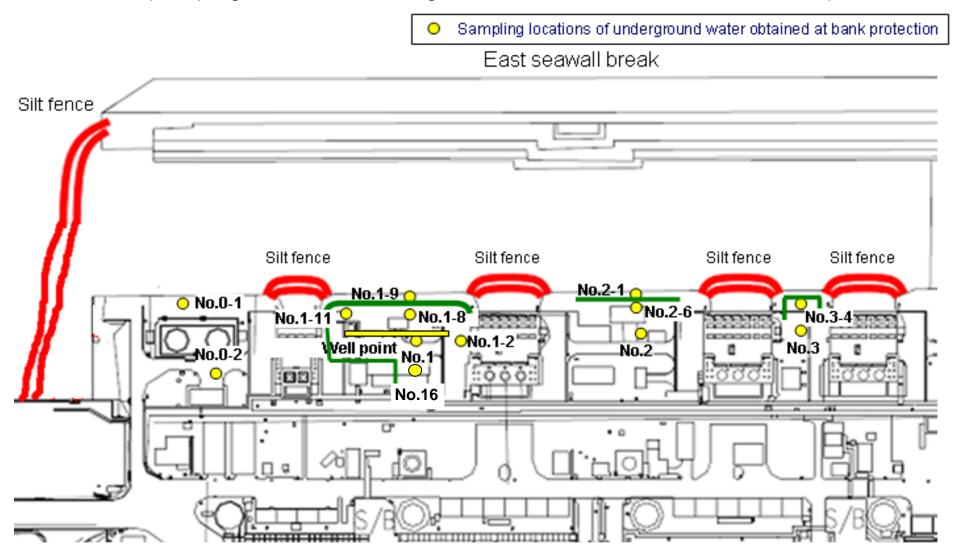
Detailed Analysis Results in the Port of Fukushima Daiichi NPS, around Discharge Channel and Bank Protection (Sampling Locations of Underground Water Obtained at Bank Protection)



 Location where ground improvement work was completed, or being implemented (as of September 2 7)

# Detailed Analysis Results in the Port of Fukushima Daiichi NPS, around Discharge Channel and Bank Protection (1/4) Underground Water Obtained at Bank Protection

Unit: Bq/L (exclude chloride)

		Underground water observation hole No.0-1	Underground water observation hole No.0-2	Underground water observation hole No.1	Underground water observation hole No.1-2	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.1-16	Groundwater pumped up from the well point
	Date of sampling	/	/	/	/	/	Sep 26, 2013	/		
	Time of sampling						6:16 AM			
	Chloride (unit: ppm)						410			
Cs	s-134 (Approx. 2 years)						11			
Cs	s-137 (Approx.30 years)						25			
The other y										
	ΑΙΙ β						310			
ŀ	H-3 (Approx. 12 years)						690			
Sr	r-90 (Approx. 29 years)	/					-			

		Underground water observation hole No.2	Underground water observation hole No.2-1	Underground water observation hole No.2-5	Underground water observation hole No.2-6	Underground water observation hole No.3	Underground water observation hole No.3-4
	Date of sampling	Sep 25, 2013	/		Sep 25, 2013	/	Sep 25, 2013
	Time of sampling	9:31 AM			12:13 PM		1:03 PM
C	s-134 (Approx. 2 years)	ND(0.42)			ND(0.44)		1.0
Cs	s-137 (Approx.30 years)	0.52			ND(0.56)		1.1
The other y							
	ΑΙΙ β	480			ND(18)		ND(18)
ŀ	H-3 (Approx. 12 years)	720			360		130
Sr	r-90 (Approx. 29 years)	-	/	/	-		-

<sup>\*</sup> Data announced this time is provided in a thick-frame. The other data was announced on September 26 and 27.

<sup>\* &</sup>quot;ND" indicates that the measurement result is below the detection limit, and the detection limit of each nuclide is provided in parentheses.

<sup>\* &</sup>quot;-" indicates that the measurement was out of range.

