

December 23, 2004

MEMORANDUM TO: Michael T. Markley, Acting Chief  
Fuel Manufacturing Section  
Fuel Cycle Facilities Branch  
Division of Fuel Cycle Safety  
and Safeguards

FROM: Melanie A. Galloway, Chief **/RA/**  
Technical Support Group  
Division of Fuel Cycle Safety  
and Safeguards  
Office of Nuclear Material Safety  
and Safeguards

SUBJECT: TECHNICAL ASSISTANCE REQUEST (TAC NO L31843) -  
AMENDMENT REQUEST FOR SPECIAL NUCLEAR MATERIAL  
LICENSE AT THE UNIVERSITY OF TEXAS AT AUSTIN

The Technical Support Group reviewed the submittal dated November 10, 2004, from the University of Texas at Austin regarding its request for a license amendment to transfer fuel elements from shipping containers to storage racks in an approved storage location. The attachment contains the criticality safety request for additional information. This information is required to complete the criticality safety assessment for the final Safety Evaluation Report to support the Fuel Cycle Facilities Branch decision on the amendment.

Attachment: Request for Additional Information

CONTACT: Tamara D. Powell, TSG/FCSS  
(301) 415-5095

December 23, 2004

MEMORANDUM TO: Michale T. Markley, Acting Chief  
Fuel Manufacturing Section  
Fuel Cycle Facilities Branch  
Division of Fuel Cycle Safety  
and Safeguards

FROM: Melanie A. Galloway, Chief **/RA/**  
Technical Support Group  
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SUBJECT: TECHNICAL ASSISTANCE REQUEST (TAC NO L31843) -  
AMENDMENT REQUEST FOR SPECIAL NUCLEAR MATERIAL  
LICENSE AT THE UNIVERSITY OF TEXAS AT AUSTIN

The Technical Support Group reviewed the submittal dated November 18, 2004, from the University of Texas at Austin regarding its request for a license amendment to transfer fuel elements from shipping containers to storage racks in an approved storage location. The attachment contains the criticality safety request for additional information. This information is required to complete the criticality safety assessment for the final Safety Evaluation Report to support the Fuel Cycle Facilities Branch decision on the amendment.

Attachment: Request for Additional Information

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<b>OFFICE</b>	TSG		TSG				
<b>NAME</b>	TPowell		MGalloway				
<b>DATE</b>	12/ 23 /04		12/ 23 /04				

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### Request for additional information

1. What is the  $k_{\text{eff}}$  for the 4 x 4 array that is air moderated and water reflected?
2. What is the  $k_{\text{eff}}$  for the 2 x 9 array that is air moderated and water reflected?
3. How does the design of the Auxiliary Equipment Room (AER) make flooding of the AER incredible?
4. In addition to those listed in the submittal, what are the requirements specified in the standard procedures for handling special nuclear materials?
5. Do the standard procedures for handling special nuclear materials allow any exceptions to the requirements and would any exceptions to the requirements apply to the transfer of the MCXPR elements? If so, please explain.
6. Will any special nuclear material other than the fuel elements be allowed in or be stored in the AER? If not, how will this be ensured?
7. Since the storage rack has not been constructed, how will any changes to the current plans and dimensions that may occur during the building of the storage rack be evaluated with respect to criticality safety?