

IAEA Comprehensive Report on the Safety of "ALPS Treated Water"

- The IAEA conducted technical reviews (on five occasions) before discharge in order to evaluate whether the discharge of ALPS treated water into the sea complies with the international safety standards.
- In those reviews, TEPCO's assessment of radiological environmental impacts was verified and data were corroborated through comparison among analytical laboratories (Interlaboratory Comparison (ILC)) with the participation of third-party analytical laboratories* in addition to the IAEA.
- The comprehensive report published in July 2023 evaluates that "discharges of the ALPS treated water to the sea would have a negligible radiological impact on people and the environment."

* Analytical laboratories of South Korea, France, the United States, and Switzerland participated.

Reviewed items	Major results
Radiological impacts on humans and the environment	<ul style="list-style-type: none"> • Assessment of radiological impacts on the environment is being conducted in compliance with international standards. • International waters are not affected by the discharge of ALPS treated water, and the cross-border impact is negligible.
Integrity of facilities and process for controlling discharge	<ul style="list-style-type: none"> • The system and process for controlling discharge are robust. • Emergency isolation valves and radiation detectors are incorporated in the system in a redundant manner.
Regulatory management and approval	<ul style="list-style-type: none"> • The Nuclear Regulation Authority has established and is enforcing appropriate legal and regulatory safety frameworks as an independent regulatory organization.
Analysis/source and environmental monitoring	<ul style="list-style-type: none"> • Monitoring activities by the government of Japan and TEPCO are in compliance with the international safety standards. • TEPCO has the ability to undertake accurate and precise analyses and has a sustainable and robust analytical system in place.

(Source) Prepared based on METI's website "Let's get to know and understand about ALPS treated water."
https://www.meti.go.jp/earthquake/nuclear/hairo_osensui/english/shirou_alps.html



In response to the request of the government of Japan, the IAEA conducted reviews in and after February 2022 from the viewpoints of (i) safety of ALPS treated water, (ii) appropriateness of the regulatory process, and (iii) independent sampling and analysis of supporting evidence. The results of the reviews were published as reports in and after April 2022, and the comprehensive report summarizing the reviews was published on July 4, 2023. International experts from 11 countries participated in the reviews, in addition to the experts of the IAEA.

In the review concerning (i), data provided by TEPCO and the Ministry of Economy, Trade and Industry (METI) concerning eight technical matters, including TEPCO's radiological environmental impacts assessment, were verified. In the review concerning (ii), the details of the examinations and inspections being conducted by the Nuclear Regulation Authority were checked. In the review concerning (iii), the IAEA conducted independent monitoring of radioactive materials in ALPS treated water and the environment and verified data published by the Japan side.

The comprehensive report summarizing the results of these reviews concludes that the approach to and activities for the discharge of ALPS treated water taken by TEPCO, the Nuclear Regulation Authority, and the government of Japan are consistent with relevant international safety standards. Additionally, it concludes that discharges of the ALPS treated water to the sea would have a negligible radiological impact on people and the environment. On the other hand, the report points out the necessity to assess the consistency of activities during the operation of the ALPS treated water discharges with relevant international safety standards at various times. Given these, the IAEA presents its commitment to being involved even after the commencement of ALPS treated water discharges to secure the safety thereof.

(Source)

Prepared based on

- IAEA, "IAEA COMPREHENSIVE REPORT ON THE SAFETY REVIEW OF THE ALPS-TREATED WATER AT THE FUKUSHIMA DAIICHI NUCLEAR POWER STATION" (July 2023)
https://www.iaea.org/sites/default/files/iaea_comprehensive_alps_report.pdf
- METI's website "Let's get to know and understand about ALPS treated water."
https://www.meti.go.jp/earthquake/nuclear/hairo_osensui/english/shirou_alps.html

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