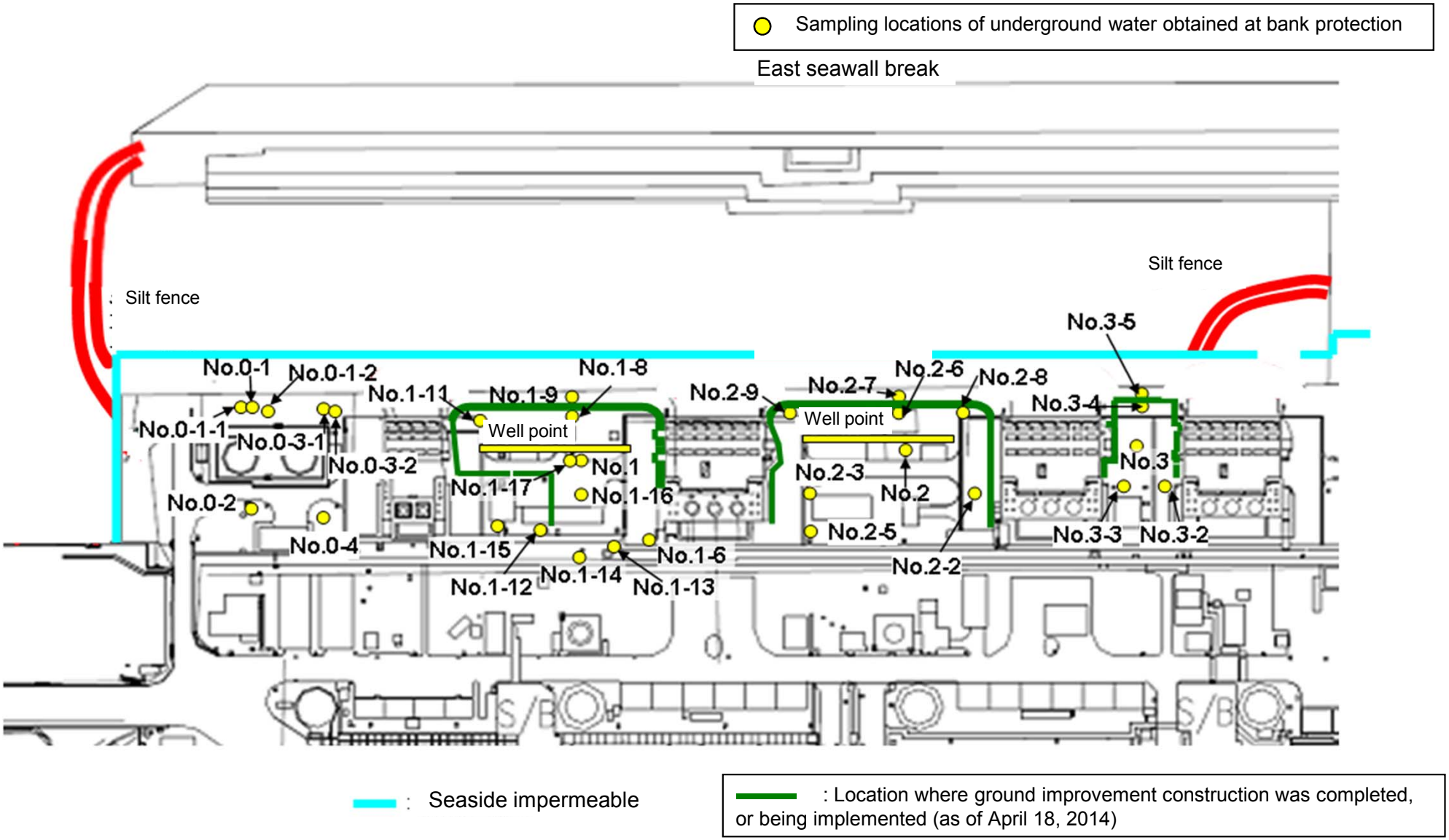
<Reference>
November 13, 2014
Tokyo Electric Power Company

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 (1/3)
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 (note)	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															
Time of sampling															
Chloride (unit: ppm)															
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）															

	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 (note)	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(note)
Date of sampling		Nov 9	Nov 9	Nov 9			Nov 9	Nov 9	Nov 9					
Time of sampling		8:54 AM	10:50 AM	9:33 AM			9:59 AM	10:22 AM	9:30 AM					
Chloride (unit: ppm)		—	—	—			660	—	—					
Cs-134 (Approx. 2 years)		ND(0.44)	3.2	ND(0.39)			ND(0.44)	ND(0.39)	ND(0.49)					
Cs-137 (Approx.30 years)		ND(0.47)	7.3	ND(0.52)			1.1	ND(0.54)	ND(0.72)					
The other γ														
Gross β		120	360	740			930	3,600	38,000					
H-3 (Approx. 12 years)		600	460	820			690	1,000	3,400					
Sr-90（Approx. 29 years）		—	—	—			—	—	—					

* Data announced this time is provided in a thick-frame. The other data was announced on November 10, 2014.

