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NEI

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NUCLEAR ENERGY INSTITUTE

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September 25, 2008

OFFICE OF SECRETARY
RULEMAKINGS AND
ADJUDICATIONS STAFF

Ms. Annette Vietti-Cook
Secretary to the Commission
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001

Subject: Natural Resources Defense Council; Receipt of Petition for Rulemaking [Docket No. PRM-50-90; NRC-2008-0279] 73 FR 30321 dated May 27, 2008.

Project Number: 689

Dear Madam Secretary:

The Nuclear Energy Institute (NEI)¹ appreciates the opportunity to provide comments on the subject petition. These comments are based on industry input from NEI's members and are offered for your consideration in resolving the petition. NEI does not support the subject petition as discussed below and in the attachment to this letter for several reasons.

Specifically, the petition for rulemaking submitted by the Natural Resources Defense Council (NRDC) requests that NRC amend its regulations pertaining to the domestic licensing of highly enriched uranium (HEU) to establish a date when the NRC will no longer license the use, transport or export of HEU except for restricted use by a few specific facilities. As stated above, NEI does not support the petition and offers the following general comments and specific comments attached for your further consideration.

¹ NEI is the organization responsible for establishing unified nuclear industry policy on matters affecting the nuclear energy industry, including the regulatory aspects of generic operational and technical issues. NEI's members include all utilities licensed to operate commercial nuclear power plants in the United States, nuclear plant designers, major architect/engineering firms, fuel fabrication facilities, materials licensees, and other organizations and individuals involved in the nuclear energy industry.

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SECY-02

1. A 50+ year track record has been established for the safe and secure licensing, transport, export, and use of HEU, and there is no evidence or data to suggest the contrary.
2. Over 41,000 medical procedures are performed daily in the U.S. alone, with almost all of them relying on the availability of isotopes produced with HEU targets in Canadian, European and South African reactors.
3. In addition to complex technical and economic issues involved with HEU to low enriched uranium (LEU) target conversion, is the fact that a new waste stream would be generated requiring proper characterization and management.
4. There is ongoing Federal government and industry involvement to assess various technical and economic feasibility issues, and environmental stewardship of conversion. A government-industry coordinated approach to these complex matters requires continued Federal support to bring them to fruition.
5. Contrary to the NRDC's request, a specific date for HEU to LEU conversion cannot be definitively and realistically identified at this time for a whole host of reasons, but has been estimated by government and industry to be between eight to ten years or more.
6. We encourage NRC to consider the National Academy of Sciences' ongoing study on the feasibility of converting HEU targets, which is expected to be publicly released in late 2008 or early 2009.

Conversely, we support the comments submitted by the American Association of Physicists in Medicine (August 11, 2008 letter) and the National Organization of Test, Research and Training Reactors (August 1, 2008 letter).

We appreciate the opportunity to comment on the NRDC petition for rulemaking as it has the potential to impact each American citizen who undergoes a medical procedure using isotopes.

If you have any questions regarding the comments, please feel free to contact me at 202-739-8126; fmk@nei.org or Janet Schlueter at 202-739-8098; jrs@nei.org.

Sincerely,



Felix M. Killar, Jr.

Attachment

c: Mr. Michael T. Lesar, ADM/DAS/RDEB, NRC

Specific Comments on the NRDC Petition for Rulemaking on HEU

Strong Safety and Security Record

The licensing for use, transport and export of highly enriched uranium (HEU) has been safely regulated in this country for over 50 years with involvement by several Federal agencies, e.g., U.S. Nuclear Regulatory Commission, U.S. Department of Energy (DOE), U.S. Department of State, and U.S. Department of Homeland Security. Also, security requirements for the transport, delivery and storage of HEU are strictly regulated and have historically been adhered to while protecting public health and safety and the environment. We are not aware of any evidence or data to suggest that the current level of government oversight or licensee performance is inadequate. Therefore, we disagree with the petitioner's statement that "HEU is simply too dangerous for continued commercial use."

