ALPS Treated Water Discharge Status Update

August 27, 2026

TEPCO

Tokyo Electric Power Company Holdings, Inc.

Report contents

1. Performance of the discharge of ALPS treated water

   (Management number* : 26-4-22)

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

3. Causes and countermeasures for the automatic suspension incident of the

   ALPS treated water dilution and discharge facility

[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, “26-4-22” indicates that the data is for the 4th discharge of 2026, which is the 22nd discharge to date.

Report contents

* 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, “26-4-22” indicates that the data is for the 4th discharge of 2026, which is the 22nd discharge to date.

Overview

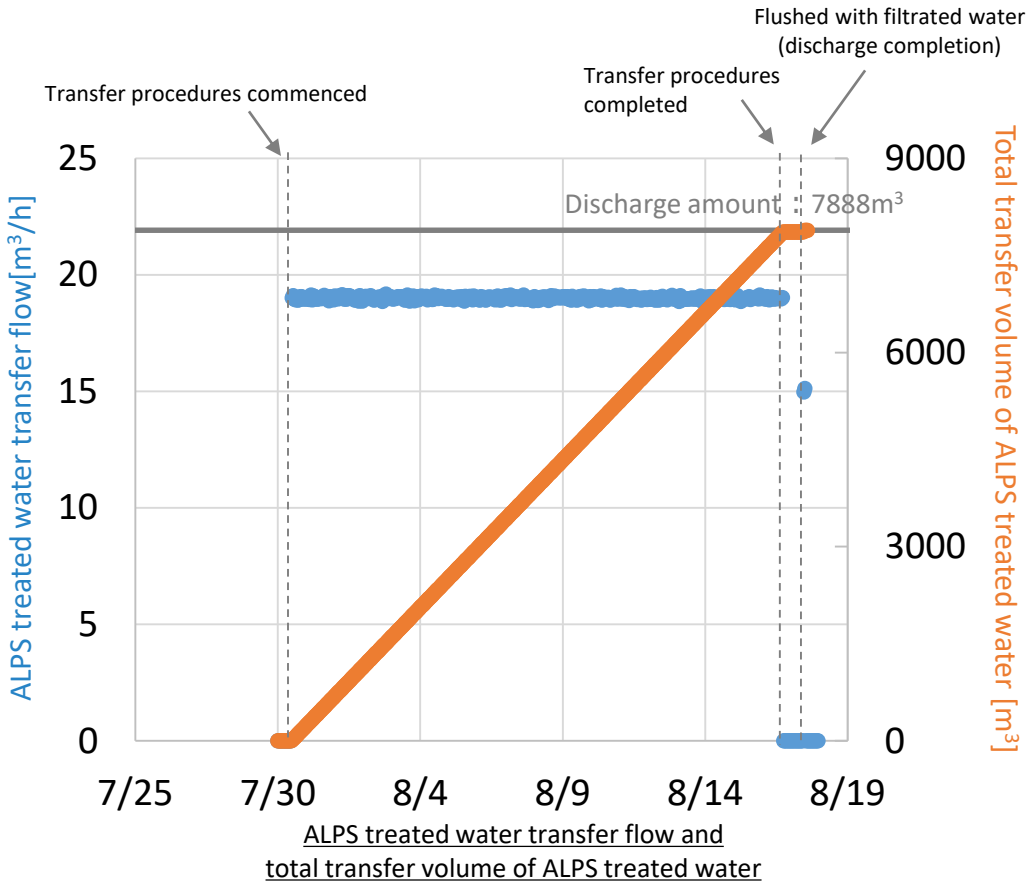
- We conducted the discharge of ALPS treated water (management number: 26-4-22) as follows.
- On the next page, we will explain that there was no abnormality in parameters and sea area monitoring.

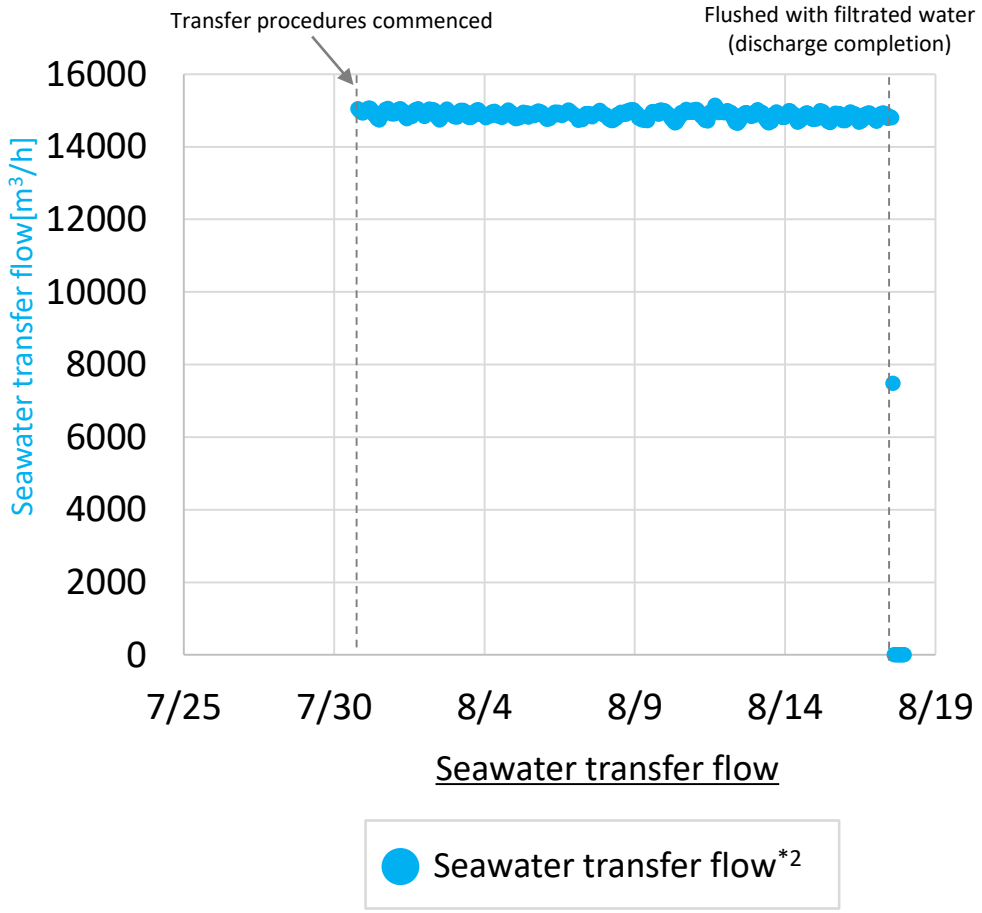
FY2026

Management number	Tank group	Tritium Concentration	Commenced	Completed	Amount of discharge	Amount of tritium radioactivity
26-1-19	Group A	24 x 10^4 Bq/liter	April 2, 2026	April 20, 2026	7,865m^3	Approx. 1.9 T Bq
26-2-20	Group B	17 x 10^4 Bq/liter	June 1, 2026	June 20, 2026	7,927m^3	Approx. 1.3 T Bq
26-3-21	Group A	17 x 10^4 Bq/liter	July 6, 2026	July 24, 2026	7,894m^3	Approx. 1.3 T Bq
26-4-22	Group C	17 x 10^4 Bq/liter	July 30, 2026	August 17, 2026	7,888m^3	Approx. 1.3 T Bq

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

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

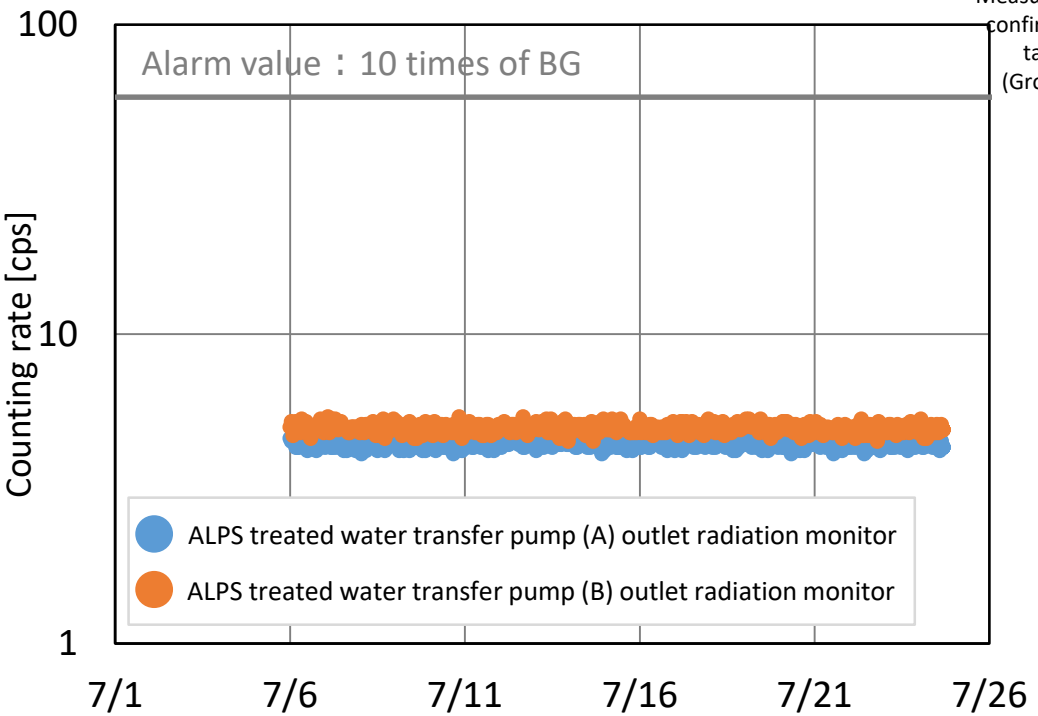




*1 : The flowmeters are reduplicate, so the higher of the figures from both meters was used.
*2 : Total for systems A and B

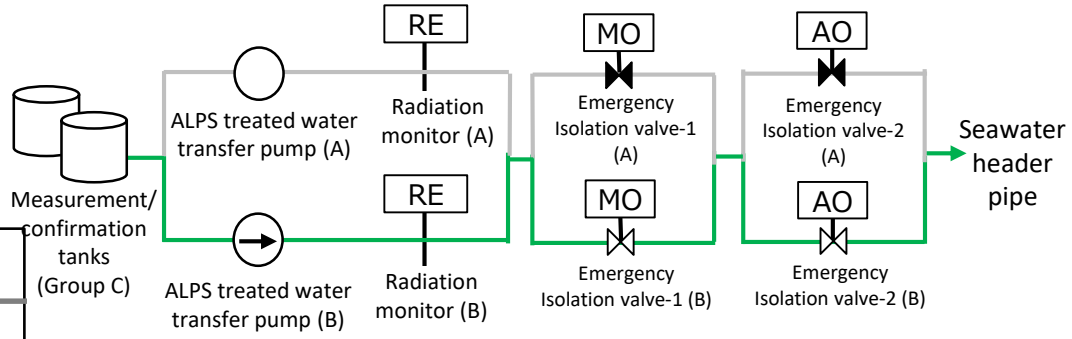
1-1. Operating parameter records during the discharge (2/3)

