

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

COMMISSIONERS:

Stephen G. Burns, Chairman  
Kristine L. Svinicki  
Jeff Baran

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In the Matter of )

U.S. DEPARTMENT OF ENERGY )

(Export of 93.20% Enriched Uranium) )  
\_\_\_\_\_ )

Docket No. 11006187

License No. XSNM3757

**CLI-16-15**

**MEMORANDUM AND ORDER**

**I. INTRODUCTION**

Dr. Alan J. Kuperman requests leave to intervene and a hearing on an export license application filed by the Department of Energy/National Nuclear Security Administration (DOE/NNSA).<sup>1</sup> DOE/NNSA seeks to export 130 kilograms of highly enriched uranium (HEU) to France—specifically to the Compagnie pour l’Etude et la Réalisation de Combustibles Atomiques (CERCA) facility. Dr. Kuperman does not seek denial of this requested license; rather, he requests a full and open public hearing, and he asks the NRC to limit the amount of uranium DOE/NNSA can export so that DOE/NNSA does not send a multi-year supply of HEU

<sup>1</sup> See *Petition of Alan J. Kuperman for Leave to Intervene and Request for Hearing* (Mar. 18, 2015) (Petition); Application to Export Enriched Uranium to the Institut Laue-Langevin for use as Fuel in the High-Flux Reactor (to France), License No. XSNM3757 (Dec. 18, 2014) (ADAMS accession no. ML14357A012).

to France. For the reasons discussed below, we deny Dr. Kuperman's request for a hearing and direct issuance of the requested license.

## II. BACKGROUND

DOE/NNSA submitted a license application to export up to 130 kilograms of HEU (enriched up to 93.20%) to CERCA, which will fabricate the HEU into fuel and then transfer the fuel to the Institut Laue-Langevin for use in its High-Flux Reactor. This proposed export would take place under the auspices of the U.S. – Euratom Agreement for Cooperation in the Peaceful Uses of Nuclear Energy, and the European Commission has confirmed that the French recipients are authorized to receive this type of nuclear material. DOE/NNSA plans to export this HEU using a military transporter.

The ultimate end user—the Institut Laue-Langevin—is a research center that specializes in neutron science. It uses a high-flux reactor to produce neutrons that, in turn, are used in a variety of research settings. This High-Flux Reactor operates continuously during a 50-day cycle, followed by a shutdown after each cycle.<sup>2</sup> Typically there are four cycles per year, and each cycle requires a single fuel element containing approximately ten kilograms of HEU.<sup>3</sup> The reactor therefore uses about forty kilograms of HEU per year; this proposed export constitutes a three-to-five year supply of HEU.

The operator cannot currently use low-enriched uranium to fuel this reactor and produce the neutrons it needs. Although the operator agreed in 1998 to study the feasibility of converting its reactor to a low-enriched uranium reactor, that work remains ongoing, with conversion to low-enriched uranium now expected in the 2027-28 timeframe.

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<sup>2</sup> <https://www.ill.eu/en/reactor-environment-safety/high-flux-reactor> (last visited August 18, 2016).

<sup>3</sup> <https://www.ill.eu/en/reactor-environment-safety/safety/faq-reactor-safety/what-are-the-technical-specifications-of-the-ills-reactor/> (last visited August 18, 2016).

All fuel for the Institut's High-Flux Reactor is first fabricated at the CERCA facility. As noted in the correspondence providing the Executive Branch's views, the Institut's current fuel inventory will last only until September 2019. CERCA requested an extended lead time for this HEU due to uncertainties related to possible post-Fukushima refurbishments at its fabrication facility. Once exported, and after fabrication, this 130 kilograms of HEU would provide enough fuel to allow the High-Flux Reactor to operate until approximately 2023.

In accordance with section 126 of the Atomic Energy Act of 1954, as amended (AEA),<sup>4</sup> and 10 C.F.R. § 110.41, the NRC submitted DOE/NNSA's application to the Executive Branch on January 20, 2015, for review. The State Department provided the NRC with the Executive Branch's views on this export application by letter dated May 4, 2016.<sup>5</sup> The Executive Branch recommended that the NRC make all the required statutory determinations and issue the requested license to DOE/NNSA. The Executive Branch supplemented its views in a letter dated June 3, 2016.<sup>6</sup> The June letter provided additional information and context regarding DOE/NNSA's application and reiterated the Executive Branch's recommendation that the NRC issue the proposed license.

