

<Reference>

# **Progress Status of the Ground Improvement/ Historical Data of Radioactive Density in Groundwater at the East Side of Turbine Buildings**

**December 20, 2013**

**Tokyo Electric Power Company**



**東京電力**

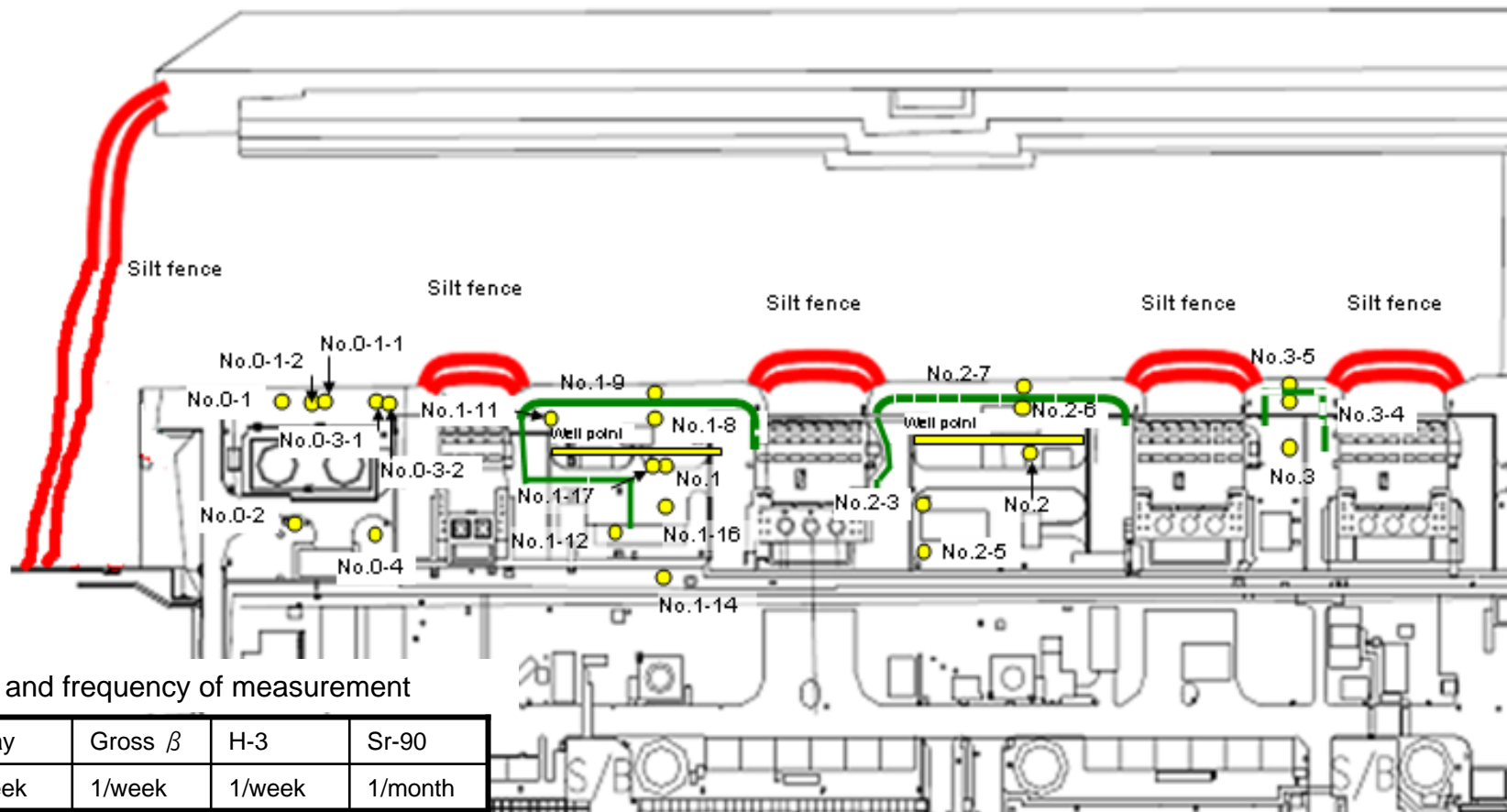
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To prevent outflow of contaminated water into the port, ground improvement construction is undergoing at the east side of Unit 1-4 Turbine Buildings.

Results of radioactive nuclide analysis are published for the samples of groundwater at the east side of Unit 1-4 Turbine Buildings and seawater at the port in order to monitor the source and the extent of the radioactive materials in the groundwater, and whether the materials included in groundwater affect the sea.

● Sampling locations of underground water obtained at bank protection

East seawall break



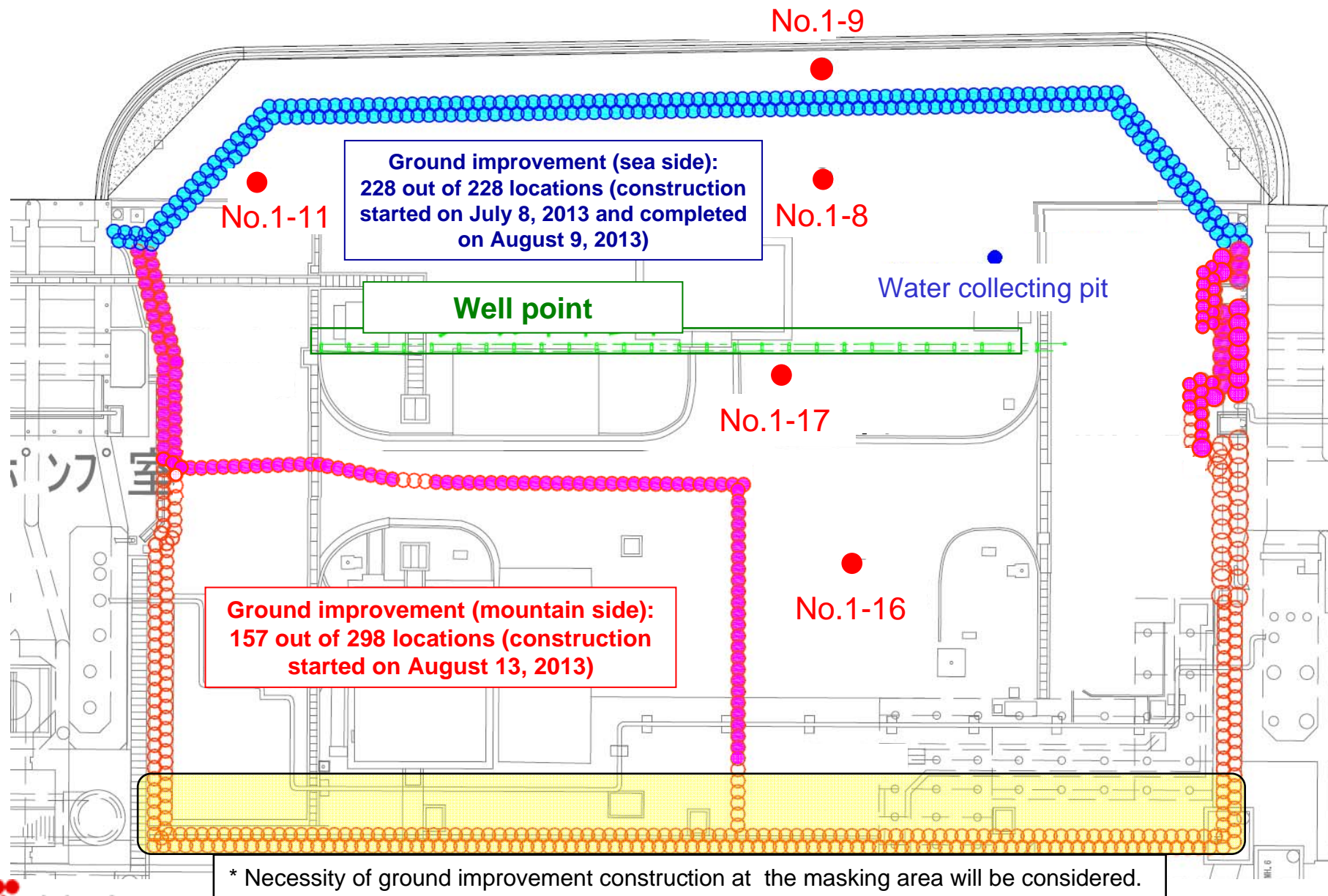
Item and frequency of measurement

$\gamma$ ray	Gross $\beta$	H-3	Sr-90
1/week	1/week	1/week	1/month

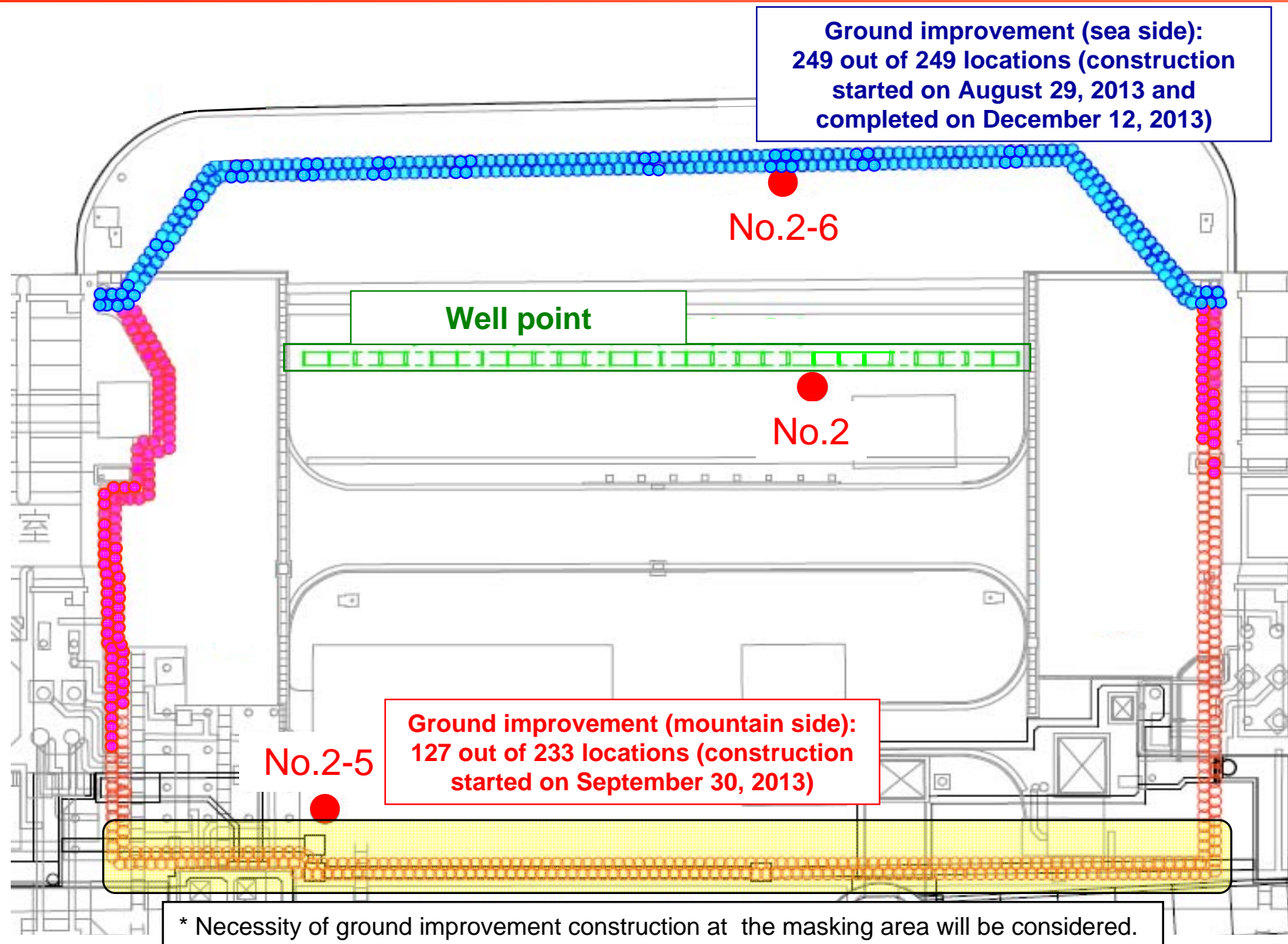
\* Frequency of the measurement is subject to change as needed.

