



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

April 3, 2001

OFFICE OF THE  
SECRETARY

COMMISSION VOTING RECORD

DECISION ITEM: SECY-01-0047

TITLE: PROPOSED LICENSE TO EXPORT HEU TO  
CANADA FOR USE IN THE NRU REACTOR TO  
PRODUCE MEDICAL RADIOISOTOPES

The Commission (with all Commissioners agreeing) approved the subject paper as recorded in the Staff Requirements Memorandum (SRM) of April 2, 2001.

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

Annette L. Vietti-Cook  
Secretary of the Commission

Attachments:

1. Voting Summary
2. Commissioner Vote Sheets

cc: Chairman Meserve  
Commissioner Dicus  
Commissioner Diaz  
Commissioner McGaffigan  
Commissioner Merrifield  
OGC  
EDO  
PDR

**NOTE: THIS VOTING RECORD WILL BE RELEASED TO THE PUBLIC 5 WORKING DAYS  
AFTER THE LETTER IS DISPATCHED**

VOTING SUMMARY - SECY-01-0047

RECORDED VOTES

	APRVD	DISAPRVD	ABSTAIN	NOT PARTICIP	COMMENTS	DATE
CHRM. MESERVE	X				X	3/27/01
COMR. DICUS	X				X	3/29/01
COMR. DIAZ	X				X	3/27/01
COMR. McGAFFIGAN	X				X	3/29/01
COMR. MERRIFIELD	X				X	3/30/01

COMMENT RESOLUTION

In their vote sheets, all Commissioners approved the staff's recommendation and provided some additional comments. The Commission acted upon the export license application authorizing the export of 10.05 kilograms of HEU to Canada for use in the NRU reactor and provided a forwarding letter reflecting the terms of the Commission's final decision in the SRM issued on April 2, 2001.

**NOTE: THIS VOTING RECORD WILL BE RELEASED TO THE PUBLIC 5 WORKING DAYS AFTER THE LETTER IS DISPATCHED**

NOTATION/AFFIRMATION VOTE

RESPONSE SHEET

TO: Annette Vietti-Cook  
Secretary of the Commission

FROM: CHAIRMAN MESERVE

SUBJECT: SECY-01-0047 - PROPOSED LICENSE TO EXPORT HEU TO  
CANADA FOR USE IN THE NRU REACTOR TO PRODUCE  
MEDICAL RADIOISOTOPES

Approved   x w/comments   Disapproved                      Abstain           

Not Participating            Request Discussion           

**COMMENTS:**

I approve the subject export license application on the following conditions:

1. The Commission directs that the licensee under XSNM3060 should not ship any additional material until receiving advice from the Commission following the mid-year 2001 review of the MAPLE program. In light of the fact that the operation of the MAPLE reactors is currently under review, further shipments of uranium oxide are unjustified at this time.
2. The Commission approves only 5 kilograms of uranium metal for the NRU license for immediate shipment, and will consider approving the remaining 5.05 kilograms (for a total of 10.05 kilograms) after the mid-2001 MAPLE review. At that time the Commission may have further information on the expected duration of future reliance on the NRU reactor and the need for additional shipments of uranium metal.

  
SIGNATURE

March 27, 2001

DATE

Entered on "AS" Yes   X   No

NOTATION VOTE

RESPONSE SHEET

TO: Annette Vietti-Cook, Secretary  
FROM: COMMISSIONER DICUS  
SUBJECT: **SECY-01-0047 - PROPOSED LICENSE TO EXPORT HEU TO CANADA FOR USE IN THE NRU REACTOR TO PRODUCE MEDICAL RADIOISOTOPES**

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

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

COMMENTS:

See attached comments.

Patricia Joy Dicus  
SIGNATURE

March 29, 2001  
DATE

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

## COMMISSIONER DICUS' COMMENTS ON SECY-01-0047

I approve the issuance of the export license to Transnuclear, Inc. for the export of 10.05 kg total of HEU, with the understanding that approximately 5 kg will be shipped shortly and the additional approximately 5 kg will be shipped later, if needed. I recommend that the staff notify the Commission 60 days prior to the expected date of the second shipment with a report that should update information concerning the necessity for operation of the NRU reactor and, at the same time, update the expected schedule for operation of the Maple reactor.

