



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D.C. 20555-0001

May 22, 2013

SECRETARY

COMMISSION VOTING RECORD

DECISION ITEM: SECY-12-0145

TITLE: DENIAL OF PETITION FOR RULEMAKING  
(PRM-70-9) – AMERICAN PHYSICAL SOCIETY

The Commission acted on the subject paper as recorded in the Staff Requirements Memorandum (SRM) of May 22, 2013.

This Record contains a summary of voting on this matter together with the individual vote sheets, views and comments of the Commission.

A handwritten signature in cursive script that reads "Rochelle C. Bavol".

Rochelle C. Bavol  
Acting Secretary of the Commission

Attachments:

1. Voting Summary
2. Commissioner Vote Sheets

cc: Chairman Macfarlane  
Commissioner Svinicki  
Commissioner Apostolakis  
Commissioner Magwood  
Commissioner Ostendorff  
OGC  
EDO  
PDR

VOTING SUMMARY - SECY-12-0145

RECORDED VOTES

	APRVD	DISAPRVD	ABSTAIN	NOT PARTICIP	COMMENTS	DATE
CHRM. MACFARLANE	X		X		X	3/22/13
COMR. SVINICKI	X				X	1/18/13
COMR. APOSTOLAKIS	X				X	3/26/13
COMR. MAGWOOD	X		X		X	3/11/13
COMR. OSTENDORFF	X				X	12/20/12

**NOTATION VOTE**

**RESPONSE SHEET**

**TO:** Annette Vietti-Cook, Secretary  
**FROM:** CHAIRMAN MACFARLANE  
**SUBJECT:** SECY-12-0145 – DENIAL OF PETITION FOR  
RULEMAKING (PRM-70-9) – AMERICAN PHYSICAL  
SOCIETY

Approved  X  Disapproved  X  Abstain

Not Participating

**COMMENTS:** Below   Attached  X  None



\_\_\_\_\_  
**SIGNATURE**

3/22/2013

\_\_\_\_\_  
**DATE**

Entered on "STARS" Yes  X  No



**Chairman Macfarlane's Comments on SECY-12-0145,  
"Denial of Petition for Rulemaking (PRM-70-9) – American Physical Society"**

**Decision**

I approve, in part, the staff's recommendation to deny APS's petition for rulemaking, but believe that NRC needs to develop a more comprehensive approach to assessing the proliferation risks posed by technologies that we are asked to license. The staff should therefore provide a notation vote paper outlining the options for performing a cumulative proliferation assessment<sup>1</sup> of fuel cycle facilities (including enrichment or reprocessing (ENR) technologies) during the pre-application and license review phases.

**Introduction**

The United States has always played a leading role in preventing the proliferation of nuclear weapons and material. Many of these weapons are still in existence, and the materials that fuel these weapons, especially plutonium and highly enriched uranium, exist in abundance around the world. Ensuring that these materials do not fall into the hands of people who would use them maliciously remains paramount. As a result it is especially important that technologies that produce enriched uranium and separated plutonium be carefully evaluated and protected to prevent the theft and diversion of these materials.

The Cold War ended over twenty years ago. The threat posed by nuclear weapons, however, remains, but has become more complex by virtue of both nation-state and non-nation state actors seeking to "weaponize" nuclear materials. The U.S. national-security establishment advises that it is more important than ever before to ensure that nuclear materials are secure against theft and diversion by non-state actors. The U.S. Department of Defense, for example, has noted that "[t]he international security environment has changed dramatically since the end of the Cold War[,] and that "today's most immediate and extreme danger is nuclear terrorism."<sup>2</sup>

The international community is equally concerned. At the Washington Nuclear Security Summit in 2010, heads of state, representatives of the United Nations, the International Atomic Energy Agency, European Union, and INTERPOL concluded that "[n]uclear terrorism is one of the most challenging threats to international security, and strong nuclear security measures are the most effective means to prevent terrorists, criminals, or other unauthorized actors from acquiring nuclear materials."<sup>3</sup> Two years later, at a reconvened Nuclear Security Summit in Seoul, Korea, the world community again concluded that "the fundamental responsibility of States ... [is] to maintain effective security of all nuclear material, which includes nuclear materials used in nuclear weapons, and nuclear facilities under their control, and to prevent non-state actors from acquiring such materials and from obtaining information or technology required to use them for malicious purposes."<sup>4</sup>

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<sup>1</sup> The term "cumulative proliferation assessment" applies specifically within the context of this vote and is defined in a later section.

<sup>2</sup> U.S. Dep't of Defense, Nuclear Posture Review Report, at iv (April 2010), available at <http://www.defense.gov/npr/docs/2010%20Nuclear%20Posture%20Review%20Report.pdf>.

<sup>3</sup> Communiqué of the Washington Nuclear Security Summit (April 13, 2010), available at <http://www.whitehouse.gov/the-press-office/communiqu-washington-nuclear-summit>.

<sup>4</sup> Seoul Communiqué, 2012 Seoul Nuclear Security Summit, at 1 (March 2012), available at [http://www.thenuclearsecuritysummit.org/userfiles/Seoul%20Communique\\_FINAL.pdf](http://www.thenuclearsecuritysummit.org/userfiles/Seoul%20Communique_FINAL.pdf).



## American Physical Society Petition

At question in the American Physical Society's (APS) petition for rulemaking is the NRC's role in ensuring the prevention of proliferation associated with ENR technologies. The APS asserts that requiring an applicant to provide an assessment of the proliferation risks of such technologies is consistent with the NRC's requirement to evaluate whether issuance of a license would be inimical to the common defense and security or to the health and safety of the public.<sup>5</sup> The APS also asserts that our current licensing process is insufficient to address proliferation concerns because the current licensing process uses a "net effect" in which proliferation-relevant issues are spread across the license application and never synthesized.<sup>6</sup> Finally, APS asserts that NRC will be reviewing license applications for new ENR technologies with features such as size and efficiency that increase their proliferation risk, and that successful commercialization of these technologies could spur those interested in proliferation to action.<sup>7</sup> Although I am not approving the petition, the topic APS raises concerning NRC's role in the prevention of proliferation is an important one that warrants additional attention.

## Analysis of Petition

I have read with interest the Congressional Research Service's (CRS) March 27, 2012 memorandum regarding NRC's authority to require an assessment as part of a uranium enrichment facility license application.<sup>8</sup> In this memorandum, CRS concludes that the AEA gives NRC "broad authority ... under various provisions ... to issue rules prescribing licensing requirements in order to promote the 'common defense and security.'"<sup>9</sup> As does APS in its petition, CRS specifically points to Section 57c.(2) of the AEA, which states that the Commission shall not "issue a license pursuant to section 2073 of this title to any person within the United States if the Commission finds that the ... issuance of such license would be inimical to the common defense and security or would constitute an unreasonable risk to the health and safety of the public."<sup>10</sup> While the CRS March 27, 2012, memorandum supports Assertions 1 and 3 in the APS petition,<sup>11,12</sup> it does not conclude that NRC has the authority to make a license decision based on a proliferation assessment.

