

May 22, 2013

MEMORANDUM TO: R. W. Borchardt  
Executive Director for Operations

FROM: Rochelle C. Bavol, Acting Secretary /RA/

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

The Commission has approved the staff's recommendations to deny the American Physical Society (APS) petition for rulemaking and to publish the staff's analysis in the *Federal Register*, subject to the comments and edits below.

The staff should periodically review our regulations and guidance to ensure that our requirements are robust enough to meet new proliferation challenges involved in building and operating enrichment or reprocessing facilities that use technologies the NRC has not previously licensed.

The staff should better communicate to the public how our requirements and participation in U.S. government activities support nonproliferation objectives.

1. The staff should more clearly explain how the NRC looks holistically at nonproliferation objectives in its licensing review process considering Material Control and Accounting, Physical Security, Information Security, Cyber Security, and Export Control. Through appropriate communication tools (such as a press release, fact sheet, web page updates, blog posts, or other media deemed suitable by the staff) the staff should:
  - a. Describe what the terms "proliferation" and "nonproliferation" mean in the context of the NRC's regulatory framework. There are limited references to these terms in NRC regulations and guidance, without a definition of either.
  - b. In clear, plain language, use information from the *Federal Register* Notice 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.

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SECY Note: This SRM and the subject SECY paper will be released to the public immediately upon notification of the petitioner.

- c. Explain how the NRC participates in U.S. government activities that support nonproliferation objectives, including (i) how the NRC currently does or does not address nonproliferation in carrying out its statutory mandate, and (ii) identifying NRC's responsibilities as well as those of the other federal agencies with which we work on these issues.
    - d. Explain 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.
    - e. Document considerations that future applicants can use in the design phase of their enrichment and reprocessing (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.
2. The staff should provide a briefing for technical and legal assistants to explain how the staff integrates the efforts of various NRC elements as it considers nonproliferation-related aspects of applications for ENR facilities. As part of this briefing, the Office of General Counsel should provide an overview of the legal framework associated with the NRC's consideration of nonproliferation-related aspects of applications for ENR facilities. This briefing should also provide staff's views on how the NRC's licensing process or broader federal government processes, such as a Section 123 review, address the special case of "novel" ENR technologies. As part of this briefing, staff should discuss how NRC information about such facilities would be shared with other interested Federal agencies.
3. The following changes should be made to the Federal Register Notice:
  - a. Page 3, 1<sup>st</sup> ¶, line 5, revise to read: "...ENR applicants have a peculiar particular insight..."
  - b. Page 3, 1<sup>st</sup> ¶, line 9, revise to read: "...provide the NRC with significant, meaningful information..."
  - c. Page 3, 1<sup>st</sup> ¶, line 10, revise to read: "...application nor would such an assessment assist the NRC in carrying out its statutory responsibility to protect public health and safety and promote the common defense. Furthermore..."
  - d. Page 5, at the end of the 1<sup>st</sup> full ¶, add a new paragraph: "One of the NRC's primary concerns is to ensure that the facilities it regulates that manufacture or use enriched uranium and plutonium do so safely and securely. The NRC's regulations on physical security, information security, material control and accounting, cyber security, and export control create a tapestry of protection for the material and technology at NRC-regulated fuel cycle facilities. These regulations, which focus on preventing the theft or diversion of radioactive materials and classified technologies, take proliferation considerations into

account. The petitioner has not demonstrated that the NRC's current licensing program is deficient."

