

# ALPS Treated Water Discharge Status Update

August 29, 2024

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Tokyo Electric Power Company Holdings, Inc.

- 1. Performance of the discharge of ALPS treated water  
(Management number\* 24-4-8)**
  - 2. Transfer of ALPS treated water in preparation for the future discharges**
  - 3. Results from the FY2023 investigative analysis of the six nuclides targeted for monitoring**
- (Reference) Sea area monitoring history after the commencement of discharge**

\* The management number is made up of the fiscal year, followed by the discharge number for that fiscal year, and the total number of discharges to date.  
For example, "24-4-8" indicates that the data is for the fourth discharge of 2024, which is the eighth discharge to date.

- 1. Performance of the discharge of ALPS treated water  
(Management number\* 24-4-8)**
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  3. Results from the FY2023 investigative analysis of the six nuclides targeted for monitoring
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\* The management number is made up of the fiscal year, followed by the discharge number for that fiscal year, and the total number of discharges to date.  
For example, "24-4-8" indicates that the data is for the fourth discharge of 2024, which is the eighth discharge to date.

# 1. Overview

- We conducted the discharge of ALPS treated water (management number: 24-4-8) as follows.
- In this report, we will explain that there was no abnormality in parameters and sea area monitoring.

## FY2023

Management number	Tank group	Tritium concentration	Commenced	Completed	Amount of discharge	Amount of tritium radioactivity
23-1-1	Group B	14 x 10 <sup>4</sup> Bq/liter	Aug 24, 2023	Sep 11, 2023	7,788m <sup>3</sup>	Approx. 1.1 trillion Bq
23-2-2	Group C	14 x 10 <sup>4</sup> Bq/liter	Oct 5, 2023	Oct 23, 2023	7,810m <sup>3</sup>	Approx. 1.1 trillion Bq
23-3-3	Group A	13 x 10 <sup>4</sup> Bq/liter	Nov 2, 2023	Nov 20, 2023	7,753m <sup>3</sup>	Approx. 1.0 trillion Bq
23-4-4	Group B	17 x 10 <sup>4</sup> Bq/liter	Feb 28, 2024	Mar 17, 2024	7,794m <sup>3</sup>	Approx. 1.3 trillion Bq

## FY2024

Management number	Tank group	Tritium Concentration	Commenced	Completed	Amount of discharge	Amount of tritium radioactivity
24-1-5	Group C	19 x 10 <sup>4</sup> Bq/liter	Apr 19, 2024	May 7, 2024	7,851m <sup>3</sup>	Approx. 1.5 trillion Bq
24-2-6	Group A	17 x 10 <sup>4</sup> Bq/liter	May 17, 2024	Jun 4, 2024	7,892m <sup>3</sup>	Approx. 1.3 trillion Bq
24-3-7	Group B	17 x 10 <sup>4</sup> Bq/liter	Jun 28, 2024	Jul 16, 2024	7,846m <sup>3</sup>	Approx. 1.3 trillion Bq
24-4-8	Group C	20 x 10 <sup>4</sup> Bq/liter	Aug 7, 2024	Aug 25, 2024	7,897m <sup>3</sup>	Approx. 1.6 trillion Bq

# 1-1. Analysis Results of ALPS Treated Water in the Measurement/Confirmation Tank (Management number: 24-4-8)



- Pre-discharge analysis results for the samples taken from the measurement/confirmation tank (Group C) on June 21, 2024, were obtained. It was confirmed that the water satisfies discharge requirements (Table 1. Disclosed on August 5, 2024).
  - Item 1: For 30<sup>\*1</sup> nuclides to be measured and assessed, the sum of the ratios of the concentration of each radionuclide to the regulatory concentration is 0.12, and it is confirmed to be less than 1.
  - Item 2: Analysis results of tritium concentration is 20 x 10<sup>4</sup> Bq/liter, and it is confirmed to be less than 1 million Bq/liter.
  - Item 1/2: The external agency consigned by TEPCO (Kaken) and the third-party consigned by the Japanese Government (JAEA)<sup>\*2</sup> obtained the same results from their analyses.
  - Item 3/4: It was confirmed that operational targets have been satisfied.

\*1 The number of nuclides to be measured and assessed has been 30 since the discharge of management number 24-4-8. For details, see page 24 onwards

\*2 ALPS treated water third-party analysis ([https://fukushima.jaea.go.jp/okuma/alps/index\\_e.html](https://fukushima.jaea.go.jp/okuma/alps/index_e.html))

Table 1 . Pre-discharge analysis results of water in the measurement/confirmation tank (Management number: 24-4-8)

Items		Requirement basis	Operational Target	Analysis Results
①	Nuclide to be measured and assessed (30 nuclides)	Implementation plan	The sum of the ratios of the concentration of each radionuclide to the regulatory concentration, except for tritium, is less than 1	<b>0.12 ( &lt; 1 )</b>
②	Tritium		Tritium concentration is less than 1 million Bq/liter	<b>20 x 10<sup>4</sup>Bq/liter (less than 1 million Bq/liter)</b>
③	Nuclides voluntarily checked to ensure that they are not significantly present (38 nuclides)	Voluntary	No significant concentrations were found of any of the nuclides	<b>None of the nuclides are present in significant consternation</b>
④	General water quality: 44 criteria		Pre-check of water quality standards <sup>*3</sup>	<b>All criteria satisfied</b>

\*3 Water sampled from the discharge vertical shaft (upper-stream storage) once a year to confirm that legal requirements are being satisfied

# [Reference] Pre-discharge Analysis Results of ALPS Treated Water in the

## Measurement/Confirmation (Management number: 24-4-8) (1/4)



- For 30\* nuclides to be measured and assessed, the sum of the ratios of the concentration of each radionuclide to the regulatory concentration is 0.12, and it is confirmed to be less than 1.

Nuclides to be measured and assessed (30 nuclides)

Analysis results of radioactivity (Bq/liter)

Ratios to Regulatory Concentration Limit

Pre-discharge Analysis Results of ALPS Treated Water in the Measurement/Confirmation Tanks (1/4)			
Sample Name	ALPS Treated Water in the Measurement/Confirmation Tanks	Group C	
Date and Time of Sampling	June 21, 2024 10:40		
Storage Volume (m <sup>3</sup> )	8943		
Summary	Nuclides to be measured and assessed (29 nuclides) : The sum of the ratios of the concentration of each radionuclide to the regulatory concentration		0.12 (Confirmed to be less than 1)

Radioactivity Analysis: Nuclides to be measured and assessed (30 nuclides)											
No.	Nuclide	Analysis Results			Analysis Results			Ratios to Regulatory Concentration Limit		Regulatory Concentration Limit *2 (Bq/L)	Analysis Method *4
		Analysis Value (Bq/L)	TEPCO Uncertainty *1 (Bq/L)	Detection Limit (Bq/L)	Analysis Value (Bq/L)	KAKEN Co.,Ltd. Uncertainty *1 (Bq/L)	Detection Limit (Bq/L)	TEPCO	KAKEN Co.,Ltd.		
1	C-14	1.2E+01	± 1.9E+00	1.6E+00	9.8E+00	± 8.4E-01	9.5E-01	5.8E-03	4.9E-03	2000	Measurement
2	Mn-54	ND	—	2.6E-02	ND	—	1.8E-02	less than 2.6E-05	less than 1.8E-05	1000	Measurement
3	Fe-55	ND	—	1.6E+01	ND	—	1.2E+01	less than 7.9E-03	less than 5.9E-03	2000	Measurement
4	Co-60	4.4E-01	± 8.0E-02	2.7E-02	4.1E-01	± 5.5E-02	1.9E-02	2.2E-03	2.0E-03	200	Measurement
5	Ni-63	ND	—	8.1E+00	ND	—	5.8E+00	less than 1.3E-03	less than 9.6E-04	6000	Measurement
6	Se-79	ND	—	9.8E-01	ND	—	1.7E+00	less than 4.9E-03	less than 8.5E-03	200	Measurement
7	Sr-90	1.2E+00	± 5.1E-02	3.5E-02	1.1E+00	± 1.4E-01	3.4E-02	4.0E-02	3.5E-02	30	Measurement
8	Y-90	1.2E+00	—	3.5E-02	1.1E+00	—	3.4E-02	4.0E-03	3.5E-03	300	Sr-90/Y-90 Radioactive Equilibrium Assessment
9	Tc-99	7.3E-01	± 1.6E-01	1.1E-01	6.4E-01	± 1.1E-01	2.2E-02	7.3E-04	6.4E-04	1000	Measurement
10	Ru-106	ND	—	2.2E-01	ND	—	1.9E-01	less than 2.2E-03	less than 1.9E-03	100	Measurement
11	Cd-113m	ND	—	7.7E-02	ND	—	2.9E-02	less than 1.9E-03	less than 7.2E-04	40	Measurement
12	Sb-125	2.3E-01	± 7.5E-02	9.1E-02	7.5E-01	± 6.0E-02	7.9E-02	2.9E-04	2.6E-04	800	Measurement
13	Te-125m	8.7E-02	—	3.4E-02	7.6E-02	—	2.9E-02	9.6E-05	8.4E-05	900	Sb-125/Te-125m Radioactive Equilibrium Assessment
14	I-129	2.9E-01	± 6.9E-02	3.0E-02	3.3E-01	± 5.8E-02	2.6E-02	3.2E-02	3.7E-02	9	Measurement
15	Cs-134	ND	—	3.4E-02	ND	—	2.2E-02	less than 5.7E-04	less than 3.6E-04	60	Measurement
16	Cs-137	2.2E-01	± 4.4E-02	2.7E-02	2.1E-01	± 3.1E-02	2.0E-02	2.5E-03	2.3E-03	90	Measurement
17	Ce-144	ND	—	3.8E-01	ND	—	2.8E-01	less than 1.9E-03	less than 1.4E-03	200	Measurement
18	Pm-147	ND	—	3.3E-01	ND	—	2.5E-01	less than 1.1E-04	less than 8.5E-05	3000	Eu-154 Relative Ratio Assessment
19	Sm-151	ND	—	1.3E-02	ND	—	9.7E-03	less than 1.6E-06	less than 1.2E-06	8000	Eu-154 Relative Ratio Assessment
20	Eu-154	ND	—	7.4E-02	ND	—	5.7E-02	less than 1.9E-04	less than 1.4E-04	400	Measurement
21	Eu-155	ND	—	2.1E-01	ND	—	1.4E-01	less than 7.1E-05	less than 4.7E-05	3000	Measurement
22	U-234									20	Gross Alpha
23	U-238									20	Gross Alpha
24	Np-237									9	Gross Alpha
25	Pu-238			2.9E-02			2.3E-02			4	Gross Alpha
26	Pu-239	ND	—		ND	—		less than 7.2E-03	less than 5.9E-03	4	Gross Alpha
27	Pu-240							*3	*3	4	Gross Alpha
28	Am-241									5	Gross Alpha
29	Cm-244									7	Gross Alpha
30	Pu-241	ND	—	7.9E-01	ND	—	6.4E-01	less than 4.0E-03	less than 3.2E-03	200	Pu-238 Relative Ratio Assessment
The sum of the ratios of the concentration of each radionuclide to the regulatory concentration (sum of the ratios to regulatory concentration limit)								less than 1.2E-01	less than 1.1E-01		

\* ND indicates that analysis result is less than the detection limit.  
 \* Values are expressed in exponential notation.  
 For example, "3.1E+01" means "3.1×10<sup>1</sup>" and equals 31. Similarly, "3.1E+00" means "3.1×10<sup>0</sup>" and equals 3.1, and "3.1E-01" means "3.1×10<sup>-1</sup>" and equals 0.31.  
 \*1 "Uncertainty" refers to the accuracy of analysis data.  
 "Uncertainty" is calculated using "Expanded Uncertainty: Coverage Factor k=2".  
 \*2 Regulatory concentration limits stipulated in the Regulations of the Safety and Physical Protection of Specific Nuclear Fuel Material at Fukushima Daiichi Nuclear Power Station of the Tokyo Electric Power Company, Incorporated.  
 (Attached Chart 1, Row 6: Concentration limits in the water outside of the environmental monitoring area [in this chart Bq/cm<sup>3</sup> has been converted into Bq/L])  
 \*3 The ratio to regulatory concentration limit for alpha-radionuclides has been assessed using the lowest regulatory concentration limit for all the target nuclides.  
 \*4 Analysis methods are as follows:  
 Measurement - The concentrations of each radionuclide have been calculated by directly measuring/analyzing radioactivity intensity and the quantity of the element.  
 Gross Alpha - The total amount of alpha-radionuclides in the specimen are calculated by directly measuring alpha rays.  
 Radioactive Equilibrium Assessment - Calculated using a physical phenomenon in which the amount of radioactivity of one radionuclide and another radionuclide produced by the decay of that radionuclide exist in a certain ratio.  
 Relative Ratio Assessment - Calculated based on the assessment values of radionuclides that existed inside the reactor while considering radionuclide decay and migration into ALPS treated water.

\* The number of nuclides to be measured and assessed has been 30 since the discharge of management number 24-4-8. For details, see page 24 onwards.

[Reference] Pre-discharge Analysis Results of ALPS Treated Water in the  
 Measurement/Confirmation (Management number: 24-4-8) (2/4)



- Analysis results of tritium concentration is  $20 \times 10^4$  Bq/liter.

Tritium Concentration (Bq/liter)

Pre-discharge Analysis Results of ALPS Treated Water in the Measurement/Confirmation Tanks (2/4)

Summary	$20 \times 10^4$ Bq/L (confirmed to be less than 1 million Bq/L)
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Radioactivity Analysis: Tritium

No.	Nuclide	Analysis Results						Analysis Objective	Analysis Method *3
		TEPCO			KAKEN Co.,Ltd.				
		Analysis Value (Bq/L)	Uncertainty *1 (Bq/L)	Detection Limit (Bq/L)	Analysis Value (Bq/L)	Uncertainty *1 (Bq/L)	Detection Limit (Bq/L)		
1	H-3	$2.0E+05$	$\pm 1.2E+04$	$1.7E+01$	$2.0E+05$	$\pm 1.4E+04$	$2.8E+01$	*2	Measurement

· Values are expressed in exponential notation.

For example, "3.1E+01" means " $3.1 \times 10^{11}$ " and equals 31. Similarly, "3.1E+00" means " $3.1 \times 10^{0n}$ " and equals 3.1, and "3.1E-01" means " $3.1 \times 10^{-1n}$ " and equals 0.31.

\*1 "Uncertainty" refers to the accuracy of analysis data.

"Uncertainty" is calculated using "Expanded Uncertainty: Coverage Factor  $k=2$ ".

\*2 To confirm that the tritium concentration is less than  $1E+06$ Bq/liter (less than 1 million Bq/liter), the maximum concentration stipulated in the implementation plan, ensuring that the tritium concentration after dilution is less than 1,500 Bq/liter.

\*3 Analysis method is as follows:

Measurement - The concentration of radionuclide has been calculated by directly measuring/analyzing radioactivity intensity and the quantity of the element.

<Excerpt from Treated Water Portal Site>

# [Reference] Pre-discharge Analysis Results of ALPS Treated Water in the Measurement/Confirmation (Management number: 24-4-8) (3/4)



- We voluntarily checked that the nuclides (38 nuclides) are not significantly present. We confirmed that all the 38 nuclides are not significantly present.

Pre-discharge Analysis Results of ALPS Treated Water in the Measurement/Confirmation Tanks (3/4)

Summary		No significant concentrations found of any of the nuclides	
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Radioactivity Analysis: Nuclides voluntarily checked to ensure that they are not significantly present (38 nuclides)

No.	Nuclide	TEPCO		KAKEN Co.,Ltd.		Confirmation Method *2
		Assessment *1	Detection Limit (Bq/L)	Assessment *1	Detection Limit (Bq/L)	
1	Fe-59	○	4.5E-02	○	3.9E-02	Measurement
2	Co-58	○	2.6E-02	○	2.2E-02	
3	Zn-65	○	5.0E-02	○	4.2E-02	
4	Rb-86	○	3.4E-01	○	3.0E-01	
5	Sr-89	○	6.9E-02	○	6.1E-02	
6	Y-91	○	2.7E+00	○	2.9E+00	
7	Nb-95	○	3.3E-02	○	1.9E-02	
8	Ru-103	○	3.4E-02	○	2.8E-02	
9	Ag-110m	○	2.5E-02	○	1.9E-02	
10	Cd-115m	○	1.4E+00	○	1.2E+00	
11	Sn-123	○	1.3E+00	○	1.0E+00	
12	Sn-126	○	1.7E-01	○	1.2E-01	
13	Sb-124	○	5.9E-02	○	4.3E-02	
14	Te-123m	○	5.2E-02	○	4.2E-02	
15	Te-127	○	7.1E-01	○	6.5E-01	
16	Te-129m	○	9.1E-01	○	7.4E-01	
17	Te-129	○	3.8E-01	○	6.2E-01	
18	Cs-136	○	2.8E-02	○	3.0E-02	
19	Ba-140	○	1.1E-01	○	1.4E-01	
20	Ce-141	○	1.1E-01	○	8.7E-02	
21	Pm-146	○	4.2E-02	○	3.4E-02	
22	Pm-148m	○	2.6E-02	○	2.4E-02	
23	Pm-148	○	4.2E-01	○	3.5E-01	
24	Eu-152	○	1.3E-01	○	1.0E-01	
25	Gd-153	○	2.7E-01	○	1.3E-01	
26	Tb-160	○	8.3E-02	○	6.6E-02	
27	Am-243	○	2.9E-02	○	2.3E-02	
28	Cm-242	○	2.9E-02	○	2.3E-02	
29	Cm-243	○	2.9E-02	○	2.3E-02	
30	Rh-103m	○	3.4E-02	○	2.9E-02	
31	Rh-106	○	2.2E-01	○	1.9E-01	
32	Sn-119m	○	6.4E-03	○	4.3E-03	
33	Te-127m	○	7.3E-01	○	6.6E-01	
34	Cs-135	○	1.8E-07	○	1.3E-07	
35	Ba-137m	○	2.6E-02	○	1.9E-02	
36	Pr-144m	○	5.7E-03	○	4.2E-03	
37	Pr-144	○	3.8E-01	○	2.8E-01	
38	Am-242m	○	2.0E-04	○	1.6E-04	

\*1 "○" indicates that the absence of significant concentrations was confirmed by the following, and "×" indicates that significant concentrations of nuclide was confirmed.

- Concentration of nuclide measured was below detection limit
- For nuclide that has been assessed using radioactive equilibrium, etc., if its target nuclide is detected and the assessment value of the target nuclide is extremely small compared to the regulatory concentration limit, or in other words, if it is less than 1/100 of the regulatory concentration limit which is the value set as the detection limit, then it shall be deemed to be below the detection limit.

Nuclide	Assessment Values (Bq/L)		Regulatory Concentration Limit
	TEPCO	KAKEN Co.,Ltd.	
Rh-103m	—	—	2.0E+05
Rh-106	—	—	3.0E+05
Sn-119m	—	—	2.0E+03
Te-127m	—	—	3.0E+02
Cs-135	1.5E-06	1.4E-06	6.0E+02
Ba-137m	2.1E-01	2.0E-01	8.0E+05
Pr-144m	—	—	4.0E+04
Pr-144	—	—	2.0E+04
Am-242m	—	—	5.0E+00

\* A hyphen "—" indicates that the concentration of the target nuclide was below the detection limit.  
 \* Values are expressed in exponential notation.  
 For example, "3.1E+01" means "3.1×10<sup>1</sup>" and equals 31. Similarly, "3.1E+00" means "3.1×10<sup>0</sup>" and equals 3.1, and "3.1E-01" means "3.1×10<sup>-1</sup>" and equals 0.31.

\*2 Analysis Methods are as follows:  
 Measurement - The concentrations of each radionuclide have been calculated by directly measuring/analyzing radioactivity intensity and the quantity of the element.  
 Measurement (substituted with gross alpha) - The total amount of alpha-radionuclides in the specimen are calculated by directly measuring alpha rays.  
 Radioactive Equilibrium Assessment - Calculated using a physical phenomenon in which the amount of radioactivity of one radionuclide and another radionuclide produced by the decay of that radionuclide exist in a certain ratio.  
 Relative Ratio Assessment - Calculated based on the assessment values of radionuclides that existed inside the reactor while considering radionuclide decay and migration into ALPS treated water.

\*3 Regulatory concentration limits stipulated in the Regulations of the Safety and Physical Protection of Specific Nuclear Fuel Material at Fukushima Daiichi Nuclear Power Station of the Tokyo Electric Power Company, Incorporated.  
 (Attached Chart 1, Row 6: Concentration limits in the water outside of the environmental monitoring area [In this chart Bq/cm<sup>3</sup> has been converted into Bq/L])

✂ Excerpt from Treated Water Portal Site

Nuclides voluntarily checked to ensure that they are not significantly present (38 nuclides)

Assessment results  
 ○ : absence of significant concentration was confirmed  
 × : significant concentration was confirmed

\* The number of nuclides voluntarily checked has been 38 since the discharge of management number 24-4-8. For details, see page 24 onwards.



Measurement/Confirmation (Management number: 24-4-8) (4/4)

- For 44 general water quality measurement items (voluntary check to confirm that there are no unusual water quality), **it is confirmed that all criteria<sup>※1</sup> satisfied.**

※1: In accordance with Fukushima Prefecture's "Ordinance on Discharge Standards Based on the Air Pollution Control Act and Wastewater Standard based on the Water Pollution Prevention Act (attached Chart 2)", and "the Ordinance Enforcement Regulations Pertaining to the Preservation of the Living Environment in Fukushima (attached Chart 5)".

General water quality measurement items (44 criteria)

Analysis results

Pre-discharge Analysis Results of ALPS Treated Water in the Measurement/Confirmation Tanks (4/4)

Summary	Criteria satisfied
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General Water Quality Analysis: Voluntary check to confirm that there are no unusual water quality (44 criteria)

No.	Measurement Items	Unit	Analysis Result	Criteria *1
1	Hydrogen Ions (pH)	-	8.6	Sea Area 5.0~9.0
2	Suspended Solids (SS)	mg/L	<1	Maximum: 70 or less Average: 50 or less
3	Chemical Oxygen Demand (COD)	mg/L	<0.5	Maximum: 40 or less Average: 30 or less
4	Boron	mg/L	0.4	Sea Area 230 or less
5	Soluble Iron	mg/L	<1	10 or less
6	Copper	mg/L	<0.1	2 or less
7	Nickel	mg/L	<0.1	2 or less
8	Chrome	mg/L	<0.1	2 or less
9	Zinc	mg/L	<0.1	2 or less
10	Biochemical Oxygen Demand (BOD)	mg/L	<1	Maximum: 40 or less Average: 30 or less
11	Coliform Count	pcs/cm <sup>3</sup>	0	3000 or less
12	Cadmium	mg/L	<0.01	0.03 or less
13	Cyanide	mg/L	<0.05	0.5 or less
14	Organic Phosphorus	mg/L	<0.1	1 or less
15	Lead	mg/L	<0.01	0.1 or less
16	Hexavalent Chromium	mg/L	<0.05	0.2 or less
17	Arsenic	mg/L	<0.01	0.1 or less
18	Mercury	mg/L	<0.0005	0.005 or less
19	Alkyl Mercury	mg/L	<0.0005	Not Detected *2
20	Polychlorinated Biphenyl	mg/L	<0.0005	0.003 or less
21	Trichlorethylene	mg/L	<0.03	0.1 or less
22	Tetrachloroethylene	mg/L	<0.01	0.1 or less
23	Dichloromethane	mg/L	<0.02	0.2 or less
24	Carbon Tetrachloride	mg/L	<0.002	0.02 or less

25	1,2-Dichloroethane	mg/L	<0.004	0.04 or less
26	1,1-Dichloroethylene	mg/L	<0.1	1 or less
27	Cis-1,2-Dichloroethylene	mg/L	<0.04	0.4 or less
28	1,1,1-Trichloroethane	mg/L	<0.3	3 or less
29	1,1,2-Trichloroethane	mg/L	<0.006	0.06 or less
30	1,3-Dichloropropene	mg/L	<0.002	0.02 or less
31	Thiuram	mg/L	<0.006	0.06 or less
32	Simazine	mg/L	<0.003	0.03 or less
33	Thiobencarb	mg/L	<0.02	0.2 or less
34	Benzene	mg/L	<0.01	0.1 or less
35	Selenium	mg/L	<0.01	0.1 or less
36	Fenitrothion	mg/L	<0.003	0.03 or less
37	Phenols	mg/L	<0.1	1 or less
38	Fluorine	mg/L	<0.5	Sea Area 10 or less
39	Soluble Manganese	mg/L	<1	10 or less
40	Ammonia, Ammonium Compounds	mg/L	<1	100 or less
41	Nitrite Compounds and Nitrate Compounds	mg/L	5	
42	1,4-Dioxane	mg/L	<0.05	0.5 or less
43	n-Hexane Extractables (Mineral Oils)	mg/L	<0.5	1 or less
44	n-Hexane Extractables (Animal and Vegetable Oils and Fats)	mg/L	<1	10 or less

\* A "less than" symbol (<) indicates that the quantity is below quantitation limit.

