



UNITED STATES
NUCLEAR REGULATORY COMMISSION
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November 2, 2000

MEMORANDUM TO: Susan F. Shankman, Deputy Director
Licensing and Inspection Directorate
Spent Fuel Project Office, NMSS

FROM: Chester Poslusny, Sr. Transportation Project Officer */RA/*
Transportation and Storage Safety
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Licensing and Inspection Directorate
Spent Fuel Project Office, NMSS

SUBJECT: SUMMARY OF PUBLIC MEETING WITH THE NUCLEAR ENERGY
INSTITUTE

On July 20, 2000, Spent Fuel Project Office (SFPO) staff met with the Nuclear Energy Institute (NEI) and industry representatives at Nuclear Regulatory Commission (NRC) Headquarters in Rockville, Maryland, to continue discussions on NEI's proposals for Standard Technical Specifications (STS) for spent fuel dry cask storage. The meeting was publicly noticed on July 7, 2000. Forty-two participants including vendor and utility representatives attended the meeting. Attachment 1 is a list of attendees. Attachment 2 is the meeting agenda and slides presented by NRC. Attachment 3 is the slides presented by NEI.

In a letter dated July 13, 2000, the staff acknowledged NEI's June 7, 2000, letter that addressed earlier NRC comments on the proposed STS for dry storage. In its letter, the NRC staff indicated that because of the number and complexity of some of the proposed changes, the staff intends to review the proposals in a modular fashion. In the July 13, 2000, letter, the staff further indicated that it would first address proposed changes to the fuel specifications and provided talking points for discussion at the July 20 meeting (the talking points are provided on pages 5-6 of Attachment 2).

The NRC staff opened the meeting by expressing its appreciation for the continuing industry participation in the effort. The staff also noted the mutual goal of reaching agreement on STS for dry cask storage in a time frame coincident with the effective date of changes to 10 CFR 72.48, April 2001. The staff reiterated the four fundamental safety criteria to be applied to STS for dry cask storage: maintain subcriticality, prevent radioactive releases, ensure radiation doses do not exceed limits, and maintain retrievability of stored radioactive materials. NEI reaffirmed its agreement with those criteria during its presentation.

The staff then described its plan to continue its review of the NEI proposed STS in a modular fashion and laid out a proposed schedule for completion of the review by the end of 2000. The staff invited NEI to propose changes to the modules or schedule, depending on NEI's relative priorities. NEI indicated that the proposed schedule appeared to support the parallel effort for implementation of the revised 10 CFR 72.48 process. NEI also raised questions about the proposed modules but generally agreed to hold additional meetings with the staff, as necessary, to resolve issues in each area. NEI indicated its intent to submit a single, revised proposal once all the remaining issues are resolved.

NEI briefly summarized the background of TS for dry cask storage and reiterated the difficulties experienced and anticipated with existing cask TS. NRC again acknowledged that improvements in cask TS are warranted; but disagreed with NEI that exemptions have become a "routine" means of getting around TS problems. NEI clarified that it believes exemption requests will become more common, if the existing TS are not changed. NEI further described its position in support of the proposed STS for dry cask storage, previously submitted to NRC by letter dated October 6, 1999, as supplemented in its June 7, 2000, letter. Two points that NEI strongly emphasized are that the proposed dry cask storage STS are consistent with the improved STS developed for power reactors, in terms of use, application, and level of detail and safety significance; and that the industry has accumulated significant experience in the application of 10 CFR 50.59, a process very similar to the 10 CFR 72.48 process that will be an integral part of the implementation of dry cask STS.

The NRC responded to NEI's presentation by pointing out some fundamental differences in the criteria that apply to dry cask storage TS versus power reactor TS. One example is that the long-term integrity of the fuel cladding must be maintained to ensure fuel retrievability. With respect to the comparison of 10 CFR 50.59 to 10 CFR 72.48, the staff expressed its view that more guidance and experience in the use of the 72.48 process is needed before the staff would consider the comparison to be valid.

With respect to the fuel specifications for dry cask storage, NRC indicated that, in the past, applicants have only received approval for those fuel types specifically analyzed in the SAR but have always had the option of providing analyses for a broader range of fuel types. NRC agreed in principle that an applicant could describe a methodology and qualifications for performing criticality analyses in such a way that, if approved by the staff, the methodology could be applied to fuel types not previously addressed in the SAR. However, the question of what would constitute sufficient information in the SAR will be a difficult issue to resolve for this approach.

