

- Transfer of ALPS treated water from G4 south area Group A/B to measurement/confirmation facility tank group C was completed on December 19, 2024, in preparation for the seventh discharge of FY2024. Circulation/agitation commenced on January 7, 2025 and sample were taken on January 14, 2025.
- When discharge of the ALPS treated water commenced (first ~ third discharges of FY2023), the water was discharged in two stages. Prior to discharging the water into the sea, the ALPS treated water that had been diluted with seawater was temporarily held in upper-stream storage so that the water could be directly sampled/measured (First stage), and confirm through calculated estimates and actual measurements that there had been no significant difference in the concentration of tritium, and that said concentration was below the discharge criteria of 1,500Bq/liter. After this was done, we proceeded to continuously discharge the water into the sea (Second stage) and confirmed that the treated water was indeed being diluted and mixed as designed.
- Furthermore, during discharge into the sea, samples and measurements were taken daily from down-stream of the seawater pipe header to confirm that there were no significant difference between calculated estimates and the actual measurements of tritium concentrations based on all discharges to date, and that the water was being diluted/mixed as designed.
- Accordingly, since the forth discharge of FY2023, it was decided to implement discharge in two-stage only once a year for the time being, and as such, the seventh discharge of FY2024 will be conducted in two stages.

< Announced by February 27, 2025 >

- The analysis results from sampled specimens have confirmed that the water in tank group C meets discharge criteria.
 - ① Nuclides to be measured and assessed (30 nuclides):
The sum of the ratios of the concentration of each radionuclide to the regulatory concentration: 0.076 (confirmed to be less than 1)
 - ② Tritium: 310,000 Bq/liter (confirmed to be less than 1 million Bq/liter)
 - ③ Nuclides voluntarily checked to ensure that they are not significantly present (38 nuclides):
No significant concentrations found of any of the nuclides
 - ④ General water quality (voluntary check to confirm that there are no unusual water quality) (44 criteria): Criteria values have been met
- Measurements taken by the external agency* (Kaken) show the same results and confirm that the water in tank group C meets discharge criteria.
- Therefore, direct sampling/measurement (First stage) in preparation for the seventh discharge was implemented on March 10, and it will be confirmed after March 12 that there are no problems with the results from Frist Stage, after which continuous discharge into the sea from measurement/confirmation tank group C (Second Stage) will be implemented.
- Going forward, we will remain vigilant to ensure the safe and stable discharge of ALPS treated water.

* Measurements taken of ① Nuclides to be measured and assessed (30 nuclides); ② Tritium; and, ③ Nuclides voluntarily checked to ensure that they are not significantly present (38 nuclides).

- When discharge of the ALPS treated water commenced (first ~ third discharges of FY2023), the water was discharged in two stages. Prior to discharging the water into the sea, the ALPS treated water that had been diluted with seawater was temporarily held in upper-stream storage so that the water could be directly sampled/measured (First stage), and confirm through calculated estimates and actual measurements that there had been no significant difference in the concentration of tritium, and that said concentration was below the discharge criteria of 1,500Bq/liter. After this was done, we proceeded to continuously discharge the water into the sea (Second stage) and confirmed that the treated water was indeed being diluted and mixed as designed.
- Furthermore, during discharge into the sea, samples and measurements were taken daily from down-stream of the seawater pipe header to confirm that there were no significant difference between calculated estimates and the actual measurements of tritium concentrations based on all 10 discharges to date, and that the water was being diluted/mixed as designed.
- Based on the results from the discharges in two-stage and all 10 discharges to date, we have confirmed that the water is being diluted/mixed in the seawater pipe header as designed thereby achieving the objective of the two-stage discharge. However, in light of the opinions of regional residents, for the time being, a discharge in two-stage will be implemented once a year.
- The seventh discharge of FY2024 shall be implemented in two stages and, as always, during First Stage we will confirm that there are no significant differences between the calculated estimates and actual measurements for tritium concentrations, and that the water is being diluted/mixed [slide 4 (A)], and that the concentration of tritium is less than the discharge criteria of 1,500Bq/liter (less than the operational limit of 700Bq/liter). In addition to this, we shall confirm that there have been no changes in facility status by using seawater flow values and ALPS treated water flow values to confirm that the water is being diluted as designed [slide 4 (B)] after which we shall proceed to continuous discharge into the sea (Second stage).

- Procedure of discharge in two-stage is as follows:

First Stage . . . General performance confirmation of components (no discharge into the sea)

- ① Upper-stream storage emptied
- ② ALPS treated water (measurement/confirmation tank group C) tritium concentration entered into system
- ③ One seawater transfer pump started up
- ④ ALPS treated water transfer pump started up after the seawater transfer pump reaches rated flow
- ⑤ ALPS treated water transfer flow automatically adjusted in accordance with tritium concentration so that the ALPS treated water diluted by seawater concentration is 700Bq/liter[※]
- ⑥ After rated flow has been reached, the ALPS treated water transfer pump and the seawater transfer pump will be shutdown

