

9 August 2023

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I refer to your email of 4 August 2023 in which you request the following under the Official Information Act 1982 (OIA):

'... a copy of the report by the Office of Radiation Safety, Ministry of Health, on the IAEA report on [Fukushima Daiichi ALPS Treated Water Discharge]'

The information relevant to your request is attached.

Please note that it is our policy to proactively release our responses to official information requests where possible. Therefore, our response to your request (with your personal information removed) may be published on the Ministry website: www.mfat.govt.nz/en/about-us/contact-us/official-information-act-responses/

If you have any questions about this decision, you can contact us by email at: DM-ESD@mfat.govt.nz. You have the right to seek an investigation and review by the Ombudsman of this decision by contacting www.ombudsman.parliament.nz or freephone 0800 802 602.

Nāku poa, mā



Sarah Corbett
for Secretary of Foreign Affairs and Trade

Comprehensive IAEA report on Fukushima treated water release: Supplementary brief from the Office of Radiation Safety, Ministry of Health

Summary

- The International Atomic Energy Agency (IAEA) has published the final report of the review of handling the treated radioactive water at the Fukushima Daiichi Storage facility against relevant international safety standards.
- The two-year review led by IAEA was conducted at the request of the Japanese government and covered all radiation safety related aspects relating to the management, control and proposed discharge of treated radioactive water from the Fukushima Daiichi nuclear power plant site.
- In addition to IAEA experts, a Task Force that was set up to conduct the review included experts from Member States from Argentina, Australia, Canada, China, France, the Marshall Islands, Korea, Russia, the United Kingdom, United States and Viet Nam.
- The aim of the Task Force was to assess whether the management of the proposed radioactive water discharges is consistent with internationally accepted radiological safety standards, notably the Fundamental Principles, Safety Requirements and Safety Guides published by IAEA. These standards are well established, having been developed in consultation with all Member States including Aotearoa New Zealand.
- The main conclusions of the report are that all activities associated with the proposed discharges are consistent with the internationally accepted requirements and standards, and the radiological impact on people and the environment is negligible.
- **The Office of Radiation Safety agrees with these conclusions based on this report and previous documents published by IAEA on this topic.**
- The work of the Task Force will continue throughout the operations of the proposed discharges, and their ongoing review and assessment will provide confidence in the safety and handling of the proposed radioactive water discharges.

Impact on the Environment

1. TEPCO, the Japanese power plant operator, carried out a radiological environmental impact assessment, which the Task Force has found to be consistent with international safety standards.
2. The Japanese regulator set a very conservative public dose constraint of 0.05 mSv per year to members of the public arising from these discharges (this equates to approximately 5 chest/dental X-rays). To put this into context the average dose to New Zealanders from natural background radiation is approximately 40 times higher per year (2 mSv). The results of the radiological environmental impact assessment show that the estimated dose to populations in neighbouring countries will be negligible.
3. The environmental impact assessment estimates the radiation dose over a year to the most exposed members of the public to be at least a 1000 times lower than the dose constraint set by the regulator. This is a negligible (unmeasurable) radiation dose, far less than the dose a person would receive from cosmic radiation on a short 3 hour flight from New Zealand to Australia.
4. Estimated radiation doses to animals and plants were also found to be negligible.

5. The radioactivity levels in the marine environment, as estimated in the environmental impact assessment, are extremely low and will be indistinguishable from 'background' levels at distances of a few kilometres from the discharge point, which is proposed to be 1 km into the sea from the shore.

Environmental Monitoring

6. The environment in Fukushima and the surrounding will continue to be monitored in compliance with scientifically proven methods.

7. The Office of Radiation Safety agrees with the IAEA conclusion that TEPCO has demonstrated a high level of accuracy in their measurements and technical competence. The analytical methods were found to be appropriate and fit for purpose. The accuracy of the radiation measurements performed by TEPCO has been confirmed by comparing TEPCO measurements with seven world-leading laboratories in Monaco, Austria, Switzerland, France, the United States of America and the Republic of Korea.

Tritium

8. Tritium (^3H) is a radioactive isotope of Hydrogen, commonly found in water and has very low toxicity being eliminated from the body very quickly.

9. Tritium is produced by natural (from cosmic radiation) and man-made processes. The proposed tritium radioactivity discharge limit is similar to the annual routine discharges from nuclear power plants around the world during normal operation and is considered to be very small.

Prepared by Dr Andreas Markwitz, the Director for Radiation Safety, New Zealand upon advice from senior subject matter experts from the Institute of Environmental Science and Research (ESR), New Zealand

5 July 2023

Released under the Official Information Act 1982