While I agree with Chairman Meserve's intention to closely monitor the shipment of HEU to the Maple reactors, I suggest the Commission wait for the next annual report expected within a few months to consider whether any modifications to the export license related to the Maple Reactors is appropriate.

I have the utmost confidence that the proliferation issues underlying concerns with HEU exports generally will not be aggravated by the proposed export, given Canada's exemplary record in the non-proliferation arena. Recognizing the importance of maintaining a reliable supply of medical isotopes for our citizenry, I believe the prompt approval of the requested export is in the best interests of the United States. I note that the State Department supports the requested export. Further, the recent visit of NRC personnel to Canada to review information related to the NRU request and the progress of the Maple Reactors has not lead to any findings inconsistent with the recommendations and bases presented in SECY-01-0047. Under these circumstances I find that approval of the 10.05 kg export request is appropriate.

gtd  
3-29-01

NOTATION VOTE

RESPONSE SHEET

TO: Annette Vietti-Cook, Secretary  
FROM: COMMISSIONER DIAZ  
SUBJECT: **SECY-01-0047 - PROPOSED LICENSE TO EXPORT HEU TO CANADA FOR USE IN THE NRU REACTOR TO PRODUCE MEDICAL RADIOISOTOPES**

Approved <sup>w/comments</sup> xx *[handwritten initials]* Disapproved \_\_\_\_\_ Abstain \_\_\_\_\_

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

COMMENTS:

See attached comments.

*[Handwritten Signature]*  
\_\_\_\_\_  
SIGNATURE

3.27.01  
\_\_\_\_\_  
DATE

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

## COMMENTS OF COMMISSIONER DIAZ ON SECY-01-0047

I approve the staff's recommendations subject to the conditions in the Chairman's vote. The Commission has received, and is continuing to receive, updated information on the progress of the program for conversion of the MAPLE reactors to LEU targets, and thus I am satisfied that, at present, the requirements of Section 134 of the Atomic Energy Act, as amended (the "Schumer Amendment"), are met, as well as the other statutory requirements.

I look forward to receipt of the next annual report on the conversion program, as required by a condition to the license for export of HEU targets for the Maple reactors, which is due to the Commission in May, 2001. I support an in-depth review of that report, including a public meeting, so that the Commission can assess whether the requirements of the Schumer Amendment are continuing to be met and whether it is appropriate to adjust the amount of HEU authorized for export to the Maple reactors in light of information regarding the conversion program or delay in the startup of the Maple reactors. It will be highly important, in my view, to explore, in detail, the bases for anticipated completion dates for the development and implementation phases of the conversion program, as well as developments regarding continued operation of the NRU reactor.

NOTATION VOTE

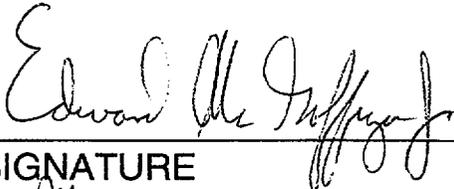
RESPONSE SHEET

TO: Annette Vietti-Cook, Secretary  
FROM: COMMISSIONER MCGAFFIGAN  
SUBJECT: **SECY-01-0047 - PROPOSED LICENSE TO EXPORT HEU TO CANADA FOR USE IN THE NRU REACTOR TO PRODUCE MEDICAL RADIOISOTOPES**

Approved <sup>w/comments</sup>  Disapproved  Abstain   
Not Participating

COMMENTS:

See attached comments.

  
\_\_\_\_\_  
SIGNATURE  
March 29, 2001  
\_\_\_\_\_  
DATE

Entered on "STARS" Yes  No

**Commissioner McGaffigan's Comments on SECY-01-0047**

I approve the NRU reactor export license amendment, subject to the conditions proposed by Chairman Meserve. The Chairman's changes are clearly consistent with the long established U.S. non-proliferation policy and with the Schumer Amendment. I have no doubt about Canada's non-proliferation commitment, just as I have no doubt about the European Community's non-proliferation commitment in the case of the HEU exports to the Petten reactor. But the goal is to minimize the amount of U.S.-origin HEU in international commerce and to incentivize a universal transition to LEU fuel and LEU targets.