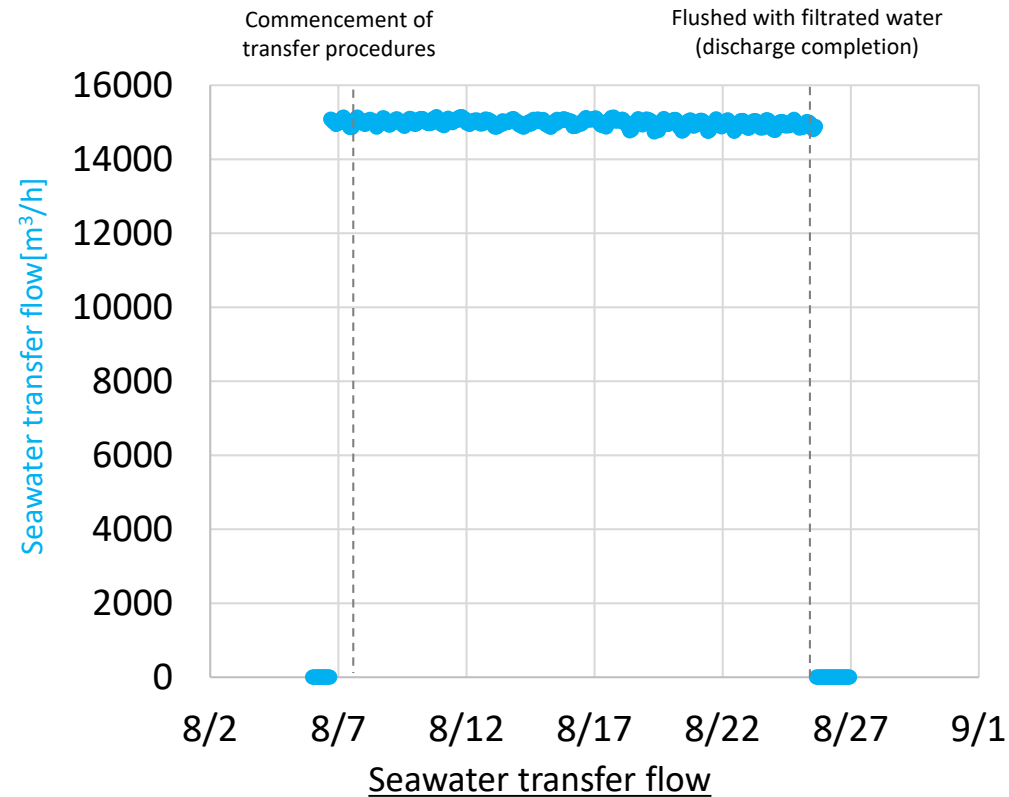
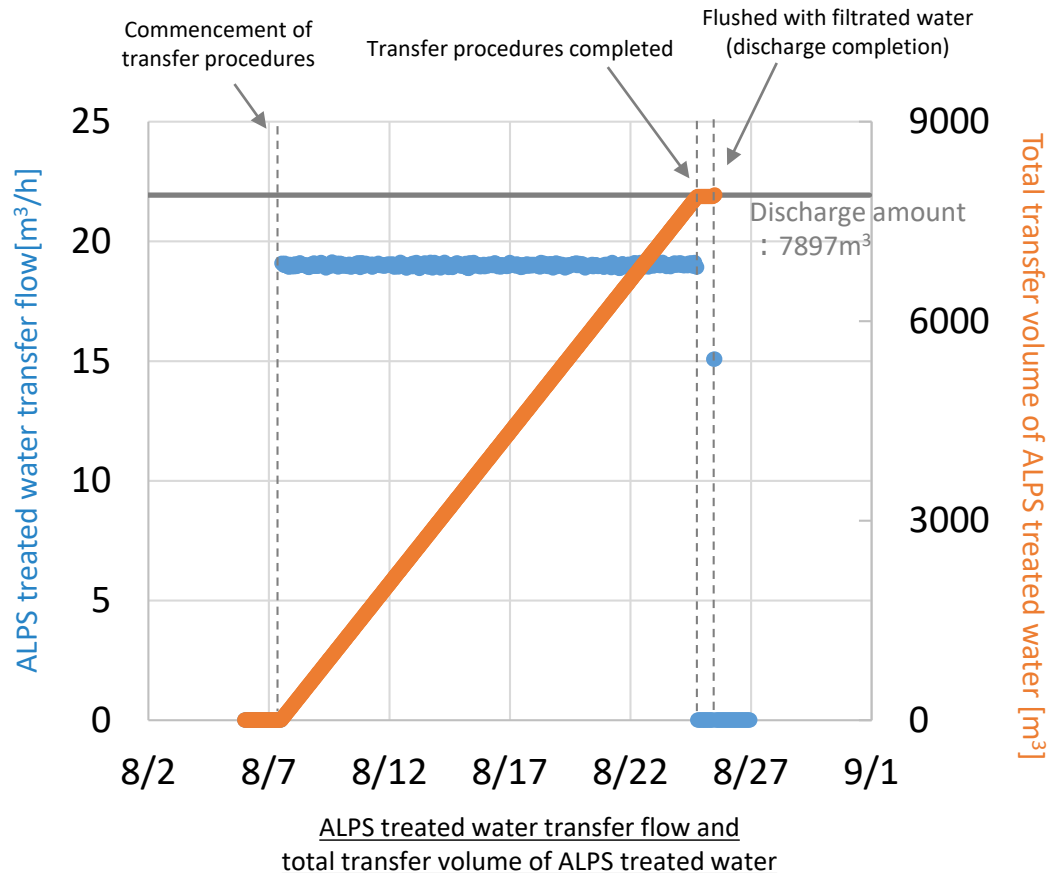
\*1 In accordance with Fukushima Prefecture's "Ordinance on Discharge Standards Based on the Air Pollution Control Act and Wastewater Standards based on the Water Pollution Prevention Act (attached Chart 2) [大気汚染防止法に基づく排出基準及び水質汚濁防止法に基づく排水基準を定める条例(別表第2)]", and "the Ordinance Enforcement Regulations Pertaining to the Preservation of the Living Environment in Fukushima (attached Chart 5) [福島県生活環境の保全等に関する条例施行規則(別表第5)]".

\*2 "Not Detected" indicates that, as described in "Ministerial Ordinance on Effluent standards (attached Table 1) [排水基準を定める省令(別表第一)]", when the state of water pollution is assessed in discharged water using the methods established by the Minister of the Environment, the result is below the limit of quantification (Alkyl Mercury: 0.0005 mg/liter) of the assessment method.

※2: Excerpt from Treated Water Portal Site

# 1-2. Operating parameter records during the discharge (1/3)

■ We were able to operate ALPS treated water transfer systems and seawater systems without issue.



- ALPS treated water transfer flow<sup>\*1</sup>
- Total transfer volume of ALPS treated water

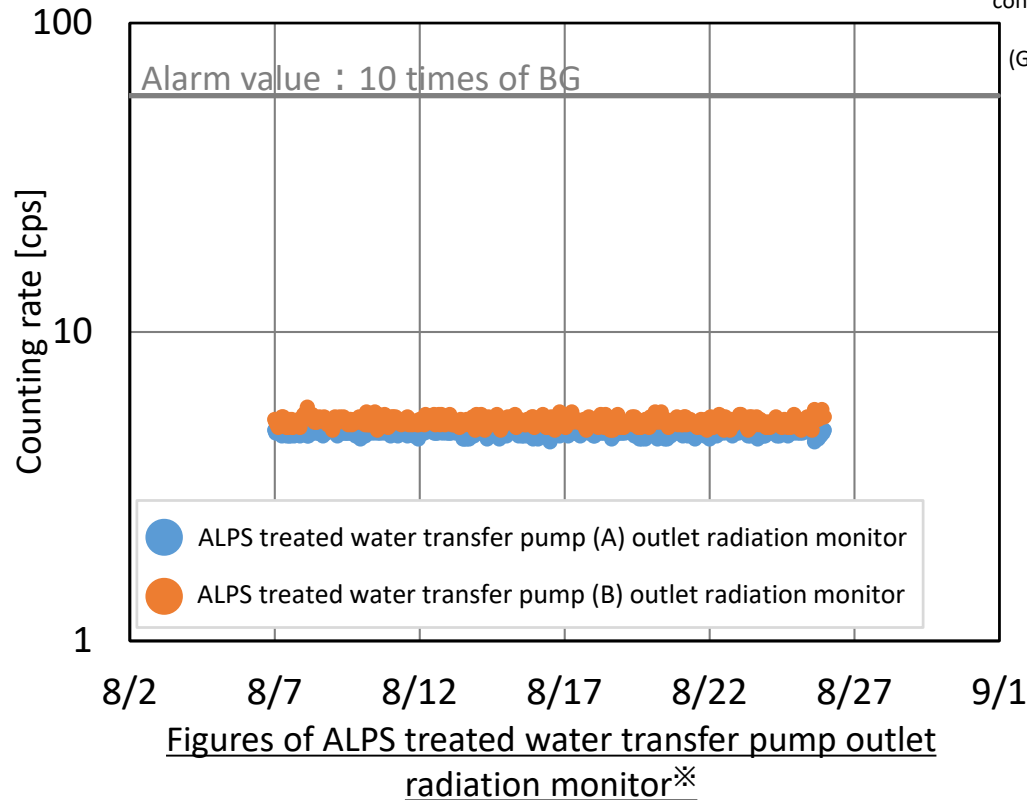
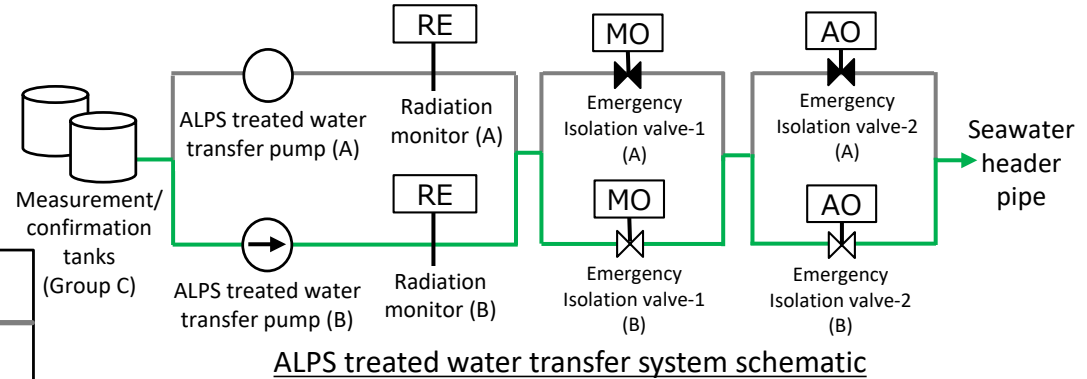
- Seawater transfer flow<sup>\*2</sup>

\*1 : The flowmeters are reduplicate, so the higher of the figures from both meters was used.

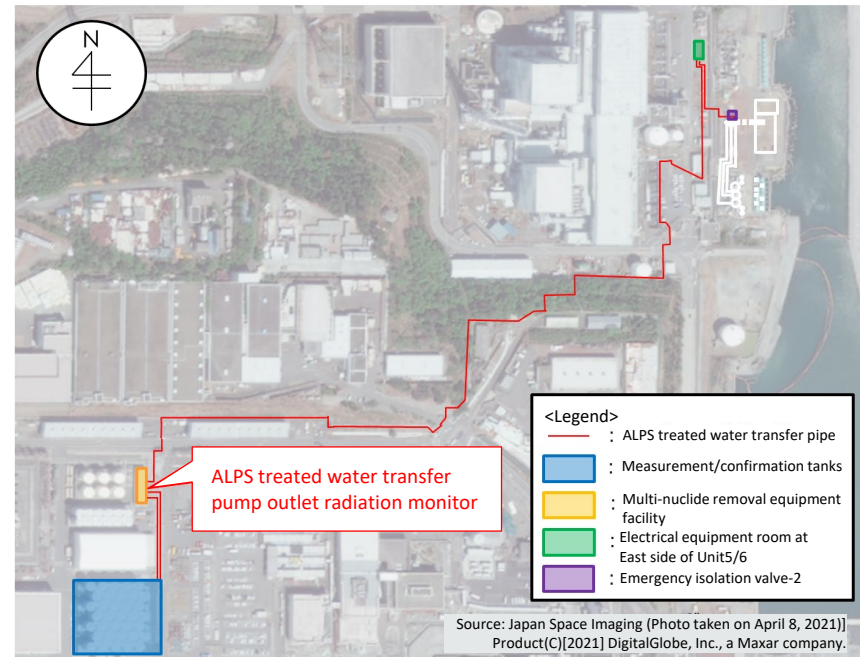
\*2 : Total for systems A and B

# 1-2. Operating parameter records during the discharge (2/3)

■ No abnormalities were seen in the figures from the ALPS treated water transfer pump outlet radiation monitor.



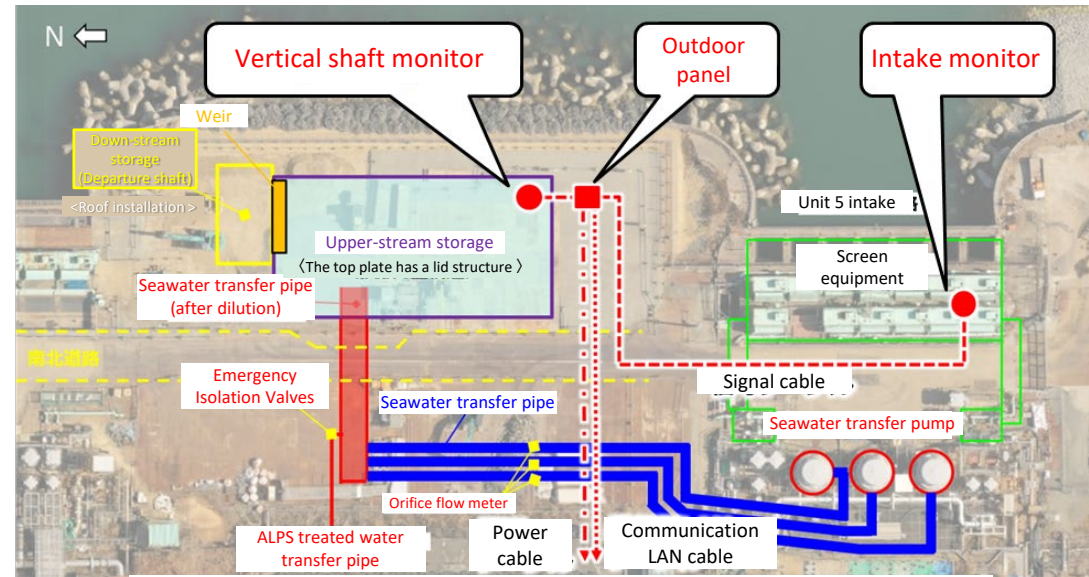
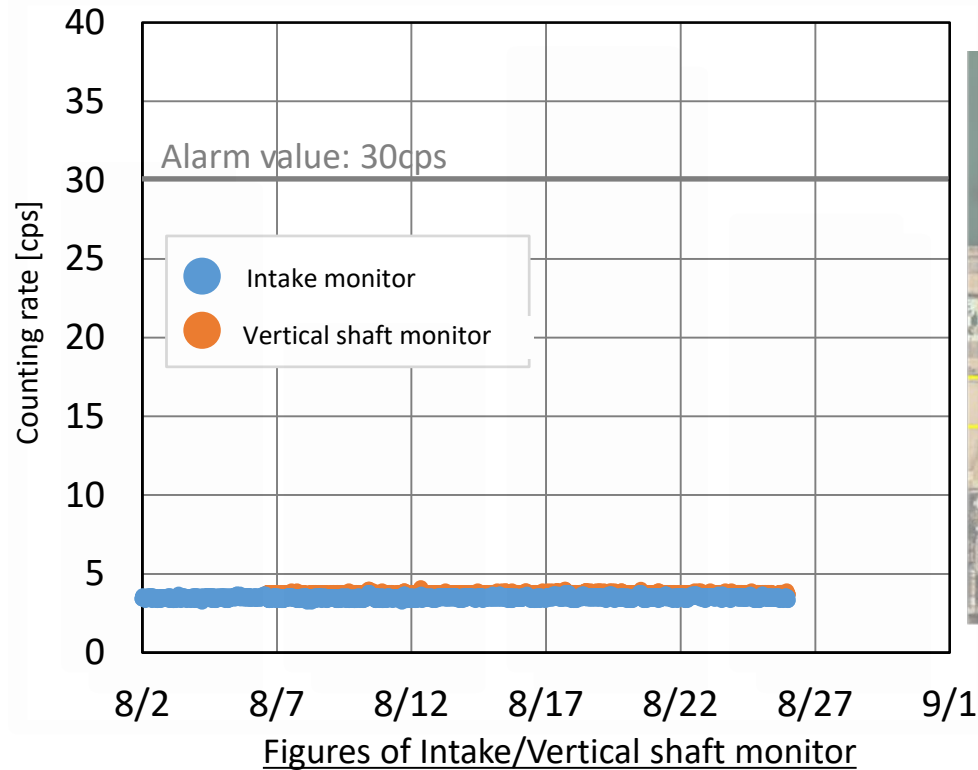
※ : As shown in the schematic on the upper right, ALPS treated water was passed through System B. (System A was filled with filtrated water)



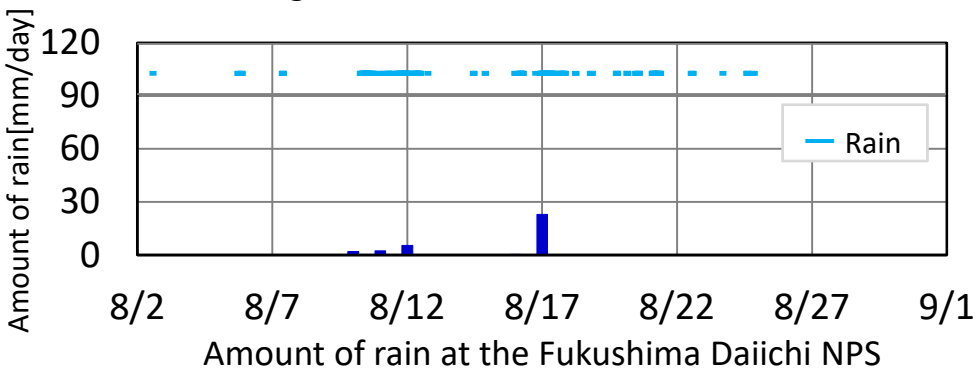
Overview of ALPS treated water dilution/discharge facility

# 1-2. Operating parameter records during the discharge (3/3)

- No abnormalities were seen in the figures from the Intake/Vertical shaft monitors.

