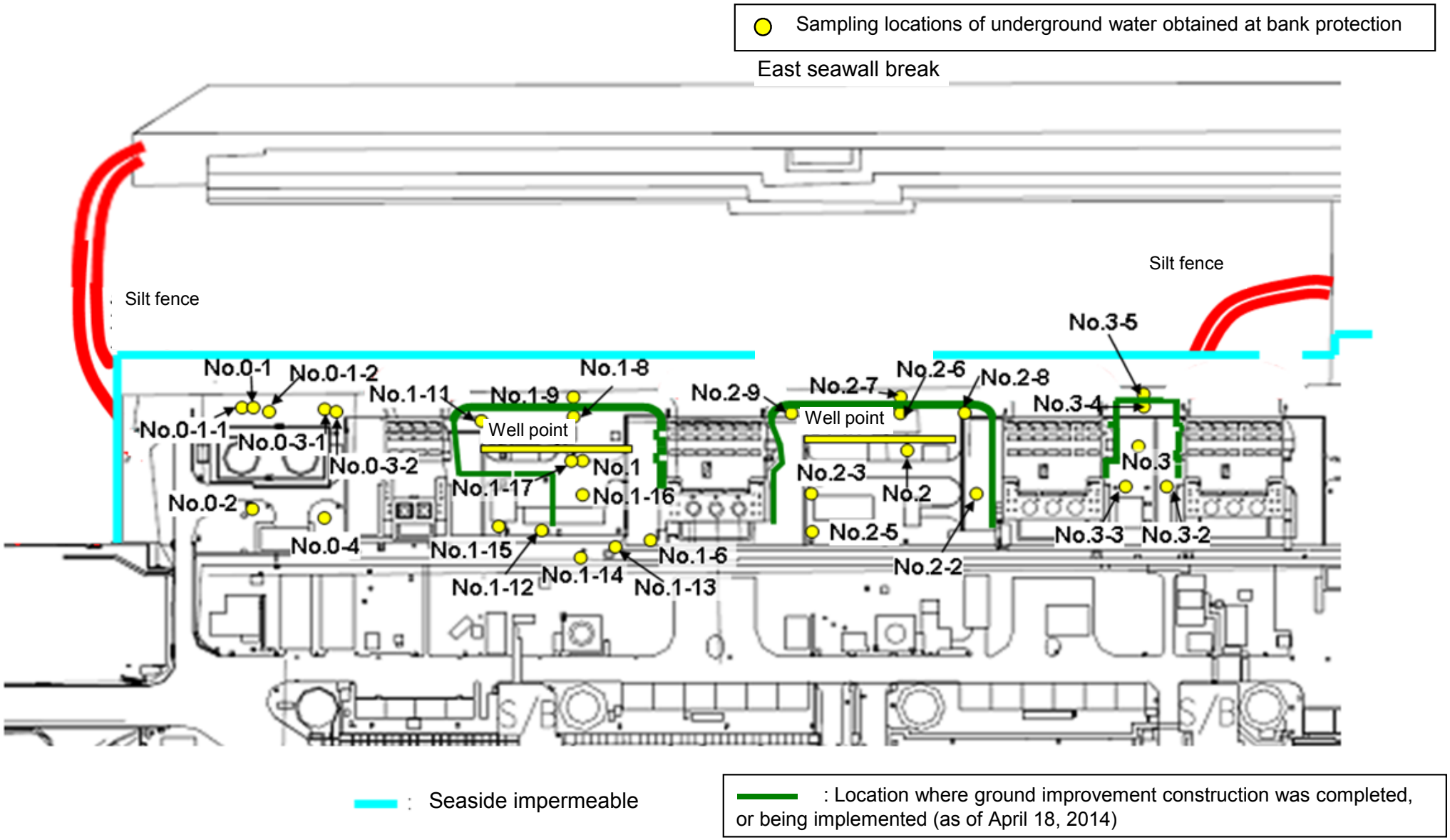
<Reference>
September 25, 2014
Tokyo Electric Power Company

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)



Detailed Analysis Results in the Port of Fukushima Daiichi NPS, around Discharge Channel and Bank Protection (1/2)
Underground Water Obtained at Bank Protection

Unit: Bq/L (exclude chloride)

