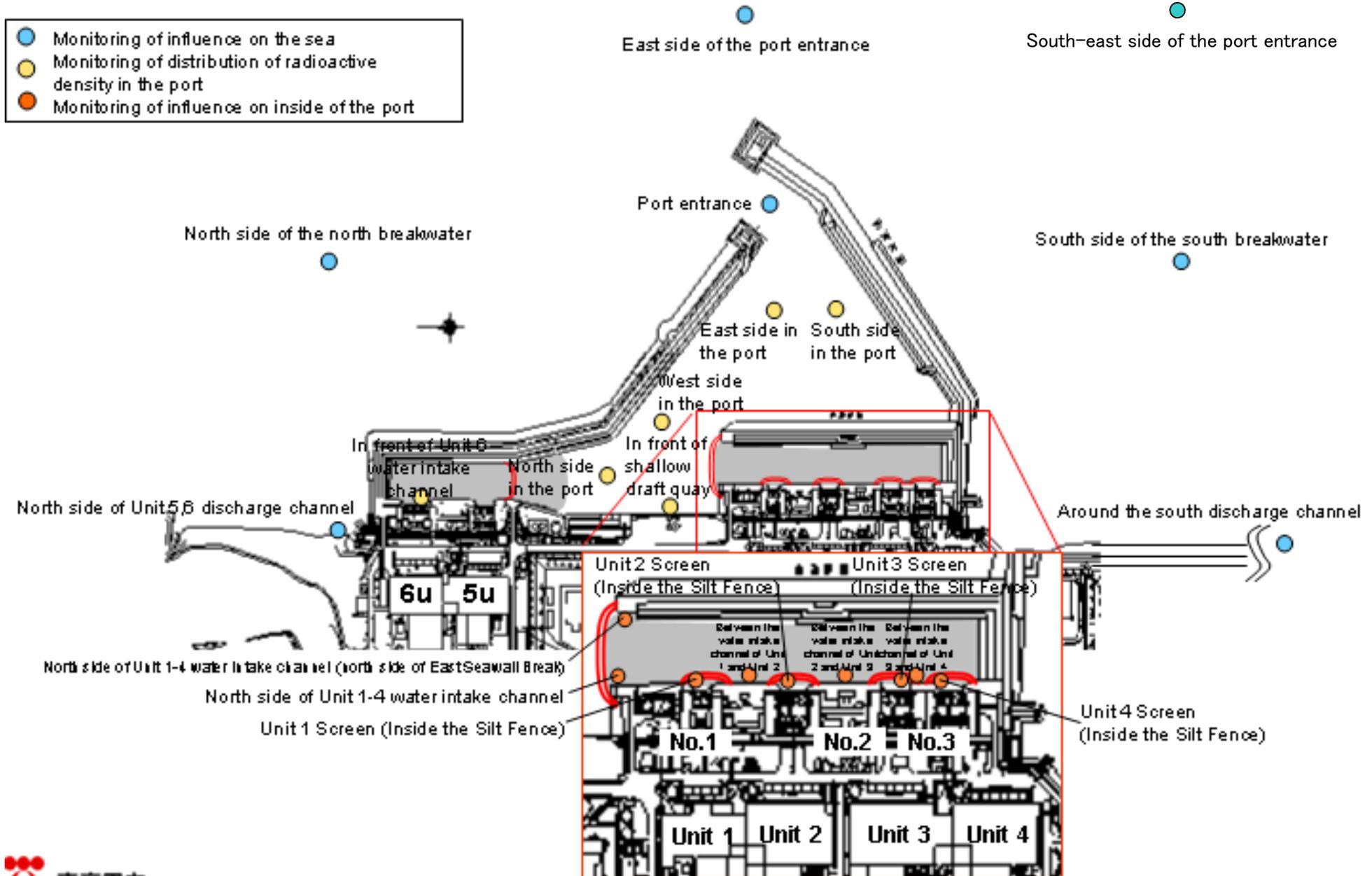
* Data announced this time is provided in a thick-frame. The other data was announced in November.

* "ND" indicates that the measurement result is below the detection limit, and the detection limit of each nuclide is provided in parentheses except for "The other γ "

* "-" indicates that the measurement was out of range.

