

② Treatment of contaminated water

【Current situation】

As to contaminated water produced at the site, cesium is removed first then multi-nuclides are removed by the Multi-nuclide Removal Equipment (ALPS) from the viewpoint of mitigating risk of the contaminated water. (Note that ALPS is currently being repaired and will restart around the latter half of September. As for new high-performance multi-nuclide removal equipment, a public request for proposals has been announced.)

Note that even after contaminated water is treated through ALPS, tritium cannot be removed. Currently, it is planned that water treated through ALPS will be stored in tanks.

Water treated through ALPS contains higher levels of tritium than the concentration limit set in the public notice. Therefore various methods for dealing with it need to be discussed, including feasibility studies on tritium removal techniques.

【Technologies needed】

(1) Requirements for tritium removal technologies

- Tritium contained in water after treated through the ALPS (approx. $1 \sim 5 \times 10^6 \text{Bq/l}$) need to be removed to a level less than the concentration limit set in the public notice ($6 \times 10^4 \text{Bq/l}$).
- The tritium removal equipment's performance per installment area should be high (Bq/day/m^2).
- The tritium removal equipment's performance per day should be more than $400 \text{m}^3/\text{day}$ (total amount of groundwater flowing into the basements of the buildings a day).

(2) Requirements for treatment technologies

- Other methods than stated in (1) to treat large amounts of tritium containing water or to store tritium containing water safely for a long period of time can be proposed, e.g. transpiration, underground storage, immobilization by concrete.