The NRC also published a notice of opportunity to request a hearing on the application.<sup>7</sup> Dr. Kuperman thereafter filed an intervention petition. Dr. Kuperman seeks, first, a hearing on DOE/NNSA's export application and, second, that the Commission not issue a multi-year export

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<sup>4</sup> 42 U.S.C. § 2155.

<sup>5</sup> Letter from Richard J.K. Stratford, U.S. Department of State, to Brooke G. Smith, U.S. Nuclear Regulatory Commission (May 4, 2016) (ML16126A052) (non-public).

<sup>6</sup> Letter from Richard J.K. Stratford, U.S. Department of State to Brooke G. Smith, U.S. Nuclear Regulatory Commission (June 3, 2016) (ML16158A026) (non-public).

<sup>7</sup> Application for a License to Export High-Enriched Uranium, 80 Fed. Reg. 8711 (Feb. 18, 2015).

license for HEU to CERCA and the Institut Laue-Langevin in excess of demonstrated need.<sup>8</sup> As discussed below, we deny Dr. Kuperman's request for a hearing. But we respond to his views as we consider the statutory and regulatory determinations we must make before issuing this license, treating his views as written comments pursuant to 10 C.F.R. § 110.81. Finally, we direct the issuance of the license.

### III. DR. KUPERMAN'S HEARING REQUEST

Dr. Kuperman seeks an oral hearing in which (1) all pertinent information and data are made available for public inspection and analysis and (2) the public is afforded a reasonable opportunity to present oral and written testimony to the Commission.<sup>9</sup>

#### A. Statutory and Regulatory Requirements for a Hearing on an Export License Application

Pursuant to section 304(b) of the Nuclear Non-Proliferation Act of 1978, the NRC established procedures that allow for "public participation in nuclear export licensing proceedings when the Commission finds that such participation will be in the public interest and will assist the Commission in making the statutory determinations required by the [AEA], including such public hearings and access to information as the Commission deems appropriate."<sup>10</sup> These procedures, which govern hearing requests and petitions to intervene on an export license application, are contained in 10 C.F.R. Part 110, Subpart H, and they "constitute the exclusive basis for hearings in nuclear export licensing proceedings."<sup>11</sup> Our regulations also require us to review the Executive Branch's views on the export application

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<sup>8</sup> Petition at 18-21.

<sup>9</sup> *Id.* 20, 22.

<sup>10</sup> 42 U.S.C. § 2155a.

<sup>11</sup> *Id.*; *see also* 10 C.F.R. § 110.80.

before reaching a decision on the hearing request or petition to intervene.<sup>12</sup> If we determine that a hearing should be granted, we may order either an oral hearing or a hearing consisting of written comments.<sup>13</sup> In addition to these hearing procedures, our regulations also provide for non-adjudicatory public participation. Specifically, our regulations expressly encourage the public to provide written comments on export license applications, which we consider and respond to as appropriate.<sup>14</sup>

Under our regulations—and consistent with section 304(b) of the Nuclear Non-Proliferation Act—hearing requests in export cases must “explain why a hearing or an intervention would be in the public interest and how a hearing or intervention would assist the Commission in making the [statutory] determinations.”<sup>15</sup> Once we receive an intervention petition on an export application, therefore, we must determine whether a hearing is in the public interest and would assist us in making the required determinations.<sup>16</sup>

Our regulations further provide that a hearing request must “specify, *when a person asserts that his interest may be affected*, both the facts pertaining to his interest and how it may be affected.”<sup>17</sup> Section 110.84 further explains: “If a hearing request or intervention petition asserts an interest which may be affected, the Commission will consider:

- (1) The nature of the alleged interest;
- (2) How that issue relates to issuance or denial; and

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<sup>12</sup> 10 C.F.R. § 110.84(d).

<sup>13</sup> *Id.* § 110.84(g).

<sup>14</sup> *Id.* § 110.81(a).

<sup>15</sup> *Id.* § 110.82(b)(3).

<sup>16</sup> *Id.* § 110.84(a).

<sup>17</sup> *Id.* § 110.82(b)(4) (emphasis added).