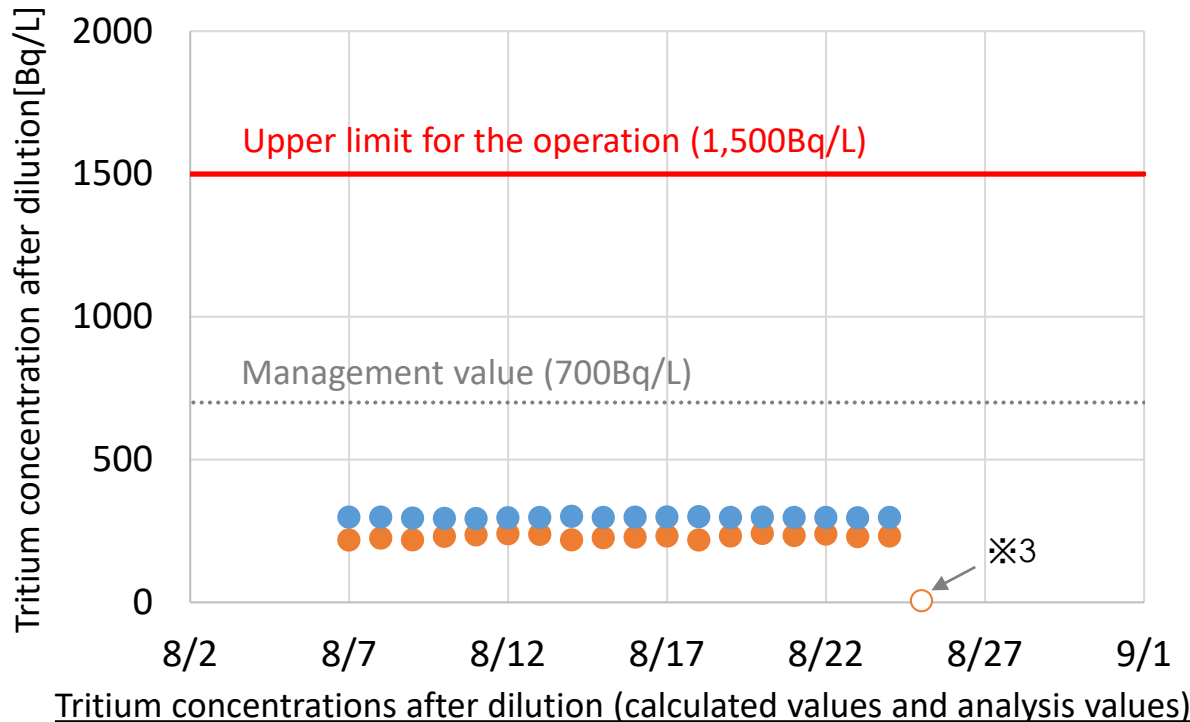


Overview of Intake/Vertical shaft monitor



# 1-3. Tritium concentrations after dilution during the discharge **TEPCO**

- During the discharge period, water was sampled daily from the seawater pipe to analyze tritium concentrations.  
⇒ Confirmed to be less than the upper limit for the operation: 1,500Bq/liter



- Calculated values<sup>※1</sup>
- Analysis values (Detected values)

※1 : Calculated using the following formula  
(Uncertainty has been considered for each parameter)

Tritium concentrations after dilution (Calculated values)

$$= \frac{\text{Tritium concentrations in ALPS treated water}^{\text{※2}} \times \text{ALPS treated water transfer flow}}{\text{Seawater transfer flow} + \text{ALPS treated water transfer flow}}$$

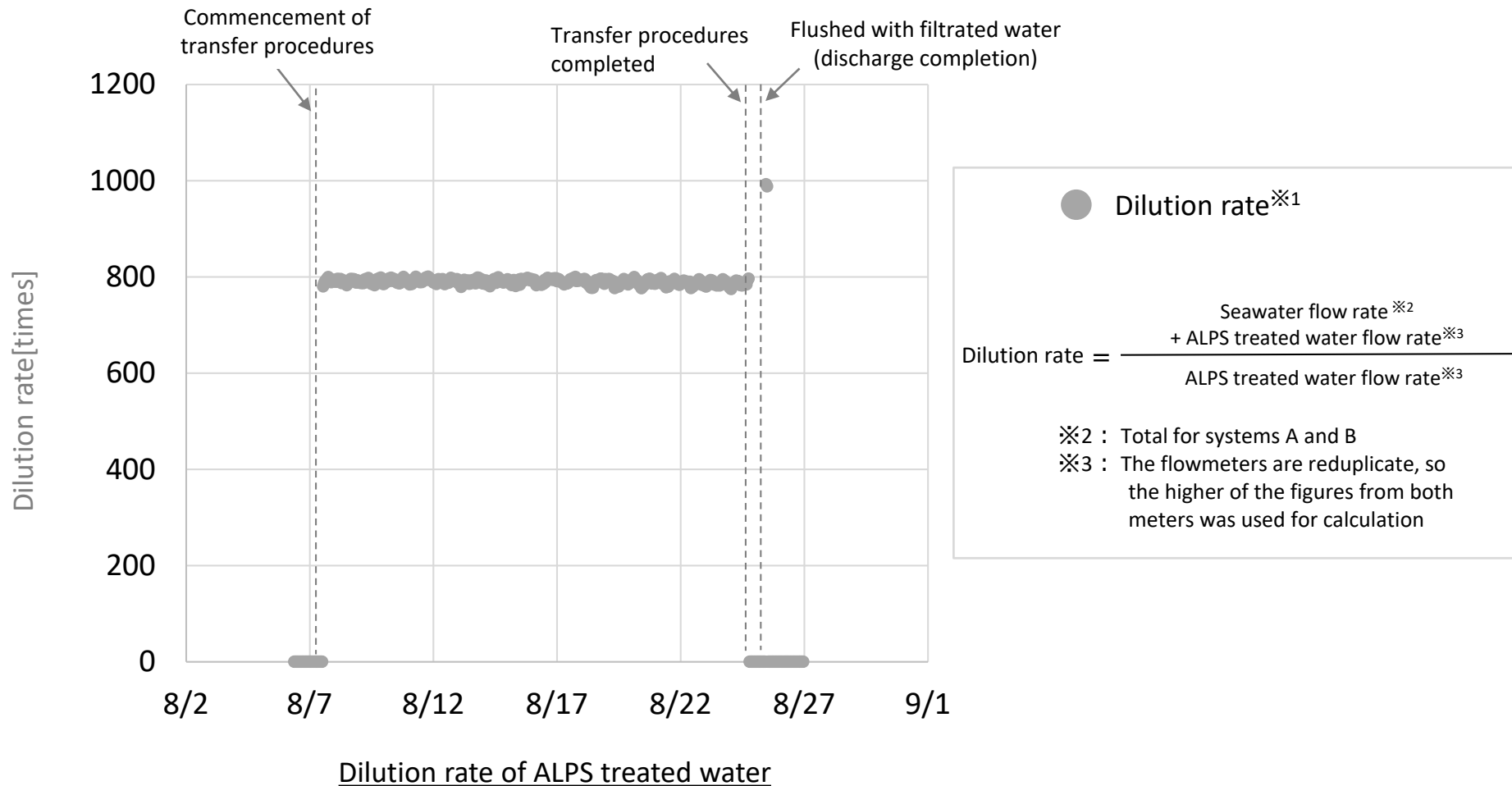
※2 : Analysis values at measurement/confirmation tanks

※3 : No calculated values since the pipes were flushed out with filtrated water.

	8/7	8/8~8/24	8/25
Calculated value: Time of data acquisition	14:00	7:00	—
Analysis value: Time of specimen sampling	14:22	7:00~10:00	11:53

# [Reference] Dilution rate of ALPS treated water

- The dilution rate had always been kept at over 100 times during the discharge.



# [Reference] Total radioactivity of nuclides to be measured and assessed (30 nuclides)

- The following chart shows the total radioactivity (Bq) for nuclides to be measured and assessed (30 nuclides) during the discharge of Management number: 24-4-8. (Calculated from analysis values<sup>※1</sup> (Bq/liter) and discharge volume (7,897m<sup>3</sup>) for each nuclide)
  - ※1: It was confirmed that the sum of the ratios of legally required concentrations of the nuclides targeted for measurement/assessment is 0.12 and less than 1.
- The total radioactivity from nuclides for which analysis values were below detection limit (ND) have not been included.

Nuclide	Analysis value [Bq/liter]	Total radioactivity [Bq]	Nuclide	Analysis value [Bq/liter]	Total radioactivity [Bq]	Nuclide	Analysis value [Bq/liter]	Total radioactivity [Bq]
C-14	1.2E+01	9.5E+07	Cd-113m	<7.7E-02	—	Eu-155	<2.1E-01	—
Mn-54	<2.6E-02	—	Sb-125	2.3E-01	1.8E+06	U-234 <sup>※3</sup>	<2.9E-02	—
Fe-55	<1.6E+01	—	Te-125m <sup>※2</sup>	8.7E-02	6.9E+05	U-238 <sup>※3</sup>	<2.9E-02	—
Co-60	4.4E-01	3.5E+06	I-129	2.9E-01	2.3E+06	Np-237 <sup>※3</sup>	<2.9E-02	—
Ni-63	<8.1E+00	—	Cs-134	<3.4E-02	—	Pu-238 <sup>※3</sup>	<2.9E-02	—
Se-79	<9.8E-01	—	Cs-137	2.2E-01	1.7E+06	Pu-239 <sup>※3</sup>	<2.9E-02	—
Sr-90	1.2E+00	9.5E+06	Ce-144	<3.8E-01	—	Pu-240 <sup>※3</sup>	<2.9E-02	—
Y-90 <sup>※2</sup>	1.2E+00	9.5E+06	Pm-147 <sup>※2</sup>	<3.3E-01	—	Pu-241 <sup>※2</sup>	<7.9E-01	—
Tc-99	7.3E-01	5.8E+06	Sm-151 <sup>※2</sup>	<1.3E-02	—	Am-241 <sup>※3</sup>	<2.9E-02	—
Ru-106	<2.2E-01	—	Eu-154	<7.4E-02	—	Cm-244 <sup>※3</sup>	<2.9E-02	—

※2 Analysis values were assessed with radioactive equilibrium

※3 Gross Alpha measurements

## 1-4. Planned inspection for measurement/confirmation facility

### after the completion of the discharge of management number: 24-4-8

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- After the completion of the discharge of management number 24-4-8, we plan to inspect measurement/confirmation facility sequentially for each facility group based on long-term inspection plan.
- We plan to inspect facilities related to tank group C after the completion of the discharge of management number 24-4-8, and facilities related to tank group A after the discharge of management number 24-5-9.
- After the completion of the discharge of management number 24-6-10, we plan to inspect common facilities (transfer, dilution, water discharge, and water intake facilities) together with facilities related to tank group B.
- Transfer of ALPS treated water to measurement/confirmation facility tank group C in preparation for the discharge of management number 24-7-11 will be conducted in around November or December 2024.



# 1-5. Sea area monitoring history (1/2)

- Measurement results of tritium concentrations in water sampled in the vicinity of the discharge outlet (within 3km of the power station) and outside of the vicinity of the discharge outlet (within a 10km square in front of the power station) since the commencement of the first discharge on August 24, 2023, are all below indices (discharge suspension level and investigation level).
- For quick tritium measurements taken in the vicinity of the discharge outlet, we have been continuing with the monitoring by placing importance on the discharge period since December 26, 2023.

(Unit: Bq/liter)

	Sampling location	Frequency	August 2024										
			7 *3	8	9	10	11	12	13	14	15	16	17
In the vicinity of the discharge outlet	T-1	Twice a week*1	<9.3	—	<6.6	—	—	—*4	<7.6	—	<8.1	—	—
	T-2	Twice a week*1	<9.5	—	<6.6	—	—	—*4	<7.5	—	<8.0	—	—
	T-0-1	Once a day*2	<6.9	<7.0	<6.7	—*4	—*4	—*4	<6.4	<8.2	<8.0	—*4	—*4
	T-0-1A	Once a day*2	<7.0	<8.3	<6.5	—*4	—*4	—*4	<6.3	<6.4	9.0	—*4	—*4
	T-0-2	Once a day*2	<7.0	<7.1	<6.8	—*4	—*4	—*4	<6.4	<8.2	<6.7	—*4	—*4
	T-0-3A	Twice a week*1	—	<8.4	<6.6	—	—	—*4	<7.1	—	<6.7	—	—
	T-0-3	Twice a week*1	—	<7.1	<6.7	—	—	—*4	<6.4	—	<6.7	—	—
	T-A1	Twice a week*1	—	<8.4	<8.1	—	—	—*4	<6.9	—	<7.6	—	—
	T-A2	Once a day*2	<6.7	<8.1	<8.1	—*4	—*4	—*4	<7.1	<6.4	<7.8	—*4	—*4
	T-A3	Twice a week*1	—	<8.4	<8.1	—	—	—*4	<7.1	—	<7.7	—	—
Outside the vicinity of the discharge outlet	T-D5	Once a week	—	—	—	—	—	—*4	<7.6	—	—	—	—
	T-S3	Once a month	—	—	—	—	—	—	—	—	—	—	—
	T-S4	Once a month	—	—	—	—	—	—	—	—	—	—	—
	T-S8	Once a month	—	<7.1	—	—	—	—	—	—	—	—	—

※: A "less than" symbol (<) indicates that the analysis result was less than the detection limit.

:Term of discharge of ALPS treated water (Management number: 24-4-8)

\*1: Conduct twice a week during the discharge period and for once a week following the completion of discharge. Conduct once a week outside the discharge period, excluding one week following the completion of discharge

\*2: Conduct once a week during the discharge period and once a week following the completion of discharge. Conduct once a month outside the discharge period, excluding one week following the completion of discharge

\*3: Sampled after the commencement of discharge at 2PM

\*4: Sampling suspended due to bad weather condition

# 1-5. Sea area monitoring history (2/2)

(Unit: Bq/liter)

	Sampling location	Frequency	August 2024							
			18	19	20	21	22	23	24	25 *3
In the vicinity of the discharge outlet	T-1	Twice a week*1	—	<7.5	—	—	<6.3	—	—	—
	T-2	Twice a week*1	—	<7.5	—	—	<6.3	—	—	—
	T-0-1	Once a day*2	<6.2	<7.6	<7.6	<6.2	<6.3	<7.6	<7.5	<6.0
	T-0-1A	Once a day*2	<6.3	<7.5	<5.5	<6.2	<6.5	<6.3	<7.5	<7.0
	T-0-2	Once a day*2	<6.2	<7.5	<7.6	<6.2	<6.5	<7.6	<7.6	<6.1
	T-0-3A	Twice a week*1	—	<7.8	—	—	<6.4	—	—	—
	T-0-3	Twice a week*1	—	<7.5	—	—	<6.4	—	—	—
	T-A1	Twice a week*1	—	<7.8	—	—	<6.0	—	—	—
	T-A2	Once a day*2	<7.0	<7.8	<5.6	<6.2	<6.0	<6.3	<7.5	<7.0
	T-A3	Twice a week*1	—	<7.8	—	—	<6.0	—	—	—
Outside the vicinity of the discharge outlet	T-D5	Once a week	—	<7.5	—	—	—	—	—	—
	T-S3	Once a month	—	—	—	<7.6	—	—	—	—
	T-S4	Once a month	—	—	—	<7.6	—	—	—	—
	T-S8	Once a month	—	—	—	—	—	—	—	—

※: A "less than" symbol (<) indicates that the analysis result was less than the detection limit.  :Term of discharge of ALPS treated water (Management number: 24-4-8)

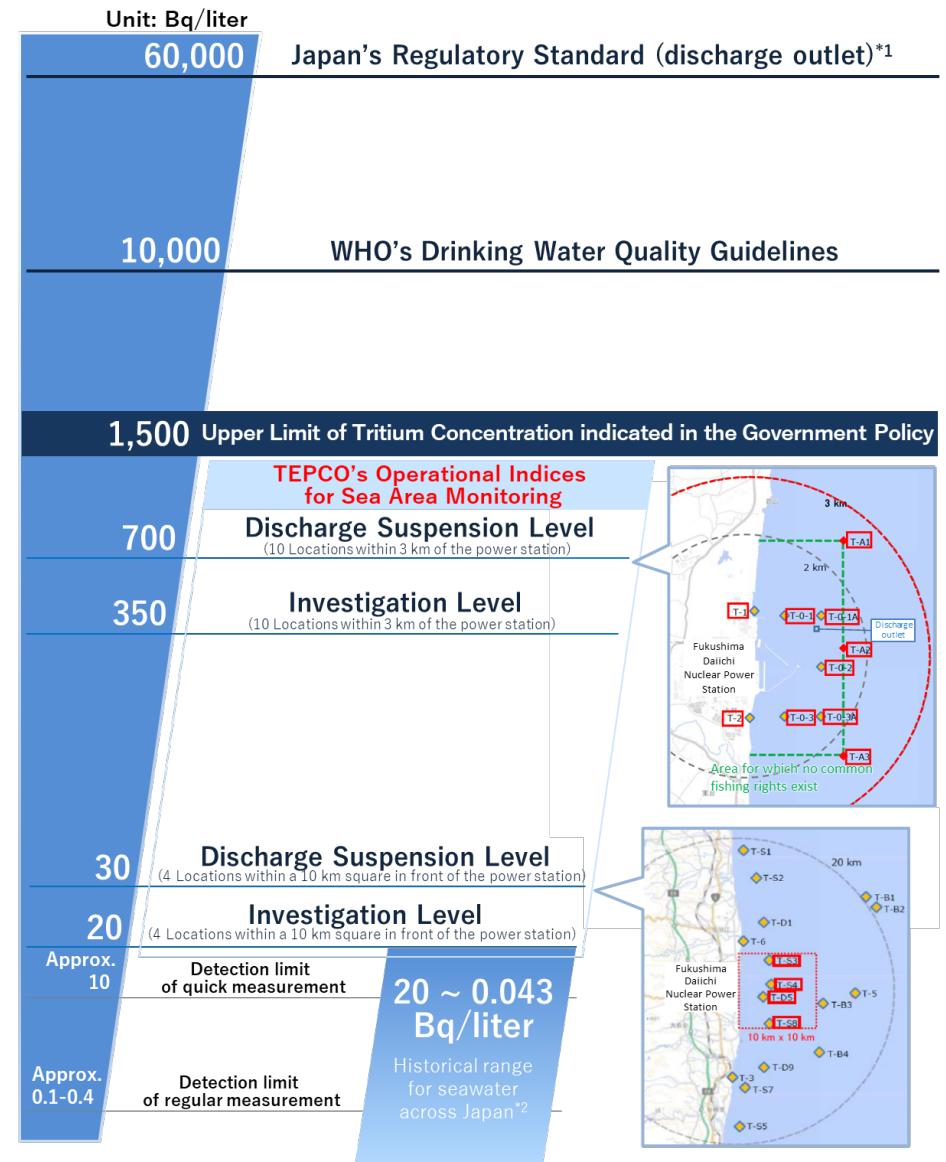
\*1: Conduct twice a week during the discharge period and for once a week following the completion of discharge. Conduct once a week outside the discharge period, excluding one week following the completion of discharge

\*2: Conduct once a week during the discharge period and once a week following the completion of discharge. Conduct once a month outside the discharge period, excluding one week following the completion of discharge

\*3: Sampled before 8AM, prior to the completion of the discharge

# [Reference] Comparison of tritium concentration in seawater

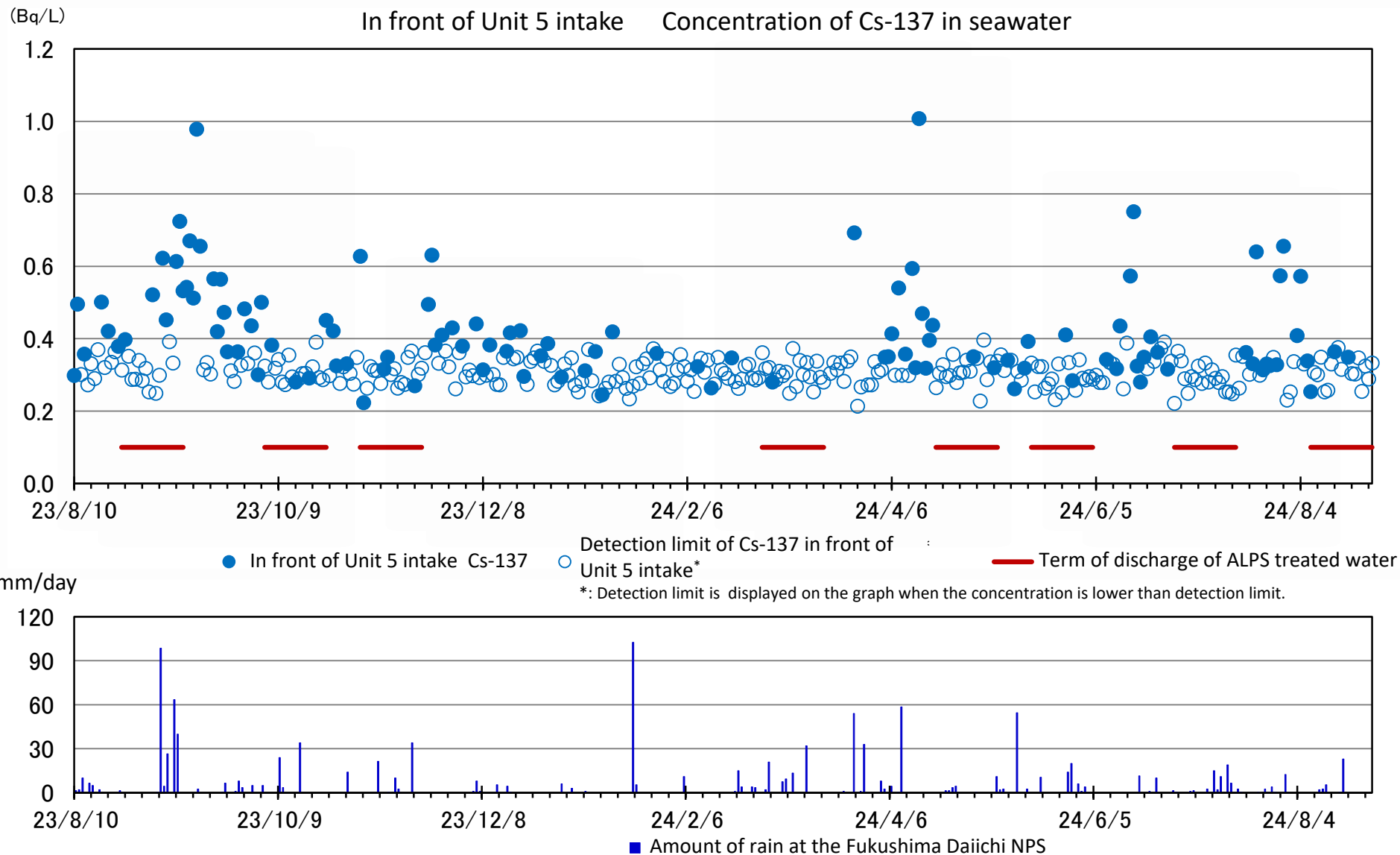
- Tritium concentrations measured during sea area monitoring after the commencement of discharge are within the range of fluctuation identified through past seawater monitoring performed throughout the entirety of Japan.
- In the future, it is possible that concentrations of tritium in the seawater may be affected by the concentrations of tritium in the ALPS treated water that is discharged, and exceed those observed in the past.
- However, even if this occurs, sea dispersion simulation results for discharged water performed during the radiological impact assessment have shown that these fluctuations will be within predicted levels and below the investigation level.



