NRC FORM 699 (9-2003) U.S. NUCLEAR REGULATORY COMMISSION

CONVERSATION RECORD

DATE: 01/26/2006

TIME: 1:00pm

NAME OF PERSON(S) CONTACTED OR IN CONTACT WITH YOU	TELEPHONE NO.
Anthony Patko	678-328-1274

ORGANIZATION: NAC International

SUBJECT: Possible Residual Tritium in NAC-LWT Transport Cask (Docket No. 71-9225)

TYPE OF CONVERSATION
- ☐ VISIT
- ☑ CONFERENCE
- ☐ TELEPHONE
  - ☐ INCOMING
  - ☐ OUTGOING

SUMMARY *(Continue on Page 2)*

List of all conference call participants is at the end.

Background. NAC-LWT casks are authorized for the transport of up to 300 tritium-producing burnable absorber rods (TPBARs). Under certain conditions tritium may infuse into the stainless steel structures of the cask, including the containment vessel and basket structures. The infused tritium may remain bound in the stainless steel after the TPBARs are removed. There is a concern that there may be significant tritium release upon receipt of an empty casks, and that this release could be significant, unanticipated, and unmonitored.

Current Status of Tritium Shipments. There have been a number of tritium shipments in the past. These include several shipments in the 1997-99 timeframe from Watts Bar to Idaho, and a shipment of a small number of sectioned rods in mid-2005. Currently there are two casks containing TPBARs stored at Savannah River Site. One casks has 215 rods and one cask has 19 rods. DOE stated that there has been no instance where there was significant tritium release from the TPBARs in transport.

Tritium Concentrations in the Transport Cask. PNNL reported that the site procedures for unloading TPBARs includes sampling the cask cavity gas for traces of tritium. This is accomplished by venting the cask cavity through tritium monitors before removing the cask lid. There has not been an instance where the concentration of tritium in the cask cavity exceeded the detectability limit (about 1E-3 uCi/liter). In addition, prior to shipping an empty package, smear surveys are taken of the cask cavity surfaces. The tritium levels have, in general, not exceeded 1000 to 2000 dpm/100 cm^2.

Amendment of Package Operations in the SAR. NAC, with input from DOE, will provide supplemental information in the Package Operations (Section 7) of the Safety Analysis Report. The revised section will include monitoring for tritium prior to opening a package carrying TPBARs, and monitoring tritium surface contamination on shipments of empty casks after TPBAR shipments. NAC will also request an amendment to authorize the transport of a limited number of sectioned TPBARs, to allow the return of PEI (Post Irradiated Examination) rod segments to SRS.

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ACTION REQUIRED

None.

NAME OF PERSON DOCUMENTING CONVERSATION	SIGNATURE	DATE
Nancy Osgood	Nancy Osgood	2-1-06

ACTION TAKEN

N/A

TITLE OF PERSON TAKING ACTION	SIGNATURE OF PERSON TAKING ACTION	DATE
N/A		

CONVERSATION RECORD (Continued)

SUMMARY *(Continue on Page 3)*

Call Participants:
DOE: Nanette Founds, Connie Rogers, Keith Adkins.
PNNL: Gerald Sorensen, Bruce Reed, Glenn Hollenberg.
SRS: Bill Brizes.
NAC: Jamie Adam, Holger Pfeifer, Tony Patko.
NRC: Charles Interrante, Tze-Jer Chuang, Kim Hardin, Larry Campbell, Ron Parkhill, Nancy Osgood

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