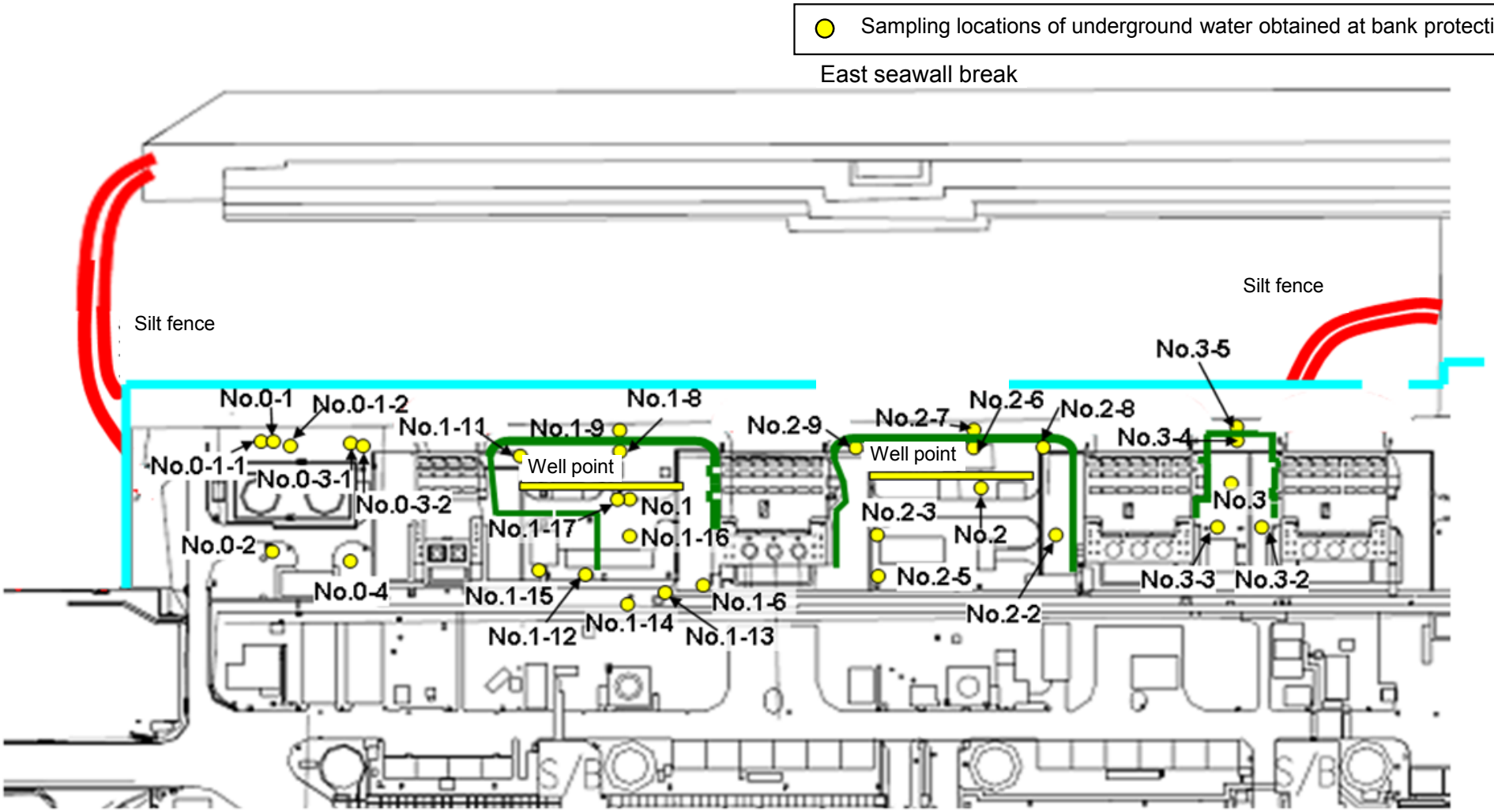
<Reference>
October 29, 2014
Tokyo Electric Power Company

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 (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 26					
Time of sampling										6:58 AM					
Chloride (unit: ppm)										25					
Cs-134 (Approx. 2 years)										–					
Cs-137 (Approx.30 years)										–					
The other γ															
Gross β										ND(18)					
H-3 (Approx. 12 years)										ND(110)					
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														
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 27.

* "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 (2/2)
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(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 28					
Time of sampling										7:20 AM					
Chloride (unit: ppm)										21					
Cs-134 (Approx. 2 years)										–					
Cs-137 (Approx.30 years)										–					
The other γ															
Gross β										ND(19)					
H-3 (Approx. 12 years)										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						Oct 28								
Time of sampling						8:30 AM								
Chloride (unit: ppm)						–								
Cs-134 (Approx. 2 years)						ND(0.45)								
Cs-137 (Approx.30 years)						ND(0.65)								
The other γ														
Gross β						1900								
H-3 (Approx. 12 years)						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.

<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	8.5 <4/28>	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>	1,900,000 〔9/23〕	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>	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〕	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>	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.