— : Location where ground improvement construction was completed, or being implemented (as of December 4)

# Progress Status of Ground Improvement Construction between Unit 1 and 2 (As of the Morning on December 20)



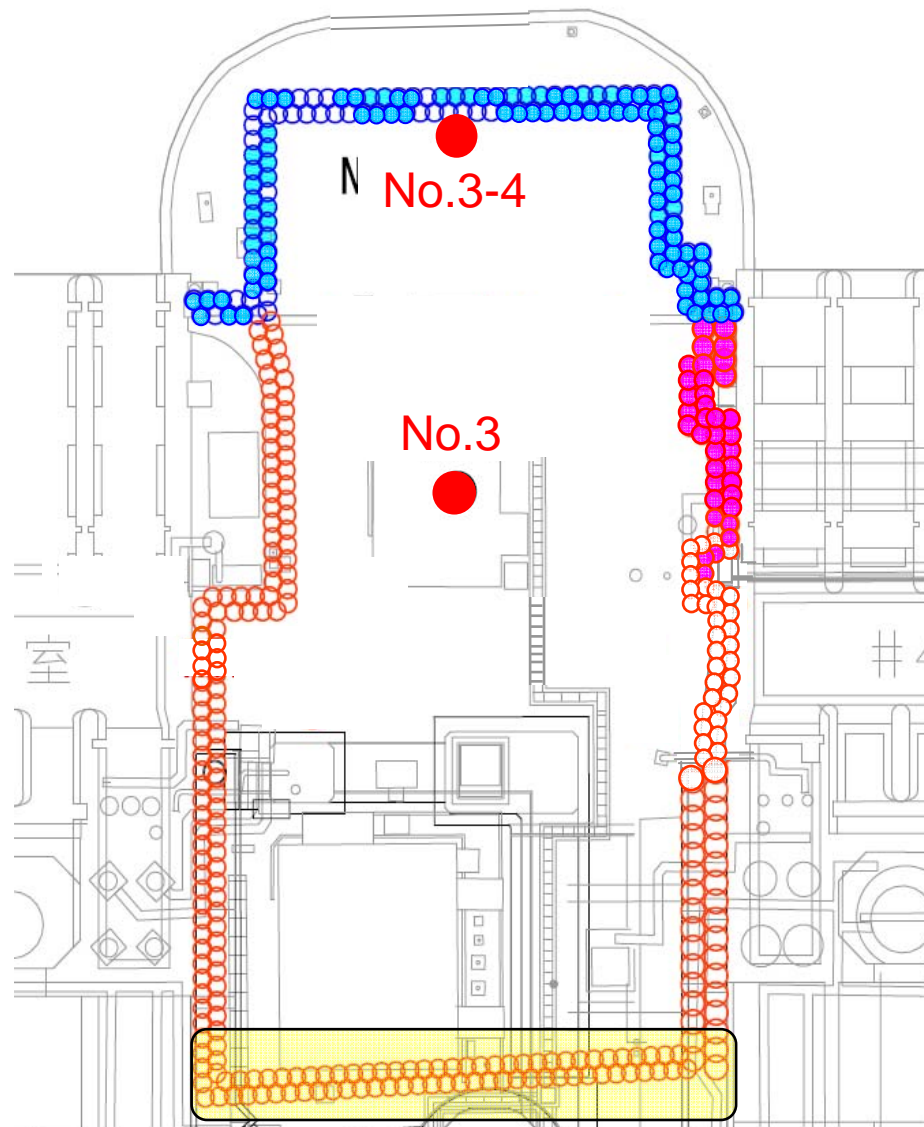
# Progress Status of Ground Improvement Construction between Unit 2 and 3 (As of the Morning on December 20)



# Progress Status of Ground Improvement Construction between Unit 3 and 4 (As of the Morning on December 20)

Ground improvement (sea side):  
105 out of 132 locations (construction  
started on August 23, 2013)

Ground improvement (mountain side):  
36 out of 207 locations (construction  
started on October 19, 2013)



\* Necessity of ground improvement construction at the masking area will be considered.

**Groundwater observation hole No.0-1 (Bq/L)**

Sampling date	2013/8/8	2013/8/8 (Remeasurement)	2013/8/10	2013/8/15	2013/8/22	2013/8/29	2013/9/1	2013/9/8	2013/9/15	2013/9/22
Sampling time	2:15 PM	2:15 PM	9:35 AM	10:52 AM	9:41 AM	9:50 AM	11:03 AM	12:02 PM	9:52 AM	10:25 AM
Cs-134	0.61		0.66	0.39	ND (0.42)	1.4	0.80	0.92	1.7	2.1
Cs-137	1.6		1.2	1.1	0.64	3.0	2.1	2.4	4.4	4.6
Ru-106	ND		ND	ND	ND	ND	ND	ND	ND	ND
Mn-54	ND		ND	ND	ND	ND	ND	ND	ND	ND
Co-60	ND		ND	ND	ND	ND	ND	ND	ND	ND
Sb-125	ND		ND	ND	ND	ND	ND	ND	ND	ND
Gross β	210		290	210	300	86	160	79	170	120
H-3	23,000	23,000	34,000	35,000	42,000	45,000	38,000	30,000	20,000	19,000
Sr-90	Under measurement		-	-	-	-	-	-	-	-

\* "ND" indicates that the measurement result is below the detection limit, and the detection limit of each nuclide is provided in parentheses

Sampling date	2013/9/29	2013/10/6	2013/10/13	2013/10/20	2013/10/27	2013/11/3	2013/11/10	2013/11/17	2013/11/24	2013/12/1
Sampling time	9:54 AM	9:45 AM	9:50 AM	9:37 AM	9:50 AM	9:47 AM	10:04 AM	9:42 AM	9:47 AM	9:47 AM
Cs-134	3.0	2.3	2.9	5.1	2.4	3.5	6.3	5.3	5.9	6.5
Cs-137	5.8	5.9	6.7	9.5	5.8	8.8	14	12	13	16
Ru-106	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Mn-54	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Co-60	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Sb-125	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Gross β	170	160	180	130	61	110	80	93	97	89
H-3	19,000	16,000	19,000	11,000	8,600	26,000	31,000	28,000	26,000	27,000
Sr-90	-	-	-	-	-	-	-	-	-	-

\* "ND" indicates that the measurement result is below the detection limit, and the detection limit of each nuclide is provided in parentheses

Sampling date	2013/12/8	2013/12/15
Sampling time	12:10 PM	11:36 AM
Cs-134	5.4	7.6
Cs-137	12	17
Ru-106	ND	ND
Mn-54	ND	ND
Co-60	ND	ND
Sb-125	ND	ND
Gross β	110	100
H-3	26,000	Under measurement
Sr-90	-	-

\* "ND" indicates that the measurement result is below the detection limit, and the detection limit of each nuclide is provided in parentheses

**Groundwater observation hole No.0-1-1 (Bq/L)**

Sampling date	2013/12/7
Sampling time	11:15 AM
Cs-134	ND (0.46)
Cs-137	0.58
Ru-106	ND
Mn-54	ND
Co-60	ND
Sb-125	ND
Gross $\beta$	21
H-3	18,000
Sr-90	Under measurement

\* "ND" indicates that the measurement result is below the detection limit, and the detection limit of each nuclide is provided in parentheses

**Groundwater observation hole No.0-1-2 (Bq/L)**

Sampling date	2013/11/10	2013/11/17	2013/11/24	2013/12/1	2013/12/8	2013/12/15
Sampling time	12:42 PM	10:02 AM	10:11 AM	10:07 AM	11:25 AM	11:50 AM
Cs-134	ND (0.42)	ND (0.40)	ND (0.37)	ND (0.42)	ND (0.41)	ND (0.38)
Cs-137	ND (0.52)	0.51	ND (0.44)	ND (0.46)	ND (0.55)	ND (0.42)
Ru-106	ND	ND	ND	ND	ND	ND
Mn-54	ND	ND	ND	ND	ND	ND
Co-60	ND	ND	ND	ND	ND	ND
Sb-125	ND	ND	ND	ND	ND	ND
Gross $\beta$	21	ND (18)	ND (21)	ND (17)	15	ND (17)
H-3	36,000	48,000	64,000	65,000	66,000	Under measurement
Sr-90	Under measurement	-	-	-	-	-

\* "ND" indicates that the measurement result is below the detection limit, and the detection limit of each nuclide is provided in parentheses

**Groundwater observation hole No.0-2 (Bq/L)**

Sampling date	2013/9/2	2013/9/8	2013/9/15	2013/9/22	2013/9/29	2013/10/6	2013/10/13	2013/10/20	2013/10/27	2013/11/3
Sampling time	9:51 AM	12:35 PM	10:32 AM	11:15 AM	10:52 AM	11:20 AM	11:08 AM	11:04 AM	10:40 AM	10:37 AM
Cs-134	ND (0.47)	ND (0.46)	ND (0.42)	ND (0.45)	ND (0.39)	ND (0.34)	0.61	ND (0.41)	ND (0.42)	ND (0.44)
Cs-137	0.75	0.67	0.93	ND (0.55)	ND (0.46)	0.52	1.6	0.76	0.58	0.72
Ru-106	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Mn-54	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Co-60	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Sb-125	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Gross $\beta$	ND (24)	ND (17)	19	37	24	28	87	ND (15)	22	ND (17)
H-3	ND (120)	ND (130)	ND (120)	ND (120)	ND (120)	ND (110)	ND (120)	ND (130)	ND (120)	ND (120)
Sr-90	Under measurement	-	-	-	-	-	-	-	-	-

\* "ND" indicates that the measurement result is below the detection limit, and the detection limit of each nuclide is provided in parentheses

Sampling date	2013/11/10	2013/11/17	2013/11/24	2013/12/1	2013/12/8	2013/12/15
Sampling time	11:03 AM	10:42 AM	11:47 AM	11:52 AM	9:36 AM	9:47 AM
Cs-134	0.46	ND (0.39)	0.59	ND (0.41)	ND (0.40)	ND (0.46)
Cs-137	0.80	ND (0.54)	1.4	0.49	ND (0.47)	0.79
Ru-106	ND	ND	ND	ND	ND	ND
Mn-54	ND	ND	ND	ND	ND	ND
Co-60	ND	ND	ND	ND	ND	ND
Sb-125	ND	ND	ND	ND	ND	ND
Gross $\beta$	ND (17)	ND (18)	ND (21)	ND (17)	18	ND (17)
H-3	ND (110)	130	260	1,100	1,800	Under measurement
Sr-90	-	-	-	-	-	-

\* "ND" indicates that the measurement result is below the detection limit, and the detection limit of each nuclide is provided in parentheses

#### Groundwater observation hole No.0-3-1 (Bq/L)

Sampling date	2013/11/20	2013/11/24	2013/12/1	2013/12/8	2013/12/15
Sampling time	12:44 PM	11:02 AM	10:37 AM	11:00 AM	11:24 AM
Cs-134	ND (0.42)	0.44	ND (0.44)	ND (0.48)	ND (0.43)
Cs-137	0.86	0.76	0.83	0.62	0.57
Ru-106	ND	ND	ND	ND	ND
Mn-54	ND	ND	ND	ND	ND
Co-60	ND	ND	ND	ND	ND
Sb-125	ND	ND	ND	ND	ND
Gross $\beta$	ND (21)	ND (21)	ND (17)	ND (15)	ND (17)
H-3	ND (120)	ND (120)	ND (110)	ND (110)	Under measurement
Sr-90	Under measurement	-	-	-	-