NEI maintained that the only fuel parameter necessary for inclusion in the STS is k_{eff} . If subcriticality is demonstrated by the applicant, as long as sufficient margin is maintained, then NEI believes that different fuel types can be stored in a cask design, irrespective of differences in other fuel parameters. The staff believes that a certain minimum set of fuel parameters should still be specified in TS to provide reasonable assurance that subcriticality will be maintained. The staff noted that it has identified a number of errors in criticality analyses presented to date and that it believes that the methods used and the experience of industry in

applying those methods vary too greatly for the staff to conclude that criticality safety will be reasonably assured with NEI's current proposal.

Recognizing the difference of opinion between NRC and NEI on this issue, the staff proposed to work toward incremental improvements in the TS for dry cask storage. The staff identified a reduced list of possible parameters including maximum enrichment, maximum mass of fissile material, and some additional parameters relating to the geometry of the fuel. The staff invited NEI to propose a similar limited set of fuel parameters, based on their relative importance to criticality safety. The staff indicated that it is pursuing a parallel effort, through a contract with Oak Ridge National Laboratory, to investigate and identify those parameters with the greatest impact on criticality safety.

The meeting was adjourned with an agreement for future meetings on fuel specifications and the other modules proposed by NRC. Despite the recognized differences, both NRC and NEI agreed to continue to work together to improve existing TSs for dry cask storage.

No proprietary information was disseminated or presented at this meeting. No regulatory decisions were requested or made.

Attachments:

1. Attendance List
2. Agenda and NRC Slides
3. NEI Slides

Attachment 1

Attendance List

**NRC/NEI MEETING
July 20, 2000
ATTENDEES**

NAME	ORGANIZATION	TELEPHONE
Randy Hall	NRC/NMSS/SFPO	301-415-1336
Bill Brach	NRC/NMSS/SFPO	301-415-8500
Eric Leeds	NRC/NMSS/SFPO	301-415-8540
Chet Poslusny	NRC/NMSS/SFPO	301-415-1341
Carl Withee	NRC/NMSS/SFPO	301-415-8534
Sheena Whaley	NRC/NMSS/SFPO	301-415-1911
Marissa Bailey	NRC/NMSS/SFPO	301-415-8531
Susan Shankman	NRC/NMSS/SFPO	301-415-8500
Wayne Hodges	NRC/SFPO	301-415-2398
Alan Nelson	NEI	202-739-8110
Bryan Ford	Entergy/Millstone 1	860-434-4311
Dave Waters	Consumers Energy	231-547-8316
Suzanne LeBlang	Consumers Energy	616-764-2288
Glenn Michael	Arizona Public Service Co.	623-393-5750
Jerry Phillabaum	PECO Energy	610-640-6785
Jon Kapitz	Northern States Power	651-388-1121
Gary Zimmerman	Portland General Electric	503-556-7278
Brian Gutherman	Holtec International	856-797-0900
Mike Mason	Transnuclear, Inc.	914-347-2345
Cecil Parks	ORNL	865-574-5280
John Wagner	ORNL	865-241-3570
Keith Waldrop	Duke Power	704-382-7999
Glenn Adams	Wisconsin Electric	414-221-4691
Randy Robins	VA Power	804-273-2252
Brain Mann	Excel Services	301-984-4400
Donald R. Hoffman	Excel Services	301-984-4400
Bill Lee	NAC	770-447-1144
Bill Beckner	NRC/NRR	301-415-1161

NAME	ORGANIZATION	TELEPHONE
Chris Jackson	NRC/NMSS/SFPO	301-415-2947
Tim McGinty	NRC/NMSS/SFPO	301-415-8580
Patricia Eng	NRC/NMSS/SFPO	301-415-8577
Phil Brochman	NRC/NMSS/SFPO	301-415-8592
Earl Easton	NRC/NMSS/SFPO	301-415-8520
Jack Guttman	NRC/NMSS/SFPO	301-415-8510
Julia Myers	NRC/NMSS/SFPO	301-415-8512
Mike Waters	NRC/NMSS/SFPO	301-415-3875
Adelaide Giantelli	NRC/NMSS/SFPO	301-415-3521
Joe Kovacic	NRC/NMSS/SFPO	301-415-8532
Elaine Keegan	NRC/NMSS/SFPO	301-415-8517
Michael Rubin	NRC/NMSS/SFPO	301-415-1344
Steven Baggett	NRC/NMSS/SFPO	301-415-0584
Jenny Weil	McGraw-Hill	202-383-2161

Attachment 2

Agenda and NRC Slides

Attachment 3

NEI Slides