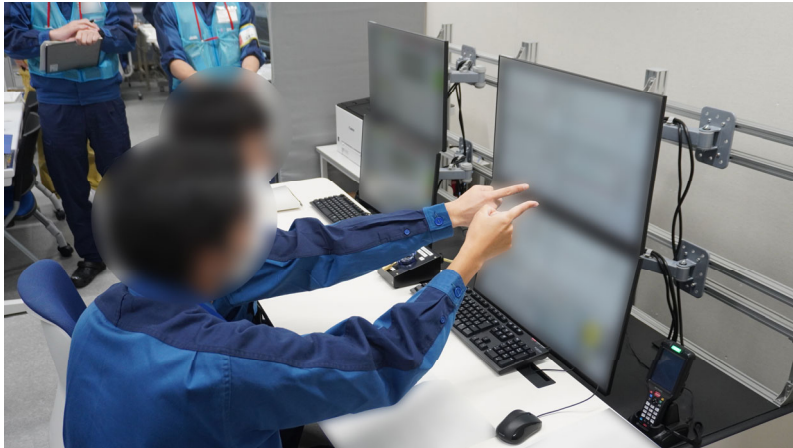


- As the First Stage of the third discharge, on October 31 at 11:24, in order to confirm that ALPS treated water is being diluted as expected, we transferred a very small amount of ALPS treated water (approximately 1m<sup>3</sup>) to the dilution facility, using transfer facilities. The water was diluted with seawater (approximately 1,200m<sup>3</sup>) and was stored in the discharge vertical shaft (upper-stream storage).
- On the same day, we sampled the diluted water stored in the discharge vertical shaft (upper-stream storage) and measured tritium concentration. On November 1, the results showed that the analysis value is approximately equal to the calculated concentration and below 1,500Bq/liter. The sample of the water was also analyzed by the Japan Atomic Energy Agency (JAEA) who confirmed that the analysis value is below 1,500 Bq/liter.
- The decision to proceed to the Second Stage will be made depending on weather/sea conditions of tomorrow morning (November 2) .

<Announced by November 1>

- This morning (November 2), we decided to proceed to the Second Stage in the light of weather/sea conditions. We started up the seawater transfer pumps at 10:21 which marked the commencement of the discharge into the sea.
- During the discharge period, water samples will be taken from the seawater pipes to confirm that tritium is being suitably diluted. In addition, in order to confirm that the tritium concentration is less than the discharge suspension level (700Bq/liter) and the investigation level (350Bq/liter), we will continue to take seawater samples daily from 10 locations within 3km of the power station and perform seawater tritium analyses with an increased detection limit of approximately 10Bq/liter. Analysis results for all the water samples will be publicly disclosed as soon as they are obtained.
- We shall continue to engage in this process with the utmost vigilance to ensure that there are no unintentional discharge of ALPS treated water into the sea.

## [Reference] Photos of the Second Stage



Operations by TEPCO operators  
(the Second Stage)



