December 18, 2019

The Honorable Dan Brouillette
Secretary of Energy

The Honorable Alex Azar
Secretary of Health and Human Services

Re: Joint Certification – by January 2, 2020 – under the American Medical Isotopes Production Act

Dear Mr. Secretaries,

We, the undersigned experts on nuclear security and public health, urge you to make the joint certification – as required by January 2, 2020, under the American Medical Isotopes Production Act (AMIPA) of 2013 – to halt further exports of nuclear weapons-grade, highly enriched uranium (HEU) for use in targets to produce medical isotopes on grounds that, as per AMIPA: "(A) there is a sufficient supply of molybdenum-99 produced without the use of highly enriched uranium available to meet the needs of patients in the United States; and (B) it is not necessary to export United States-origin highly enriched uranium for the purposes of medical isotope production in order to meet United States patient needs."

Of the four foreign producers that export molybdenum-99 (Mo-99) to the United States, three already do not use HEU targets to produce medical isotopes for the U.S. market: Curium (Netherlands), NTP (South Africa), and ANSTO (Australia). The fourth, IRE (Belgium), has stated in public documents that it already has sufficient U.S.-origin HEU for targets to produce Mo-99 through the third quarter of 2020, by which time it expects to be able to produce Mo-99 with targets of low-enriched uranium (LEU), which is not suitable for nuclear weapons.[1] IRE also has requested, via the U.S. National Nuclear Security Administration (NNSA), that the U.S. Nuclear Regulatory Commission (NRC) approve a final HEU export license for targets so that IRE can produce Iodine-131 until that process is converted to LEU targets in 2021. The NRC will determine if all or some of that pending license application is justified.

Accordingly, after January 2, 2020, no further HEU export license applications are expected to be submitted to the NRC for targets to produce medical isotopes. U.S. patient needs can be met by a combination of the three foreign producers that avoid HEU targets, the fourth foreign producer that is converting to LEU targets, and a U.S. producer (NorthStar in Wisconsin) that is already producing without HEU targets. In addition, several U.S. companies that avoid HEU targets are expected soon to start commercial production of Mo-99, facilitated by past NNSA cost-sharing, including under AMIPA.

Since 2009, NNSA has provided a total of at least $138 million in cost-sharing to seven U.S.-based initiatives to produce Mo-99 without HEU targets: NorthStar, SHINE, GE-Hitachi, BWXT, General Atomics, Northwest, and Niowave. This $138 million national-security investment has two goals. First, it aims to minimize any need for HEU exports, which pose risks of nuclear proliferation and nuclear terrorism. Second, it aims to reinforce the supply of medical isotopes to U.S. patients, which has been interrupted by past foreign events such as labor strikes and the eruption of a volcano in Iceland that halted international air traffic. Mo-99 has a very short radioactive half-life and thus cannot be stockpiled, so the only way to ensure a supply for U.S. patients is to establish domestic production.

[1] "IRE LEU conversion update," OECD-NEA AD-HOC Lite, Slide 4, July 9, 2019, http://sites.utexas.edu/nppp/files/2019/09/IRE-conversion-status-2019-July.pdf. Letter from Becky G. Eddy, Program Manager, NNSA Production Office, to David Skeen, Deputy Director, Office of International Programs, U.S. NRC, July 31, 2019.

Mr. Secretaries, if you fail to make the joint certification required under AMIPA, the NRC would be permitted to approve future applications of HEU for targets, which would both increase nuclear security risks and abet foreign companies to undercut the commercial viability of domestic U.S. producers of medical isotopes. This could mean that U.S. patients would be more vulnerable to an interruption in the supply of medical isotopes and that the previous $138 million U.S. government investment in domestic production would have been all or partially wasted.

Finally, we wish to remind you that in the event of unforeseen circumstances after a joint certification, AMIPA already contains a waiver: "If there is a critical shortage in the supply of molybdenum-99 available to satisfy the domestic United States medical isotope needs, the restriction of export licenses may be suspended for a period of no more than 12 months" at a time. For example, if IRE were to encounter significant delays in converting to LEU targets, and this raised the risk of a shortage in the supply of medical isotopes to U.S. patients, the waiver could be invoked to temporarily renew exports of HEU for targets to produce Mo-99. Thus, the joint certification would create no risk to U.S. patients, even in the event of such unforeseen circumstances.

Thank you for considering our views. We would be happy to provide additional information upon request.

Sincerely,

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