** The value was corrected from "0:00" to "730" as of January 16, 2014. We apologize for this error.

Detailed Analysis Results in the Port of Fukushima Daiichi NPS, around Discharge Channel and Bank Protection (Sampling Locations of Seawater)



**Detailed Analysis Results in the Port of Fukushima Daiichi NPS, around Discharge Channel and Bank Protection (7/12)
Seawater**

	Unit: Bq/L									Unit: Bq/L	
	1F, North side of Unit 5,6 discharge channel	1F, In front of Unit 6 water intake channel	1F, In front of shallow draft quay	1F, North side of Unit 1-4 water intake channel	1F, North side of Unit 1-4 water intake channel (north side of East Seawall Break)	1F, Unit 1 Screen (Inside the Silt Fence)	1F, Between the water intake channel of Unit 1 and Unit 2 (surface layer)	1F, Between the water intake channel of Unit 1 and Unit 2 (lower layer)	1F, Unit 2 Screen (Inside the Silt Fence)	Density Limit Specified by the Reactor Regulation **	WHO Guidelines for drinking-water quality
Date of Sampling	Jun 26, 2013		Jun 26, 2013	Jun 21, 2013	Jun 27, 2013	Jun 21, 2013	Jun 21, 2013	Jun 26, 2013	Jun 21, 2013		
Time of sampling	11:25		6:06	6:18	9:50	6:23	11:00	16:55	6:29		
Cs-134(Approx. 2 years)	ND(1.9)		ND(1.8)	12	6.1	6.9	9.4	6.2	7.1	60	10
Cs-137(Approx.30 years)	3.3		2.3	28	13	15	19	9.3	14	90	10
Gross β	ND(22)		ND(18)	310	200	160	330	210	230		
H-3 (Approx. 12 years)	8.6		340	1100	180	480	910	360	290	60,000	10,000
Sr-90 (Approx. 29 years)	Under analysis		Under analysis	Under analysis	Under analysis	Under analysis	Under analysis	Under analysis	Under analysis	30	10

	Unit: Bq/L									Unit: Bq/L	
	1F, Between the water intake channel of Unit 2 and Unit 3	1F, Unit 3 Screen (Inside the Silt Fence)	1F, Between the water intake channel of Unit 3 and Unit 4	1F, Unit 4 Screen (Inside the Silt Fence)	1F, Around the south discharge channel	1F, Port entrance	1F, East side in the port *1	1F, West side in the port *1	Density Limit Specified by the Reactor Regulation **	WHO Guidelines for drinking-water quality	
Date of Sampling	Jun 26, 2013	Jun 21, 2013	Jun 26, 2013	Jun 21, 2013	Jun 26, 2013	Jun 20, 2013	Jun 26, 2013	Jun 26, 2013			
Time of sampling	6:51	6:33	6:47	6:37	11:15	13:18	14:22	14:25			
Cs-134(Approx. 2 years)	8.8	64	9.9	31	ND(1.1)	ND (1.3)	ND(2.4)	ND(2.5)	60	10	
Cs-137(Approx.30 years)	18	110	23	70	ND(1.3)	ND (1.2)	ND(2.4)	3.3	90	10	
Gross β	220	270	230	250	ND(22)	15	33	43			
H-3 (Approx. 12 years)	350	220	250	ND(210)	ND(2.9)	5.0	14	26	60,000	10,000	
Sr-90 (Approx. 29 years)	Under analysis	Under analysis	Under analysis	Under analysis	Under analysis	Under analysis	-	-	30	10	

* Data announced this time is provided in a thick-frame. The other data was announced in June and July.

* "ND" indicates that the measurement result is below the detection limit, and the detection limit of each nuclide is provided in parentheses.

* "-" indicates that the measurement was out of range.

*1: Although it was stated "Under Analysis" for the Sr-90 results of the "1F, East side in the port" and "1F, West side in the port" taken on June 26, 2013, they have been corrected to "-" since they had not been measured.

** Density Limit Specified by the Rule for the Installation, Operation, etc. of Commercial Nuclear Power Reactors (the density limit in the water outside the surrounding monitored areas is provided in section 6 of Appendix 2 [the amount is converted from Bq/cm³ to Bq/L]).

Detailed Analysis Results in the Port of Fukushima Daiichi NPS, around Discharge Channel and Bank Protection (8/12)
Seawater

Unit: Bq/L

	1F, North side of Unit 5,6 discharge channel	1F, In front of Unit 6 water intake channel	1F, In front of shallow draft quay	1F, North side of Unit 1-4 water intake channel	1F, North side of Unit 1-4 water intake channel (north side of East Seawall Break)	1F, Unit 1 Screen (Inside the Silt Fence)	1F, Between the water intake channel of Unit 1 and Unit 2 (surface layer)	1F, Between the water intake channel of Unit 1 and Unit 2 (lower layer)	1F, Unit 2 Screen (Inside the Silt Fence)	Density Limit Specified by the Reactor Regulation **	WHO Guidelines for drinking-water quality
Date of Sampling	Jul 22, 2013		Jul 22, 2013	Jul 23, 2013	Jul 22, 2013	Jul 22, 2013	Jul 23, 2013	Jul 23, 2013	Jul 22, 2013		
Time of sampling	5:50		5:25	6:23	6:14	5:38	6:33	6:33	5:45		
Cs-134(Approx. 2 years)	ND(1.4)		ND(1.9)	18	ND(1.8)	4.8	15	9.9	ND(1.9)	60	10
Cs-137(Approx.30 years)	ND(1.3)		ND(2.2)	40	ND(1.8)	8.4	27	19	ND(1.9)	90	10
Gross β	ND(21)		ND(21)	240	ND(21)	79	120	100	ND(21)		
H-3 (Approx. 12 years)	ND(3.2)		ND(120)	990	ND(120)	320	580	370	ND(120)	60,000	10,000
Sr-90 (Approx. 29 years)	Under analysis		Under analysis	Under analysis	Under analysis	Under analysis	Under analysis	Under analysis	Under analysis	30	10