\* "ND" indicates that the measurement result is below the detection limit, and the detection limit of each nuclide is provided in parentheses

#### Groundwater observation hole No.0-3-2 (Bq/L)

Sampling date	2013/12/6	2013/12/11 (pumped water)	2013/12/12 (pumped water)	2013/12/13 (pumped water)	2013/12/16 (pumped water)	2013/12/17 (pumped water)	2013/12/18 (pumped water)
Sampling time	1:53 PM	1:00 PM	12:00 PM	12:00 PM	1:00 PM	12:00 PM	12:00 PM
Cs-134	ND (0.38)	ND (0.38)	ND (0.40)	ND (0.41)	ND (0.62)	ND (0.37)	ND (0.40)
Cs-137	0.54	ND (0.46)	0.56	ND (0.47)	ND (0.64)	ND (0.48)	ND (0.51)
Ru-106	ND	ND	ND	ND	ND	ND	ND
Mn-54	ND	ND	ND	ND	ND	ND	ND
Co-60	ND	ND	ND	ND	ND	ND	ND
Sb-125	ND	ND	ND	ND	ND	ND	ND
Gross $\beta$	19	67	ND (17)	ND (18)	63,000*	ND (17)	ND (20)
H-3	64,000	66,000	67,000	68,000	65,000*	Under measurement	Under measurement
Sr-90	Under measurement	-	-	-	-	-	-

\* "ND" indicates that the measurement result is below the detection limit, and the detection limit of each nuclide is provided in parentheses

\*\*" next to the value indicates that this value is just for a reference, since the result of gross  $\beta$  in the groundwater observation hole No.0-3-2 obtained on December 17 was below the detection limit value (equivalent to the result obtained previously on December 13), and it is supposed that the radioactive material has mixed into the water obtained on December 16.



**Groundwater observation hole No.0-4 (Bq/L)**

Sampling date	2013/10/27	2013/11/3	2013/11/10	2013/11/17	2013/11/24	2013/12/1	2013/12/8	2013/12/15
Sampling time	12:25 PM	12:00 PM	12:10 PM	11:35 AM	12:55 PM	1:08 PM	10:30 AM	10:43 AM
Cs-134	ND (0.38)	ND (0.41)	ND (0.44)	ND (0.40)	ND (0.37)	ND (0.36)	ND (0.38)	ND (0.44)
Cs-137	ND (0.49)	ND (0.53)	0.48	ND (0.52)	ND (0.48)	0.49	ND (0.49)	ND (0.54)
Ru-106	ND	ND	ND	ND	ND	ND	ND	ND
Mn-54	ND	ND	ND	ND	ND	ND	ND	ND
Co-60	ND	ND	ND	ND	ND	ND	ND	ND
Sb-125	ND	ND	ND	ND	ND	ND	ND	ND
Gross β	ND (19)	ND (17)	ND (17)	ND (18)	ND (21)	ND (17)	15	ND (17)
H-3	13,000	17,000	19,000	16,000	15,000	20,000	20,000	Under measurement
Sr-90	Under measurement	-	-	-	-	-	-	-

\* "ND" indicates that the measurement result is below the detection limit, and the detection limit of each nuclide is provided in parentheses

**Groundwater observation hole No.1 (Bq/L)**

Sampling date	2012/12/8 <sup>1</sup>	2013/5/24	2013/5/31	2013/6/7 ①	2013/6/7 ②	2013/6/14 ①	2013/6/14 ②	2013/6/21	2013/6/25	2013/6/28
Sampling time	11:00 AM	4:19 PM	3:01 PM	3:45 PM	3:45 PM	2:29 PM	2:29 PM	9:01 AM	1:39 PM	5:50 PM
Cs-134	ND (0.59)	ND (0.45)	0.53	ND (0.42)	ND (0.40)	ND (0.37)	ND (0.37)	ND (0.36)	ND (0.39)	ND (0.40)
Cs-137	ND (0.72)	ND (0.45)	0.57	ND (0.53)	0.49	ND (0.43)	0.51	0.53	ND (0.49)	ND (0.43)
Ru-106	ND	26	19	19	21	18	19	16	20	16
Mn-54	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Co-60	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Sb-125	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Gross β	150	1,900	1,300	1,700	1,600	1,200	1,300	1,500	1,400	1,400
H-3	29,000	500,000	460,000	500,000	470,000	450,000	440,000	430,000	450,000	430,000
Sr-90	8.6	1,000	890	1,200	1,200	Under measurement	Under measurement	Under measurement	-	-

\* "ND" indicates that the measurement result is below the detection limit, and the detection limit of each nuclide is provided in parentheses

\*1 As of γ nuclide measurement, the amount is lower than true value since the high BG is in use.

Sampling date	2013/7/1	2013/7/4	2013/7/8	2013/7/11	2013/7/15	2013/7/19	2013/7/22	2013/7/25	2013/7/29	2013/8/1
Sampling time	3:05 PM	11:50 AM	1:30 PM	12:51 PM	1:00 PM	8:02 AM	1:21 PM	1:15 PM	11:50 AM	11:55 AM
Cs-134	1.1	ND (0.64)	ND (0.50)	ND (0.61)	ND (0.43)	ND (0.48)	ND (0.42)	ND (0.42)	ND (0.46)	ND (0.44)
Cs-137	1.5	ND (0.47)	ND (0.47)	1.0	ND (0.49)	0.73	ND (0.45)	ND (0.55)	ND (0.51)	0.55
Ru-106	ND	24	16	15	18	17	ND	12	17	14
Mn-54	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Co-60	ND	ND	ND	ND	ND	0.50	ND	ND	ND	ND
Sb-125	ND	ND	ND	1.7	ND	ND	ND	ND	ND	ND
Gross β	1,300	1,500	1,800	1,600	1,500	1,400	1,400	1,400	1,300	1,300
H-3	420,000	430,000	410,000	390,000	400,000	420,000	430,000	430,000	420,000	440,000
Sr-90	-	-	-	-	-	-	-	Under measurement	-	-

\* "ND" indicates that the measurement result is below the detection limit, and the detection limit of each nuclide is provided in parentheses

Sampling date	2013/8/5	2013/8/8	2013/8/12	2013/8/15	2013/8/19	2013/8/22	2013/8/26	2013/8/29	2013/8/30	2013/9/2
Sampling time	12:23 PM	11:29 AM	10:46 AM	12:01 PM	10:21 AM	10:58 AM	10:36 AM	10:15 AM	11:25 AM	10:07 AM
Cs-134	ND (0.52)	0.52	ND (0.42)	ND (0.54)	3.2	ND (0.57)	ND (0.47)	13	0.98	1.5
Cs-137	0.62	1.1	0.50	ND (0.49)	4.3	0.66	0.84	31	2.1	3.5
Ru-106	17	15	12	11	14	7.9	14	17	17	11
Mn-54	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Co-60	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Sb-125	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Gross β	1,400	1,300	1,700	1,700	1,500	1,500	1,500	1,400	1,700	1,300
H-3	430,000	430,000	380,000	370,000	310,000	430,000	420,000	390,000	390,000	400,000
Sr-90	-	-	-	-	-	Under measurement	-	-	-	-

\* "ND" indicates that the measurement result is below the detection limit, and the detection limit of each nuclide is provided in parentheses

Sampling date	2013/9/5	2013/9/9	2013/9/12	2013/9/16	2013/9/19	2013/9/23	2013/9/26	2013/9/30	2013/10/3	2013/10/7
Sampling time	9:40 AM	10:51 AM	9:30 AM	10:25 AM	10:02 AM	11:11 AM	9:51 AM	9:45 AM	10:28 AM	10:35 AM
Cs-134	2.5	ND (0.40)	ND (0.46)	ND (0.57)	ND (0.43)	ND (0.44)	ND (0.45)	ND (0.49)	ND (0.52)	ND (0.56)
Cs-137	5.7	0.72	ND (0.58)	ND (0.67)	ND (0.57)	0.81	1.1	ND (0.59)	0.62	ND (0.58)
Ru-106	12	12	6.5	7.6	7.0	7.3	6.2	6.0	4.4	4.4
Mn-54	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Co-60	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Sb-125	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.2
Gross β	1,500	650	1,000	940	770	820	510	560	660	430
H-3	370,000	350,000	360,000	360,000	330,000	310,000	330,000	290,000	280,000	270,000
Sr-90	-	-	-	-	Under measurement	-	-	-	-	-

\* "ND" indicates that the measurement result is below the detection limit, and the detection limit of each nuclide is provided in parentheses

Sampling date	2013/10/10	2013/10/14	2013/10/17	2013/10/21	2013/10/24	2013/10/28	2013/10/31	2013/11/4	2013/11/7	2013/11/11
Sampling time	10:00 AM	1:05 PM	10:15 AM	12:24 PM	12:55 PM	11:14 AM	10:59 AM	10:11 AM	10:10 AM	10:02 AM
Cs-134	ND (0.51)	ND (0.39)	ND (0.40)	ND (0.45)	ND (0.44)	ND (0.40)	ND (0.45)	ND (0.47)	ND (0.43)	ND (0.36)
Cs-137	1.4	0.74	0.59	ND (0.54)	0.57	0.51	ND (0.54)	ND (0.48)	ND (0.54)	0.66
Ru-106	6.0	5.6	ND	5.3	6.1	ND	5.6	ND	3.7	ND
Mn-54	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Co-60	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Sb-125	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Gross β	310	670	450	330	380	570	420	420	370	440
H-3	290,000	260,000	250,000	250,000	240,000	240,000	230,000	230,000	230,000	220,000
Sr-90	-	Under measurement	-	-	-	-	-	-	-	Under measurement

\* "ND" indicates that the measurement result is below the detection limit, and the detection limit of each nuclide is provided in parentheses

Sampling date	2013/11/14	2013/11/18	2013/11/21	2013/11/25	2013/11/28	2013/12/2	2013/12/5	2013/12/9	2013/12/12	2013/12/16
Sampling time	10:45 AM	10:12 AM	10:50 AM	10:43 AM	10:01 AM	10:52 AM	11:27 AM	10:22 AM	10:30 AM	11:00 AM
Cs-134	ND (0.48)	ND (0.50)	0.47	ND (0.43)	ND (0.47)	ND (0.41)	ND (0.40)	0.66	ND (0.47)	ND (0.41)
Cs-137	0.54	0.70	1.2	ND (0.45)	ND (0.54)	ND (0.49)	0.5	1.1	ND (0.55)	0.9
Ru-106	3.9	ND	2.8	4.6	ND	3.5	3.5	ND	ND	2.8
Mn-54	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Co-60	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Sb-125	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Gross β	490	480	430	570	490	470	480	540	500	460
H-3	380,000	220,000	220,000	230,000	220,000	220,000	230,000	230,000	230,000	Under measurement
Sr-90	-	-	-	-	-	-	-	Under measurement	-	-

\* "ND" indicates that the measurement result is below the detection limit, and the detection limit of each nuclide is provided in parentheses

**Groundwater observation hole No.1-1 (Bq/L) \* Observation hole where sampling could not be performed due to the ground improvement construction**

Sampling date	2013/6/28	2013/7/1	2013/7/5	2013/7/8
Sampling time	4:40 PM	4:05 PM	11:00 AM	2:35 PM
Cs-134	ND (0.41)	ND (0.44)	ND (0.42)	1.9
Cs-137	ND (0.51)	0.98	0.55	3.6
Ru-106	ND	7.8	7.7	7.9
Mn-54	0.52	0.92	1.0	0.78
Co-60	ND	ND	ND	ND
Sb-125	ND	ND	ND	ND
Gross β	3,000	4,300	3,800	4,400
H-3	430,000	510,000	600,000	630,000
Sr-90	Under measurement	-	-	-

