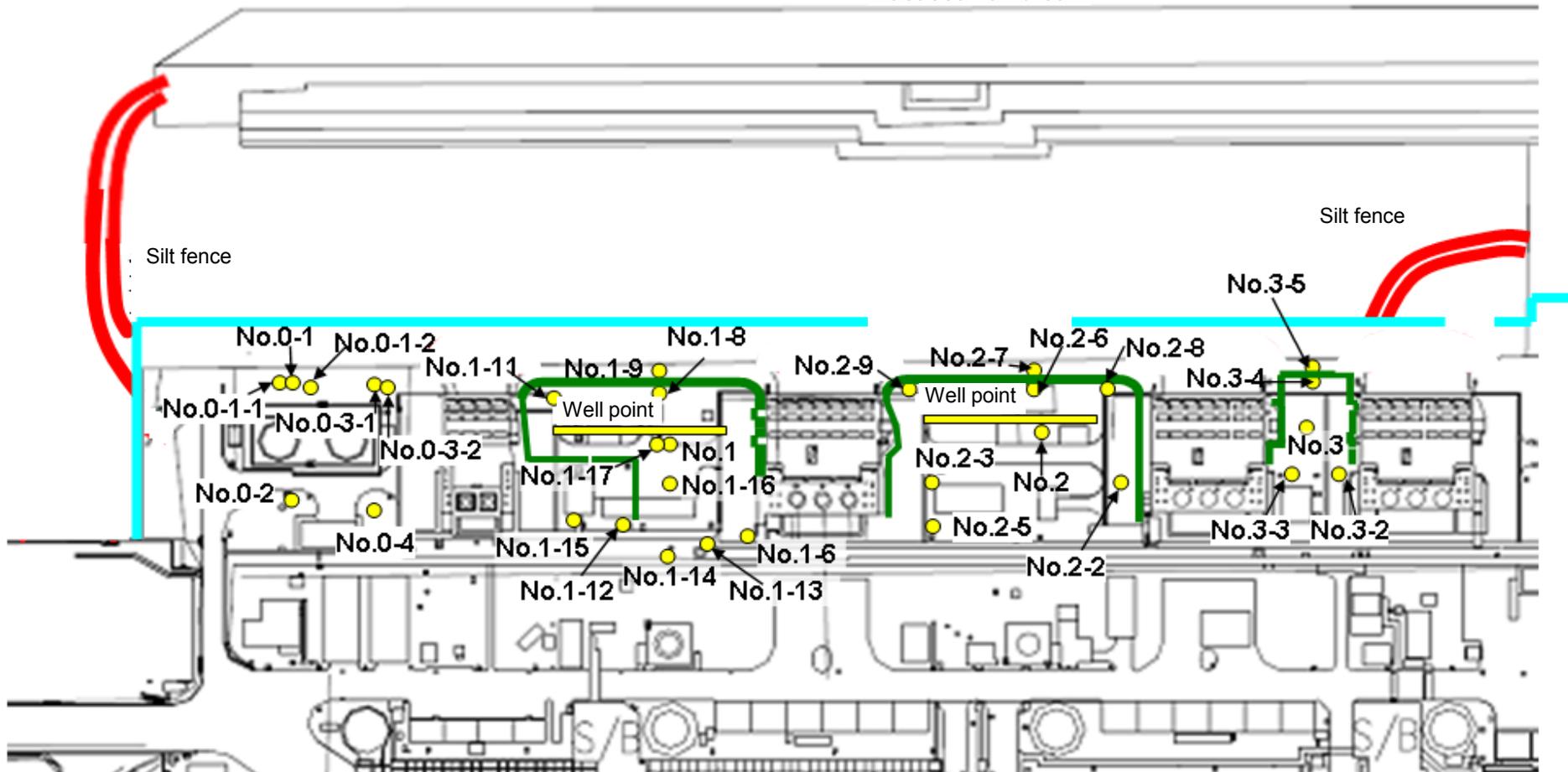


Detailed Analysis Results in the Port of Fukushima Daiichi NPS, around Discharge Channel and Bank Protection (Sampling Locations of Underground Water Obtained at Bank Protection)

● Sampling locations of underground water obtained at bank protection

East seawall break



— : Seaside impermeable

— : Location where ground improvement construction was completed, or being implemented (as of April 18, 2014)