* "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.
(Note) As of No. 1-9, 2-5, and 3-5, γwas not measured because they are samlpled by sampler. Gross βwere measured after filtation for references.

Detailed Analysis Results in the Port of Fukushima Daiichi NPS, around Discharge Channel and Bank Protection (2/3)
Underground Water Obtained at Bank Protection

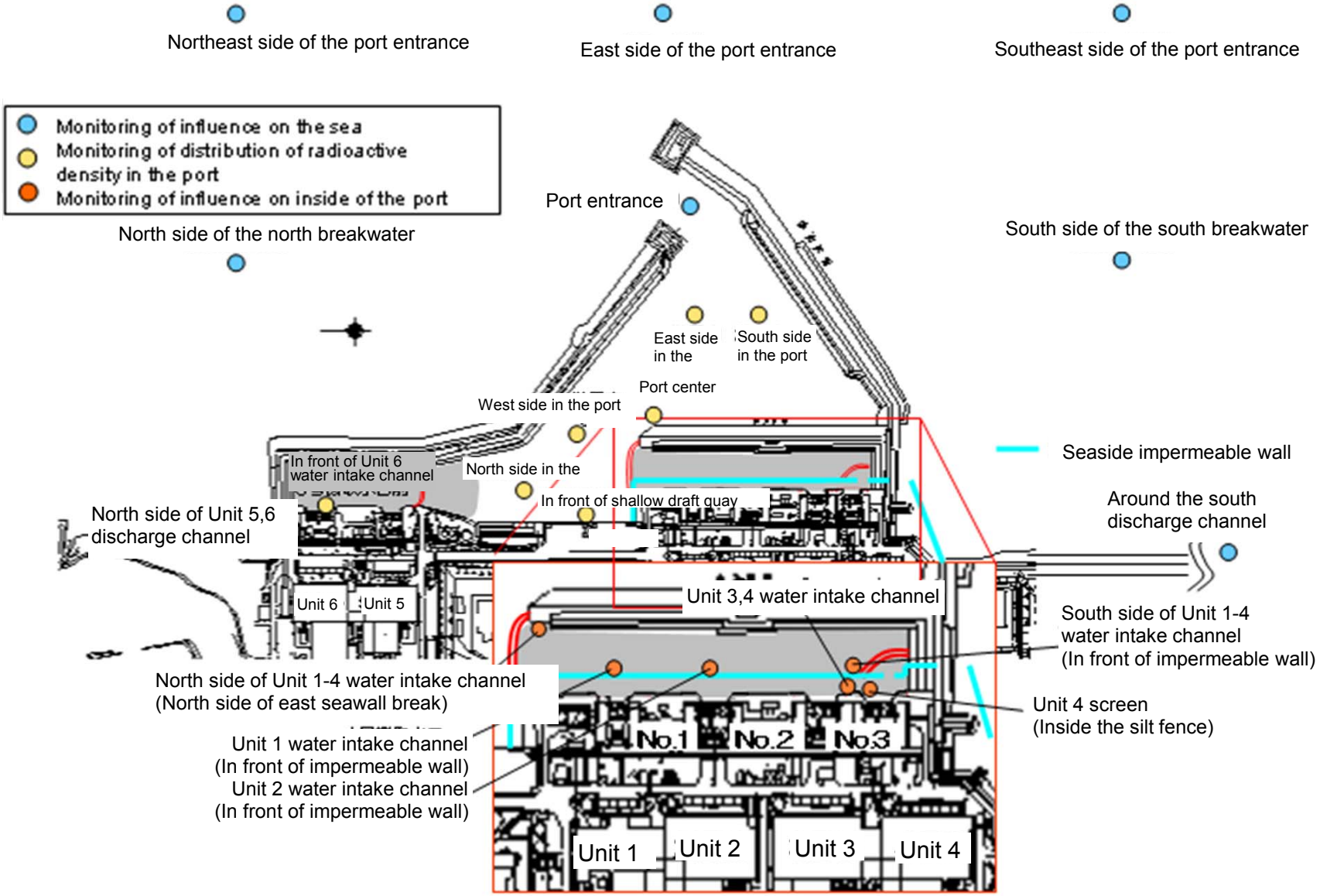
Unit: Bq/L (exclude chloride)

