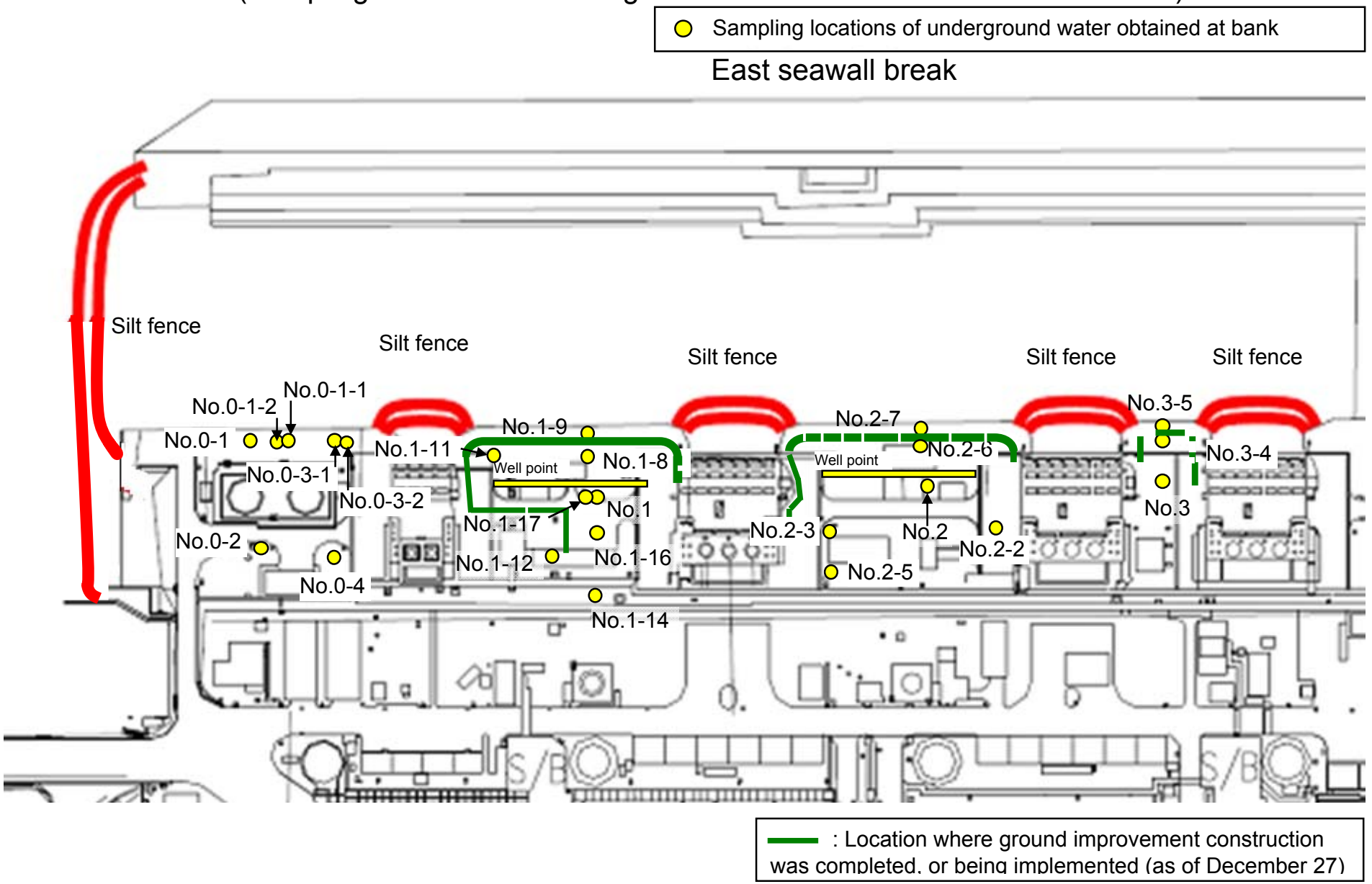
<Reference>
January 23, 2014
Tokyo Electric Power Company

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.0-1-1	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.1-8	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
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）														

	Underground water observation hole No.1-17	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	Groundwater pumped up from the well point (between Unit 2 and 3)	Underground water observation hole No.3	Underground water observation hole No.3-4	Underground water observation hole No.3-5
Date of sampling			Jan 19, 2014	Jan 19, 2014	Jan 19, 2014			Jan 19, 2014	Jan 19, 2014			
Time of sampling			9:29 AM	12:03 PM	11:14 AM			9:56 AM	10:00 AM			
Chloride (unit: ppm)			-	-	-			840	-			
Cs-134 (Approx. 2 years)			ND(0.40)	12	ND(0.42)			0.52	ND(0.67)			
Cs-137 (Approx.30 years)			ND(0.51)	28	0.77			1.60	1.1			
The other γ												
Gross β			350	490	1,200			160	140,000			
H-3 (Approx. 12 years)			730	570	1,200			1,100[*1]	4,300			
Sr-90（Approx. 29 years）			-	-	-			-	-			