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	Oct 19	Oct 19	Oct 19	Oct 19	Oct 20	Oct 19	Oct 20		Oct 20	Oct 21	Oct 20	Oct 20			Oct 20
Time of sampling	10:18 AM	9:46 AM	9:10 AM	9:30 AM	9:30 AM	8:38 AM	9:33 AM		10:12 AM	7:36 AM	9:51 AM	9:15 AM			10:32 AM
Chloride (unit: ppm)	—		—	—	—	—	—		—	23	—	—			—
Cs-134 (Approx. 2 years)	14	ND(0.40)	ND(0.39)	ND(0.36)	ND(0.38)	ND(0.44)	ND(0.46)		5.8	—	0.69	19			ND(0.51)
Cs-137 (Approx.30 years)	36	ND(0.60)	ND(0.45)	ND(0.48)	ND(0.51)	ND(0.62)	ND(0.55)		21	—	1.3	51			ND(0.54)
The other y	Mn-54 (Approx. 310 days)	ND	ND	ND	ND	ND	ND		ND	—	ND	ND			ND
	Ru-106 (Approx. 370 days)	ND	ND	ND	ND	ND	4.5		ND	—	ND	ND			ND
Gross β	100	ND(17)	ND(17)	ND(17)	43	ND(17)	33		5,400	ND(18)	29	410			31,000
H-3 (Approx. 12 years)	2,600	8,300	200	ND(110)	8,000	8,600	210,000		2,600	ND(110)	2,500	39,000			95,000
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	Oct 20													
Time of sampling	10:00 AM													
Chloride (unit: ppm)	—													
Cs-134 (Approx. 2 years)	1.9													
Cs-137 (Approx.30 years)	6.8													
The other y	Mn-54 (Approx. 310 days)	2.2												
	Ru-106 (Approx. 370 days)	ND												
Gross β	360,000													
H-3 (Approx. 12 years)	51,000													
Sr-90 (Approx. 29 years)	—													

* Data announced this time is provided in a thick-frame. The other data was announced on October 20, 21 and 22, 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 y".

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

(Note) As of No. 1-9, 2-5, and 3-5, y was not measured because they are sampled by sampler. Gross β were measured after filtration 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							Oct 23	Oct 23		Oct 23	Oct 23	Oct 23	Oct 23		Oct 23
Time of sampling							9:40 AM	10:12 AM		7:35 AM	10:11 AM	9:27 AM	9:43 AM		10:35 AM
Chloride (unit: ppm)							—	—		28	—	—	—		—
Cs-134 (Approx. 2 years)							ND(0.43)	39,000		—	ND(0.47)	4.5	69		ND(0.51)
Cs-137 (Approx.30 years)							0.54	120,000		—	0.79	12	220		ND(0.55)
The other γ	Mn-54 (Approx. 310 days)						ND	200		—	ND	ND	ND		ND
	Co-60 (Approx. 5 years)						ND	710		—	ND	ND	ND		ND
Gross β						33	1,400,000		ND(21)	35	140	21,000		24,000	
H-3 (Approx. 12 years)						Under analysis	Under analysis		Under analysis	Under analysis	Under analysis	Under analysis		Under analysis	
Sr-90 (Approx. 29 years)						—	—		—	—	—	—		—	