\*1: This standard has been stipulated based on the calculation that if a person were to drink approximately 2L of the water coming out of the discharge outlet of a nuclear facility every day for one year, his/her exposure would be 1mSv.  
 \*2: Source: Environmental Radioactivity and Radiation in Japan (Period: April 2019 to March 2022)

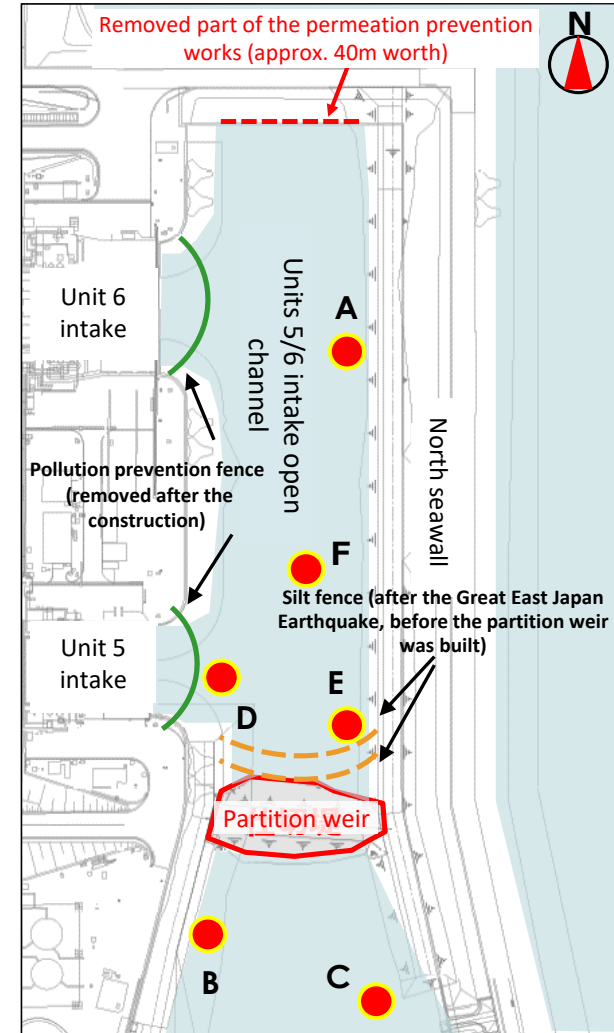
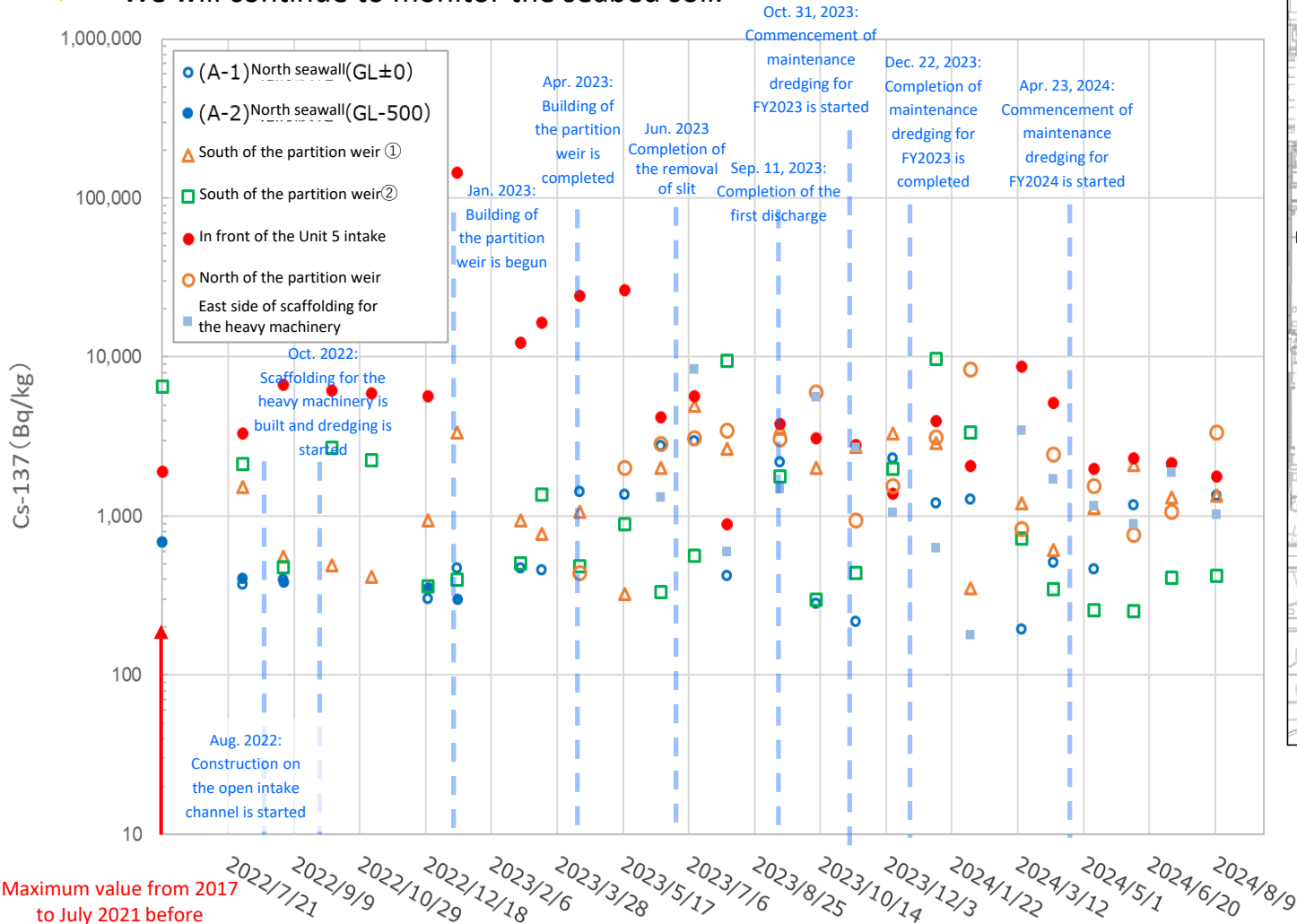
# 1-6. Unit 5 intake channel monitoring

- Sea water monitoring results at near the intake for seawater to be used for dilution during the discharge of ALPS treated water have confirmed that values are similar to those outside of the term of the discharge.



# 1-7. Monitoring results for seabed soil inside the Unit 5/6 intake open channel (1)

- Monitoring results for seabed soil in front of Unit 5 intake did not show significant fluctuations from the beginning of construction until December 2022. While they showed higher readings after January 2023, we have confirmed that these readings decreased after the completion of silt removal.
- We will continue to monitor the seabed soil.



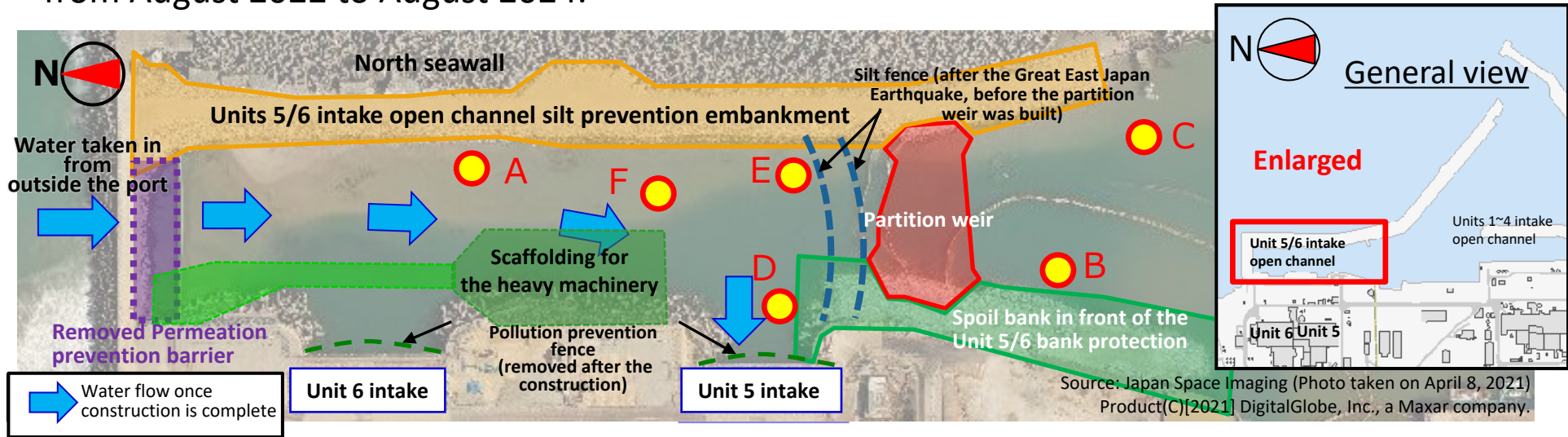
<Legend>

- Sampling location in construction
- Silt fence (before the partition weir was built)
- Pollution prevention fence

Maximum value from 2017 to July 2021 before construction started

# 1-7. Monitoring results for seabed soil inside the Unit 5/6 intake open channel (2)

➤ The following shows monitoring results for seabed soil inside the unit 5/6 intake open channel from August 2022 to August 2024.



Sampling points		Before construction	2022						2023												2024						
		2017 to July 2021	Aug.	Sep.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.
A-1 North side of the Unit 5/6 open channel	Cs-134	4.4~52.3	33.2	36.0	-	-	31.5	37.2	39.8	39.8	40.1	33.9	66.5	65.5	33.6	65.9	34.6	32.0	69.5	44.5	51.1	34.6	34.4	34.8	53.6	51.4	40.4
	Cs-137	163.6~678.6	371.6	398.8	-	-	303.2	468.1	460.2	460.2	1,414.0	1,360.0	2,752.0	2,957.0	422.3	2,195.0	281.8	216.7	3,322.0	1,210.0	1,270.0	195.2	510.4	461.7	1,169.0	2,107.0	1,337.0
A-2 North side of the Unit 5/6 open channel	Cs-134	14.4~58.5	33.6	32.5	-	-	38.3	33.4	※Only sampled from the surface (GL±0m) since sand was removed during dredging																		
	Cs-137	310.0~689.8	404.0	383.2	-	-	356.4	299.1																			
B South side of the partition weir ① (South side of the silt fence)	Cs-134	723.0	34.5	42.1	65.6	55.4	46.7	73.9	49.1	43.1	62.6	47.8	60.1	97.1	59.9	92.5	52.4	53.2	83.7	75.2	38.2	52.8	35.1	50.6	48.1	39.7	58.2
	Cs-137	6,475.0	1,528.0	553.9	492.4	412.8	936.0	3,331.0	936.1	777.0	1,061.0	323.8	2,008.0	4,943.0	2,649.0	3,528.0	2,004.0	2,732.0	3,287.0	2,868.0	353.9	1,205.0	613.8	1,125.0	2,086.0	1,308.0	1,342.0
C South side of the partition weir ② (South side of the silt fence)	Cs-134	183.0	51.3	47.2	68.7	59.7	51.8	40.3	30.9	40.3	44.6	61.6	59.5	47.7	234.8	59.3	37.1	39.6	44.0	153.3	115.8	42.4	26.5	36.9	39.2	29.5	41.4
	Cs-137	1,893.0	2,114.0	476.0	2,671.0	2,242.0	360.8	400.5	503.5	1,356.0	485.9	886.9	330.5	560.6	9,519.0	1,773.0	295.9	441.2	1,970.0	9,737.0	3,345.0	723.9	348.9	257.0	253.0	409.7	419.6
D Unit 5 intake	Cs-134	-	101.6	184.0	213.7	160.4	108.7	3,546.0	167.4	472.0	690.7	586.2	63.7	141.4	64.5	75.2	70.7	50.2	50.5	61.8	50.3	177.8	114.8	79.6	50.3	40.3	64.9
	Cs-137	-	3,301.0	6,714.0	6,198.0	5,941.0	5,678.0	144,000.0	12,290.0	16,972.0	24,760.7	26,400.0	4,189.0	5,699.0	951.7	3,876.2	3,085.0	2,810.0	1,387.0	3,981.0	2,069.0	8,661.0	5,140.0	1,970.0	2,305.0	2,166.0	1,763.0
E North side of the partition weir	Cs-134	-	-	-	-	-	-	-	-	-	42.8	59.8	86.8	98.7	96.8	56.9	147.0	35.6	45.5	64.4	161.2	46.4	40.4	38.3	37.0	41.6	55.0
	Cs-137	-	-	-	-	-	-	-	-	-	437.1	2,022.0	2,822.0	3,069.0	3,438.0	3,022.0	5,975.0	936.5	1,546.0	3,145.0	8,371.0	829.4	2,427.0	1,551.0	764.6	1,066.0	3,371.0
F East side of scaffolding for the heavy machinery	Cs-134	-	-	-	-	-	-	-	-	-	-	-	40.2	166.1	45.3	53.7	98.0	52.4	51.4	58.6	31.3	55.3	37.8	87.1	34.1	40.7	49.1
	Cs-137	-	-	-	-	-	-	-	-	-	-	-	1,312.0	8,303.0	592.4	1,481.0	5,569.0	2,676.0	1,049.0	630.9	178.7	3,446.0	1,694.0	1,148.0	891.0	1,884.0	1,020.0

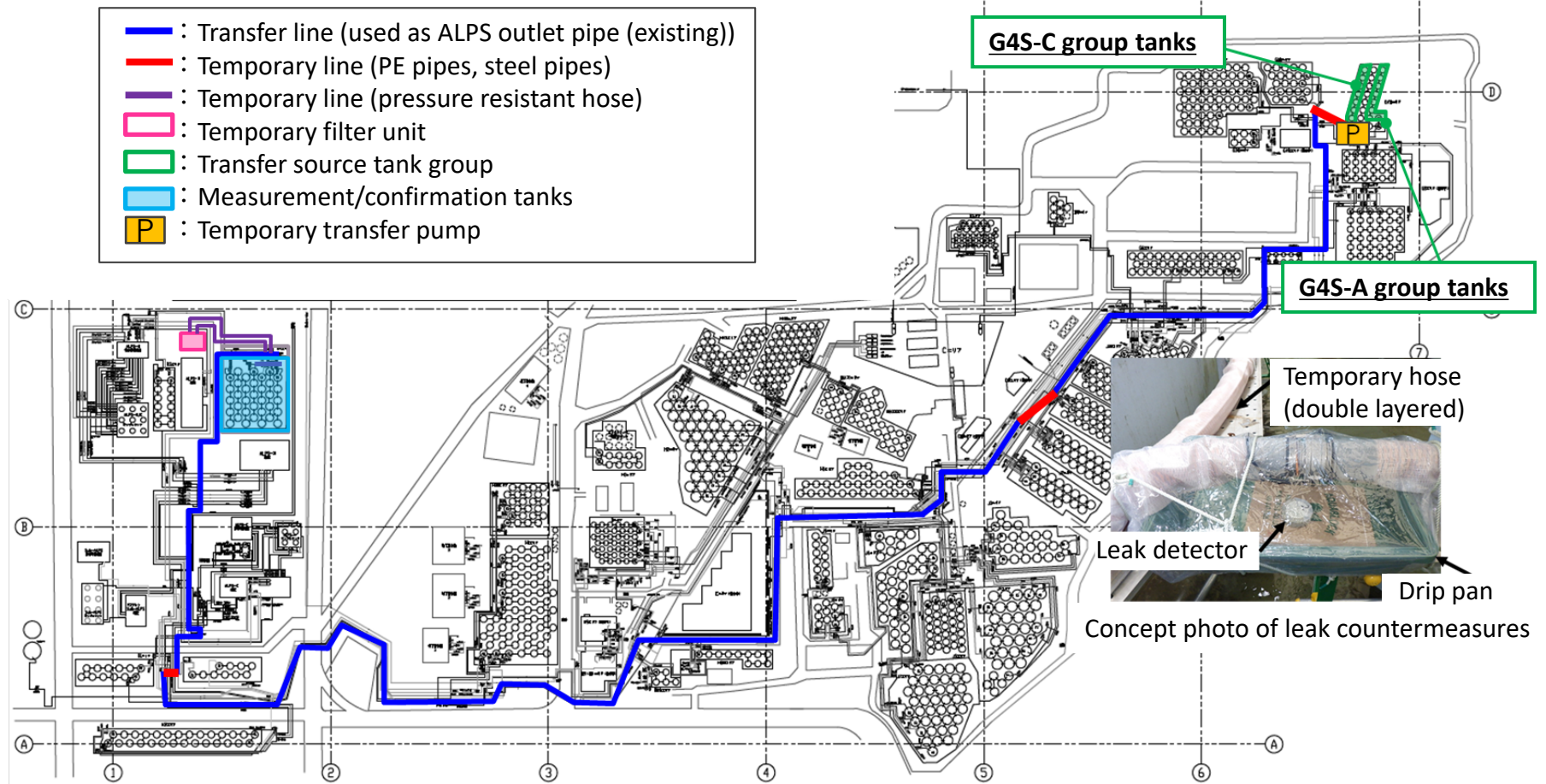
※Unit: Bq/liter, Figures in gray were below the detection limit

1. Performance of the discharge of ALPS treated water  
(Management number\* 24-4-8)
  - 2. Transfer of ALPS treated water in preparation for the future discharges**
  3. Results from the FY2023 investigative analysis of the six nuclides targeted for monitoring
- (Reference) Sea area monitoring history after the commencement of discharge

\* The management number is made up of the fiscal year, followed by the discharge number for that fiscal year, and the total number of discharges to date.  
For example, "24-4-8" indicates that the data is for the fourth discharge of 2024, which is the eighth discharge to date.

## 2. Transfer of ALPS treated water in preparation for the future discharges

- Transfer of ALPS treated water from G4S area Group C and A to measurement/confirmation facility tank group A in preparation for the discharge of Management number: 24-5-9 was conducted (from June 12, 2024 to July 11, 2024). The water is currently being analyzed.
- Transfer of ALPS treated water from G4S area Group A to measurement/confirmation facility tank group B in preparation for the discharge of Management number: 24-6-10 was conducted (from July 22, 2024 to August 23, 2024). Circulation/agitation has been commenced since August 28 and sample will be taken on September 4.





1. Performance of the discharge of ALPS treated water  
(Management number\* 24-4-8)
2. Transfer of ALPS treated water in preparation for the future discharges
- 3. Results from the FY2023 investigative analysis of the six nuclides targeted for monitoring**

(Reference) Sea area monitoring history after the commencement of discharge

\* The management number is made up of the fiscal year, followed by the discharge number for that fiscal year, and the total number of discharges to date.  
For example, "24-4-8" indicates that the data is for the fourth discharge of 2024, which is the eighth discharge to date.

### 3-1. Results from the FY2023 investigative analysis of the six nuclides targeted for monitoring in contaminated water prior to ALPS treatment

- Prior to the discharge of ALPS treated water into the sea, we confirm that discharge standards have been met (sum of the ratios of the regulatory concentrations limits of radioactive nuclides, with the exception of tritium, is less than 1). 29 nuclides that have been found in contaminated water in significant concentrations (concentrations that exceed 1/100 of the regulatory concentration limit) during past analysis have been selected/targeted for measurement and assessment.
- However, since it is possible that the concentrations of radioactive substances in contaminated water may fluctuate in conjunction with the progress of decommissioning, once a year we conduct an investigative analysis of six nuclides (nuclides to be monitored\*<sup>1</sup>) that may theoretically be present in contaminated water, even though no significant concentrations have been found during past analysis, in order to confirm that they do not exist at significant levels.

\*1: : Chlorine 36, Niobium 93, Niobium 94, Molybdenum 93, Cadmium 113m, Barium 133

< Announced by April 24, 2023 >

- In February of this year **we conducted our FY2023 investigative analysis of the six nuclides to be monitored in contaminated water prior to ALPS treatment (water sampled from the ALPS inlet).**
- Results of the analysis showed the concentration of cadmium 113m to be 2.9Bq/liter, which is approximately 7/100, above 1/100 of the regulatory concentration limit (40Bq/liter) (The concentrations of the other five nuclides were below 1/100 of the legally required concentration).
- In light of the investigative analysis results, **we will add cadmium 113m to the nuclides to be measured/assessed starting from the fourth sea discharge of ALPS treated water in FY2024.**
- Water in which cadmium 113m was detected was contaminated water prior to ALPS treatment. Cadmium 113m is a nuclide that can be removed by ALPS. **We have been voluntarily measuring 39 nuclides including cadmium 113m prior to the discharge of ALPS treated water into the sea. Since we have been confirming during each discharge that concentration of cadmium 113m is less than approximately 1/500 of the regulatory concentration limit (40Bq/liter), there are no issues with the safety of ALPS treated water discharged.** Moreover, since the contribution of cadmium 113m to sum of the ratios of the regulatory concentrations limits is very small, **there is no impact from adding cadmium 113m to the nuclides targeted for measurement and assessment.**
- We will continue to remain vigilant to ensure the safe and stable discharge of ALPS treated water into the sea.

## 3-2. Nuclides to be measured/assessed to date

- When discharging ALPS treated water into the sea, the 29 nuclides shown in the charts below have been targeted for measurement/assessment when analyzing ALPS treated water prior to sea discharge.
- Apart from 29 nuclides aforementioned, we have been voluntarily analyzing 39 nuclides including cadmium 113m among the nuclides that are removed by ALPS, to confirm that they do not exist in significant concentration (1/100 of the regulatory concentration limit).

[Nuclides to be measured/assessed(29 nuclides) ]

C-14 Carbon	Sr-90 Strontium	I-129 Iodine	Eu-154 Europium	Pu-239 Plutonium
Mn-54 Manganese	Y-90 Yttrium	Cs-134 Cesium	Eu-155 Europium	Pu-240 Plutonium
Fe-55 Iron	Tc-99 technetium	Cs-137 Cesium	U-234 Uranium	Pu-241 Plutonium
Co-60 Cobalt	Ru-106 Ruthenium	Ce-144 Cerium	U-238 Uranium	Am-241 Americium
Ni-63 Nickel	Sb-125 Antimony	Pm-147 Promethium	Np-237 Neptunium	Cm-244 Curium
Se-79 Selenium	Te-125m Tellurium	Sm-151 Samarium	Pu-238 Plutonium	

[Nuclides to be measured/assessed voluntarily(39 nuclides)]

Fe-59 Iron	Rh-103m Rhodium	Sd-124 Antimony	Ba-137m Barium	Eu-152 Europium
Co-58 Cobalt	Rh-106 Rhodium	Te-123m tellurium	Ba-140 Barium	Gd-153 Gadolinium
Zn-65 Zinc	Ag-110m Silver	Te-127 tellurium	Ce-141 Cerium	Tb-160 Terbium
Rb-86 Rubidium	<b>Cd-113m</b> <b>Cadmium</b>	Te-127m tellurium	Pr-144 Praseodymium	Am-242m Americium
Sr-89 Strontium	Cd-115m Cadmium	Te-129 tellurium	Pr-144m Praseodymium	Am-243 Americium
Y-91 Yttrium	Sn-119m Tin	Te-129m tellurium	Pm-146 Promethium	Cm-242 Curium
Nb-95 Niobium	Sn-123 Tin	Cs-135 Cesium	Pm-148 Promethium	Cm-243 Curium
Ru-103 Ruthenium	Sn-126 Tin	Cs-136 Cesium	Pm-148m Promethium	

### 3-3. Regularly checking nuclides to be measured/assessed

- Since it is possible that the concentrations of radioactive substances in contaminated water may fluctuate in conjunction with the progress of decommissioning, once a year we conduct an investigative analysis to confirm that they do not exist at significant levels.
- Furthermore, if significant concentrations of nuclides to be monitored are found during the investigative analysis, the nuclides selected as targets for measurement/assessment are reevaluated.

#### 【 Investigative analysis 】

We check once a year to confirm that there are no significant concentrations of nuclides to be monitored in contaminated water prior to ALPS treatment.

#### ○Nuclides to be monitored (6 nuclides)

Although nuclides shown below are not detected in significant quantities in past analysis of contaminated and treated water, they are subject to continuous check since it is theoretically possible that they exist in contaminated water.

<b>Cl-36</b>	<b>Nb-93m</b>	<b>Nb-94</b>	<b>Mo-93</b>	<b>Cd-113m</b>	<b>Ba-133</b>
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### 3-4. Investigative analysis (analysis of nuclides targeted for monitoring) results

- The results of investigative analysis of contaminated water prior to ALPS treatment in FY2023 are as shown in the chart below
- Five out of the six nuclides to be monitored(chlorine 36, niobium 93m, niobium 94, molybdenum 93, barium 133) were below detection limits. Cadmium 113m was detected at concentration approximately 7/100, higher than 1/100 of regulatory concentration limit.

<Analysis results for the nuclides targeted for monitoring>

Analyzed nuclide	Specimen sampling location	Specimen sampling date	Analysis results (becquerels/liter)	0.01 of regulatory concentration limit(becquerels/liter)
Cl-36 Chlorine	ALPS Inlet (contaminated water prior to ALPS treatment)	February 7, 2024	Below detection limits (detection limit: 1.7 )	9
Nb-93m Niobium			Below detection limits (detection limit: 14)	70
Nb-94 Niobium			Below detection limits (detection limit: 0.88)	5
Mo-93 Molybdenum			Below detection limits (detection limit: 1.9)	3
<b>Cd-113m</b> Cadmium			<b>2.9</b> > <b>0.4</b> More than 1/100 of the regulatory concentration limit	
Ba-133 Barium			Below detection limits (detection limit: 4.9)	5

**Cadmium 113m added to the nuclides to be measured/assessed**

# 3-5. Changes to the nuclides to be measured/assessed

## Nuclides to be measured/assessed : 2930 nuclides

C-14 Carbon	Sr-90 Strontium	I-129 Iodine	Eu-154 Europium	Pu-239 Plutonium
Mn-54 Manganese	Y-90 Yttrium	Cs-134 Cesium	Eu-155 Europium	Pu-240 Plutonium
Fe-55 Iron	Tc-99 Technetium	Cs-137 Cesium	U-234 Uranium	Pu-241 Plutonium
Co-60 Cobalt	Ru-106 Ruthenium	Ce-144 Cerium	U-238 Uranium	Am-241 Americium
Ni-63 Nickel	Sb-125 Antimony	Pm-147 Promethium	Np-237 Neptunium	Cm-244 Curium
Se-79 Selenium	Te-125m Tellurium	Sm-151 Samarium	Pu-238 Plutonium	<b>Cd-113m</b> Cadmium

Assessed as the sum of the ratios of legally required concentrations to check that it is less than 1

H-3  
Tritium

Measured in order to determine that the volume of water with which to dilute the treated water so that the tritium concentration after dilution is less than 1,500 Bq/liter

**Measured every time**

## Nuclides targeted for removal by ALPS that are not subject to be measured/assessed : 3938 nuclides

Fe-59 Iron	Rh-103m Rhodium	Sb-124 Antimony	Ba-137m Barium	Eu-152 Europium
Co-58 Cobalt	Rh-106 Rhodium	Te-123m Tellurium	Ba-140 Barium	Gd-153 Gadolinium
Zn-65 Zinc	Ag-110m Silver	Te-127 Tellurium	Ce-141 Cerium	Tb-160 Terbium
<b>Rb-86</b> Rubidium	<b>Cd-113m</b> Cadmium	Te-127m Tellurium	Pr-144 Praseodymium	Am-242m Americium
Sr-89 Strontium	Cd-115m Cadmium	Te-129 Tellurium	Pr-144m Praseodymium	Am-243 Americium
Y-91 Yttrium	Sn-119m Tin	Te-129m Tellurium	Pm-146 Promethium	Cm-242 Curium
Nb-95 Niobium	Sn-123 Tin	Cs-135 Cesium	Pm-148 Promethium	Cm-243 Curium
Ru-103 Ruthenium	Sn-126 Tin	Cs-136 Cesium	Pm-148m Promethium	

Voluntarily measured to confirm that concentrations are below detectable levels

## Nuclides to be monitored : 65 nuclides

Cl-36 Chlorine	Nb-93m Niobium	Nb-94 Niobium	Mo-93 Molybdenum
<b>Cd-113m</b> Cadmium	Ba-133 Barium		

Checked once a year to confirm that there are no significant concentrations

\*Although Cd-113m will no longer be monitored, its trend will be checked voluntarily in regular basis.