Unit: Bq/L

	1F, Between the water intake channel of Unit 2 and Unit 3	1F, Unit 3 Screen (Inside the Silt Fence)	1F, Between the water intake channel of Unit 3 and Unit 4	1F, Unit 4 Screen (Inside the Silt Fence)	1F, Around the south discharge channel	1F, Port entrance	1F, East side in the port	1F, West side in the port
Date of Sampling	Jul 22, 2013	Jul 22, 2013	Jul 22, 2013	Jul 22, 2013	Jul 22, 2013	Jul 22, 2013		
Time of sampling	5:49	11:13	6:02	11:16	5:15	11:32		
Cs-134(Approx. 2 years)	ND(1.7)	31	ND(2.0)	12	ND(1.2)	ND(1.9)		
Cs-137(Approx.30 years)	ND(1.8)	63	ND(2.0)	26	ND(1.4)	ND(2.0)		
Gross β	ND(21)	120	ND(21)	49	ND(20)	ND(18)		
H-3 (Approx. 12 years)	ND(120)	ND(120)	ND(120)	ND(120)	ND(3.2)	ND(3.0)		
Sr-90 (Approx. 29 years)	Under analysis	Under analysis	Under analysis	Under analysis	Under analysis	Under analysis		

Density Limit Specified by the Reactor Regulation **	WHO Guidelines for drinking-water quality
60	10
90	10
60,000	10,000
30	10

* Data announced this time is provided in a thick-frame. The other data was announced in June and July.

* "ND" indicates that the measurement result is below the detection limit, and the detection limit of each nuclide is provided in parentheses.

* "-" indicates that the measurement was out of range.

** Density Limit Specified by the Rule for the Installation, Operation, etc. of Commercial Nuclear Power Reactors (the density limit in the water outside the surrounding monitored areas is provided in section 6 of Appendix 2 [the amount is converted from Bq/L to Bq/L]).

Detailed Analysis Results in the Port of Fukushima Daiichi NPS, around Discharge Channel and Bank Protection (9/12)
Seawater

Unit: Bq/L

	1F, North side of Unit 5,6 discharge channel	1F, In front of Unit 6 water intake channel	1F, In front of shallow draft quay	1F, North side of Unit 1-4 water intake channel	1F, North side of Unit 1-4 water intake channel (north side of East Seawall Break)	1F, Unit 1 Screen (Inside the Silt Fence)	1F, Between the water intake channel of Unit 1 and Unit 2 (surface layer)	1F, Between the water intake channel of Unit 1 and Unit 2 (lower layer)	1F, Unit 2 Screen (Inside the Silt Fence)	1F, Between the water intake channel of Unit 2 and Unit 3	1F, Unit 3 Screen (Inside the Silt Fence)	Density Limit Specified by the Reactor Regulation **	WHO Guidelines for drinking-water quality
Date of Sampling	Aug 19, 2013		Aug 19, 2013	Aug 22, 2013	Aug 19, 2013	Aug 19, 2013	Aug 22, 2013	Aug 22, 2013	Aug 19, 2013	Aug 19, 2013	Aug 19, 2013		
Time of sampling	6:10		5:53	6:09	6:43	6:09	6:31	6:31	6:17	6:21	6:28		
Cs-134(Approx. 2 years)	ND(1.4)		3.3	24	8.0	24	20	5.2	26	12	68	60	10
Cs-137(Approx.30 years)	ND(1.5)		7.4	51	19	41	39	7.9	52	30	140	90	10
Gross β	ND(18)		28	620	280	540	540	210	490	310	270		
H-3 (Approx. 12 years)	5.4		ND(120)	2,000	300	1,800	1,300	280	820	240	160	60,000	10,000
Sr-90 (Approx. 29 years)	Under analysis		5.7	620	220	430	480	160	330	180	100	30	10

Unit: Bq/L

	1F, Between the water intake channel of Unit 3 and Unit 4	1F, Unit 4 Screen (Inside the Silt Fence)	1F, Around the south discharge channel	1F, Port entrance	1F, East side in the port	1F, West side in the port	1F, North side in the port	1F, South side in the port	North side of the north breakwater	East side of the port entrance	South side of the south breakwater	Density Limit Specified by the Reactor Regulation **	WHO Guidelines for drinking-water quality
Date of Sampling	Aug 19, 2013	Aug 19, 2013	Aug 19, 2013	Aug 19, 2013									
Time of sampling	6:32	6:37	5:20	7:22									
Cs-134(Approx. 2 years)	20	20	ND(1.4)	1.6								60	10
Cs-137(Approx.30 years)	43	49	ND(1.5)	4.7								90	10
Gross β	160	200	ND(18)	69									
H-3 (Approx. 12 years)	270	ND(120)	ND(3.0)	68								60,000	10,000
Sr-90 (Approx. 29 years)	120	94	Under analysis	49								30	10

* Data announced this time is provided in a thick-frame. The other data was announced in June and July.