I strongly support providing Canada with the necessary amount of HEU required to meet the production needs for medical radioisotopes, in particular Mo-99. I believe that Chairman Meserve sets out a clear, rational approach in his vote that satisfies the continuing need for radioisotope production. The immediate need is met by authorizing the initial export of 5 kilograms HEU under License Number XSNM03171. Export of the remaining 5.05 kilograms of HEU should be based on a demonstration of need, a determination of which the Applicant states in its amendment request will not be made until after the scheduled date of the next annual report on the MAPLE program, due to the Commission in May 2001.

I understand that the full amount of HEU authorized for export in calendar year (CY) 2000 was shipped last year (22.6 kilograms). This means that there is currently a sufficient quantity of HEU available to support the operating needs of the MAPLE program for a long time, perhaps well into CY 2003 depending on when the MAPLE reactors can begin operation. In order to limit the amount of U.S.-origin HEU circulating in international commerce, I support seeking assurances from the licensee under License Number XSNM3060 of its intent not to ship any additional material until consulting with the Commission following receipt of the next annual report on the MAPLE program. That license currently authorizes more HEU than can possibly be used during the term of the license, given the problems the MAPLE reactors have encountered. I believe that the Commission should consider reducing the amount of HEU authorized for export under the license. But I will await the annual report before reaching a final conclusion on that matter.

*EdR*

NOTATION VOTE

RESPONSE SHEET

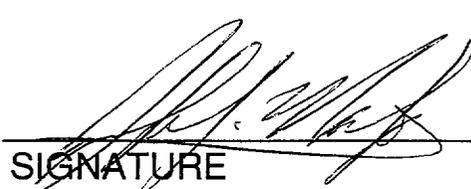
TO: Annette Vietti-Cook, Secretary  
FROM: COMMISSIONER MERRIFIELD  
SUBJECT: **SECY-01-0047 - PROPOSED LICENSE TO EXPORT HEU TO CANADA FOR USE IN THE NRU REACTOR TO PRODUCE MEDICAL RADIOISOTOPES**

Approved  Disapproved  Abstain

Not Participating

COMMENTS:

*See attached comments.*

  
\_\_\_\_\_  
SIGNATURE

*2/30/01*  
\_\_\_\_\_  
DATE

Entered on "STARS" Yes  No

Comments from Commissioner Merrifield on SECY-01-0047:

The issue of approving exports of HEU to Canada has resulted in significant Commission attention and deliberation over the last two years to ensure that the exports are consistent with our nations non-proliferation policies. While I fully support efforts associated with nuclear non-proliferation goals and believe that reducing the amount of HEU available internationally is an important goal that the Commission must support, the Commission has an equally important duty to regulate responsibly. We cannot regulate responsibly if we ignore the realities that are associated with this amendment request.

There are several factors we must consider. First, this request is from our well respected neighbor Canada, which has a remarkable history of supporting and promoting non-proliferation policies world wide. Second, the Commission has interpreted the Schumer amendment to not require absolute certainty about the timing or feasibility of implementing LEU targets. Third, the Commission recognized that the Schumer Amendment quite reasonably permits the Commission to consider the costs involved and to not impose restrictions that would interrupt the critical supply of medical isotopes. See In the Matter of Transnuclear, Inc., CLI-99-20, 49 NRC 469, 478 (1999). At our previous Commission meetings, the National Control Institute (NCI) agreed with this interpretation and the need to ensure a predictable steady supply of medical isotopes to prevent patients in the United States and around the world from being denied essential medical treatment. Importantly, it was recognized that the more expensive the production costs for these isotopes, the more expensive the medical costs would ultimately be for these patients.