### 3-6. Concentrations of cadmium 113m after ALPS treatment

- Even if cadmium 113m is contained in contaminated water, it can be removed with ALPS.
- Additionally, this nuclide is measured prior to the discharge of ALPS treated water into the sea, and we have confirmed that concentrations are less than approximately 1/500 of the regulatory concentration limit. Therefore, there are no impact on the safety of ALPS treated water discharged.
- Even if cadmium 113m was present in ALPS treated water at concentrations at detection limit, its ratio of the regulatory concentration limit is very small and would have no impact on the sum of the ratios of the regulatory concentrations limits.

#### <Concentrations of cadmium 113m in ALPS treated water discharged to date>

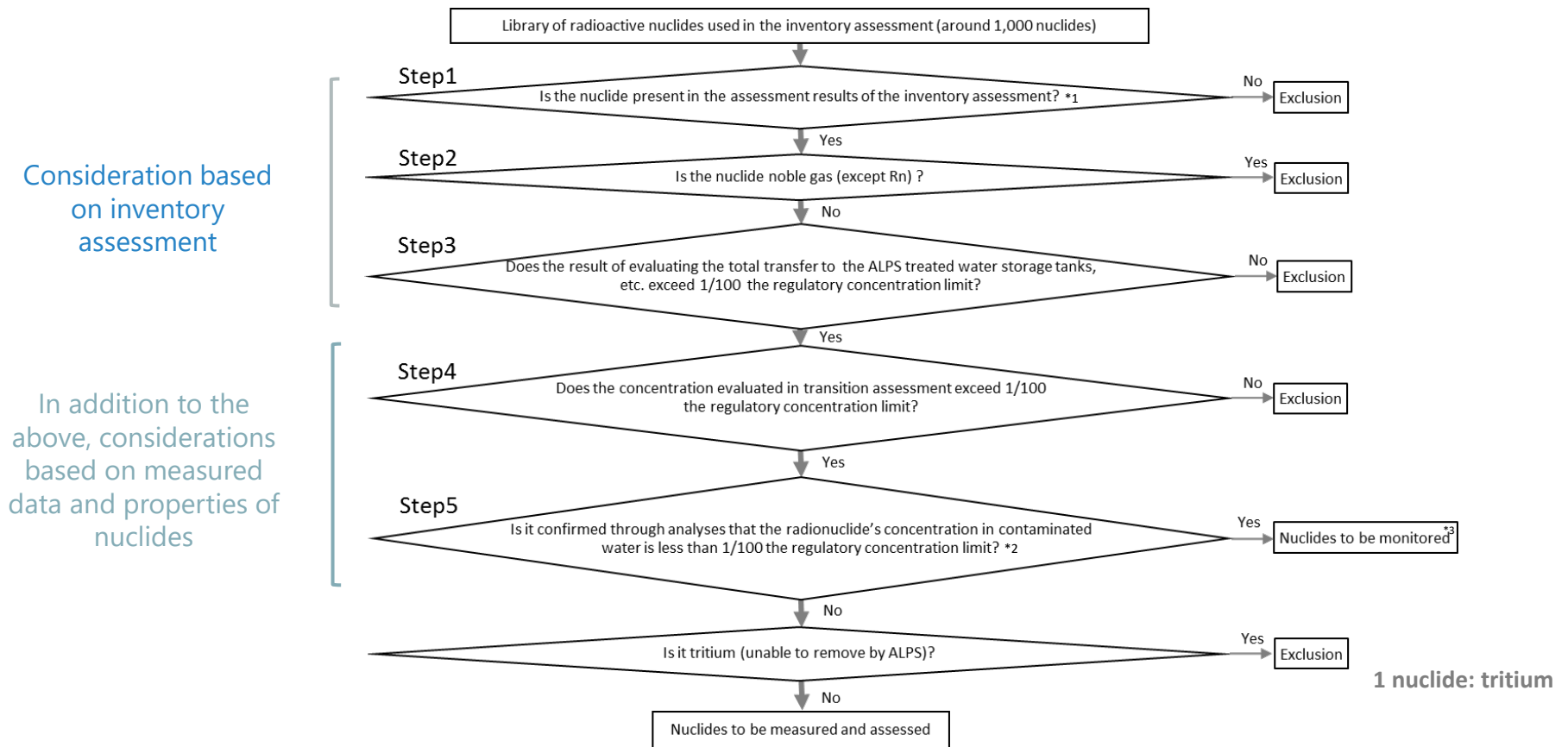
		Cadmium 113m regulatory concentration limit[Bq/liter]	Cadmium 113m analysis results [Bq/liter]	Cadmium 113m regulatory concentration limit (*)
FY2023	First discharge	40	Below detection limits (detection limit: 0.084)	0.0021
	Second discharge		Below detection limits (detection limit: 0.085)	0.0021
	Third discharge		Below detection limits (detection limit: 0.093)	0.0023
	Fourth discharge		Below detection limits (detection limit: 0.088)	0.0022
FY2024	First discharge		Below detection limits (detection limit: 0.085)	0.0021
	Second discharge		Below detection limits (detection limit: 0.086)	0.0021
	Third discharge		Below detection limits (detection limit: 0.086)	0.0021

\*Ratio of the regulatory concentration limit is assessed assuming the nuclides are present at detection limit

# [Reference] Flow chart for the selection of nuclides to be measured/assessed

- Nuclides to be measured/assessed are selected based on the following flowchart stated on implementation plan approved by the Nuclear Regulatory Agency (NRA).
- During the selection process, nuclides that could realistically exist considering their half-lives are selected based on guidance from the IAEA and the NRA. After that, a desktop analysis is conducted assuming\* that the total amount of radioactive substances has migrated to the ALPS treated water, etc. storage tank. Furthermore, nuclides that could exist at significant concentrations in contaminated water are assessed based on actual measurement data from contaminated water stored for 12 years as well as the nature of the nuclides.

\*Assumes that contaminated water that has been continually treated for the 12 years since the accident has been stored in the same tank



\*1 : The inventory assessment decay period has been set properly in accordance with when the selection results are used (initially set to be 2023 (12 years after the accident))  
 \*2 : The maximum detection value is used for nuclides that have been detected in the past, and the minimum detection limit is used for nuclides that have never been detected  
 \*3 : Nuclides that are continually measured to confirm that there are no significant concentrations in contaminated water



1. Performance of the discharge of ALPS treated water  
(Management number※ 24-4-8)

2. Transfer of ALPS treated water in preparation for the future discharges

**(Reference) Sea area monitoring history after the commencement of discharge**

※ The management number is made up of the fiscal year, followed by the discharge number for that fiscal year, and the total number of discharges to date.  
For example, “24-4-8” indicates that the data is for the fourth discharge of 2024, which is the eighth discharge to date.

# (Reference) Sea area monitoring history (1/32)

- Measurement results of tritium concentrations in water sampled in the vicinity of the discharge outlet (within 3km of the power station) and outside of the vicinity of the discharge outlet (within a 10km square in front of the power station) since the commencement of the first discharge on August 24, 2023, are all below indices (discharge suspension level and investigation level).
- For quick tritium measurements taken in the vicinity of the discharge outlet, we increased the frequency from once a week to daily after the commencement of the discharge, continuing until December 25, 2023, and we have promptly disclosed the results. (Unit: Bq/liter)

	Sampling location	Frequency	August, 2023											
			24 *1	24 Normal *1,2	25	26	26 Normal *3	27	28	29	30	30 Normal *2,3	31	31 Normal *3
In the vicinity of the discharge outlet	T-1	Once a week*	<6.3	<0.34	<5.6	<6.6	0.97	<6.2	<7.3	<5.9	<6.4	1.0	<6.8	—
	T-2	Once a week*	<6.3	<0.33	<5.5	<6.5	1.1	<6.2	<7.3	<5.9	<6.3	1.3	<6.8	—
	T-0-1	Once a week*	<8.0	<0.34	<6.8	<6.1	0.66	<6.1	—*4	—*4	<6.8	<0.32	<8.2	—
	T-0-1A	Once a week*	<4.6	2.6	<7.6	<6.2	0.087	<6.1	—*4	—*4	<6.9	0.43	10	—
	T-0-2	Once a week*	<8.1	<0.35	<6.8	<6.1	0.92	<6.1	—*4	—*4	<6.8	1.4	<8.2	—
	T-0-3A	Once a week*	<4.7	<0.33	<7.6	<6.8	<0.068	<6.8	—*4	—*4	<7.6	<0.32	<5.1	—
	T-0-3	Once a week*	<8.0	<0.34	<6.9	<6.1	0.14	<6.1	—*4	—*4	<6.8	<0.31	<8.3	—
	T-A1	Once a week*	<6.6	<0.32	<7.6	<6.8	0.13	<6.8	—*4	—*4	<7.6	1.1	<5.1	—
	T-A2	Once a week*	<6.6	<0.32	<7.6	<6.8	0.065	<6.8	—*4	—*4	<7.7	1.5	<5.1	—
	T-A3	Once a week*	<6.6	<0.32	<6.9	<6.8	<0.072	<6.8	—*4	—*4	<7.6	1.1	<5.2	—
Outside the vicinity of the discharge outlet	T-D5	Once a week	—	—	—	—	—	—	—	—	—	—	<6.8	0.59
	T-S3	Once a month	—	—	—	—	—	—	—	—	<7.6	0.070	—	—
	T-S4	Once a month	—	—	—	—	—	—	—	—	<7.7	0.073	—	—
	T-S8	Once a month	—	—	—	—	—	—	—	—	<7.7	0.062	—	—

※ : A "less than" symbol (<) indicates that the analysis result was less than the detection limit.

\* : Monitored daily for the time being after the commencement of discharge

\*1 : Sampled after the commencement of discharge at 3PM

\*3 : Detection limit 0.1 Bq/liter

\*2 : Detection limit 0.4 Bq/liter

\*4 : Sampling suspended due to bad weather condition

□ : Term of discharge of ALPS treated water (Management number: 23-1-1)

# (Reference) Sea area monitoring history (2/32)

(Unit: Bq/liter)

	Sampling location	Frequency	September, 2023											
			1	2	3	4	4 Normal *1	5	6	6 Normal *1	7	8	9	10
In the vicinity of the discharge outlet	T-1	Once a week*	<7.2	<6.8	<5.8	<6.6	0.68	<7.1	<7.1	–	<6.1	<5.9	<6.0	<7.8
	T-2	Once a week*	<7.4	<6.8	<5.8	<6.6	0.90	<7.1	<7.1	–	<6.1	<5.9	<6.0	<7.8
	T-0-1	Once a week*	<7.3	<7.3	<6.8	<6.9	<0.34	<6.6	<6.6	–	<8.7	<6.9	<8.0	<7.0
	T-0-1A	Once a week*	<7.3	<8.2	<6.8	<6.9	<0.33	<7.0	<6.6	–	<8.7	<6.9	<8.0	<7.1
	T-0-2	Once a week*	<7.3	<7.3	<6.7	<7.0	0.74	<6.5	<6.6	–	<8.6	<6.8	<8.0	<7.0
	T-0-3A	Once a week*	<7.0	<7.8	<6.5	<5.9	<0.33	<7.6	<6.3	–	<5.3	<7.4	<6.5	<6.5
	T-0-3	Once a week*	<7.3	<8.2	<6.7	<6.8	<0.34	<7.8	<6.6	–	<8.7	<6.9	<8.0	<7.1
	T-A1	Once a week*	<7.1	<7.9	<6.5	<5.9	1.1	<7.6	<6.3	–	<5.3	<7.4	<6.4	<6.5
	T-A2	Once a week*	<7.1	<7.8	<6.5	<7.3	0.88	<7.6	<6.2	–	<5.3	<7.3	<6.6	<6.4
	T-A3	Once a week*	<7.1	<7.9	<6.5	<7.3	0.82	<7.6	<6.3	–	<5.3	<7.3	<6.5	<6.5
Outside the vicinity of the discharge outlet	T-D5	Once a week	–	–	–	–	–	–	<7.1	<0.34	–	–	–	–
	T-S3	Once a month	–	–	–	–	–	–	–	–	–	–	–	–
	T-S4	Once a month	–	–	–	–	–	–	–	–	–	–	–	–
	T-S8	Once a month	–	–	–	–	–	–	–	–	–	–	–	–

※ : A “less than” symbol (<) indicates that the analysis result was less than the detection limit.

\*1 : Detection limit 0.4 Bq/liter

: Term of discharge of ALPS treated water (Management number: 23-1-1)

\* : Monitored daily for the time being after the commencement of discharge

# (Reference) Sea area monitoring history (3/32)

(Unit: Bq/liter)

	Sampling location	Frequency	September, 2023											
			11 *1	11 Normal *1,2	12	12 Normal *2	13	13 Normal *2	14	15	16	17	18	18 Normal *3
In the vicinity of the discharge outlet	T-1	Once a week*	<7.0	0.21	<7.2	—	<7.2	—	<6.5	<7.3	<6.7	<7.0	<7.6	<0.31
	T-2	Once a week*	<7.0	0.24	<7.2	—	<7.2	—	<6.5	<7.4	<6.8	<6.9	<7.6	<0.31
	T-0-1	Once a week*	<6.8	0.10	<7.7	—	<6.6	—	<7.5	<7.8	<7.6	<7.8	<7.4	<0.36
	T-0-1A	Once a week*	<6.8	0.12	<7.8	—	<6.5	—	<7.5	<7.7	<7.5	<7.7	<7.3	<0.34
	T-0-2	Once a week*	<6.8	0.13	<7.7	—	<6.5	—	<7.5	<7.7	<7.6	<7.7	<7.3	<0.31
	T-0-3A	Once a week*	<6.2	0.10	<7.0	—	<5.9	—	<6.6	<7.4	<6.8	<6.9	<7.6	<0.35
	T-0-3	Once a week*	<6.8	0.16	<7.8	—	<6.5	—	<7.5	<7.7	<7.5	<7.8	<7.3	<0.34
	T-A1	Once a week*	<7.0	0.078	<7.0	—	<5.9	—	<6.7	<5.5	<7.2	<5.5	<6.7	<0.31
	T-A2	Once a week*	<7.0	0.097	<7.0	—	<5.9	—	<6.7	<5.5	<7.3	<5.4	<6.7	<0.31
	T-A3	Once a week*	<7.0	0.16	<7.0	—	<5.9	—	<6.7	<5.5	<7.2	<5.5	<6.7	<0.31
Outside the vicinity of the discharge outlet	T-D5	Once a week	—	—	—	—	<7.2	0.11	—	—	—	—	—	—
	T-S3	Once a month	—	—	<7.1	<0.068	—	—	—	—	—	—	—	—
	T-S4	Once a month	—	—	<7.1	0.087	—	—	—	—	—	—	—	—
	T-S8	Once a month	<6.2	0.098	—	—	—	—	—	—	—	—	—	—

※ : A “less than” symbol (<) indicates that the analysis result was less than the detection limit.

\*1 : Sampled before 9AM, prior to the completion of the discharge

\*2 : Detection limit 0.1 Bq/liter

\*3 : Detection limit 0.4 Bq/liter

: Term of discharge of ALPS treated water (Management number: 23-1-1)

\* : Monitored daily for the time being after the commencement of discharge

# (Reference) Sea area monitoring history (4/32)

(Unit: Bq/liter)

	Sampling location	Frequency	September, 2023											
			19	20	20 Normal *1	21	22	23	24	25	25 Normal *1	26	27	27 Normal *1
In the vicinity of the discharge outlet	T-1	Once a week*	<5.0	<6.9	—	<5.0	<5.3	<6.5	<6.7	<7.2	<0.31	<5.6	<6.2	—
	T-2	Once a week*	<5.0	<6.9	—	<5.0	<5.3	<6.5	<6.7	<7.2	<0.31	<5.6	<6.3	—
	T-0-1	Once a week*	<5.5	<7.9	—	<6.5	<6.3	<6.5	<7.6	<8.7	<0.35	<7.9	<6.2	—
	T-0-1A	Once a week*	<5.6	<8.2	—	<6.5	<6.3	<6.5	<7.5	<8.7	<0.35	<7.9	<6.2	—
	T-0-2	Once a week*	<5.6	<7.9	—	<6.5	<6.2	<6.5	<7.5	<8.7	<0.30	<7.9	<6.2	—
	T-0-3A	Once a week*	<5.0	<6.1	—	<5.0	<5.3	<6.5	<6.7	<7.2	<0.35	<5.6	<6.2	—
	T-0-3	Once a week*	<5.5	<7.9	—	<6.5	<6.3	<6.5	<7.5	<8.7	<0.35	<7.9	<6.2	—
	T-A1	Once a week*	<6.9	<5.9	—	<6.6	<7.0	<7.6	<5.1	<6.3	<0.30	<7.3	<6.6	—
	T-A2	Once a week*	<6.9	<5.9	—	<6.7	<7.0	<7.6	<5.1	<6.3	<0.30	<7.3	<6.7	—
	T-A3	Once a week*	<7.0	<6.3	—	<6.6	<7.0	<7.6	<5.1	<6.3	<0.29	<7.3	<6.6	—
Outside the vicinity of the discharge outlet	T-D5	Once a week	—	<6.1	<0.34	—	—	—	—	—	—	—	<6.3	<0.35
	T-S3	Once a month	—	—	—	—	—	—	—	—	—	—	—	—
	T-S4	Once a month	—	—	—	—	—	—	—	—	—	—	—	—
	T-S8	Once a month	—	—	—	—	—	—	—	—	—	—	—	—

※ : A “less than” symbol (<) indicates that the analysis result was less than the detection limit.

\*1 : Detection limit 0.4 Bq/liter

\* : Monitored daily for the time being after the commencement of discharge

# (Reference) Sea area monitoring history (5/32)

(Unit: Bq/liter)

	Sampling location	Frequency	September, 2023			October, 2023								
			28	29	30	1	2	2 Normal *1	3	4	4 Normal *1	5 *2	5 Normal *1,2	6
In the vicinity of the discharge outlet	T-1	Once a week*	<6.7	<4.9	<7.3	<6.0	<5.8	<0.34	<6.7	<6.9	—	<5.8	<0.31	<5.8
	T-2	Once a week*	<6.7	<4.7	<7.3	<6.0	<5.7	<0.33	<6.6	<6.8	—	<5.7	<0.31	<5.7
	T-0-1	Once a week*	<6.8	<6.8	<7.9	<8.3	<7.0	<0.35	<6.5	<7.3	—	<7.8	<0.31	<7.0
	T-0-1A	Once a week*	<6.8	<6.8	<7.9	<8.0	<6.9	<0.35	<6.4	<7.3	—	<7.6	5.2	<7.4
	T-0-2	Once a week*	<6.8	<6.9	<8.0	<8.4	<7.0	<0.36	<6.4	<7.2	—	<7.6	<0.33	<7.0
	T-0-3A	Once a week*	<6.7	<4.7	<7.4	<6.2	<5.8	<0.35	<6.8	<6.9	—	<5.9	<0.32	<5.8
	T-0-3	Once a week*	<6.8	<7.0	<7.7	<8.0	<7.0	<0.35	<6.4	<7.2	—	<7.7	<0.32	<6.4
	T-A1	Once a week*	<9.3	<7.8	<8.1	<8.0	<5.6	<0.30	<7.3	<7.5	—	<7.7	<0.30	<7.0
	T-A2	Once a week*	<5.5	<7.8	<8.0	<8.0	<5.7	<0.30	<7.5	<7.5	—	<7.7	<0.31	<7.0
	T-A3	Once a week*	<7.2	<7.6	<8.0	<8.1	<5.6	<0.30	<7.4	<7.4	—	<7.6	<0.30	<7.1
Outside the vicinity of the discharge outlet	T-D5	Once a week	—	—	—	—	—	—	—	<6.8	<0.35	—	—	—
	T-S3	Once a month	—	—	—	—	—	—	—	—	—	—	—	—
	T-S4	Once a month	—	—	—	—	—	—	—	—	—	—	—	—
	T-S8	Once a month	—	—	—	—	—	—	—	—	—	—	—	—

※ : A “less than” symbol (<) indicates that the analysis result was less than the detection limit.

\*1 : Detection limit 0.4 Bq/liter

\*2 : Sampled after the commencement of discharge at 2PM

: Term of discharge of ALPS treated water (Management number: 23-2-2)

\* : Monitored daily for the time being after the commencement of discharge

# (Reference) Sea area monitoring history (6/32)

(Unit: Bq/liter)

	Sampling location	Frequency	October, 2023											
			7	8	9	9 Normal *1	10	11	12	12 Normal *1	13	14	15	16
In the vicinity of the discharge outlet	T-1	Once a week*	<5.8	<6.1	<7.2	0.40	<6.9	<6.5	<6.3	—	<6.5	<6.1	<5.5	<6.0
	T-2	Once a week*	<5.8	<6.1	<7.1	0.77	<6.9	<6.6	<6.3	—	<6.5	<6.2	<5.5	<6.0
	T-0-1	Once a week*	<6.7	<8.2	<7.9	1.4	—*2	<7.3	<7.3	—	<7.3	<8.7	<7.3	<7.8
	T-0-1A	Once a week*	9.4	<8.2	11	12	—*2	<7.3	14	—	11	<8.7	14	16
	T-0-2	Once a week*	<6.8	<8.1	<7.9	0.43	—*2	<7.3	<7.3	—	<7.3	<8.7	<7.3	<7.8
	T-0-3A	Once a week*	<5.8	<6.1	<7.2	<0.072	—*2	<6.8	<6.3	—	<6.5	<6.1	<5.6	<6.0
	T-0-3	Once a week*	<6.7	<8.2	<7.8	0.45	—*2	<7.3	<7.2	—	<7.2	<8.6	<7.3	<7.8
	T-A1	Once a week*	<6.4	<5.5	<6.7	0.43	—*2	<6.8	<8.7	—	<8.6	<6.2	<7.2	<7.2
	T-A2	Once a week*	<5.9	<5.5	<6.7	0.25	—*2	<6.8	<8.6	—	<8.6	<5.6	<7.2	<7.2
	T-A3	Once a week*	<5.8	<5.5	<6.8	<0.073	—*2	<6.8	<8.6	—	<8.6	<5.7	<7.2	<7.2
Outside the vicinity of the discharge outlet	T-D5	Once a week	—	—	—	—	—	—	<6.4	<0.070	—	—	—	—
	T-S3	Once a month	—	—	—	—	—	—	<6.4	<0.071	—	—	—	—
	T-S4	Once a month	—	—	—	—	—	—	<6.4	<0.070	—	—	—	—
	T-S8	Once a month	—	—	—	—	—	—	<6.5	0.065	—	—	—	—

※ : A “less than” symbol (<) indicates that the analysis result was less than the detection limit.

