

NRC FORM 699 (9-2003)		U.S. NUCLEAR REGULATORY COMMISSION		DATE 09/18/2006
CONVERSATION RECORD				TIME 2:30pm
NAME OF PERSON(S) CONTACTED OR IN CONTACT WITH YOU Jayant Bondre ORGANIZATION Transnuclear, Inc		TELEPHONE NO. .		TYPE OF CONVERSATION <input type="checkbox"/> VISIT <input checked="" type="checkbox"/> CONFERENCE <input type="checkbox"/> TELEPHONE <input type="checkbox"/> INCOMING <input type="checkbox"/> OUTGOING
SUBJECT Phone call with Transnuclear, Inc. (TN) to discuss issue associated with the NUHOMS HD rulemaking comments (Docket 72-1030)				
SUMMARY (Continue on Page 2)				
Transnuclear, Inc. attendees: Bob Grubb, Jayant Bondre, Don Shaw, Peter Shih				
Structural Integrity Associates: Barry Gordon				
Nuclear Regulatory Commission (NRC) attendees: Edwin Hackett, Gordon Bjorkman, Robert Nelson, Geoffrey Hornseth, Joe Sebrosky				
<p>The purpose of the phone call was to discuss a comment associated with the NUHOMS HD rulemaking. The staff is in the process of resolving comments associated with the rulemaking. The comment concerned the possibility of the dry shielded canister (DSC) support structure inside the Horizontal Storage Module (HSM) corroding from contact with air and humidity in the environment, particularly at coastal sites. The staff held a phone call with TN on 9/13/06. The purpose of the call on 9/18/06 was to discuss the options identified during the 9/13/06 phone call, which were:</p>				
<p>1) For coastal sites, the staff believed TN should consider specifying in the safety analysis report (SAR) a minimum copper content for the structural steel of 0.20% or provide data that the corrosion of the steel is acceptable with a copper content below this level.</p>				
<p>2) As an alternative to item 1 above, for coastal sites, the staff believed TN should consider specifying in the safety analysis report (SAR) a specification for the coating to be applied to the structural steel and the technical basis for the specification to ensure that the coating will last the 20 year licensing basis for the design.</p>				
<p>3) TN believed that the staff should consider that the preponderance of the evidence suggests that corrosion of the steel support structure is not an issue for the 20 year licensing basis life. TN believed that given that there is some corrosion resistance provided in the steel, that a coating is applied, and that the steel is inside the HSM protected from the environment nothing additional needed to be done.</p>				
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ACTION REQUIRED TN committed to resolving the issue by providing a statement in safety analysis report section 3.4.1.4, that for coastal environments that any load-bearing steel used to support the DSC in the HSM would be procured with a minimum 0.20 copper content for corrosion resistance. TN also indicated that it would evaluate whether any commitments needed to be made regarding the weld wire that is used for the support structure.				
NAME OF PERSON DOCUMENTING CONVERSATION Joseph Sebrosky		SIGNATURE 		DATE 9/21/06 9/18/06
ACTION TAKEN				
TITLE OF PERSON TAKING ACTION		SIGNATURE OF PERSON TAKING ACTION		DATE

CONVERSATION RECORD (Continued)

SUMMARY (Continue on Page 3)

The staff stated that it had considered TN's proposal (option 3) and rejected the argument for a coastal environment. The staff acknowledged that based on recent certified material test reports for the steel used for the DSC support structure inside the HSM that there was enough copper content to provide adequate corrosion resistance for the 20 year licensing basis for the design. However, the staff stated that the steel that TN was specifying did not require a minimum copper content and that the copper content was based on the source of the material for the steel. The staff noted that most steel mills today use scrap steel recovered from automobiles as a source of the material. Because of the wiring harnesses and other sources of copper in the scrap there happened to be enough copper in the steel that TN recently procured to provide corrosion protection. The staff noted that if the steel mill used scrap steel from a recently demolished bridge there was no guarantee that there would be sufficient copper content to provide corrosion protection.

The staff and TN then discussed options 1 and 2 in further detail. TN committed to resolving the issue by providing a statement in safety analysis report section 3.4.1.4, that for coastal environments that any load-bearing steel used to support the DSC in the HSM would be procured with a minimum 0.20 copper content for corrosion resistance. TN also indicated that it would evaluate whether any commitments needed to be made regarding the weld wire that is used for the support structure. TN indicated that it did not believe such a commitment was necessary because there were no structural welds associated with the DSC support structure in the DSC.

The staff and TN also discussed several references associated with corrosion of steel in a coastal environment. Subsequent to the phone call TN provided the staff with the following references:

- 1) Albrecht, P., and Hall T.T., "Atmospheric Corrosion Resistance of Structural Steels," *Journal of Materials in Civil Engineering*, January/February 2003.
- 2) Larrabee, C.P., and Coburn, S.K., "The Atmospheric Corrosion of Steels as Influenced by Changes in Chemical Composition," *Proceedings of the First International Congress on Metallic Corrosion*, Butterworths, London, 1962, p. 276 - 285.

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