# Detailed Analysis Results in the Port of Fukushima Daiichi NPS, around Discharge Channel and Bank Protection (2/4) Underground Water Obtained at Bank Protection

Unit: Bq/L (exclude chloride)

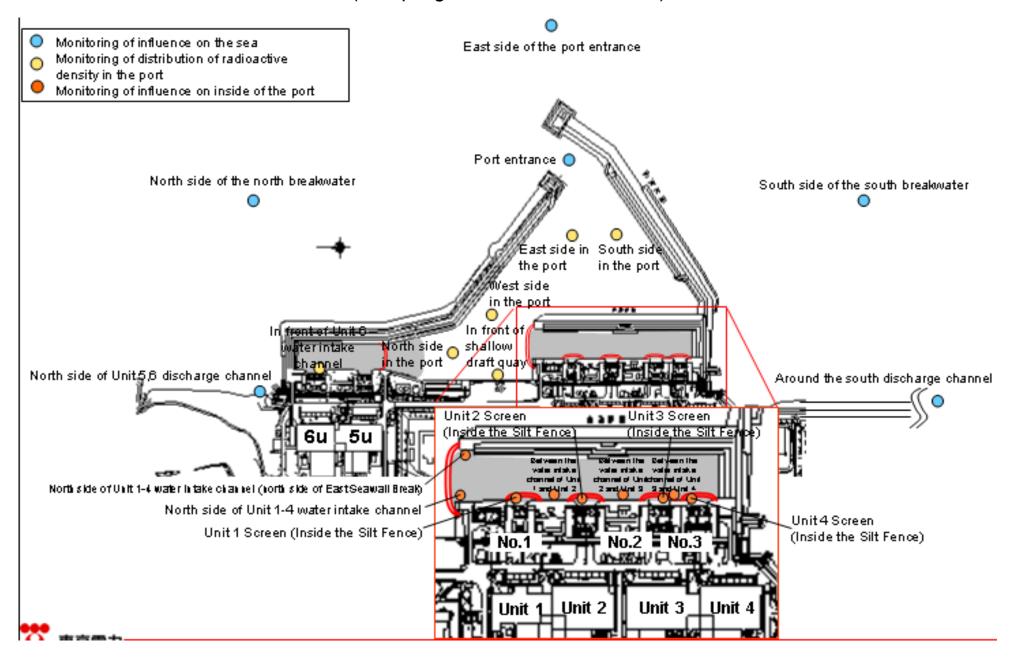
		ı		ı	ı					(exclude chioride)
		Underground water observation hole No.0-1	Underground water observation hole No.0-2	Underground water observation hole No.1	Underground water observation hole No.1-2	Underground water observation hole No.1-8	Underground water observation hole No.1-9	Underground water observation hole No.1-11	Underground water observation hole No.1-16	Groundwater pumped up from the well point
	Date of sampling	Sep 29, 2013	Sep 29, 2013	/			Sep 29, 2013			
	Time of sampling	9:54 AM	10:52 AM				6:18 AM			
	Chloride (unit: ppm)	-	-				420			
C	s-134 (Approx. 2 years)	3.0	ND(0.39)				11			
Cs	s-137 (Approx.30 years)	5.8	ND(0.46)				25			
The other y										
	ΑΙΙ β	170	24				250			
ŀ	H-3 (Approx. 12 years)	Under analysis	Under analysis				Under analysis			
Sr	r-90 (Approx. 29 years)	-	-				-			

		Underground water observation hole No.2	Underground water observation hole No.2-1	Underground water observation hole No.2-5	Underground water observation hole No.2-6	Underground water observation hole No.3	Underground water observation hole No.3-4
	Date of sampling	Sep 29, 2013	/	/	Sep 29, 2013	/	
	Time of sampling	9:33 AM			10:30 AM		
Cs	s-134 (Approx. 2 years)	0.49			ND(0.41)		
Cs	-137 (Approx.30 years)	0.94			0.57		
The other y							
	ΑΙΙ β	290			ND(18)		
F	H-3 (Approx. 12 years)	Under analysis			Under analysis		
Sr	-90 (Approx. 29 years)	-		V	-		

<sup>\* &</sup>quot;ND" indicates that the measurement result is below the detection limit, and the detection limit of each nuclide is provided in parentheses.

