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Subject: 書面による意見提出

Ministry of Economy, Trade and Industry

**Submission regarding plans to release radioactive water from the Fukushima Nuclear Power Station**

It has been drawn to our attention that the Ministry of Economy, Trade and Industry (METI) intends by this summer to finalize plans to release 1.19 million m3 of radioactive water (so called "ALPS treated water") currently stored in tanks at the site of the Fukushima Daiichi Nuclear Power Plant. The two remaining options under consideration are (1) release as water vapour, and (2) dilute and release directly into the ocean as water. Of these, we understand that your preferred option is the second: to discharge the water directly into the ocean.

We understand that you are currently conducting hearings with local governments and industrial groups in Fukushima. We strongly believe that the opinions of people living and working in Fukushima, as well as the opinions of people throughout Japan, should be fully taken into account.

We recognise this also as an international issue and, as such, we request that you take into consideration our opinions, as an organisation with an interest in the ocean environment at a global level.

The radioactive contaminated water in question is often presented to the public as having had all radionuclides except for tritium removed through treatment by an advanced liquid processing system (ALPS). Altogether, the accumulated treated water contains about 860 trillion becquerels of tritium. However, the ALPS treatment process has not completely removed all the other radionuclides. In fact, the concentration of 62 radionuclides other than tritium exceeds the effluent standard in about 72% of the water currently stored in tanks.

Tokyo Electric Power Company (TEPCO) says it will conduct secondary treatment if it releases radioactive materials into the ocean and keep these radioactive nuclides below the standard values, but, in view of the problems experienced with water treatment using ALPS in the past, we fear that this standard will not be achieved. Moreover, even if secondary treatment were carried out, it would be impossible to completely remove these radionuclides. We would be very concerned if any of these radioactive substances were released into the ocean.

Furthermore, we do not accept that tritium is as benign as the government makes it out to be. Experts disagree on the health effects of tritium. There is a view that when tritium replaces hydrogen in organic compounds it stays in the body for a long time and affects nearby cells and that, when it replaces hydrogen in DNA and subsequently decays into helium, the effect of exposure becomes stronger.

The reason given by the government for releasing this radioactively contaminated water is that by around summer 2022 there will be no vacant area where tanks can be installed within the site of the nuclear power plant. But ocean discharge is not the only available option. Alternatives have been proposed, including by the Citizens Commission on Nuclear Energy (CCNE), an NGO whose members include nuclear engineers. For example, CCNE has proposed storage in large tanks, or solidification into mortar for subsequent disposal. The government has not given due consideration to these proposals.

Local fishermen, including Tetsu Nozaki, Chairman of the Fukushima Prefecture
Federation of Fisheries Associations, have repeatedly expressed their
opposition to ocean discharge and release of water vapour. They are concerned about the reputational damage to their industry of these approaches. We support their concerns and are concerned about the release of any contaminants into the ocean, especially water containing radioactive isotopes from nuclear power plants.

We therefore urge you to reconsider your plans to release the radioactively contaminated water currently stored at the Fukushima Nuclear Power Station.

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**References**

原子力市民委員会 (Citizens’ Commission on Nuclear Energy), *福島第一原発汚染水に関する「見解」*, 2019年10月3日

http://www.ccnejapan.com/?p=10445

http://www.ccnejapan.com/20191003\_CCNE.pdf

http://www.ccnejapan.com/documents/2019/20191003\_CCNE\_2.pdf

http://www.ccnejapan.com/documents/2019/20191003\_CCNE\_kawai.pdf

http://www.ccnejapan.com/?p=10506

Citizens’ Commission on Nuclear Energy, *Deposit Tritiated Water in Large Tanks for 100 Years or Longer*, June 6, 2018

http://www.ccnejapan.com/20180828\_CCNE\_eng1.pdf

Citizens’ Commission on Nuclear Energy, *Releasing Fukushima Daiichi Nuclear Power Station Tritium to the Ocean – Getting the Issues Straight*, June 6, 2018

http://www.ccnejapan.com/20180828\_CCNE\_eng2.pdf

Ian Fairlie, *Should TEPCO / Japanese Government Dump Tritium-Contaminated Water from Fukushima into the Sea?*, September 18, 2019,
https://www.ianfairlie.org/news/should-tepco-japanese-government-dump-tritium-contaminated-water-from-fukushima-into-the-sea/

Ian Fairlie, *Tritium Hazard Report: Pollution and Radiation Risk from*

*Canadian Nuclear Facilities*, Greenpeace, June 2007

https://www.nirs.org/wp-content/uploads/radiation/tritium/tritium06122007gphazardreport.pdf

Cindy Folkers, *Tritium: Health Consequences*, Nuclear Information and Resource Service, April 2016

https://www.nirs.org/wp-content/uploads/factsheets/tritiumbasicinfo.pdf