I note that NRC continues to have increasingly frequent discussions and influence internationally in the area of nuclear security. During these discussions, we need to be able to stress with other regulators the critical nature of nonproliferation and its relevance to foreign governments' legal and regulatory structures. Our federal partners, including the Departments of State, Defense, and Energy, are on the frontlines, but we also have an important role in preventing proliferation. In executing this role, we must "walk the walk" to the extent our policy-setting and regulatory authority permits.

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<sup>5</sup> APS Petition for NRC Rule Change (PRM-70-9) at 3 (November 10, 2010) (Agencywide Documents Access and Management System (ADAMS) Accession No. ML 103260300) (APS Petition)) (citing Atomic Energy Act of 1954, as amended (AEA), §§ 57, 69, 42 U.S.C. §§ 2077, 2099 (2006)).

<sup>6</sup> APS Petition at 3.

<sup>7</sup> APS Petition at 2.

<sup>8</sup> CRS 2012 Memorandum at 1 (ADAMS ML12164A200).

<sup>9</sup> CRS 2012 Memorandum at 2 (citing AEA Section 161b., 42 U.S.C. § 2201. Courts have also held that the AEA is unique in the degree to which broad responsibility, which is not closely prescribed, is given to NRC to fulfill its mission. *Public Citizen v. NRC*, 573 F.3d 916, 918 (9th Cir. 2009); *Siegel v. Atomic Energy Commission*, 400 F.2d 778, 783 (D.C. Cir. 1968).

<sup>10</sup> CRS 2012 Memorandum at 4 (citing AEA § 57c.(2), 42 U.S.C. § 2077 (February 2011)).

<sup>11</sup> APS Petition at 3 ("Such an NPA [Nuclear Proliferation Assessment] is consistent with the NRC requirement to evaluate whether the issuance of a license 'would be inimical to the common defense and security or to the health and safety of the public.'").

<sup>12</sup> APS Petition at 1 ("Several public APS statements speak to the Society's position on nuclear issues and the way in which energy security, national security and non-proliferation are coupled. Consistent with these public statements of support of nuclear power and positions on nuclear non-proliferation, APS believes its petition for an NRC rule change is in the national security and energy interests of the United States.").



Nevertheless, the NRC's primary role is to ensure that the facilities it regulates that manufacture or use enriched uranium and plutonium do so safely and securely. This security role, the role of preventing the malicious use of nuclear materials, takes proliferation considerations into account. The NRC's regulations on physical security, information security, material control and accounting, and export control create a tapestry of protection for the material and technology at NRC-regulated fuel cycle licensee facilities. Our regulatory framework is robust and strong. Accordingly, while I agree that the NRC has the statutory authority to require a proliferation assessment as part of its domestic licensing process, and though I am sympathetic to many of the arguments that APS makes, I do not agree that our current licensing process is broken or deficient.

### **A Call for a Cumulative Assessment**

I approve the staff's recommendation to deny APS's petition for rulemaking, but also disapprove, in part, the staff's recommendation because I find that this petition raises issues we should consider further. New technologies may present new proliferation challenges that our regulations and guidance have not foreseen. In this regard, I agree with Commissioner Magwood that APS's petition raises a worthy point in the call for an assessment of the proliferation risks involved in building and operating enrichment or reprocessing facilities that employ a new or novel technology. Rather than relying on the "net effect" of information contained in various parts of a licensing application, we should consider the benefits of a cumulative assessment. I envision this cumulative assessment to be a synthesis of all of the parts of the application and the review that the NRC conducts under its statutory authority for protecting public health and safety and security. I want to emphasize that I am not asking the NRC staff to gather any additional information (including intelligence information) that is not already available to us.

I believe that the NRC and its federal partners would benefit from a re-evaluation of the NRC's approach to proliferation prevention by developing a more comprehensive strategy for assessing the proliferation risks posed by technologies that we are asked to license. We must consider the continually changing nature of the threat, and therefore regularly reassess whether our regulatory framework – including aspects impacting national nonproliferation policies and goals – is comprehensive enough to account for such challenges. Like Commissioner Ostendorff, I also believe we should communicate more effectively with industry and the public to explain how we address proliferation concerns in our licensing activities.

A cumulative assessment of NRC's nonproliferation role should account for NRC's current statutory oversight of fuel cycle facilities and enrichment technologies, reprocessing technologies, should they ever come to pass, and associated materials and facilities. To conduct a cumulative assessment, the staff should consider adapting the process it uses to conduct environmental reviews, in which the incremental impacts of the action are considered together with all other reasonably foreseeable past, present, and future actions taking place over a period of time. In environmental reviews, a cumulative impacts assessment considers how individual impacts may be minor when considered alone, but are potentially more significant when viewed together with the potential impacts of other reasonably foreseeable actions over a period of time.

This approach, when used to look at our nonproliferation role, may help the NRC identify where its regulations and guidance may need to be modified for licensing a certain technology. The information and analyses that we synthesize as part of our regulatory function may also be of value to the federal agencies that have a lead role in developing and enforcing U.S. nonproliferation strategies. In short, looking at these areas through a new type of holistic nonproliferation lens, within our statutory authority, may provide beneficial regulatory insights to both us and our federal partners.



## Direction to Staff

The staff should outline, in a notation vote paper, the options for performing a cumulative assessment of fuel cycle facilities, including enrichment and reprocessing facilities, during the pre-application and license review phases. The cumulative assessment could inform NRC's licensing and oversight, by focusing on several important areas such as security, material control and accounting, and export controls. The cumulative assessment could also be used as a tool to communicate our nonproliferation role. I note that the concept of this cumulative assessment would be similar to safety risk-informed approaches the Agency has adopted, in which risk information is used in decision-making to appropriately prioritize and focus attention on the most risk-significant systems and activities of a facility.

The staff should also discuss the implementation schedule, subsidiary objectives, and resource needs for the process of performing a cumulative assessment for fuel cycle facilities and new ENR applications that may come before the Agency in the future. The staff should also discuss whether such an assessment would assist the NRC in evaluating the application, determining how our regulatory framework applies to the technology, and identifying any necessary changes to our regulations or guidance.