\* "ND" indicates that the measurement result is below the detection limit, and the detection limit of each nuclide is provided in parentheses

**Groundwater observation hole No.1-2 (Bq/L) \* Observation hole where sampling could not be performed due to the ground improvement construction**

Sampling date	2013/7/5	2013/7/8	2013/7/8 (Filtration)	2013/7/9	2013/7/9 (Filtration)	2013/7/9 (Residue)	2013/7/11	2013/7/11 (Filtration)	2013/7/15	2013/7/15 (Filtration)
Sampling time	12:10 PM	2:00 PM	2:00 PM	1:00 PM	1:00 PM	1:00 PM	1:25 PM	1:25 PM	1:23 PM	1:23 PM
Cs-134	99	9,000	94	11,000	130	10,000	8,200	98	5,900	ND (21)
Cs-137	210	18,000	190	22,000	270	20,000	17,000	150	12,000	ND (21)
Ru-106	95	ND	/	ND	/	/	ND	/	ND	/
Mn-54	62	25	/	ND	/	/	ND	/	ND	/
Co-60	1.2	3.1	/	ND	/	/	ND	/	ND	/
Sb-125	35	ND	/	ND	/	/	ND	/	250	/
Gross β	900,000	890,000	920,000	900,000	890,000	/	890,000	/	890,000	/
H-3	380,000	360,000	/	370,000	/	/	380,000	/	350,000	/
Sr-90	Under measurement	-	/	-	/	/	-	/	-	/

\* "ND" indicates that the measurement result is below the detection limit, and the detection limit of each nuclide is provided in parentheses

Sampling date	2013/7/18	2013/7/18 (Filtration)	2013/7/22	2013/7/22 (Filtration)	2013/7/25	2013/7/25 (Filtration)	2013/7/29	2013/7/29 (Filtration)	2013/8/1	2013/8/1 (Filtration)
Sampling time	1:23 PM	1:23 PM	1:47 PM	1:47 PM	2:00 PM	2:00 PM	12:10 PM	12:10 PM	12:25 PM	12:25 PM
Cs-134	5,400	ND (25)	3,500	50	2,600	ND (22)	1,300	ND (18)	760	ND (26)
Cs-137	11,000	ND (25)	7,300	71	5,400	25	2,700	ND (21)	1,600	45
Ru-106	ND	/	ND	/	ND	/	ND	/	ND	/
Mn-54	ND	/	ND	/	ND	/	ND	/	ND	/
Co-60	ND	/	ND	/	ND	/	ND	/	ND	/
Sb-125	ND	/	ND	/	ND	/	180	/	110	/
Gross β	880,000	/	880,000	/	880,000	/	870,000	/	870,000	/
H-3	350,000	/	350,000	/	370,000	/	350,000	/	380,000	/
Sr-90	-	/	-	/	-	/	-	/	-	/

\* "ND" indicates that the measurement result is below the detection limit, and the detection limit of each nuclide is provided in parentheses

Sampling date	2013/8/5	2013/8/5 (Filtration)	2013/8/8	2013/8/8 (Filtration)	2013/8/12	2013/8/12 (Filtration)	2013/8/15	2013/8/15 (Filtration)	2013/8/19	2013/8/19 (Filtration)
Sampling time	12:46 PM	12:46 PM	1:38 PM	1:38 PM	12:27 PM	12:27 PM	1:35 PM	1:35 PM	12:06 PM	12:06 PM
Cs-134	350	ND (18)	200	19	180	ND (20)	150	ND (18)	880	53
Cs-137	750	ND (22)	400	29	400	ND (23)	360	38	1,900	97
Ru-106	ND	/	ND	/	ND	/	160	/	ND	/
Mn-54	ND	/	ND	/	ND	/	ND	/	ND	/
Co-60	ND	/	ND	/	ND	/	ND	/	ND	/
Sb-125	110	/	170	/	130	/	95	/	200	/
Gross β	880,000	/	880,000	/	890,000	/	880,000	/	870,000	/
H-3	390,000	/	170,000	/	180,000	/	300,000	/	180,000	/
Sr-90	-	/	Under measurement	/	-	/	-	/	-	/

\* "ND" indicates that the measurement result is below the detection limit, and the detection limit of each nuclide is provided in parentheses

Sampling date	2013/8/22	2013/8/22 (Filtration)	2013/8/26	2013/8/26 (Filtration)	2013/8/29	2013/8/29 (Filtration)	2013/9/2	2013/9/2 (Filtration)	2013/9/5	2013/9/5 (Filtration)
Sampling time	12:33 PM	12:33 PM	12:35 PM	12:35 PM	11:42 AM	11:42 AM	11:56 AM	11:56 AM	1:40 PM	1:40 PM
Cs-134	150	110	110	80	120	75	140	66	82	52
Cs-137	360	230	270	170	260	160	300	150	180	100
Ru-106	ND	/	ND	/	ND	/	ND	/	ND	/
Mn-54	ND	/	ND	/	ND	/	ND	/	ND	/
Co-60	ND	/	ND	/	ND	/	ND	/	ND	/
Sb-125	ND	/	ND	/	ND	/	ND	/	ND	/
Gross β	840,000	/	760,000	/	680,000	/	590,000	/	500,000	/
H-3	400,000	/	380,000	/	380,000	/	350,000	/	310,000	/
Sr-90	-	/	-	/	-	/	-	/	-	/

\* "ND" indicates that the measurement result is below the detection limit, and the detection limit of each nuclide is provided in parentheses

Sampling date	2013/9/9	2013/9/9 (Filtration)	2013/9/12	2013/9/12 (Filtration)	2013/9/16	2013/9/16 (Filtration)	2013/9/19	2013/9/19 (Filtration)	2013/9/23	2013/9/23 (Filtration)
Sampling time	1:37 PM	1:37 PM	9:58 AM	9:58 AM	10:54 AM	10:54 AM	10:26 AM	10:26 AM	10:45 AM	10:45 AM
Cs-134	54	41	110	35	78	39	90	23	71	42
Cs-137	110	94	270	100	180	96	200	100	170	75
Ru-106	ND		ND		ND		ND		ND	
Mn-54	ND		ND		ND		ND		ND	
Co-60	ND		ND		ND		ND		ND	
Sb-125	ND		ND		ND		ND		ND	
Gross β	460,000		430,000		430,000		350,000		280,000	
H-3	280,000		310,000		430,000		290,000		270,000	
Sr-90	-		-		-		-		-	

\* "ND" indicates that the measurement result is below the detection limit, and the detection limit of each nuclide is provided in parentheses

Sampling date	2013/9/26	2013/9/26 (Filtration)	2013/9/30	2013/9/30 (Filtration)	2013/10/3	2013/10/3 (Filtration)	2013/10/7
Sampling time	11:55 AM	11:55 AM	11:09 AM	11:09 AM	11:05 AM	11:05 AM	12:06 PM
Cs-134	150	58	520	370	440	330	1,400
Cs-137	360	140	1,200	800	970	710	2,800
Ru-106	ND		ND		ND		ND
Mn-54	ND		ND		ND		ND
Co-60	ND		ND		ND		ND
Sb-125	ND		ND		ND		ND
Gross β	270,000		160,000		200,000		250,000
H-3	270,000		62,000		57,000		54,000
Sr-90	-		-		-		-

\* "ND" indicates that the measurement result is below the detection limit, and the detection limit of each nuclide is provided in parentheses

**Groundwater observation hole No.1-3 (Bq/L) \* Observation hole where sampling could not be performed due to the ground improvement construction**

Sampling date	2013/7/12	2013/7/15	2013/7/18	2013/7/22	2013/7/25	2013/7/29	2013/8/1	2013/8/5	2013/8/8	2013/8/12
Sampling time	12:20 PM	1:20 PM	12:36 PM	12:33 PM	12:45 PM	11:26 AM	11:20 AM	11:18 AM	12:18 PM	11:20 AM
Cs-134	ND (0.66)	ND (0.46)	ND (0.39)	ND (0.46)	ND (0.44)	ND (0.44)	ND (0.50)	ND (0.61)	ND (0.55)	ND (0.55)
Cs-137	1.4	ND (0.54)	0.53	ND (0.58)	ND (0.62)	ND (0.47)	0.75	ND (0.60)	1.0	ND (0.67)
Ru-106	16	14	15	17	11	16	15	11	17	12
Mn-54	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Co-60	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Sb-125	1.4	ND	ND	ND	ND	ND	ND	ND	ND	ND
Gross β	92,000	100,000	120,000	150,000	150,000	150,000	150,000	150,000	150,000	160,000
H-3	290,000	250,000	270,000	260,000	260,000	250,000	250,000	230,000	240,000	210,000
Sr-90	Under measurement	-	-	-	-	-	-	-	Under measurement	-

\* "ND" indicates that the measurement result is below the detection limit, and the detection limit of each nuclide is provided in parentheses

Sampling date	2013/8/15	2013/8/19	2013/8/22	2013/8/26	2013/8/29	2013/9/2
Sampling time	12:26 PM	10:54 AM	11:25 AM	11:18 AM	10:38 AM	10:37 AM
Cs-134	ND (0.64)	ND (0.56)	1.0	1.1	1.3	10
Cs-137	ND (0.76)	ND (0.65)	2.3	2.1	3.3	24
Ru-106	11	14	12	5.1	4.6	ND
Mn-54	ND	ND	ND	ND	ND	ND
Co-60	ND	ND	ND	ND	ND	ND
Sb-125	ND	ND	ND	1.4	ND	ND
Gross β	160,000	120,000	130,000	61,000	33,000	21,000
H-3	190,000	190,000	220,000	250,000	230,000	200,000
Sr-90	-	-	-	-	-	-

\* "ND" indicates that the measurement result is below the detection limit, and the detection limit of each nuclide is provided in parentheses

**Groundwater observation hole No.1-4 (Bq/L) \* Observation hole where sampling could not be performed due to the ground improvement construction**

Sampling date	2013/7/8	2013/7/11	2013/7/15	2013/7/18	2013/7/22	2013/7/25	2013/7/29	2013/8/1	2013/8/5	2013/8/8
Sampling time	3:30 PM	12:25 PM	11:55 AM	12:03 PM	12:18 PM	12:00 PM	10:51 AM	10:43 AM	10:40 AM	11:00 AM
Cs-134	1.5	0.91	ND (0.41)	0.67	ND (0.43)	0.49	0.48	0.50	ND (0.46)	0.55
Cs-137	3.6	2.0	0.67	1.0	1.1	0.88	1.1	1.4	0.65	1.2
Ru-106	ND	ND	ND	ND	ND	ND	ND	ND	ND	3.1
Mn-54	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Co-60	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Sb-125	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Gross β	330	250	67	50	110	110	78	130	130	170
H-3	69,000	98,000	60,000	42,000	46,000	50,000	51,000	57,000	64,000	76,000
Sr-90	Under measurement	-	-	-	-	-	-	-	-	Under measurement

\* "ND" indicates that the measurement result is below the detection limit, and the detection limit of each nuclide is provided in parentheses

Sampling date	2013/8/12	2013/8/15	2013/8/19	2013/8/22
Sampling time	10:21 AM	11:30 AM	9:50 AM	10:20 AM
Cs-134	ND (0.41)	ND (0.47)	1.1	1.0
Cs-137	1.3	1.2	2.1	1.8
Ru-106	ND	ND	ND	ND
Mn-54	ND	ND	ND	ND
Co-60	ND	ND	ND	ND
Sb-125	ND	ND	ND	ND
Gross β	150	220	380	240
H-3	72,000	76,000	75,000	21,000
Sr-90	-	-	-	-