- (3) The possible effect of any order on that interest, including whether the relief requested is within the Commission's authority, and, if so, whether granting relief would redress the alleged injury."<sup>18</sup>

We first consider Dr. Kuperman's assertion of an interest and then address whether Dr. Kuperman has shown that a hearing would be in the public interest and would assist us in making the required statutory and regulatory determinations.

## **B. Analysis**

Dr. Kuperman's petition includes a section discussing his interests.<sup>19</sup> Dr. Kuperman provides biographical information describing his past and ongoing professional work on non-proliferation issues and his organization's institutional interests in the topic.<sup>20</sup> Dr. Kuperman asserts that these institutional interests related to public information and education programs concerning arms control, proliferation risks, nuclear terrorism, and the use of HEU "would be significantly and adversely impaired" unless we hold a "full, open, and independent review" of the issues.<sup>21</sup>

Consistent with 10 C.F.R. § 110.84(b), we find that although Dr. Kuperman has articulated the nature of his interests, his interests do not have a sufficient nexus to the proposed export of HEU to France to satisfy the other elements we consider when assessing an

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<sup>18</sup> *Id.* § 110.84(b). As we have explained, persons without an affected interest are not as likely as persons with an affected interest to contribute to our decisionmaking and show that a hearing would be in the public interest and assist us in making the statutory determinations. See *U.S. Department of Energy* (Plutonium Export License), CLI-04-17, 59 NRC 357, 367 (2004).

<sup>19</sup> Petition at 3-5.

<sup>20</sup> *Id.* at 3-4. Dr. Kuperman notes that he is the Coordinator of the Nuclear Proliferation Prevention Project, which engages in "research, debate, and public education to ensure that civilian applications of nuclear technology do not foster the spread of nuclear weapons to states or terrorist groups." *Id.* at 3.

<sup>21</sup> *Id.* at 4.

asserted interest that may be affected by a proceeding.<sup>22</sup> Specifically, Dr. Kuperman has not shown that issuing this export license will hinder his ability to continue his educational activities and continue his activities related to arms control, nuclear weapons, proliferation, terrorism, and the use of HEU. As a result, we conclude that Dr. Kuperman has not demonstrated that he possesses an interest that may be affected by this proceeding.

Additionally, Dr. Kuperman has not demonstrated that granting the hearing or intervention would be in the public interest and would assist us in making the required statutory and regulatory determinations.<sup>23</sup> We consider both factors when evaluating whether to grant a hearing or intervention.<sup>24</sup> To satisfy these factors, a petitioner must specifically identify how a hearing would bring new information to light.<sup>25</sup>

Here, although Dr. Kuperman “does not necessarily oppose the granting of the license application *for some portion* of the HEU sought, assuming the requisite need can be demonstrated,”<sup>26</sup> he argues that the NRC should not approve an export of HEU that exceeds the demonstrated needs of the applicant.<sup>27</sup> Dr. Kuperman asserts that the NRC should not

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<sup>22</sup> See *Transnuclear, Inc.* (Export of 93.15% Enriched Uranium), CLI-94-1, 39 NRC 1, 5 (1994) (explaining that merely asserting an “institutional interest in providing information to the public” is insufficient for showing an affected interest.)

<sup>23</sup> The statutory determinations can be found at 42 U.S.C. § 2156, 42 U.S.C. § 2160d(a) and 42 U.S.C. § 2077(c). The regulatory determinations are found at 10 C.F.R. §§ 110.45 and 110.42(a)(1-5, 7-9).

<sup>24</sup> 10 C.F.R. § 110.84(a).

<sup>25</sup> See *U.S. Department of Energy*, CLI-04-17, 59 NRC at 369 (“Petitioners have already submitted detailed information as to the basis for their position. We do not believe a hearing will result in significant new information that is not already available to and considered by the Commission in making the requisite statutory determinations.”); see also *Transnuclear, Inc.* (Export of 93.3% Enriched Uranium), CLI-00-16, 52 NRC 68, 72 (2000) (explaining that nothing in the petitioner’s filings indicates it will be able to “present significant information not already available to and considered by the Commission”).

<sup>26</sup> Petition at 18.