In outlining the available options for performing a cumulative assessment, the staff should explore the following topics, working together with the Office of the General Counsel (OGC) and the Office of International Programs (OIP):

- The definition of "proliferation" and "nonproliferation." There are limited references to these terms in NRC regulations and guidance, without a definition of either. The staff should describe what these terms mean in the context of the NRC's regulatory framework.
- NRC's requirements in these two areas and its participation in U.S. government activities that support nonproliferation objectives, including (a) how the NRC currently does or does not address nonproliferation in carrying out its statutory mandate, and (b) identifying NRC's responsibilities as well as those of the other federal agencies with which we work on these issues.
- The rigor the NRC currently requires for the physical protection of materials, plants, and equipment, and relevant technical information associated with enrichment and reprocessing technologies, and how these factors relate to nonproliferation.
- A communication plan for explaining to the general public how the NRC addresses nonproliferation within its statutory authority by identifying and describing all NRC activities that support nonproliferation objectives. This communication plan should also identify NRC's responsibilities, other federal agencies' responsibilities, and how the various agencies with nonproliferation responsibilities work together to carry out national nonproliferation goals and strategies.
- The elements of a license application that would be involved in a synthesized assessment. I note that in other areas, the NRC is already evaluating the effect of a "piecemeal" approach to regulation; I believe it is essential that we reevaluate our "piecemeal" approach to performing our nonproliferation role, as well. The staff should also determine whether a synthesized assessment would provide additional clarity in our regulations and related guidance.
- A determination of staffing needs - if any - to carry out such an assessment should be provided.



- A thorough analysis of the legal issues, as well as the resource implications and costs involved, in (a) requesting that an applicant conduct and provide a nonproliferation assessment as part of its license application, and that the staff review such an assessment; or (b) the NRC staff conducting such an assessment. OGC, working together with the staff, should help provide this information.
  
  - The benefits of developing and using a pilot program to test the use of a consolidated, synthesized proliferation assessment and whether it (a) aids the NRC's ability to do its work; and/or (b) supports other federal agencies with primary responsibility for making nonproliferation determinations for new technologies. Such a pilot program could inform a future rulemaking or new or revised guidance in this area and might involve a mock assessment of a currently approved facility.
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**NOTATION VOTE**

**RESPONSE SHEET**

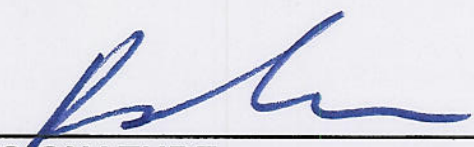
TO: Annette Vietti-Cook, Secretary  
FROM: COMMISSIONER SVINICKI  
SUBJECT: SECY-12-0145 – DENIAL OF PETITION FOR  
RULEMAKING (PRM-70-9) – AMERICAN PHYSICAL  
SOCIETY

Approved XX Disapproved \_\_\_\_\_ Abstain \_\_\_\_\_

Not Participating \_\_\_\_\_

COMMENTS: Below XX Attached XX None \_\_\_\_\_

For the reasons set forth in the draft *Federal Register* notice, I approve the staff's recommendation denying the petition and approve publication of the draft notice, subject to the attached edits.

  
\_\_\_\_\_  
SIGNATURE

01/8/13  
\_\_\_\_\_  
DATE

Entered on "STARS" Yes  No \_\_\_\_\_

## **SUPPLEMENTARY INFORMATION:**

- I. Summary of Rationale for Denial
- II. Background
- III. Petition Assertions and NRC Responses
- IV. Public Comments on the Petition and NRC Responses
- V. Determination of Petition

### **I. Summary of Rationale for Denial**

The petition requests that the NRC require that each applicant for an ENR facility license provide an assessment of the proliferation risks associated with the construction and operation of the proposed facility. While the NRC recognizes the importance of the petitioner's concerns about minimizing the risk of nuclear proliferation, the NRC is denying the petition for rulemaking.

The petitioner has not shown that ENR applicants have a peculiar particular insight on proliferation issues or have access to the intelligence resources, capabilities, and information that would enable them to prepare a meaningful proliferation assessment. Therefore, the petitioner has not demonstrated that requiring an applicant to prepare and include such an assessment as part of its application would provide the NRC with ~~significant~~, meaningful information that would enhance the NRC's decision-making on the applicant's license application nor assist the NRC in carrying out its statutory responsibility to protect public health and safety and promote the common defense. Furthermore, as discussed more fully later in this document, the NRC's existing regulatory program and ongoing oversight of applicants and licensees ensure that they comply with requirements designed to minimize proliferation risks associated with the construction and operation of ENR facilities. These requirements include



cost of the project. Under the APS proposed rule change, all ENR license applicants would be required to carry out such an assessment and submit it to the NRC staff for review.

- The term “Nuclear Proliferation Assessment [Statement]” (NPAS) is used in the Atomic Energy Act (AEA) of 1954, as amended, under Section 123, in the context of U.S. agreements for cooperation with a foreign nation. The NRC participates in these assessments with other Federal entities, in the manner described in Section 123. In particular, the NRC has already engaged in the preparation and review of an NPAS for an enrichment technology. In 1999, the NRC participated with other Federal entities in the NPAS that supported the decision to allow the Separation of Isotopes by Laser Excitation (“SILEX”) technology to be transferred from Australia to the United States. Similarly, under the APS proposed rule change, the NRC staff could work with other Federal entities in reviewing the nuclear proliferation assessment provided by the license applicant.

#### NRC Response to Assertion 1:

The NRC disagrees with the petitioner that an applicant seeking an ENR facility license from the NRC is the appropriate partyentity for conducting a nuclear proliferation assessment. A commercial entity would not have access to the intelligence resources, capabilities, and information essential to compiling a meaningful nuclear proliferation assessment. An assessment based solely on information available to a commercial entity would be of little value to the NRC in assessing the proliferation risks associated with licensing a particular facility. The task of assessing proliferation risks is best performed by the Federal Government. Other Federal agencies, led by the DOS and including the DOE, the Department of Defense (DOD), and the Department of Commerce (DOC), have primary responsibility for implementing national nonproliferation policies and goals and conducting proliferation assessments of sensitive

technologies, including nuclear technologies. The NRC routinely interacts with and provides its technical expertise and support to these agencies.

Once a foreign-developed ENR technology has advanced to the point where an applicant is seeking an NRC license, the appropriate U.S. Government agencies have already made a favorable determination that the technology in question can be adequately protected for development and production within the U.S. For example, the SILEX technology was imported into the U.S. under the terms of an agreement negotiated between the governments of the U.S. and Australia under Section 123 of the AEA (123 Agreement). This agreement allows for the sharing of Restricted Data (ENR technology) between the U.S. and Australia. This Agreement was negotiated by the DOS, ~~and was~~ approved by the President, ~~and~~. ~~It~~ included the required NPAS for the SILEX technology.

Under Section 123 of the AEA, an NPAS is prepared to demonstrate that the terms of a bilateral agreement are consistent with the requirements of the AEA, with particular emphasis on the adequacy of safeguards and other control mechanisms for the protection of nuclear technologies and materials, and that U.S. assistance provided under the bilateral agreement will not be used by the recipient country to further any military or nuclear explosive purpose. Under Section 123, the DOS is responsible for preparing an NPAS, with technical assistance from other Federal agencies including the NRC. However, Section 123 does not apply to or address license applications submitted to the NRC utilizing a domestically developed ENR technology.