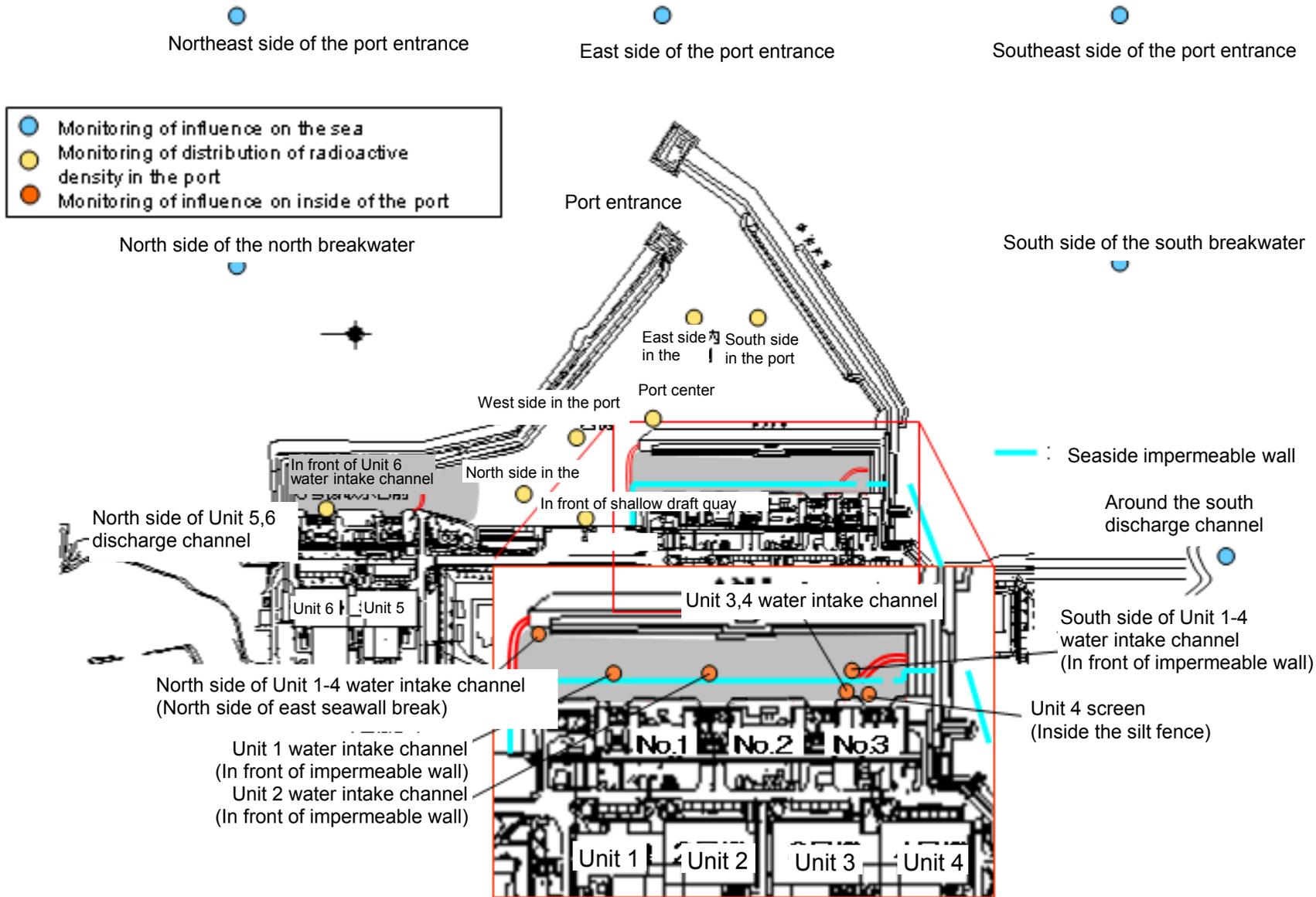
	Groundwater pumped up from the well point (between Unit 1 and 2)	Underground water observation hole No.2	Underground water observation hole No.2-2	Underground water observation hole No.2-3	Underground water observation hole No.2-5(note)	Underground water observation hole No.2-6	Underground water observation 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														
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)													
Gross β														
H-3 (Approx. 12 years)														
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, γ was not measured because they are sampled by sampler. Gross β were measured after filtration for 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	Oct 20, 2014	Oct 20, 2014	Oct 20, 2014	Oct 20, 2014	Oct 20, 2014	Oct 20, 2014	Oct 20, 2014	Oct 20, 2014	Oct 20, 2014	Oct 20, 2014			
Time of sampling	5:30 AM	5:26 AM	5:35 AM	6:04 AM	5:40 AM	5:46 AM	5:54 AM	5:51 AM	5:57 AM	4:35 AM			
Cs-134(Approx. 2 years)	ND(0.66)	ND(2.0)	ND(1.6)	4.2	6.3	3.5	24	24	17	ND(0.76)		60	10
Cs-137(Approx.30 years)	ND(0.62)	ND(2.1)	ND(2.0)	15	16	13	78	82	54	ND(0.60)		90	10
Gross β	13	21	ND(15)	75	50	61	550	480	220	14			
H-3 (Approx. 12 years)	ND(1.5)	4.5	5.8	210	180	160	2,200	2,100	740	ND(1.5)		60,000	10,000
Sr-90 (Approx. 29 years)	Under analysis	—	—	—	—	—	—	—	—	Under analysis		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					Oct 20							
Time of sampling					6:01 AM							
Cs-134(Approx. 2 years)					ND(1.1)						60	10
Cs-137(Approx.30 years)					3.0						90	10
Gross β					ND(16)							
H-3 (Approx. 12 years)					7.1						60,000	10,000
Sr-90 (Approx. 29 years)					—						30	10

* Data announced this time is provided in a thick-frame. The other data was announced on October 21.

* "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 [*]	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 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	ND
	Mn-54 (Approx. 310 days)	ND	ND	ND	ND	0.64 <2/20>	ND	ND	1.0 [7/5]	62 [7/5]	ND	ND	ND	700 <10/13>
	Co-60 (Approx. 5 years)	ND	ND	ND	ND	ND	ND	0.50 [7/19]	ND	3.1 [7/8]	ND	ND	ND	3600 <10/13>
	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]	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]	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]	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 Y	Ru-106 (Approx. 370 days)	ND	ND	-	ND	5.4 [10/28]	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	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
	Sb-125 (Approx. 3 years)	ND	ND	-	ND	61 [10/21]	ND	ND	ND	24 <6/16>	2.1 [11/25]	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>	29,000 <10/3>	110 <7/10>	3,100,000 <1/20> <1/30> <2/3>	1,200,000 <10/9>	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]	160,000 <10/13> <10/16>	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>	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 Y	Ru-106 (Approx. 370 days)	ND	ND	ND	ND	ND	6.5 ^{*2} <2/11>	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	0.54 [10/30]	-
	Co-60 (Approx. 5 years)	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	-
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>	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>	13,000 ^{*2} <2/7> <2/11>	13,000 <10/19>	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>	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 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, γ was not measured because they are sampled by sampler. Gross β were measured after filtration 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]	19 <9/22>	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>	60 <9/22>	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>	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]

	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 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