POLICY ISSUE
NOTATION VOTE

RESPONSE SHEET

TO: Carrie M. Safford, Secretary

FROM: Commissioner Marzano

SUBJECT: SECY-26-0062: Recommendation Regarding the Future of the Replenishment of Potassium Iodide

Approved X **Disapproved** ____ **Abstain** ____ **Not Participating** ____

COMMENTS: **Below** ____ **Attached** X **None** ____

MATTHEW MARZANO
Digitally signed by MATTHEW MARZANO
Date: 2026.06.03 09:53:11 -04'00'

Signature
Matthew J. Marzano

Date **06/03/2026**

Entered in STAR
Yes X
No ____

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Commissioner Marzano's Comments on SECY-26-0062: Recommendation Regarding the Future of the Replenishment of Potassium Iodide (KI)

I would like to express my sincere appreciation to the staff for their comprehensive review of current KI policies, practices, and evidence for effective KI use in an emergency. I support the staff's recommendation to cease funding of initial and replenishment stockpiles of KI beginning in FY 2028.

Before offering my comments on the staff's proposal, I want to underscore that this paper exemplifies not only the type of rigorous assessment the Commission envisioned when requesting this paper but also reflects the broader commitments we have made under the ADVANCE Act to operate more efficiently and effectively. The staff's analysis integrates historical context, prior research, and related efforts to present a clear, evidence-based recommendation—an effort that aligns with our culture and values. Organizational efficiency is rarely achieved through a single action or policy change. Instead, it emerges from an accumulation of efforts like this one, where sound policy analysis identifies opportunities for meaningful improvements. The staff's work here also illustrates how resolving longstanding policy inconsistencies can produce tangible budgetary benefits—an especially important outcome at a time when the agency is being asked to do more with fewer resources.

The staff presents three options for consideration in SECY-26-0062, each of which require coordination with federal partners as dictated by the language in the Public Health Security and Bioterrorism Preparedness and Response Act of 2002 (Bioterrorism Act). It is my view that the Bioterrorism Act, as delegated, with bifurcated responsibility for making KI available (Nuclear Regulatory Commission) and funding KI supply (Department of Health and Human Services via the Strategic Nuclear Stockpile (SNS)), creates an unworkable framework. Thus, we should seek to extract ourselves from this paradigm. Additionally, SECY-26-0062 characterizes the Commission's obligations under Section 127 of the Bioterrorism Act in a manner that I believe deserves more careful examination—specifically whether the current interpretation may be overstating the scope of NRC's residual obligations under the Bioterrorism Act.

I appreciate the staff's foresight in presenting the Commission with viable solutions to address the immediate and long-term funding challenges of making KI available as currently required under law. While each option offers a potential path forward, Option 3 should be pursued as the highest priority given the evidence that suggests current policy for the prophylactic use of KI in emergencies does not reflect the latest science or best practices in emergency management. Furthermore, prior efforts to transfer this responsibility to another federal agency have failed. And even if the staff is able to reach an agreement through one of the first two options, this appears to simply shift responsibility for funding suboptimal KI policy to another federal agency. We should be enabling not just prudent use of NRC fee-based funds, but prudent use of public funds generally. In this case, doing so requires development of exactly the technical basis proposed to support Option 3.

Therefore, the staff should ensure that sufficient resources are available and applied to (1) document a robust technical basis, (2) engage in the Federal Radiological Preparedness Coordinating Committee (FRPCC), (3) conduct additional state and federal agency outreach and coordination, as appropriate, and (4) coordinate with other federal agencies to ensure coherent and consistent policy on the use of KI. The technical basis should present any considerations needed to reflect modern reactor designs and scalable emergency preparedness

frameworks. The staff should also coordinate directly with the President's Office of Science and Technology Policy (OSTP) to seek clarification of the scope of the January 2008 waiver and its effect on NRC's residual obligations under Section 127.

Nevertheless, with coordination efforts critical to understanding the feasibility of each option still ahead of us, I approve in principle the staff's pursuit of all three options identified in SECY-26-0062. In doing so, it is my intention to support an approach that provides the staff with flexibility as they begin iterative outreach to federal counterparts. And, as my colleagues have expressed, the staff should reengage the Commission as appropriate if it becomes clear that none of the currently proposed options are expected to be successful.

After examining the staff's proposals, there are three separate matters that are somewhat collapsed in this discussion, which I believe should be addressed independently. I outline below my considerations regarding federal funding of KI, our legislative mandate, and the development of an informed, sound, and comprehensive policy.

