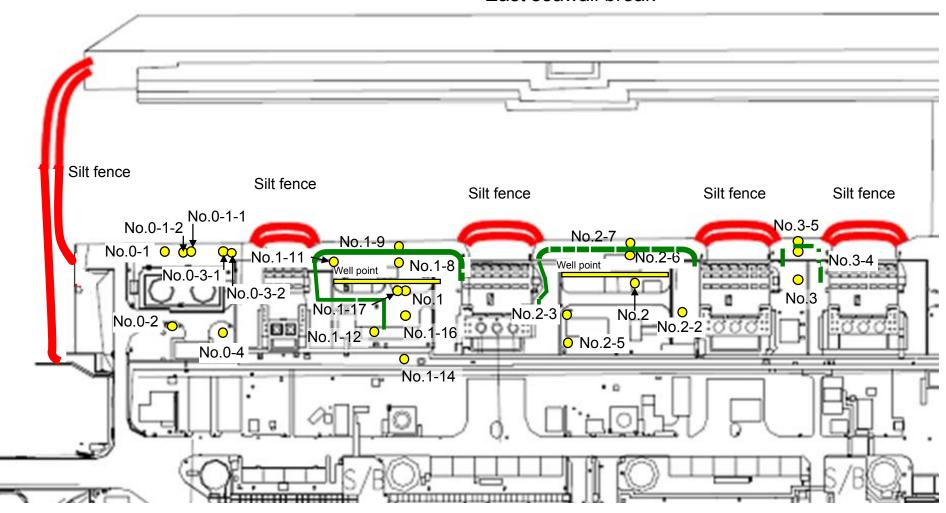
Detailed Analysis Results in the Port of Fukushima Daiichi NPS, around Discharge Channel and Bank Protection (Sampling Locations of Underground Water Obtained at Bank Protection)

Sampling locations of underground water obtained at bank

### East seawall break



: Location where ground improvement construction was completed, or being implemented (as of December 27)

# Detailed Analysis Results in the Port of Fukushima Daiichi NPS, around Discharge Channel and Bank Protection (1/4) Underground Water Obtained at Bank Protection

Unit: Bq/L (exclude chloride)

		Underground water observation hole No.0-1	Underground water observation hole No.0-1-1		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.1-8		Underground water observation hole No.1-11	Underground water observation hole No.1-12	Underground water	Underground water observation hole No.1-16
	Date of sampling	/	/	/	/	/	/	/	/	/	Jan 19, 2014	/	/	1 /	/
	Time of sampling										6:52 AM				
	Chloride (unit: ppm)										340				
С	Cs-134 (Approx. 2 years)										5.8				
C	Ss-137 (Approx.30 years)										14				/
The															
other y															
	Gross β										69				
ı	H-3 (Approx. 12 years)							/			480				
S	6r-90 (Approx. 29 years)				/		/		/		-		/		/

		Underground water observation hole No.1-17	Groundwater pumped up from the well point (between Unit 1 and 2)	Underground water observation hole No.2	Underground water observation hole No.2-2	Underground water observation hole No.2-3	Underground water observation hole No.2-5	Underground water observation hole No.2-6		Groundwater pumped up from the well point (between Unit 2 and 3)	Underground water observation hole No.3	Underground water observation hole No.3-4	Underground water observation hole No.3-5
	Date of sampling	/	/	/	/	/	/	/	/	/	1	/	
	Time of sampling												
	Chloride (unit: ppm)												
С	Cs-134 (Approx. 2 years)												
С	Ss-137 (Approx.30 years)												
The													
other y													
	Gross β												
	H-3 (Approx. 12 years)							/					
S	Gr-90 (Approx. 29 years)			/		/	/	/			/	/	

<sup>\*</sup> Data announced this time is provided in a thick-frame. The other data was announced on January 20.

<sup>\* &</sup>quot;ND" indicates that the measurement result is below the detection limit, and the detection limit of each nuclide is provided in parentheses.