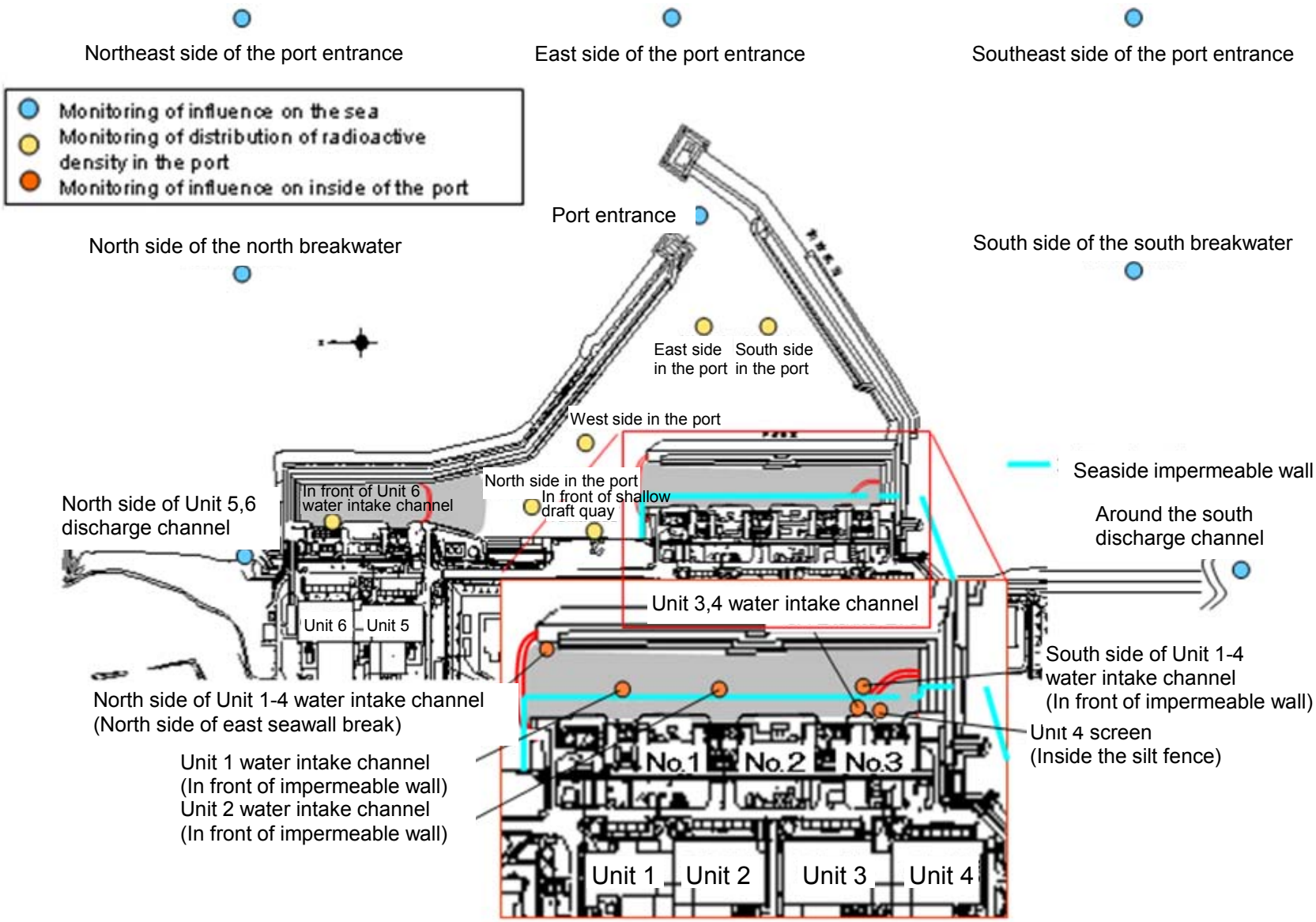
		Underground water observation hole No.0-1	Underground water observation hole No.0-1-2	Underground water observation hole No.0-2	Underground water observation hole No.0-3-1	Underground water observation hole No.0-3-2	Underground water observation hole No.0-4	Underground water observation hole No.1	Underground water observation hole No.1-6	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								Jun 9, 2014	Jun 9, 2014	Jun 16, 2014	Jun 15, 2014	Jun 9, 2014	Jun 9, 2014	Jun 9, 2014	Jun 9, 2014	Jun 9, 2014
Time of sampling								10:23 AM	10:15 AM	10:27 AM	6:15 AM	10:00 AM	9:21 AM	9:33 AM	9:40 AM	9:40 AM
Chloride (unit: ppm)								–	–	–	60	–	–	–	–	–
Cs-134 (Approx. 2 years)								ND(0.40)	6,300	26	7.1	0.68	5.9	19	2.4	ND(0.44)
Cs-137 (Approx.30 years)								ND(0.49)	17,000	74	14	1.7	17	50	5.6	0.52
The other γ	Mn-54 (Approx. 310 days)							ND	100	1.8	ND	ND	ND	0.4	ND	ND
	Co-60 (Approx. 5 years)							ND	390	ND	ND	ND	ND	ND	ND	0.50
	Sb-125 (Approx. 3 years)							ND	ND	ND	ND	ND	ND	ND	11	ND
Gross β								140	750,000	21,000	29	85	540	4,800	890,000	32,000
H-3 (Approx. 12 years)								140,000	5,700	18,000	ND(120)	9,500	47,000	15,000	9,000	12,000
Sr-90（Approx. 29 years）								120	620,000	18000※1	3.9	67＊1	130	4,100＊1	820,000	29,000＊1