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

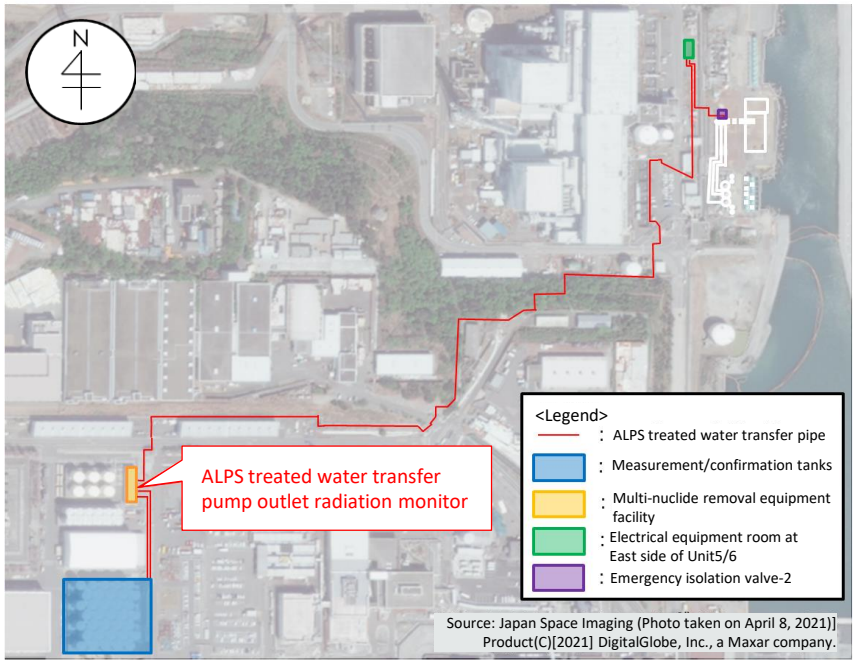


Figures of ALPS treated water transfer pump outlet radiation monitor※

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



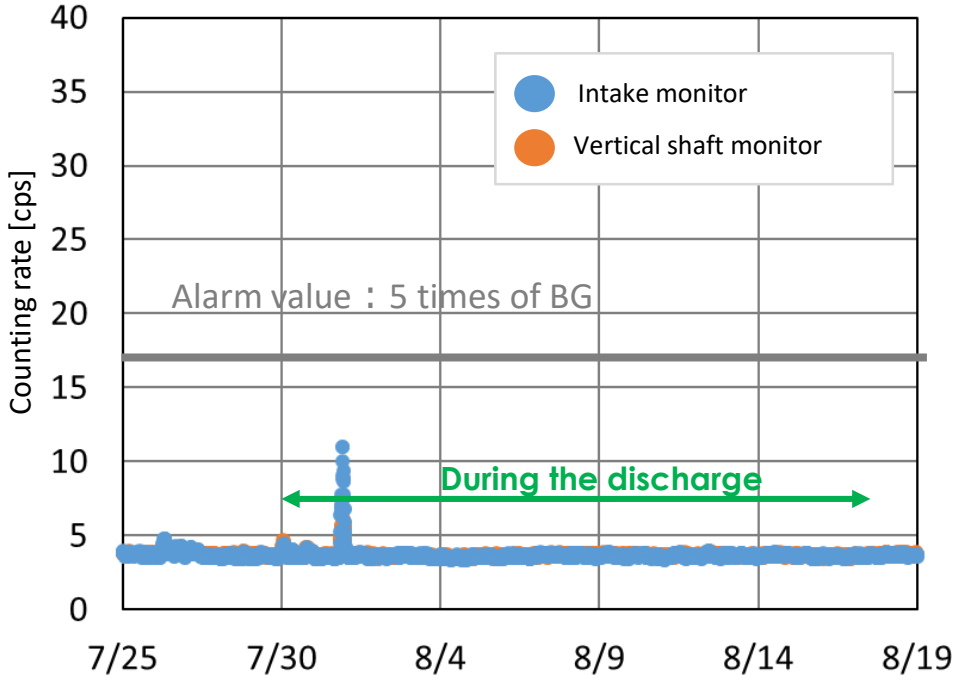
ALPS treated water transfer system schematic



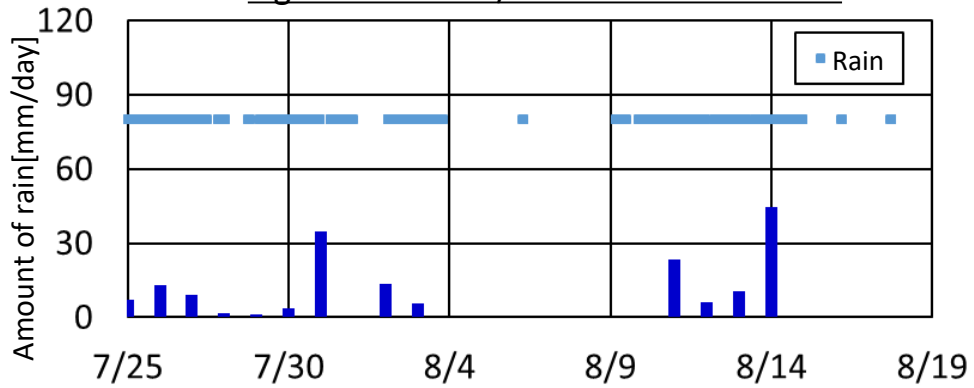
Overview of ALPS treated water dilution/discharge facility

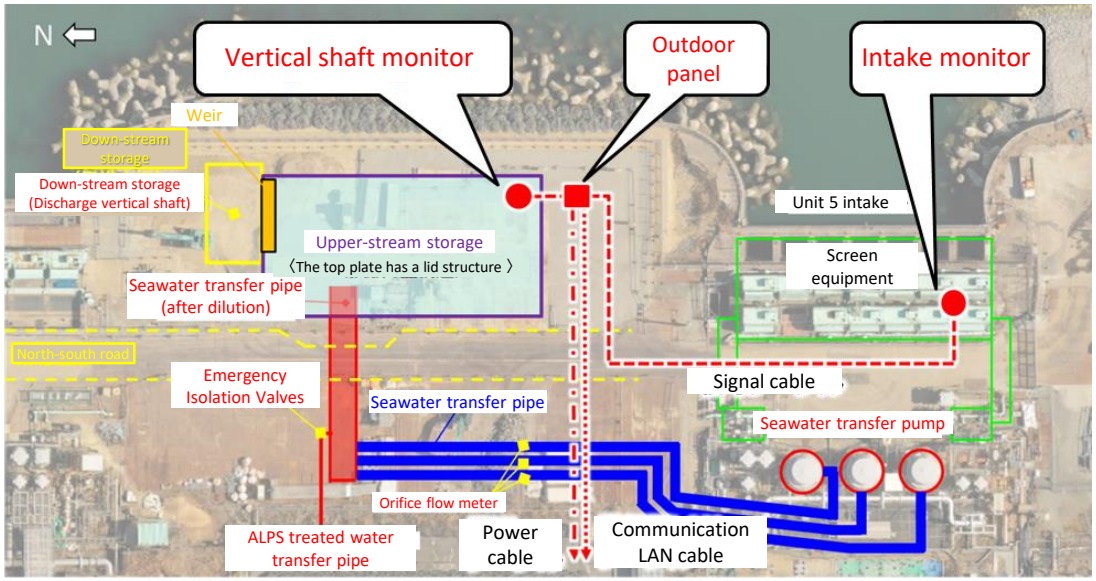
1-1. Operating parameter records during the discharge (3/3)

- Temporary increase in values, possibly due to rain is observed at the intake monitor and the vertical shaft monitor, but no abnormalities are seen in the readings.



Figures of Intake/Vertical shaft monitor



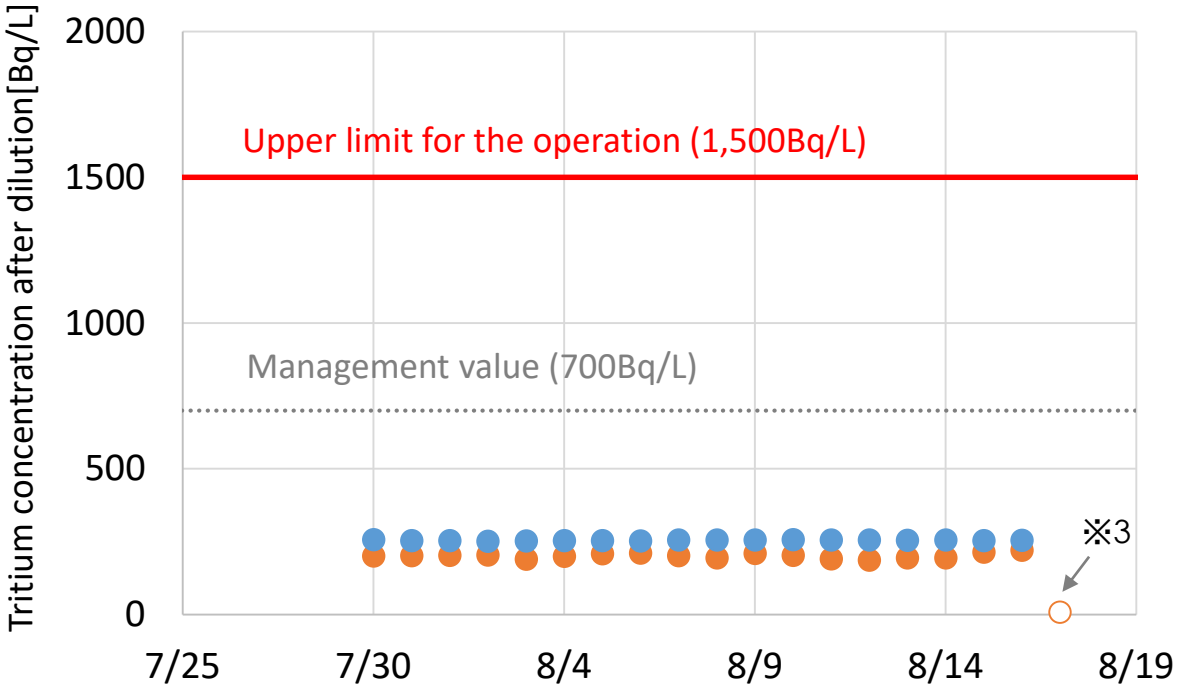


Overview of intake/vertical shaft monitor

※It is assumed that the temporary increases during rainfall were caused by the runoff of fallout from onshore areas and precipitation of natural radionuclides (such as daughter nuclide of radon, etc.).