<sup>\* &</sup>quot;-" indicates that the measurement was out of range.

# Detailed Analysis Results in the Port of Fukushima Daiichi NPS, around Discharge Channel and Bank Protection (2/4) Underground Water Obtained at Bank Protection

Unit: Bq/L (exclude chloride)

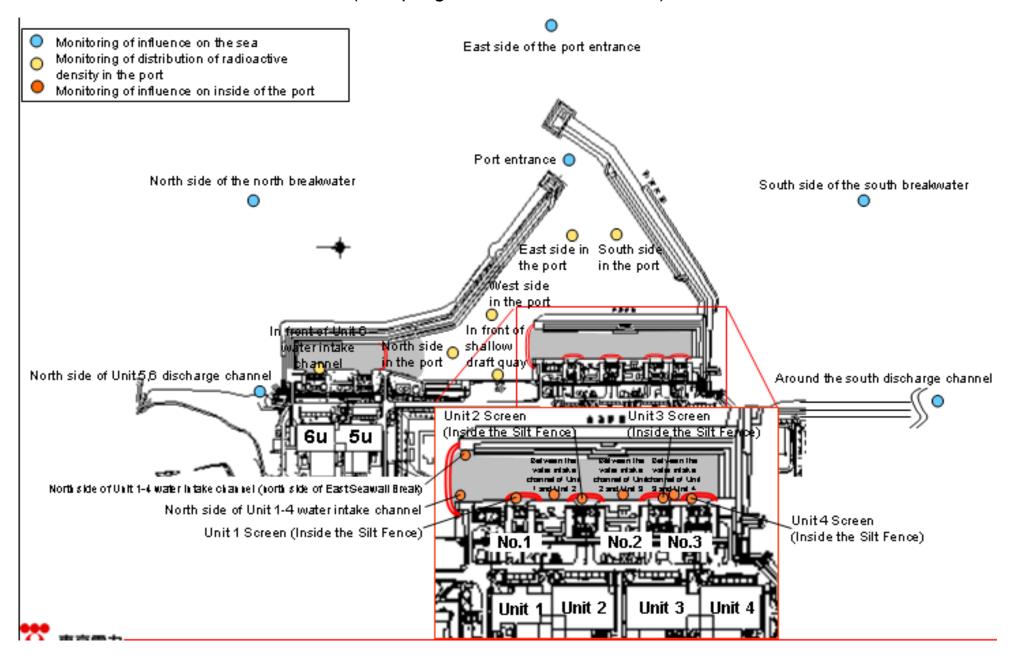
		Underground water observation hole No.0-1	Underground water observation hole No.0-1-1		Underground water observation hole No.0-2	Underground water observation hole No.0-3-1		Underground water observation hole No.0-4		Underground water observation hole No.1-8		Underground water observation hole No.1-11	Underground water observation hole No.1-12	Underground water	Underground water observation hole No.1-16
	Date of sampling	/	/	/	/	/	/	/	/	/	Jan 21, 2014	/	/	1 /	
	Time of sampling										6:53 AM				
	Chloride (unit: ppm)										320				
С	Cs-134 (Approx. 2 years)										2.9				
C	Ss-137 (Approx.30 years)										7.0				
The															
other y															
	Gross β										85				
I	H-3 (Approx. 12 years)							/			Under analysis	/			
S	6r-90 (Approx. 29 years)		/		/		/	/	/	/	-	/	/		/

		Underground water observation hole No.1-17	Groundwater pumped up from the well point (between Unit 1 and 2)	Underground water observation hole No.2	Underground water observation hole No.2-2	Underground water observation hole No.2-3	Underground water observation hole No.2-5	Underground water observation hole No.2-6		Groundwater pumped up from the well point (between Unit 2 and 3)	Underground water observation hole No.3*	Underground water observation hole No.3-4	Underground water observation hole No.3-5
	Date of sampling		/		/	1	/	Jan 21, 2014	/	/	1	/	/
	Time of sampling							8:59 AM					
	Chloride (unit: ppm)							-					
C	Ss-134 (Approx. 2 years)							ND(0.35)					
Cs	s-137 (Approx.30 years)							ND(0.44)					
The													
other y													
	Gross β							2,100					
ŀ	H-3 (Approx. 12 years)							Under analysis					
Sı	r-90 (Approx. 29 years)	/		/		/	/	-			/	/	

<sup>\* &</sup>quot;ND" indicates that the measurement result is below the detection limit, and the detection limit of each nuclide is provided in parentheses.