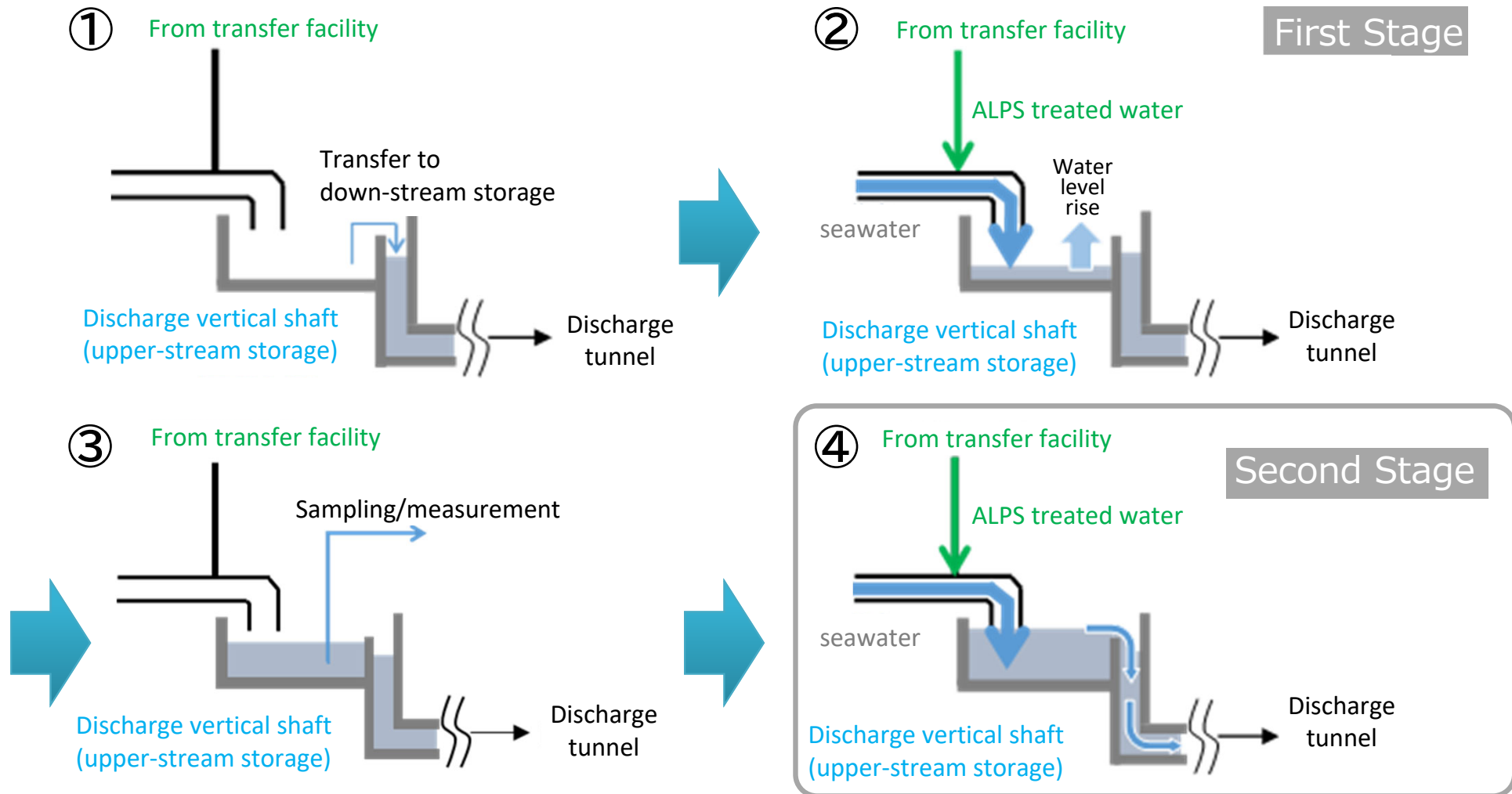
Key switch operations during the Second Stage



ALPS treated water diluted with seawater  
overflowing from the upper-stream storage  
to the down-stream storage

- 10:21 : Commenced the discharge into the sea  
(started up the seawater transfer pumps)
- 10:31 : Confirmed overflow from the upper- stream storage to the  
down-stream storage
- 10:33 : Confirmed that there are no abnormalities with the down-stream storage
- 11:31 : Commenced ALPS treated water transfer procedure
- 11:47 : Confirmed that there are no abnormalities in the field

# [Reference] Method of initially discharging small amounts



- ① The discharge vertical shaft (upper-stream storage) will be emptied.
- ② A very small amount of (approximately  $1\text{m}^3$ ) ALPS treated water will be diluted with seawater (approximately  $1,200\text{m}^3$ ) and then held in the discharge vertical shaft (upper-stream storage).
- ③ The water in the discharge vertical shaft (upper-stream storage) will be sampled and the tritium concentration will be measured in order to confirm that actual concentration is approximately the same as the calculated tritium concentration, and that the concentration of tritium is less than  $1,500\text{Bq/liter}$ . [Processes ① through ③ comprise the First Stage]
- ④ Then, TEPCO will move on to the Second Stage which will be continuous discharge into the sea.