ENR technology that is solely developed in the U.S. is subject to the requirements set forth in section 151c of the AEA. Section 151c requires that any person in the United States who makes any invention or discovery useful in the production or utilization of special nuclear material (SNM) must make a report of such invention or discovery to the DOE. This report need not be made if an application has been filed with the U.S. Patent and Trademark Office.



Consistent with the guidance set forth in ~~DOE Atomic Energy Commission~~ Notice 148 (37 FR 15393 (August 1, 1972)), upon receipt of the report, the DOE will provide the person with appropriate guidance on the proper classification of information, components, technology or other matter related to the invention or discovery. If the DOE determines that any of this information, components, technology or other matter is restricted data, the person would be directed to protect it in accordance with the requirements set forth in Sections 141 through 143 and Sections 224 through 227 of the AEA. The NRC expects that any sensitive information, components and technology associated with an ENR technology developed in the United States would be subject to these requirements. Furthermore, the NRC is confident that these restrictions on the possession, use and dissemination of restricted data adequately address the proliferation risks associated with a domestically developed ENR technology. Therefore, the NRC is also confident that information on a domestically developed ENR technology is adequately protected and proliferation risks associated with a particular ENR technology have already been assessed by the U.S. Government prior to an NRC licensing proceeding. ~~Of course, once~~ if an applicant receives a license for a facility utilizing a domestically developed ENR technology, that facility would be subject to the NRC's comprehensive regulatory ~~and oversight licensing~~ framework.

Consistent with its statutory authorities under the AEA, the Commission will not issue a license for an ENR facility if it determines that such a facility would constitute an unreasonable risk to the health and safety of the public or would be inimical to the common defense and security. The AEA does not require a nuclear proliferation assessment as a prerequisite to the domestic licensing of an ENR facility. However, as explained more fully in response to petition Assertion 2, the NRC's ~~is confident that its~~ existing comprehensive licensing framework adequately addresses proliferation risks and concerns associated with access to ENR



The petition asserts that, over the next several years, the NRC will be reviewing license applications for new technologies that could carry substantial proliferation risks. This assertion is based on findings in a report entitled "Technical Steps to Support Nuclear Arsenal Downsizing," released on February 18, 2010, by an APS Study Group, "APS Panel on Public Affairs" (see <http://www.aps.org/link/downsizing.cfm>). The petition states that the membership of this APS Study Group comprises some of the country's leading experts on both the technical and policy issues related to nuclear power, nuclear weapons, and proliferation. X

The petition asserts that the APS Study Group found that some of the new technologies could be proliferation "game changers," since they would lead to smaller, more efficient, and possibly less expensive methods for the production and use of nuclear materials that would be more difficult to detect. The APS Study Group cited laser isotope separation as an example of a new technology that is substantially smaller and more energy efficient than centrifuge enrichment technology. Consequently, the petition states that this technology has raised proliferation concerns. The petition states that the IAEA is sufficiently concerned that existing detection technologies are not adequate to address detection of covert facilities, and that the IAEA established a division specifically tasked with improving detection technology. The petition also states that the DOE has a similar program tasked with carrying out research and development to improve detection technology, with one effort dedicated to detecting laser enrichment.

#### NRC Response to Assertion 4:

The NRC acknowledges that new technologies may pose proliferation risks. However, the NRC is not aware of any existing ENR technologies that cannot be detected or pose proliferation risks that are not addressed by the NRC's existing licensing framework ~~and would~~

~~justify requiring applicants for an ENR facility license to prepare a nuclear proliferation assessment, particularly when such an assessment is not likely to lead to significant or meaningful information.~~ Similarly, the NRC is not aware of, and the petition did not identify, any new technology that would be “game changers” because they would be less expensive, too small, or too efficient to detect.

For example, on September 25, 2012, the NRC issued a license for the GLE facility in Wilmington, North Carolina. GLE has stated that its laser enrichment facility will be more efficient and cost-effective than a comparably sized gas centrifuge plant. That facility will not, however, be small or difficult to detect. Rather, the GLE facility’s energy consumption will be similar to that of a gas centrifuge facility and the facility’s size will be only one-third to one-half smaller than that of a gas centrifuge facility. The proposed facility will need nearly 100 acres, its main operations building will have an area of approximately 600,000 square feet, and there will be sections approximately 160 feet high. Additionally, the NRC expects that technologies and facilities, such as the one proposed by GLE, will emit unique environmental signatures that will enable identification of a specific nuclear facility.

The NRC recognizes that the IAEA and the DOE are developing new detection methods for clandestine facilities and that these technologies will be important in international efforts to combat nuclear proliferation. The NRC staff will use information related to new detection technologies from these IAEA and DOE programs as appropriate in its licensing programs.

The NRC continues to coordinate with other Federal agencies to assess the threat environment and work with licensees and the nuclear industry to develop appropriate strategies and requirements to address identified threats. Should the NRC identify new threats or unique proliferation risks that are not currently addressed by its licensing framework, the NRC will take appropriate steps (e.g., issuance of orders or revised regulations) to address those risks.



Assertion 2, the NRC's regulatory requirements and programs, and ongoing interagency cooperation, adequately address existing proliferation risks and concerns. The NRC is not aware of any new information that would lead the NRC to conclude that its licensing framework does not adequately protect the public health and safety and the common defense and security.

Furthermore, the NRC's licensing framework is flexible and adaptable; the NRC continually assesses the threat environment and coordinates with its Federal partners, including the DOS, DOE, and DOC. Should the NRC identify new risks that are not addressed by its licensing framework, the NRC would take appropriate steps to address these risks.

Accordingly, the NRC disagrees that the best way to address proliferation concerns is to require an ENR applicant to submit a proliferation assessment.

Assertion 6:

The petition asserts that the successful commercialization of ENR technologies may itself stimulate the interests of proliferants.

NRC Response to Assertion 6:

The NRC's licensing responsibilities under the AEA are regulatory in nature; the NRC does not encourage or discourage the development of a particular technology. Moreover, it is not the NRC's role, nor is it within the NRC's capabilities, to restrict inquiry into the feasibility of scientific concepts associated with the nuclear fuel cycle. Whether or not the issuance of an NRC license may demonstrate that a technology is feasible or commercially viable is not a ~~valid regulatory basis for denying a license under the AEA~~ consideration in the NRC licensing process.