		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	Underground water observation hole No.2-7	Underground water observation hole No.2-8	Groundwater pumped up from the well point (between Unit 2 and 3)	Underground water observation hole No.3	Underground water observation hole No.3-2	Underground water observation hole No.3-3	Underground water observation hole No.3-4	Underground water observation hole No.3-5
Date of sampling															
Time of sampling															
Chloride (unit: ppm)															
Cs-134 (Approx. 2 years)															
Cs-137 (Approx.30 years)															
The other γ	Mn-54 (Approx. 310 days)														
	Co-60 (Approx. 5 years)														
	Sb-125 (Approx. 3 years)														
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 on June 10, 13, 16, 17, 18, and 20.
* "ND" indicates that the measurement result is below the detection limit, and the detection limit of each nuclide is provided in parentheses, except "the other γ"
* "-" indicates that the measurement was out of range.
※1 In the results on June 10 and 13, 2014, "Under analysis" were shown of June 9 sampled, they are actually June 16 sampled.

* 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.

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 (2/2)
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 (north side of East Seawall Break)	1F, In front of Unit 1 discharge channel (in front of impermeable wall)	1F, In front of Unit 2 discharge channel (in front of impermeable wall)	1F, Between the water intake channel of Unit 3 and Unit 4	1F, Unit 4 Screen (Inside the Silt Fence)	1F, North side of Unit 1-4 water intake channel (in front of impermeable wall)	1F, Around the south discharge channel	Density Limit Specified by the Reactor Regulation *	WHO Guidelines for drinking-water quality
Date of Sampling	Jun 9, 2014		Jun 9, 2014	Jun 9, 2014			Jun 9, 2014	Jun 9, 2014		Jun 23, 2014		
Time of sampling	6:33 AM		6:17 AM	6:47 AM			6:32 AM	6:41 AM		5:45 AM		
Cs-134(Approx. 2 years)	ND(0.74)		ND(3.1)	ND(2.2)			19	16		ND(0.56)	60	10
Cs-137(Approx.30 years)	ND(0.71)		ND(2.3)	2.7			45	36		ND(0.58)	90	10
Gross β	12		ND(18)	ND(18)			660	410		9.7		
H-3 (Approx. 12 years)	ND(1.6)		2.3	ND(110)			1,800	1,200		ND(1.8)	60,000	10,000
Sr-90（Approx. 29 years）	0.050		ND(0.77)	2.4			660＊1	390＊1		ND(0.0095)	30	10

Unit: Bq/L

	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 port entrance	Southeast 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	Jun 9, 2014											
Time of sampling	8:53 AM											
Cs-134(Approx. 2 years)	ND(1.3)										60	10
Cs-137(Approx.30 years)	ND(1.2)										90	10
Gross β	ND(16)											
H-3 (Approx. 12 years)	2.0										60,000	10,000
Sr-90（Approx. 29 years）	ND(0.12)										30	10

* Data announced this time is provided in a thick-frame. The other data was announced on June 10, 13, 17, 24, and 27.
The data of Sr-90 of "1F, discharge channel of Unit 5 and 6" and "1F, Around the south discharge channel" in the broken-line frame was announced on July 25, in "Nuclides Analysis Result of the Sub-drain of Fukushima Daiichi NPS".

