PR 72
(71FR25782)

May 31, 2006

(4)

Secretary, U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001

DOCKETED
USNRC

May 31, 2006 (1:30pm)

OFFICE OF SECRETARY
RULEMAKINGS AND
ADJUDICATIONS STAFF

Attention: Rulemakings and Adjudications Staff

Subject: 10 CFR Part 72, Docket No. 72-1030; RIN 3150-AH93
NUHOMS HD Addition to the List of Approved Casks
Vendor: Transnuclaire

Gentlemen:

I would like to submit the following comments in opposition to NRC's proposal to add NUHOMS HD to the list of approved casks.

a. This NUHOMS HSM is much heavier and bigger than the previous models. Each loaded module weighs over 200 tons. What if the ground underneath the NUHOMS housing settles over the years under the weight of the modules! According to NRC's SER, on page 3-7, "It is assumed that an axial load of 80 kips is required for insertion, and 60 kips for extraction". This seems backwards: you will need more force to extract the canister than you will to insert it (when the rail is new and greased). How do you square the safety concern if, because of settlement and weather effects, 60 kips is not enough to pull the canister out? How will the NUHOMS be emptied of fuel if the canister binds to the rails? This is a huge concern to those of us who live near the NUHOMS sites. I hope that NRC would not toss this out as a non-issue. Instead of hoping for the best, the minimum NRC could do is to require that a demo of canister extractions at a couple of sites loaded with NUHOMS for ten years (or more) be done to prove that the horizontally loaded canister can be successfully extracted.

   You should also require a real stiff foundation underneath the NUHOMS to support the weight of the NUHOMS. At present, I see nothing in the proposed certificate that requires a strong support foundation to be built. Serious oversight, in my view.

b. My second concern pertains to storing fuel in a hot state stored horizontally. I have searched the public filings by Transnuclaire on this docket and the other docket (No. 72-1004). I have <u>not</u> found a single evaluation of the consequences of storing fuel horizontally over long periods of time. You should know that this question was considered by the Westinghouse engineers. I attach the information on the discussions that took place between Westinghouse and a utility. The conclusion that they reached is that *additional analyses and evaluation will be needed to determine whether it is permissible to store Westinghouse's fuel horizontally.*

   I strongly suggest that you do not dismiss the fuel supplier's (and reactor supplier's) concern without careful consideration.

   I know that a lot of fuel is already in NUHOMS at many sites. Who knows what is happening to all of the fuel stored outside of the fuel supplier's (Westinghouse's) specifications, because you cannot go and examine its condition?

Template = SECY-067

SECY-02

In the future, the fuel that will be stored will have burned longer in the reactor, which will make it more fragile. I think that NRC should perform a careful safety evaluation before permitting even more fuel, particularly well burned fuel, to be stored horizontally.

c. Your safety evaluation on page 4-6 says that "The NUHOMS HD DSC only undergoes a one-time temperature drop during backfilling of the DSC with helium gas. Because this is a one-time event, the DSC does not undergo any thermal cycling".

Your SER evidently assumes that the fuel will never be unloaded, repackaged and reloaded after it has been vacuum dried and backfilled. If that is the underlying basis of your SER, then the certificate should be restricted to only once-through loading such that there is no likelihood of thermal cycling of the fuel.

d. NRC's SER says that "The application performed dynamic impact analysis using LS-DYNA 3D on a cask-pad-soil finite element model..." This is not true. A read of the FSAR would show that applicant has used a cookbook approach, developed by EPRI in the time when LS-DYNA was not widely used, which is considered to be unconservative by most experts.

According to the experts I have consulted, a true LS-DYNA analysis would have shown much greater g-loads under an 80-inch drop. Therefore, the SAR analysis on which NRC has relied is inadequate and unconservative.

e. In my view, the tornado missile analysis in Chapter 11 of the NUHOMS FSAR does not consider the damaging scenario of missile impact. All of the analysis assumes impact over the concrete walls. The most dangerous impact would occur if the missile were to hit the fasteners that keep the door of the HSM in place. If the fastener fails from the missile impact, then the door will come loose and the canister will be exposed and people nearby will be irradiated.

I do not see any evaluation of this scenario in Transnuclaire's FSAR or NRC's SER.

I hope that you will give my comments due consideration.

Very truly yours,

Peter Kuhn
New Hampshire

Attachment: Email correspondence (three pages)

<< OLE Object: Picture (Device Independent Bitmap) >>

James R. Halligan/North-America/Westinghouse@Exchange
11/04/2005 11:48 AM

To: Albert J. Blatter/CENO/USNUS/BNFL-TEMP@ABB_USSEV_IMS
cc: George P. Smith/CENO/USNUS/BNFL-TEMP@ABB_USSEV_IMS, Diana B. Robinson/North-America/Westinghouse@Exchange
Subject: FW: Dry Cast Storage
Security Level:? Internal

Al,

Please review the question below. For Westinghouse assemblies there would be no issue in storing assemblies in the horizontal position provided they were continuously supported. The support would include lowering and uprighting as is done in the upender and shipping container.

