

Allen, William

From: Allen, William
Sent: Thursday, October 30, 2014 3:36 PM
To: Chesnutt, Samuel (Samuel.Chesnutt@xenuclear.com); Piotter, Jason
Subject: RAI Phone Call
Attachments: Teleconference RAI.pdf

Attached is the RAI to be discussed.

Jason, you requested a word change before you would concur. As you know, I made the change. However, I made that change to the version which was on the G:\ drive. This PDF was generated from the version on my hard drive. Please tell me if the change you requested is not there, and if not, I'll update the version on my hard drive.

Chris

Request for Additional Information
Northern States Power Company
Docket No. 72-10
Proposed Amendment to Special Nuclear Materials License No. SNM-2506

By letter dated May 23, 2014 (ADAMS Accession No. ML14143A202), Northern States Power Company submitted to the NRC an amendment request to SNM license number SNM-2506 TS for the Prairie Island Independent Spent Fuel Storage Installation. The proposed amendment request seeks to revise the cask cavity pressurization requirements and their technical bases for the spent fuel storage casks.

Request for Additional Information

1. Justify that positive internal pressurization is no longer required to prevent in-leakage of air.

The FSAR states the following:

A positive cask cavity pressure is described in the SAR as a barrier "to prevent inleakage of air" (Section 3.2.5.3.3/A3.2.5.3.3) and as a "precaution against the inleakage of air" (Section 3.3.1 /A3.3.1). However, in-leakage is prevented by the welded containment vessel and double O-ring seals on all mechanical connections. The seal interspace is pressurized and monitored with a low pressure alarm for each cask, as explained in the Containment Integrity discussion later in this Evaluation.

A thorough and detailed justification of the confinement integrity including base material, welds, and seal regions was provided to the staff as justification for elimination of the internal pressure requirement. That justification however appears to be unchanged from the original licensing basis, and as such, does not explain the necessity of the original requirement for internal pressurization to prevent against air in-leakage. If the confinement integrity, which prevented the escape of pressurized helium to an unacceptable level was sufficient in the original licensing basis, it is unclear how air-in-leakage could physically occur, regardless of pressurization within the canister at the values under consideration. It appears that the feature of pressurization was initially coupled with the overall confinement integrity and therefore cannot merely be discarded without a more thorough explanation of its purpose and relative importance to overall confinement than what was originally provided in the amendment request.

This information is needed to ensure compliance with 10 CFR 72.120(d) and 72.122(h)(1).

Enclosure