* "ND" indicates that the measurement result is below the detection limit, and the detection limit of each nuclide is provided in parentheses.

* "-" indicates that the measurement was out of range.

** Density Limit Specified by the Rule for the Installation, Operation, etc. of Commercial Nuclear Power Reactors (the density limit in the water outside the surrounding monitored areas is provided in section 6 of Appendix 2 [the amount is converted from Bq/cm³ to Bq/L]).

Detailed Analysis Results in the Port of Fukushima Daiichi NPS, around Discharge Channel and Bank Protection (10/12) Seawater

Unit: Bq/L

	1F, North side of Unit 5,6 discharge channel	1F, In front of Unit 6 water intake channel	1F, In front of shallow draft quay	1F, North side of Unit 1-4 water intake channel	1F, North side of Unit 1-4 water intake channel (north side of East Seawall Break)	1F, Unit 1 Screen (Inside the Silt Fence)	1F, Between the water intake channel of Unit 1 and Unit 2 (surface layer)	1F, Between the water intake channel of Unit 1 and Unit 2 (lower layer)	1F, Unit 2 Screen (Inside the Silt Fence)	1F, Between the water intake channel of Unit 2 and Unit 3	1F, Unit 3 Screen (Inside the Silt Fence)	Density Limit Specified by the Reactor Regulation **	WHO Guidelines for drinking-water quality
Date of Sampling	Sep 23, 2013	/	Sep 23, 2013	Sep 22, 2013	Sep 23, 2013	Sep 23, 2013	Sep 22, 2013	Sep 22, 2013	Sep 23, 2013	Sep 23, 2013	Sep 23, 2013		
Time of sampling	5:58	/	6:00	6:09	6:38	6:10	6:18	6:18	6:15	6:18	6:25		
Cs-134(Approx. 2 years)	ND(0.88)	/	1.7	46	6.2	31	28	11	17	13	25	60	10
Cs-137(Approx.30 years)	ND(1.1)	/	2.7	94	19	65	59	25	46	35	57	90	10
Gross β	ND(17)	/	21	810	110	440	480	200	350	320	220		
H-3 (Approx. 12 years)	ND(1.8)	/	ND(120)	3,000	230	1,400	1,500	470	1,300	670	290	60,000	10,000
Sr-90 (Approx. 29 years)	Under analysis	/	1.4	720	93	380	440	200	310	270	120	30	10

Unit: Bq/L

	1F, Between the water intake channel of Unit 3 and Unit 4	1F, Unit 4 Screen (Inside the Silt Fence)	1F, Around the south discharge channel	1F, Port entrance	1F, East side in the port	1F, West side in the port	1F, North side in the port	1F, South side in the port	North side of the north breakwater	East side of the port entrance	South side of the south breakwater	Density Limit Specified by the Reactor Regulation **	WHO Guidelines for drinking-water quality
Date of Sampling	Sep 23, 2013	Sep 23, 2013	Sep 23, 2013	Sep 24, 2013	/	/	/	/	/	/	/		
Time of sampling	6:31	6:30	5:20	9:37	/	/	/	/	/	/	/		
Cs-134(Approx. 2 years)	15	30	ND(1.2)	ND(1.2)	/	/	/	/	/	/	/	60	10
Cs-137(Approx.30 years)	28	76	ND(1.4)	1.4	/	/	/	/	/	/	/	90	10
Gross β	230	190	ND(17)	ND(15)	/	/	/	/	/	/	/		
H-3 (Approx. 12 years)	570	310	ND(1.8)	ND(1.8)	/	/	/	/	/	/	/	60,000	10,000
Sr-90 (Approx. 29 years)	190	130	分析中	0.51	/	/	/	/	/	/	/	30	10

* Data announced this time is provided in a thick-frame. The other data was announced in October.

* "ND" indicates that the measurement result is below the detection limit, and the detection limit of each nuclide is provided in parentheses.

* "-" indicates that the measurement was out of range.

** Density Limit Specified by the Rule for the Installation, Operation, etc. of Commercial Nuclear Power Reactors (the density limit in the water outside the surrounding monitored areas is provided in section 6 of Appendix 2 [the amount is converted from Bq/cm³ to Bq/L]).