<sup>27</sup> *Id.*

authorize a license to export a multi-year supply of HEU because of proliferation and terrorism risks and because of the impact on U.S. common defense and security.<sup>28</sup> Specifically, Dr. Kuperman articulates three reasons to support this argument: (1) approving exports in excess of need would provide a disincentive to converting European facilities to non-HEU fuel;<sup>29</sup> (2) approving a large export would aggravate the risk of interception;<sup>30</sup> and (3) the non-proliferation risks outweigh the benefits to the applicant when approving an export in excess of need.<sup>31</sup> Dr. Kuperman further argues that “only a public hearing in which issues related to the appropriateness of exporting HEU are fully aired and subjected to public scrutiny can serve to resolve legitimate public questions concerning both the need for granting this license application and the risks associated with such action.”<sup>32</sup>

Notwithstanding Dr. Kuperman’s extensive knowledge of non-proliferation issues and the points he makes in his petition, he has not adequately explained how a hearing would be in the public interest and assist us in making the required statutory and regulatory findings in this case. Dr. Kuperman has identified portions of the license application that, in his view, raise important public policy questions. But that is not sufficient to obtain a hearing. He must also identify how a hearing would provide new information to us, and how this information links to the findings that we must make. His petition does neither. Dr. Kuperman does not explain how a hearing would add to the points already made in his petition. Nor does he pinpoint which NRC export licensing determinations a hearing would address.<sup>33</sup> Dr. Kuperman’s arguments regarding breaking up

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<sup>28</sup> *Id.* at 19.

<sup>29</sup> *Id.* at 15-16, 19.

<sup>30</sup> *Id.* at 19-20.

<sup>31</sup> *Id.* at 20.

<sup>32</sup> *Id.* at 21.

<sup>33</sup> 10 C.F.R. §§ 110.42 and 110.45 provide these criteria.



the proposed HEU export are plain on the face of his petition and can be readily understood on that basis.<sup>34</sup> As a result, we deny Dr. Kuperman's intervention petition and hearing request. Even though Dr. Kuperman has not met the threshold for obtaining a hearing, we still consider his views on DOE/NNSA's export license application as written comments on the application.<sup>35</sup> We turn next to our determination on the application, taking into account Dr. Kuperman's views.

#### IV. STATUTORY AND REGULATORY DETERMINATIONS

Before granting an export license for HEU to a nuclear weapon state (like France), we must make the following determinations:

- The proposed export satisfies AEA § 127's nonproliferation criteria;<sup>36</sup>
- The proposed export satisfies the "Schumer Amendment," which is found in AEA § 134;<sup>37</sup>
- Finally, under AEA § 57c(2), the proposed export will not be "inimical to the common defense and security" of the United States.<sup>38</sup>

We address each in turn, responding to Dr. Kuperman's written views when appropriate.

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<sup>34</sup> Cf. *EnergySolutions, LLC* (Radioactive Waste Import/Export Licenses), CLI-11-3, 73 NRC 613, 623 (2011) ("Petitioners' written views are on the record. We therefore need not devote adjudicatory resources on providing an oral hearing on Petitioners' grievances when they have been unable to articulate material issues that require litigation at a hearing[.]").

<sup>35</sup> 10 C.F.R. § 110.81(a).

<sup>36</sup> 42 U.S.C. § 2156; see also 10 C.F.R. § 110.42(a)(1-5).

<sup>37</sup> 42 U.S.C. § 2160d; see also 10 C.F.R. § 110.42(a)(9).

<sup>38</sup> 42 U.S.C. § 2077(c)(2); see also 10 C.F.R. § 110.42(a)(8). Additionally, our regulations require that we find any export "of more than 0.003 effective kilograms of special nuclear material . . . would be under the terms of an agreement for cooperation." *Id.* § 110.42(a)(7). As noted above, the proposed export would be under the term of the U.S. – Euratom Agreement for Cooperation in the Peaceful Uses of Nuclear Energy.

**A. Section 127 Criteria**

Section 127 of the AEA lists five applicable non-proliferation criteria that govern exports of special nuclear material.<sup>39</sup> None of these criteria are the subject of Dr. Kuperman's petition, and on the basis of the Executive Branch's views and the record, we find that these non-proliferation criteria have been satisfied.

**B. Section 134 Criteria**

Section 134 of the AEA requires the NRC to make additional findings before authorizing an applicant to export HEU.<sup>40</sup> Specifically, section 134(a) requires the NRC to determine that:

- (1) there is no alternative nuclear reactor fuel or target enriched in the isotope 235 to a lesser percent than the proposed export that can be used in the reactor;
- (2) the proposed recipient of that uranium has provided assurances that, whenever an alternative nuclear reactor fuel or target can be used in that reactor, it will use that alternative in lieu of highly enriched uranium; and
- (3) the United States Government is actively developing an alternative nuclear reactor fuel or target that can be used in that reactor.