1-2. Tritium concentrations after dilution during the discharge

- 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※1

Analysis values (Detected values)

Analysis values (Below detectable levels)

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

Tritium concentrations after dilution (Calculated values)

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

※2：Analysis values at measurement/confirmation tanks

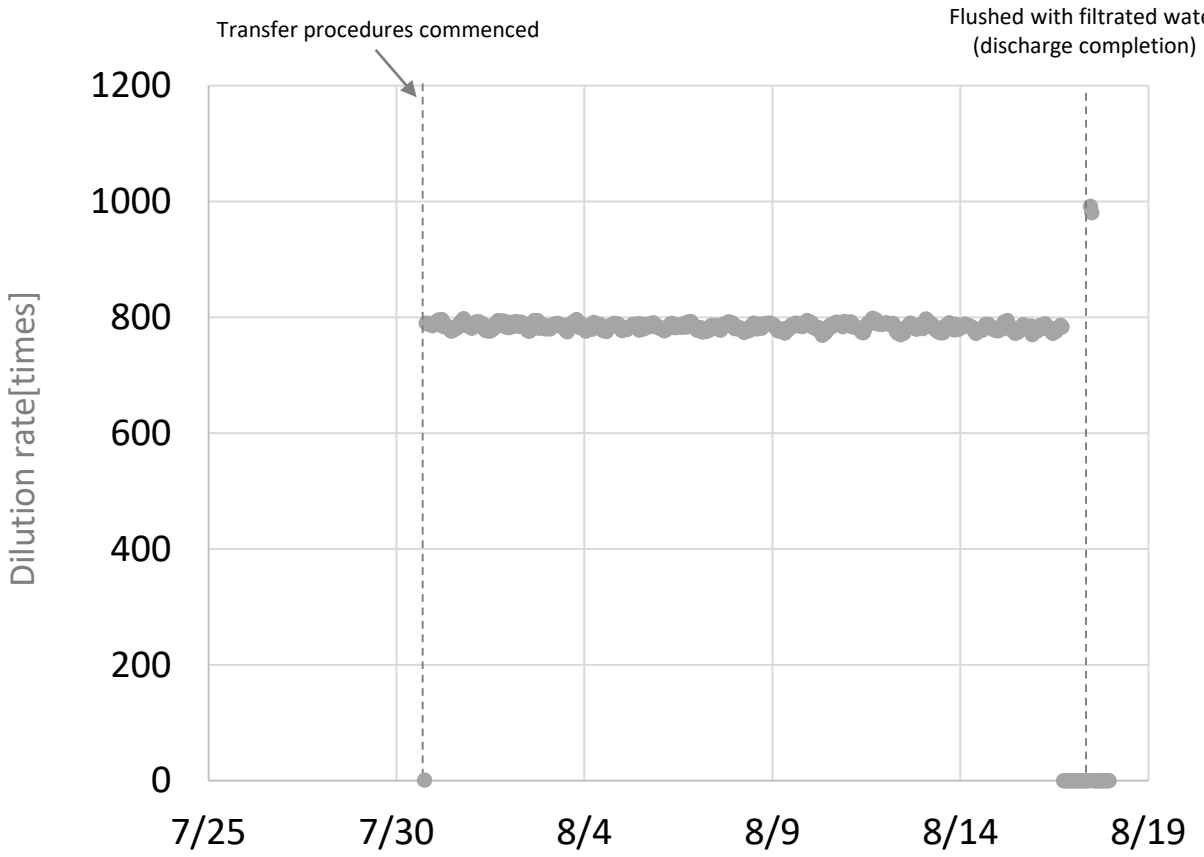
※3：No calculated values since the pipes were flushed out with filtrated water.

Tritium concentrations after dilution (calculated values and analysis values)

	7/30	7/31～8/16	8/17
Calculated value: Time of data acquisition	13:00	7:00	12:00
Analysis value: Time of specimen sampling	13:29	7:00～9:00	12:09

[Supplement] Dilution rate of ALPS treated water

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



Dilution rate of ALPS treated water

Dilution rate※1

※1：Calculated using the following formula

$$\text{Dilution rate} = \frac{\text{Seawater flow rate}^{※2} + \text{ALPS treated water flow rate}^{※3}}{\text{ALPS treated water flow rate}^{※3}}$$

※2： Total for systems A and B
※3： The flowmeters are reduplicate, so the higher of the figures from both meters was used for calculation

1-3. Sea area monitoring history (1/3)

TEPCO

○ 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) are all below indices (discharge suspension level and investigation level).

(Unit: Bq/L)

	Sampling location*3	Frequency	July 2026		August 2026								
			30*4	31	1	2	3	4	5	6	7	8	9
In the vicinity of the discharge outlet	T-1	Twice a week*1	<8.0	-	-	-	<7.1	<8.8	<8.2	<9.4	<9.9	-	-
	T-2	Twice a week*1	<8.0	-	-	-	<7.2	-*6	-*6	<9.4	<9.9	-	-
	T-0-1	Once a day*2	<7.3	<9.0	<7.7	-*5	-*5	-*6	-*6	-*6	-*6	<8.9	-*6
	T-0-1A	Once a day*2	<7.4	<8.8	<9.0	-*5	-*5	-*6	-*6	-*6	-*6	<8.9	-*6
	T-0-2	Once a day*2	<7.4	<9.0	<7.8	-*5	-*5	-*6	-*6	-*6	-*6	<8.8	-*6
	T-0-3A	Twice a week*1	-	<8.3	-	-	-*5	-*6	-*6	-*6	-*6	<7.0	-
	T-0-3	Twice a week*1	-	<8.8	-	-	-*5	-*6	-*6	-*6	-*6	<8.9	-
	T-A1	Twice a week*1	-	<8.4	-	-	-*5	-*6	-*6	-*6	-*6	<7.0	-
	T-A2	Once a day*2	<7.4	<8.5	<9.1	-*5	-*5	-*6	-*6	-*6	-*6	<6.9	-*6
	T-A3	Twice a week*1	-	<9.5	-	-	-*5	-*6	-*6	-*6	-*6	<9.7	-
Outside the vicinity of the discharge outlet	T-D5	Once a week	-	-	-	-	-	-	-	-	-	<9.7	-
	T-S3	Once a month	-	<9.5	-	-	-	-	-	-	-	-	-
	T-S4	Once a month	-	<9.4	-	-	-	-	-	-	-	-	-
	T-S8	Once a month	-	<9.4	-	-	-	-	-	-	-	-	-

※: A "less than" symbol (<) indicates that the analysis result was less than the detection limit indicates that the detected value : Term of discharge of ALPS treated water

*1: 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 the one week following the completion of discharge
*2: Conduct once a day during the discharge period and for one week following the completion of discharge. Conduct once a week outside the discharge period, excluding the one week following the completion of discharge
*3: For sampling locations, refer to "[Reference] Measurement monitoring plan"
*4: Sampled after the commencement of discharge at 1PM *5: Sampling suspended due to vessel trouble. *6: Sampling suspended due to bad weather condition

1-3. Sea area monitoring history (2/3)

(Unit: Bq/L)

	Sampling location*3	Frequency	August 2026										
			10	11	12	13	14	15	16	17	18	19	20
In the vicinity of the discharge outlet	T-1	Twice a week*1	<9.7	-*6	-*6	<8.4	-*6	-	-	<7.3	-	-	<8.7
	T-2	Twice a week*1	<9.7	-*6	-*6	<8.4	-*6	-	-	<7.3	-	-	<8.7
	T-0-1	Once a day*2	-*6	-*6	-*6	-*6	-*6	<9.2	<6.4	<7.1	<7.4	<6.4	<8.7
	T-0-1A	Once a day*2	-*6	-*6	-*6	-*6	-*6	<9.0	<6.4	<7.1	<7.4	<6.5	<9.3
	T-0-2	Once a day*2	-*6	-*6	-*6	-*6	-*6	<9.3	<6.4	<7.1	<7.4	<6.4	<9.2
	T-0-3A	Twice a week*1	-*6	-*6	-*6	-*6	-*6	<8.9	-	<6.1	-	-	<9.1
	T-0-3	Twice a week*1	-*6	-*6	-*6	-*6	-*6	<9.0	-	<7.1	-	-	<9.1
	T-A1	Twice a week*1	-*6	-*6	-*6	-*6	-*6	<6.9	-	<6.2	-	-	<9.0
	T-A2	Once a day*2	-*6	-*6	-*6	-*6	-*6	<6.9	<7.4	<6.0	<7.4	<6.4	<8.9
	T-A3	Twice a week*1	-*6	-*6	-*6	-*6	-*6	<6.9	-	<6.1	-	-	<8.9
Outside the vicinity of the discharge outlet	T-D5	Once a week	-	-	-	-	-	<6.9	-	<7.3	-	-	-
	T-S3	Once a month	-	-	-	-	-	-	-	-	-	<8.7	-
	T-S4	Once a month	-	-	-	-	-	-	-	-	-	<8.7	-
	T-S8	Once a month	-	-	-	-	-	-	-	-	-	<8.7	-

※: A "less than" symbol (<) indicates that the analysis result was less than the detection limit indicates that the detected value : Term of discharge of ALPS treated water

*1: 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 the one week following the completion of discharge
*2: Conduct once a day during the discharge period and for one week following the completion of discharge. Conduct once a week outside the discharge period, excluding the one week following the completion of discharge
*3: For sampling locations, refer to "[Reference] Measurement monitoring plan"
*4: Sampled after the commencement of discharge at 1PM *5: Sampling suspended due to vessel trouble. *6: Sampling suspended due to bad weather condition

1-3. Sea area monitoring history (3/3)

(Unit: Bq/L)

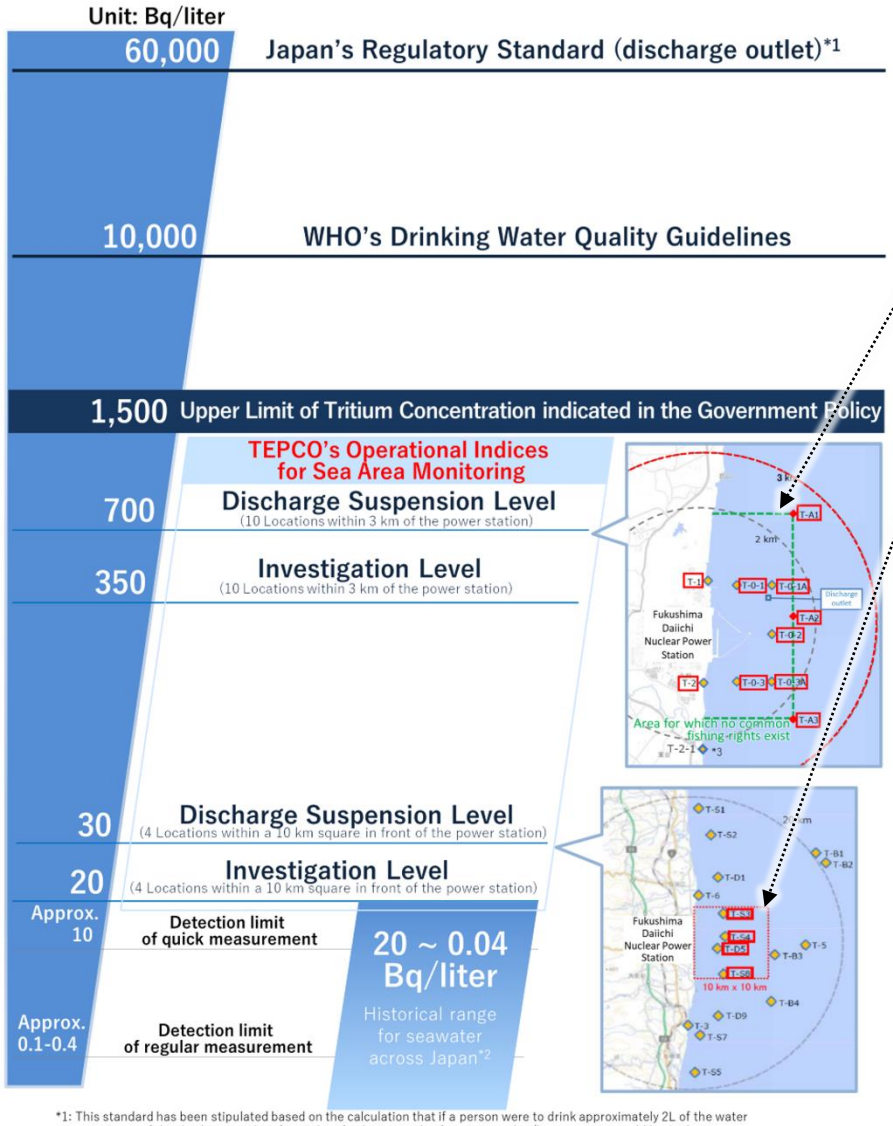
	Sampling location*3	Frequency	August 2026			
			21	22	23	24
In the vicinity of the discharge outlet	T-1	Twice a week*1	-	-	-	<6.4
	T-2	Twice a week*1	-	-	-	<6.3
	T-0-1	Once a day*2	<7.7	<9.9	<7.5	<7.6
	T-0-1A	Once a day*2	<7.7	<7.9	<9.0	<7.6
	T-0-2	Once a day*2	<7.7	<9.9	<7.5	<7.6
	T-0-3A	Twice a week*1	-	-	-	<7.6
	T-0-3	Twice a week*1	-	-	-	<7.6
	T-A1	Twice a week*1	-	-	-	<7.6
	T-A2	Once a day*2	<7.7	<10	<9.0	<7.6
	T-A3	Twice a week*1	-	-	-	<7.6
Outside the vicinity of the discharge outlet	T-D5	Once a week	-	-	-	<6.3
	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 ▭ indicates that the detected value ▭ : Term of discharge of ALPS treated water

*1: 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 the one week following the completion of discharge
*2: Conduct once a day during the discharge period and for one week following the completion of discharge. Conduct once a week outside the discharge period, excluding the one week following the completion of discharge
*3: For sampling locations, refer to “[Reference] Measurement monitoring plan”
*4: Sampled after the commencement of discharge at 1PM *5: Sampling suspended due to vessel trouble. *6: Sampling suspended due to bad weather condition

[Supplement] Comparison of tritium concentration in seawater

【Reference】 Comparison of concentration of tritium in seawater



*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/ Radiation DataBase (Period: April 2019 to July 2023)
*3: Alternative location if safety cannot be ensured at T-2

- We have set a discharge suspension level and an investigation level as TEPCO's operational indices.