<sup>\* &</sup>quot;-" indicates that the measurement was out of range.

Detailed Analysis Results in the Port of Fukushima Daiichi NPS, around Discharge Channel and Bank Protection (Sampling Locations of Seawater)



## Detailed Analysis Results in the Port of Fukushima Daiichi NPS, around Discharge Channel and Bank Protection (3/4) Seawater

Unit: Bq/L

	1F, North side of Unit 5,6 discharge channel	1F, In front of Unit 6 water intake channel	1F, In front of shallow draft quay	1F, North side of Unit 1-4 water intake channel	1F, North side of Unit 1-4 water intake channel (north side of East Seawall Break)	1F, Unit 1 Screen (Inside the Silt Fence)	1F, Between the water intake channel of Unit 1 and Unit 2 (surface layer)	1F, Between the water intake channel of Unit 1 and Unit 2 (lower layer)	1F, Unit 2 Screen	1F, Between the water intake channel of Unit 2 and Unit 3	1F, Unit 3 Screen (Inside the Silt Fence)	Density Limit Specified by the Reactor Regulation *	WHO Guidelines for drinking- water quality
Date of Sampling		/		Sep 26, 2013		/	Sep 26, 2013	Sep 26, 2013					
Time of sampling			/	6:08 AM			6:14 AM	6:14 AM					
Cs-134(Approx. 2 years)				26			17	16				60	10
Cs-137(Approx.30 years	) /		/	54			42	38				90	10
ΑΙΙ β				370			300	300	. /				
H-3 (Approx. 12 years)				1,200			860	660				60,000	10,000
Sr-90 (Approx. 29 years)	/		/	-			-	-	/	/		30	10

	1F, Between the water intake channel of Unit 3 and Unit 4	1F, Unit 4 Screen (Inside the Silt Fence)	1F, Around the south discharge channel	1F, Port entrance	1F, East side in the port	1F, West side in the port	1F, North side in the port	1F, South side in the port	North side of the north breakwater	East side of the port entrance	breakwater	Density Limit Specified by the Reactor Regulation	WHO Guidelines for drinking- water quality
Date of Sampling				/			/	/		/	/		
Time of sampling								/	/				
Cs-134(Approx. 2 years)							/		/			60	10
Cs-137(Approx.30 years)	/							/				90	10
ΑΙΙ β													
H-3 (Approx. 12 years)							/	/	/			60,000	10,000
Sr-90 (Approx. 29 years)	/	/	/	/		/	/	V	/	/	/	30	10

<sup>\*</sup> Data announced this time is provided in a thick-frame. The other data was announced on September 27.

<sup>\* &</sup>quot;ND" indicates that the measurement result is below the detection limit, and the detection limit of each nuclide is provided in parentheses.

<sup>\* &</sup>quot;-" indicates that the measurement was out of range.

<sup>\*</sup> Density Limit Specified by the Rule for the Installation, Operation, etc. of Commercial Nuclear Power Reactors (the density limit in the water outside the surrounding monitored areas is provided in section 6 of Appendix 2 [the amount is converted from Bg/cm³ to Bg/L]).

## Detailed Analysis Results in the Port of Fukushima Daiichi NPS, around Discharge Channel and Bank Protection (4/4) Seawater

Unit: Bq/L

	1F, North side of Unit 5,6 discharge channel	1F, In front of Unit 6 water intake channel	1F, In front of shallow draft quay	1F, North side of Unit 1-4 water intake channel	1F, North side of Unit 1-4 water intake channel (north side of East Seawall Break)	1F, Unit 1	1F, Between the water intake channel of Unit 1 and Unit 2 (surface layer)	1F, Between the water intake channel of Unit 1 and Unit 2 (lower layer)	1F, Unit 2 Screen	1F, Between the water intake channel of Unit 2 and Unit 3	1F, Unit 3 Screen (Inside the Silt Fence)	Density Limit Specified by the Reactor Regulation *	WHO Guidelines for drinking- water quality
Date of Sampling			/	Sep 29, 2013		/	Sep 29, 2013	Sep 29, 2013	/				
Time of sampling				6:08 AM			6:15 AM	6:15 AM					
Cs-134(Approx. 2 years)				26			24	22				60	10
Cs-137(Approx.30 years)				60			53	52				90	10
ΑΙΙ β				390	/		360	330					
H-3 (Approx. 12 years)				Under analysis			Under analysis	Under analysis				60,000	10,000
Sr-90 (Approx. 29 years)	/			-			-	-				30	10