On the matter of federal funding of KI

When the Commission amended 10 CFR 50.47(b)(10) in 2001, it explicitly recognized that its decision to fund state KI stockpiles "contradicts the Commission's historical policy that funding for state and local emergency planning is the responsibility of those governments."[1] The decision to fund initial KI supplies was an exception made in the moment, not a statement of enduring federal responsibility. In 2006, with initial supplies reaching their shelf life, the Commission again approved NRC funding to replenish KI supplies, but with an explicit statement that this replenishment was a one-time action that would not be renewed.[2] The Commission then elected in 2009 to "modify its potassium iodide (KI) distribution policy from a one-time replenishment action to one providing KI tablets to affected states that request them and replenishing KI tablet stockpiles upon states' requests." [3] This action responded to shifting direction on the implementation of Section 127 of the Bioterrorism Act, including Dr. Marburger's 2008 decision[4] and his embedded discussion of the NRC's KI distribution policy at the time.

Today, this ongoing funding of KI is accomplished through fee-based revenues collected equally from all NRC licensees—including licensees whose states have elected not to participate in a KI program at all. Twenty-six states and the District of Columbia do not distribute KI, either because nuclear power plants are considered too distant to pose a material risk to surrounding populations or because those jurisdictions do not view KI as an effective complement to evacuation and sheltering. Yet their licensees' fees contribute to a program that benefits only the 24 states that have elected to maintain a KI program. Amongst those state programs are some that rely on post-accident distribution strategies, which our own recent analysis suggests are of limited value.

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[1] 66 FR 5437, "Consideration of Potassium Iodide in Emergency Plans," January 19, 2001.
[2] SRM-SECY-06-0142, "Options and Recommendations for Replenishing Expired Potassium Iodide (KI), U.S. Nuclear Regulatory Commission, September 6, 2006, ADAMS Accession No. ML062490522.
[3] SRM-SECY-09-0041, "Recommendation for Future Replenishment of Potassium Iodide," U.S. Nuclear Regulatory Commission, April 7, 2009, ML090970150.
[4] Decision Memorandum from John H. Marburger, III, Director, Office of Science and Technology Policy, "Decision on Delegation of Section 127(f) of the Public Health Security and Bioterrorism Preparedness and Response Act of 2002," January 22, 2008, ML090370423.

Furthermore, no other element of offsite emergency preparedness is funded by the NRC. Costs incurred to fulfill other requirements of 10 CFR 50.47(b), such as training, periodic exercises, and public information materials, are borne by the states and, where appropriate, by licensees. KI is uniquely positioned as an item that the federal government purchases and ships. Accordingly, I support the staff's recommendation that funding cease in FY 2028.

On NRC's legislative mandate

As I expressed above, I find that the prevailing interpretation of the NRC's responsibilities under the Bioterrorism Act warrants further scrutiny, especially when considering the basis for the decision issued under Section 127(f) by the Director of OSTP in 2008. My reading of Dr. Marburger's decision is that the waiver effectively addressed the entirety of the Bioterrorism Act's distribution mandate rather than converting it from a 0-to-20-mile requirement down to a 0-to-10-mile requirement. Dr. Marburger's Decision Memorandum suggests that he considered the Bioterrorism Act as one of several relevant policy frameworks. He writes, "Under the Act, the Federal government would provide KI to be distributed by state and local governments to populations living in a zone *extending an additional 10 miles beyond the existing 10 mile emergency planning zone* near nuclear power plants (NPPs), in which a KI distribution program already exists."[5] Dr. Marburger's Decision Memorandum continues by stating that, "Because the federal government already makes KI available to states for distribution within 10 miles of a nuclear power plant, *Section 127 would effectively expand the KI distribution zone to the 10-20 mile range*."[6] Critically, as SECY-09-0041 noted, Dr. Marburger "took it as given that federal resources, through the NRC, were already committed to the distribution of KI supplies to the general public in the 10-mile Emergency Planning Zone (EPZ)."[7] This framing suggests that his waiver decision was premised on a pre-existing NRC commitment, not that it affirmatively created or reinforced one.

This distinction matters. If the waiver was issued against the backdrop of an existing NRC program and was understood by Dr. Marburger to leave that program undisturbed as a matter of fact rather than law, then it does not follow that discontinuing NRC funding would itself violate the Bioterrorism Act. In the paradigm where the Bioterrorism Act is not operative, the Commission's decision to directly fund KI is the prerogative of the NRC. The question becomes whether there is any new information that warrants reconsideration of the Commission's 2009 decision to fund KI on an ongoing basis. This question is answered affirmatively in SECY-26-0062, and I return to that point in the next section.

Given the ambiguity I've discussed above, I recommend that the staff coordinate directly with the OSTP to seek clarification of the scope of the January 2008 waiver and its effect on NRC's residual obligations under Section 127 of the Bioterrorism Act. The staff should seek formal clarification as to whether OSTP views the Section 127(a) requirements as currently operative for the 0–10-mile zone, and if so, whether OSTP would consider pursuing a potential new waiver determination covering that zone. If the OSTP engagement clarifies that Section 127 remains operative and that OSTP is open to a new waiver determination, then that further supports elevating Option 3 as the primary path forward.

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[5] *Id*. (*emphasis added*).
[6] *Id*.
[7] SECY-09-0041, "Recommendation for Future Replenishment of Potassium Iodide," U.S. Nuclear Regulatory Commission, March 3, 2009, ML082270731.