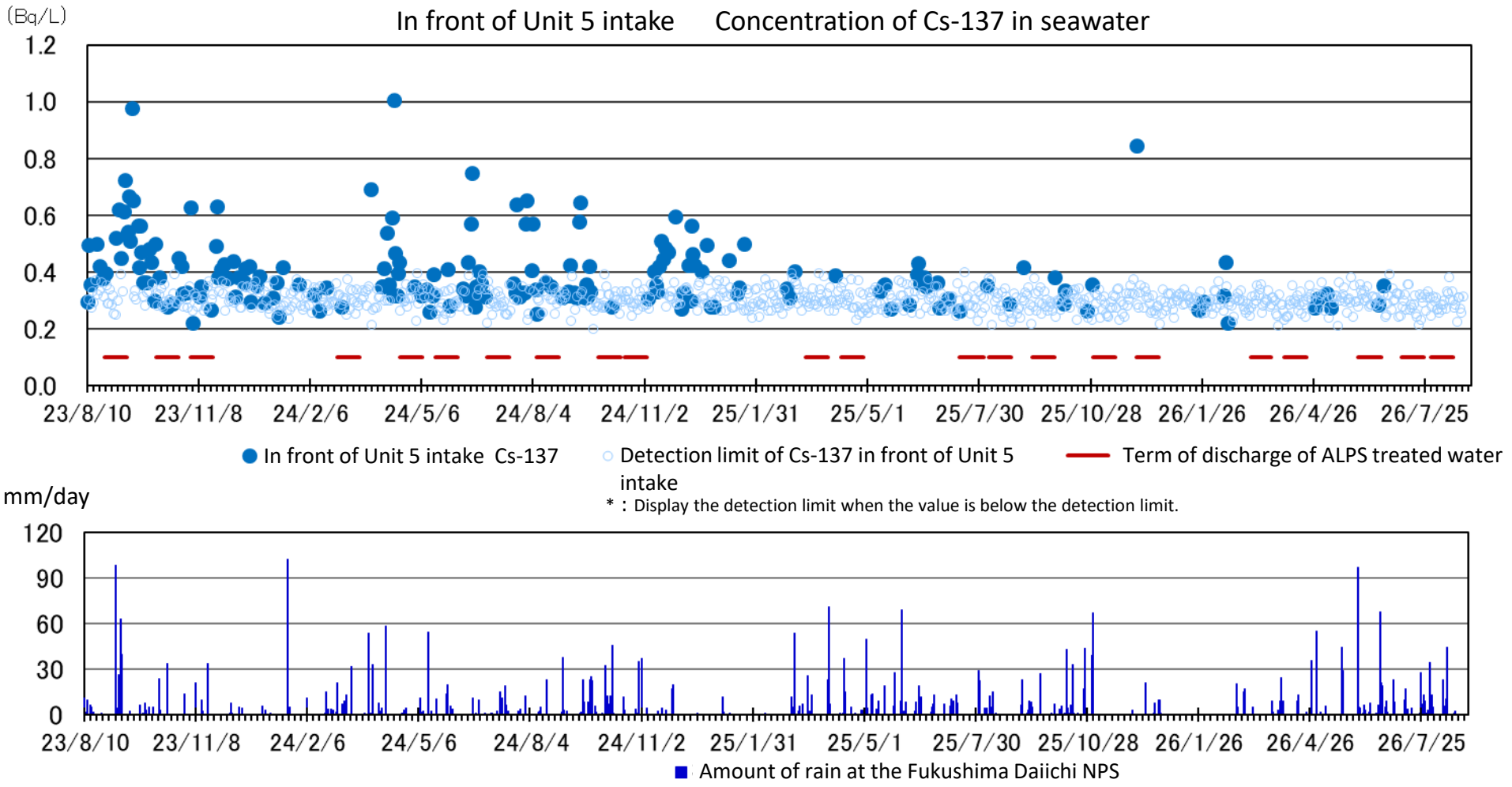
	Discharge suspension level	Investigation level
Within 3km of the power station	700 Bq/L	350 Bq/L
Within a 10km square in front of the power station	30 Bq/L	20 Bq/L

If the discharge suspension level is exceeded, the sea discharge will be immediately suspended.
If the investigation level is exceeded, facilities/operation status will be inspected and the frequency of monitoring will be increased as necessary.

- Even if the tritium concentration exceeds indices (Discharge suspension level and Investigation level), the levels are well below the Japan's regulatory standard of 60,000 Bq/L and the WHO's drinking water quality guidelines of 10,000 Bq/L, and we assess that the surrounding sea areas are still safe.
- It is expected that the concentration of tritium in seawater will be affected depending on the concentration of tritium in the treated water to be released in the future, and higher values than before will be detected. Even in such cases, it is evaluated that the concentration will remain below the investigation level and other indices.

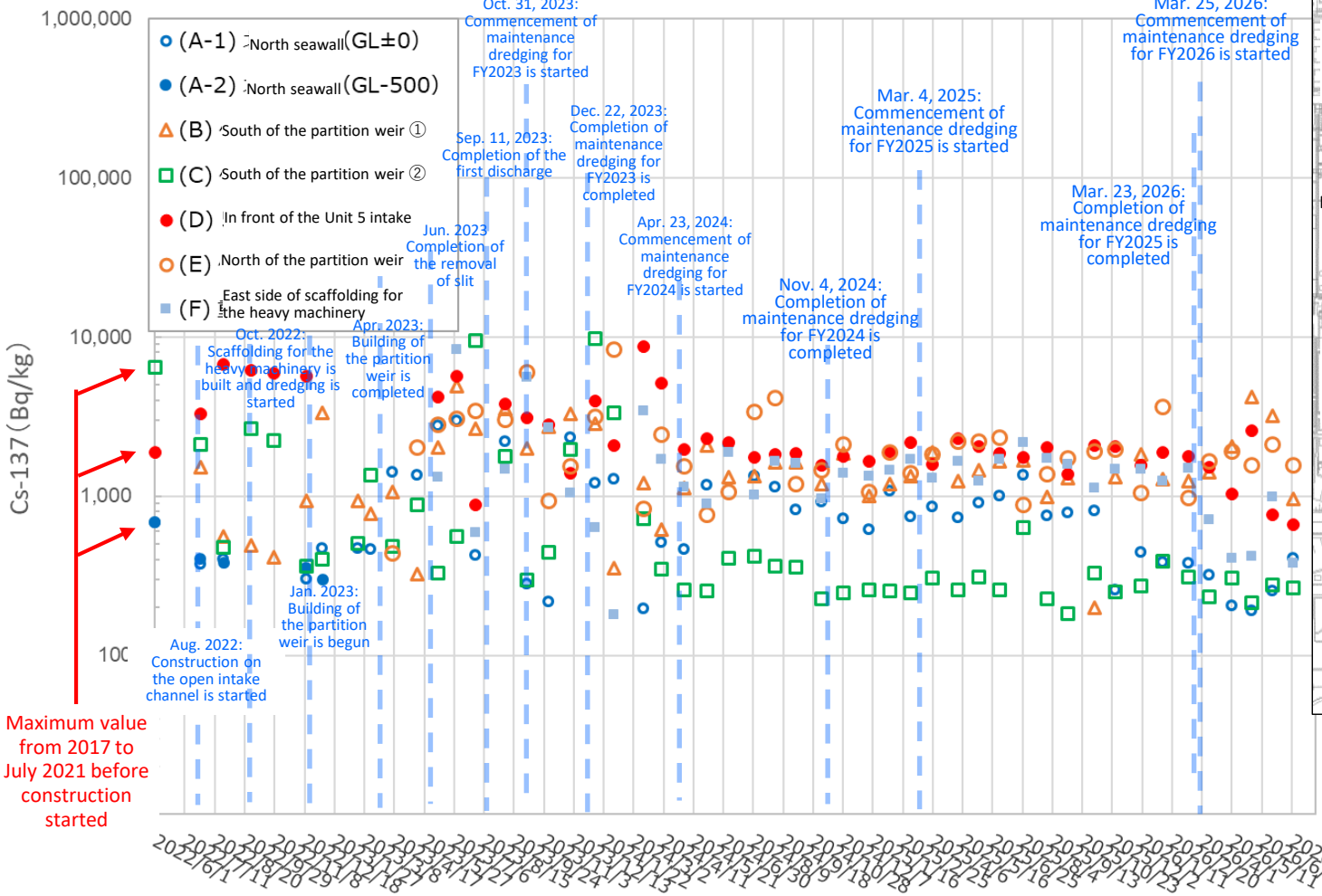
1-4. Unit 5 intake channel monitoring

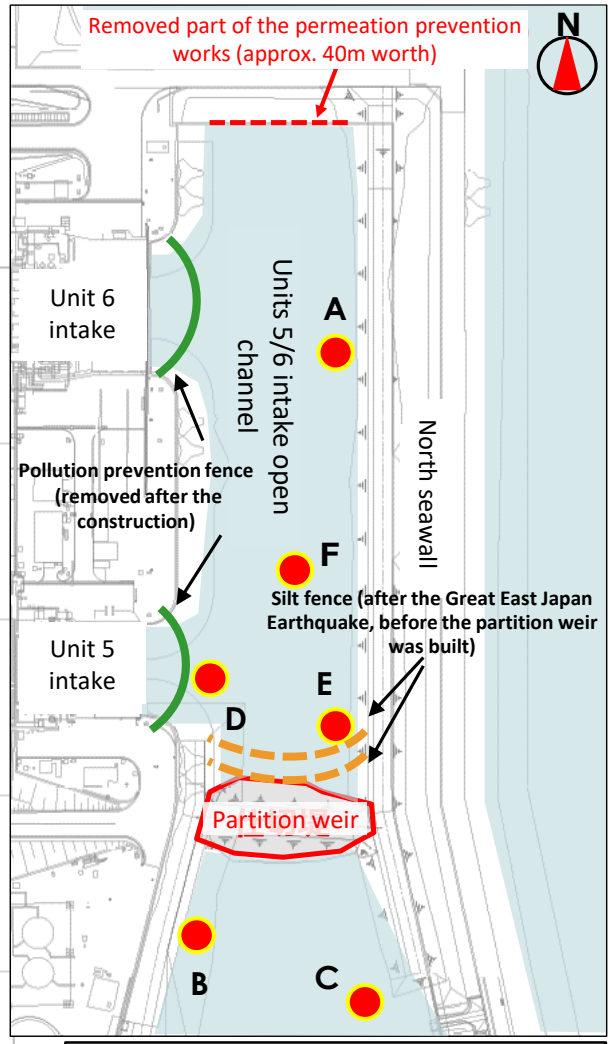
- Sea water monitoring results at near the intake for seawater to be used for dilution during the discharge of ALPS treated water have confirmed that values are similar to those outside of the term of the discharge.