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<sup>39</sup> 42 U.S.C. § 2156; *see also* 10 C.F.R. § 110.42(a)(1-5). Section 127 lists a sixth criterion, but that sixth criterion applies only to exports of nuclear technology and is not applicable to an export of nuclear material. In abbreviated form, the five applicable criteria are:

- (1) IAEA [International Atomic Energy Agency] safeguards will be applied with respect to any such material proposed to be exported;
- (2) No material proposed to be exported will be used for any nuclear explosive device or for research on or development of any nuclear explosive device;
- (3) Adequate physical security measures will be maintained with respect to such material proposed to be exported and to any special nuclear material used in or produced through the use thereof;
- (4) No material proposed to be exported will be re-transferred to the jurisdiction of any other nation or group of nations unless the prior approval of the United States is obtained for such re-transfer;
- (5) No material proposed to be exported and no special nuclear material produced through the use of such material will be reprocessed, and no irradiated fuel elements containing such material removed from a reactor shall be altered in form or content, unless the prior approval of the United States is obtained.

<sup>40</sup> 42 U.S.C. § 2160d; *see also* 10 C.F.R. § 110.42(a)(9).

The Executive Branch states that these three criteria have all been satisfied. Specifically, Argonne National Laboratory has confirmed that there is no low-enriched uranium fuel currently available that can be used in the Institut Laue-Langevin's High-Flux Reactor. The Institut Laue-Langevin (the recipient) has repeatedly confirmed its intent to convert the High-Flux Reactor so that it can use low-enriched uranium. And NNSA is currently cooperating with its European counterparts to develop low-enriched uranium fuel for this reactor.

Dr. Kuperman does not identify in his petition how this export violates section 134(a). Instead, he maintains that failing to limit the export would undermine the general policy underlying the Schumer Amendment by exacerbating the risk that European operators will continue to delay conversion to low-enriched uranium.<sup>41</sup> Dr. Kuperman asserts that authorizing such a large export of HEU is contrary to the spirit of the Schumer Amendment (if not the technical criteria) because it could be viewed as promoting HEU use in Europe.

As previously noted, NNSA and its European counterparts already have an active program—the "HERACLES" program—under way to develop low-enriched uranium that can be used in research reactors such as the Institut Laue-Langevin's High-Flux Reactor. But this alternative fuel will not be ready until 2027, as technical efforts to develop low-enriched fuel for this High-Flux Reactor are ongoing. Because this proposed export would supply the reactor until only 2023, the reactor will not be receiving all the HEU it needs prior to conversion. Dr. Kuperman's concern, therefore, that this export could push back the date of the expected conversion is misplaced—even after this export the Institut Laue-Langevin will still need more HEU. Nor would this export provide the Institut Laue-Langevin or Europe as a whole with a disincentive to convert to low-enriched uranium. The Executive Branch's views confirm that the Institut Laue-Langevin and its European partners are fully committed to converting to low-enriched uranium fuel.

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<sup>41</sup> Petition at 15-16, 19.

Further, in December 2014, DOE and the Euratom Supply Agency entered into a Memorandum of Understanding whereby Euratom committed to further minimize HEU use in Europe by either sending excess un-irradiated HEU back to the United States or downblending it in Euratom member states. The Executive Branch's views note that under the auspices of this 2014 agreement—as well as the Joint Statement issued at the 2016 Nuclear Security Summit—Europe will offset this proposed export by returning a greater amount of HEU back to the United States.<sup>42</sup> Therefore, from an HEU-minimization standpoint, the proposed export does not undermine the Schumer Amendment's objective of shifting away from HEU use overseas for non-military purposes. Accordingly, we are not persuaded by Dr. Kuperman's view that this export undermines the Schumer Amendment, and we find that the section 134 criteria are satisfied.

