

**NUCLEAR REACTOR LABORATORY**  
AN INTERDEPARTMENTAL CENTER OF  
MASSACHUSETTS INSTITUTE OF TECHNOLOGY



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J. A. BERNARD, JR.  
Director of Reactor Operations

February 28, 1996

U.S. Nuclear Regulatory Commission  
ATTN: Document Control Desk  
Washington, D.C. 20555

Subject: Request for Temporary Increase in SNM Possession, License R-37, Docket 50-20

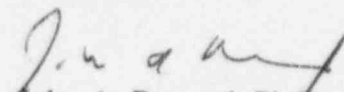
Gentlemen:

On 23 February 1996, the Massachusetts Institute of Technology submitted an application to amend its Facility Operating License No. R-37. The requested amendment was for a temporary increase in the possession limit for Uranium-235 in Paragraph 2b(2) of that license. The reason for the request was inability of the U.S. Department of Energy (DOE) to accept returns of spent fuel from MIT. Enclosed is a letter dated 21 February 1996 from DOE in which they provide a tentative schedule for return of spent fuel. Please note that they will not be able to take any shipments of spent fuel from MIT in 1996 or 1997.

Three shipments of eight elements each are scheduled for 1998. This will reduce our inventory by about 7.2 kilograms. In our letter of 02/23/96, we had estimated our inventory as of March 1, 1999 to be 36.9 kilograms. So, even if we do receive the three shipments in 1998, our inventory will still be above the current 29 kilogram limit. DOE is then planning to provide one shipment per year. That will not be sufficient to further reduce our inventory. However, it may make it possible to reduce the magnitude of the requested temporary increase in the possession limit. We would notify NRC if this were the case. Also, it should be noted that we are required by our technical specifications to report spent fuel shipping activities to NRC.

This DOE letter is provided to you as an item of information.

Sincerely,

  
John A. Bernard, Ph.D.  
Director of Reactor Operations  
MIT Research Reactor

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Savannah River Operations Office  
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**FEB 21 1996**

Dr. John Bernard  
Director of Reactor Operations  
Massachusetts Institute of Technology  
Nuclear Reactor Lab  
138 Albany Street  
Building NW 12  
Cambridge, Massachusetts 02139

Dear Dr. Bernard:

**SUBJECT: Shipment(s) of Spent Nuclear Fuel (SNF) to the Savannah River Site (SRS)**

On Wednesday, February 14, 1996, Mr. Tom Newton of your staff contacted SRS regarding the possibility of making one or more shipments of SNF from the Massachusetts Institute of Technology (MIT) to SRS for storage during 1996. Upon receipt of this inquiry, a review of SRS's current receipt schedule and shipping cask utilization was conducted to determine if SRS could support such a request.

As you are aware, there is only one shipping cask that is small, light weight, and licensed by the Nuclear Regulatory Commission for use by universities - the BMI-1 cask. Because of the transit times and loading and unloading times required for the BMI-1 cask, it is typically not possible to make more than two shipments per month with that cask. This constraint coupled with SRS's cask receipt capacity (three domestic casks per month) make it impossible for MIT to ship SNF to SRS in the BMI-1 cask during 1996 without delaying other planned shipments.

A review of planned shipments for 1996 was also performed to determine if any could be delayed without significant impact to their programs or facilities. The U.S. Department of Energy (DOE) is committed to the completion of the program for converting the majority of University research reactors to low enriched uranium and the removal of the highly enriched uranium from those campuses. Almost half of the shipments scheduled for the BMI-1 cask are directly related to this effort. In addition, DOE will likely resume shipments of government-owned SNF at SRS in the next few months. At that time, the reactor at the National Institute of Standards and Technology will be shipping SNF to SRS for the first time in about seven years. Unfortunately this facility cannot be delayed in their shipment schedule because of facility utilization and the fact that they have less than one year of margin before they must shutdown from a lack of SNF storage capacity.

Absent an emergency situation at MIT, SRS cannot support receipt of SNF from MIT during 1996. The present schedule shows three shipments of SNF from MIT in April and May 1998. If this schedule causes significant impact on your facility from a safety and health perspective or from an operational or financial perspective, please notify us. We will work with you and your staff to reach a mutually agreeable shipping schedule. MIT is recognized as one of SRS's regular customers and we wish to cooperate with you on future shipments to the maximum extent possible.

Dr. John Bernard

2

If the SNF storage situation at your facility changes and becomes more urgent or if the urgency of your current situation is greater than presented above, please contact me immediately so that we can work with you to develop a solution.

If you or your staff have any questions or require additional information on receipt plans and capabilities, please contact me at 803-557-3759.

Sincerely,

A handwritten signature in black ink, appearing to read 'W D Clark', with a long horizontal flourish extending to the right.

W. D. Clark, Manager  
Spent Nuclear Fuel Program

RSFD:WDC:gis

cc: B. K. Chambers, RSFD  
G. W. Stout, PAI