* "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/cm^3 to Bq/L]).

* 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.

<Reference> The Highest concentration 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*	Groundwater observation hole No.1-6
Cs-134 (Approx. 2 years)		29 <5/25>	ND	0.61 <3/2>	0.61 〔10/13〕	0.64 <4/6>	0.86 <9/8>	0.70 <6/29>	13 〔8/29〕	1.9 〔7/8〕	11,000 〔7/9〕	10 〔9/2〕	1.5 〔7/8〕	310 〔8/5〕	12,000 <8/12> <9/22>
Cs-137 (Approx.30 years)		78 <5/25>	ND	1.5 <3/2>	2.2 <1/12>	1.1 <4/6>	2.3 <9/8>	1.6 <6/29>	31 〔8/29〕	3.6 〔7/8〕	22,000 〔7/9〕	24 〔9/2〕	3.6 〔7/8〕	650 〔8/5〕	34,000 <8/12> <9/22>
The other γ	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	ND
	Mn-54 (Approx. 310 days)	ND	ND	ND	ND	ND	0.64 <2/20>	ND	ND	1.0 〔7/5〕	62 〔7/5〕	ND	ND	ND	320 <2/13> <2/17>
	Co-60 (Approx. 5 years)	ND	ND	ND	ND	ND	ND	ND	0.50 〔7/19〕	ND	3.1 〔7/8〕	ND	ND	ND	830 <2/20>
	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〕	34 <5/19>
Gross β		300 [8/29] <5/18>	21 〔12/7〕	24 <6/22>	87 〔10/13〕	ND	67*1 〔12/11〕	44 <6/22>	1,900 〔5/24〕	4,400 〔7/8〕	9,300,000 〔7/8〕	160,000 〔8/12〕 〔8/15〕	380 〔8/19〕	56,000 〔8/5〕	1,400,000 <8/12>
H-3 (Approx. 12 years)		45,000 〔8/29〕	18,000 〔12/7〕	74,000 [12/15] <1/19>	6,800 <2/16>	ND	76,000 <2/6>	56,000 <2/23>	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〕	110,000*2 <2/6>
Sr-90(Approx. 29 years)		140 〔8/8〕	7.9 〔12/7〕	2.6 〔11/10〕	0.73 〔9/2〕	1.5 〔11/20〕	2.3 〔12/6〕	ND(0.83) 〔10/27〕	1,300 〔8/22〕	2,300 〔6/28〕	5,000,000 〔7/5〕	130,000 〔8/8〕	200 〔7/8〕	5,100 〔8/22〕	690,000 <5/12>