# [Reference] FY2023 Discharge Plan

- Currently, we are performing facility inspection after the second discharge (tank group C). If no abnormalities are found in the inspection, we will transfer ALPS treated water to transfer pipe on October 30 and will commence the First Stage of the third discharge on October 31. The Second Stage, which marks the beginning of the third discharge (tank group A) of ALPS treated water into the sea, will start on November 2.

1 <sup>st</sup> discharge	Measurement/confirmation facility (K4 area) Group B:	Approx. 7,800m <sup>3</sup>	Secondary treatment: No Tritium concentration: 140,000Bq/liter Total amount of tritium: 1.1 trillion Bq	Completed
2 <sup>nd</sup> discharge	Measurement/confirmation facility (K4 area) Group C:	Approx. 7,800m <sup>3</sup>	Secondary treatment: No Tritium concentration: 140,000Bq/liter Total amount of tritium: 1.1 trillion Bq	Completed
3 <sup>rd</sup> discharge	Measurement/confirmation facility (K4 area) Group A:	Approx. 7,800m <sup>3</sup>	Secondary treatment: No Tritium concentration: 130,000Bq/liter Total amount of tritium: 1.0 trillion Bq	Details on the next page
4 <sup>th</sup> discharge	K4 area Group E (Transferred to Measurement/confirmation facility group B <sup>※2</sup> ):	Approx. 4,500m <sup>3</sup>	Secondary treatment: No Tritium concentration: 170,000~210,000Bq/liter <sup>※1</sup> Total amount of tritium: 1.4 trillion Bq <sup>※1</sup>	
	K3 area Group A (Transferred to Measurement/confirmation facility group B <sup>※2</sup> ):	Approx. 3,300m <sup>3</sup>		

➔ Total amount of tritium discharged during FY2023: Approx. **5 trillion Bq**

※1 Average value of the tank group that was assessed taking into account the radioactive decay until July 1, 2023

※2 To be transferred to K4 area tank group B that will be empty after the 1<sup>st</sup> discharge is completed

# [Reference] Outline of third discharge for Group K4-A

Outline of discharge for group K4-A		
Attributes of the treated water	Concentration of the 29 types of radionuclides (excluding tritium) in scope of measurement/evaluation	Within regulatory requirements (sum of the ratios of the concentration of each radionuclide to the regulatory concentration limit is less than 1)  (sum of the ratios of the concentration of each radionuclide to the regulatory concentration limit: 0.25* ) (details on p1 of the link)
	Tritium concentration	130,000Bq/liter (details on p2 of the link)
	Concentration of the 39 significant types of radionuclides measured voluntarily	No significant radionuclides identified (details on p3 of the link)
	Status of water quality assessment	Within government and prefectural requirements (details on p4 of the link)
	Water temperature	Same as outdoor temperature. After diluted to 740 times, same as sea water temperature (not the same as plant's thermal discharge)
Expected volume of treated water discharge	Approximately 7,800m <sup>3</sup>	
Treated water flow rate	Approximately 460m <sup>3</sup> /day (set not to exceed designed maximum on 500m <sup>3</sup> /day)	
Dilution sea water flow rate	Approximately 340,000m <sup>3</sup> /day (same speed as walking in the tunnel [approximated 1m/second])	
Concentration of tritium after dilution	Approximated 180Bq/liter	
Term of discharge	Approximately 17 days	



※ Comparison of the sum of the ratios of the concentration of each radionuclide to the regulatory concentration limit before/after sea water dilution

	Before dilution	After dilution (740 times)
29 types	0.25	0.00034
Tritium	2.17	0.0029
		0.0032 (1/310 of government requirements)

