

Sampling from the measurement/confirmation facility that is part of ALPS treated water dilution/discharge facility in the Fukushima Daiichi Nuclear Power Station

<Reference Material>

March 27, 2023

TEPCO Holdings

Fukushima Daiichi D&D Engineering
Company

- Considering the Japanese government's basic policy announced in April 2021, TEPCO had been reviewing the details of the design and operation of ALPS treated water dilution/discharge facility and related facilities. On December 21, 2021, TEPCO submitted the "Application Documents for Approval to Amend the Implementation Plan for Fukushima Daiichi Nuclear Power Station Specified Nuclear Facility" to the Nuclear Regulation Authority (NRA), and on July 22, 2022, these application documents were approved by the NRA.
- Construction on ALPS treated water dilution/discharge facilities began on August 4, 2022, and we have been installing pipe/pipe supports, etc., for the measurement/confirmation facility. On March 15, we received the certificate of pre-service inspection completion for the measurement/confirmation facility from the NRA for the pre-service inspection we had been conducting starting on January 16, 2023.
- Upon receiving this certificate, circulation/agitation operation of the group B of the measurement/confirmation tanks was started at 11 am on March 17 to homogenize the concentration of radioactive nuclides in the tank group.

<Announced as of March 20 >

- Having conducted circulation/agitation operation beyond what is necessary to equalize the water quality within the tank groups*, samples were collected today from the tanks, which are now homogeneous.
- Sampling was conducted in the presence of the national government and the local municipalities.
- The samples will be analyzed to make sure that the water meets the discharge criteria (sum of the ratios to regulatory concentration limits excluding tritium is less than 1) before ALPS treated water is diluted and discharged.

*More than 144 hours from 1:58am of March 19 when the containment function of B tank group was confirmed (more than two rounds of the water amount of tank).

Sampling



Collecting samples



Witnessing the sampling 1



Collected Samples



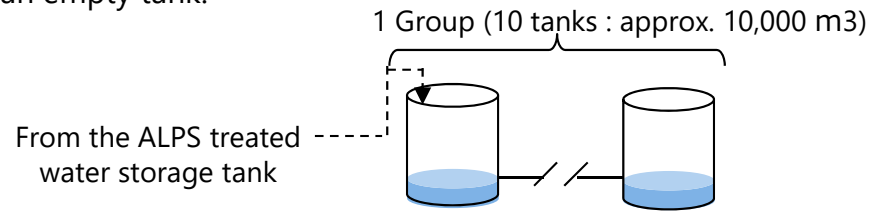
Witnessing the sampling 2

(Reference) Overview of Measurement/Confirmation Facility

- K4 area tanks (total : approx. 30,000 m³) will be used as measurement and confirmation tanks. 10 tanks of each will be taken from groups A, B, and C (each tank has a capacity of around 1,000m³).
 - Tank groups will be rotated for use during the ① Receiving process, ② Measurement/confirmation process, and ③ Discharge process, and during the ② Measurement/confirmation process, the water shall be circulated/agitated in order to take a sample for analysis that is homogeneous and represents all the water in the tanks. After the commencement of discharge, for the time being the water in the tank groups shall be circulated/agitated at least twice[※].
- ※ The water will recirculate/be agitated for more than 144 hours