Unit: Bq/L

		Groundwater observation hole No.1-8	Groundwater observation hole No.1-9	Groundwater observation hole No.1-10	Groundwater observation hole No.1-11	Groundwater observation hole No.1-12	Groundwater observation hole No.1-13	Groundwater observation hole No.1-14	Groundwater observation hole No.1-15	Groundwater observation hole No.1-16	Groundwater observation hole No.1-17	Groundwater pumped up from the well point (between Unit 1 and 2)	Groundwater observation hole No.2	Groundwater observation hole No.2-1*	Groundwater observation hole No.2-2
Cs-134 (Approx. 2 years)		47 〔11/25〕	170 〔9/3〕	-	1.1 <1/13>	74 〔10/21〕	37,000 <2/13>	88*2 <2/27>	ND	30 <7/28>	1.4 <7/7>	110 〔9/23〕	0.88 <2/26>	0.66 〔9/1〕	15 <2/12>
Cs-137 (Approx.30 years)		110 〔11/25〕	380 〔9/3〕	-	3.4 <4/28>	170 〔10/21〕	93,000 <2/13>	230*2 <2/27>	0.88 <7/10>	86 <7/28>	2.8 <4/28> <9/8>	250 〔9/23〕	2.5 <2/26>	1.1 〔8/29〕 〔9/1〕	38 <2/12>
The other γ	Ru-106 (Approx. 370 days)	ND	ND	-	ND	5.4 〔10/28〕	ND	ND	ND	9.2 〔10/28〕	5.5 <4/21> <5/1>	25 〔9/2〕	ND	ND	ND
	Mn-54 (Approx. 310 days)	12 <2/3>	ND	-	ND	ND	ND	2.1 <9/8>	ND	11 <8/25>	ND	8.5 <4/28>	ND	ND	ND
	Co-60 (Approx. 5 years)	1.3 <2/3>	ND	-	ND	0.51 〔10/24〕	ND	0.44 <5/29>	ND	0.9 〔11/7〕	0.61 〔11/25〕	0.61 <6/9>	ND	ND	ND
	Sb-125 (Approx. 3 years)	ND	ND	-	ND	61 〔10/21〕	ND	ND	ND	24 <6/16>	2.1 〔11/25〕	ND	ND	ND	ND
Gross β		59,000 <2/3>	2,100*2 〔11/17〕	78*2 <1/27>	2,300 〔12/26〕	1,100 <5/5>	260,000 <2/12> <2/13>	28,000 <9/22>	110 <7/10>	3,100,000 <1/20> <1/30> <2/3>	840,000 <9/22>	1,900,000 〔9/23〕	1,700 〔7/8〕	380 〔7/29〕	600 <4/16>
H-3 (Approx. 12 years)		33,000 <6/2>	860*2 〔11/14〕	270,000*2 <1/27>	85,000 〔9/13〕	440,000 〔10/31〕	88,000 <2/12>	23,000 <2/13>	74,000 <7/10>	43,000 〔9/26〕	32,000 <1/20>	460,000 〔8/19〕	1,000 <2/23>	440 〔8/26〕	660 <1/8>
Sr-90(Approx. 29 years)		35,000 <2/17>	300 〔10/3〕	—	22 <1/9>	290 〔10/21〕	160,000* <2/12>	2,200 <5/12>	Under analysis	2,700,000 <2/13>	5,600 <5/12>	—	54 〔5/31〕	5.9 〔7/25〕	320 〔12/25〕

Unit: Bq/L

		Groundwater observation hole No.2-3	Groundwater observation hole No.2-5	Groundwater observation hole No.2-6	Groundwater observation hole No.2-7	Groundwater observation hole No.2-8	Groundwater observation hole No.2-9	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.3-2	Groundwater observation hole No.3-3	Groundwater observation hole No.3-4	Groundwater observation hole No.3-5
Cs-134 (Approx. 2 years)		2.2 <2/26>	41 <5/7>	17 <3/11>	3.5 <2/23>	1.3 <7/20>	ND	2.2 <9/7>	3.5 〔7/25〕	1.2 〔7/25〕 〔8/8〕	23 <8/27>	180 <7/2>	5.1 <7/23>	100 <7/30>
Cs-137 (Approx.30 years)		5.5 <2/26>	110 <5/7>	50 <3/11>	9.0 <2/23>	3.4 <7/20>	0.58*2 <2/11>	5.7 <9/7>	5.9 〔8/8〕	2.6 〔8/1〕	68 <9/3>	500 <7/2>	16 <8/27>	310 <7/30>
The other γ	Ru-106 (Approx. 370 days)	ND	ND	ND	ND	ND	6.5*2 <2/11>	ND	ND	ND	ND	ND	ND	-
	Mn-54 (Approx. 310 days)	0.29 〔12/6〕	0.95 <6/4>	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.54 〔10/30〕	-
	Co-60 (Approx. 5 years)	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	-
	Sb-125 (Approx. 3 years)	ND	74 <5/7>	ND	ND	ND	ND	ND	1.6 <1/1>	ND	ND	ND	ND	-
Gross β		1,500 〔12/6〕 〈1/8〉	150,000 <2/12>	3,200 〔12/5〕	1,300 <6/20>	5,800 <7/23>	1,700 <2/7>	240,000 〔12/12〕	1,400 〔7/11〕	180 〔8/1〕	3,100 <8/20> <8/28>	8900 <7/2>	46 <8/13>	510 <7/16>
H-3 (Approx. 12 years)		1,700 〔12/6〕	7,900 <4/9>	1,900 <8/10>	1,100 <1/19>	1,700 <4/6> <8/6> <8/13>	13,000*2 <2/7> <2/11>	8,900 <9/14>	3,200 〔Dec. 12, 2012〕	460 〔8/1〕	3,700 <7/9>	8,000 <5/7>	170 〔9/18〕	170 <1/8>
Sr-90(Approx. 29 years)		1,200 〔12/6〕	34,000	Under analysis	ND(1.4) 〔11/21〕	3,900 <3/30>	1,200*2 <2/11>	-	8.3 〔Dec. 12, 2012〕	4.4 〔7/23〕	2000 <4/18>	3,600 <4/30>	ND	200 <5/28>