	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(note)	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															
Time of sampling															
Chloride (unit: ppm)															
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）															

	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(note)	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(note)
Date of sampling		Nov 12	Nov 12	Nov 12			Nov 12	Nov 12	Nov 12	Nov 12	Nov 12	Nov 12	Nov 12	Nov 12
Time of sampling		8:57 AM	10:35 AM	9:32 AM			9:56 AM	10:12 AM	10:00 AM	9:45 AM	10:45 AM	11:13 AM	10:07 AM	9:15 AM
Chloride (unit: ppm)		–	–	–			780	–	–	–	–	–	–	700
Cs-134 (Approx. 2 years)		ND(0.39)	3.0	ND(0.53)			ND(0.41)	ND(0.43)	ND(0.43)	–	11	43	2.7	–
Cs-137 (Approx.30 years)		0.51	7.5	ND(0.53)			0.86	ND(0.51)	0.65	–	44	140	11	–
The other γ														
Gross β		110	410	710			930	3,700	37,000	ND(21)	2500	3700	42	28
H-3 (Approx. 12 years)		Under analysis	Under analysis	Under analysis			Under analysis	Under analysis	Under analysis	Under analysis	Under analysis	Under analysis	Under analysis	Under analysis
Sr-90（Approx. 29 years）		–	–	–			–	–	–	–	–	–	–	–

* "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.
(Note) As of No. 1-9, 2-5, and 3-5, γwas not measured because they are samlpled by sampler. Gross βwere measured after filtation for references.
*γwas not measured because the water was highly turbid. (Gross β were measured after filtration as references.)

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 (3/3)
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 intake channel (in front of impermeable wall)	1F, In front of Unit 2 intake 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, South side of Unit 1-4 water intake channel (In front of impermeable wall)	1F, Around the south discharge channel	1F, Port entrance	Density Limit Specified by the Reactor Regulation *	WHO Guidelines 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

Unit: Bq/L

	1F, East side in the port	1F, West side in the port	1F, North side in the port	1F, South side in the port	1F, Port center	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						Nov 11	Nov 11	Nov 11	Nov 11	Nov 11			
Time of sampling						9:56 AM	9:51 AM	10:02 AM	10:13 AM	10:09 AM			
Cs-134(Approx. 2 years)						ND(0.74)	ND(0.66)	ND(0.77)	ND(0.56)	ND(0.92)		60	10
Cs-137(Approx.30 years)						ND(0.58)	ND(0.63)	ND(0.57)	ND(0.80)	ND(0.69)		90	10
Gross β						ND(15)	ND(15)	ND(15)	ND(15)	ND(15)			
H-3 (Approx. 12 years)						Under analysis	Under analysis	Under analysis	Under analysis	Under analysis		60,000	10,000
Sr-90（Approx. 29 years）						—	—	—	—	—		30	10

* "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

<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*	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>	1.3 <9/25>	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〕	67,000 <10/17>
Cs-137 (Approx.30 years)	78 <5/25>	ND	1.5 <3/2>	2.2 <1/12>	1.1 <4/6>	5.1 <9/25>	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〕	200,000 <10/16>
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
The other γ: 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	700 <10/13>
The other γ: Co-60 (Approx. 5 years)	ND	ND	ND	ND	ND	ND	ND	0.50 〔7/19〕	ND	3.1 〔7/8〕	ND	ND	ND	3600 <10/13>
The other γ: 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	74 <10/9>	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〕	7,800,000 <10/13>
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〕	*2 110,000 <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〕	1,100,000 <8/4>