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

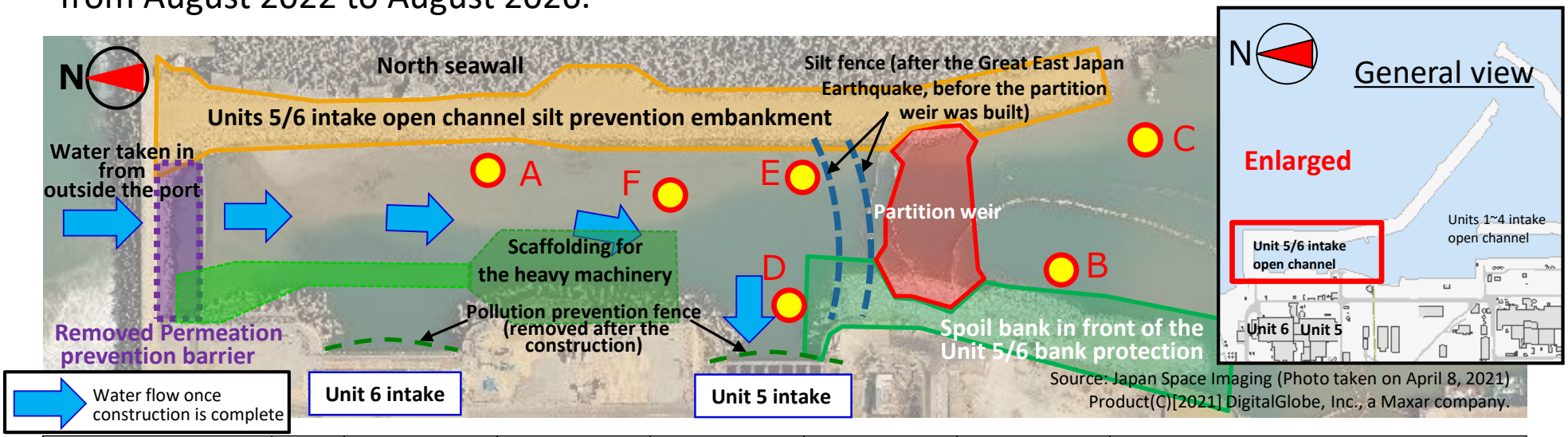
- Monitoring results for seabed soil in front of Unit 5 intake did not show significant fluctuations from the beginning of construction at the intake open channel until December 2022. While they showed higher readings after January 2023, we have confirmed that these readings decreased after the completion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





1-5. 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 2026.



Sampling points		Before construction 2017 to July 2021	FY2022 Aug. ~ Mar.	FY2023 Apr. ~ Mar.	FY2024 Apr. ~ Mar.	FY2025 Apr. ~ Mar.	FY2026 Apr.	FY2026 May	FY2026 Jun.	FY2026 Jul.	FY2026 Aug.
A−1 North side of the Unit 5/6 open channel (North side of the silt fence (GL±0m))	Cs−134	ND～9.5 (4.4)	ND (31.5～39.8)	ND～65.5 (32.0)	ND (34.4～64.5)	ND (29.7～92.3)	ND (24.3)	ND (34.8)	ND (24.7)	ND (32.7)	ND (44.1)
	Cs−137	163.6～678.6	303.2～468.1	216.7～2975.0	461.7～2107.0	258.1～1352.0	316.9	204.3	190.4	255.4	407.5
A−2 North side of the Unit 5/6 open channel (North side of the silt fence (GL-0.5m))	Cs−134	ND～20.0 (25.6)	ND (32.5～38.3)	※Only sampled from the surface (GL±0m) since sand was removed during dredging							
	Cs−137	310.0～689.8	299.1～404.0								
B South side of the partition weir (① (South side of the silt fence))	Cs−134	723.0	ND～73.9 (42.1)	ND～97.1 (38.2)	ND (35.1～64.5)	ND (35.7～84.1)	ND (63.8)	ND (45.4)	ND (51.4)	ND (59.0)	ND (41.9)
	Cs−137	6,475.0	412.8～3,331.0	323.8～4943.0	613.8～1889.0	200.1～1889.0	1,408.0	2,040.0	4,198.0	3,193.0	954.3
C South side of the partition weir (② (South side of the silt fence))	Cs−134	183.0	ND～51.3 (30.9)	ND～234.8 (37.1)	ND (26.5～48.6)	ND (25.1～50.7)	ND (38.8)	ND (25.2)	ND (34.1)	ND (30.5)	ND (36.2)
	Cs−137	1,893.0	360.8～2,671.0	295.9～9519.0	227.4～419.6	182.1～633.3	233.6	304.0	214.5	276.3	266.3
D Unit 5 intake	Cs−134	—	101.6～3,546.0	ND～690.7 (50.3)	ND～114.8 (35.9)	ND (37.6～80.5)	ND (53.4)	ND (52.7)	ND (61.9)	ND (56.8)	ND (39.2)
	Cs−137	—	3,301.0～144,000.0	951.7～26400.0	1563.0～2306.0	1380.0～2306.0	1,509.0	1,026.0	2,575.0	766.3	666.5
E North side of the partition weir	Cs−134	—	—	ND～161.2 (35.6)	ND (30.0～59.7)	ND (36.0～82.8)	ND (40.5)	ND (53.5)	ND (43.7)	ND (48.1)	ND (55.3)
	Cs−137	—	—	437.1～5795.0	746.6～4154.0	882.6～3652.0	1,654.0	1,921.0	1,560.0	2,106.0	1,555.0
F East side of scaffolding for the heavy machinery	Cs−134	—	—	ND～166.1 (31.3)	ND (34.1～87.1)	ND (34.1～69.2)	ND (58.3)	ND (38.7)	ND (33.7)	ND (30.3)	ND (33.4)
	Cs−137	—	—	592.4～8303.0	891.0～1884.0	1122.0～2187.0	713.2	404.5	416.2	985.2	379.9

(Note) Unit: Bq/liter, Figures in gray indicate that all data during the relevant period were below the detection limit, the values shown in parentheses in the table above indicate the detection limits.

[Reference] Total radioactivity of nuclides to be measured and assessed (29 nuclides)

TEPCO

- The following chart shows the total radioactivity (Bq) for nuclides to be measured and assessed (29 nuclides) during the discharge of Management number: 26-4-22. (Calculated from analysis values※1 (Bq/liter) and discharge volume (7,888m³) 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 0.61 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	2.2E+01	1.7E+08	Cd-113m	<1.0E-01	–	U-234※3	<3.2E-02	–
Mn-54	<2.2E-02	–	Sb-125	9.0E-02	7.1E+05	U-238※3	<3.2E-02	–
Fe-55	<1.6E+01	–	Te-125m※2	3.3E-02	2.6E+05	Np-237※3	<3.2E-02	–
Co-60	2.6E-01	2.1E+06	I-129	4.7E+00	3.7E+07	Pu-238※3	<3.2E-02	–
Ni-63	<8.8E+00	–	Cs-134	<2.7E-02	–	Pu-239※3	<3.2E-02	–
Se-79	<8.6E-01	–	Cs-137	5.2E-01	4.1E+06	Pu-240※3	<3.2E-02	–
Sr-90	8.1E-01	6.4E+06	Pm-147※2	<3.2E-01	–	Pu-241※2	<8.7E-01	–
Y-90※2	8.1E-01	6.4E+06	Sm-151※2	<1.2E-02	–	Am-241※3	<3.2E-02	–
Tc-99	8.0E+00	6.3E+07	Eu-154	<7.1E-02	–	Cm-244※3	<3.2E-02	–
Ru-106	<2.2E-01	–	Eu-155	<1.6E-01	–			

※2 Analysis values were assessed with radioactive equilibrium

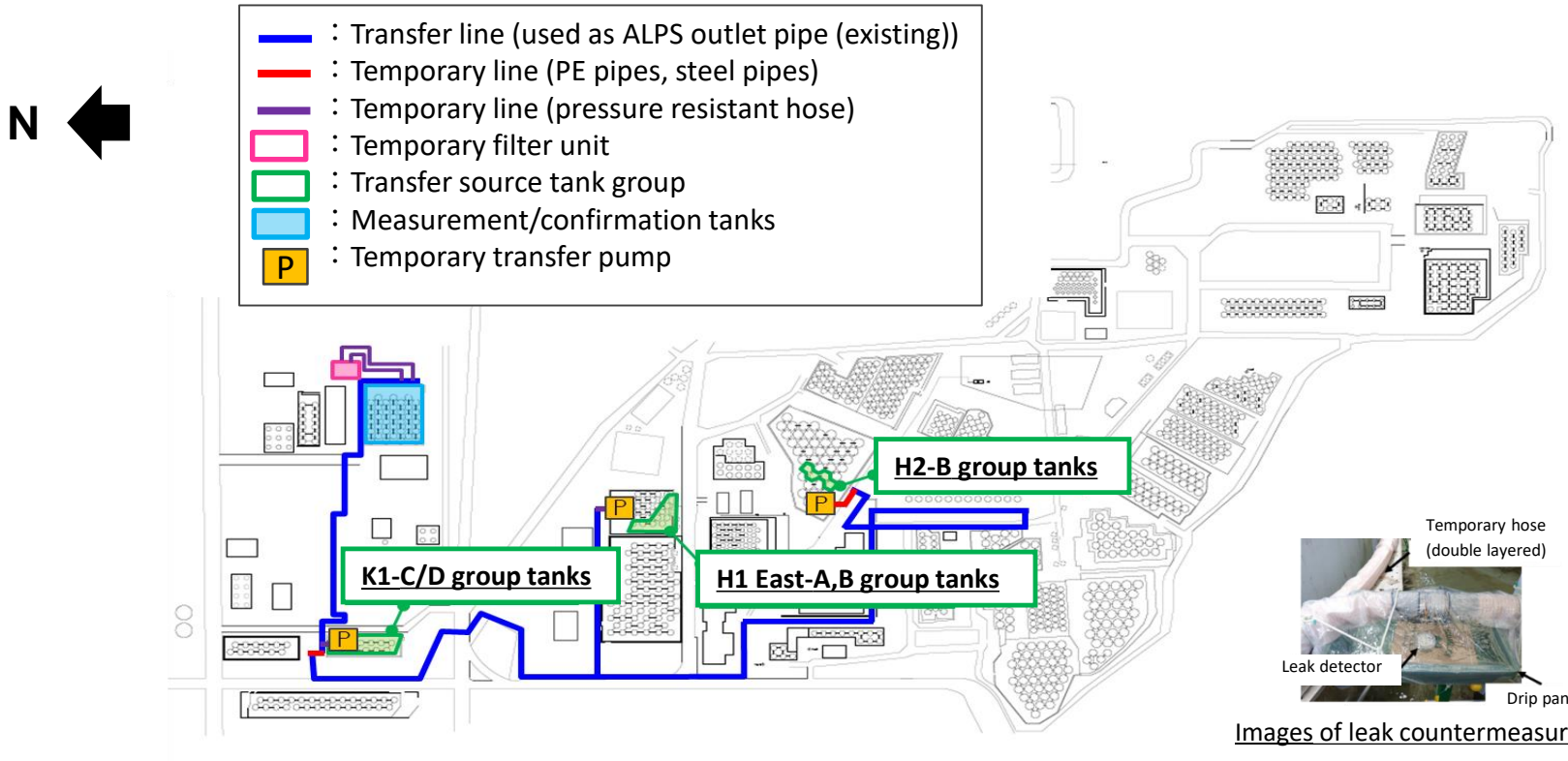
※3 Gross Alpha measurements

Report contents

* 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, “26-4-22” indicates that the data is for the 4th discharge of 2026, which is the 22nd discharge to date.