# [Reference] Manual shutdown by operators (in response to sea area monitoring)

- Seawater tritium analysis is implemented once a week at all points on Figures 1 and 2 below, with the detection limit set to 0.1-0.4Bq/liter.
- In addition, quick tritium measurements with the detection limit set to 10Bq/liter will be implemented at the locations outlined in the red frames in Figures 1 and 2 below. In the case "discharge suspension level" indicators are exceeded, the discharge into the sea will be suspended.
- After the commencement of the discharge, in light of the monitoring frequency outlined by the various organizations within the Comprehensive Monitoring Plan, frequency of quick tritium measurements specifically near the discharge outlets shown in Figure 1 will be increased from once a week to everyday for the time being.

Figure 1. Sampling locations within a 3km radius of the power station (in the vicinity of the discharge outlet)

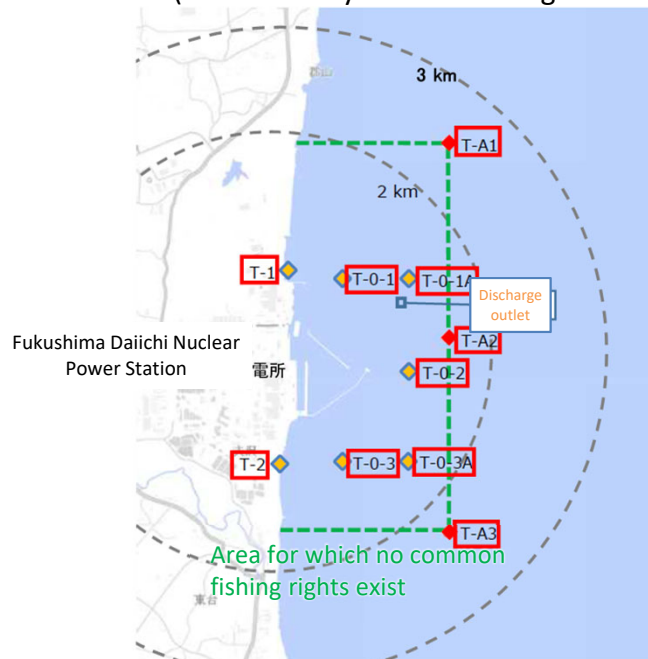
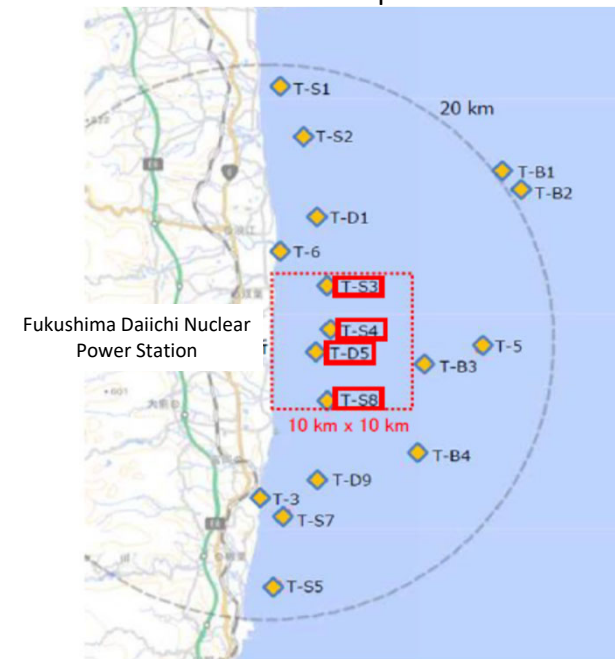


Figure 2. Sampling locations within a 10km square in front of the power station



: Monitoring locations for quick tritium measurements (10 locations)  
**Indicator (discharge suspension level): 700Bq/liter**  
 Analysis frequency: once a week → Every day for the time being

: Monitoring locations for quick tritium measurements (4 locations)  
**Indicator (discharge suspension level): 30Bq/liter**  
 Analysis frequency: Once a week (T-D5),  
 Once a month (T-S3, T-S4, T-S8)