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>	130 <10/18>	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>	390 <10/20>	0.88 <7/10>	86 <7/28>	3.0 <9/29>	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
The other γ: Mn-54 (Approx. 310 days)	12 <2/3>	ND	-	ND	ND	ND	2.1 <9/8>	ND	11 <8/25>	ND	54 <11/10>	ND	ND	ND
The other γ: 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
The other γ: 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 2,100 〔11/17〕	*2 78 <1/27>	2,300 〔12/26〕	1,100 <5/5>	260,000 <2/12> <2/13>	29,000 <10/3>	110 <7/10>	3,100,000 <1/20> <1/30> <2/3>	1,200,000 <10/9>	2,100,000 <11/10>	1,700 〔7/8〕	380 〔7/29〕	600 <4/16>
H-3 (Approx. 12 years)	33,000 <6/2>	*2 860 〔11/14〕	*2 270,000 <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〕	160,000 <10/13> <10/16> <11/3>	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〕	—	170 <8/4>	290 〔10/21〕	160,000 <2/12>	13,000 <8/4>	Under analysis	2,700,000 <2/13>	170,000 <8/4>	—	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>	*2 0.58 <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	*2 6.5 <2/11>	ND	ND	ND	ND	ND	ND	-
The other γ: 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〕	-
The other γ: Co-60 (Approx. 5 years)	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	-
The other γ: 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] <11/6>	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>	8,900 <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>	*2 13,000 <2/7> <2/11>	13,000 <10/19> <10/26> <10/29>	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 <5/7>	Under analysis	ND(1.4) 〔11/21〕	3,900 <3/30>	*2 1,200 <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 dose 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, since September 17, γwas not measured because they are samlpled by sampler. Gross βwere measured after filtation for references.

<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 (north side of East Seawall Break)	1F, In front of Unit 1 intake channel (in front of impermeable wall)	1F, Between the water intake channel of Unit 1 and Unit 2 (lower layer)	1F, Between the water intake channel 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)	1F, Around the south discharge channel	1F, Port entrance
Cs-134(Approx. 2 years)	1.8 〔6/21〕	2.8 〔12/2〕	5.3 〔8/5〕	32 〔10/11〕	12 〈6/23〉	12 〈9/8〉	50 〈9/22〉	62 〔9/16〕	24 〈11/3〉	1.8 〈6/9〉	3.3 〔12/24〕
Cs-137(Approx.30 years)	4.5 〈3/17〉	5.8 〔12/2〕	8.6 〔8/5〕	73 〔10/11〕	33 〈5/12〉	40 〈9/8〉	150 〈9/22〉	140 〔9/16〕 〈9/22〉	64 〈11/3〉	4.9 〈6/9〉	7.3 〔10/11〕
Gross β	17 〈1/6〉	46 〔8/19〕	40 〔7/3〕	320 〔8/12〕	140 〈5/5〉 〈7/14〉 〈8/18〉 〈9/1〉	160 〈8/18〉	660 〈6/9〉	680 〈9/22〉	380 〈3/10〉	16 〈6/9〉 〈8/4〉	69 〔8/19〕
H-3 (Approx. 12 years)	8.7 〈5/12〉	24 〔8/19〕	340 〔6/26〕	600 〔8/18〕	460 〈8/18〉	350 〈8/18〉	2,500 〈6/23〉	2,200 〈7/21〉	810 〈8/4〉 〈11/3〉	5.6 〈5/19〉	68 〔8/19〕
Sr-90（Approx. 29 years）	4.7 〔6/26〕	—	7.2 〔6/26〕	220 〔8/19〕	—	—	660 〈6/9〉	470 〈8/4〉	—	0.29 〔6/26〕	49 〔8/19〕

Unit: Bq/L

	1F, East side in the port	1F, West side in the port	1F, North side in the port	1F, South side in the port	1F, Port center	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
Cs-134(Approx. 2 years)	3.3 〔10/17〕	4.4 〔12/24〕	5.0 〔12/2〕	3.5 〔10/17〕	ND	ND	ND	ND	ND	ND
Cs-137(Approx.30 years)	9.0 〔10/17〕	10.0 〔12/24〕	8.4 〔12/2〕	7.8 〔10/17〕	7.8 <10/7>	ND	0.7 <10/8>	1.6 〔10/18〕	ND	ND
Gross β	74 〔8/19〕	60 〔7/4〕	69 〔8/19〕	79 〔8/19〕	58 <10/7>	ND	ND	ND	ND	ND
H-3 (Approx. 12 years)	67 〔8/19〕	59 〔8/19〕	52 〔8/19〕	60 〔8/19〕	54 <10/7>	4.7 〔8/14〕	1.8 <10/1>	6.4 〔10/8〕	1.8 <5/29>	2.8 <4/23>
Sr-90（Approx. 29 years）	—	—	—	—	—	—	—	—	—	—

* 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, 2013.

● Since some samples are still under analysis, the highest dose of the Strontium-90 is shown 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