2-1. Transfer of ALPS treated water in preparation for the future discharges

- Transfer of ALPS treated water from H1 East area Group A/B and H2 area Group B to measurement/confirmation facility tank group B in preparation for the discharge of management number: 26-5-23 commenced from June 22, 2026 to July 6, 2026. (Transferred volume (actual): 7,770 m³ (H1 East area Group A/B: 4,570 m³, H2 area Group B: 3,200 m³) Circulation/agitation of the tanks commenced on July 9, 2026 and samples were taken on July 16, 2026. Currently under analysis.
- Transfer of ALPS treated water from H2 area Group B and K1 area Group C/D to measurement/confirmation facility tank group A in preparation for the discharge of management number: 26-6-24 commenced from July 24, 2026 to August 6, 2026. (Transferred volume (actual): 7,770 m³ (H2 area Group B: 5,890 m³, K1 area Group C/D: 1,880 m³) Circulation/agitation of the tanks commenced on August 17, 2026 and samples were taken on August 24, 2026. Currently under analysis.
- Transfer of ALPS treated water from K1 area Group C/D to measurement/confirmation facility tank group C in preparation for the discharge of management number: 26-7-25 commenced on August 19, 2026, and transfer is scheduled to be completed in early September, 2026.



Images of leak countermeasures

Report contents

* 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, “26-4-22” indicates that the data is for the 4th discharge of 2026, which is the 22nd discharge to date.

3-1. Automatic suspension incident of the ALPS treated water dilution and discharge facility (1/2)

TEPCO

■ June 10, 2026

- 4:17 p.m. : An open/close abnormality signal came from a primary discharge valve (MO-F251B) in measurement/confirmation tank Group B within the ALPS treated water discharge and discharge facilities thereby resulting in the automatic suspension of discharge※. The open/close abnormality signal was generated when the signal indicating “Full open” sent from the aforementioned valve to the control system in response to an “open” command signal sent to the valve from the control system got cut off.

- 4:24 p.m. : It was confirmed in the field that there are no abnormalities with the shutdown status of the facility since the aforementioned valve is fully closed (no leaks from the system)

■ June 11, 2026

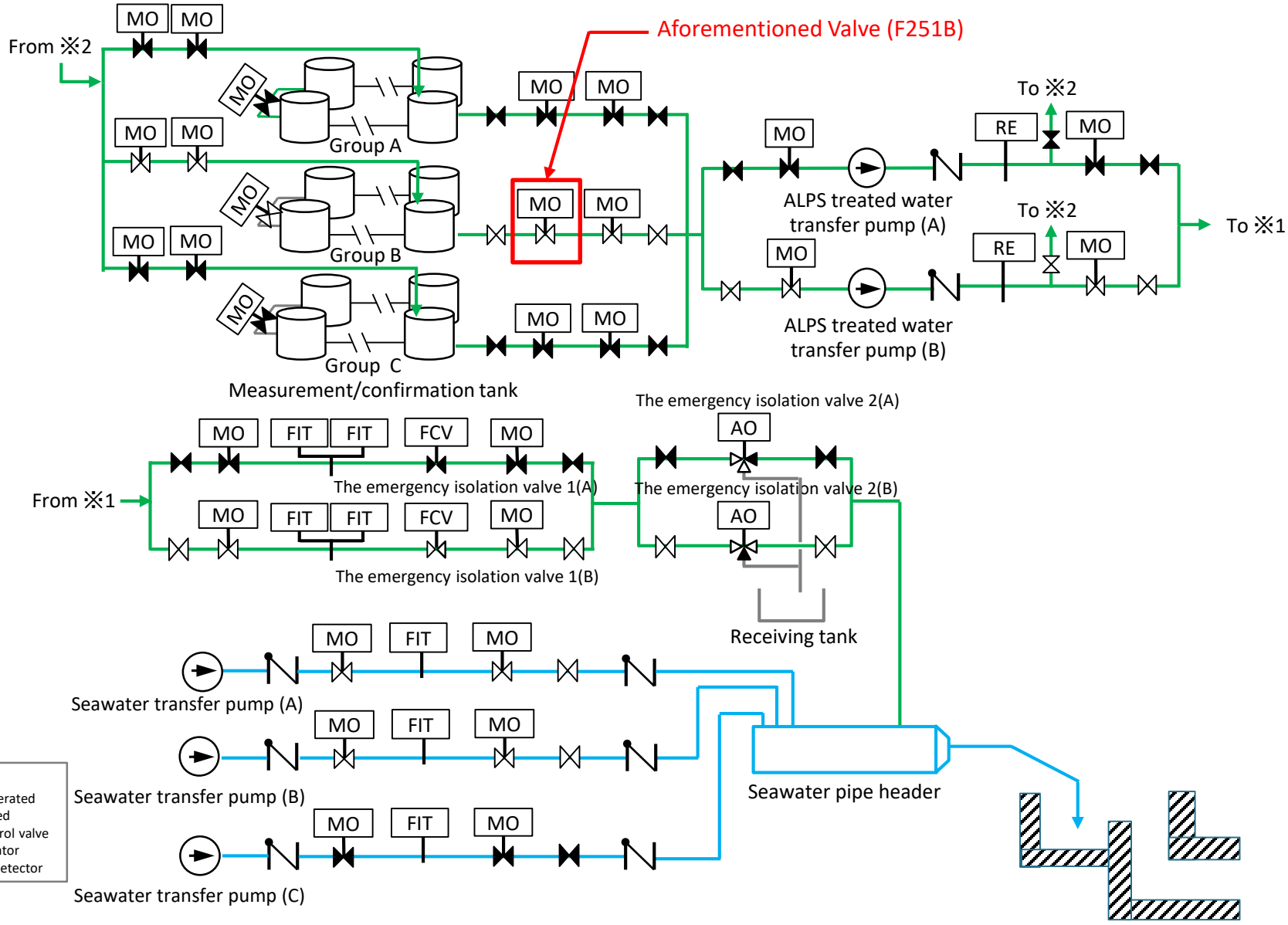
- 4:10 p.m. : Discharge recommenced after the aforementioned valve was replaced with a spare

※: This suspension of discharge does not constitute an “emergency shutdown” (emergency isolation valves 1 and 2 would close first in this case) meant to prevent unintentional discharges of ALPS treated water into the sea, but rather a “normal” shutdown (Emergency isolation valve 1 is closed after closure of the FCV and shutdown of the pump) caused by the detection of an equipment abnormality

【Presumed cause】

- Since we have confirmed that no abnormal signals were sent from the control system in the seismically isolated building to the aforementioned valve, it is assumed that there is an abnormality with the motor of the aforementioned valve.
- The event could not be recreated when checking the operation of the aforementioned valve, and no abnormalities were detected during past regular inspections.

[Supplement] Valve from which an open/close abnormality signal was sent on June 10



ALPS Treated water dilution and discharge facility system diagram

3-1. Automatic suspension incident of the ALPS treated water dilution and discharge facility (2/2)

TEPCO

■ July 10, 2026

➢ 4:17 PM : Automatic shutdown of circulation/agitation operation due to valve open/closed abnormality signal sent from the ALPS treated water dilution and discharge facility measurement and confirmation tank group B circulation and agitation receiving primary valve (MO-F218B) ※. The open/closed abnormality signal was sent in conjunction with a loss of "open" signal sent to the control panel from the aforementioned valve that was open.

➢ 4:55 PM: It was confirmed in the field that the aforementioned valve was completely closed and that there are no abnormalities with facility shutdown (no system leaks)

※: The control system activated appropriately and initiated shutdown as designed

■ July 11, 2026

➢ 3:38PM The aforementioned valve was replaced with a spare after which circulation and agitation was recommenced

■ July 16, 2026

➢ 12:38 PM Samples were taken from the measurement and confirmation tank group B after circulation and agitation was implemented for more than the stipulated amount of time (144 hours).

【Investigation status】

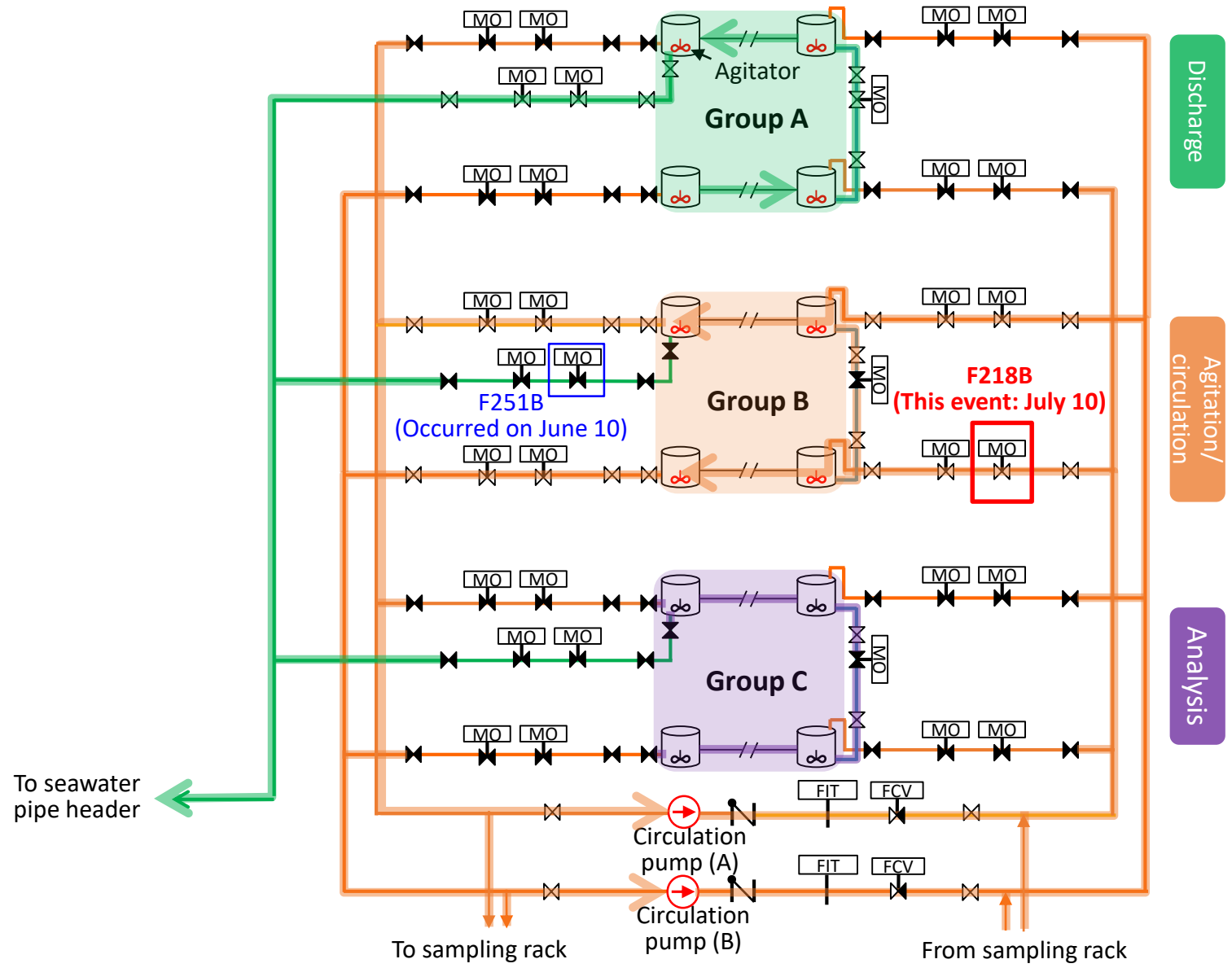
- As with the automatic shutdown that occurred during Group B discharge 26-2-20 on June 10, 2026, the alarm history show that this event was also caused by a loss of "open" signal sent to the control from the valve.
- When examining the reproducibility of this event using the valve involved, it was found that the "open" signal could be lost for an instant (1 sec. max.). Furthermore, when the "open" signal was lost the valve did not activate and remained open.