\* "ND" indicates that the measurement result is below the detection limit, and the detection limit of each nuclide is provided in parentheses

**Groundwater observation hole No.1-5 (Bq/L) \* Observation hole where sampling could not be performed due to the ground improvement construction**

Sampling date	2013/7/31	2013/8/5	2013/8/6	2013/8/8	2013/8/12	2013/8/15	2013/8/19	2013/8/22	2013/8/26	2013/8/29
Sampling time	1:05 PM	11:55 AM	10:38 AM	1:05 PM	12:00 PM	1:02 PM	11:40 AM	12:00 PM	12:00 PM	11:13 AM
Cs-134	21	310	260	250	190	150	130	91	53	62
Cs-137	44	650	540	520	390	320	260	190	110	130
Ru-106	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Mn-54	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Co-60	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Sb-125	ND	ND	6.7	12	8.9	9.3	ND	ND	ND	ND
Gross β	1,200	56,000	47,000	52,000	26,000	21,000	13,000	6,200	3,400	2,600
H-3	28,000	56,000	45,000	57,000	70,000	72,000	56,000	28,000	30,000	24,000
Sr-90	Under measurement	-	-	-	-	-	-	Under measurement	-	-

\* "ND" indicates that the measurement result is below the detection limit, and the detection limit of each nuclide is provided in parentheses

Sampling date	2013/9/2	2013/9/5
Sampling time	11:16 AM	12:58 PM
Cs-134	40	50
Cs-137	85	110
Ru-106	ND	ND
Mn-54	ND	ND
Co-60	ND	ND
Sb-125	ND	ND
Gross β	2,000	820
H-3	23,000	23,000
Sr-90	-	-

\* "ND" indicates that the measurement result is below the detection limit, and the detection limit of each nuclide is provided in parentheses

**Groundwater observation hole No.1-8 (Bq/L)**

Sampling date	2013/8/20	2013/8/26	2013/9/2	2013/9/9	2013/9/16	2013/9/23	2013/9/30	2013/10/7	2013/10/14	2013/10/21
Sampling time	9:40 AM	9:36 AM	9:37 AM	10:15 AM	10:00 AM	9:40 AM	9:00 AM	9:36 AM	9:30 AM	11:00 AM
Cs-134	21	26	30	17	31	20	17	23	24	24
Cs-137	45	58	63	37	67	45	37	49	53	58
Ru-106	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Mn-54	ND	0.52	ND	ND	0.76	0.46	ND	1.0	0.67	0.64
Co-60	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Sb-125	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Gross β	1,100	1,200	1,100	370	2,100	1,900	1,500	100	2,500	3,700
H-3	950	840	1,100	1,200	1,900	2,100	1,700	2,100	2,500	2,000
Sr-90	Under measurement	-	-	-	Under measurement	-	-	-	Under measurement	-

\* "ND" indicates that the measurement result is below the detection limit, and the detection limit of each nuclide is provided in parentheses

Sampling date	2013/10/28	2013/11/4	2013/11/11	2013/11/18	2013/11/25	2013/12/2	2013/12/9	2013/12/16
Sampling time	9:17 AM	9:14 AM	9:10 AM	9:11 AM	9:23 AM	9:26 AM	9:30 AM	9:18 AM
Cs-134	43	20	31	41	47	38	39	36
Cs-137	95	45	69	96	110	88	91	88
Ru-106	ND	ND	ND	ND	ND	ND	ND	ND
Mn-54	2.6	1.1	3.6	5.2	7.1	7.1	8.7	9.7
Co-60	0.44	ND	ND	0.58	ND	ND	0.57	0.62
Sb-125	ND	ND	ND	ND	ND	ND	ND	ND
Gross β	11,000	4,400	11,000	14,000	18,000	17,000	29,000	31,000
H-3	2,000	1,600	2,700	4,900	6,600	7,500	9,100	Under measurement
Sr-90	-	-	Under measurement	-	-	-	Under measurement	-

\* "ND" indicates that the measurement result is below the detection limit, and the detection limit of each nuclide is provided in parentheses

#### Groundwater observation hole No.1-9 (Bq/L)

Sampling date	2013/9/3	2013/9/3 (Filtration)	2013/9/5	2013/9/5 (Filtration)	2013/9/8	2013/9/10	2013/9/12	2013/9/15	2013/9/17	2013/9/19
Sampling time	10:20 AM	10:20 AM	10:20 AM	10:20 AM	8:40 AM	6:20 AM	6:55 AM	6:06 AM	6:30 AM	6:24 AM
Cs-134	170	66	110	41	59	33	8.7	45	29	19
Cs-137	380	120	240	110	140	77	20	100	69	45
Ru-106	ND		ND		ND	ND	ND	ND	ND	ND
Mn-54	ND		ND		ND	ND	ND	ND	ND	ND
Co-60	ND		ND		ND	ND	ND	ND	ND	ND
Sb-125	ND		ND		ND	ND	ND	ND	ND	ND
Gross β	470		540		600	200	270	350	260	240
H-3	670		580		560	380	650	680	570	650
Sr-90	Under measurement		-		-	-	-	-	-	-

\* "ND" indicates that the measurement result is below the detection limit, and the detection limit of each nuclide is provided in parentheses

Sampling date	2013/9/22	2013/9/24	2013/9/26	2013/9/29	2013/10/1	2013/10/3	2013/10/6	2013/10/8	2013/10/10	2013/10/13
Sampling time	6:22 AM	6:16 AM	6:16 AM	6:18 AM	6:23 AM	6:15 AM	6:22 AM	6:30 AM	6:25 AM	5:58 AM
Cs-134	17	10	11	11	12	9.5	7.9	6.7	9.2	10
Cs-137	40	23	25	25	28	25	19	16	21	24
Ru-106	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Mn-54	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Co-60	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Sb-125	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Gross β	230	160	310	250	140	83	110	89	71	120
H-3	600	680	690	550	770	690	460	630	620	670
Sr-90	-	-	-	-	-	Under measurement	-	-	-	-

\* "ND" indicates that the measurement result is below the detection limit, and the detection limit of each nuclide is provided in parentheses



Sampling date	2013/10/15	2013/10/17	2013/10/20	2013/10/22	2013/10/24	2013/10/27	2013/10/29	2013/10/31	2013/11/3	2013/11/5
Sampling time	6:13 AM	6:39 AM	6:18 AM	6:29 AM	6:15 AM	6:15 AM	6:20 AM	6:15 AM	6:20 AM	6:12 AM
Cs-134	5.4	36	5.7	4.9	3.4	9.3	5.5	6.0	2.5	3.0
Cs-137	13	79	13	14	7.9	22	11	15	7.4	7.5
Ru-106	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Mn-54	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Co-60	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Sb-125	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Gross $\beta$	120	300	88	69	62	78	86	57	87	86
H-3	590	270	670	590	540	700	480	590	440	530
Sr-90	-	-	-	-	-	-	-	-	Under measurement	-

\* "ND" indicates that the measurement result is below the detection limit, and the detection limit of each nuclide is provided in parentheses

Sampling date	2013/11/7	2013/11/10	2013/11/12	2013/11/14	2013/11/17	2013/11/18	2013/11/19	2013/11/21	2013/11/24	2013/11/26
Sampling time	6:23 AM	6:31 AM	6:31 AM	6:27 AM	6:16 AM	5:55 AM	6:25 AM	6:48 AM	6:37 AM	6:57 AM
Cs-134	3.5	16	12	3.4	13	9.3	3.3	3.0	2.9	3.3
Cs-137	8.6	40	31	8.8	30	23	8.8	7.7	7.6	8.5
Ru-106	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Mn-54	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Co-60	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Sb-125	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Gross $\beta$	94	64	94	76	2,100	470	710	900	350	340
H-3	440	550	810	860	720	550	510	500	440	460
Sr-90	-	-	-	Under measurement	-	-	-	-	-	-

\* "ND" indicates that the measurement result is below the detection limit, and the detection limit of each nuclide is provided in parentheses

Sampling date	2013/11/28	2013/12/1	2013/12/3	2013/12/5	2013/12/8	2013/12/10	2013/12/12	2013/12/15	2013/12/17
Sampling time	6:47 AM	6:58 AM	7:03 AM	6:56 AM	6:40 AM	7:02 AM	6:40 AM	6:45 AM	7:16 AM
Cs-134	26	3.3	42	11	13	10	4.4	28	16
Cs-137	63	7.7	110	27	33	26	11	74	40
Ru-106	ND	ND	ND	ND	ND	ND	ND	ND	ND
Mn-54	ND	ND	ND	ND	ND	ND	ND	ND	ND
Co-60	ND	ND	ND	ND	ND	ND	ND	ND	ND
Sb-125	ND	ND	ND	ND	ND	ND	ND	ND	ND
Gross $\beta$	230	200	160	130	120	130	140	100	89
H-3	510	580	480	510	520	580	460	550	Under measurement
Sr-90	-	-	-	-	-	-	-	-	Under measurement

\* "ND" indicates that the measurement result is below the detection limit, and the detection limit of each nuclide is provided in parentheses

**Groundwater observation hole No.1-11 (Bq/L)**

Sampling date	2013/9/13	2013/9/16	2013/9/19	2013/9/23	2013/9/26	2013/9/30	2013/10/3	2013/10/7	2013/10/10	2013/10/14
Sampling time	10:35 AM	9:35 AM	9:35 AM	10:10 AM	9:25 AM	9:23 AM	9:22 AM	10:02 AM	9:34 AM	9:57 AM
Cs-134	ND (0.36)	ND (0.40)	ND (0.48)	0.44	0.45	ND (0.48)	0.43	0.55	0.67	0.92
Cs-137	0.48	ND (0.58)	0.74	1.2	1.1	1.0	1.4	0.82	2.00	1.8
Ru-106	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Mn-54	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Co-60	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Sb-125	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Gross β	43	42	57	29	36	32	72	31	46	49
H-3	85,000	72,000	68,000	76,000	55,000	43,000	48,000	36,000	32,000	33,000
Sr-90	Under measurement	-	-	-	-	-	-	-	-	Under measurement

\* "ND" indicates that the measurement result is below the detection limit, and the detection limit of each nuclide is provided in parentheses

Sampling date	2013/10/17	2013/10/21	2013/10/24	2013/10/28	2013/10/31	2013/11/4	2013/11/7	2013/11/11	2013/11/14	2013/11/18
Sampling time	9:30 AM	11:57 AM	10:50 AM	9:50 AM	9:50 AM	9:36 AM	9:01 AM	9:36 AM	10:28 AM	9:30 AM
Cs-134	0.56	ND (0.41)	0.43	0.41	0.94	0.68	0.55	0.75	0.56	0.62
Cs-137	1.3	1.2	1.2	1.3	1.8	1.2	1.3	2.0	1.3	1.4
Ru-106	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Mn-54	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Co-60	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Sb-125	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Gross β	64	29	32	29	19	22	22	42	18	53
H-3	26,000	25,000	22,000	24,000	20,000	22,000	21,000	17,000	20,000	18,000
Sr-90	-	-	-	-	-	-	-	Under measurement	-	-

\* "ND" indicates that the measurement result is below the detection limit, and the detection limit of each nuclide is provided in parentheses

Sampling date	2013/11/21	2013/11/25	2013/11/28	2013/12/2	2013/12/6	2013/12/9	2013/12/12	2013/12/16
Sampling time	11:10 AM	10:10 AM	10:40 AM	9:50 AM	11:46 AM	10:15 AM	11:12 AM	9:50 AM
Cs-134	0.49	0.73	0.61	0.92	ND (0.47)	0.42	0.44	ND (0.42)
Cs-137	1.7	1.5	1.4	2.2	1.1	1.2	0.80	0.64
Ru-106	ND	ND	ND	ND	ND	ND	ND	ND
Mn-54	ND	ND	ND	ND	ND	ND	ND	ND
Co-60	ND	ND	ND	ND	ND	ND	ND	ND
Sb-125	ND	ND	ND	ND	ND	ND	ND	ND
Gross β	ND (17)	25	35	46	64	49	24	28
H-3	18,000	25,000	22,000	21,000	22,000	28,000	24,000	Under measurement
Sr-90	-	-	-	-	-	Under measurement	-	-