<sup>\* &</sup>quot;-" indicates that the measurement was out of range.

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 (3/4) 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	water intake channel of Unit 1	1F, Between the water intake channel of Unit 1 and Unit 2 (lower layer)	1F, Unit 2 Screen	1F, Between the water intake channel of Unit 2 and Unit 3	Screen	1F, Between the water intake channel of Unit 3 and Unit 4	Specified by the	WHO Guideline s for drinking- water quality
Date of Sampling			/	Jan 19, 2014		/	Jan 19, 2014	Jan 19, 2014			/			
Time of sampling				6:40 AM			6:47 AM	6:47 AM						
Cs-134(Approx. 2 years)				18			20	8.3					60	10
Cs-137(Approx.30 years)				48			45	20					90	10
Gross β				440			470	110						
H-3 (Approx. 12 years)				990	/	/	940	300	/	/			60,000	10,000
Sr-90 (Approx. 29 years)		/	/	Under analysis			Under analysis	Under analysis	/	/		/	30	10

													ι	Jnit: Bq/L
	1F, Unit 4 Screen (Inside the Silt Fence)	1F, Around the south discharge channel		1F, East side in the port	1F, West side in the port	1F, North side in the port		North side of the north breakwater		East side of the port entrance	Southeast side of the port entrance	South side of the south breakwater	Density Limit Specified by the Reactor Regulatio n *	WHO Guideline s for drinking- water quality
Date of Sampling		/	/	/	/	/	/			/	/			
Time of sampling		/				/		/		/				
Cs-134(Approx. 2 years)			/				/	/					60	10
Cs-137(Approx.30 years)		/		/		/		/		/	/		90	10
Gross β														
H-3 (Approx. 12 years)										/			60,000	10,000
Sr-90 (Approx. 29 years)	/	/	/	/	/	/	/	/	/	/	/	/	30	10

<sup>\*</sup> Data announced this time is provided in a thick-frame. The other data was announced on January 20.

<sup>\* &</sup>quot;ND" indicates that the measurement result is below the detection limit, and the detection limit of each nuclide is provided in parentheses.

<sup>\* &</sup>quot;-" indicates that the measurement was out of range.

<sup>\*</sup> 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/cm to Bq/L]).

## Detailed Analysis Results in the Port of Fukushima Daiichi NPS, around Discharge Channel and Bank Protection (4/4) 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	water intake channel of Unit 1	1F, Between the water intake channel of Unit 1 and Unit 2 (lower layer)	1F, Unit 2 Screen	1F, Between the water intake channel of Unit 2 and Unit 3	Screen	1F, Between the water intake channel of Unit 3 and Unit 4	Density Limit Specified by the Reactor Regulatio n *	WHO Guideline s for drinking- water quality
Date of Sampling			/	Jan 21, 2014	/	/	Jan 21, 2014	Jan 21, 2014	/		/			
Time of sampling				6:44 AM			6:49 AM	6:49 AM						
Cs-134(Approx. 2 years)				17			13	13					60	10
Cs-137(Approx.30 years)				36		/	43	32		/			90	10
Gross β				310			290	140						
H-3 (Approx. 12 years)				Under analysis			Under analysis	Under analysis					60,000	10,000
Sr-90 (Approx. 29 years)	/		/	-			-	-	/	/		/	30	10

												l	Jnit: 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		North side of the north breakwater	East side of the port entrance	Southeast side of the port entrance	South side of the south breakwater	Density Limit Specified by the Reactor Regulatio n*	s for drinking-
Date of Sampling		/	/	/	/	/	/	/	/	/			
Time of sampling										/			
Cs-134(Approx. 2 years)							/					60	10
Cs-137(Approx.30 years)	/	/	/	/		/		/	/	/		90	10
Gross β									/				
H-3 (Approx. 12 years)		/	/			/	/		/			60,000	10,000
Sr-90 (Approx. 29 years)	/	/	/	/	/	/	/		/	/		30	10