* Data announced this time is provided in a thick-frame. The other data was announced on January 20.
* "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.
*1 The highest dose among the results previously announced in the "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 (2/2)
Underground Water Obtained at Bank Protection

Unit: Bq/L (exclude chloride)

	Underground water observation hole No.0-1	Underground water observation hole No.0-1-1	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.1-8	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
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）														

	Underground water observation hole No.1-17	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	Groundwater pumped up from the well point (between Unit 2 and 3)	Underground water observation hole No.3*	Underground water observation hole No.3-4	Underground water observation hole No.3-5
Date of sampling			Jan 22, 2014	Jan 22, 2014	Jan 22, 2014			Jan 22, 2014	Jan 22, 2014	Jan 22, 2014	Jan 22, 2014	Jan 22, 2014
Time of sampling			9:58 AM	11:16 AM	9:28 AM			10:18 AM	10:10 AM	10:35 AM	10:10 AM	10:27 AM
Chloride (unit: ppm)			-	-	-			780	-	-	-	150
Cs-134 (Approx. 2 years)			ND(0.43)	12	ND(0.42)			0.59	ND(0.61)	0.52	1.1	2.6
Cs-137 (Approx.30 years)			0.56	30	0.85			1.0	ND(0.70)	0.70	2.2	7.0
The other γ												
The other γ												
The other γ												
The other γ												
Gross β			370	500	990			140	140,000	ND(17)	ND(17)	68[*1]
H-3 (Approx. 12 years)			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.

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

*1 The highest dose among the results previously announced in the "Detailed Analysis Results in the Port of Fukushima Daiichi NPS, around Discharge Channel and Bank Protection".

<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*
Cs-134 (Approx. 2 years)		7.6 〔12/15〕	ND	ND	0.61 〔10/13〕	0.44 〔11/24〕	0.82 <1/14>	ND	13 〔8/29〕	1.9 〔7/8〕	11,000 〔7/9〕	10 〔9/2〕	1.5 〔7/8〕	310 〔8/5〕
Cs-137 (Approx.30 years)		17 〔12/15〕〔12/29〕	0.58 〔12/7〕	0.51 〔11/17〕	2.2 <1/12>	0.86 〔11/20〕	2.1 <1/14>	1.4 <1/12>	31 〔8/29〕	3.6 〔7/8〕	22,000 〔7/9〕	24 〔9/2〕	3.6 〔7/8〕	650 〔8/5〕
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
	Mn-54 (Approx. 310 days)	ND	ND	ND	ND	ND	0.40 <1/5> <1/16>	ND	ND	1.0 〔7/5〕	62 〔7/5〕	ND	ND	ND
	Co-60 (Approx. 5 years)	ND	ND	ND	ND	ND	ND	ND	0.50 〔7/19〕	ND	3.1 〔7/8〕	ND	ND	ND
	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〕
Gross β		300 〔8/22〕	21 〔12/7〕	21 〔11/10〕	87 〔10/13〕	ND	67*2 〔12/11〕	29 〔12/29〕	1,900 〔5/24〕	4,400 〔7/8〕	900,000 〔7/5〕〔7/9〕	160,000 〔8/12〕〔8/15〕	380 〔8/19〕	56,000 〔8/5〕
H-3 (Approx. 12 years)		45,000 〔8/29〕	18,000 〔12/7〕	74,000 〔12/15〕	4,700 <1/12>	ND	73,000 <1/14> <1/16>	46,000 <1/12>	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〕
Sr-90(Approx. 29 years)		Under analysis	Under analysis	Under analysis	0.73 〔9/2〕	Under analysis	Under analysis	Under analysis	1,300 〔8/22〕	Under analysis	Under analysis	Under analysis	Under analysis	5,100 〔8/22〕