**Comment Category 4:** *Commercialization of enrichment technology may increase interest, which could result in increased proliferation risks. Even a non-commercially viable process can pose proliferation risks, if the process is successfully implemented.*

Twenty-one comment letters make statements related to this category. The petition asserts that commercialization of the technology may itself stimulate proliferation interests. Sixteen commenters agreed with the petitioner. A commenter states that successful development of a commercially viable process is irrelevant, because even inefficient pilot-scale facilities can pose significant proliferation risks. Another commenter states that feasibility, not commercial viability, is the key determinant of proliferation risks. Finally, a commenter asserts that GLE's operation of a test loop, and potential move to a larger facility would be a clear signal that the technology works, thus attracting interest in it.

**NRC Response to Comment Category 4:**

As explained in response to petition Assertion 6, the NRC's licensing responsibilities are regulatory in nature. The NRC, as an independent regulatory agency, does not encourage or discourage the development of a particular technology. In addition, it is not the NRC's role, nor is it within the NRC's capabilities, to restrict inquiry into ~~the feasibility of~~ scientific concepts associated with the nuclear fuel cycle. A concern that the issuance of an NRC license may demonstrate that a technology is feasible or commercially viable is not a consideration in the NRC licensing process. ~~valid regulatory basis to deny a license under the AEA.~~ When evaluating a license application, the NRC's role is to determine if the applicant has satisfied NRC licensing requirements, including demonstrating that a proposed facility would not constitute an unreasonable risk to the health and safety of the public or would not be inimical to the common defense and security. If the NRC determines that an applicant has failed to satisfy

NRC licensing requirements, including demonstrating that the facility or technology could not be operated in such a manner, the NRC would deny the license application.

To the extent that the commenters are concerned that the issuance of a license or the successful operation of a new enrichment technology may increase international interest in that technology, as explained in response to petition Assertion 2, the NRC's extensive regulatory requirements, ongoing NRC oversight, and other Federal programs ensure that classified design details of the technology are protected from potential proliferators.

**Comment Category 5:** *Sufficiency of the current regulatory process to address nuclear proliferation issues.*

Fourteen comment letters include statements related to this category. Twelve commenters support petition Assertion 2 that the current regulatory process is insufficient to address nuclear proliferation issues, while two commenters take the opposing view.

One commenter supporting the petition states that a regulatory gap exists in the NRC's regulations that would be filled by requiring a nuclear proliferation assessment in domestic licensing. The commenter claims that the gap in the current domestic licensing framework restricts consideration of proliferation issues to the narrow questions of whether or not a facility meets the NRC's regulations for material protection, control and accounting, and protection of sensitive information. The commenter states that such a limited review does not take into account broader issues related to the indirect impacts of NRC licensing of sensitive fuel cycle facilities on the global nonproliferation regime.

Another commenter supporting the petition states that the current regulatory process for assessing proliferation is defective in that it does not provide an integrated risk assessment of this potential but is instead less focused and therefore less definitive than it needs to be to fulfill



One commenter opposing the petition states that although the petitioner rightly invokes elements of the AEA that speak to licensing activities that “would be inimical to the common defense and security or to the health and safety of the public,” the petition fails to indicate what current shortfalls there are in licensees’ obligations regarding information protection or physical protection of such facilities.

**NRC Response to Comment Category 5:**

Commenters claim the NRC’s existing regulatory framework is not sufficient for several reasons, including: 1) no one is conducting a nuclear proliferation assessment of nuclear technology risks, 2) there is a regulatory gap because the NRC’s consideration of proliferation risks is too narrow, and 3) the NRC’s process fails to include an integrated risk assessment. The NRC disagrees with these comments. As explained in response to petition Assertion 2, the NRC’s ~~is confident that its~~ existing comprehensive licensing framework adequately addresses proliferation risks by, for example, including requirements to prevent unauthorized disclosure of classified matter and technology, and provide physical protection of nuclear equipment and materials.

The commenters have not identified a regulatory gap or proliferation concern that is not adequately addressed in the current licensing framework. The NRC is not aware of, and the petitioner and commenters did not identify, any specific shortcomings in the NRC’s comprehensive licensing framework where a nuclear proliferation assessment by license applicants would provide significant and meaningful information that would enhance NRC decision-making or provide an “additional layer of protection” against proliferation risks necessary for the NRC to carry out its responsibilities.

In addition, commenters suggest that the NRC does not adequately consider broader nuclear nonproliferation policies and goals. Specifically, commenters state that the NRC does not consider the impacts that its domestic licensing actions may have upon the broader global nonproliferation regime, and the NRC should consult with other agencies when considering the proliferation risks of a pending license application. As described in response to petition Assertion 2, the NRC interacts with other Federal agencies and receives information regarding various threats and activities, including those related to proliferation concerns. In addition, the NRC routinely cooperates with other U.S. Government agencies on matters relating to the nation's security. Through this extensive cooperation, the NRC ensures that its licensing activities are aligned with the nation's larger nonproliferation goals and policies. Further, the U.S. Government, often supported by the NRC, is actively engaged in the international nonproliferation regime as a Member State at the IAEA, the NSG, and the Nuclear Energy Agency.

In response to the commenter stating that a nuclear proliferation assessment requirement would encourage awareness of proliferation concerns that could be translated into design features that improve the proliferation resistance of future facilities, the NRC's existing licensing framework provides regulatory requirements that address design features needed to protect classified information, ensure physical security of licensed material, and protect against the loss, theft or attempted theft, or unauthorized production of SNM. Applicants of ENR facilities would be aware of these design requirements and would be required to address them in their facility designs and in their license applications. A proliferation assessment, therefore, would add little benefit to what is already required under the existing regulations. As discussed in response to Comment Category 13, incorporation of safeguards and MC&A requirements early in the design phase can be more efficient than retrofitting them later.



The NRC will not speculate about suggested content for a “required” nuclear proliferation assessment. As previously discussed, the NRC has determined that in light of the current licensing framework, revising 10 CFR part 70 to require a proliferation assessment would not provide new and significant information that would enhance the NRC’s decision-making or assist the NRC in carrying out its statutory responsibilities.

**Comment Category 7:** *The NRC’s decision to license new technology will set a precedent for the international nuclear industry.*

Two comment letters include statements related to this category. One commenter states that the NRC continues to have influence as a leader in the movement to improve nuclear safeguards, safety, and security; thus, an NRC decision to require a nuclear proliferation assessment as part of the licensing process would help move international nuclear industry consensus in that direction. Another commenter states that the NRC’s approval of new technology is likely to serve as a precedent for greater use elsewhere.

**NRC Response to Comment Category 7:**

The NRC does not agree that its decision to license a domestic ENR facility utilizing a particular enrichment technology would necessarily cause other countries to develop that particular technology. Many other factors would play a role in ~~determining~~ a particular government’s ~~desire to pursue~~ of ENR technology, including its political will, technical expertise, financial capital, and international obligations. Additionally, as stated in response to petition 5 Assertion 1, speculative assertions regarding the potential influence of NRC decisions are not considered in domestic licensing proceedings. The DOS, working with the DOE and other Federal agencies, has the primary responsibility for implementing the Federal

Government's national nuclear nonproliferation goals and policies. The NRC does strive to improve nuclear safety and security internationally as well as domestically. However, as stated previously, the NRC does not agree with the comment that requiring the NRC's licensees to submit a nuclear proliferation assessment of the risks of constructing and operating an ENR facility would further the goal of improving nuclear safeguards, safety, or security.