<sup>\* &</sup>quot;ND" indicates that the measurement result is below the detection limit, and the detection limit of each nuclide is provided in parentheses.

<sup>\* &</sup>quot;-" indicates that the measurement was out of range.

<sup>\*</sup> 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/cm to Bq/L]).

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

Unit:	Bq/L
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		observa	idwater ition hole .0-1	observa	dwater ition hole 0-1-1	observa	dwater tion hole 0-1-2	observa	ndwater ation hole 0.0-2	observa	ndwater ation hole 0-3-1	observa	dwater tion hole 0-3-2	observa	dwater tion hole 0-4	Ground observat No	ion hole	Ground observat No.	ion hole	Ground observat No.	ion hole	Ground observat No.	ion hole	Groun observa No.			dwater tion hole 1-5
C	s-134 (Approx. 2 years)	7.6	[12/15]	ND		ND		0.61	[10/13]	0.44	[11/24]	0.82	<1/14>	ND		13	[8/29]	1.9	[7/8]	11,000	[7/9]	10	[9/2]	1.5	[7/8]	310	[8/5]
Cs	s-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]	2.1	<1/14>	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]
	Ru-106 (Approx. 370 days)	ND		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	
The	Mn-54 (Approx. 310 days)	ND		ND		ND		ND		ND		0.40	<1/5> <1/16>	ND		ND		1.0	[7/5]	62	[7/5]	ND		ND		ND	
other y	Co-60 (Approx. 5 years)	ND		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		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* <sup>2</sup>	[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]
ŀ	H-3 (Approx. 12 years)	45,000	[8/29]	18,000	[12/7]	74,000	[12/15]	4,700	<1/12>	ND		73,000	<1/14> <1/16>	46,000	<1/12>	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]
S	r-90(Approx. 29 years)	Under analysis		Under analysis		Under analysis		0.73	[9/2]	Under analysis		Under analysis		Under analysis		1,300	[8/22]	Under analysis		Under analysis		Under analysis		Under analysis		5,100	[8/22]

Unit: Bq/L Groundwater Groundwater Groundwater Groundwater Groundwater Groundwater Groundwater Groundwater pumped up from observation hole the well point No.1-8 No.1-9 No.1-11 No.1-12 No.1-14 No.1-16 No.1-17 (between Unit 1 and 2) Cs-134 (Approx. 2 years) [11/25] 170 [9/3] 1.1 <1/13> [10/21] 1.2 [11/14] 3.1<sup>\*2</sup> [12/13] 1.2 [12/5] [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] Ru-106 (Approx. 370 days) ND ND [10/28] ND [10/28] [12/12] [9/2] ND 5.4 9.2 4.1 25 Mn-54 (Approx. 310 days) 9.7 [12/16] ND ND ND ND ND ND 0.85 <1/20> The other [10/24] Co-60 (Approx. 5 years) 0..70 <1/20> ND ND 0.51 ND 0.9 [11/7] 0.61 [11/25] ND ND ND [12/5] 2.1 Sb-125 (Approx. 3 years) 61 [10/21] 11 [11/25] ND [12/2] 39.000 <1/6> 2.100 [11/17] 2.300 [12/26] 730 [10/21] 410 <1/16> <1/20> 130 700,000 [9/23] 3.100.000 Gross β [12/23] H-3 (Approx. 12 years) [9/26] 12,000 <1/6> 860 [11/14] 85,000 [9/13] 440,000 [10/31] 11,000 [11/25] 43,000 31,000 <1/16> 460,000 [8/19] Under Under Under [9/16] Sr-90(Approx. 29 years) 1,300 170 [9/3] 17 [9/13] [10/21] analysis analysis analysis analysis