Unit: Bq/L

		Groundwater observation hole No.1-8	Groundwater observation hole No.1-9	Groundwater observation hole No.1-11	Groundwater observation hole No.1-12	Groundwater observation hole No.1-14	Groundwater observation hole No.1-16	Groundwater observation hole No.1-17	Groundwater pumped up from the well point (between Unit 1 and 2)
Cs-134 (Approx. 2 years)		47 〔11/25〕	170 〔9/3〕	1.1 <1/13>	74 〔10/21〕	1.2 〔11/14〕	3.1*2 〔12/13〕	1.2 〔12/5〕	110 〔9/23〕
Cs-137 (Approx.30 years)		110 〔11/25〕	380 〔9/3〕	2.8 <1/13>	170 〔10/21〕	2.3 〔11/21〕	3.4 〔10/10〕	0.66 〔12/12〕	250 〔9/23〕
The other γ	Ru-106 (Approx. 370 days)	ND	ND	ND	5.4 〔10/28〕	ND	9.2 〔10/28〕	4.1 〔12/12〕	25 〔9/2〕
	Mn-54 (Approx. 310 days)	9.7 〔12/16〕	ND	ND	ND	ND	ND	ND	0.85 <1/20>
	Co-60 (Approx. 5 years)	0..70 <1/20>	ND	ND	0.51 〔10/24〕	ND	0.9 〔11/7〕	0.61 〔11/25〕	ND
	Sb-125 (Approx. 3 years)	ND	ND	ND	61 〔10/21〕	ND	11 〔12/5〕	2.1 〔11/25〕	ND
Gross β		39,000 <1/6>	2,100 〔11/17〕	2,300 〔12/26〕	730 〔10/21〕	410 <1/16>	3,100,000 <1/20>	130 〔12/2〕〔12/23〕	700,000 〔9/23〕
H-3 (Approx. 12 years)		12,000 <1/6>	860 〔11/14〕	85,000 〔9/13〕	440,000 〔10/31〕	11,000 〔11/25〕	43,000 〔9/26〕	31,000 <1/16>	460,000 〔8/19〕
Sr-90(Approx. 29 years)		1,300 〔9/16〕	170 〔9/3〕	17 〔9/13〕	Under analysis	Under analysis	Under analysis	Under analysis	-

Unit: Bq/L

		Groundwater observation hole No.2	Groundwater observation hole No.2-1*	Groundwater observation hole No.2-2	Groundwater observation hole No.2-3	Groundwater observation hole No.2-5*1	Groundwater observation hole No.2-6	Groundwater observation hole No.2-7	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.3-4	Groundwater observation hole No.3-5
Cs-134 (Approx. 2 years)		0.50 〔7/9〕	0.66 〔9/1〕	13 <1/15>	0.84 <1/5>	13 <1/8>	0.56 〔10/30〕	1.5 <1/12>	1.1 〔12/12〕	3.5 〔7/25〕	1.2 〔7/25〕〔8/8〕	1.9 <1/8>	64 <1/15>
Cs-137 (Approx.30 years)		1.2 〔7/11〕〔8/1〕	1.1 〔8/29〕〔9/1〕	31 <1/15>	2.6 <1/5>	30 <1/8>	0.61 〔10/13〕	3.6 <1/12>	2.4 〔12/7〕	5.9 〔8/8〕	2.6 〔8/1〕	4.3 〔11/27〕	170 <1/15>
The other γ	Ru-106 (Approx. 370 days)	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	-
	Mn-54 (Approx. 310 days)	ND	ND	ND	0.29 〔12/6〕	0.94 <1/8>	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	ND	ND	ND	26 〔9/29〕	ND	ND	ND	1.6 <1/1>	ND	ND	-
Gross β		1,700 〔7/8〕	380 〔7/29〕	530 〔12/29〕	1,500 〔12/6〕	46,000 〔9/29〕	3,200 〔12/5〕	270 〔12/20〕	240,000 〔12/12〕	1,400 〔7/11〕	180 〔8/1〕	ND	43 〔12/18〕
H-3 (Approx. 12 years)		870 〔12/8〕	440 〔8/26〕	660 <1/8>	1,700 〔12/6〕	6,300 〔12/4〕	1,200 〔11/24〕〔11/27〕	1,000 〔11/21〕〔12/4〕<1/15><1/17>	5,100 〔12/6〕	3,200 〔2012/12/12〕	460 〔8/1〕	170 〔9/18〕	170 <1/8>
Sr-90(Approx. 29 years)		54 〔5/31〕	Under analysis	Under analysis	Under analysis	Under analysis	Under analysis	Under analysis	-	8.3 〔2012/12/12〕	Under analysis	Under analysis	-

● Since some samples are still under analysis, the highest dose of the Strontium-90 is among those previously announced
*1 The analysis result of No.2-5 obtained on September 29 is the reference value, since we could not sample groundwater by a regular procedure
*2 Analysis result of pumped water.

* "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.