【Countermeasures】

- To prevent damage caused by pump shutdown, if the "open" signal from a valve is lost, control systems initiate an automatic shutdown of operation. The control system will also initiate an automatic shutdown if it detects other abnormalities in multiple parameters being monitored, such as pressure and flow volume.
- When reproducing the event, it was confirmed that the valve stays open if the "open" signal is lost for instant and there is no impact on operation.
- Therefore, going forward as a measure to prevent recurrence of the incident, the control system will be updated so that automatic shutdowns are not initiated if the "open" signal is lost for an instant. Furthermore, the automatic shutdown control triggered by abnormality detection in multiple monitoring items will remain in place after the system modification, therefore, the pump protection function against dead-head operation will not be affected.
- The cause of the temporary loss of the "open" signal is still under investigation.

【Addendum】 Valve that experienced an open/close abnormality on July 10

TEPCO



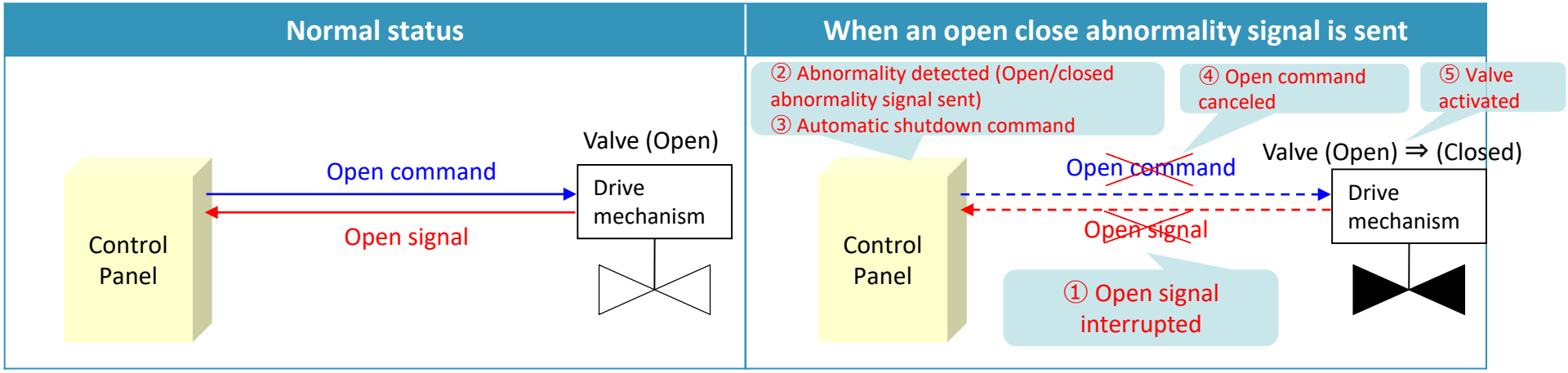
ALPS treated water dilution and discharge facility measurement and confirmation facility system diagram ※

※ As of July 10

3-2. Concept diagram of the cause of the automatic shutdown

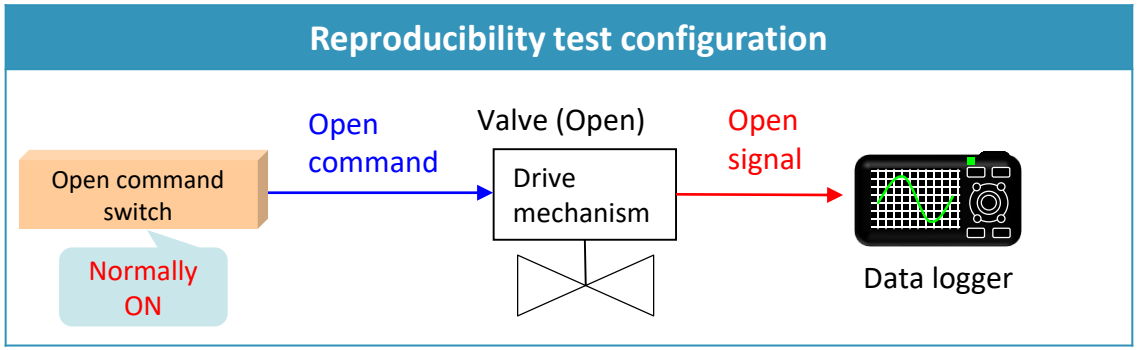
■ **Cause of the automatic shutdown**

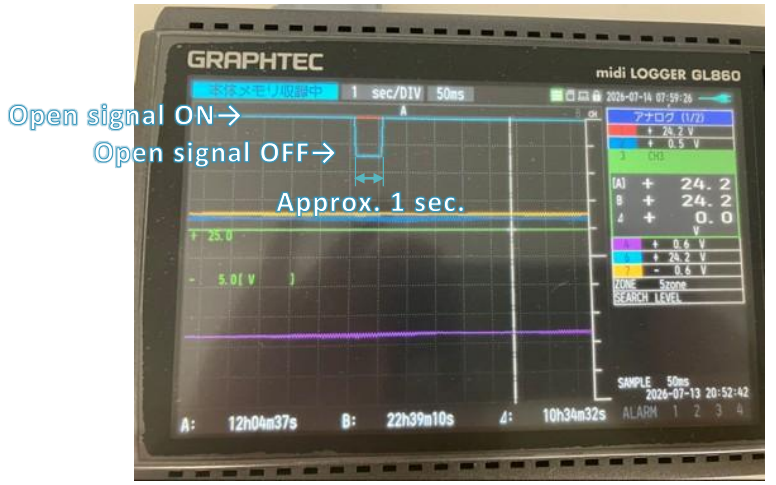
➢ We have confirmed that the cause was interruption of the "Open" signal outputted from the valve when it was open



■ **Results of attempts to reproduce the event on the valve**

➢ A data logger was used to record "Open" signal output as open commands were continually sent to the valve that experienced the event. Measurement results showed that whereas the open signal could be interrupted for as long a 1 second, the valve remained open.





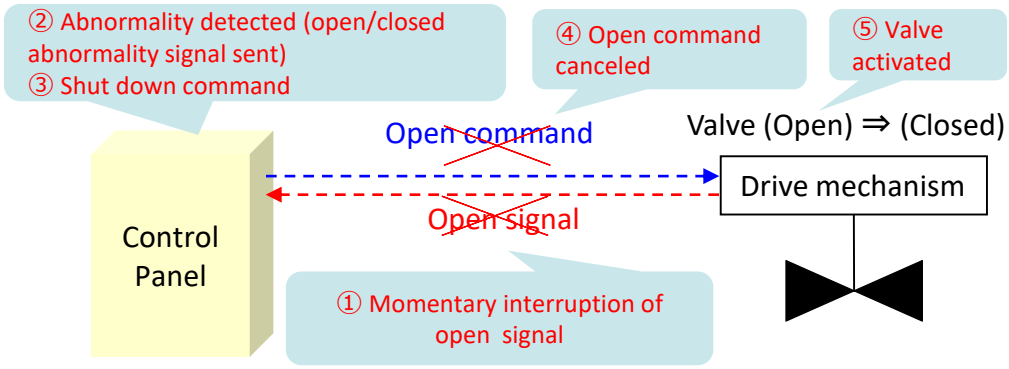
Data logger during reproducibility test

3-3. Concept diagram of automatic shutdown countermeasures

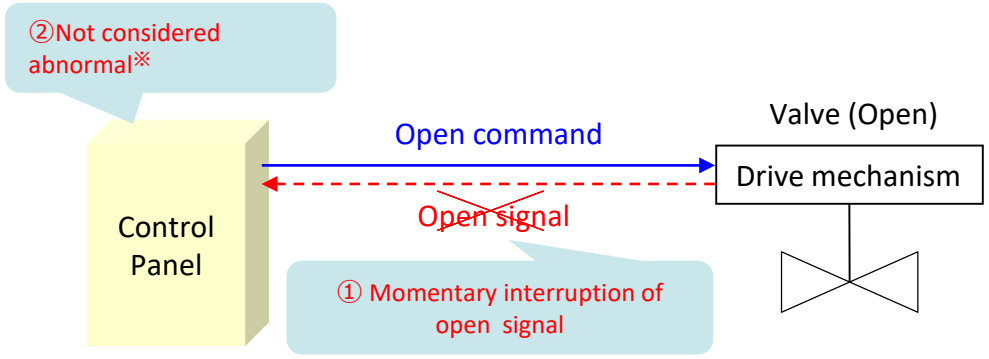
■ **Countermeasures**

- In order to prevent malfunctions caused by pump shutoff, if an open signal from a valve is interrupted, operation is automatically shut down. However through a system upgrade automatic shutdown control caused by a momentary open signal interruption was deleted. This system upgrade will be implemented in the later half of September 2026 following a review.
- Furthermore, since pump inlet pressure and flow will be monitored and automatic operation shutdown control in the event of an abnormality will be maintained, there will be no impact on functions to prevent malfunctions caused by pump shutdown.

Now



After countermeasures



※ Pump inlet pressure and flow will be monitored and automatic operation shut down control in the event of an abnormality will be maintained, there will be no impact on functions to prevent malfunctions caused by pump shutdown.

Report contents

1. Performance of the discharge of ALPS treated water

   (Management number* : 26-4-22)

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

3. Causes and countermeasures for the automatic suspension incident of the

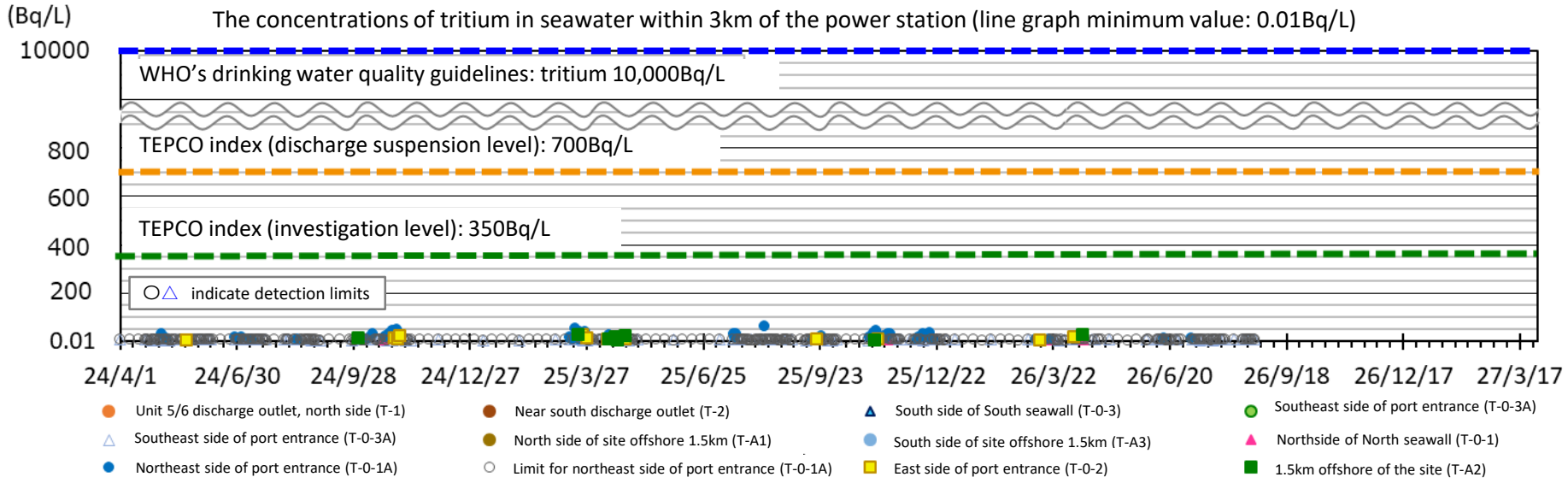
   ALPS treated water dilution and discharge facility