Furthermore, upon reviewing the record—particularly the outline of the staff's coordination efforts with industry and federal partners[8] to implement the 2006 Commission direction[9] which sought alternatives to NRC funding of KI—I anticipate that efforts to establish an agreement for implementing the first two options presented in SECY-26-0062 will present significant challenges. As I stated above, I approve in principle of the staff's pursuit of all three options, but in a priority order that reflects the outcome of the engagement with OSTP. Dr. Marburger also specifically recommended that the NRC work in concert with other federal, state, and local health authorities to develop a 'best practices' guideline for KI distribution. That recommendation has not been executed by the agency in all respects. As discussed below, I believe the moment has arrived to fully implement that directive.

The development of informed, sound, comprehensive policy and guidance

Although I do not view the funding of KI as the NRC's responsibility, I believe it is incumbent upon the NRC to bring our expertise and tools to bear in a manner that guides KI policy in a technically sound and comprehensive way. The NRC has an extensive record of investment in consequence modeling (e.g., MELCOR Accident Consequence Code System (MACCS)/MELCOR) and history of coordination through the FRPCC to evaluate realistic protective action strategies (including evacuation, sheltering, and interdiction of food/milk) against KI benefits. The current matter before the Commission in this paper presents a timely opportunity for the NRC to leverage our technical expertise and mature computational capabilities to inform a policy that has long relied upon legacy assumptions. The NRC's emergency preparedness regulations require that emergency plans include consideration of prophylactic use of KI as a supplement to evacuation and sheltering. Informing the NRC's regulations and guidance based on the weight of scientific evidence demonstrates the agency's commitment to protecting the public health and safety, building public confidence, and implementing "Gold Standard Science" in its decision-making, consistent with Executive Order 14303, "Restoring Gold Standard Science."

SECY-26-0062, and the cited references, identify several considerations that current KI policy does not address and that should be incorporated into guidance, including:

- *Mask effectiveness.* Research cited in SECY-26-0062 notes that across many representative accident scenarios, cesium iodide (CsI) dominates the radioiodine species in early release phases. This suggests that mask use could be an effective and readily deployable countermeasure against inhalation of radioiodine, with fewer logistical constraints than KI distribution. This finding should be integrated into the federal guidance.
- *Advanced and microreactor source terms.* Federal KI policy was developed for large Light Water Reactors with 10-mile EPZs and Chernobyl-scale source terms. Many advanced reactor designs and small modular reactors have substantially smaller radioiodine inventories as well as different release characteristics, thus, our regulations now provide provisions for scaled EPZs. For some designs, the source term may be sufficiently small such that neither a pre-distribution nor a stockpile program is warranted. Guidance criteria should be developed when KI distribution programs are and are not appropriate, based on reactor type, source term, and EPZ configuration.

[8] *Id*.
[9] ML062490522.

- *Lessons from Fukushima.* The Fukushima accident of 2011 released radioactive material over several days rather than as a discrete event, raising new questions about KI use in prolonged multi-phase release scenarios, particularly for at-risk populations including children and pregnant women. Guidance should reflect these findings.
- *Population compliance assumptions.* The recent report providing a qualitative evaluation of KI implementation strategies using the MACCS code is explicit that its results assume perfect adherence to protective action instructions.[10] Any updated guidance must grapple with realistic compliance assumptions rather than idealized ones.

As I discussed in my vote for SECY-22-0083, "Petition for Rulemaking and Rulemaking Plan on Public Protective Actions During a General Emergency (PRM-50-123; NRC-2020-0155)," where evidence and practical experience suggests that our regulations and guidance may be outdated, we should pursue updates to governing policy that reflect the current state of knowledge. We should also ensure that evidence-based solutions, especially on recommendations for emergency preparedness, are communicated effectively to maintain public trust. Similarly, I believe that it is the NRC's responsibility to guide KI policy in a technically sound and comprehensive manner. Therefore, the staff should work within the FRPCC to update the Federal Guidance based on the best available science with a public audience in mind.

As I noted in prior votes, I believe that the NRC's ability to support durable, science-backed reforms depends on sustained research capacity. With the significant downward trend in funding for the NRC's Office of Regulatory Research, I fear we will lose similar opportunities to prepare for the reforms of the future.

Finally, I note that SECY-26-0062 is marked "official use only" (OUO). I presume this is a conservative interpretation considering that this paper is a result of a Staff Requirements Memorandum (SRM) classified as OUO (the FY 27 budget). Barring any other rationale for the classification, I recommend removal of the OUO designation. The change in Commission Policy being contemplated here should be fully transparent and the considerations and rationale for the Commission's ultimate decision should be available to the public.

[10] SAND2026-19267, "Quantitative Evaluation of Potassium Iodide Implementation Strategies for Emergency Preparedness and Response," Sandia National Laboratories, March 31, 2026, ML26097A248.