\*1 : Detection limit 0.1 Bq/liter

\*2 : Sampling suspended due to bad weather condition

: Term of discharge of ALPS treated water (Management number: 23-2-2)

\* : Monitored daily for the time being after the commencement of discharge

# (Reference) Sea area monitoring history (7/32)

(Unit: Bq/liter)

	Sampling location	Frequency	October, 2023											
			16 Normal *1	17	18	19	19 Normal *1	20	21	22	23 *2	23 Normal *1,2	24	25
In the vicinity of the discharge outlet	T-1	Once a week*	4.3	<6.5	<7.1	<7.2	—	<5.5	<5.6	<5.3	<6.5	1.3	<6.5	<5.8
	T-2	Once a week*	0.66	<6.5	<7.1	<7.1	—	<5.5	<5.6	<5.2	<6.5	0.80	<6.5	<5.8
	T-0-1	Once a week*	1.0	<6.7	<5.9	<8.3	—	<7.0	<6.8	<7.3	<6.7	1.3	<7.8	<7.5
	T-0-1A	Once a week*	14	<6.7	<5.8	<8.5	—	<7.0	22	16	<6.7	0.71	<7.7	<7.5
	T-0-2	Once a week*	1.2	<6.7	8.9	<8.4	—	<7.0	<6.8	<7.3	<6.7	0.40	<7.7	<7.5
	T-0-3A	Once a week*	0.74	<6.5	<7.1	<7.1	—	<5.5	<5.6	<5.3	<6.5	<0.33	<6.5	<5.8
	T-0-3	Once a week*	1.0	<6.7	<6.7	<8.4	—	<7.0	<6.8	<7.3	<6.7	1.0	<7.7	<7.5
	T-A1	Once a week*	0.50	<8.3	<7.2	<7.5	—	<7.5	<8.5	<5.7	<6.8	0.37	<7.5	<7.8
	T-A2	Once a week*	0.56	<8.3	<7.2	<7.5	—	<7.5	<8.4	<5.7	<6.9	<0.31	<7.5	<7.8
	T-A3	Once a week*	0.80	<8.3	<7.2	<7.5	—	<7.5	<8.5	<5.7	<6.8	<0.32	<7.5	<7.8
Outside the vicinity of the discharge outlet	T-D5	Once a week	—	—	—	<7.5	<0.34	—	—	—	<6.9	<0.32	—	—
	T-S3	Once a month	—	—	—	—	—	—	—	—	—	—	—	—
	T-S4	Once a month	—	—	—	—	—	—	—	—	—	—	—	—
	T-S8	Once a month	—	—	—	—	—	—	—	—	—	—	—	—

※ : A “less than” symbol (<) indicates that the analysis result was less than the detection limit.

\*1 : Detection limit 0.4 Bq/liter

\*2 : Sampled before 9AM, prior to the completion of the discharge

: Term of discharge of ALPS treated water (Management number: 23-2-2)

\* : Monitored daily for the time being after the commencement of discharge



# (Reference) Sea area monitoring history (8/32)

(Unit: Bq/liter)

	Sampling location	Frequency	October, 2023						November, 2023					
			26	27	28	29	30	31	1	1 Normal *2	2 *3	2 Normal *2,3	3	4
In the vicinity of the discharge outlet	T-1	Once a week*	<6.5	<6.4	<7.2	<6.8	<6.4	<7.1	<7.9	<0.32	<6.0	0.35	<8.1	<8.0
	T-2	Once a week*	<6.6	<6.3	<7.2	<6.8	<6.4	<7.1	<7.9	<0.33	<8.3	0.36	<8.1	<8.2
	T-0-1	Once a week*	<7.6	<7.8	<8.3	<7.8	—*1	—*1	<7.8	<0.35	<8.0	<0.36	<6.2	<6.3
	T-0-1A	Once a week*	<7.7	<7.8	<8.3	<7.9	—*1	—*1	<7.8	<0.34	<8.0	6.9	7.1	<6.2
	T-0-2	Once a week*	<7.6	<7.8	<8.3	<7.9	—*1	—*1	<7.8	<0.33	<8.1	<0.37	<6.2	<6.2
	T-0-3A	Once a week*	<6.6	<6.3	<7.3	<6.9	—*1	—*1	<7.9	<0.32	<5.4	<0.26	<8.1	<8.2
	T-0-3	Once a week*	<7.6	<7.8	<8.3	<7.9	—*1	—*1	<7.8	<0.34	<8.0	<0.36	<6.2	<6.2
	T-A1	Once a week*	<6.2	<6.6	<6.6	<6.6	—*1	—*1	<6.6	<0.31	<8.2	<0.31	<5.7	<9.2
	T-A2	Once a week*	<6.2	<6.5	<6.6	<6.6	—*1	—*1	<6.4	<0.31	<8.2	<0.30	<5.7	<9.2
	T-A3	Once a week*	<6.2	<6.6	<6.6	<6.6	—*1	—*1	<6.6	<0.32	<8.2	<0.31	<5.7	<9.2
Outside the vicinity of the discharge outlet	T-D5	Once a week	—	—	—	—	—	—	<7.9	<0.33	—	—	—	—
	T-S3	Once a month	—	—	—	—	—	—	—	—	—	—	—	—
	T-S4	Once a month	—	—	—	—	—	—	—	—	—	—	—	—
	T-S8	Once a month	—	—	—	—	—	—	—	—	—	—	—	—

※ : A “less than” symbol (<) indicates that the analysis result was less than the detection limit.

\*1 : Sampling suspended due to bad weather condition

\*2 : Detection limit 0.4 Bq/liter

\*3 : Sampled after the commencement of discharge at 2PM

: Term of discharge of ALPS treated water (Management number: 23-3-3)

\* : Monitored daily for the time being after the commencement of discharge

# (Reference) Sea area monitoring history (9/32)

(Unit: Bq/liter)

	Sampling location	Frequency	November, 2023											
			5	6	6 Normal *1	7	8	8 Normal *3	9	9 Normal *1	10	11	12	13
In the vicinity of the discharge outlet	T-1	Once a week*	<7.6	<5.6	<0.34	<6.9	<5.5	—	<5.5	—	<6.9	<5.8	<7.0	<6.3
	T-2	Once a week*	<7.5	<5.5	0.38	<6.9	<5.5	—	<5.5	—	<7.0	<5.8	<6.9	<6.3
	T-0-1	Once a week*	<7.5	<7.2	0.36	—*2	<6.7	—	<6.4	—	<8.1	—*2	<4.7	<9.0
	T-0-1A	Once a week*	<7.6	9.0	9.5	—*2	<6.8	—	<6.4	—	11	—*2	<4.6	<9.0
	T-0-2	Once a week*	<7.5	<7.1	<0.31	—*2	<6.7	—	<8.4	—	<8.1	—*2	<4.7	<8.9
	T-0-3A	Once a week*	<7.6	<5.4	0.54	—*2	<5.5	—	<5.6	—	<7.0	—*2	<6.9	<6.3
	T-0-3	Once a week*	<7.5	<7.1	<0.31	—*2	<6.7	—	<6.4	—	<8.1	—*2	<5.1	<9.0
	T-A1	Once a week*	<5.7	<6.5	<0.39	—*2	<7.2	—	<7.5	—	<6.9	—*2	<7.8	<7.6
	T-A2	Once a week*	<5.7	<6.5	<0.38	—*2	<7.2	—	<7.5	—	<6.9	—*2	<7.8	<7.6
	T-A3	Once a week*	<5.7	<6.5	<0.39	—*2	<7.2	—	<7.6	—	<6.8	—*2	<7.8	<7.6
Outside the vicinity of the discharge outlet	T-D5	Once a week	—	—	—	—	—	—	<7.5	<0.34	—	—	—	—
	T-S3	Once a month	—	—	—	—	<7.7	0.12	—	—	—	—	—	—
	T-S4	Once a month	—	—	—	—	<7.7	0.10	—	—	—	—	—	—
	T-S8	Once a month	—	—	—	—	<7.8	0.097	—	—	—	—	—	—

※ : A “less than” symbol (<) indicates that the analysis result was less than the detection limit.

\*1 : Detection limit 0.4 Bq/liter

\*2 : Sampling suspended due to bad weather condition

\*3 : Detection limit 0.1 Bq/liter

: Term of discharge of ALPS treated water (Management number: 23-3-3)

\* : Monitored daily for the time being after the commencement of discharge

# (Reference) Sea area monitoring history (10/32)

(Unit: Bq/liter)

	Sampling location	Frequency	November, 2023											
			13 Normal *1	14	15	15 Normal *1	16	17	18	19	20 *3	20 Normal *3,4	21	21 Normal *4
In the vicinity of the discharge outlet	T-1	Once a week*	0.25	<5.8	<6.9	—	<8.8	<7.8	<9.3	<6.3	<7.0	1.7	<6.6	—
	T-2	Once a week*	0.25	<5.9	<6.9	—	<8.6	<7.7	<9.3	<6.2	<7.1	0.60	<6.5	—
	T-0-1	Once a week*	0.15	<6.6	<6.2	—	<7.1	<7.9	—*2	<7.4	<8.1	1.2	<7.0	—
	T-0-1A	Once a week*	0.14	7.2	10	—	<7.3	<7.9	—*2	<7.4	<8.1	1.0	<7.0	—
	T-0-2	Once a week*	0.17	<6.5	<6.2	—	7.9	<7.8	—*2	<7.4	<8.1	0.77	<7.1	—
	T-0-3A	Once a week*	0.49	<5.7	<6.9	—	<8.8	<8.0	—*2	<6.3	<7.0	0.87	<6.7	—
	T-0-3	Once a week*	0.44	<6.6	<6.2	—	<7.3	<7.9	—*2	<7.3	<8.1	0.92	<7.2	—
	T-A1	Once a week*	0.082	<6.8	<8.6	—	<8.8	<5.5	—*2	<8.6	<7.3	1.5	<9.0	—
	T-A2	Once a week*	0.16	<6.8	<8.8	—	<8.6	<5.5	—*2	<8.8	<7.2	0.60	<8.9	—
	T-A3	Once a week*	0.15	<7.0	<8.6	—	<8.8	<5.5	—*2	<8.8	<7.2	0.37	<8.9	—
Outside the vicinity of the discharge outlet	T-D5	Once a week	—	—	<8.6	0.12	—	—	—	—	—	—	<7.2	<0.33
	T-S3	Once a month	—	—	—	—	—	—	—	—	—	—	—	—
	T-S4	Once a month	—	—	—	—	—	—	—	—	—	—	—	—
	T-S8	Once a month	—	—	—	—	—	—	—	—	—	—	—	—

※ : A “less than” symbol (<) indicates that the analysis result was less than the detection limit.

\*1 : Detection limit 0.1 Bq/liter

\*2 : Sampling suspended due to bad weather condition

\*3 : Sampled before 8AM, prior to the completion of the discharge

\*4 : Detection limit 0.4 Bq/liter

■ : Term of discharge of ALPS treated water (Management number: 23-3-3)

\* : Monitored daily for the time being after the commencement of discharge

# (Reference) Sea area monitoring history (11/32)

(Unit: Bq/liter)

	Sampling location	Frequency	November, 2023										December, 2023	
			22	23	24	25	26	27	27 Normal *1	28	29	30	1	2
In the vicinity of the discharge outlet	T-1	Once a week*	<6.5	<5.5	<5.3	<6.3	<7.1	<5.7	<0.34	<5.5	<6.0	<7.4	<4.9	<5.5
	T-2	Once a week*	<6.4	<5.5	<5.2	<6.3	<7.1	<5.8	<0.34	<5.5	<6.0	<7.4	<4.9	<5.5
	T-0-1	Once a week*	<7.1	<6.4	<7.2	<7.3	<8.1	<6.4	0.38	<6.8	<5.9	<7.3	<7.3	<6.8
	T-0-1A	Once a week*	<7.0	<6.4	<7.2	<7.3	<8.2	<6.5	<0.33	<6.7	<5.8	<7.2	<7.2	<6.7
	T-0-2	Once a week*	<7.0	<6.5	<7.3	<7.3	<8.1	<6.5	<0.26	<6.7	<5.8	<7.3	<7.2	<6.7
	T-0-3A	Once a week*	<6.6	<5.5	<5.2	<6.3	<7.1	<5.7	<0.33	<5.5	<6.0	<7.4	<4.9	<5.5
	T-0-3	Once a week*	<7.1	<6.5	<7.3	<7.3	<8.2	<6.4	<0.33	<6.8	<5.9	<7.3	<7.2	<6.7
	T-A1	Once a week*	<7.4	<7.2	<5.7	<5.2	<5.7	<7.8	<0.36	<6.7	<5.9	<6.8	<8.8	<8.1
	T-A2	Once a week*	<7.7	<7.2	<5.7	<5.2	<5.6	<7.8	<0.36	<6.7	<5.9	<6.8	<8.8	<8.1
	T-A3	Once a week*	<7.6	<7.2	<5.6	<5.2	<5.7	<7.8	<0.36	<6.7	<5.9	<6.8	<8.8	<8.1
Outside the vicinity of the discharge outlet	T-D5	Once a week	—	—	—	—	—	<7.8	<0.34	—	—	—	—	—
	T-S3	Once a month	—	—	—	—	—	—	—	—	—	—	—	—
	T-S4	Once a month	—	—	—	—	—	—	—	—	—	—	—	—
	T-S8	Once a month	—	—	—	—	—	—	—	—	—	—	—	—

※ : A “less than” symbol (<) indicates that the analysis result was less than the detection limit.

\*1 : Detection limit 0.4 Bq/liter

\* : Monitored daily for the time being after the commencement of discharge

# [Reference] Sea area monitoring history (12/32)



(Unit: Bq/liter)

	Sampling location	Frequency	December, 2023											
			3	4	4 Normal *1	5	6	7	7 Normal *2	8	9	9 Normal *1	10	11
In the vicinity of the discharge outlet	T-1	Once a week*	<6.7	<6.0	<0.31	<6.3	<5.8	<5.0	—	<5.2	<6.1	—	<6.2	<6.3
	T-2	Once a week*	<6.7	<6.1	<0.31	<6.2	<5.7	<5.0	—	<5.2	<6.1	—	<6.3	<6.2
	T-0-1	Once a week*	<5.1	<5.8	<0.35	<7.5	<8.0	<7.3	—	<6.3	<8.3	—	<4.8	<6.5
	T-0-1A	Once a week*	<5.1	<5.8	<0.33	<7.5	<8.0	<7.3	—	<6.3	<8.4	—	<6.2	<6.5
	T-0-2	Once a week*	<5.1	<5.8	<0.30	<7.5	<7.9	<7.2	—	<6.3	<8.5	—	<4.9	<6.5
	T-0-3A	Once a week*	<6.9	<6.0	<0.33	<6.2	<5.9	<5.0	—	<5.2	<6.0	—	<6.2	<6.3
	T-0-3	Once a week*	<5.1	<5.8	<0.33	<7.4	<8.0	<7.2	—	<6.3	<8.3	—	<7.4	<6.5
	T-A1	Once a week*	<6.1	<8.1	<0.36	<8.4	<5.2	<6.5	—	<8.6	<7.9	—	<6.8	<5.2
	T-A2	Once a week*	<6.1	<8.1	<0.36	<8.3	<7.5	<6.5	—	<8.6	<7.8	—	<6.8	<5.3
T-A3	Once a week*	<6.1	<8.1	<0.36	<8.3	<5.3	<6.5	—	<8.7	<7.9	—	<6.9	<5.3	
Outside the vicinity of the discharge outlet	T-D5	Once a week	—	—	—	—	—	—	—	—	<6.0	<0.34	—	—
	T-S3	Once a month	—	—	—	—	—	—	—	—	—	—	—	—
	T-S4	Once a month	—	—	—	—	—	—	—	—	—	—	—	—
	T-S8	Once a month	—	—	—	—	—	<6.6	0.057	—	—	—	—	—

※ : A “less than” symbol (<) indicates that the analysis result was less than the detection limit.

\*1 : Detection limit 0.4 Bq/liter

\*2 : Detection limit 0.1 Bq/liter

\* : Monitored daily for the time being after the commencement of discharge

# (Reference) Sea area monitoring history (13/32)

(Unit: Bq/liter)

	Sampling location	Frequency	December, 2023											
			11 Normal *1	12	13	14	14 Normal *1	15	16	17	18	18 Normal *3	19	19 Normal *3
In the vicinity of the discharge outlet	T-1	Once a week*	0.15	<7.0	<6.7	<6.7	—	<6.1	<6.9	<6.5	<5.8	<0.36	<5.7	—
	T-2	Once a week*	0.12	<7.0	<6.7	<6.7	—	<6.1	<6.9	<6.5	<5.8	<0.36	<5.7	—
	T-0-1	Once a week*	0.076	—*2	—*2	<7.0	—	<5.9	<6.8	—*2	<5.8	<0.34	<8.2	—
	T-0-1A	Once a week*	<0.073	—*2	—*2	<5.5	—	<5.8	<6.7	—*2	<5.9	<0.35	<8.2	—
	T-0-2	Once a week*	0.083	—*2	—*2	<5.9	—	<5.9	<6.8	—*2	<5.9	<0.33	<8.2	—
	T-0-3A	Once a week*	<0.074	—*2	—*2	<6.7	—	<6.1	<6.9	—*2	<5.7	<0.34	<5.8	—
	T-0-3	Once a week*	<0.075	—*2	—*2	<8.1	—	<5.9	<7.0	—*2	<5.9	<0.35	<8.2	—
	T-A1	Once a week*	0.095	—*2	—*2	<8.1	—	<6.5	<7.5	—*2	<6.8	<0.36	<7.5	—
	T-A2	Once a week*	0.081	—*2	—*2	<8.1	—	<6.5	<7.5	—*2	<6.8	<0.36	<7.5	—
T-A3	Once a week*	0.13	—*2	—*2	<8.1	—	<6.5	<7.5	—*2	<6.8	<0.36	<7.5	—	
Outside the vicinity of the discharge outlet	T-D5	Once a week	—	—	—	<8.1	0.079	—	—	—	—	—	<7.5	<0.34
	T-S3	Once a month	—	—	—	—	—	—	—	—	—	—	—	—
	T-S4	Once a month	—	—	—	—	—	—	—	—	—	—	—	—
	T-S8	Once a month	—	—	—	—	—	—	—	—	—	—	—	—

※ : A “less than” symbol (<) indicates that the analysis result was less than the detection limit.

\*1 : Detection limit 0.1 Bq/liter

\*2 : Sampling suspended due to bad weather condition

\*3 : Detection limit 0.4 Bq/liter

\* : Monitored daily for the time being after the commencement of discharge

# (Reference) Sea area monitoring history (14/32)

○ For quick tritium measurements taken in the vicinity of the discharge outlet, we changed the frequency in order to place importance on the discharge period from December 26, 2023, and have been continuing the monitoring.

(Unit: Bq/liter)

	Sampling location	Frequency	December, 2023									January, 2024		
			20	20 Normal *1	21	22	23	24	25	25 Normal *2	26	1	3	3 Normal *2
In the vicinity of the discharge outlet	T-1	Once a week*	<6.7	—	<7.2	<6.6	<7.0	<7.1	<6.1	<0.33	<5.0	<5.6	—	<0.33
	T-2	Once a week*	<6.7	—	<7.1	<6.6	<7.0	<7.2	<6.1	<0.33	<4.9	<5.5	—	<0.33
	T-0-1	Once a week*	<7.5	—	<8.0	<7.1	<6.6	<7.3	<7.3	<0.27	<6.9	—*3	<6.5	<0.27
	T-0-1A	Once a week*	<7.5	—	<8.0	<7.1	<6.5	<7.3	<7.3	<0.34	<5.8	—*3	<6.5	<0.35
	T-0-2	Once a week*	<7.5	—	<8.0	<7.1	<6.6	<7.3	<7.3	<0.31	<6.8	—*3	<6.5	<0.32
	T-0-3A	Once a week*	<6.5	—	<7.3	<6.6	<7.0	<7.2	<6.1	<0.34	<5.0	—*3	<8.1	<0.34
	T-0-3	Once a week*	<7.5	—	<8.1	<7.1	<6.5	<7.4	<7.4	<0.34	<7.0	—*3	<6.5	<0.34
	T-A1	Once a week*	<6.5	—	<6.9	<6.1	<6.2	<7.3	<7.8	<0.36	<9.2	—*3	<8.1	<0.37
	T-A2	Once a week*	<6.5	—	<6.9	<6.2	<6.2	<7.2	<7.9	<0.36	<9.2	—*3	<8.1	<0.37
T-A3	Once a week*	<6.5	—	<6.9	<6.2	<6.2	<7.2	<7.8	<0.36	<9.2	—*3	<8.2	<0.37	
Outside the vicinity of the discharge outlet	T-D5	Once a week	—	—	—	—	—	—	<7.9	<0.33	—	—	—	—
	T-S3	Once a month	<6.7	0.12	—	—	—	—	—	—	—	—	—	—
	T-S4	Once a month	<6.7	0.075	—	—	—	—	—	—	—	—	—	—
	T-S8	Once a month	—	—	—	—	—	—	—	—	—	—	—	—

※ : A “less than” symbol (<) indicates that the analysis result was less than the detection limit.

\*1 : Detection limit 0.1 Bq/liter

\*2 : Detection limit 0.4 Bq/liter

\*3 : Sampling suspended due to bad weather condition

\* : Monitored daily for the time being after the commencement of discharge

Monitored daily for the time being after the commencement of discharge. In order to place importance on the discharge period, frequency of the measurement was changed from December 26, 2023 as follows;

4 locations in the vicinity of the discharge outlet (T-0-1, T-0-1A, T-0-2, T-A2) : Conduct daily during the discharge period and for one week following the completion of discharge

Conduct once a week outside the discharge period, excluding one week following the completion of discharge

Other 6 locations (T-1, T-2, T-0-3A, T-0-3, T-A1, T-A3) : Conduct twice a week during the discharge period and for one week following the completion of discharge

Conduct once a month outside the discharge period, excluding one week following the completion of discharge

# (Reference) Sea area monitoring history (15/32)



(Unit: Bq/liter)

	Sampling location	Frequency	January, 2024											
			6	6 Normal *1	8	8 Normal *2	9	9 Normal *2	11	11 Normal *2	15	15 Normal *1	17	17 Normal *2
In the vicinity of the discharge outlet	T-1	Twice a week*	—	—	—	<0.075	—	—	—	—	—	<0.37	—	—
	T-2	Twice a week*	—	—	—	<0.083	—	—	—	—	—	<0.37	—	—
	T-0-1	Once a day*	—	—	<6.5	0.045	—	—	—	—	<6.2	<0.27	—	—
	T-0-1A	Once a day*	—	—	<7.2	0.21	—	—	—	—	<4.2	<0.33	—	—
	T-0-2	Once a day*	—	—	<6.6	<0.082	—	—	—	—	<6.2	<0.31	—	—
	T-0-3A	Twice a week*	—	—	—	0.23	—	—	—	—	—	<0.33	—	—
	T-0-3	Twice a week*	—	—	—	0.16	—	—	—	—	—	<0.33	—	—
	T-A1	Twice a week*	—	—	—	<0.071	—	—	—	—	—	<0.36	—	—
	T-A2	Once a day*	—	—	<7.6	0.11	—	—	—	—	<4.2	<0.36	—	—
	T-A3	Twice a week*	—	—	—	0.079	—	—	—	—	—	<0.36	—	—
Outside the vicinity of the discharge outlet	T-D5	Once a week	<8.1	<0.35	—	—	<7.0	0.097	—	—	—	—	—	—
	T-S3	Once a month	—	—	—	—	—	—	—	—	—	—	<7.8	0.14
	T-S4	Once a month	—	—	—	—	—	—	—	—	—	—	<7.7	<0.068
	T-S8	Once a month	—	—	—	—	—	—	<6.8	0.053	—	—	—	—

※ : A “less than” symbol (<) indicates that the analysis result was less than the detection limit.

