Research & Applications



... would maintain protection against demonstrable radiation risks while eliminating requirements for continuous dose reduction in ranges where health effects have not been conclusively demonstrated." Further, "substantial evidence suggests that even 10,000 mrem/year may maintain a reasonable safety margin based on available epidemiological and radiobiological data."

Actual workplace exposures are considerably lower than the regulatory occupational dose limit of 5,000 mrem/year and are below historical levels. The report attributes the lower exposures to current ALARA requirements and states by way of an example that "in 2023, only 22 percent of monitored [Department of Energy] personnel received any measurable dose; of those, the average was just 50 mrem, 1 percent of the regulatory limit. Over the past five years, only one monitored individual within DOE received a dose above the 2,000 mrem administrative control level."

For the general public, "the current dose limit of 100 mrem per year also appears to be overly restrictive given the lack of observable effects at much higher levels of natural background radiation experienced by millions of people worldwide. A revised public dose limit of 500 mrem per year would maintain a substantial safety margin while better aligning with scientific evidence and enabling more cost-effective implementation of beneficial nuclear technologies across energy, healthcare, and industrial sectors."

The European Union, Japan, and Canada have annual occupational dose limits that, while not identical, roughly match or exceed the current U.S. limit of 5,000 mrem, according to a table provided in the report. Annual public dose limits for the EU, Japan, and Canada match the current U.S. limits at 100 mrem.

In 2022, the National Academies of Science,

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