● Since some samples are still under analysis, the highest concentration of the Strontium-90 is among those previously announced.
*1 Analysis result of pumped water.
*2 The results are for a reference, since the water was highly turbid. (γ and Gross β were measured after filtration.)

* "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 name of the holes where the sampling could not be performed due to the chemical injection of ground improvement.
Note) As of No. 1-9, 2-5, and 3-5, γ was not measured because they are samlpled by sampler. Gross β were measured after filtation for references.

<Reference> The Highest concentration 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 (north side of East Seawall Break)		1F, Unit 1 discharge channel (in front of impermeable wall)		1F, Between the water intake channels of Unit 1 and Unit 2 (surface layer)		1F, Between the water intake channels of Unit 1 and Unit 2 (lower layer)		1F, Unit 2 discharge channel (in front of impermeable wall)		1F, Between the water intake channels of Unit 2 and Unit 3		1F, Between the water intake channels of Unit 3 and Unit 4		1F, Unit 4 Screen (Inside the Silt Fence)		1F, South side of Unit 1-4 water intake channel (in front of impermeable wall)	
Cs-134(Approx. 2 years)	1.8	〔6/21〕	2.8	〔12/2〕	5.3	〔8/5〕	32	〔10/11〕	12	<6/23>	87	〔10/10〕	93	〔10/10〕	12	<9/8>	52	〔12/21〕	50	<9/22>	62	〔9/16〕	15	<4/14> <5/19>
Cs-137(Approx.30 years)	4.5	<3/17>	5.8	〔12/2〕	8.6	〔8/5〕	73	〔10/11〕	33	<5/12>	200	〔10/10〕	200	〔10/10〕	40	<9/8>	110	〔10/11〕 〔12/21〕	150	<9/22>	140	〔9/16〕 <9/22>	45	<5/19>
Gross β	17	<1/6>	46	〔8/19〕	40	〔7/3〕	320	〔8/12〕	140	<5/5> <7/14> <8/18> <9/1>	1,900	<5/20>	1,500	<6/10>	160	<8/18>	1,000	<6/2>	660	<6/9>	680	<9/22>	380	<3/10>
H-3 (Approx. 12 years)	8.7	<5/12>	24	〔8/19〕	340	〔6/26〕	600	〔8/18〕	460	<8/18>	4,200	<5/27>	3,900	<6/10>	350	<8/18>	2,600	<6/2>	2,500	<6/23>	2,200	<7/21>	810	<8/4>
Sr-90（Approx. 29 years）	4.7	〔6/26〕	—		7.2	〔6/26〕	220	〔8/19〕	—		1,400	<5/15>	820	<5/15>	—		520	<5/12>	410	<5/12>	250	<5/12>	—	

Unit: Bq/L

	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 port entrance		Southeast side of of the port entrance		South side of the south breakwater	
Cs-134(Approx. 2 years)	1.8	<6/9>	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)	4.9	<6/9>	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	16	<6/9> <8/4>	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)	5.6	<5/19>	68	〔8/19〕	67	〔8/19〕	59	〔8/19〕	52	〔8/19〕	60	〔8/19〕	4.7	〔8/14〕	1.7	<4/23>	6.4	〔10/8〕	1.8	<5/29>	2.8	<4/23>
Sr-90（Approx. 29 years）	0.29	〔6/26〕	49	〔8/19〕	—		—		—		—		—		—		—		—		—	

* 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 after January 13, 2013. For the other locations, the data is obtained after June 13, 2013.

● Since some samples are still under analysis, the highest concentration of the Strontium-90 is among those previously announced.

* "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