**C. Noninimicality Finding**

Finally, we must also determine under section 57c(2) of the AEA that the proposed export will not be "inimical to the common defense and security" of the United States.<sup>43</sup> Here, Dr. Kuperman raises two arguments that suggest inimicality concerns with this proposed export. First, Dr. Kuperman asserts that Commission approval of the pending export application would lead to unnecessary risks resulting from shipping a large quantity of weapons-grade nuclear material.<sup>44</sup> This, Dr. Kuperman states, raises the risk that terrorists or "rogue states" could attempt to intercept the export. Second, Dr. Kuperman maintains that this export could lead to a

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<sup>42</sup> The text of the Joint Statement can be found here: <http://www.nss2016.org/document-center-docs/2016/4/1/joint-statement-on-eu-us-heu-exchange> (last visited August 18, 2016).

<sup>43</sup> 42 U.S.C. § 2077(c)(2); *see also* 10 C.F.R. § 110.42(a)(8).

<sup>44</sup> Petition at 19-20.

stockpiling of HEU abroad and thus be contrary to longstanding U.S. foreign policy objectives.<sup>45</sup>

We address each argument in turn.

Dr. Kuperman is correct that any shipment of weapons-grade nuclear material entails some risk of diversion. Yet we note that the diversion or interception risk is especially minimal when the shipment is being conducted by a military transport, as is the case here. Further, upon close inspection, we conclude that increasing the number of HEU shipments—as Dr. Kuperman prefers—would serve to *increase* those risks rather than decrease them. Additional shipments increase the amount of planning effort and would therefore increase the risk that sensitive shipment information could be compromised. Increasing the number of shipments could also establish a pattern that would enable potential adversaries to collect intelligence and then execute an attempt to intercept a subsequent shipment. And additional shipments would increase the probability of equipment failure. This conclusion is buttressed by the Executive Branch's views, which likewise conclude that breaking this proposed export into many shipments would increase security risks. Accordingly, we do not agree that this export poses unreasonable diversion risks.

Dr. Kuperman further argues that the proposed export of a multi-year supply of HEU is significantly in excess of the end user's needs and raises stockpiling concerns. Dr. Kuperman, therefore, asserts that this export would be contrary to previous Commission precedent and longstanding U.S. foreign policy objectives.<sup>46</sup> As a preliminary matter, Dr. Kuperman notes previous export licenses that authorized only a one-year supply of HEU.<sup>47</sup> Yet those export

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<sup>45</sup> *Id.* at 16-17, 19-20.

<sup>46</sup> *Id.* at 19.

<sup>47</sup> *Id.* at 11. Specifically, Dr. Kuperman references License Nos. XSNM-3708, XSNM-3726, XSNM-3729, XSNM-3730, XSNM-3745, XSNM-3730-1, XSNM-3729-1, XSNM-3752, XSNM-3755, and XSNM-3756.

licenses were for medical-isotope targets rather than research reactor fuel. Fuel for research reactors entails longer fabrication timelines. And research reactors' fuel requirements tend to be more stable and predictable over longer periods of time compared to medical-isotope targets—thereby rendering research reactors more suitable to large shipments of HEU compared to medical-isotope production. In fact, we previously decided to authorize the export of a three-to-five year supply of HEU to the Institut Laue-Langevin's High-Flux Reactor.<sup>48</sup>

Although Dr. Kuperman is correct that our precedent generally discourages exports in excess of the end user's actual needs,<sup>49</sup> we disagree that this proposed export would actually exceed the reactor's needs and lead to stockpiling. The High-Flux Reactor's core features a single element composed of several hundred thin involute plates manufactured to exact tolerances. The associated fuel fabrication process is therefore highly complex—and it contains the very real possibility that some fuel will either be rejected during fabrication or fail during reactor operation. Fuel contingencies, therefore, serve as a reasonable hedge against fuel failure and provide a basis for exporting more than a one-year supply of HEU. Further, as noted above, the reactor will require HEU until at least 2027. Even assuming that no fuel failure occurs, this export would not be sufficient to satisfy the Institut Laue-Langevin's annual requirement for HEU until it is able to convert to LEU; accordingly, this proposed export would not result in excess HEU that is susceptible to misuse.

Finally, Dr. Kuperman expresses concern that the reactor could shut down prematurely, thus leaving a stockpile of HEU in Europe that could be used to undermine U.S. non-

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<sup>48</sup> License No. XSNM-3633 authorized the export of almost 150 kilograms of HEU to the Institut Laue-Langevin's High-Flux Reactor—DOE/NNSA shipped this material in 2012.

