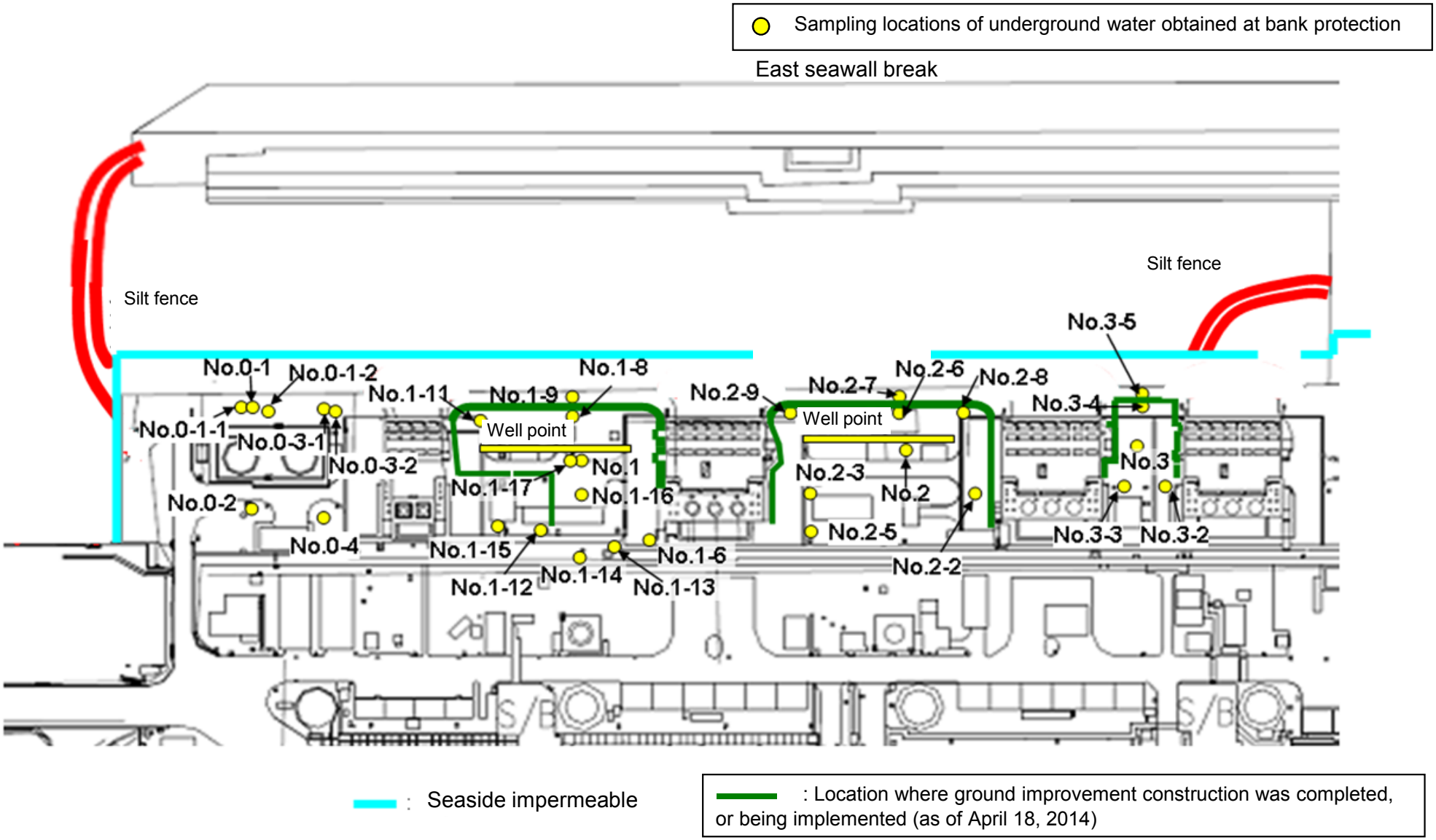
<Reference>
November 27, 2014
Tokyo Electric Power Company