Detailed Analysis Results in the Port of Fukushima Daiichi NPS, around Discharge Channel and Bank Protection (11/12) Seawater

Unit: Bq/L

	1F, North side of Unit 5,6 discharge channel	1F, In front of Unit 6 water intake channel	1F, In front of shallow draft quay	1F, North side of Unit 1-4 water intake channel	1F, North side of Unit 1-4 water intake channel (north side of East Seawall Break)	1F, Unit 1 Screen (Inside the Silt Fence)	1F, Between the water intake channel of Unit 1 and Unit 2 (surface layer)	1F, Between the water intake channel of Unit 1 and Unit 2 (lower layer)	1F, Unit 2 Screen (Inside the Silt Fence)	1F, Between the water intake channel of Unit 2 and Unit 3	1F, Unit 3 Screen (Inside the Silt Fence)	Density Limit Specified by the Reactor Regulation **	WHO Guidelines for drinking-water quality
Date of Sampling	Oct 14, 2013	/	Oct 14, 2013	Oct 20, 2013	Oct 14, 2013	Oct 14, 2013	Oct 20, 2013	Oct 20, 2013	Oct 14, 2013	Oct 14, 2013	Oct 14, 2013		
Time of sampling	5:50	/	5:48	6:02	6:32	5:59	6:08	6:08	6:05	6:07	6:15		
Cs-134(Approx. 2 years)	ND(1.0)	/	2.7	36	13	47	20	15	50	32	23	60	10
Cs-137(Approx.30 years)	1.5	/	5.5	65	26	97	50	34	110	62	51	90	10
Gross β	ND(16)	/	22	590	120	620	570	330	520	370	120		
H-3 (Approx. 12 years)	2.4	/	ND(120)	1,600	ND(120)	1,500	1300***	490***	1,300	680	ND(120)	60,000	10,000
Sr-90 (Approx. 29 years)	Under analysis	/	Under analysis	480	68	480	470	290	430	340	23	30	10

Unit: Bq/L

	1F, Between the water intake channel of Unit 3 and Unit 4	1F, Unit 4 Screen (Inside the Silt Fence)	1F, Around the south discharge channel	1F, Port entrance	1F, East side in the port	1F, West side in the port	1F, North side in the port	1F, South side in the port	North side of the north breakwater	East side of the port entrance	South side of the south breakwater	Density Limit Specified by the Reactor Regulation **	WHO Guidelines for drinking-water quality
Date of Sampling	Oct 14, 2013	Oct 14, 2013	Oct 14, 2013	Oct 21, 2013	/	/	/	/	/	/	/		
Time of sampling	6:25	6:23	5:10	10:16	/	/	/	/	/	/	/		
Cs-134(Approx. 2 years)	15	20	ND(1.0)	1.2	/	/	/	/	/	/	/	60	10
Cs-137(Approx.30 years)	32	53	ND(1.1)	2.6	/	/	/	/	/	/	/	90	10
Gross β	120	85	ND(17)	ND(15)	/	/	/	/	/	/	/		
H-3 (Approx. 12 years)	220	ND(120)	ND(1.8)	7.2	/	/	/	/	/	/	/	60,000	10,000
Sr-90 (Approx. 29 years)	89	22	Under analysis	2.7	/	/	/	/	/	/	/	30	10

* Data announced this time is provided in a thick-frame. The other data was announced in October.

* "ND" indicates that the measurement result is below the detection limit, and the detection limit of each nuclide is provided in parentheses.

* "-" indicates that the measurement was out of range.

** Density Limit Specified by the Rule for the Installation, Operation, etc. of Commercial Nuclear Power Reactors (the density limit in the water outside the surrounding monitored areas is provided in section 6 of Appendix 2 [the amount is converted from Bq/cm³ to Bq/L]).

***The value was corrected from "920" to "1,300", from "600" to "490" each as of January 16, 2014. We apologize for this error.

Detailed Analysis Results in the Port of Fukushima Daiichi NPS, around Discharge Channel and Bank Protection (12/12) Seawater

Unit: Bq/L

	1F, North side of Unit 5,6 discharge channel	1F, In front of Unit 6 water intake channel	1F, In front of shallow draft quay	1F, North side of Unit 1-4 water intake channel	1F, North side of Unit 1-4 water intake channel (north side of East Seawall Break)	1F, Unit 1 Screen (Inside the Silt Fence)	1F, Between the water intake channel of Unit 1 and Unit 2 (surface layer)	1F, Between the water intake channel of Unit 1 and Unit 2 (lower layer)	1F, Unit 2 Screen (Inside the Silt Fence)	1F, Between the water intake channel of Unit 2 and Unit 3	1F, Unit 3 Screen (Inside the Silt Fence)	Density Limit Specified by the Reactor Regulation **	WHO Guidelines for drinking-water quality
Date of Sampling	Nov 11, 2013		Nov 11, 2013	Nov 17, 2013	Nov 11, 2013	Nov 11, 2013	Nov 17, 2013	Nov 17, 2013	Nov 11, 2013	Nov 11, 2013	Nov 11, 2013		
Time of sampling	6:05		5:38	5:57	6:15	5:49	6:18	6:18	5:55	6:00	6:06		
Cs-134(Approx. 2 years)	ND(1.2)		2.6	25	9.0	12	18	16	23	9.9	17	60	10
Cs-137(Approx.30 years)	ND(1.2)		7.1	48	15	36	49	42	47	28	44	90	10
Gross β	ND(17)		29	400	72	420	330	210	370	200	86		
H-3 (Approx. 12 years)	ND(1.9)		8.3	1,100	170	1,400	880	520	1,400	430	120	60,000	10,000
Sr-90(Approx. 29 years)	Under analysis		Under analysis	Under analysis	Under analysis	Under analysis	Under analysis	Under analysis	Under analysis	Under analysis	Under analysis	30	10

