

January 25, 2007

MEMORANDUM TO: Stacey L. Rosenberg, Chief
Special Projects Branch
Division of Policy and Rulemaking
Office of Nuclear Reactor Regulation

FROM: Tanya M. Mensah, Senior Project Manager /RA/
Special Projects Branch
Division of Policy and Rulemaking
Office of Nuclear Reactor Regulation

SUBJECT: SUMMARY OF THE DECEMBER 19, 2006, CATEGORY 2 PUBLIC
MEETING ON INTERIM REACTIVITY- INITIATED ACCIDENTS (RIA)
CRITERIA (TAC NO. MD0705)

On December 19, 2006, the second public meeting was held between the U.S. Nuclear Regulatory Commission (NRC) staff and industry representatives at NRC headquarters in One White Flint North, 11555 Rockville Pike, Rockville, MD. This meeting was a follow-up to the first public meeting held on November 9, 2006. A summary of the November 9, 2006, public meeting is available in the NRC's Agencywide Documents Access and Management System (ADAMS) in Package Accession No. ML063310216. Representatives from the Union of Concerned Scientists (UCS), Westinghouse Electric Company (Westinghouse), Areva NP, Inc., General Electric, Electric Power Research Institute (EPRI), Duke Energy, and Arizona Public Service participated in the public meeting. A list of attendees is enclosed.

The purpose of the December 19, 2006, public meeting was to seek input and address comments from the industry representatives and members of the public to support the development of interim criteria for RIA (ADAMS Accession No. ML063350480). The interim criteria will appear as an update to the NUREG-0800, "Standard Review Plan [(SRP)] for the Review of Safety Analysis Reports for Nuclear Power Plants." Comments prepared by the EPRI and Westinghouse on the draft RIA interim criteria, along with presentation slides from this workshop are available in ADAMS.

- NRC Presentation Slides (ADAMS Accession No. ML063620588)
- Industry Presentation Slides (ADAMS Accession No. ML063620579)
- Industry Comments on the Interim RIA Criteria (ADAMS Accession Nos. ML063620584 and ML063620571)

During the meeting, EPRI representatives emphasized key elements of their prepared comments. With respect to the non-Pellet-to-Cladding Mechanical Interaction (PCMI) fuel cladding failure criteria, the industry representatives provided results from several RIA test programs, including earlier Nuclear Safety Research Reactor (NSRR) tests not included in the development of the draft criteria, which illustrated a trend in failure enthalpy versus cladding differential pressure. The industry representatives defended the current SRP criteria of 170 cal/g (total fuel enthalpy). The NRC staff will consider this new information.

With respect to the pressurized water reactor PCMI failure criteria, the industry representatives highlighted differences in transient behavior between uranium oxide and mixed oxide (MOX) fuel rods during RIA tests. The industry representatives were hoping that several of the Cabri MOX test results, especially REP-Na7, would be removed from the database used to develop the criteria. In addition, the industry representatives provided results from separate-effects mechanical testing which illustrated temperature effects on mechanical properties of irradiated and pre-hydrated zircaloy tubing. This information was introduced in order to further scale the cold NSRR test results. The NRC staff will consider this new information.

With respect to the boiling water reactor (BWR) PCMI failure criteria, the industry representatives emphasized the range of hydrogen reported for the NSRR test results and thought it too restrictive to employ the lowest hydrogen content in the development of the failure criteria. The industry representatives also commented on potential scaling of the test results to account for differences in pulse width between NSRR and operating BWRs. As a result of both, the industry representatives stated that the draft criteria was overly conservative. The NRC staff will consider these comments.

Several comments received by the industry representatives requested clarification on the implementation of the new interim criteria. Specifically, a definition of zero enthalpy and prompt pulse, as well as best estimate nodal corrosion, was required for estimating PCMI failure. Changes will be incorporated into the technical basis document to capture these clarifications and definitions.

Several comments received were related to the core coolability criteria. During the meeting it was determined that the sample implementation paths were too confusing and will be removed.

There were no comments on the fission-product inventory.

Similar to the November 9, 2006, public meeting, several members of the industry representatives expressed concern with the implementation schedule and "back-fit" to the current operating fleet. Since the new criteria is more restrictive than current criteria, the industry representatives want a staged implementation, potentially over a few years. This would allow time for the industry representatives to develop and license the required analytical models and methods.

Members of the public were present. No public meeting feedback forms were received. The meeting was adjourned.

Project No. 669

Enclosure: List of Attendees

cc w/encl: See next page

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ADAMS Package Number: ML070290389

Meeting Notice Accession Number: ML063380327

Meeting Handout Accession Number: ML063620588, ML063620579, ML063620584, ML063620571

Meeting Summary Accession Number: ML063620565 NRC-001

OFFICE	PSPB/PM	PSPB/LA	DSS/SNPB	PSPB/BC
NAME	TMensah	DBaxley	RLandry (A)	SRosenberg
DATE	1/22/07	1/22/07	1/22/07	1/25/07

DISTRIBUTION FOR MEETING SUMMARY:

Date: January 25, 2007

PUBLIC

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RidsOpaMail

Receptionist (OWFN and TWFN)

PClifford

PMNS

HScott

RJasinski

RidsAcrsAcnwMailCenter

RidsNrrDss

List of Attendees for December 19, 2006	
Name	Organization
Jens Andersen*	Global Nuclear Fuels-Americas
Charles Beard**	Westinghouse
Ralph Caruso	NRC
Paul Clifford	NRC
Bert Dunn	AREVA
Kurt Edsinger*	EPRI
Charles Heck	General Electric (GE)
Jerry Holm	AREVA
Nayem Jahingir*	Global Nuclear Fuels-Americas
Ralph Landry	NRC
Dr. Edwin Lyman*	Union Of Concerned Scientist (USC)
Tanya Mensah	NRC
Ralph Meyer	NRC
David Mitchell	Westinghouse
Robert Montgomery	ANATECH/EPRI
Brian Moore	Global Nuclear Fuels-Americas
Odelli Ozer	Electric Power Research Institute (EPRI)
Dobromir Panayotov **	Westinghouse (Sweden)
Chuck Patterson*	Global Nuclear Fuels-Americas
Robert Rand*	Global Nuclear Fuels-Americas
Paul Richichi*	Global Nuclear Fuels-Americas
Dan Risher**	Westinghouse
George K. Roberts **	Westinghouse (Sweden)
Harold Scott	NRC
Rob Sisk	Westinghouse
William Slagle	Westinghouse
Staffan Soderholtz **	Westinghouse (Sweden)
Gregg Swindlehurst	Duke Energy
John Voglewede	NRC
Shih-Liang Wu	NRC

* Participated via Teleconference

** Participated via Video-teleconference

ENCLOSURE

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