\*1 : Detection limit 0.4 Bq/liter

\*2 : Detection limit 0.1 Bq/liter

\* : 4 locations in the vicinity of the discharge outlet : Conduct daily during the discharge period and for one week following the completion of discharge  
 Conduct once a week outside the discharge period, excluding one week following the completion of discharge  
 Other 6 locations : Conduct twice a week during the discharge period and for one week following the completion of discharge  
 Conduct once a month outside the discharge period, excluding one week following the completion of discharge



# (Reference) Sea area monitoring history (16/32)



(Unit: Bq/liter)

	Sampling location	Frequency	January, 2024				February, 2024							
			24	24 Normal *1	29	29 Normal *1	5	5 Normal *1	7	7 Normal *2	12	12 Normal *2	13	13 Normal *2
In the vicinity of the discharge outlet	T-1	Twice a week*	—	<0.37	—	<0.34	<6.1	<0.33	—	—	—	0.12	—	—
	T-2	Twice a week*	—	<0.37	—	<0.35	<6.1	<0.33	—	—	—	<0.074	—	—
	T-0-1	Once a day*	<7.8	<0.37	<5.9	<0.29	<7.7	<0.34	—	—	<7.0	0.048	—	—
	T-0-1A	Once a day*	<7.3	<0.34	<7.6	<0.33	<7.6	<0.32	—	—	<6.6	0.081	—	—
	T-0-2	Once a day*	<7.7	<0.32	<8.2	<0.38	<7.6	<0.36	—	—	<7.1	<0.072	—	—
	T-0-3A	Twice a week*	—	<0.33	—	<0.33	<6.0	<0.32	—	—	—	<0.072	—	—
	T-0-3	Twice a week*	—	<0.33	—	<0.33	<7.5	<0.34	—	—	—	<0.071	—	—
	T-A1	Twice a week*	—	<0.37	—	<0.35	<7.0	<0.36	—	—	—	<0.073	—	—
	T-A2	Once a day*	<7.3	<0.37	<7.6	<0.35	<6.8	<0.36	—	—	<6.7	<0.068	—	—
T-A3	Twice a week*	—	<0.37	—	<0.35	<6.9	<0.36	—	—	—	<0.068	—	—	
Outside the vicinity of the discharge outlet	T-D5	Once a week	—	—	<6.9	<0.33	<6.1	<0.33	—	—	—	—	<8.1	<0.072
	T-S3	Once a month	—	—	—	—	—	—	<6.2	<0.068	—	—	—	—
	T-S4	Once a month	—	—	—	—	—	—	<6.1	0.071	—	—	—	—
	T-S8	Once a month	—	—	—	—	—	—	—	—	—	—	—	—

※ : A “less than” symbol (<) indicates that the analysis result was less than the detection limit.

\*1 : Detection limit 0.4 Bq/liter

\*2 : Detection limit 0.1 Bq/liter

\* : 4 locations in the vicinity of the discharge outlet : Conduct daily during the discharge period and for one week following the completion of discharge  
 Conduct once a week outside the discharge period, excluding one week following the completion of discharge  
 Other 6 locations : Conduct twice a week during the discharge period and for one week following the completion of discharge  
 Conduct once a month outside the discharge period, excluding one week following the completion of discharge

# (Reference) Sea area monitoring history (17/32)

(Unit: Bq/liter)

	Sampling location	Frequency	February, 2024								March, 2024			
			19	19 Normal *1	21	21 Normal *1	26	26 Normal *1	28	29	1	1 Normal *1	2	3
In the vicinity of the discharge outlet	T-1	Twice a week*	—	<0.32	—	—	—	<0.34	—*2	<6.9	<9.3	<0.34	—	—
	T-2	Twice a week*	—	<0.31	—	—	—	<0.33	—*2	<6.8	<9.2	<0.33	—	—
	T-0-1	Once a day*	<6.6	<0.27	—	—	<7.9	<0.27	—*2	—*2	<6.5	<0.35	—*2	<7.3
	T-0-1A	Once a day*	<6.4	<0.32	—	—	<7.9	<0.33	—*2	—*2	<6.4	<0.34	—*2	12
	T-0-2	Once a day*	<6.5	<0.37	—	—	<7.9	<0.36	—*2	—*2	<9.5	<0.36	—*2	<7.8
	T-0-3A	Twice a week*	—	<0.33	—	—	—	<0.32	—*2	—*2	<8.2	<0.34	—	—
	T-0-3	Twice a week*	—	<0.33	—	—	—	<0.32	—*2	—*2	<6.6	<0.34	—	—
	T-A1	Twice a week*	—	<0.36	—	—	—	<0.35	—*2	—*2	<7.8	<0.37	—	—
	T-A2	Once a day*	<6.8	<0.36	—	—	<7.9	<0.35	—*2	—*2	<7.8	<0.37	—*2	<8.2
	T-A3	Twice a week*	—	<0.36	—	—	—	<0.35	—*2	—*2	<7.8	<0.37	—	—
Outside the vicinity of the discharge outlet	T-D5	Once a week	—	—	<5.5	<0.34	—	—	—*2	—	—*2	—*2	—	—
	T-S3	Once a month	—	—	—	—	—	—	—	—	—	—	—	—
	T-S4	Once a month	—	—	—	—	—	—	—	—	—	—	—	—
	T-S8	Once a month	—	—	—	—	—*2	—*2	—	—	—	—	—	—

※ : A “less than” symbol (<) indicates that the analysis result was less than the detection limit.

\*1 : Detection limit 0.4 Bq/liter

\*2 : Sampling suspended due to bad weather condition

: Term of discharge of ALPS treated water (Management number: 23-4-4)

\* : 4 locations in the vicinity of the discharge outlet : Conduct daily during the discharge period and for one week following the completion of discharge  
 Conduct once a week outside the discharge period, excluding one week following the completion of discharge  
 Other 6 locations : Conduct twice a week during the discharge period and for one week following the completion of discharge  
 Conduct once a month outside the discharge period, excluding one week following the completion of discharge

# (Reference) Sea area monitoring history (18/32)

(Unit: Bq/liter)

	Sampling location	Frequency	March, 2024											
			4	4 Normal *1,2	5	6	7	8	9	10	11	11 Normal *2	12	13
In the vicinity of the discharge outlet	T-1	Twice a week*	<7.4	0.50	—	—	<8.1	<7.2	<6.7	<6.4	<6.1	1.2	—	—
	T-2	Twice a week*	<7.4	0.33	—	—	<8.1	<7.4	<6.7	<6.3	<6.1	0.31	—	—
	T-0-1	Once a day*	<9.0	<0.36	<7.9	—*3	—*3	—*3	—*3	—*3	<6.8	0.51	<8.8	—*3
	T-0-1A	Once a day*	<6.9	<0.34	16	—*3	—*3	—*3	—*3	—*3	9.5	6.6	<7.5	—*3
	T-0-2	Once a day*	<9.0	<0.36	<8.0	—*3	—*3	—*3	—*3	—*3	<6.1	0.20	<7.6	—*3
	T-0-3A	Twice a week*	<9.0	3.6	—	—	—*3	—*3	—*3	—*3	<6.8	<0.066	—	—
	T-0-3	Twice a week*	<9.1	1.1	—	—	—*3	—*3	—*3	—*3	<6.9	0.086	—	—
	T-A1	Twice a week*	<6.8	0.58	—	—	—*3	—*3	—*3	—*3	<7.1	<0.072	—	—
	T-A2	Once a day*	<6.9	<0.36	<7.9	—*3	—*3	—*3	—*3	—*3	<7.0	0.10	<7.5	—*3
	T-A3	Twice a week*	<6.9	<0.36	—	—	—*3	—*3	—*3	—*3	<6.9	0.11	—	—
Outside the vicinity of the discharge outlet	T-D5	Once a week	<8.8	<0.33	—	—	—	—	—	—	<6.9	<0.067	—	—
	T-S3	Once a month	<6.8	<0.068	—	—	—	—	—	—	—	—	—	—
	T-S4	Once a month	<6.9	<0.069	—	—	—	—	—	—	—	—	—	—
	T-S8	Once a month	<9.1	0.11	—	—	—	—	—	—	—	—	—	—

※ : A "less than" symbol (<) indicates that the analysis result was less than the detection limit.

\*1 : Detection limit 0.4 Bq/liter

\*2 : Detection limit 0.1 Bq/liter

\*3 : Sampling suspended due to bad weather condition

: Term of discharge of ALPS treated water (Management number: 23-4-4)

\* : 4 locations in the vicinity of the discharge outlet : Conduct daily during the discharge period and for one week following the completion of discharge  
 Conduct once a week outside the discharge period, excluding one week following the completion of discharge  
 Other 6 locations : Conduct twice a week during the discharge period and for one week following the completion of discharge  
 Conduct once a month outside the discharge period, excluding one week following the completion of discharge

# (Reference) Sea area monitoring history (19/32)

(Unit: Bq/liter)

	Sampling location	Frequency	March, 2024											
			14	15 Normal *1	16	17 Normal *2	18	19	19 Normal *4	20	21	22	23	24
In the vicinity of the discharge outlet	T-1	Twice a week*	<8.0	—	—	—	—*3	<6.7	<0.32	—	<6.3	—	<6.2	—
	T-2	Twice a week*	<8.0	—	—	—	—*3	<6.8	<0.33	—	<6.4	—	<6.1	—
	T-0-1	Once a day*	<7.1	<6.6	<7.1	<6.2	—*3	<5.8	<0.27	<7.6	—*3	—*3	—*3	<7.6
	T-0-1A	Once a day*	<6.9	<6.1	<7.2	<7.7	—*3	<5.9	<0.34	<7.6	—*3	—*3	—*3	<5.5
	T-0-2	Once a day*	<6.9	<6.1	<7.3	<7.7	—*3	<5.7	<0.29	<7.6	—*3	—*3	—*3	<7.4
	T-0-3A	Twice a week*	<8.3	—	—	—	—*3	<5.9	<0.34	—	—*3	—*3	—*3	<5.4
	T-0-3	Twice a week*	<7.0	—	—	—	—*3	<5.9	<0.33	—	—*3	—*3	—*3	<7.5
	T-A1	Twice a week*	<8.4	—	—	—	—*3	<7.6	<0.36	—	—*3	—*3	—*3	<6.9
	T-A2	Once a day*	<8.4	<6.1	<7.3	<7.6	—*3	<7.5	<0.36	<7.5	—*3	—*3	—*3	<6.7
	T-A3	Twice a week*	<8.3	—	—	—	—*3	<7.5	<0.36	—	—*3	—*3	—*3	<6.9
Outside the vicinity of the discharge outlet	T-D5	Once a week	—	—	—	—	—*3	<6.9	<0.33	—	—	—	—	—
	T-S3	Once a month	—	—	—	—	—	—	—	—	—	—	—	—
	T-S4	Once a month	—	—	—	—	—	—	—	—	—	—	—	—
	T-S8	Once a month	—	—	—	—	—	—	—	—	—	—	—	—

※ : A “less than” symbol (<) indicates that the analysis result was less than the detection limit.

\*1 : Sampled during the suspension due to the earthquake

\*2 : Sampled before 8AM, prior to the completion of the discharge

\*3 : Sampling suspended due to bad weather condition

\*4 : Detection limit 0.4 Bq/liter

\* : 4 locations in the vicinity of the discharge outlet : Conduct daily during the discharge period and for one week following the completion of discharge

Conduct once a week outside the discharge period, excluding one week following the completion of discharge

Other 6 locations : Conduct twice a week during the discharge period and for one week following the completion of discharge

Conduct once a month outside the discharge period, excluding one week following the completion of discharge

# (Reference) Sea area monitoring history (20/32)

(Unit: Bq/liter)

	Sampling location	Frequency	March, 2024				April, 2024							
			25	25 Normal *1,2	28	28 Normal *1	1	1 Normal *1	2	2 Normal *1	8	8 Normal *2	11	11 Normal *2
In the vicinity of the discharge outlet	T-1	Twice a week*	<5.8	<0.33	—	—	<6.7	<0.32	—	—	—	0.14	—	—
	T-2	Twice a week*	<5.9	<0.34	—	—	<6.8	<0.32	—	—	—	0.11	—	—
	T-0-1	Once a day*	<6.4	<0.33	—	—	<8.0	<0.34	—	—	<5.7	0.076	—	—
	T-0-1A	Once a day*	<7.2	<0.33	—	—	<8.0	<0.32	—	—	<7.0	<0.069	—	—
	T-0-2	Once a day*	<6.5	<0.30	—	—	<8.1	<0.31	—	—	<5.7	<0.065	—	—
	T-0-3A	Twice a week*	<6.8	<0.33	—	—	<6.9	<0.33	—	—	—	<0.071	—	—
	T-0-3	Twice a week*	<7.2	<0.33	—	—	<8.0	<0.33	—	—	—	0.14	—	—
	T-A1	Twice a week*	<6.7	0.39	—	—	<6.9	0.34	—	—	—	<0.073	—	—
	T-A2	Once a day*	<6.7	<0.34	—	—	<6.9	<0.34	—	—	<7.0	<0.073	—	—
	T-A3	Twice a week*	<7.2	0.34	—	—	<7.0	<0.34	—	—	—	<0.073	—	—
Outside the vicinity of the discharge outlet	T-D5	Once a week	—	—	<5.9	<0.32	—	—	<7.5	<0.33	<5.7	<0.070	—	—
	T-S3	Once a month	—	—	—	—	—	—	—	—	—	—	<6.5	<0.073
	T-S4	Once a month	—	—	—	—	—	—	—	—	—	—	<6.6	<0.072
	T-S8	Once a month	<7.1	0.039	—	—	—	—	—	—	—	—	—	—

※ : A “less than” symbol (<) indicates that the analysis result was less than the detection limit.

\*1 : Detection limit 0.4 Bq/liter

\*2 : Detection limit 0.1 Bq/liter

\* : 4 locations in the vicinity of the discharge outlet : Conduct daily during the discharge period and for one week following the completion of discharge  
 Conduct once a week outside the discharge period, excluding one week following the completion of discharge  
 Other 6 locations : Conduct twice a week during the discharge period and for one week following the completion of discharge  
 Conduct once a month outside the discharge period, excluding one week following the completion of discharge

# (Reference) Sea area monitoring history (21/32)

(Unit: Bq/liter)

	Sampling location	Frequency	April, 2024											
			15	15 Normal *1,2	19 *3	19 Normal *1,3	20	20 Normal *1	21	22	22 Normal *1	23	23 Normal *2	24
In the vicinity of the discharge outlet	T-1	Twice a week*	—	0.33	<6.0	<0.34	—	—	—	<9.6	<0.32	—	—	—
	T-2	Twice a week*	—	<0.30	<6.1	<0.34	—	—	—	<9.4	<0.32	—	—	—
	T-0-1	Once a day*	<7.7	<0.32	—*4	—*4	<7.8	<0.33	<7.5	<6.5	<0.32	<7.6	—	<5.7
	T-0-1A	Once a day*	<7.7	<0.33	—*4	—*4	<6.9	<0.34	<7.5	<6.6	<0.34	<5.6	—	<5.7
	T-0-2	Once a day*	<7.7	<0.34	—*4	—*4	<7.8	1.3	<7.5	<6.5	2.5	<5.6	—	<5.8
	T-0-3A	Twice a week*	—	<0.34	—*4	—*4	<6.9	0.91	—	<7.1	<0.34	—	—	—
	T-0-3	Twice a week*	—	<0.33	—*4	—*4	<7.9	0.70	—	<6.5	<0.34	—	—	—
	T-A1	Twice a week*	—	<0.35	—*4	—*4	<6.4	<0.36	—	<6.9	<0.35	—	—	—
	T-A2	Once a day*	<7.7	<0.35	—*4	—*4	<6.6	2.9	<7.5	<7.0	0.79	<5.6	—	<6.4
	T-A3	Twice a week*	—	<0.35	—*4	—*4	<6.4	<0.36	—	<7.0	3.2	—	—	—
Outside the vicinity of the discharge outlet	T-D5	Once a week	<8.0	<0.33	—	—	—	—	—	<9.4	<0.34	—	—	—
	T-S3	Once a month	—	—	—	—	—	—	—	—	—	<6.6	being measured	—
	T-S4	Once a month	—	—	—	—	—	—	—	—	—	<6.5	0.11	—
	T-S8	Once a month	<8.0	0.058	—	—	—	—	—	—	—	<6.5	0.13	—

※ : A "less than" symbol (<) indicates that the analysis result was less than the detection limit.

\*1 : Detection limit 0.4 Bq/liter

\*2 : Detection limit 0.1 Bq/liter

\*3 : Sampled after the commencement of discharge at 2PM

\*4 : Sampling suspended due to bad weather condition

\* : 4 locations in the vicinity of the discharge outlet : Conduct daily during the discharge period and for one week following the completion of discharge

Conduct once a week outside the discharge period, excluding one week following the completion of discharge

Other 6 locations : Conduct twice a week during the discharge period and for one week following the completion of discharge

Conduct once a month outside the discharge period, excluding one week following the completion of discharge

# (Reference) Sea area monitoring history (22/32)

(Unit: Bq/liter)

	Sampling location	Frequency	April, 2024							May, 2024				
			25	26	27	28	29	29 Normal *1	30	1	2	3	4	5
In the vicinity of the discharge outlet	T-1	Twice a week*	<7.7	—	—	—	<6.1	0.62	—	—	<6.6	—	—	—
	T-2	Twice a week*	<7.8	—	—	—	<6.1	0.51	—	—	<6.6	—	—	—
	T-0-1	Once a day*	<7.3	<6.4	<9.4	<7.9	<6.9	0.48	<5.6	<9.0	<6.8	<8.1	<7.3	<7.6
	T-0-1A	Once a day*	<7.3	<6.5	<9.5	<7.8	<7.0	1.2	<5.6	<7.4	<6.8	29	<6.5	<7.7
	T-0-2	Once a day*	<7.3	<6.4	<9.4	<7.9	<6.9	<0.34	<5.6	<9.0	<6.8	<8.1	<6.4	<7.7
	T-0-3A	Twice a week*	<5.2	—	—	—	<6.3	<0.33	—	—	<5.8	—	—	—
	T-0-3	Twice a week*	<7.3	—	—	—	<6.9	<0.33	—	—	<6.7	—	—	—
	T-A1	Twice a week*	<7.7	—	—	—	<6.3	<0.36	—	—	<5.8	—	—	—
	T-A2	Once a day*	<5.2	<7.2	<6.3	<7.6	<6.3	<0.36	<5.6	<7.4	<5.8	<6.5	<6.4	<5.0
	T-A3	Twice a week*	<5.2	—	—	—	<6.4	<0.36	—	—	<5.8	—	—	—
Outside the vicinity of the discharge outlet	T-D5	Once a week	—	—	—	—	<6.4	<0.33	—	—	—	—	—	—
	T-S3	Once a month	—	—	—	—	—	—	—	—	—	—	—	—
	T-S4	Once a month	—	—	—	—	—	—	—	—	—	—	—	—
	T-S8	Once a month	—	—	—	—	—	—	—	—	—	—	—	—

※ : A “less than” symbol (<) indicates that the analysis result was less than the detection limit.

\*1 : Detection limit 0.4 Bq/liter

: Term of discharge of ALPS treated water (Management number: 24-1-5)

\* : 4 locations in the vicinity of the discharge outlet : Conduct daily during the discharge period and for one week following the completion of discharge  
 Conduct once a week outside the discharge period, excluding one week following the completion of discharge  
 Other 6 locations : Conduct twice a week during the discharge period and for one week following the completion of discharge  
 Conduct once a month outside the discharge period, excluding one week following the completion of discharge

# (Reference) Sea area monitoring history (23/32)

(Unit: Bq/liter)

	Sampling location	Frequency	May, 2024											
			6	6 Normal *1	7 *2	8	8 Normal *3	9	10	11	12	13	14	14 Normal *3
In the vicinity of the discharge outlet	T-1	Twice a week*	<5.1	<0.32	—	—	—	<9.3	—	—	—	<5.8	—	<0.076
	T-2	Twice a week*	<5.1	0.51	—	—	—	<9.4	—	—	—	<5.8	—	<0.084
	T-0-1	Once a day*	<5.8	<0.30	<4.9	<6.2	—	<5.5	<7.9	<6.6	<7.5	—*4	<6.2	0.054
	T-0-1A	Once a day*	13	9.4	<7.6	<6.2	—	<5.5	<6.3	<5.5	<7.5	—*4	<7.7	0.10
	T-0-2	Once a day*	<5.9	<0.34	<7.6	<6.2	—	<5.5	<7.9	<6.5	<7.5	—*4	<6.2	<0.079
	T-0-3A	Twice a week*	<6.3	<0.33	—	—	—	<5.3	—	—	—	—*4	<7.1	0.12
	T-0-3	Twice a week*	<5.8	<0.33	—	—	—	<5.4	—	—	—	—*4	<6.2	0.079
	T-A1	Twice a week*	<6.2	1.8	—	—	—	<5.3	—	—	—	—*4	<6.4	0.080
	T-A2	Once a day*	<6.2	<0.35	<7.6	<7.8	—	<5.3	<6.2	<5.5	<9.2	—*4	<7.7	<0.071
	T-A3	Twice a week*	<6.3	<0.35	—	—	—	<5.2	—	—	—	—*4	<7.7	<0.071
Outside the vicinity of the discharge outlet	T-D5	Once a week	<5.1	<0.33	—	—	—	—	—	—	—	—*4	<6.4	<0.069
	T-S3	Once a month	—	—	—	<7.7	being measured	—	—	—	—	—	—	—
	T-S4	Once a month	—	—	—	<7.6	being measured	—	—	—	—	—	—	—
	T-S8	Once a month	—	—	—	—	—	—	—	—	—	—	—	—

※ : A “less than” symbol (<) indicates that the analysis result was less than the detection limit.