Unit: Bq/L

	1F, Between the water intake channel of Unit 3 and Unit 4	1F, Unit 4 Screen (Inside the Silt Fence)	1F, Around the south discharge channel	1F, Port entrance	1F, East side in the port	1F, West side in the port	1F, North side in the port	1F, South side in the port	North side of the north breakwater	East side of the port entrance	South side of the south breakwater	Density Limit Specified by the Reactor Regulation **	WHO Guidelines for drinking-water quality
Date of Sampling	Nov 11, 2013	Nov 11, 2013	Nov 11, 2013	Nov 25, 2013									
Time of sampling	6:04	6:10	5:15	9:27									
Cs-134(Approx. 2 years)	11	20	ND(0.83)	ND(1.0)								60	10
Cs-137(Approx.30 years)	20	50	ND(1.3)	ND(0.90)								90	10
Gross β	150	97	ND(17)	ND(17)									
H-3 (Approx. 12 years)	280	150	ND(1.9)	ND(1.8)								60,000	10,000
Sr-90(Approx. 29 years)	Under analysis	Under analysis	Under analysis	ND(0.19)								30	10

* Data announced this time is provided in a thick-frame. The other data was announced in November and December.

* "ND" indicates that the measurement result is below the detection limit, and the detection limit of each nuclide is provided in parentheses.

* "-" indicates that the measurement was out of range.

** Density Limit Specified by the Rule for the Installation, Operation, etc. of Commercial Nuclear Power Reactors (the density limit in the water outside the surrounding monitored areas is provided in section 6 of Appendix 2 [the amount is converted from Bq/cm³ to Bq/L]).

<Reference> The Highest Dose Until the Previous Measurement (Groundwater Obtained at Bank Protection)

Unit: Bq/L

	Groundwater observation hole No.0-1	Groundwater observation hole No.0-1-1	Groundwater observation hole No.0-1-2	Groundwater observation hole No.0-2	Groundwater observation hole No.0-3-1	Groundwater observation hole No.0-3-2	Groundwater observation hole No.0-4	Groundwater observation hole No.1	Groundwater observation hole No.1-1	Groundwater observation hole No.1-2	Groundwater observation hole No.1-3	Groundwater observation hole No.1-4	Groundwater observation hole No.1-5
Cs-134 (Approx. 2 years)	7.6 [12/15]	ND	ND	0.61 [10/13]	0.44 [11/24]	0.41 [12/26]	ND	13 [8/29]	1.9 [7/8]	11,000 [7/9]	10 [9/2]	1.5 [7/8]	310 [8/5]
Cs-137 (Approx.30 years)	17 [12/15] [12/29]	0.58 [12/7]	0.51 [11/17]	2.2 <1/12>	0.86 [11/20]	0.91 [12/26]	1.4 <1/12>	31 [8/29]	3.6 [7/8]	22,000 [7/9]	24 [9/2]	3.6 [7/8]	650 [8/5]
The other Y	Ru-106 (Approx. 370 days)	ND	ND	ND	ND	ND	ND	26 [5/24]	7.9 [7/8]	160 [8/15]	17 [7/22] [8/8]	3.1 [8/8]	ND
	Mn-54 (Approx. 310 days)	ND	ND	ND	ND	0.40 <1/5>	ND	ND	1.0 [7/5]	62 [7/5]	ND	ND	ND
	Co-60 (Approx. 5 years)	ND	ND	ND	ND	ND	ND	0.50 [7/19]	ND	3.1 [7/8]	ND	ND	ND
	Sb-125 (Approx. 3 years)	ND	ND	ND	ND	ND	ND	1.7 [7/11]	ND	250 [7/15]	1.4 [7/12] [8/26]	ND	12 [8/8]
Gross β	300 [8/22]	21 [12/7]	21 [11/10]	87 [10/13]	ND	67*2 [12/11]	29 [12/29]	1,900 [5/24]	4,400 [7/8]	900,000 [7/5] [7/9]	160,000 [8/12] [8/15]	380 [8/19]	56,000 [8/5]
H-3 (Approx. 12 years)	45,000 [8/29]	18,000 [12/7]	74,000 [12/15]	3,900 <1/5>	ND	70,000 [12/29]	36,000 <1/5>	500,000 [5/24] [6/7]	630,000 [7/8]	430,000 [9/16]	290,000 [7/12]	98,000 [7/11]	72,000 [8/15]
Sr-90(Approx. 29 years)	Under analysis	Under analysis	Under analysis	Under analysis	Under analysis	Under analysis	Under analysis	1,200 [6/7]	Under analysis				