	1F, Between the water intake channel of Unit 3 and Unit 4	Screen	1F, Around the south discharge channel	1F, Port entrance	1F, East side in the port	1F, West side in the port	1F, North side in the port	1F, South side in the port	North side of the north breakwater	Last side of the	breakwater	Density Limit Specified by the Reactor Regulation	drinking-
Date of Sampling				/	/	/	/	/	Sep 28, 2013	Sep 28, 2013	Sep 28, 2013		
Time of sampling								/	9:42 AM	9:51 AM	9:56 AM		
Cs-134(Approx. 2 years)						/			ND(0.61)	ND(0.66)	ND(0.64)	60	10
Cs-137(Approx.30 years)								/	ND(0.57)	ND(0.64)	ND(0.57)	90	10
ΑΙΙ β									ND(16)	ND(16)	ND(16)		
H-3 (Approx. 12 years)									Under analysis	Under analysis	Under analysis	60,000	10,000
Sr-90(Approx. 29 years)	/	/	V	/		/	/	V	-	-	-	30	10

<sup>\* &</sup>quot;ND" indicates that the measurement result is below the detection limit, and the detection limit of each nuclide is provided in parentheses.

<sup>\* &</sup>quot;-" indicates that the measurement was out of range.

<sup>\*</sup> Density Limit Specified by the Rule for the Installation, Operation, etc. of Commercial Nuclear Power Reactors (the density limit in the water outside the surrounding monitored areas is provided in section 6 of Appendix 2 [the amount is converted from Bg/cm³ to Bg/L]).

#### <Reference> The Highest Dose Until the Previous Measurement (Groundwater Obtained at Bank Protection)

Unit: Bq/L

			Ground observati No.0	ion hole	Ground observati No.	tion hole	Ground observat No	ion hole	Ground observat No.	ion hole	Groun observa No.	tion hole	Ground observat No.	tion hole		dwater tion hole 1-4		dwater tion hole 1-5	observa	dwater tion hole .1-8		dwater tion hole .1-9	Groun observa No.	tion hole	observa	ndwater ition hole 1-16	pumped the we	dwater I up from ell point n tank)
	Cs	-134 (Approx. 2 years)	2.1	[ 9/22 ]	ND		13	[ 8/29 ]	1.9	[ 7/8 ]	11,000	[7/9]	10	[ 9/2 ]	1.5	[ 7/8 ]	310	(8/5)	31	(9/16)	170	(9/3)	[ 1/0 ]	(9/26)	ND		110	( 9/23 )
	Cs-	-137 (Approx.30 years)	4.6	[ 9/22 ]	0.93	(9/15)	31	[ 8/29 ]	3.6	[7/8]	22,000	[7/9]	24	[ 9/2 ]	3.6	[ 7/8 ]	650	(8/5)	67	(9/16)	380	[ 9/3 ]	1.2	[ 9/23 ]	[ 1/2 ]	[ 9/26 ]	250	[ 9/23 ]
		Ru-106 (Approx. 370 days)	ND		ND		26	[ 5/24 ]	7.9	[7/8]	160	(8/15)	17	(7/22) (8/8)	3.1	[ 8/8 ]	ND		ND		ND		ND		ND		25	[ 9/2 ]
.	⊺he	Mn-54 (Approx. 310 days)	ND		ND		ND		1.0	(7/5)	62	[ 7/5 ]	ND		ND		ND		0.76	(9/16)	ND		ND		ND		ND	
ot	ner γ	Co-60 (Approx. 5 years)	ND		ND		0.50	[7/19]	ND		3.1	[ 7/8 ]	ND		ND		ND		ND		ND		ND		ND		ND	
		Sb-125 (Approx. 3 years)	ND		ND		1.7	[7/11]	ND		250	(7/15)	1.4	(7/12) (8/26)	ND		12	[ 8/8 ]	ND		ND		ND		ND		ND	
		All β	300	[ 8/22 ]	(2/6)	( 9/22 )	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)	2,100	(9/16)	600	(9/8)	57	(9/19)	[ 2/27 ]	(9/26)	700,000	[ 9/23 ]
	Н	-3 (Approx. 12 years)	45,000	[ 8/29 ]	ND		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)	2100	[ 9/23 ]	680	(9/15) (9/24)	85000	[ 9/13 ]	43000	[ 9/26 ]	460,000	(8/19)
	Sr	-90(Approx. 29 years)	Under analysis		Under analysis		1,200	[6/7]	Under analysis		Under analysis		Under analysis		Under analysis		Under analysis		Under analysis		Under analysis		Under analysis		Under analysis		-	

