

Eliminating LNT model just the beginning

I was glad to see the article in the June issue regarding ongoing work in reevaluating radiation exposure limits (“The low-dose radiation Grand Challenge: Moving forward,” *NN*, June 2019, p. 24). Assuming we are successful in relegating the linear no-threshold (LNT) model to the valley of the dinosaurs where it belongs, we must also not redefine but eliminate the “as low as reasonably achievable” (ALARA) principle and adjust the Nuclear Regulatory Commission’s radiological oversight process, as well as the Institute of Nuclear Power Operations’ performance indicators on radiation safety.

We cannot assume that either of these entities will change just because we eliminate the LNT model upon which the performance indicators are based. They have been there since at least 2000, and in the case of ALARA, for much longer. ALARA has forced many millions of dollars in

low-benefit rem reduction upon utilities. We need to embrace risk assessment of dose rather than arbitrary numbers.

A major milestone was reached when it was concluded that the use of respirators may increase exposure because of the longer time it takes to do the work and that they could be optional after appropriate evaluation. That is the same approach that must be used by the NRC and INPO regarding this issue.

In the case of INPO, its radiation safety indicator is really nothing of the kind. A true safety indicator would be something like zero-internal exposure or zero over-exposure. Instead, INPO defines the top quartile in radiation safety by how many total rems a plant gets in an outage over all the jobs done. At my plant, I recommended that internally we change the term “radiation safety goals” to “dose-management goals” but report under the INPO title. My plant would not even consider it.

Bottom line: You can change the approach all you want, but there will be no

gain to plants if the NRC and INPO do not also change with the times. I hope they do, and I hope the effort will involve both groups to help drive the issue.

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