\* "ND" indicates that the measurement result is below the detection limit, and the detection limit of each nuclide is provided in parentheses

**Groundwater observation hole No.1-12 (Bq/L)**

Sampling date	2013/10/21	2013/10/24	2013/10/28	2013/10/31	2013/11/4	2013/11/7	2013/11/11	2013/11/14	2013/11/18	2013/11/21
Sampling time	11:22 AM	12:10 PM	10:14 AM	10:15 AM	9:20 AM	9:30 AM	9:11 AM	9:35 AM	9:17 AM	9:46 AM
Cs-134	74	36	26	15	14	12	9.0	7.9	8.5	8.0
Cs-137	170	80	62	29	33	30	21	19	19	17
Ru-106	ND	ND	5.4	ND	ND	ND	ND	ND	ND	ND
Mn-54	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Co-60	ND	0.51	ND	ND	ND	ND	ND	ND	ND	ND
Sb-125	61	17	6.0	2.1	ND	ND	ND	ND	ND	ND
Gross β	730	640	410	150	200	350	160	110	130	89
H-3	350,000	390,000	420,000	440,000	420,000	370,000	390,000	230,000	330,000	280,000
Sr-90	Under measurement	-	-	-	-	-	Under measurement	-	-	-

\* "ND" indicates that the measurement result is below the detection limit, and the detection limit of each nuclide is provided in parentheses

Sampling date	2013/11/25	2013/11/28	2013/12/2	2013/12/5	2013/12/9	2013/12/12	2013/12/16
Sampling time	9:45 AM	9:14 AM	9:40 AM	10:15 AM	9:27 AM	9:32 AM	9:47 AM
Cs-134	7.9	8.0	6.3	6.3	6.2	5.8	4.5
Cs-137	18	19	17	14	14	12	10
Ru-106	ND	ND	ND	ND	ND	ND	ND
Mn-54	ND	ND	ND	ND	ND	ND	ND
Co-60	ND	ND	ND	ND	ND	ND	ND
Sb-125	ND	ND	ND	ND	ND	ND	ND
Gross β	100	75	85	86	82	68	74
H-3	230,000	210,000	180,000	170,000	140,000	130,000	Under measurement
Sr-90	-	-	-	-	Under measurement	-	-

\* "ND" indicates that the measurement result is below the detection limit, and the detection limit of each nuclide is provided in parentheses

**Groundwater observation hole No.1-14 (Bq/L)**

Sampling date	2013/11/10	2013/11/14	2013/11/18	2013/11/21	2013/11/25	2013/11/28	2013/12/2	2013/12/5	2013/12/9	2013/12/12
Sampling time	12:30 PM	10:15 AM	9:45 AM	10:25 AM	10:20 AM	9:40 AM	9:58 AM	10:56 AM	9:52 AM	9:47 AM
Cs-134	0.84	1.2	0.90	0.78	0.69	0.75	0.60	0.68	ND (0.46)	ND (0.42)
Cs-137	2.0	1.8	2.1	2.3	1.6	2.1	1.4	1.2	1.4	1.5
Ru-106	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Mn-54	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Co-60	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Sb-125	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Gross β	33	22	28	160	140	96	110	160	160	190
H-3	2,600	3,600	3,600	4,700	11,000	6,200	6,000	8,900	7,100	7,300
Sr-90	Under measurement	-	-	-	-	-	-	-	Under measurement	-

\* "ND" indicates that the measurement result is below the detection limit, and the detection limit of each nuclide is provided in parentheses

Sampling date	2013/12/16
Sampling time	10:14 AM
Cs-134	ND (0.45)
Cs-137	1.3
Ru-106	ND
Mn-54	ND
Co-60	ND
Sb-125	ND
Gross $\beta$	200
H-3	Under measurement
Sr-90	-

\* "ND" indicates that the measurement result is below the detection limit, and the detection limit of each nuclide is provided in parentheses

### Groundwater observation hole No.1-16 (Bq/L)

Sampling date	2013/9/26	2013/9/30	2013/10/3	2013/10/7	2013/10/10	2013/10/14	2013/10/17	2013/10/21	2013/10/24	2013/10/28
Sampling time	11:30 AM	10:38 AM	10:05 AM	11:02 AM	10:24 AM	12:43 PM	9:50 AM	11:54 AM	12:30 PM	10:43 AM
Cs-134	ND (0.99)	ND (1.8)	1.5	1.4	ND (1.0)	ND (0.96)	ND (0.98)	ND (0.71)	ND (1.1)	ND (1.4)
Cs-137	2.1	2.3	2.9	2.6	3.4	2.1	1.8	1.2	1.2	1.4
Ru-106	ND	ND	ND	ND	ND	ND	ND	ND	ND	9.2
Mn-54	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Co-60	ND	ND	ND	0.54	ND	ND	ND	ND	0.46	0.64
Sb-125	ND	ND	ND	ND	ND	ND	ND	ND	ND	4.5
Gross $\beta$	400,000	450,000	680,000	700,000	740,000	880,000	830,000	390,000	310,000	650,000
H-3	43,000	37,000	34,000	36,000	32,000	30,000	21,000	8,700	11,000	14,000
Sr-90	Under measurement	-	-	-	-	Under measurement	-	-	-	-

\* "ND" indicates that the measurement result is below the detection limit, and the detection limit of each nuclide is provided in parentheses

Sampling date	2013/10/31	2013/11/4	2013/11/7	2013/11/11	2013/11/14	2013/11/18	2013/11/21	2013/11/25	2013/11/28	2013/12/2
Sampling time	10:35 AM	9:45 AM	9:50 AM	9:35 AM	9:55 AM	9:36 AM	10:15 AM	10:00 AM	9:29 AM	10:09 AM
Cs-134	ND (1.6)	ND (1.2)	1.1	ND (1.4)	1.6	ND (1.5)	ND (1.2)	ND (1.6)	ND (2.8)	ND (1.9)
Cs-137	2.4	ND (0.81)	1.3	2.0	1.7	1.6	1.8	1.5	1.3	1.4
Ru-106	ND	7.7	7.5	ND	9.1	ND	ND	ND	ND	ND
Mn-54	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Co-60	0.87	0.49	0.90	0.53	0.52	ND	0.63	0.56	0.56	0.62
Sb-125	5.2	5.5	5.8	7.5	6.1	8.6	7.0	6.8	7.7	7.7
Gross $\beta$	550,000	540,000	590,000	650,000	660,000	750,000	750,000	910,000	1,100,000	1,300,000
H-3	11,000	14,000	18,000	20,000	21,000	23,000	25,000	30,000	34,000	36,000
Sr-90	-	-	-	Under measurement	-	-	-	-	-	-

\* "ND" indicates that the measurement result is below the detection limit, and the detection limit of each nuclide is provided in parentheses

Sampling date	2013/12/5	2013/12/9	2013/12/12	2013/12/13 (pumped water)	2013/12/16 (pumped water)	2013/12/16
Sampling time	10:38 AM	9:45 AM	9:55 AM	12:00 PM	1:00 PM	10:00 AM
Cs-134	ND (1.6)	ND (1.9)	ND (1.9)	3.1	ND (2.8)	ND (1.9)
Cs-137	1.4	1.5	1.8	1.3	ND (1.5)	ND (1.4)
Ru-106	ND	ND	ND	ND	ND	ND
Mn-54	ND	ND	ND	ND	ND	ND
Co-60	0.55	ND	0.55	0.86	ND	ND
Sb-125	11	7.5	8.6	5.5	ND	ND
Gross β	1,400,000	1,500,000	1,800,000	1,400,000	1,700,000	1,600,000
H-3	40,000	42,000	33,000	41,000	39,000	Under measurement
Sr-90	-	Under measurement	-	-	-	-

\* "ND" indicates that the measurement result is below the detection limit, and the detection limit of each nuclide is provided in parentheses

#### Groundwater observation hole No.1-17 (Bq/L)

Sampling date	2013/11/22	2013/11/25	2013/11/28	2013/12/2	2013/12/5	2013/12/9	2013/12/12	2013/12/16
Sampling time	9:23 AM	11:00 AM	10:19 AM	10:34 AM	11:50 AM	10:40 AM	10:48 AM	10:44 AM
Cs-134	ND (0.49)	ND (0.52)	ND (0.59)	ND (0.51)	1.2	ND (0.49)	ND (0.54)	ND (0.54)
Cs-137	ND (0.48)	ND (0.49)	ND (0.44)	ND (0.48)	0.55	ND (0.49)	0.66	ND (0.53)
Ru-106	4.0	ND	4.0	ND	ND	3.4	4.1	ND
Mn-54	ND	ND	ND	ND	ND	ND	ND	ND
Co-60	0.41	0.61	0.61	0.37	0.5	0.52	0.49	0.51
Sb-125	ND	2.1	2.0	1.6	1.5	1.7	1.8	1.5
Gross β	44	78	74	130	46	55	65	22
H-3	9,800	10,000	12,000	15,000	16,000	16,000	16,000	Under measurement
Sr-90	Under measurement	-	-	-	-	Under measurement	-	-

\* "ND" indicates that the measurement result is below the detection limit, and the detection limit of each nuclide is provided in parentheses

#### Groundwater pumped up from the well point between Unit 1 and 2 (Bq/L)

Sampling date	2013/8/19	2013/8/26	2013/9/2	2013/9/9	2013/9/16	2013/9/23	2013/9/30	2013/10/7	2013/10/14	2013/10/21
Sampling time	11:20 AM	10:30 AM	9:35 AM	1:30 PM	9:45 AM	9:30 AM	8:55 AM	9:35 AM	9:15 AM	10:45 AM
Cs-134	1.5	1.0	ND (1.6)	ND (0.63)	15	110	30	20	0.96	5.0
Cs-137	3.4	2.1	ND (1.6)	ND (0.68)	32	250	69	43	2.7	13
Ru-106	17	9.7	25	9.0	12	ND	ND	ND	12	8.2
Mn-54	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Co-60	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Sb-125	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Gross β	190,000	5,900	360,000	89,000	450,000	700,000	490,000	610,000	250,000	330,000
H-3	460,000	260,000	380,000	220,000	290,000	340,000	240,000	200,000	250,000	130,000
Sr-90	-	-	-	-	-	-	-	-	-	-

\* "ND" indicates that the measurement result is below the detection limit, and the detection limit of each nuclide is provided in parentheses

Sampling date	2013/10/28	2013/11/4	2013/11/11	2013/11/18	2013/11/25	2013/12/2	2013/12/9	2013/12/16
Sampling time	9:40 AM	9:10 AM	9:10 AM	9:13 AM	10:20 AM	3:20 PM	9:45 AM	10:10 AM
Cs-134	1.3	ND (0.67)	ND (1.1)	1.2	1.4	0.86	0.54	ND (0.48)
Cs-137	3.2	1.1	1.3	2.7	3.1	2.7	1.1	1.3
Ru-106	ND	ND	8.7	5.3	5.6	7.3	8.6	7.8
Mn-54	ND	ND	ND	ND	ND	ND	ND	ND
Co-60	ND	ND	ND	ND	ND	ND	ND	ND
Sb-125	ND	ND	ND	ND	ND	ND	ND	ND
Gross β	230,000	90,000	240,000	17,000	14,000	20,000	26,000	32,000
H-3	99,000	92,000	96,000	75,000	81,000	84,000	86,000	Under measurement
Sr-90	-	-	-	-	-	-	-	-

\* "ND" indicates that the measurement result is below the detection limit, and the detection limit of each nuclide is provided in parentheses

### Groundwater observation hole No.2 (Bq/L)

Sampling date	2012/12/8 <sup>1</sup>	2013/5/24	2013/5/31	2013/6/7 ①	2013/6/7 ②	2013/6/21	2013/6/26	2013/7/1	2013/7/4	2013/7/8
Sampling time	11:00 AM	4:12 PM	3:16 PM	4:05 PM	4:05 PM	5:44 PM	2:30 PM	4:55 PM	1:05 PM	1:00 PM
Cs-134	ND (0.61)	ND (0.37)	ND (0.41)	0.47	ND (0.37)	ND (0.32)	ND (0.40)	0.48	ND (0.39)	ND (0.49)
Cs-137	ND (0.81)	ND (0.41)	0.95	0.73	ND (0.48)	ND (0.37)	ND (0.48)	0.66	ND (0.46)	0.74
Ru-106	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Mn-54	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Co-60	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Sb-125	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Gross β	55	53	76	ND (18)	ND (18)	53	170	260	93	1,700
H-3	410	380	340	390	340	560	850	740	530	730
Sr-90	8.2	28	54	5.2	5.1	Under measurement	-	-	-	-

\* "ND" indicates that the measurement result is below the detection limit, and the detection limit of each nuclide is provided in parentheses

\*1 As of γ nuclide measurement, the amount is lower than true value since the high BG is in use.