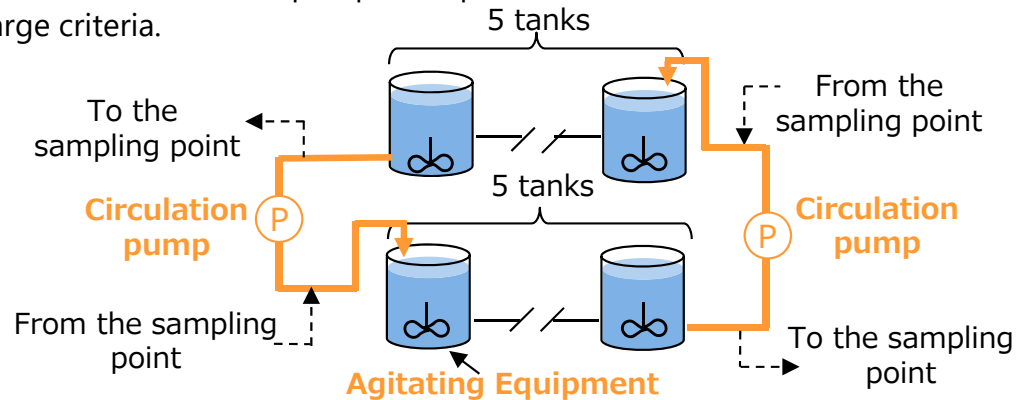
① Receiving process

Receive ALPS treated water from the ALPS treated water storage tank into an empty tank.



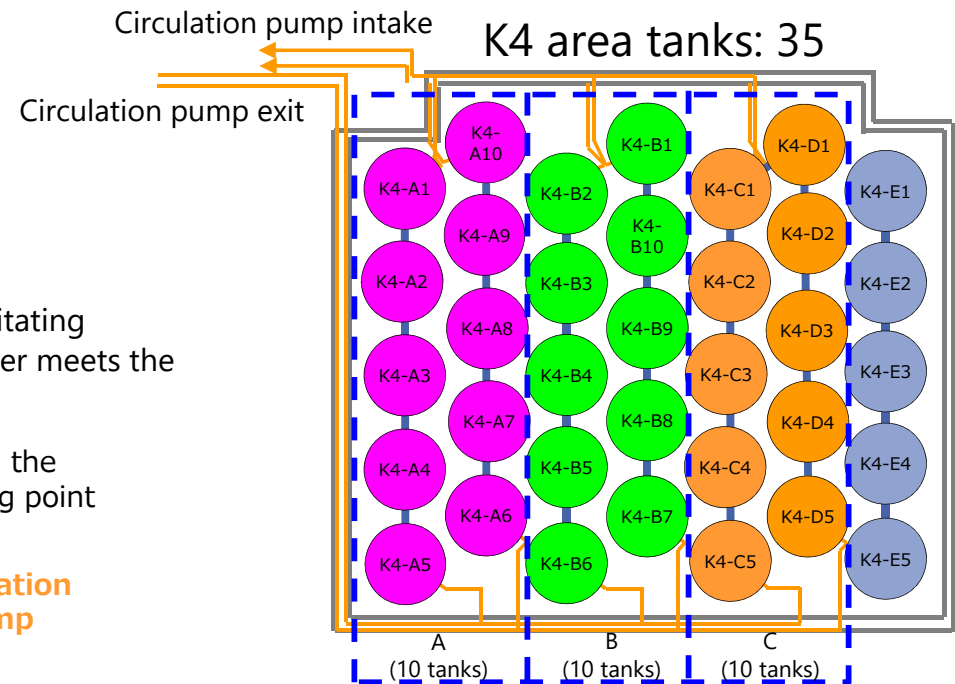
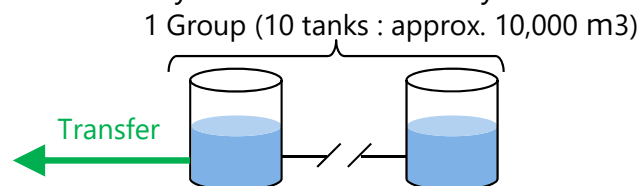
② Measuring/confirmation process

After homogenizing the quality of the water in the tanks using the agitating equipment and circulation pumps, samples are taken to see if the water meets the discharge criteria.



③ Discharge Process

After confirming the water meets the discharge criteria, the ALPS treated water is transferred via the transfer facility to the dilution facility.



| | A | B | C |
|-----------------------|------------------------------|------------------------------|------------------------------|
| 1 st round | Receiving | — | — |
| 2 nd round | Measurement and confirmation | Receiving | — |
| 3 rd round | Discharge | Measurement and confirmation | Receiving |
| 4 th round | Receiving | Discharge | Measurement and confirmation |
| ... | Measurement and confirmation | Receiving | Discharge |