- e. Page 8, 2<sup>nd</sup> ¶, line 2, revise to read: "...appropriate party entity to for conducting..."
- f. Page 9, 1<sup>st</sup> ¶, line 8, revise to read: "...This Agreement, was negotiated by the DOS, and was approved by the President, and It included..."
- g. Page 9, 2<sup>nd</sup> ¶, line 1, revise to read: "...of the AEA, the Federal government prepares an NPAS is prepared to demonstrate..."
- h. Page 9, 3<sup>rd</sup> ¶, line 6, revise to read: "...set forth in DOE Atomic Energy Commission's "Novel Methods of Isotope Separation: Procedures for Reports on Research Notice 148..."(37 FR 15393, (August 1, 1972))..."
- i. Page 10, lines 3 and 8, revise to read "Restricted Data"
- j. Page 10, line 12, revise to read: "...Of course, once if an applicant..."
- k. Page 10, line 14, revise to read: "...regulatory and oversight licensing framework..."
- l. Page 10, 1<sup>st</sup> full ¶, line 6, revise to read: "...the NRC's is confident that its existing comprehensive..."
- m. Page 11, first line, revise to read: "Furthermore, the NRC, is confident that through its ongoing interaction with other Federal agencies, ensures that its the NRC's licensing framework..."
- n. Page 12, at the end of the 1<sup>st</sup> paragraph, before Assertion 2, add a new paragraph: "One of the NRC's primary concerns is to ensure that the facilities it regulates that manufacture or use enriched uranium and plutonium do so safely and securely. The NRC's regulations on physical security, information security, material control and accounting, cyber security, and export control create a tapestry of protection for the material and technology at NRC-regulated fuel cycle facilities. These regulations, which focus on preventing the theft or diversion of radioactive materials and classified technologies, take proliferation considerations into account. The petitioner has not demonstrated that the NRC's current licensing program is deficient."
- o. Page 20, line 5, add a comma after "...weapons, ..."
- p. Page 20, 3<sup>rd</sup> line from bottom, revise to read: "...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."
- q. Page 23, 5<sup>th</sup> line from bottom, revise to read: "...commercially viable is not a valid regulatory basis for denying a license under the AEA consideration in the NRC licensing process."

- r. Page 28, 8<sup>th</sup> line from bottom, revise to read: "...inquiry into the feasibility of scientific..."
- s. Page 28, 6<sup>th</sup> line from bottom, revise to read: "...commercially viable is not a valid regulatory basis to deny a license under the AEA consideration in the NRC licensing process."
- t. Page 29, add the following new ¶ after line 2: "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."
- u. Page 31, 1<sup>st</sup> ¶, line 6, revise to read: "...NRC's is confident that its existing..."
- v. Page 31, 3<sup>rd</sup> ¶, line 3, revise to read: "...impacts that its domestic..."
- w. Page 36, 2<sup>nd</sup> ¶, lines 3-4, revise to read: "...role in determining a particular government's desire to pursue pursuit of ENR technology,..."
- x. Page 36, 2<sup>nd</sup> ¶, add the following as the 3<sup>rd</sup> and 4<sup>th</sup> sentences: "Additionally, as stated in response to petition 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."
- y. Page 36, 2<sup>nd</sup> ¶, line 6, revise to read: "...However, as stated previously, the NRC..."
- z. Page 37, line 2, add a comma after "...information, ..."
- aa. Page 37, 1<sup>st</sup> full ¶, revise last sentence to read: "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 violated the terms of the plan."
- bb. Page 38, line 4, revise to read: "...remain current on the potential threats posture directed..."
- cc. Page 38, line 6, revise to read: "...posture environment."
- dd. Page 38, lines 10 - 11, revise to read: "...against a postulated potential threat, real or perceived, the NRC..."
- ee. Page 39, 1<sup>st</sup> full ¶, lines 5 - 6, revise to read: "...NRC's is confident that this regulatory framework..."

- ff. Page 43, 2<sup>nd</sup> ¶, lines 2 - 3, revise to read: "...safeguards and **through application of NRC's MC&A and other related** requirements..."
- gg. Page 43, 2<sup>nd</sup> ¶, lines 7 - 8, revise to read: "...~~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..."
- hh. Page 44, 1<sup>st</sup> ¶, revise last sentence to read: "**As previously stated, NRC's existing regulatory framework supports an** ~~Current~~ enrichment facility applicant's ~~are~~ **assessing** of safeguards considerations..."
- ii. Page 50, line 2, revise to read: "...The NPAS ~~is not intended to~~ **does not** address..."
- jj. Page 51, line 6, revise to read: "...~~(also supported by~~ **former** Senators Richard Lugar and ~~former Senator Sam Nunn)~~..."
- kk. Page 52, line 1, revise to read: "...~~peculiar~~ **particular**..."
- ll. Page 52, lines 4 – 8, revise to read: "...~~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.~~ **The NRC will continue to engage with and support the Executive Branch agencies with primary responsibility for assessing proliferation risks, and will continue to address proliferation risks in the NRC's comprehensive regulations for physical security, information security, material control and accounting, cyber security, and export control.**

cc: Chairman Macfarlane  
Commissioner Svinicki  
Commissioner Apostolakis  
Commissioner Magwood  
Commissioner Ostendorff  
OGC  
OIP  
CFO  
OCA  
OPA  
Office Directors, Regions, ACRS, ASLBP (via E-Mail)  
PDR