Sampling date	2013/7/9	2013/7/11	2013/7/15	2013/7/18	2013/7/22	2013/7/25	2013/7/29	2013/8/1	2013/8/5	2013/8/8
Sampling time	12:25 PM	11:30 AM	10:50 AM	11:22 AM	11:37 AM	11:04 AM	11:30 AM	12:05 PM	11:18 AM	11:36 AM
Cs-134	0.50	ND (0.47)	ND (0.37)	ND (0.36)	ND (0.44)	ND (0.39)	ND (0.40)	ND (0.35)	ND (0.42)	ND (0.39)
Cs-137	0.74	1.2	ND (0.44)	0.50	ND (0.53)	0.46	ND (0.47)	1.2	ND (0.53)	ND (0.49)
Ru-106	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Mn-54	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Co-60	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Sb-125	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Gross β	910	1,400	49	1,100	430	330	400	210	450	390
H-3	670	410	530	540	710	500	660	640	700	670
Sr-90	-	-	-	-	-	-	-	-	-	-

\* "ND" indicates that the measurement result is below the detection limit, and the detection limit of each nuclide is provided in parentheses

Sampling date	2013/8/12	2013/8/15	2013/8/19	2013/8/22	2013/8/26	2013/8/29	2013/9/1	2013/9/4	2013/9/8	2013/9/11
Sampling time	11:10 AM	11:32 AM	9:57 AM	9:25 AM	10:15 AM	10:10 AM	10:00 AM	10:10 AM	11:50 AM	9:27 AM
Cs-134	ND (0.38)	ND (0.46)	ND (0.42)	ND (0.41)	ND (0.43)	ND (0.43)	ND (0.41)	ND (0.44)	ND (0.47)	0.36
Cs-137	ND (0.48)	ND (0.53)	0.68	0.74	0.66	ND (0.54)	ND (0.55)	0.53	0.70	0.64
Ru-106	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Mn-54	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Co-60	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Sb-125	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Gross $\beta$	210	200	420	270	86	140	230	300	220	96
H-3	580	550	730	450	440	590	670	680	540	520
Sr-90	-	-	-	-	-	-	-	-	-	-

\* "ND" indicates that the measurement result is below the detection limit, and the detection limit of each nuclide is provided in parentheses

Sampling date	2013/9/15	2013/9/18	2013/9/22	2013/9/25	2013/9/29	2013/10/2	2013/10/6	2013/10/9	2013/10/13	2013/10/17
Sampling time	11:05 AM	9:24 AM	9:34 AM	9:31 AM	9:33 AM	9:17 AM	9:20 AM	9:40 AM	9:21 AM	10:39 AM
Cs-134	ND (0.36)	ND (0.37)	ND (0.48)	ND (0.42)	0.49	ND (0.35)	ND (0.46)	ND (0.37)	ND (0.42)	ND (0.36)
Cs-137	0.85	ND (0.44)	0.67	0.52	0.94	ND (0.45)	ND (0.53)	ND (0.46)	ND (0.47)	ND (0.51)
Ru-106	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Mn-54	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Co-60	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Sb-125	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Gross $\beta$	140	260	380	480	290	180	140	130	180	340
H-3	590	800	680	720	740	600	670	800	800	820
Sr-90	-	-	-	-	-	-	-	-	-	-

\* "ND" indicates that the measurement result is below the detection limit, and the detection limit of each nuclide is provided in parentheses

Sampling date	2013/10/20	2013/10/23	2013/10/27	2013/10/30	2013/11/3	2013/11/6	2013/11/10	2013/11/13	2013/11/17	2013/11/20
Sampling time	9:45 AM	10:30 AM	9:30 AM	9:58 AM	9:20 AM	9:35 AM	9:30 AM	9:16 AM	9:20 AM	9:28 AM
Cs-134	ND (0.39)	ND (0.40)	ND (0.43)	ND (0.38)	ND (0.36)	ND (0.39)	ND (0.39)	ND (0.39)	ND (0.44)	ND (0.41)
Cs-137	ND (0.50)	0.57	0.72	0.65	0.65	0.57	0.82	0.76	0.84	ND (0.45)
Ru-106	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Mn-54	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Co-60	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Sb-125	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Gross $\beta$	450	390	230	270	260	290	250	320	270	310
H-3	770	700	650	740	740	710	630	510	710	660
Sr-90	-	-	-	-	-	-	-	-	-	-

\* "ND" indicates that the measurement result is below the detection limit, and the detection limit of each nuclide is provided in parentheses

Sampling date	2013/11/24	2013/11/27	2013/12/1	2013/12/4	2013/12/8	2013/12/11	2013/12/15	2013/12/18
Sampling time	9:28 AM	9:25 AM	9:30 AM	9:42 AM	9:34 AM	9:15 AM	9:35 AM	9:24 AM
Cs-134	ND (0.40)	ND (0.42)	ND (0.45)	ND (0.43)	ND (0.42)	ND (0.40)	ND (0.41)	ND (0.43)
Cs-137	ND (0.54)	ND (0.52)	0.72	0.88	ND (0.56)	ND (0.54)	0.82	ND (0.49)
Ru-106	ND	ND	ND	ND	ND	ND	ND	ND
Mn-54	ND	ND	ND	ND	ND	ND	ND	ND
Co-60	ND	ND	ND	ND	ND	ND	ND	ND
Sb-125	ND	ND	ND	ND	ND	ND	ND	ND
Gross β	340	310	300	450	370	320	390	410
H-3	760	810	790	670	870	730	850	Under measurement
Sr-90	-	-	-	-	-	-	-	-

\* "ND" indicates that the measurement result is below the detection limit, and the detection limit of each nuclide is provided in parentheses

**Groundwater observation hole No.2-1 (Bq/L) \* Observation hole where sampling could not be performed due to the ground improvement construction**

Sampling date	2013/7/25	2013/7/29	2013/8/1	2013/8/5	2013/8/8	2013/8/12	2013/8/15	2013/8/19	2013/8/22	2013/8/26
Sampling time	11:28 AM	10:53 AM	11:19 AM	10:40 AM	11:05 AM	10:34 AM	10:56 AM	9:18 AM	9:57 AM	9:45 AM
Cs-134	ND (0.42)	ND (0.43)	0.44	ND (0.44)	ND (0.40)	ND (0.43)	ND (0.37)	ND (0.45)	ND (0.43)	ND (0.43)
Cs-137	0.69	1.0	0.95	0.55	0.69	0.48	ND (0.52)	ND (0.61)	ND (0.56)	ND (0.54)
Ru-106	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Mn-54	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Co-60	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Sb-125	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Gross β	ND (17)	380	ND (17)	ND (22)	ND (18)	ND (19)	ND (18)	ND (18)	17	ND (18)
H-3	120	170	180	210	210	290	260	330	310	440
Sr-90	Under measurement	-	-	-	-	-	-	-	-	-

\* "ND" indicates that the measurement result is below the detection limit, and the detection limit of each nuclide is provided in parentheses

Sampling date	2013/8/29	2013/9/1	2013/9/4
Sampling time	9:36 AM	9:30 AM	9:40 AM
Cs-134	ND (0.43)	0.66	ND (0.40)
Cs-137	1.1	1.1	0.82
Ru-106	ND	ND	ND
Mn-54	ND	ND	ND
Co-60	ND	ND	ND
Sb-125	ND	ND	ND
Gross β	ND (20)	ND (19)	29
H-3	370	270	380
Sr-90	-	-	-

\* "ND" indicates that the measurement result is below the detection limit, and the detection limit of each nuclide is provided in parentheses



**Groundwater observation hole No.2-3 (Bq/L)**

Sampling date	2013/12/6	2013/12/11	2013/12/15	2013/12/18
Sampling time	10:56 AM	10:27 AM	10:38 AM	10:16 AM
Cs-134	ND (0.36)	ND (0.47)	ND (0.42)	ND (0.38)
Cs-137	0.5	0.6	ND (0.49)	ND (0.49)
Ru-106	ND	ND	ND	ND
Mn-54	0.29	0.29	0.29	ND
Co-60	ND	ND	ND	ND
Sb-125	ND	ND	ND	ND
Gross $\beta$	1,500	1,200	1,400	1,200
H-3	1,700	1,500	1,400	Under measurement
Sr-90	Under measurement	-	-	-

\* "ND" indicates that the measurement result is below the detection limit, and the detection limit of each nuclide is provided in parentheses

**Groundwater observation hole No.2-5 (Bq/L)**

Sampling date	2013/9/29	2013/9/29	2013/11/7	2013/12/4
Sampling time	9:50 AM	9:50 AM	10:00 AM	10:25 AM
Cs-134	3.1	3.7	3.9	5.2
Cs-137	6.9	10.0	9.1	12
Ru-106	ND	ND	ND	ND
Mn-54	0.62	0.77	ND	0.87
Co-60	ND	ND	ND	ND
Sb-125	26	18	14	2.3
Gross $\beta$	32,000	46,000	6,000	35,000
H-3	-	1500	3,100	6,300
Sr-90	-	Under measurement	-	-

\*1 The analysis result of  $\gamma$  and gross  $\beta$  was announced on September 29. However, sample will be reanalyzed.

The analysis result of No.2-5 is the reference value, since we could not sample groundwater by a regular procedure.

