

November 19, 2004

MEMORANDUM TO: Catherine Haney, Program Director
Policy and Rulemaking Program
Division of Regulatory Improvement Programs
Office of Nuclear Reactor Regulation

FROM: Eileen M. McKenna, Section Chief ~~IRA~~
Policy and Rulemaking Program
Division of Regulatory Improvement Programs
Office of Nuclear Reactor Regulation

SUBJECT: SUMMARY OF NOVEMBER 18, 2004, MEETING WITH NUCLEAR
ENERGY INSTITUTE (NEI) AND OTHER STAKEHOLDERS ON RISK-
INFORMED 10 CFR 50.46 LOCA BREAK SIZE REGULATORY GUIDE
DEVELOPMENT AND CONSIDERATIONS FOR SELECTION OF
TRANSITION BREAK SIZE

On November 18, Nuclear Regulatory Commission (NRC) staff met with representatives of the Nuclear Energy Institute, industry, and others in a public meeting at NRC headquarters in Rockville, Maryland. Meeting attendees are identified in Attachment 1. The presentation viewgraphs presented at the meeting by industry are in Attachment 2 (ADAMS Accession No. ML043280487).

With respect to development of the regulatory guide, Tim Collins noted that the staff plans to develop guidance with a target date of June 2005, with the intention that the guidance would be available at the time the final rule is completed. One of the purposes of this meeting was to determine the level of interest from the industry in working with the staff on the guidance. Tony Pietrangelo from NEI stated that the industry does wish to help develop such guidance, particularly for those areas needed to obtain approval to use 5046a. In particular, this relates to the provision in the draft proposed rule that a licensee demonstrate the ability to mitigate (core remains amenable to cooling) a break up to the double-ended break of the largest pipe (albeit with more realistic assumptions and analyses). With respect to additional guidance, industry representatives thought that the needs in this area would be best determined when specific applications of the rule are identified. The participants agreed to establish working arrangements once the proposed rule is approved, so that efforts will be most efficient.

The second major topic was considerations with respect to selection of the transition break size (that is, the dividing break size between using current ECCS requirements and using the revised ECCS requirements). The staff stated that following the ACRS meeting, we had thought further about the selection of the transition break size, and were currently thinking of stating the requirement as "the largest connected piping to the reactor coolant system" rather than being in terms of a specific pipe size (e.g., 14 inches for PWRs), as in the draft rule language posted on Rule-forum.

Industry representatives stated the view that the break size should be an 8 inch nominal pipe size. They stated several reasons why this size was considered to include consideration of uncertainties, and why there were safety benefits to be achieved from a smaller break size.

The specific details are shown in the handout material. A specific application discussed was a change to reduce requirements for containment spray, thus, preserving more water for core cooling. It was noted that the possible benefits would vary from plant to plant due to design differences. The staff encouraged the industry to better quantify the benefits or margins that might be realized with a different break size as part of their comments on the rule.

Industry representatives asked whether the staff's proposal for largest attached piping meant an area of twice the pipe size (flow out of both ends of a rupture), and if this same size was to be applied to all other possible LOCA locations. The staff said this was the intention.

NEI also raised some other questions about the draft rule, such as why the staff included in the rule all of the details associated with RG 1.174, and why greater reliance was not placed on existing processes such as §50.59. The staff noted the "inconsequential" changes proposal and that existing §50.59 is not compatible with risk metrics such as core damage frequency as acceptance criteria. The issue of applicability of the rule to certified light water reactor designs was raised; the staff noted that there were no technical reasons why a similar approach could not be used for designs such as ABWR or System 80+, but the design certification rule process would require other rulemaking to implement.

The staff noted that a meeting is planned with the Advisory Committee on Reactor Safeguards to discuss a draft NUREG on use of the expert opinion elicitation process for estimating LOCA frequency as a function of break size. The meeting is scheduled for December 2, 2004. Industry representatives indicated an interest in presenting their position on the selection of the transition break size at that meeting as well. The ACRS staff representative at the meeting indicated that he would allot time for an industry presentation.