This is not to say that we cannot promote our non-proliferation policy of reducing the supply of HEU with respect to Canada. But we cannot do so without any regard for the practical implications of our decisions on the cost and supply of medical isotopes. In this case the record is clear that AECL is continuing to work on meeting LEU targets for the MAPLE reactors, has met with technical complications in bringing the MAPLE reactors on line, needs to continue using the NRU facilities for the production of medical isotopes, and that it will need the full allotment of 10 kilograms of HEU (shipped in 5 kg increments) to avoid interruption of supply of isotopes. AECL did say that if actual implementation of their plans for the Maple reactors is better than anticipated, then they will commit to one of two actions. If the material had been exported but not yet converted into targets for the NRU reactor, they would have the material manufactured for use in the Maple Reactor. If the second shipment had not yet occurred and they were well ahead of schedule for the Maple reactors, then AECL would not have the material shipped. But the actual request by AECL is for 10 kg of HEU to meet their currently anticipated needs. I also note that the Department of State supports the export as requested and states their belief that the requirements of the Schumer Amendment are satisfied. After careful review of the circumstances of this case, I am satisfied, at present, that the requirements of Section 134 of the Atomic Energy Act, as amended (the "Schumer Amendment"), are met, as well as the other statutory requirements. Therefore, I approve the amendment. NCI has asked the Commission, quite reasonably I believe, to consider the delay in bringing the MAPLE reactors on line, and the extra shipment of HEU for the NRU, when reviewing the annual shipment of HEU for the MAPLE reactors. The argument goes, the longer the NRU is in production, the smaller the production needs will be from the MAPLE, and accordingly the amount of HEU needed by the MAPLE should be smaller. The Commission should commit to consider this issue in our next annual review of HEU shipments for the MAPLE reactors.

I fully understand that some people have reservations about the commitment of Canada to convert to LEU targets. I believe that some of the doubts that have been raised over the last two years may have resulted from various parties not being fully open in their communications. There must be open, accurate, and full disclosure of information, particularly in regard to the operation of the NRU reactors and the licensing and conversion of the Maple facilities. There should be no ambiguity in the reports to the Commission on the status of these two facilities. By the same token, the safe construction and operation of these facilities is the responsibility of the Canadian licensee (AECL) and the Canadian Nuclear Safety Committee (CNSC), under the guidance of its President and CEO, Linda Keen. There are valid safety concerns with both the continued operation of the NRU facility and the licensing of the Maple facilities. The NRC should continue to work closely with the CNSC to understand the status of the safety review and be prepared to assist, if requested. But nothing the NRC does should arbitrarily establish schedules for the licensing or operation of either facility.

As for the timing of the shipments of the 10 kg of HEU. I have no objection to initially permitting only 5 kg of HEU to ship prior to our annual review of the MAPLE, HEU export. However, should the Applicant have a need for more than the 5 kilograms, the Commission should be prepared to expeditiously allow the remaining quantity to be exported per the initial request. The splitting of the export into two shipments can be addressed in appropriate licensing conditions in the current license application. I also am not opposed to another Commission meeting to discuss the shipment of HEU for the MAPLE reactors, should one be necessary. I would encourage the licensee in its annual report to the Commission to approach the Commission with a realistic estimate of an annual HEU shipment that will be necessary for the MAPLE reactors and which considers the delay in bringing them on line.

I will note that some people have urged the Commission to allow this specific export request but to authorize the export under the same license authorizing the export for the Maple reactor targets. Additionally, they want us to reduce the authorized amount for the Maple reactor targets by the same 10 kg. Such action is impractical for two reasons. First, there are technical differences in the types of targets used in the two facilities. The NRU reactor target uses an uranium-aluminum alloy and the Maple reactor target uses an uranium oxide composition; and the targets are manufactured at different facilities. Although technically you could take the metal to be exported in one license and ship it to the target production facility for the second reactor, administratively it is better to maintain the two actions as separate exports. Second, the current application does not contain sufficient information to make a final determination on the status of the Maple reactors. NRC has a strong oversight program over the export of HEU for the Maple reactors. This oversight program will require a mid-year review of the status of the Maple program each year HEU is being exported to support this program. The mid-year review should determine if and how much exports should be adjusted to properly support the Maple program.

A handwritten signature in black ink, appearing to be 'J. J. ...', written over a horizontal line.

3/30/01