-----Original Message-----
From: Robinson, Diana B.
Sent: Wednesday, November 02, 2005 10:25 AM
To: Halligan, James R.
Cc: Petrarca, David J.; 'Bob_Tomonto@fpl.com'
Subject: Dry Cast Storage

Good morning Jim,
Bob Tomonto called and asked what is Westinghouse's position on long term storage of fuel assemblies in a horizontal position in dry storage fuel casks. Any fuel, Westinghouse or CE design? Diana

Diana Robinson
Principal Project Engineer
Work 803-647-3452

Fax 803-647-2027
Cell 803-315-0547

-----Original Message-----
From: Robinson, Diana B.
Sent: Tuesday, November 08, 2005 1:40 PM
To: Halligan, James R.
Cc: Petrarca, David J.; Blatter, Albert J. (Notes)
Subject: Dry Cast Storage

Good afternoon Jim,
I forwarded to Bob Tomonto your previous response. Do you want me to pull it back. Can we support storing fuel in a horizontal position? What should I tell FPL?

Let me know,
Diana

-----Original Message-----
From: Halligan, James R.
Sent: Tuesday, November 08, 2005 11:58 AM
To: Blatter, Albert J. (Notes)
Cc: Smith, George P. (Notes); Robinson, Diana B.
Subject: RE: FW: Dry Cast Storage

Al,

I do not believe this has been evaluated for Westinghouse fuel. Acceptance would be based on shipping conditions. If there is a question about it we should either evaluate it or recommend fuel not be stored in the horizontal position.

-----Original Message-----
From: Blatter, Albert J. (Notes)
Sent: Tuesday, November 08, 2005 11:53 AM
To: Halligan, James R.
Cc: Smith, George P. (Notes); Robinson, Diana B.
Subject: Re: FW: Dry Cast Storage

Jim,

My preliminary response would be that there should be no issue for continuously supported CE type fuel assemblies in the horizontal position. However, there may be some unanswered questions whether the fuel rods would maintain their radial position without adverse bowing effects when exposed to long term creep effects stored in the horizontal position and only supported by the spacer grids. These unanswered questions may have been explored for the Westinghouse fuel assemblies/fuel rods and thus may be directly applicable to the CE fuel. Is there any additional information or rationale available for the Westinghouse fuel that may be evaluated to respond to your request for review of the CE fuel?

Al

"Robinson, Diana B." <robinsdb@westinghouse.com>

11/08/2005 05:09 PM

To: "'Bob_Tomonto@fpl.com'" <Bob_Tomonto@fpl.com>
cc: "Petrarca, David J." <petra1dj@westinghouse.com>, "'Perryman, Jimmie'" <Jimmie_Perryman@fpl.com>, "Blatter, Albert J. (Notes)" <albert.j.blatter@us.westinghouse.com>, "Halligan, James R." <halli1jr@westinghouse.com>
Subject: Dry Cast Storage

Good afternoon Bob,
Some questions have come up since I sent you Jim Halligan's response to the Dry Cast Storage question and I think we are going to have to take a step back and think about this one again. See below

We may have to do a formal evaluation.
I will talk to Jimmie about this.
Diana

-----Original Message-----
From: Halligan, James R.
Sent: Tuesday, November 08, 2005 2:33 PM
To: Robinson, Diana B.
Subject: RE: Dry Cast Storage

Diana,
Since this additional question has been raised I think we should not recommend that irradiated fuel be stored horizontally for the long term. It has not been evaluated.

From: "pete kuhn" <petekuhn@hotmail.com>
To: <SECY@nrc.gov>
Date: Wed, May 31, 2006 1:32 PM
Subject: Comments Docket No.72-1030,RIN 3150-AH93

See attach comments.
Thanks

Mail Envelope Properties (447DD321.F99 : 17 : 20377)

Subject:	Comments Docket No.72-1030,RIN 3150-AH93
Creation Date	Wed, May 31, 2006 1:31 PM
From:	"pete kuhn" <petekuhn@hotmail.com>
Created By:	petekuhn@hotmail.com

Recipients
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SECY (SECY)

Post Office	**Route**
TWGWPO02.HQGWDO01	nrc.gov

Files	**Size**	**Date & Time**
MESSAGE	241	Wednesday, May 31, 2006 1:31 PM
Letter_to_NRC.pdf	223224	
Mime.822	309337	

Options	
Expiration Date:	None
Priority:	Standard
ReplyRequested:	No
Return Notification:	None
Concealed Subject:	No
Security:	Standard

Junk Mail Handling Evaluation Results
Message is eligible for Junk Mail handling
This message was not classified as Junk Mail

Junk Mail settings when this message was delivered
Junk Mail handling disabled by User
Junk Mail handling disabled by Administrator
Junk List is not enabled
Junk Mail using personal address books is not enabled
Block List is not enabled