\* "ND" indicates that the measurement result is below the detection limit, and the detection limit of each nuclide is provided in parentheses

**Groundwater observation hole No.2-6 (Bq/L)**

Sampling date	2013/9/20	2013/9/22	2013/9/25	2013/9/29	2013/10/2	2013/10/6	2013/10/9	2013/10/13	2013/10/17	2013/10/20
Sampling time	10:53 AM	10:51 AM	12:13 PM	10:30 AM	10:01 AM	9:50 AM	10:15 AM	10:00 AM	11:08 AM	10:25 AM
Cs-134	ND (0.39)	0.42	ND (0.44)	ND (0.41)	ND (0.44)	ND (0.38)	ND (0.48)	ND (0.42)	ND (0.43)	ND (0.44)
Cs-137	ND (0.45)	0.57	ND (0.56)	0.57	ND (0.58)	ND (0.46)	ND (0.58)	0.61	ND (0.48)	0.60
Ru-106	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Mn-54	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Co-60	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Sb-125	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Gross $\beta$	ND (18)	ND (17)	ND (18)	ND (18)	ND (19)	24	37	50	120	270
H-3	200	210	360	610	840	910	960	1,100	1,100	930
Sr-90	Under measurement	-	-	-	-	-	-	-	-	-

\* "ND" indicates that the measurement result is below the detection limit, and the detection limit of each nuclide is provided in parentheses

Sampling date	2013/10/23	2013/10/27	2013/10/30	2013/11/3	2013/11/6	2013/11/10	2013/11/13	2013/11/17	2013/11/20	2013/11/24
Sampling time	9:55 AM	9:56 AM	10:30 AM	9:48 AM	10:03 AM	9:54 AM	9:50 AM	9:45 AM	10:06 AM	10:08 AM
Cs-134	ND (0.40)	ND (0.44)	0.56	ND (0.39)	ND (0.38)	ND (0.40)	ND (0.44)	ND (0.40)	ND (0.37)	ND (0.48)
Cs-137	ND (0.52)	ND (0.54)	0.53	0.51	0.49	ND (0.57)	ND (0.55)	ND (0.60)	ND (0.46)	ND (0.52)
Ru-106	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Mn-54	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Co-60	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Sb-125	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Gross β	530	850	1,100	1,400	1,700	1,900	2,000	2,100	2,000	2,300
H-3	960	1,000	980	1,000	1,100	1,100	1,100	980	1,100	1,200
Sr-90	-	-	-	-	-	-	-	-	-	-

\* "ND" indicates that the measurement result is below the detection limit, and the detection limit of each nuclide is provided in parentheses

Sampling date	2013/11/27	2013/12/1	2013/12/3	2013/12/5	2013/12/10	2013/12/12	2013/12/16
Sampling time	9:53 AM	9:57 AM	9:42 AM	9:37 AM	1:18 PM	9:37 AM	9:23 AM
Cs-134	ND (0.48)	ND (0.39)	ND (0.41)	ND (0.36)	ND (0.43)	ND (0.43)	ND (0.37)
Cs-137	ND (0.55)	ND (0.46)	ND (0.53)	ND (0.49)	ND (0.58)	0.53	0.58
Ru-106	ND	ND	ND	ND	ND	ND	ND
Mn-54	ND	ND	ND	ND	ND	ND	ND
Co-60	ND	ND	ND	ND	ND	ND	ND
Sb-125	ND	ND	ND	ND	ND	ND	ND
Gross β	2,500	2,700	3,100	3,200	2,800	2,900	2,900
H-3	1,200	1,100	960	980	1,000	1,100	Under measurement
Sr-90	-	-	-	-	-	-	-

\* "ND" indicates that the measurement result is below the detection limit, and the detection limit of each nuclide is provided in parentheses

#### Groundwater observation hole No.2-7 (Bq/L)

Sampling date	2013/11/21	2013/11/24	2013/11/27	2013/12/1	2013/12/4	2013/12/6	2013/12/8	2013/12/11	2013/12/13	2013/12/15
Sampling time	10:35 AM	10:40 AM	10:22 AM	10:20 AM	10:05 AM	10:11 AM	9:57 AM	9:48 AM	9:25 AM	10:03 AM
Cs-134	1.3	0.83	0.88	ND (0.50)	0.57	ND (0.51)	0.75	0.51	0.49	0.57
Cs-137	3.1	2.3	2.2	1.9	1.6	1.8	1.6	1.5	1.6	1.3
Ru-106	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Mn-54	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Co-60	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Sb-125	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Gross β	18	ND (21)	ND (18)	ND (17)	ND (18)	ND (18)	22	ND (21)	ND (17)	ND (17)
H-3	1,000	970	940	950	1,000	870	800	950	940	990
Sr-90	Under measurement	-	-	-	-	-	-	-	-	-

\* "ND" indicates that the measurement result is below the detection limit, and the detection limit of each nuclide is provided in parentheses

Sampling date	2013/12/18
Sampling time	9:45 AM
Cs-134	0.81
Cs-137	1.6
Ru-106	ND
Mn-54	ND
Co-60	ND
Sb-125	ND
Gross $\beta$	ND (19)
H-3	Under measurement
Sr-90	-

\* "ND" indicates that the measurement result is below the detection limit, and the detection limit of each nuclide is provided in parentheses

### Groundwater pumped up from the well point between Unit 2 and 3 (Bq/L)

Sampling date	2013/12/4	2013/12/5	2013/12/6	2013/12/7	2013/12/8	2013/12/10	2013/12/11	2013/12/12
Sampling time	10:10 AM	10:10 AM	10:05 AM	10:00 AM	10:00 AM	10:10 AM	9:45 AM	10:37 AM
Cs-134	0.75	ND (0.44)	0.69	ND (0.93)	0.88	0.85	ND (0.87)	1.1
Cs-137	1.5	1.1	1.7	2.4	1.4	0.86	1.5	1.8
Ru-106	ND	ND	ND	ND	ND	ND	ND	ND
Mn-54	ND	ND	ND	ND	ND	ND	ND	ND
Co-60	ND	ND	ND	ND	ND	ND	ND	ND
Sb-125	ND	ND	ND	ND	ND	ND	ND	ND
Gross $\beta$	110,000	170,000	180,000	190,000	170,000	170,000	190,000	240,000
H-3	3,100	4,800	5,100	4,500	5,000	4,500	4,800	4,600
Sr-90	-	-	-	-	-	-	-	-

\* "ND" indicates that the measurement result is below the detection limit, and the detection limit of each nuclide is provided in parentheses

### Groundwater observation hole No.3 (Bq/L)

Sampling date	2012/12/12 <sup>1</sup>	2013/5/24	2013/5/31	2013/6/7 ①	2013/6/7 ②	2013/6/21	2013/6/26	2013/7/4	2013/7/11	2013/7/18
Sampling time	11:00 AM	4:52 PM	3:32 PM	3:58 PM	3:58 PM	5:01 PM	3:50 PM	2:00 PM	10:55 AM	10:45 AM
Cs-134	ND (0.60)	0.87	1.6	0.9	0.5	1.7	0.96	1.5	1.9	1.2
Cs-137	ND (0.79)	1.4	2.7	2.0	1.6	2.9	2.9	2.8	4.8	3.1
Ru-106	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Mn-54	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Co-60	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Sb-125	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Gross $\beta$	41	18	ND (17)	ND (18)	ND (18)	ND (17)	ND (21)	ND (18)	1,400	76
H-3	3,200	2,200	1,800	1,800	1,800	1,600	1,600	1,500	1,700	1,700
Sr-90	8.3	ND (1.0)	0.25	ND (0.24)	ND (0.27)	Under measurement	-	-	-	-

\* "ND" indicates that the measurement result is below the detection limit, and the detection limit of each nuclide is provided in parentheses

\*1 As of  $\gamma$  nuclide measurement, the amount is lower than true value since the high BG is in use.

Sampling date	2013/7/25	2013/8/1	2013/8/2	2013/8/8	2013/9/5
Sampling time	1:30 PM	12:59 PM	2:25 PM	2:19 PM	9:20 AM
Cs-134	3.5	1.8	2.4	2.2	3.0
Cs-137	3.9	4.2	4.0	5.9	3.0
Ru-106	ND	ND	ND	ND	ND
Mn-54	ND	ND	ND	ND	ND
Co-60	ND	ND	ND	ND	ND
Sb-125	ND	ND	ND	ND	1.1
Gross $\beta$	ND (17)	ND (17)	ND (18)	ND (18)	ND (24)
H-3	1,700	1,400	1,500	1,500	1,100
Sr-90	-	-	-	-	-

\* "ND" indicates that the measurement result is below the detection limit, and the detection limit of each nuclide is provided in parentheses

\*1 As of  $\gamma$  nuclide measurement, the amount is lower than true value since the high BG is in use.

**Groundwater observation hole No.3-1 (Bq/L) \* Observation hole where sampling could not be performed due to the ground improvement construction**

Sampling date	2013/7/23	2013/7/25	2013/8/1	2013/8/2	2013/8/8	2013/8/16	2013/8/22
Sampling time	11:10 AM	3:15 PM	1:38 PM	3:45 PM	3:04 PM	12:21 PM	11:55 AM
Cs-134	1.1	1.2	1.1	1.0	1.2	0.67	0.68
Cs-137	2.2	2.2	2.6	2.3	2.0	1.8	1.2
Ru-106	ND	ND	ND	ND	ND	ND	ND
Mn-54	ND	ND	ND	ND	ND	ND	ND
Co-60	ND	ND	ND	ND	ND	ND	ND
Sb-125	ND	ND	ND	ND	ND	ND	ND
Gross $\beta$	ND (19)	ND (18)	180	ND (18)	25	ND (20)	55
H-3	290	310	460	370	430	370	240
Sr-90	Under measurement	-	-	-	-	-	-

\* "ND" indicates that the measurement result is below the detection limit, and the detection limit of each nuclide is provided in parentheses

**Groundwater observation hole No.3-4 (Bq/L)**

Sampling date	2013/9/12	2013/9/18	2013/9/25	2013/10/2	2013/10/9	2013/10/17	2013/10/23	2013/10/30	2013/11/6	2013/11/13
Sampling time	1:20 PM	10:16 AM	1:03 PM	11:12 AM	10:55 AM	11:40 AM	11:35 AM	11:19 AM	10:50 AM	10:50 AM
Cs-134	0.52	0.72	1.0	0.68	0.66	0.96	1.0	1.8	1.4	1.5
Cs-137	1.3	1.8	1.1	1.3	1.9	2.2	2.3	3.8	3.6	3.6
Ru-106	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Mn-54	ND	ND	ND	ND	ND	ND	ND	0.54	0.54	ND
Co-60	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Sb-125	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Gross $\beta$	ND (17)	ND (18)	ND (18)	ND (19)	ND (18)	ND (15)	ND (17)	ND (17)	ND (18)	ND (17)
H-3	ND (110)	170	130	160	ND (120)	ND (130)	ND (120)	ND (130)	ND (120)	ND (120)
Sr-90	Under measurement	-	-	-	-	-	-	-	-	-

\* "ND" indicates that the measurement result is below the detection limit, and the detection limit of each nuclide is provided in parentheses

Sampling date	2013/11/20	2013/11/27	2013/12/4	2013/12/11	2013/12/18
Sampling time	12:57 PM	11:14 AM	10:48 AM	11:02 AM	10:47 AM
Cs-134	1.3	1.7	1.1	0.99	1.4
Cs-137	3.0	4.3	3.4	3.0	3.2
Ru-106	ND	ND	ND	ND	ND
Mn-54	ND	ND	ND	ND	ND
Co-60	ND	ND	ND	ND	ND
Sb-125	ND	ND	ND	ND	ND
Gross $\beta$	ND (21)	ND (18)	ND (18)	ND (21)	ND (19)
H-3	ND (120)	ND (120)	ND (120)	ND (120)	Under measurement
Sr-90	-	-	-	-	-

\* "ND" indicates that the measurement result is below the detection limit, and the detection limit of each nuclide is provided in parentheses

#### Groundwater observation hole No.3-5 (Bq/L)

Sampling date	2013/11/23	2013/11/27	2013/12/4	2013/12/11	2013/12/18
Sampling time	10:35 AM	11:36 AM	10:40 AM	10:52 AM	10:45 AM
Cs-134	-	-	-	-	29
Cs-137	-	-	-	-	74
Ru-106	-	-	-	-	-
Mn-54	-	-	-	-	-
Co-60	-	-	-	-	-
Sb-125	-	-	-	-	-
Gross $\beta$	22*	35*	27*	ND* (21)	43
H-3	ND* (120)	ND* (120)	ND* (120)	140*	Under measurement
Sr-90	-	-	-	-	-

\* "ND" indicates that the measurement result is below the detection limit, and the detection limit of each nuclide is provided in parentheses

\* Since the water of No.3-5 was highly turbid, only chloride, Gross  $\beta$  and tritium were analyzed as a reference.