**Comment Category 8:** *Industry is committed to protecting against proliferation.*

One comment letter opposing the petition states that 1) uranium enrichment facilities have voluntarily committed to implement additional measures to enhance the protection of information associated with classified enrichment technologies, and 2) these additional commitments are incorporated into facility-specific security plans. The commenter also states that its organization has developed a guidance document endorsed by the NRC that provides guidance to enrichment facility licensees to assist in protecting against proliferation of classified technology, information, and equipment. X

**NRC Response to Comment Category 8:**

The NRC recognizes that NRC enrichment licensees and their contractors that possess classified material have voluntarily committed to adhere to additional information security measures not addressed in 10 CFR part 95. These voluntary security enhancements are set forth in NEI 08-11, "Information Security Program Guidelines for Protection of Classified Material at Uranium Enrichment Facilities," published by the NEI. These measures are contained in each licensee's security plan. This plan is reviewed and approved by the NRC as part of the issuance of a facility security clearance prior to facility operation, and Adherence to the security



~~plan is also required by a condition in each license. can be used as the basis for enforcement action if a licensee violates the terms of the plan.~~

**Comment Category 9:** *NRC should consider terrorism as part of the licensing process.*

Two comment letters include comments in this category. One commenter states that the ever-present threat of terrorism is a reason for a nuclear proliferation assessment being part of the licensing process. The other commenter suggests that the petition's suggestion to perform a nuclear proliferation assessment does not go far enough, and instead, a "nuclear proliferation and terrorism assessment" should be required. This assessment would evaluate "beyond-design-basis" proliferation and terrorism impacts by considering diversion and theft scenarios by adversaries with capabilities exceeding the design basis threats for theft or diversion of SNM. The commenter claims that this would make the assessment comparable to the aircraft impact assessment required for new nuclear plant applications in 10 CFR 50.150.

**NRC Response to Comment Category 9:**

The NRC agrees that protection measures for its regulated facilities should address known threats, including the threats from overt, malevolent acts that may involve violence. The NRC interacts regularly with its Federal partners to remain current on ~~the~~ potential threats posture directed against NRC licensed facilities and keeps its licensees informed of changes to the threat ~~posture~~ environment. The NRC's physical protection requirements in 10 CFR part 73 require that licensees protect against credible attacks from various adversary scenarios. The NRC's comprehensive licensing framework is flexible and adaptable, and will be updated as necessary to reflect protective measures to address the changing threat environment. In the

event the NRC determines that additional measures are needed to protect against a ~~postulated~~ potential threat, ~~real or perceived~~, the NRC would supplement its requirements by rule or order, as appropriate.

The commenters failed to demonstrate that a “nuclear proliferation and terrorism assessment” would provide significant and meaningful information that would enhance the NRC’s decision-making when licensing an ENR facility. As discussed in response to petition Assertions 1 and 2, the NRC has determined that in light of the current comprehensive licensing framework, revising 10 CFR part 70 to require a proliferation assessment would not assist the NRC in carrying out its statutory responsibilities.

**Comment Category 10:** *Proliferation risks should be assessed early in the regulatory process.*

Four comment letters supporting the petition include comments in this category. One commenter states that it is imperative that we understand what world we are about to create instead of discovering the proliferation consequences after the fact. Other commenters state that it is important for proliferation assessments to be prepared before new nuclear technologies are licensed, instead of waiting to deal with situations in which technology may be proliferating due to commercial demands or because of clandestine use. One commenter states that waiting to deal with such a situation is contrary to the agency’s principal mission to protect the health and safety of the public and to assure the common defense and security.

**NRC Response to Comment Category 10:**

The safety and security of nuclear materials and facilities are assessed throughout the NRC domestic licensing process. As discussed in the response to the petition Assertion 2, the NRC’s comprehensive licensing framework addresses proliferation risks by, for example,



including requirements to prevent the unauthorized disclosure of classified matter and sensitive technologies, and provide physical protection of nuclear equipment and materials. The NRC's ~~is confident that this~~ framework is adequate to address proliferation concerns throughout the licensing process. The NRC, however, acknowledges that future technologies may pose new or unique proliferation risks. Because the NRC's licensing framework is flexible and adaptable, if the NRC determines that a new technology or threat necessitates additional requirements to protect the public health and safety or promote the common defense and security, the NRC will supplement its requirements by rule or order, as appropriate.

**Comment Category 11:** *NRC's consideration of proliferation risks and the National Environmental Policy Act (NEPA).*

Two comment letters include comments in this category. Citing *San Luis Obispo Mothers for Peace v. NRC*, 449 F.3d 1016 (9th Cir. 2006), one commenter states that the NRC is already obligated under NEPA to analyze proliferation implications of any new nuclear technologies because NEPA requires consideration of "the full range of risks to the common defense and security potentially arising from its licensing decision, and must consider all reasonable alternatives that could eliminate or mitigate those risks." This commenter also claims that the NRC has a "double standard," because in its environmental impact statements (EIS) it addresses national security concerns that support licensing decisions but dismisses national security concerns that undermine licensing decisions as beyond the scope of the EIS. This commenter further claims that the NRC demonstrates a lack of judgment by generally assessing a wide range of environmental impacts but not performing a thorough nonproliferation assessment of the proposed GLE facility. The commenter attached comments on the draft EIS for the proposed GLE facility for purposes of incorporating them in this PRM record.

sensitive information is publicly revealed and that the NRC must consult with DOE experts when reviewing the proliferation assessment on the GLE facility.

### **NRC Response to Comment Category 13:**

The NRC agrees that effective safeguards against diversion and misuse of SNM are necessary. The NRC also agrees that incorporation of safeguards ~~and through application of~~ NRC's MC&A and other related requirements early in the design phase can be more efficient than retrofitting them later. As discussed in response to petition Assertion 2, the NRC's comprehensive regulatory infrastructure (specifically, 10 CFR parts 73 and 74), addresses the physical protection of SNM against radiological sabotage, theft, and diversion, and MC&A of SNM, protects against diversion and misuse of SNM. ~~Applicants are aware of the NRC requirements applicable to their design.~~ These NRC requirements ~~can have and continue to~~ be applied by applicants and licensees to facilities in early design phases. In addition, the NRC staff is working with the DOE to assess if meaningful IAEA inspections can be implemented at a laser enrichment facility without improperly revealing classified matter.