Unit: Bq/L

	Groundwater observation hole No.1-8	Groundwater observation hole No.1-9	Groundwater observation hole No.1-11	Groundwater observation hole No.1-12	Groundwater observation hole No.1-14	Groundwater observation hole No.1-16	Groundwater observation hole No.1-17	Groundwater pumped up from the well point (between Unit 1 and 2)
Cs-134 (Approx. 2 years)	47 [11/25]	170 [9/3]	1.1 <1/13>	74 [10/21]	1.2 [11/14]	3.1*2 [12/13]	1.2 [12/5]	110 [9/23]
Cs-137 (Approx.30 years)	110 [11/25]	380 [9/3]	2.8 <1/13>	170 [10/21]	2.3 [11/21]	3.4 [10/10]	0.66 [12/12]	250 [9/23]
The other Y	Ru-106 (Approx. 370 days)	ND	ND	5.4 [10/28]	ND	9.2 [10/28]	4.1 [12/12]	25 [9/2]
	Mn-54 (Approx. 310 days)	9.7 [12/16]	ND	ND	ND	ND	ND	0.83 [12/30]
	Co-60 (Approx. 5 years)	0.63 [12/23]	ND	ND	0.51 [10/24]	ND	0.9 [11/7]	0.61 [11/25]
	Sb-125 (Approx. 3 years)	ND	ND	ND	61 [10/21]	ND	11 [12/5]	2.1 [11/25]
Gross β	39,000 <1/6>	2,100 [11/17]	2,300 [12/26]	730 [10/21]	360 <1/13>	2,400,000 <1/13>	130 [12/2] [12/23]	700,000 [9/23]
H-3 (Approx. 12 years)	12,000 <1/6>	860 [11/14]	85,000 [9/13]	440,000 [10/31]	11,000 [11/25]	43,000 [9/26]	30,000 <1/9>	460,000 [8/19]
Sr-90(Approx. 29 years)	Under analysis	Under analysis	Under analysis	Under analysis	Under analysis	Under analysis	Under analysis	—

Unit: Bq/L

	Groundwater observation hole vNo.2	Groundwater observation hole No.2-1	Groundwater observation hole No.2-2	Groundwater observation hole No.2-3	Groundwater observation hole No.2-5 ¹	Groundwater observation hole No.2-6	Groundwater observation hole No.2-7	Groundwater pumped up from the well point (between Unit 2 and 3)	Groundwater observation hole No.3	Groundwater observation hole No.3-1	Groundwater observation hole No.3-4	Groundwater observation hole No.3-5
Cs-134 (Approx. 2 years)	0.50 [7/9]	0.66 [9/1]	12 <1/12>	0.84 <1/5>	13 <1/8>	0.56 [10/30]	1.5 <1/12>	1.1 [12/12]	3.5 [7/25]	1.2 [7/25] [8/8]	1.9 <1/8>	29 [12/18]
Cs-137 (Approx.30 years)	1.2 [7/11] [8/1]	1.1 [8/29] [9/1]	28 <1/1> <1/12>	2.6 <1/5>	30 <1/8>	0.61 [10/13]	3.6 <1/12>	2.4 [12/7]	5.9 [8/8]	2.6 [8/1]	4.3 [11/27]	74 [12/18]
The other Y	Ru-106 (Approx. 370 days)	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	—
	Mn-54 (Approx. 310 days)	ND	ND	ND	0.29 [12/6]	0.94 <1/8>	ND	ND	ND	ND	0.54 [10/30]	—
	Co-60 (Approx. 5 years)	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	—
	Sb-125 (Approx. 3 years)	ND	ND	ND	ND	26 [9/29]	ND	ND	1.6 <1/1>	ND	ND	—
Gross β	1,700 [7/8]	380 [7/29]	530 [12/29]	1,500 [12/6]	46,000 [9/29]	3,200 [12/5]	270 [12/20]	240,000 [12/12]	1,400 [7/11]	180 [8/1]	ND	43 [12/18]
H-3 (Approx. 12 years)	870 [12/8]	440 [8/26]	660 <1/8>	1,700 [12/6]	6,300 [12/4]	1,200 [11/24] [11/27]	1,000 [11/21] [12/4]	5,100 [12/6]	3,200 [2012/1 2/12]	460 [8/1]	170 [9/18]	170 <1/8>
Sr-90(Approx. 29 years)	54 [5/31]	Under analysis	Under analysis	Under analysis	Under analysis	Under analysis	Under analysis	—	8.3 [2012/1 2/12]	Under analysis	Under analysis	—

*1 The analysis result of No.2-5 obtained on September 29 is the reference value, since we could not sample groundwater by a regular procedure.