Unit:	Bq/L

		observa	dwater tion hole 5.2	observa	ndwater ation hole .2-1	observa	ndwater ation hole i.2-2	observa	dwater tion hole .2-3	Groun observa No.2		observa	dwater tion hole .2-6	Ground observati No.	tion hole	pumpe the w (betwe	ndwater d up from ell point en Unit 2 nd 3)	observ	ndwater ation hole lo.3		dwater tion hole 3-1*	observa	dwater tion hole .3-4	observa	ndwater ation hole i.3-5
С	s-134 (Approx. 2 years)	0.50	[7/9]	0.66	[9/1]	13	<1/15>	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>	64	<1/15>
С	s-137 (Approx.30 years)	1.2	(7/11) (8/1)	1.1	(8/29) (9/1)	31	<1/15>	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]	170	<1/15>
	Ru-106 (Approx. 370 days)	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		-	
The	Mn-54 (Approx. 310 days)	ND		ND		ND		0.29	[12/6]	0.94	<1/8>	ND		ND		ND		ND		ND		0.54	[10/30]	-	
other y	Co-60 (Approx. 5 years)	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		-	
	Sb-125 (Approx. 3 years)	ND		ND		ND		ND		26	[9/29]	ND		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) <1/15> <1/17>	5,100	[12/6]	3,200	(2012/12/ 12)	460	[8/1]	170	[9/18]	170	<1/8>
8	r-90(Approx. 29 years)	54	[5/31]	Under analysis		Under analysis		Under analysis		Under analysis		Under analysis		Under analysis		-		8.3	(2012/12/ 12)	Under analysis		Under analysis		1	

<sup>•</sup> Since some samples are still under analysis, the highest dose of the Strontium-90 is among those previously announced

<sup>\*1</sup> 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

<sup>\*2</sup> Analysis result of pumped water.

<sup>\* &</sup>quot;ND" indicates that the measurement result is below the detection limit.

 $<sup>^{\</sup>star}$  Date of sampling is provided in parentheses. ( ): 2013, < >: 2014

<sup>\* &</sup>quot;\*" is provided next to the name of 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

		side of Unit 5,6 rge channel		ont of Unit 6 ake channel		t of shallow quay		de of Unit 1-4 ke channel	water into	ide of Unit 1-4 ake channel ide of East all Break)	1F, Uni	t 1 Screen e Silt Fence)	intake char	en the water inel of Unit 1 surface layer	intake cha			2 Screen e Silt Fence)	intake char	en the water nnel of Unit 2 Unit 3		3 Screen e Silt Fence)	intake char	en the water nnel of Unit 3 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	≒1 [6/26]	-		7.4	%1 [6/26]	720	[9/22]	220	[8/19]	480	[10/14]	480	[8/22]	290	[10/20]	430	[10/14]	340	[10/14]	120	[9/23]	190	[9/23]

Unit: Bq/L

		4 Screen e Silt Fence)		nd the south ge channel	1F, Por	rt entrance	1F, East s	ide in the port	1F, West s	side in the port	1F, North s	side in the por	1F, South s	ide in the por	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)	130	[9/23]	0.36	%1 [6/26]	49	[8/19]	-		-		-		- 1		÷	-	-	-	-

<sup>\*</sup> 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.

[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

<sup>•</sup> Since some samples are still under analysis, the highest dose of the Strontium-90 is among those previously announced.

<sup>\*1</sup> Since reanalysis is ongoing, the figures are just for a reference.

<sup>\* &</sup>quot;ND" indicates that the measurement result is below the detection limit.

<sup>\*</sup> Date of sampling is provided in parentheses. ( ): 2013, <>: 2014

<sup>\* &</sup>quot;-" indicates that the measurement was out of range.