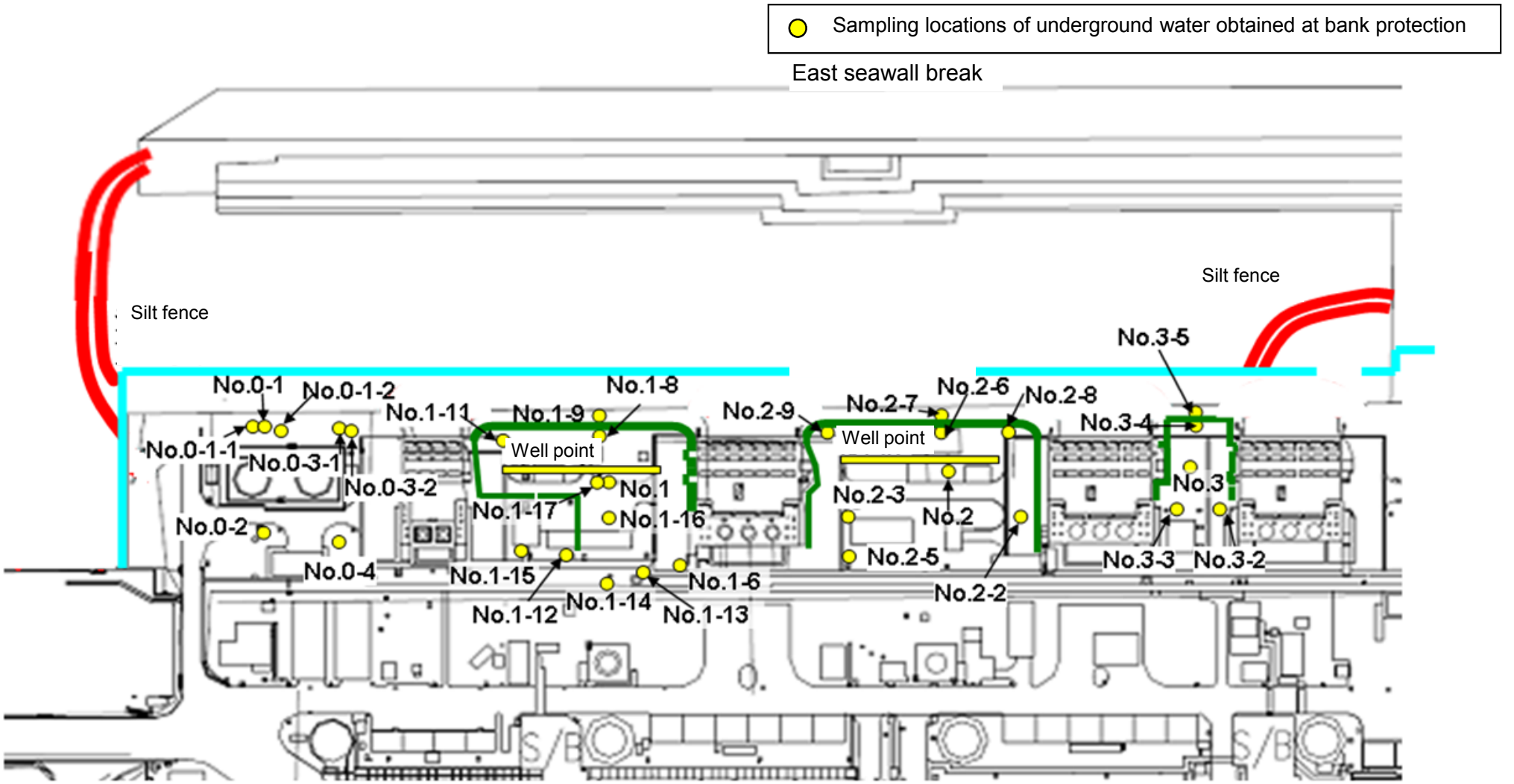
<Reference>
August 23, 2014
Tokyo Electric Power Company

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															
Time of sampling															
Chloride (unit: ppm)															
Cs-134 (Approx. 2 years)															
Cs-137 (Approx.30 years)															
The other γ															
The other γ															
The other γ															
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	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							Aug 20, 2014							
Time of sampling							9:35 AM							
Chloride (unit: ppm)							860							
Cs-134 (Approx. 2 years)							ND(0.45)							
Cs-137 (Approx.30 years)							1.4							
The other γ														
The other γ														
The other γ														
The other γ														
Gross β							920							
H-3 (Approx. 12 years)							820							
Sr-90（Approx. 29 years）							-							

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

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	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	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							Aug 22, 2014							
Time of sampling							9:34 AM							
Chloride (unit: ppm)							900							
Cs-134 (Approx. 2 years)							0.45							
Cs-137 (Approx.30 years)							1.4							
The other γ														
Gross β							990							
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.
* "-" indicates that the measurement was out of range.

<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>	0.82 <1/14>	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>
Cs-137 (Approx.30 years)	78 <5/25>	ND	1.5 <3/2>	2.2 <1/12>	1.1 <4/6>	2.1 <1/14>	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>
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	320 <2/13> <2/17>
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	830 <2/20>
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	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〕	*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〕	590,000 <2/13>

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 *1	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>	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	1.8 <8/18>	ND	4.7 <8/21>	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>	2,100 *2 〔11/17〕	78 *2 <1/27>	2,300 〔12/26〕	1,100 <5/5>	260,000 <2/12> <2/13>	22,000 <8/14>	110 <7/10>	3,100,000 <1/20> <1/30> <2/3>	350,000 <8/21>	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>	770 <3/10>	Under analysis	2,700,000 <2/13>	620 <3/10>	—	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	2.0 <4/23>	3.5 〔7/25〕	1.2 〔7/25〕〔8/8〕	22 <8/6>	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 *2 <7/20>	0.58 <2/11>	4.7 <4/23>	5.9 〔8/8〕	2.6 〔8/1〕	63 <8/6>	500 <7/2>	15 <8/20>	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 *2 <7/23>	1,700 <2/7>	240,000 〔12/12〕	1,400 〔7/11〕	180 *2 〔8/1〕	3,100 <8/20>	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 *2 <4/6> <8/6>	13,000 <2/7> <2/11>	8,800 <8/13>	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〕	Under analysis	Under analysis	ND(1.4) 〔11/21〕	3,900 <3/30>	1,200 <2/11>	-	8.3 〔2012 12/12〕	4.4 〔7/23〕	Under analysis	-	ND	-

● 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.