The NRC agrees with comments noting that 1) Safeguards-by-Design is an important tool for addressing the implementation of safeguards requirements, and 2) it is important to design a facility so that classified information is not revealed. The term Safeguards-by-Design is a design process that considers safeguards requirements early in the design of a facility. As previously stated, NRC's existing regulatory framework supports ~~Current~~ enrichment facility applicant's ~~are assessing of~~ safeguards considerations early in the design process of their respective facilities.



actions, consistent with its statutory authority to protect public health and safety and common defense and security, to address those risks or threats.

The NRC disagrees that the NRC needs to “pick sides” in the debate over SILEX and that the NRC should require a nuclear proliferation assessment in the spirit of the U.S. abandonment of reprocessing. As discussed in response to petition Assertion 6, the NRC is an independent regulatory agency; the NRC does not encourage or discourage the development of any particular technology. Such national policy decisions are appropriately made by the President and Congress. For example, in 1976, it was President Carter, not the NRC, who established as a matter of policy that the United States would not engage in nuclear fuel reprocessing because of concerns about nuclear proliferation.

The NRC agrees that the petition mixes technical and licensing issues that are within the scope of the NRC’s domestic licensing process with broader aspects of the U.S. Government’s nuclear nonproliferation policy. While the NRC’s comprehensive licensing framework is adequate to address proliferation concerns in domestic licensing, other Executive Branch agencies have the primary responsibility to address broader U.S. Government foreign policy initiatives and proliferation impacts outside of the NRC’s domestic licensing activities.

As discussed in response to petition Assertion 1, the NRC agrees that the NPAS required under Section 123 of the AEA is required in the context of a bilateral agreement negotiated between the United States and another nation governing the peaceful use of nuclear energy. The NPAS ~~is not intended to~~does not address the domestic licensing actions of the NRC.

**Comment Category 18:** *Requiring a proliferation assessment would be feasible and would not be overly burdensome nor significantly impact licensing timelines.*

Two comment letters include comments in this category. Both commenters state their support for the efforts of the NTI (also supported by <sup>former</sup> Senator Richard Lugar <sup>and</sup> ~~former Senator~~ <sup>S</sup> Sam Nunn), which supports the worldwide safeguarding of all fissile materials that could be used to do harm to our Nation. X

#### **NRC Response to Comment Category 19:**

Comments advocating support for the NTI are outside the scope of this petition because they are unrelated to the petitioner's request that the NRC require its ENR facility license applicants to perform a nuclear proliferation assessment. Nonetheless, the NRC notes that its comprehensive licensing framework requires the safeguarding of fissile material in domestic licensing activities.

#### **V. Determination of Petition**

The NRC has reviewed the petition and the public comments. For the reasons set forth in this document, the NRC is denying the petition under 10 CFR 2.803. The NRC disagrees that an applicant seeking an ENR facility license should be required to conduct a nuclear proliferation assessment. The petitioner has not shown that the NRC's comprehensive licensing framework fails to adequately address proliferation risks associated with the licensing of an ENR facility.

Additionally, the petitioner has not shown that ENR applicants have a peculiar-particular insight on proliferation issues or have access to the intelligence resources, capabilities and information that would enable them to prepare a meaningful proliferation assessment that would assist the NRC in making an informed licensing decision. ~~The task of assessing proliferation risk is best performed by the Federal Government because of the unique resources and capabilities~~



~~available to it. Furthermore, the NRC is confident that all necessary proliferation assessments~~  
~~proliferation risks~~ have and will continue to be performed assessed and addressed by the  
responsible agencies within the Executive Branch ~~well in advance of the NRC receiving an ENR~~  
~~facility license application.~~

Dated at Rockville, Maryland, this \_\_\_\_\_ day of \_\_\_\_\_, 2012.

For the Nuclear Regulatory Commission.

\_\_\_\_\_  
Annette L. Vietti-Cook,  
Secretary of the Commission.

Original signed by  
Belkys Sosa on  
March 26, 2013  
for Commissioner  
George Apostolakis

**NOTATION VOTE**

**RESPONSE SHEET**

**TO:** Annette Vietti-Cook, Secretary

**FROM:** Commissioner Apostolakis

**SUBJECT:** SECY-12-0145 – DENIAL OF PETITION FOR  
RULEMAKING (PRM-70-9) – AMERICAN PHYSICAL  
SOCIETY

Approved  X  Disapproved \_\_\_\_\_ Abstain \_\_\_\_\_

Not Participating \_\_\_\_\_

**COMMENTS:** Below  X  Attached \_\_\_\_\_ None \_\_\_\_\_

I approve the staff's recommendations to deny the American Physical Society (APS) petition for rulemaking and publish the staff's analysis in the *Federal Register*. I disagree with APS's argument that NRC's current licensing process is deficient. I agree with the staff that our licensing processes are adequate to ensure the safe and secure use of nuclear materials.

In addition, I join Chairman Macfarlane and Commissioner Magwood in asserting that APS's petition raises several interesting issues regarding the need to reevaluate our regulations and guidance to ensure our requirements are robust enough to meet proliferation challenges. I support Chairman Macfarlane's request that the staff should outline, in a notation vote paper, the options for performing a cumulative assessment of fuel cycle facilities during the pre-application and license review phases. The recommendations, if any, to make changes in NRC's programs should include the views of the Executive Branch as part of the analysis of each option presented.

  
\_\_\_\_\_  
SIGNATURE

4/2/13  
\_\_\_\_\_  
DATE

Entered on "STARS" Yes  X  No \_\_\_\_\_



**NOTATION VOTE**

**RESPONSE SHEET**

TO: Annette Vietti-Cook, Secretary  
FROM: Commissioner William D. Magwood  
SUBJECT: SECY-12-0145 – DENIAL OF PETITION FOR  
RULEMAKING (PRM-70-9) – AMERICAN PHYSICAL  
SOCIETY

Approved  Disapproved  Abstain

Not Participating

COMMENTS: Below  Attached  None



\_\_\_\_\_  
SIGNATURE

11 March 2015

\_\_\_\_\_  
DATE

Entered on "STARS" Yes  No

**Commissioner Magwood's Comments on SECY-12-0145,  
"Denial of Petition for Rulemaking (PRM-70-9) - American Physical Society"**

The subject petition raises several interesting issues about which the Commission and many others have debated for quite some time. It is valid and reasonable to be concerned that new technologies may present new proliferation risks. In the terms applied by the petition, the potential exists that future enrichment and reprocessing technologies could prove to be "game changers." The petitioners claim that such technologies could be "smaller, more efficient, and possibility less expensive" and thereby "more difficult to detect."