		observa	dwater tion hole 5.2	Ground observati No.	ion hole	Ground observat No.	ion hole	observa	dwater tion hole 2-6	observa	ndwater ation hole o.3	Ground observat No.	ion hole	Ground observat No.	ion hole
C	s-134 (Approx. 2 years)	0.50	[7/9]	0.66	[ 9/1 ]	[ 1/3 ]	[ 9/29 ]	0.42	[ 9/22 ]	3.5	[ 7/25 ]	1.2	(7/25) (8/8)	1.0	[ 9/25 ]
Cs	s-137 (Approx.30 years)	1.2	(7/11) (8/1)	1.1	(8/29) (9/1)	[ 1/6 ]	[ 9/29 ]	0.6	[ 9/22 ]	5.9	( 8/8 )	2.6	(8/1)	1.8	[ 9/18 ]
	Ru-106 (Approx. 370 days)	ND		ND		ND		ND		ND		ND		ND	
The	Mn-54 (Approx. 310 days)	ND		ND		[ 1/0 ]	[ 9/29 ]	ND		ND		ND		ND	
other y	Co-60 (Approx. 5 years)	ND		ND		ND		ND		ND		ND		ND	
	Sb-125 (Approx. 3 years)	ND		ND		[ 1/26 ]	[ 9/29 ]	ND		1.1	(9/5)	ND		ND	
	ΑΙΙ β	1,700	[ 7/8 ]	380	[ 7/29 ]	(8/11)	[ 9/29 ]	ND		1,400	[ 7/11 ]	180	[ 8/1 ]	ND	
ŀ	H-3 (Approx. 12 years)	850	[ 6/26 ]	440	(8/26)	Under analysis		210	[ 9/22 ]	3,200	[2012/12/ 12]	460	[ 8/1 ]	170	(9/18)
S	r-90(Approx. 29 years)	54	[ 5/31 ]	Under analysis		Under analysis		Under analysis		8.3	(2012/12/ 12)	Under analysis		Under analysis	

<sup>\* &</sup>quot;ND" indicates that the measurement result is below the detection limit.

 $<sup>^{\</sup>star}$  Date of sampling is provided in parentheses.