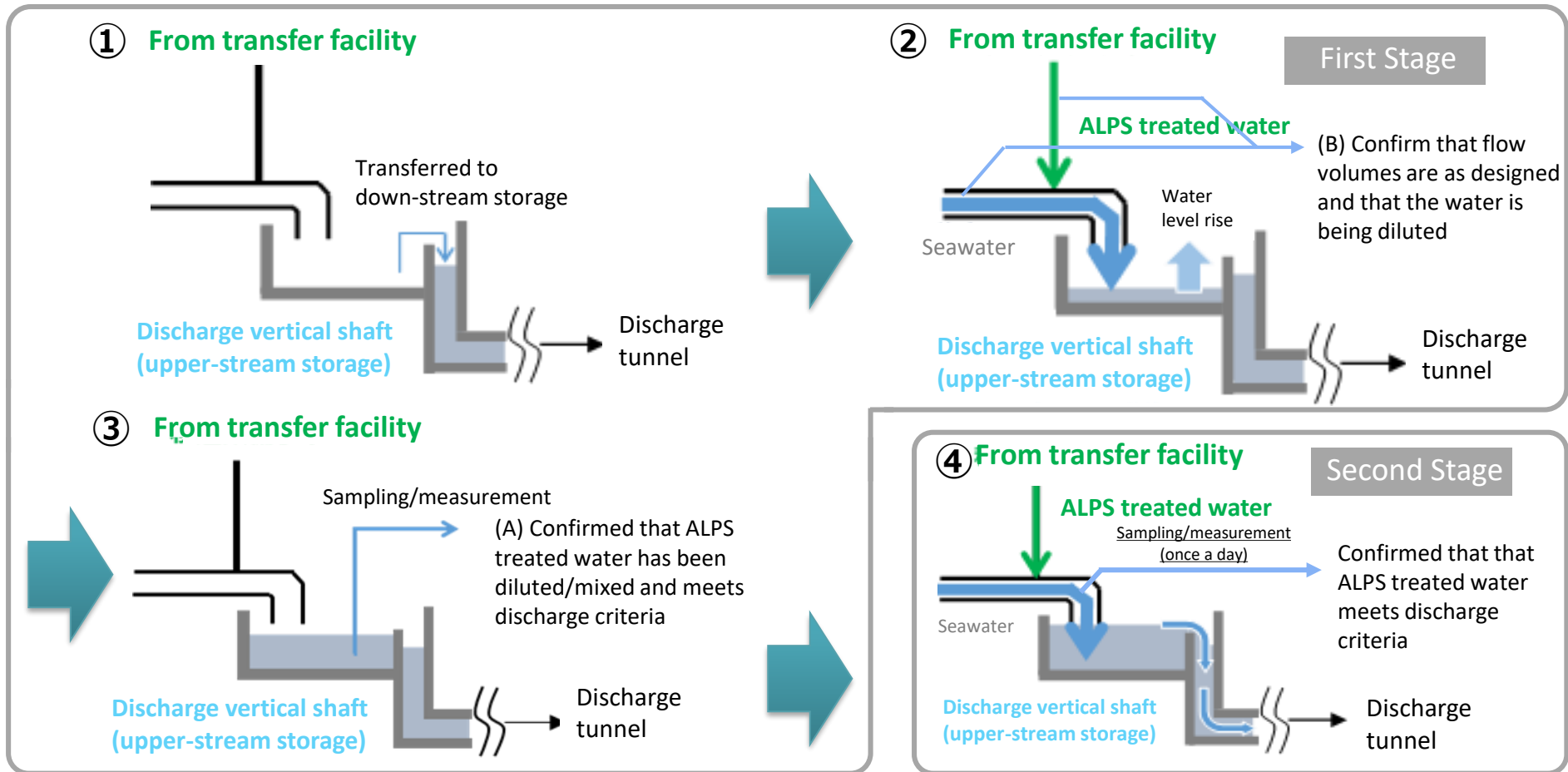
※Value determined so that the upper operational limit of 1,500Bq/liter is not exceeded in consideration of analysis uncertainty and instrument discrepancies

Components shall be activated as mentioned above to confirm there are no problems with performance. The concentration of tritium in the water diluted by seawater in upper-stream storage shall also be measured to confirm that through calculated estimates and actual measurements that there had been no significant difference in the concentration of tritium and less than 700Bq/liter.

Second Stage . . . Continuous discharge into the sea

- ⑦ Two seawater pumps started up in succession (commencement of discharge of diluted water from upper-stream storage)
- ⑧ After the two seawater pumps have reached rated flow the ALPS treated water transfer pump shall be started up (continuous discharge)
("the post-dilution tritium concentration" during continuous discharge shall be managed using calculated values and analysis values from water sampled daily from downstream of the seawater flow header)

[Reference] Method of discharge in two stage



- ① The discharge vertical shift (upper-stream storage) emptied
- ② A small amount (approximately 0.7m³) of ALPS treated water will be diluted with seawater (approximately 1,200m³) and then held in the discharge vertical shift (upper-stream storage).
- ③ It will be confirmed that there are no problems with the series of operations of the ALPS treated water dilution/discharge facilities and that the concentration of tritium in water stored in the discharge vertical shift (upper-stream storage) is that through calculated estimates and actual measurements that there had been no significant difference in the concentration of tritium, and less than 700Bq/liter. As a measure to ensure that the condition of the facilities has not changed, confirm that the water is being diluted as designed by flow volumes of the seawater and ALPS treated water. [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.