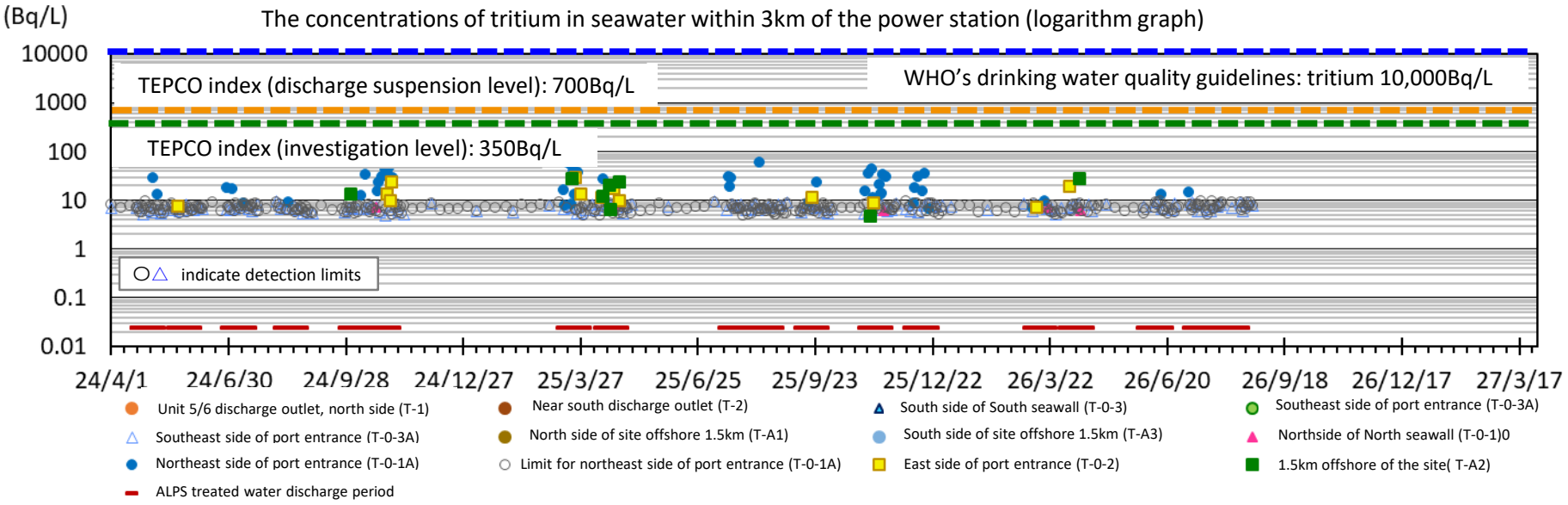
[Reference] Sea area monitoring history after the commencement of discharge

* 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, “26-4-22” indicates that the data is for the 4th discharge of 2026, which is the 22nd discharge to date.

[Reference] Sea area monitoring results (1/2)　quick monitoring

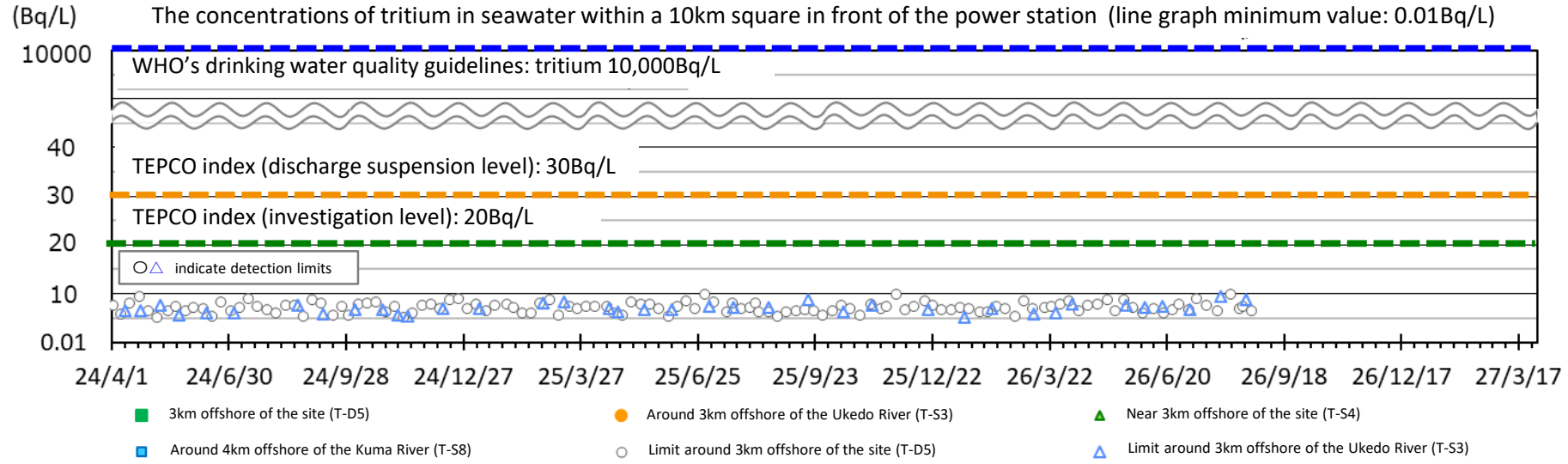
Within 3km of the power station

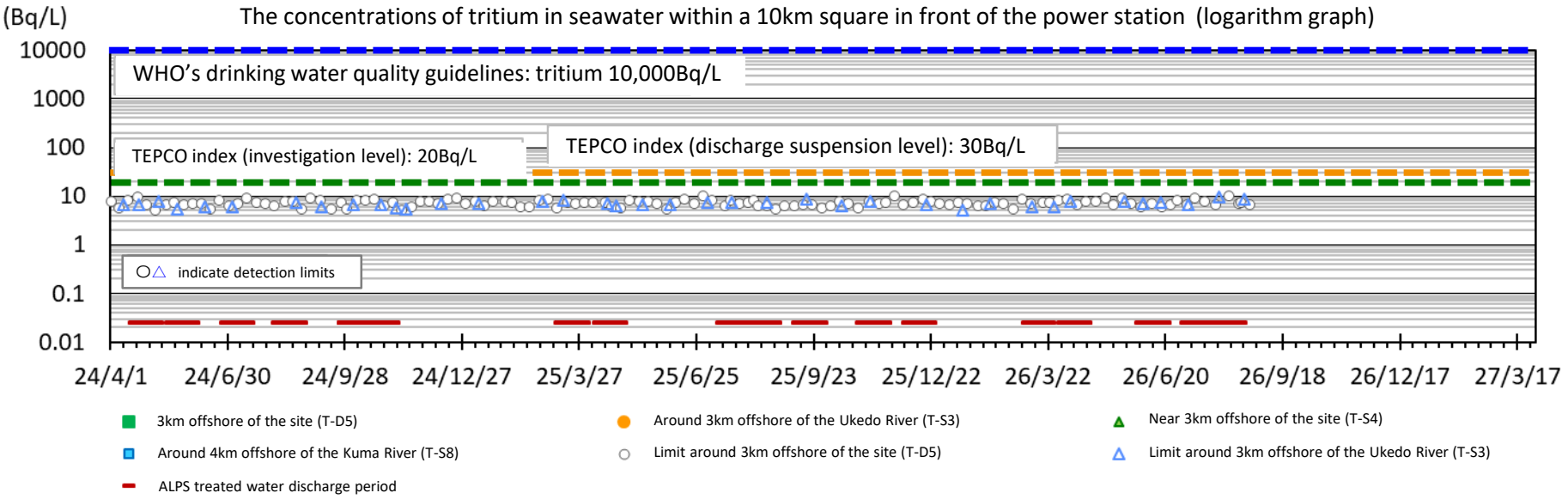




[Reference] Sea area monitoring results (2/2)　quick monitoring

Within a 10km square in front of the power station





[Reference] Sea area monitoring plan

for obtaining quick measurements of the concentration of tritium in seawater

○ We have engaged in monitoring to obtain quick measurements of the concentration of tritium in seawater with targeting the upper detection limit for 10Bq/liter, and index to determine discharge suspension (the discharge suspension level) was set.

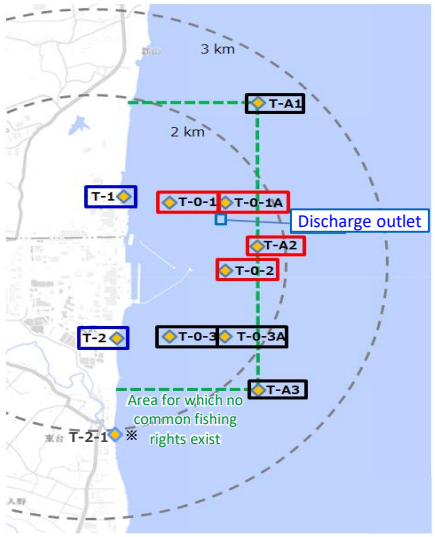


Figure 1: Specimen sampling locations within 3km of the power station (near the discharge outlet)

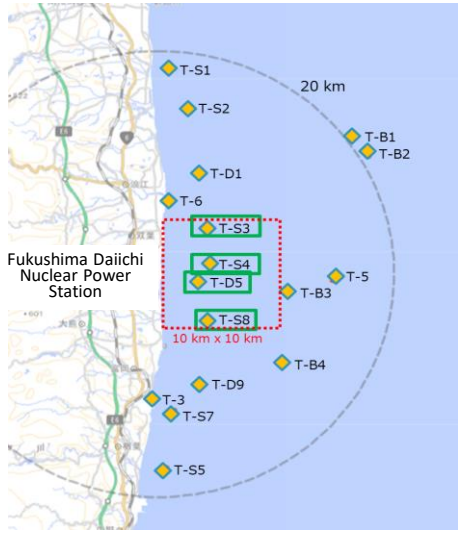


Figure 2: Specimen sampling locations within a 10km square in front of the power station

: Monitoring points used to obtain quick results (10 locations)
Index (Discharge suspension level) 700Bq/L

※ Alternative location if safety cannot be secured at T-2

: Monitoring points used to obtain quick results (4 locations)
Index (Discharge suspension level) 30Bq/L

	【Fig.1】 Within a 3km of the power station (near the discharge outlet)		【Fig. 2】 Four locations within a 10km square in front of the power station
	Four locations in the vicinity of the discharge outlet	Other six locations	
During the discharge period and for one week after the completion of discharge	Daily※1	Twice a week※2	T-D5: Once a week T-S3,T-S4,T-S8: Once a month
During the discharge suspension period (Excluding the week following the completion of discharge)	Once a week※2	Once a month※2	

※1 If bad weather during the discharge period prevents measurements for being taken for two consecutive days, on the following day (third day) if it is again expected that measurements cannot be taken, measured results will be quickly obtained from T-1 and T-2.

※2 Since the commencement of discharge in August 2023, the monitoring plan was changed on December 26, 2023 in light of actual measurements taken during discharge. (Announced on December 25, 2023)