### <Reference> The Highest Dose Until the Previous Measurement\* (Seawater)

Unit: Bq/L

	Unit 5,6	th side of discharge annel	, ,	ont of Unit 6 ake channel		n front of draft quay	Unit 1-4 w		Unit 1-4 v channel of East	rth side of water intake (north side t Seawall reak)	(Inside	1 Screen the Silt nce)	water into		water inta of Unit 1	ween the ike channel and Unit 2 r layer)	(Insid	t 2 Screen e the Silt ence)	water inta of Unit 2	ween the ake channel and Unit 3 ce layer)	water inta of Unit 2		(Inside	3 Screen e the Silt nce)
Cs-134(Approx. 2 years)	1.8	[ 6/21 ]	2.4	[ 8/19 ]	5.3	( 8/5 )	54	(9/10)	16	[8/12]	31	(9/9) (9/23)	39	(9/10)	16	(9/24) (9/26)	26	/19] [9/	1 21	(8/12)	3.5	[ 8/20 ]	350	(7/15)
Cs-137(Approx.30 years)	3.3	[6/26]	4.7	[8/19]	8.6	( 8/5 )	110	(9/10)	33	[8/12]	68	(9/9)	80	(9/10)	38	[ 9/26 ]	52	(8/19)	38	( 9/9 )	9.8	[ 8/20 ]	770	(7/15)
ΑΙΙ β	ND		46	[ 8/19 ]	40	[ 7/3 ]	1,100	[8/15]	320	[8/12]	700	[8/12]	740	[ 8/15 ]	450	[ 7/16 ]	520	(9/9)	450	( 9/9 )	85	[ 8/20 ]	1,000	(7/15)
H-3 (Approx. 12 years)	8.6	[ 6/26 ]	24	[ 8/19 ]	340	[ 6/26 ]	4,700	[8/15]	460	[7/15]	2,500	[8/12]	2,600	[ 8/15 ]	1,600	[ 9/1 ]	1,500	[ 9/9 ]	790	[ 9/9 ]	-		410	[ 9/2 ]
Sr-90 (Approx. 29 years)	5.8	[ 6/26 ]	-		7.4	[ 6/26 ]	Under analysis		Under analysis		Under analysis		Under analysis		Under analysis		Under analysis	i	Under analysis		-		Under analysis	

Unit: Bq/L

	water inta of Unit 3		water into	tween the ake channel and Unit 4 er layer)	(Inside	t 4 Screen e the Silt ence)	south o	ound the discharge annel	1F, Por	t entrance		side in the ort	1F, West			n side in the port		n side in the port		ide of the eakwater		of the port ance	South side of the south breakwater
Cs-134(Approx. 2 years)	22	[ 8/12 ]	4.8	[ 8/20 ]	62	[ 9/16 ]	ND		1.6	[ 8/19 ]	2.9	[ 8/19 ]	2.6	[ 8/19 ]	1.5	[ 9/18 ]	2.1	[8/19]	ND		ND		ND
Cs-137(Approx.30 years)	45	[ 8/12 ]	7.7	[ 8/20 ]	140	[ 9/16 ]	3.0	[7/15]	4.7	[ 8/19 ]	6.6	[ 8/19 ]	6.5	[8/19]	4.7	[ 8/19 ]	4.6	[ 8/19 ]	ND		ND		ND
ΑΙΙ β	390	[ 8/12 ]	57	[ 8/20 ]	310	[ 8/12 ]	ND		69	[ 8/19 ]	74	[ 8/19 ]	60	[ 7/4 ]	69	[ 8/19 ]	79	[ 8/19 ]	ND		ND		ND
H-3 (Approx. 12 years)	650	[ 8/12 ]	-		400	[ 8/12 ]	ND		68	[8/19]	67	[8/19]	59	[8/19]	52	[ 8/19 ]	60	[8/19]	4.7	(8/14)	3.6	(9/18)	ND
Sr-90 (Approx. 29 years)	Under analysis		-		Under analysis	;	0.36	[ 6/26 ]	3.5	[ 6/20 ]	Under analysis		Under analysis		-		-		-		-		-

<sup>\*</sup> The highest result announced in "Detailed Analysis Results in the Port of Fukushima Daiichi NPS, around Discharge Channel and Bank Protection" or the other handouts is provided.

As for "1F, North side of Unit 1-4 water intake channel", the data is obtained since January 14, 2013. For the other locations, the data is obtained since June 14.

#### [Reference] Standard values

	Cs-134	Cs-137	H-3	Sr-90
Density Limit Specified by the Rule for the Installation, Operation, etc. of Commercial Nuclear Power Reactors (the density limit in the water outside the surrounding monitored areas is provided in section 6 of Appendix 2)	60	90	60,000	30
WHO Guidelines for drinking-water quality	10	10	10,000	10

<sup>\* &</sup>quot;ND" indicates that the measurement result is below the detection limit.

<sup>\*</sup> Date of sampling is provided in parentheses.

<sup>\* &</sup>quot;-" indicates that the measurement was out of range.