*2 Analysis result of pumped water.

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

* Date of sampling is provided in parentheses. []2013, < >2014.

* "*" is provided next to the holes where the sampling could not be performed due to the chemical injection of ground improvement.

<Reference> The Highest Dose Until the Previous Measurement* (Seawater)

Unit: Bq/L

	1F, North side of Unit 5,6 discharge channel	1F, In front of Unit 6 water intake channel	1F, In front of shallow draft quay	1F, North side of Unit 1-4 water intake channel	1F, North side of Unit 1-4 water intake channel (north side of East Seawall Break)	1F, Unit 1 Screen (Inside the Silt Fence)	1F, Between the water intake channel of Unit 1 and Unit 2 (surface layer)	1F, Between the water intake channel of Unit 1 and Unit 2 (lower layer)	1F, Unit 2 Screen (Inside the Silt Fence)	1F, Between the water intake channel of Unit 2 and Unit 3	1F, Unit 3 Screen (Inside the Silt Fence)	1F, Between the water intake channel of Unit 3 and Unit 4
Cs-134(Approx. 2 years)	1.8 [6/21]	2.8 [12/2]	5.3 [8/5]	89 [10/10]	32 [10/11]	73 [10/10]	87 [10/10]	93 [10/10]	370 [10/9]	52 [12/21]	350 [7/15]	28 [9/16]
Cs-137(Approx.30 years)	3.3 [6/26]	5.8 [12/2]	8.6 [8/5]	190 [10/10]	73 [10/11]	170 [10/10]	200 [10/10]	200 [10/10]	830 [10/9]	110 [10/11] [12/21]	770 [7/15]	53 [12/16]
Gross β	17 <1/6>	46 [8/19]	40 [7/3]	1,400 [11/7]	320 [8/12]	740 [10/28]	1,200 [12/8]	450 [7/16]	1,700 [10/9]	480 [10/7]	1,000 [7/15]	390 [8/12]
H-3 (Approx. 12 years)	8.6 [6/26]	24 [8/19]	340 [6/26]	4,800 [11/7]	510 [9/2]	2,800 [10/28]	2,800 [12/8]	1,600 [9/1]	2,100 [10/28]	1,200 [10/7]	410 [9/2]	650 [8/12]
Sr-90(Approx. 29 years)	5.8 [6/26]	—	7.4 [6/26]	Under analysis	Under analysis	Under analysis	Under analysis	Under analysis	Under analysis	Under analysis	Under analysis	Under analysis

Unit: Bq/L

	1F, Unit 4 Screen (Inside the Silt Fence)	1F, Around the south discharge channel	1F, Port entrance	1F, East side in the port	1F, West side in the port	1F, North side in the port	1F, South side in the port	North side of the north breakwater	Northeast side of the port entrance	East side of the south breakwater	Southeast side of the north breakwater	South side of the south breakwater
Cs-134(Approx. 2 years)	62 [9/16]	ND	3.3 [12/24]	3.3 [10/17]	4.4 [12/24]	5.0 [12/2]	3.5 [10/17]	ND	ND	ND	ND	ND
Cs-137(Approx.30 years)	140 [9/16]	3.0 [7/15]	7.3 [10/11]	9.0 [10/17]	10 [12/24]	8.4 [12/2]	7.8 [10/17]	ND	ND	1.6 [10/18]	ND	ND
Gross β	360 [10/7]	15 <1/13>	69 [8/19]	74 [8/19]	60 [7/4]	69 [8/19]	79 [8/19]	ND	ND	ND	ND	ND
H-3 (Approx. 12 years)	400 [8/12] [10/7]	1.9 [11/25]	68 [8/19]	67 [8/19]	59 [8/19]	52 [8/19]	60 [8/19]	4.7 [8/14]	ND	6.4 [10/8]	ND	ND
Sr-90(Approx. 29 years)	Under analysis	0.36 [6/26]	3.5 [6/20]	Under analysis	Under analysis	—	—	—	—	—	—	—

* The highest result announced in "Detailed Analysis Results in the Port of Fukushima Daiichi NPS, around Discharge Channel and Bank Protection" or the other handouts is provided. As for "1F, North side of Unit 1-4 water intake channel", the data is obtained since January 14, 2013. For the other locations, the data is obtained since June 14.

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

* Date of sampling is provided in parentheses. []2013, < >2014.

* "-" indicates that the measurement was out of range.

[Reference] Standard values

Unit: Bq/L

	Cs-134	Cs-137	H-3	Sr-90
Density Limit Specified by the Rule for the Installation, Operation, etc. of Commercial Nuclear Power Reactors (the density limit in the water outside the surrounding monitored areas is provided in section 6 of Appendix 2)	60	90	60,000	30
WHO Guidelines for drinking-water quality	10	10	10,000	10