<sup>49</sup> See *Transnuclear, Inc.*, CLI-00-16, 52 NRC at 76 (noting that the requested export license gave the Commission the ability to monitor the conversion process and thus adjust the license as necessary to avoid the potential accumulation of HEU fuel significantly in excess of the reactor's actual needs).

proliferation policy.<sup>50</sup> This, Dr. Kuperman states, provides an additional reason to limit the export to a one-year supply. We recognize the possibility that a nuclear reactor may need to shut down before planned decommissioning.<sup>51</sup> But Dr. Kuperman's second point—that an unexpected reactor shutdown would necessarily lead to a stockpile of fuel in Europe—does not necessarily follow from the first. At the 2016 Nuclear Security Summit, the United States and European Union issued a Joint Statement on HEU Exchange.<sup>52</sup> This Joint Statement significantly enhanced United States-European cooperation efforts so that Europe now has a strong incentive to repatriate any excess or unused HEU back to the United States in the unlikely event of a premature shutdown. Given this cooperative international framework, the possibility that other European end users could end up obtaining and using this fuel due to the High-Flux Reactor shutting down is very low.<sup>53</sup>

For these reasons, we find that the proposed export would not be inimical to the common defense and security of the United States.

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<sup>50</sup> Petition at 16-17.

<sup>51</sup> According to the Executive Branch views, the Institut Laue-Langevin's High-Flux Reactor is a relatively young reactor with a strong safety record, well-defined mission, and strong financial backing, which reduces the likelihood of an unexpected shutdown.

<sup>52</sup> The text of the Joint Statement can be found here: <http://www.nss2016.org/document-center-docs/2016/4/1/joint-statement-on-eu-us-heu-exchange> (last visited August 18, 2016).

<sup>53</sup> The incident that Dr. Kuperman references on pages 11-12 of his petition occurred before this recent strengthening of U.S.-European cooperation regarding HEU.

**VI. CONCLUSION**

For the reasons stated above, we find that a hearing in this matter would not be in the public interest and would not assist us in making the required statutory and regulatory determinations. We further determine that the proposed export satisfies all applicable export-licensing criteria and that issuing this export license would not be inimical to the common defense and security of the United States. Accordingly, we deny Dr. Kuperman's request for a hearing and petition to intervene and direct the Office of International Programs to issue License No. XSNM3757 to DOE/NNSA for the export of up to 130 kilograms of highly enriched uranium.

IT IS SO ORDERED.

For the Commission

**NRC SEAL**

**/RA/**

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Annette L. Vietti-Cook  
Secretary of the Commission

Dated at Rockville, Maryland,  
this 5th day of October 2016.



UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

In the Matter of )  
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U.S. DEPARTMENT OF ENERGY )  
 )  
 ) Docket No. 11006187  
(High-Enriched Uranium Export License) )  
 )

CERTIFICATE OF SERVICE

I hereby certify that copies of the foregoing **COMMISSION MEMORANDUM AND ORDER (CLI-16-15)** have been served upon the following persons by Electronic Information Exchange.

Office of Commission Appellate  
Adjudication  
U.S. Nuclear Regulatory Commission  
Washington, DC 20555-0001  
E-mail: [ocaamail@nrc.gov](mailto:ocaamail@nrc.gov)

Zachary R. Stern, Esq.  
National Nuclear Security Administration  
Office of the General Counsel  
1000 Independence Ave., S.W.  
Washington, DC 20585  
E-mail: [zachary.stern@nnsa.doe.gov](mailto:zachary.stern@nnsa.doe.gov)

U.S. Nuclear Regulatory Commission  
Office of the Secretary of the Commission  
Mail Stop O-16C1  
Washington, DC 20555-0001  
Hearing Docket  
E-mail: [hearingdocket@nrc.gov](mailto:hearingdocket@nrc.gov)

Alan J. Kuperman, Ph.d.  
University of Texas at Austin  
Austin, TX 78712  
E-mail: [akuperman@mail.utexas.edu](mailto:akuperman@mail.utexas.edu)

U.S. Nuclear Regulatory Commission  
Office of the General Counsel  
Mail Stop - O-15 D21  
Washington, DC 20555-0001  
Email: [ogcmailcenter.resource@nrc.gov](mailto:ogcmailcenter.resource@nrc.gov)

[Original signed by Herald M. Speiser ]  
Office of the Secretary of the Commission

Dated at Rockville, Maryland,  
this 5<sup>th</sup> day of October, 2016