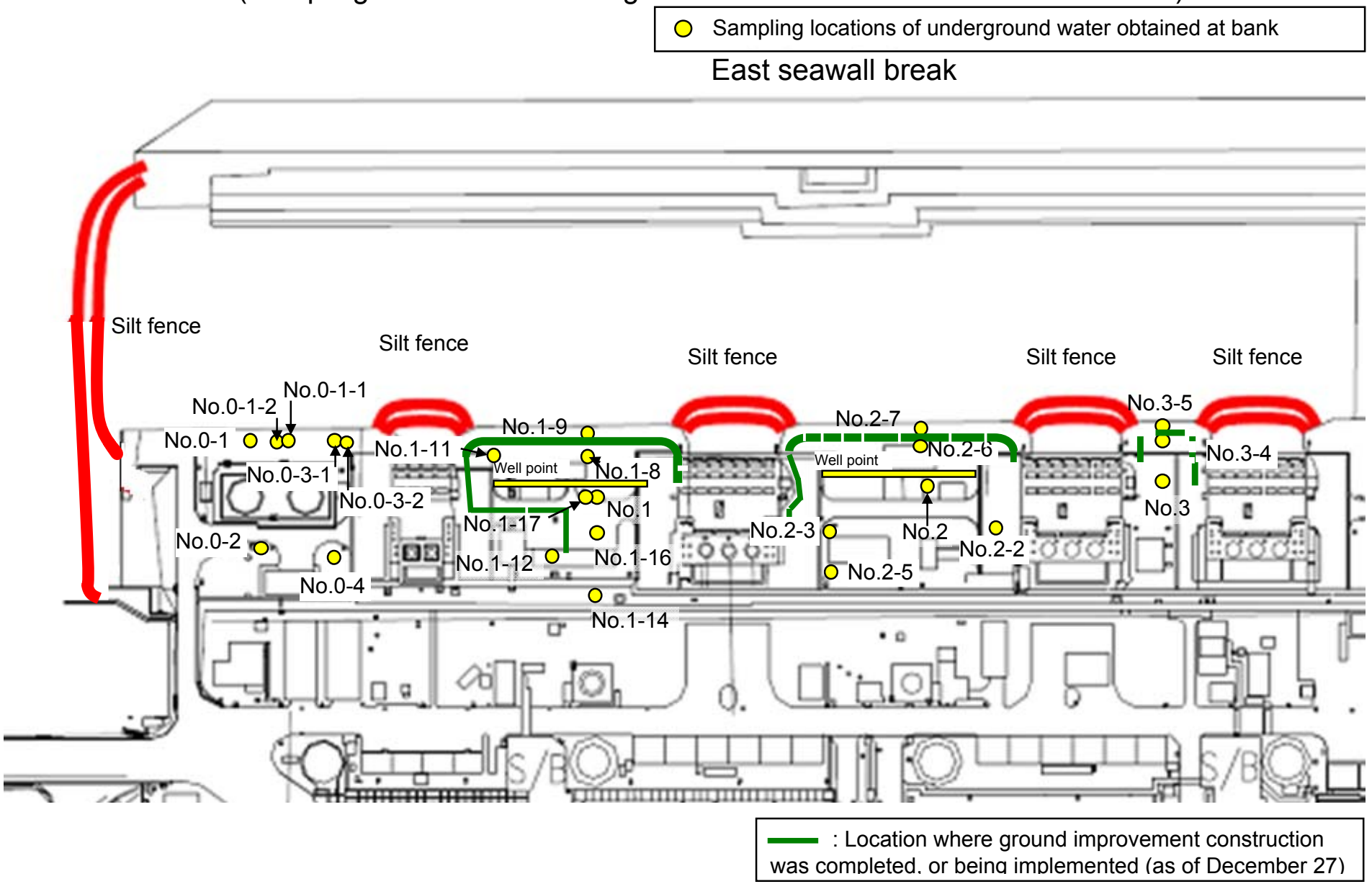
<Reference>
January 31, 2014
Tokyo Electric Power Company

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
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.1-16 (P)	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 30, 2014												
Time of sampling		11:00 AM												
Chloride (unit: ppm)		-												
Cs-134 (Approx. 2 years)		ND(2.1)												
Cs-137 (Approx.30 years)		ND(1.0)												
The other γ	Sb-125 (Approx. 3 years)	10												
Gross β		1,700,000												
H-3 (Approx. 12 years)		41,000												
Sr-90（Approx. 29 years）		Under analysis												

* Data announced this time is provided in a thick-frame. The other data was announced on January 30.
* "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*
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)		19*3 <1/26>	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	0.56 <1/27>	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] <1/19>	6,400 <1/26>	ND	73,000 <1/14> <1/16> <1/23>	48,000 <1/26>	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.1-10	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	0.92 <1/27>
	Co-60 (Approx. 5 years)	0..78 <1/27>	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〕	78*4 <1/27>	2,300 〔12/26〕	730 〔10/21〕	440 <1/30>	3,100,000 <1/20> <1/30>	130 〔12/2〕〔12/23〕	700,000 〔9/23〕
H-3 (Approx. 12 years)		12,000 <1/6>	860 〔11/14〕	270,000*4 <1/27>	85,000 〔9/13〕	440,000 〔10/31〕	15,000 <1/27>	43,000 〔9/26〕	32,000 <1/20>	460,000 〔8/19〕
Sr-90(Approx. 29 years)		1,300 〔9/16〕	170 〔9/3〕	Under analysis	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	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> <1/29>	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〕	34 <1/29>	2.6 <1/5>	30 <1/8>	0.71 <1/30>	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*1 〔9/29〕	ND	ND	ND	1.6 <1/1>	ND	ND	-
Gross β		1,700 〔7/8〕	380 〔7/29〕	540 <1/29>	1,500 〔12/6〕	46,000*1 〔9/29〕	3,200 〔12/5〕	270 〔12/20〕	240,000 〔12/12〕	1,400 〔7/11〕	180 〔8/1〕	ND	69 <1/29>
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〕	1,100 <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	ND	-

● 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.

*3 The results obtained on in the observation hole No.0-1 are for a reference, since the water was highly turbid. (γ and Gross β were measured after filtration.)

*4 The results obtained on in the observation hole No.1-10 are for a reference, since the water was highly turbid. (γ and Gross β were measured after filtration. If filtration takes a long time, γ will not be analyzed.

* "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.