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								October 02, 2014	October 02, 2014	October 09, 2014	October 02, 2014	October 02, 2014	October 02, 2014	October 02, 2014	October 09, 2014	October 02, 2014
Time of sampling								9:35 AM	9:54 AM	10:48 AM	7:12 AM	10:00 AM	9:20 AM	9:31 AM	9:35 AM	10:17 AM
Chloride (unit: ppm)								–	–	–	17	–	–	–	–	–
Cs-134 (Approx. 2 years)								ND(0.44)	10,000	9.1	–	ND(0.43)	3.7	50	3.9	ND(0.86)
Cs-137 (Approx.30 years)								ND(0.52)	30,000	25	–	1.0	8.8	160	11	ND(0.89)
The other γ	Mn-54 (Approx. 310 days)							ND	97	ND	–	ND	ND	2.1	4.2	ND
	Co-60 (Approx. 5 years)							ND	750	ND	–	ND	ND	ND	ND	ND
	Sb-125 (Approx. 3 years)							ND	ND	ND	–	ND	ND	ND	9.8	ND
Gross β								65	1,100,000	5,600	21	39	69	29,000	700,000	960,000
H-3 (Approx. 12 years)								150,000	8,000	800	ND(110)	7,000	23,000	12,000	7,100	14,000
Sr-90（Approx. 29 years）								52	1,100,000	5,300	15	26	33	28,000*1	710,000	990,000*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 October 3,6,7,10, and 11, 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 for 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.

*1 The highest measurement value (compared to the previous values provided in the handouts published in 'Detailed Analysis Results in the Port of Fukushima Daiichi NPS, around Discharge Channel and Bank Protection')

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		November 23, 2014	November 23, 2014	November 23, 2014			November 23, 2014	November 23, 2014	November 23, 2014					
Time of sampling		8:53 AM	10:41 AM	9:26 AM			9:50 AM	10:12 AM	10:00 AM					
Chloride (unit: ppm)		—	—	—			750	—	—					
Cs-134 (Approx. 2 years)		ND(0.35)	2.3	ND(0.51)			ND(0.35)	ND(0.36)	ND(0.44)					
Cs-137 (Approx.30 years)		0.58	7.4	ND(0.63)			0.89	ND(0.48)	ND(0.61)					
The other γ														
Gross β		97	300	780			980	3,400	35,000					
H-3 (Approx. 12 years)		660	370	890			840	1,100	2,900					
Sr-90（Approx. 29 years）		—	—	—			—	—	—					

* Data announced this time is provided in a thick-frame. The other data was announced on November 24, 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 for 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.

Detailed Analysis Results in the Port of Fukushima Daiichi NPS, around Discharge Channel and Bank Protection (3/3)
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		November 26, 2014	November 26, 2014	November 26, 2014			November 26, 2014	November 26, 2014	November 26, 2014	November 26, 2014	November 26, 2014	November 26, 2014	November 26, 2014	November 26, 2014
Time of sampling		8:55 AM	10:41 AM	9:37 AM			10:00 AM	10:18 AM	10:00 AM	9:35 AM	10:50 AM	11:25 AM	10:02 AM	9:00 AM
Chloride (unit: ppm)		—	—	—			900	—	—	—	—	—	—	700
Cs-134 (Approx. 2 years)		ND(0.32)	3.0	ND(0.30)			ND(0.41)	ND(0.38)	ND(0.36)	—	15	54	2.4	—
Cs-137 (Approx.30 years)		ND(0.43)	10	ND(0.45)			0.72	ND(0.42)	0.85	—	54	160	11	—
The other γ														
					i									
Gross β		120	330	660			900	3,700	35,000	ND(17)	2,500	3,900	21	26
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 for 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.
*γ was not measured due to highly turbid water. (Gross β were measured after filtration as references.)

<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
	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〉
	Co-60 (Approx. 5 years)	ND	ND	ND	ND	ND	ND	ND	0.50 〔7/19〕	ND	3.1 〔7/8〕	ND	ND	ND	3,600 〈10/13〉
	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〕	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〉	920 〈11/13〉	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〉	3,000 〈11/13〉	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	110 〈11/13〉	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〕	3.0 〈11/24〉	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〉	31,000 〈11/20〉 〈11/24〉	110 〈7/10〉	3,100,000 〈1/20〉 〈1/30〉 〈2/3〉	1,200,000 〈10/9〉	3,200,000 〈11/13〉	1,700 〔7/8〕	380 〔7/29〕	600 〈4/16〉
H-3 (Approx. 12 years)		41,000 〈11/17〉	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〉 〈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〉	490,000 〈9/1〉	—	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〕 〈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〉	13,000 *2 〈2/7〉 〈2/11〉	13,000 〈10/19〉 〈10/26〉 〈10/29〉	3,200 〔2012. 12/12〕	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 〔2012. 12/12〕	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 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 for No. 1-9, 2-5, and 3-5, since September 17, γ was not measured because they are samlpled by sampler. Gross β were measured after filtation for reference.