As I review this petition and staff's very good analyses, I find that the petitioner's concerns can be characterized in three parts:

- 1) New technologies present new proliferation threats;
- 2) Facilities based on new technologies can and should be built and operated with proliferation risks in mind (drawing, for example, from the overseas experience with the A. Q. Khan proliferation network); and
- 3) NRC's current processes do not address proliferation-specific questions such as "are there unique components of the technology whose acquisition would indicate the construction of such a facility?"

In large respect, I agree with the staff's review of this petition and its basis for rejecting it. In my judgment the petitioners vastly underestimate the rigor the NRC requires for the protection of materials, plant and equipment, and relevant technical information associated with enrichment and reprocessing technologies. I do not believe an "A. Q. Khan" could operate successfully in an NRC-licensed facility based in the United States. I agree with the staff that our current processes are more than adequate to assure the common defense and security. I also agree with staff that the current NRC requirements address nonproliferation concerns relevant to the NRC's mandate and that it is not necessary to require an applicant seeking a license to build and operate an enrichment or reprocessing facility to conduct a nuclear proliferation assessment that would be determinative in an agency decision regarding any application or other licensing action.

Moreover, I take substantive objection to the suggestion in the petition that there are technologies that are too simply dangerous to pursue. While this point is only touched upon in the petition itself (*e.g.*, when it states that "successful commercialization of the technology many itself stimulate the interests of proliferants"), the petitioners highlighted this concern in subsequent interactions. It is not the role of the NRC to act as an arbiter of "good" and "bad" technologies. Such logic would lead to intellectual censorship and perhaps worse—and it is thus my fervent hope that no agency of government in any democracy ever attempts to assume such a role.

All that said, the petition raises fair questions in the context of the first and third points mentioned above. These are valid concerns for government, though perhaps not as much as for the NRC. Nevertheless, so long as it is clearly understood that such concerns are solely relevant to new,



innovative, "game changing" technologies, I believe there may be an appropriate, positive response to these concerns.

While I agree with the entirety of the staff's thorough consideration of the petition, I disapprove in part staff's recommendation. I agree with staff that the current NRC requirements address nonproliferation concerns relevant to the NRC's mandate. I also agree that it is not necessary to require an applicant seeking a license to build and operate an enrichment or reprocessing facility to conduct a nuclear proliferation assessment that would be considered as part of the licensing review.

However, I do believe there is a benefit to requiring an applicant employing a novel enrichment or reprocessing technology to provide a classified assessment that is responsive to the key questions the petition highlights that "indicate the degree of proliferation risk". Such an assessment would be developed for two purposes:

- First, to provide NRC staff with additional information that, if a license is granted, could be used to inform inspection plans associated with the licensee's MC&A, information security, physical security, and related programs; and
- Second, to provide other interested Federal agencies with technical information regarding the implementation and detectability of the technology should it be pursued outside of the United States

If, in the process of developing such an assessment, an applicant decides to make changes to its plant design or facility operation, that would be a voluntary action consistent, I believe, with the petitioner's objectives. However, I see no justification for using such an assessment as a component of approving or disapproving a license.

Rather than initiate a separate rulemaking to effect this change, I recommend that during the next revision of 10 CFR 73 or 10 CFR 74, staff should develop a section to be included in the proposed rule that would require an applicant with a novel technology to provide the assessment described above.

Finally, I agree with Commissioner Ostendorff that we could better communicate to the public how our current requirements and activities support nonproliferation objectives. I support his suggestion that staff more clearly explain how the NRC looks holistically in its licensing review process considering Material Controls and Accountabilities, Physical Plant Security, Information Security, and Cyber Security.

 3/11/13

William D. Magwood, IV      Date

**NOTATION VOTE**

**RESPONSE SHEET**

**TO:** Annette Vietti-Cook, Secretary  
**FROM:** COMMISSIONER OSTENDORFF  
**SUBJECT:** SECY-12-0145 – DENIAL OF PETITION FOR  
RULEMAKING (PRM-70-9) – AMERICAN PHYSICAL  
SOCIETY

Approved  X  Disapproved \_\_\_\_\_ Abstain \_\_\_\_\_

Not Participating \_\_\_\_\_

**COMMENTS:** Below \_\_\_ Attached  X  None \_\_\_

*W. Ostendorff*  
\_\_\_\_\_  
SIGNATURE

*12/20/12*  
\_\_\_\_\_  
DATE

Entered on "STARS" Yes \_\_\_ No \_\_\_



**Commissioner Ostendorff's Comments on SECY-12-0145,  
"Denial of Petition for Rulemaking (PRM-70-9) – American Physical Society"**

I approve the staff's recommendation that the petition for rulemaking, which would require 10 C.F.R. Part 70 license applicants to complete a proliferation assessment, be denied. As the staff detailed in its comprehensive *Federal Register* notice (FRN), the NRC's requirements already specifically address nonproliferation concerns—prevention, detection, and defense against unauthorized disclosure of enrichment and reprocessing (ENR) technology and the diversion of associated nuclear materials. Thus, I remain confident that our licensing process and oversight programs ensure that proliferation risks associated with the construction and operation of ENR facilities are appropriately minimized.

With the advent of new enrichment technologies, there has been high interest in this topic from Congress, technical organizations, and members of the public. As the petitioner pointed out, while the NRC's licensing process satisfies proliferation objectives, those proliferation-related reviews are not synthesized. As a result, the NRC's efforts to prevent proliferation have not been clearly communicated to the public. Stakeholders have also expressed concerns about how U.S. development of new enrichment technologies may result in the spread of these technologies to countries of proliferation concern. I agree with the staff that such issues relate to broader U.S. government proliferation policies that are the responsibility of other Federal agencies, though as the staff points out, the NRC interacts regularly with those agencies and provides input as appropriate.

Our current system for addressing proliferation issues is not broken, but we could better communicate to the public how our requirements and participation in U.S. government activities support nonproliferation objectives. Therefore, the staff should address, through appropriate communication tools (like a Regulatory Issue Summary, press release, fact sheet, web page updates, blog posts, or other medium deemed suitable by the staff) two important areas:

- (1) In clear, plain language, the staff should use information from the FRN to explain to the general public how the NRC addresses proliferation concerns by synthesizing all NRC activities that support nonproliferation objectives and what our responsibility is (versus other Federal agencies) in shaping and carrying out nonproliferation goals and policies.
- (2) For Knowledge Management, the staff should document considerations that future applicants can use in the design phase of their ENR facility to comprehensively address the prevention, detection, and defense against unauthorized disclosure of ENR technology and the diversion of associated nuclear materials. The petition provided some "key questions that indicate the degree of proliferation risk," such as the detectability and design of the facility, that while not necessary for the NRC to review to ensure public health and safety or common defense and security, may be good areas of licensee focus to complement the NRC's requirements.

Again, I must emphasize that I do not have any proliferation concerns with our current regulatory approach. The staff should be commended for their exemplary work in this arena. I believe, however, that the staff should reach out to future applicants and the public to better communicate the two items above.