\*1 : Detection limit 0.4 Bq/liter

\*2 : Sampled before 8AM, prior to the completion of the discharge

\*3 : Detection limit 0.1 Bq/liter

\*4 : Sampling suspended due to bad weather condition

\* : 4 locations in the vicinity of the discharge outlet : Conduct daily during the discharge period and for one week following the completion of discharge  
 Conduct once a week outside the discharge period, excluding one week following the completion of discharge

Other 6 locations : Conduct twice a week during the discharge period and for one week following the completion of discharge  
 Conduct once a month outside the discharge period, excluding one week following the completion of discharge



# (Reference) Sea area monitoring history (24/32)

(Unit: Bq/liter)

	Sampling location	Frequency	May, 2024											
			17 *1	17 Normal *1,2	18	19	20	20 Normal *2	21	22	22 Normal *3	23	24	25
In the vicinity of the discharge outlet	T-1	Twice a week*	<5.7	<0.36	—	—	<7.2	<0.31	—	—	—	<7.3	—	—
	T-2	Twice a week*	<5.8	<0.36	—	—	<7.3	<0.30	—	—	—	<7.3	—	—
	T-0-1	Once a day*	<8.9	<0.37	<7.9	<7.0	<6.5	<0.38	<7.3	<6.5	—	<5.6	<6.4	<6.0
	T-0-1A	Once a day*	<8.8	1.1	<7.9	<6.9	<6.5	<0.33	<6.9	<6.4	—	<5.5	<6.2	<6.9
	T-0-2	Once a day*	<8.9	<0.32	<7.9	<7.0	<6.5	0.82	<7.0	7.7	—	<5.5	<6.1	<6.9
	T-0-3A	Twice a week*	<6.3	<0.34	—	—	<6.9	<0.33	—	—	—	<6.1	—	—
	T-0-3	Twice a week*	<8.9	<0.35	—	—	<6.5	<0.33	—	—	—	<5.6	—	—
	T-A1	Twice a week*	<6.2	<0.35	—	—	<6.9	0.38	—	—	—	<6.1	—	—
	T-A2	Once a day*	<6.3	<0.35	<7.9	<6.7	<6.8	1.4	<6.9	<6.4	—	<6.0	<6.2	<6.9
	T-A3	Twice a week*	<6.2	<0.35	—	—	<6.9	0.78	—	—	—	<6.2	—	—
Outside the vicinity of the discharge outlet	T-D5	Once a week	—	—	—	—	<7.2	<0.33	—	—	—	—	—	—
	T-S3	Once a month	—	—	—	—	—	—	—	<5.5	being measured	—	—	—
	T-S4	Once a month	—	—	—	—	—	—	—	<5.5	being measured	—	—	—
	T-S8	Once a month	—	—	—	—	—	—	—	<5.5	being measured	—	—	—

※ : A “less than” symbol (<) indicates that the analysis result was less than the detection limit.

\*1 : Sampled after the commencement of discharge at 1PM

\*2 : Detection limit 0.4 Bq/liter

\*3 : Detection limit 0.1 Bq/liter

: Term of discharge of ALPS treated water (Management number: 24-2-6)

\* : 4 locations in the vicinity of the discharge outlet : Conduct daily during the discharge period and for one week following the completion of discharge  
 Conduct once a week outside the discharge period, excluding one week following the completion of discharge  
 Other 6 locations : Conduct twice a week during the discharge period and for one week following the completion of discharge  
 Conduct once a month outside the discharge period, excluding one week following the completion of discharge

# (Reference) Sea area monitoring history (25/32)

(Unit: Bq/liter)

	Sampling location	Frequency	May, 2024							June, 2024				
			26	27	28	28 Normal *2	29	30	31	1	2	3	3 Normal *2	4
In the vicinity of the discharge outlet	T-1	Twice a week*	—	<8.4	—	<0.31	—	<7.9	—	—	—	<5.8	<0.30	—
	T-2	Twice a week*	—	<8.4	—	<0.30	—	<7.9	—	—	—	<5.9	<0.29	—
	T-0-1	Once a day*	<7.4	—*1	<6.3	<0.37	<6.6	<7.2	<6.7	<5.9	<6.5	<5.9	<0.36	—*1
	T-0-1A	Once a day*	<7.4	—*1	<6.9	<0.34	<5.5	<7.2	<6.7	<6.0	<6.4	<6.3	<0.34	—*1
	T-0-2	Once a day*	<7.4	—*1	<6.9	0.44	<6.6	<7.6	<6.7	<5.9	<6.5	<6.3	1.4	—*1
	T-0-3A	Twice a week*	—	—*1	<8.2	0.41	—	<6.3	—	—	—	<6.3	<0.35	—
	T-0-3	Twice a week*	—	—*1	<8.1	0.86	—	<7.3	—	—	—	<6.3	0.45	—
	T-A1	Twice a week*	—	—*1	<8.1	0.50	—	<6.2	—	—	—	<7.0	<0.35	—
	T-A2	Once a day*	<8.3	—*1	<6.8	0.36	<5.5	<6.3	<6.8	<7.0	<6.9	<7.0	<0.35	—*1
	T-A3	Twice a week*	—	—*1	<6.9	<0.35	—	<7.3	—	—	—	<6.9	<0.35	—
Outside the vicinity of the discharge outlet	T-D5	Once a week	—	—	<6.4	<0.33	—	—	—	—	—	<7.0	<0.35	—
	T-S3	Once a month	—	—	—	—	—	—	—	—	—	—	—	—
	T-S4	Once a month	—	—	—	—	—	—	—	—	—	—	—	—
	T-S8	Once a month	—	—	—	—	—	—	—	—	—	—	—	—

※ : A “less than” symbol (<) indicates that the analysis result was less than the detection limit.

\*1 : Sampling suspended due to bad weather condition

\*2 : Detection limit 0.4 Bq/liter

: Term of discharge of ALPS treated water (Management number: 24-2-6)

\* : 4 locations in the vicinity of the discharge outlet : Conduct daily during the discharge period and for one week following the completion of discharge  
 Conduct once a week outside the discharge period, excluding one week following the completion of discharge  
 Other 6 locations : Conduct twice a week during the discharge period and for one week following the completion of discharge  
 Conduct once a month outside the discharge period, excluding one week following the completion of discharge

# (Reference) Sea area monitoring history (26/32)

(Unit: Bq/liter)

	Sampling location	Frequency	June, 2024											
			5	6	7	8	9	10	10 Normal *1	11	12	12 Normal *1	17	17 Normal *1,2
In the vicinity of the discharge outlet	T-1	Twice a week*	—	<9.2	—	—	—	<6.8	0.14	—	—	—	—	<0.30
	T-2	Twice a week*	—	<9.2	—	—	—	<6.8	0.13	—	—	—	—	<0.30
	T-0-1	Once a day*	<7.4	<9.2	<6.6	<6.6	<6.9	<6.8	0.089	<7.8	—	—	<9.0	<0.34
	T-0-1A	Once a day*	<7.4	<7.3	<6.8	<6.6	<6.9	<6.5	<0.067	<7.8	—	—	<9.0	<0.34
	T-0-2	Once a day*	<7.5	<9.4	<6.8	<6.6	<6.8	<6.6	0.13	<7.8	—	—	<9.0	<0.32
	T-0-3A	Twice a week*	—	<7.3	—	—	—	<6.6	<0.066	—	—	—	—	<0.33
	T-0-3	Twice a week*	—	<7.3	—	—	—	<6.5	<0.066	—	—	—	—	<0.34
	T-A1	Twice a week*	—	<5.8	—	—	—	<6.4	<0.071	—	—	—	—	<0.36
	T-A2	Once a day*	<7.4	<5.8	<6.9	<6.6	<6.8	<6.4	0.077	<7.8	—	—	<5.3	<0.37
	T-A3	Twice a week*	—	<5.9	—	—	—	<6.4	<0.071	—	—	—	—	<0.36
Outside the vicinity of the discharge outlet	T-D5	Once a week	—	—	—	—	—	<6.8	0.086	—	—	—	<5.3	being measured
	T-S3	Once a month	—	—	—	—	—	—	—	—	<6.0	being measured	—	—
	T-S4	Once a month	—	—	—	—	—	—	—	—	<6.0	being measured	—	—
	T-S8	Once a month	—	—	—	—	—	—	—	—	—	—	<5.4	being measured

※ : A “less than” symbol (<) indicates that the analysis result was less than the detection limit.

\*1 : Detection limit 0.1 Bq/liter

\*2 : Detection limit 0.4 Bq/liter

\* : 4 locations in the vicinity of the discharge outlet : Conduct daily during the discharge period and for one week following the completion of discharge  
 Conduct once a week outside the discharge period, excluding one week following the completion of discharge  
 Other 6 locations : Conduct twice a week during the discharge period and for one week following the completion of discharge  
 Conduct once a month outside the discharge period, excluding one week following the completion of discharge

# (Reference) Sea area monitoring history (27/32)

(Unit: Bq/liter)

	Sampling location	Frequency	June, 2024						July, 2024					
			24	24 Normal *1	28 *2	28 Normal *1,2	29	30	1	1 Normal *1	2	3	3 Normal *3	4
In the vicinity of the discharge outlet	T-1	Twice a week*	—	<0.31	<7.6	0.35	—	—	<6.3	<0.29	—	—	—	<5.3
	T-2	Twice a week*	—	<0.32	<7.6	<0.33	—	—	<6.3	<0.29	—	—	—	<5.3
	T-0-1	Once a day*	<6.1	<0.34	<6.8	<0.34	<7.4	<6.1	<7.1	<0.34	<8.0	<5.7	—	<6.1
	T-0-1A	Once a day*	<6.0	<0.34	18	21	<7.4	<7.6	<7.0	<0.35	<6.2	17	—	<6.1
	T-0-2	Once a day*	<5.9	<0.34	<7.6	<0.33	<7.6	<6.1	<7.0	<0.31	<8.0	<5.7	—	<6.1
	T-0-3A	Twice a week*	—	<0.34	<6.8	<0.35	—	—	<6.2	<0.35	—	—	—	<6.6
	T-0-3	Twice a week*	—	<0.34	<6.8	<0.35	—	—	<7.0	<0.35	—	—	—	<6.1
	T-A1	Twice a week*	—	<0.36	<7.2	<0.35	—	—	<6.2	0.50	—	—	—	<6.6
	T-A2	Once a day*	<8.1	<0.37	<7.2	<0.35	<7.4	<7.5	<6.2	<0.35	<6.2	<6.1	—	<6.6
	T-A3	Twice a week*	—	<0.37	<7.2	<0.35	—	—	<6.1	<0.35	—	—	—	<6.6
Outside the vicinity of the discharge outlet	T-D5	Once a week	<8.1	<0.34	—	—	—	—	<6.3	<0.35	—	—	—	—
	T-S3	Once a month	—	—	—	—	—	—	—	—	—	<6.1	being measured	—
	T-S4	Once a month	—	—	—	—	—	—	—	—	—	<6.1	being measured	—
	T-S8	Once a month	—	—	—	—	—	—	—	—	—	—	—	<5.3

※ : A “less than” symbol (<) indicates that the analysis result was less than the detection limit.

\*1 : Detection limit 0.4Bq/liter

\*2 : Sampled after the commencement of discharge at 2PM

\*3 : Detection limit 0.1Bq/liter

\* : 4 locations in the vicinity of the discharge outlet : Conduct daily during the discharge period and for one week following the completion of discharge

Conduct once a week outside the discharge period, excluding one week following the completion of discharge

Other 6 locations : Conduct twice a week during the discharge period and for one week following the completion of discharge

Conduct once a month outside the discharge period, excluding one week following the completion of discharge

# (Reference) Sea area monitoring history (28/32)

(Unit: Bq/liter)

	Sampling location	Frequency	July, 2024											
			4 Normal *1	5	6	7	8	8 Normal *1	9	10	11	12	13	14
In the vicinity of the discharge outlet	T-1	Twice a week*	—	—	—	—	<7.1	being measured	—	—	<6.7	—	—	—
	T-2	Twice a week*	—	—	—	—	<7.0	being measured	—	—	<6.7	—	—	—
	T-0-1	Once a day*	—	<6.0	<6.2	<8.2	<6.9	being measured	<6.4	<6.4	<6.7	<9.0	<8.0	<7.4
	T-0-1A	Once a day*	—	<8.6	<7.6	<7.7	<6.8	being measured	<6.7	<7.8	8.8	<8.5	<7.6	<7.6
	T-0-2	Once a day*	—	<6.1	<6.1	<8.2	<6.8	being measured	<6.4	<6.4	<7.4	<9.1	<5.7	<7.4
	T-0-3A	Twice a week*	—	—	—	—	<7.0	being measured	—	—	<7.6	—	—	—
	T-0-3	Twice a week*	—	—	—	—	<6.7	being measured	—	—	<7.4	—	—	—
	T-A1	Twice a week*	—	—	—	—	<6.9	0.38	—	—	<7.7	—	—	—
	T-A2	Once a day*	—	<8.5	<7.7	<7.7	<6.9	0.63	<6.7	<7.7	<7.6	<8.4	<7.6	<7.7
	T-A3	Twice a week*	—	—	—	—	<6.9	0.70	—	—	<7.6	—	—	—
Outside the vicinity of the discharge outlet	T-D5	Once a week	—	—	—	—	<7.0	being measured	—	—	—	—	—	—
	T-S3	Once a month	—	—	—	—	—	—	—	—	—	—	—	—
	T-S4	Once a month	—	—	—	—	—	—	—	—	—	—	—	—
	T-S8	Once a month	being measured	—	—	—	—	—	—	—	—	—	—	—

※ : A "less than" symbol (<) indicates that the analysis result was less than the detection limit.

\*1 : Detection limit 0.1 Bq/liter

: Term of discharge of ALPS treated water (Management number: 24-3-7)

\* : 4 locations in the vicinity of the discharge outlet : Conduct daily during the discharge period and for one week following the completion of discharge  
 Conduct once a week outside the discharge period, excluding one week following the completion of discharge  
 Other 6 locations : Conduct twice a week during the discharge period and for one week following the completion of discharge  
 Conduct once a month outside the discharge period, excluding one week following the completion of discharge

# (Reference) Sea area monitoring history (29/32)

(Unit: Bq/liter)

	Sampling location	Frequency	July, 2024											
			15	15 Normal *1	16 *2	17	18	19	20	21	22	22 Normal *1	23	29
In the vicinity of the discharge outlet	T-1	Twice a week*	<6.7	0.38	—	—	<4.6	—	—	—	<7.3	<0.31	—	—
	T-2	Twice a week*	<6.7	0.95	—	—	<4.6	—	—	—	<7.3	<0.31	—	—
	T-0-1	Once a day*	<6.4	1.1	<5.5	<7.7	<8.0	<7.0	<8.5	<5.9	<7.1	being measured	<5.9	<5.4
	T-0-1A	Once a day*	<6.8	<0.35	<7.3	<7.7	<8.0	<7.1	<8.6	<5.9	<8.1	being measured	<5.9	<6.7
	T-0-2	Once a day*	<6.5	0.77	<5.4	<7.7	<8.0	<7.3	<8.3	<5.9	<8.0	<0.33	<5.9	<5.4
	T-0-3A	Twice a week*	<6.7	0.49	—	—	<6.0	—	—	—	<8.0	being measured	—	—
	T-0-3	Twice a week*	<6.4	0.85	—	—	<8.0	—	—	—	<8.4	being measured	—	—
	T-A1	Twice a week*	<8.8	<0.35	—	—	<6.1	—	—	—	<5.5	<0.35	—	—
	T-A2	Once a day*	<8.8	0.36	<7.3	<7.7	<6.1	<7.0	<8.5	<5.8	<5.6	<0.35	<5.9	<6.7
	T-A3	Twice a week*	<8.8	<0.35	—	—	<4.6	—	—	—	<5.5	<0.35	—	—
Outside the vicinity of the discharge outlet	T-D5	Once a week	<8.9	<0.35	—	—	—	—	—	—	<7.2	being measured	—	<6.7
	T-S3	Once a month	—	—	—	—	—	—	—	—	—	—	—	—
	T-S4	Once a month	—	—	—	—	—	—	—	—	—	—	—	—
	T-S8	Once a month	—	—	—	—	—	—	—	—	—	—	—	—

※ : A “less than” symbol (<) indicates that the analysis result was less than the detection limit.

\*1 : Detection limit 0.1 Bq/liter

\*2 : Sampled before 8AM, prior to the completion of the discharge

: Term of discharge of ALPS treated water (Management number: 24-3-7)

\* : 4 locations in the vicinity of the discharge outlet : Conduct daily during the discharge period and for one week following the completion of discharge  
 Conduct once a week outside the discharge period, excluding one week following the completion of discharge  
 Other 6 locations : Conduct twice a week during the discharge period and for one week following the completion of discharge  
 Conduct once a month outside the discharge period, excluding one week following the completion of discharge

# (Reference) Sea area monitoring history (30/32)

(Unit: Bq/liter)

	Sampling location	Frequency	July	August, 2024										
			29 Normal *1	5	5 Normal *1	7 *2	7 Normal *1,2	8	8 Normal *1,3	9	10	11	12	13
In the vicinity of the discharge outlet	T-1	Twice a week*	<0.32	<5.9	being measured	<9.3	being measured	—	—	<6.6	—	—	—*4	<7.6
	T-2	Twice a week*	<0.32	<5.9	being measured	<9.5	being measured	—	—	<6.6	—	—	—*4	<7.5
	T-0-1	Once a day*	<0.31	<9.3	being measured	<6.9	being measured	<7.0	—	<6.7	—*4	—*4	—*4	<6.4
	T-0-1A	Once a day*	<0.35	<9.3	being measured	<7.0	being measured	<8.3	—	<6.5	—*4	—*4	—*4	<6.3
	T-0-2	Once a day*	<0.34	<5.9	being measured	<7.0	being measured	<7.1	—	<6.8	—*4	—*4	—*4	<6.4
	T-0-3A	Twice a week*	<0.35	<9.5	being measured	—	—	<8.4	being measured	<6.6	—	—	—*4	<7.1
	T-0-3	Twice a week*	<0.35	<9.3	being measured	—	—	<7.1	being measured	<6.7	—	—	—*4	<6.4
	T-A1	Twice a week*	<0.36	<6.4	being measured	—	—	<8.4	being measured	<8.1	—	—	—*4	<6.9
	T-A2	Once a day*	<0.36	<6.3	being measured	<6.7	being measured	<8.1	—	<8.1	—*4	—*4	—*4	<7.1
	T-A3	Twice a week*	<0.36	<6.2	being measured	—	—	<8.4	being measured	<8.1	—	—	—*4	<7.1
Outside the vicinity of the discharge outlet	T-D5	Once a week	being measured	<6.0	being measured	—	—	—	—	—	—	—	—*4	<7.6
	T-S3	Once a month	—	—	—	—	—	—	—	—	—	—	—	—
	T-S4	Once a month	—	—	—	—	—	—	—	—	—	—	—	—
	T-S8	Once a month	—	—	—	—	—	<7.1	being measured	—	—	—	—	—

※ : A "less than" symbol (<) indicates that the analysis result was less than the detection limit.

: Term of discharge of ALPS treated water (Management number: 24-4-8)

\*1 : Detection limit 0.4Bq/liter

\*2 : Sampled after the commencement of discharge at 2PM

\*3 : Detection limit 0.1Bq/liter

\*4 : Sampling suspended due to bad weather condition

\* : 4 locations in the vicinity of the discharge outlet : Conduct daily during the discharge period and for one week following the completion of discharge

Conduct once a week outside the discharge period, excluding one week following the completion of discharge

Other 6 locations : Conduct twice a week during the discharge period and for one week following the completion of discharge

Conduct once a month outside the discharge period, excluding one week following the completion of discharge

# (Reference) Sea area monitoring history (31/32)

(Unit: Bq/liter)

	Sampling location	Frequency	August, 2024											
			13 Normal *1	14	14 Normal *1	15	16	17	18	19	19 Normal *3	20	20 Normal *1	21
In the vicinity of the discharge outlet	T-1	Twice a week*	—	—	being measured	<8.1	—	—	—	<7.5	being measured	—	—	—
	T-2	Twice a week*	—	—	being measured	<8.0	—	—	—	<7.5	being measured	—	—	—
	T-0-1	Once a day*	—	<8.2	being measured	<8.0	—*2	—*2	<6.2	<7.6	being measured	<7.6	—	<6.2
	T-0-1A	Once a day*	—	<6.4	being measured	9.0	—*2	—*2	<6.3	<7.5	being measured	<5.5	—	<6.2
	T-0-2	Once a day*	—	<8.2	being measured	<6.7	—*2	—*2	<6.2	<7.5	being measured	<7.6	—	<6.2
	T-0-3A	Twice a week*	—	—	being measured	<6.7	—	—	—	<7.8	being measured	—	—	—
	T-0-3	Twice a week*	—	—	being measured	<6.7	—	—	—	<7.5	being measured	—	—	—
	T-A1	Twice a week*	—	—	being measured	<7.6	—	—	—	<7.8	being measured	—	—	—
	T-A2	Once a day*	—	<6.4	being measured	<7.8	—*2	—*2	<7.0	<7.8	being measured	<5.6	—	<6.2
	T-A3	Twice a week*	—	—	being measured	<7.7	—	—	—	<7.8	being measured	—	—	—
Outside the vicinity of the discharge outlet	T-D5	Once a week	being measured	—	—	—	—	—	—	<7.5	being measured	—	—	—
	T-S3	Once a month	—	—	—	—	—	—	—	—	—	—	being measured	<7.6
	T-S4	Once a month	—	—	—	—	—	—	—	—	—	—	being measured	<7.6
	T-S8	Once a month	—	—	—	—	—	—	—	—	—	—	—	—

※ : A "less than" symbol (<) indicates that the analysis result was less than the detection limit.

: Term of discharge of ALPS treated water (Management number: 24-4-8)

\*1 : Detection limit 0.1Bq/liter

\*2 : Sampling suspended due to bad weather condition

\*3 : Detection limit 0.4Bq/liter

\* : 4 locations in the vicinity of the discharge outlet : Conduct daily during the discharge period and for one week following the completion of discharge  
Conduct once a week outside the discharge period, excluding one week following the completion of discharge

Other 6 locations : Conduct twice a week during the discharge period and for one week following the completion of discharge  
Conduct once a month outside the discharge period, excluding one week following the completion of discharge



# (Reference) Sea area monitoring history (32/32)

(Unit: Bq/liter)

	Sampling location	Frequency	August, 2024			
			22	23	24	25 *1
In the vicinity of the discharge outlet	T-1	Twice a week*	<6.3	—	—	—
	T-2	Twice a week*	<6.3	—	—	—
	T-0-1	Once a day*	<6.3	<7.6	<7.5	<6.0
	T-0-1A	Once a day*	<6.5	<6.3	<7.5	<7.0
	T-0-2	Once a day*	<6.5	<7.6	<7.6	<6.1
	T-0-3A	Twice a week*	<6.4	—	—	—
	T-0-3	Twice a week*	<6.4	—	—	—
	T-A1	Twice a week*	<6.0	—	—	—
	T-A2	Once a day*	<6.0	<6.3	<7.5	<7.0
	T-A3	Twice a week*	<6.0	—	—	—
Outside the vicinity of the discharge outlet	T-D5	Once a week	—	—	—	—
	T-S3	Once a month	—	—	—	—
	T-S4	Once a month	—	—	—	—
	T-S8	Once a month	—	—	—	—

※ : A “less than” symbol (<) indicates that the analysis result was less than the detection limit.

: Term of discharge of ALPS treated water (Management number: 24-4-8)

\*1 : Sampled before 8AM, prior to the completion of the discharge

\* : 4 locations in the vicinity of the discharge outlet : Conduct daily during the discharge period and for one week following the completion of discharge  
 Conduct once a week outside the discharge period, excluding one week following the completion of discharge

Other 6 locations : Conduct twice a week during the discharge period and for one week following the completion of discharge  
 Conduct once a month outside the discharge period, excluding one week following the completion of discharge