Nationwide Medical Use

The continued export of HEU to Canada for production of Molybdenum-99/ Technetium-99m is critical to ensuring that the domestic supply of medical isotopes meets current demand. Each day, there are approximately 41,000 nuclear medicine procedures performed in this country alone, and almost all of them rely on medical isotopes produced using HEU targets. In addition, as the American Association of Physicists in Medicine stated in its letter, the Canadian reactor is one of only four reactors worldwide to produce isotopes for commercial use. The importance of the continued operation of the Canadian reactor to the U.S. cannot be overstated, and was highlighted by two relatively recent events. First, in November 2007, it was announced that the Canadian reactor would not be allowed to restart after its regular maintenance schedule. This potential imminent shortage of isotopes caused the Canadian government to swiftly pass legislation to permit the restart of the reactor, although a temporary loss of global supply of medical isotopes did result. In addition, the three reactors in Europe were all shut down at the same time with one to remain down for several months. More recently, the Canadian decision to terminate the MAPLE reactor project makes the continued operation of the existing Canadian reactor even more critical to ensuring an adequate supply of medical isotopes. In summary, there is no viable alternative supply of medical isotopes to the U.S. at this time and, as such, any potential shutdown of the Canadian reactor due to a lack of HEU must be very carefully studied, planned and orchestrated so as not to negatively impact medical care.

New Radioactive Waste Stream

Conversion of HEU to LEU targets involves several complex issues that would need to be addressed in a comprehensive and coordinated manner before it could occur. In addition to the array of technical and economic feasibility issues, lead time obstacles for conversion of existing processes, as well as environmental stewardship, there would be new processes because the composition of the

LEU target will be different from its HEU counterpart. As a result, a new, yet to be characterized, waste stream requiring disposal and safe management would result. These are complex matters that require thoughtful coordination, particularly since the supply of medical isotopes used worldwide cannot be interrupted during any transition from HEU to LEU targets.

Ongoing Government and Industry Coordination

DOE's National Nuclear Security Agency, DOE's national laboratories, other Federal agencies and industry representatives have been involved, for some time, in identifying, analyzing, and formulating recommendations on how to proceed on HEU to LEU conversion matters. While medical isotope production using LEU targets is technically feasible and has been demonstrated, it has not yet been proven economically viable due to the significant costs associated with conversion. In addition, DOE's Reduced Enrichment for Research and Test Reactors program has been addressing this topic for several years, which reflects the complexities of fully resolving the matter. Most recently, representatives of non-power reactors held a routine meeting at the Massachusetts Institute of Technology to discuss issues of mutual interest and their conversion schedules. In order for HEU to LEU reactor target conversion to occur, continued Federal resource support by NRC, DOE and others is critical to its success.

Conversion Timeline

At this time, NEI is not supportive of a fixed date for conversion of HEU to LEU targets, as petitioned by NRDC, based on the complexity of the issues associated with conversion and the imperative goal of ensuring a reliable and continuous supply of medical isotopes. However, industry will continue to support the Federal government's interest and efforts in this initiative while maintaining the safe use, transport and export of HEU.

From: Annette Vietti-Cook
Sent: Friday, September 26, 2008 8:26 AM
To: Evangeline Ngbea; Emile Julian; Rebecca Giitter
Subject: FW: Natural Resources Defense Council; Receipt of Petition for Rulemaking
Attachments: Natural Resources Defense Council; Receipt of Petition for Rulemaking

From: BELL, Denise [dxb@nei.org] on behalf of KILLAR, Felix [fmk@nei.org]
Sent: Thursday, September 25, 2008 3:55 PM
Subject: Natural Resources Defense Council; Receipt of Petition for Rulemaking
Attachments: 09-25-08_NRC_Natural Resources Defense Council; Receipt of Petition for Rulemaking.pdf

September 25, 2008

Ms. Annette Vietti-Cook
Secretary to the Commission
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Sincerely,

Felix M. Killar, Jr.

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From: Annette Vietti-Cook <Annette.Vietti-Cook@nrc.gov>
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