

Date: December 2, 2013

To: Dr. Allison Macfarlane
Chairman, US Nuclear Regulatory Commission
11545 Rockville Pike, Rockville, MD 20852

Dear Chairman Macfarlane:

Thank you for the recent opportunity to provide you and NRC staff with an update on the impacts of the Fukushima nuclear power plants (NPPs) on the ocean. As discussed, this was an unprecedented event for the oceans. While the radionuclide releases were higher by far in 2011, continuing leakage from the tanks and groundwater contaminated from the NPP cooling waters and the potential for new leaks during decommissioning remain of great concern, especially for coastal Japanese fisheries. This winter, the arrival of the water containing traces of Fukushima radioactive contaminants on our US west coast, has resulted in increasing alarm among some in the US public. Addressing public concerns in a timely and scientifically credible manner is important and provides an invaluable “teachable moment.”

As I see it, in terms of US interests, there are two issues, one short term and one long term.

In the short term, there is a rapidly growing demand for some type of monitoring off the US west coast, Alaska and Hawaii. Without monitoring, it will be difficult to convey to the public how low/safe the Fukushima contaminant levels will be off the US coast, which are expected to peak in a couple of years. During our recent visit to Members of Congress and staff from the US west coast, Alaska and Hawaii, we were repeatedly advised of public concern about lack of monitoring and independent assessment of possible health effects necessary to counter the alarmist views that any level of radioactivity poses a significant health risk. As one example, the Alaskan offices are concerned that the detection of Fukushima radioactivity in seafood, despite assurances of negligible health impacts, could have very negative consequences for Alaska’s multi-billion dollar fishing industry. Clearly the monitoring needs to be accompanied by public education from trusted sources on the relative risks of radioactivity and human health effects.

In the longer term one can ask- are we ready if something similar happened along our coast, given that many US NPPs are situated on the coast or on rivers that drain to the ocean. Fukushima can be seen as a test bed for our ability to predict and monitor the fate and transport of radionuclides in the oceans and in our seafood supply. By every estimate, Fukushima radionuclides will be at safe levels off our coast, but current ocean models predict factors of ten differences in the concentrations of water born cesium isotopes. That level of uncertainty would be unacceptable if isotope concentration levels were higher. Also, we’ve noted a lack of training of the next generation of marine radiochemists and radioecologists, expertise that has been in decline in the US since the Cold War, as documented in a recent NAS study.

In response to these short and long term concerns, Woods Hole Oceanographic Institution launched a new Center for Marine and Environmental Radioactivity (CMER) at WHOI with the goals of: 1) public education, 2) training and 3) promoting new science and technologies to study natural and human made radionuclides. In our visit to your office and discussion with several agencies in DC (NOAA, NIST, DOE, NSF) we are consistently told that such efforts are in the US national interest, yet there is no agency that is “home” to these type of activities.

Given NRC's focus on assuring public safety from US nuclear power plant operations, we appreciate your recognition of the value of our work to date. We also appreciate any support you may be willing to provide in communicating with other US agencies and counterparts in Japan the benefits these short and long term studies will provide in more fully understand the ocean impacts of Fukushima. On our end, we are hoping to leverage private, corporate and government seed monies to keep the CMER effort going with the intention that this effort will eventually become a longer term priority within a US mission agency, such as DOE. Fukushima has certainly motivated our own efforts and provides a unique and valuable opportunity to learn from this unfortunate event.

Best Regards,

A handwritten signature in black ink, appearing to read 'K Buessler', with a long horizontal flourish extending to the right.

Ken O. Buessler
Center Director, CMER

Cc:
John Holdren
Ernest Moniz