Having completed the discussion the staff asked for public comments or questions. After answering the public questions, the staff adjourned the meeting.

Project No. 689

Attachments: As stated

cc: See next page

The specific details are shown in the handout material. A specific application discussed was a change to reduce requirements for containment spray, thus, preserving more water for core cooling. It was noted that the possible benefits would vary from plant to plant due to design differences. The staff encouraged the industry to better quantify the benefits or margins that might be realized with a different break size as part of their comments on the rule.

Industry representatives asked whether the staff's proposal for largest attached piping meant an area of twice the pipe size (flow out of both ends of a rupture), and if this same size was to be applied to all other possible LOCA locations. The staff said this was the intention.

NEI also raised some other questions about the draft rule, such as why the staff included in the rule all of the details associated with RG 1.174, and why greater reliance was not placed on existing processes such as §50.59. The staff noted the "inconsequential" changes proposal and that existing §50.59 is not compatible with risk metrics such as core damage frequency as acceptance criteria. The issue of applicability of the rule to certified light water reactor designs was raised; the staff noted that there were no technical reasons why a similar approach could not be used for designs such as ABWR or System 80+, but the design certification rule process would require other rulemaking to implement.

The staff noted that a meeting is planned with the Advisory Committee on Reactor Safeguards to discuss a draft NUREG on use of the expert opinion elicitation process for estimating LOCA frequency as a function of break size. The meeting is scheduled for December 2, 2004. Industry representatives indicated an interest in presenting their position on the selection of the transition break size at that meeting as well. The ACRS staff representative at the meeting indicated that he would allot time for an industry presentation.

Having completed the discussion the staff asked for public comments or questions. After answering the public questions, the staff adjourned the meeting.

Project No. 689

Attachments: As stated

cc: See next page

DISTRIBUTION: See next page

ADAMS Accession #:Memo ML043270640 Package: ML043270641
Attachment 2: Accession No.: ML043280487

OFFICE	RPRP	NRR
NAME	EMcKenna	TCollins
DATE	11/19/2004	11/19/2004

OFFICIAL RECORD COPY

**Attendance for Meeting on Risk-Informed LOCA
Break Size Selection and RG Development
November 18, 2004 - NRC Headquarters**

Name	Organization
Brian Sheron	NRC/NRR
Suzanne Black	NRC/NRR/DSSA
Gene Imbro	NRC/NRR/DE
Eileen McKenna	NRC/NRR/DRIP
Tim Collins	NRC/NRR
Tony Pietrangelo	NEI
John Butler	NEI
Wayne Harrison	STPNOC/WOG
Mitch Nissley	Westinghouse
Bruce Bishop	Westinghouse
Carolyn Fairbanks	NRC/RES
Michael Knapik	McGraw-Hill
Gary Hammer	NRC/NRR/DE
Ken Chang	NRC/NRR/DRIP
Bert Dunn	Framatome ANP
Bob Harvey	Duke Power
Deanne Raleigh	LIS Scientech
Louis Quintana	GE Energy
Jared Wermeil	NRC/NRR/DSSA
Tony Browning	NMC-BWROG
Rick Hill	GE
Bob Jacquith	Westinghouse
Mark Rubin	NRC/NRR/DSSA
Dave McIntyre	NRC
Hossein Hamzehee	NRC/RES

Name	Organization
Nancy Chapman	SERCH/Bechtel
Stephen Dinsmore	NRC/NRR/DSSA
Jack Stringfellow	SNC
Mike Snodderly	NRC/ACRS
Christopher Jackson	NRC/OCM
Dave Bajumpaa	Dominion
Michael Johnson	NRC/NRR/DSSA
Ralph Landry	NRC/NRR/DSSA
Charles Ader	NRC/RES

Nuclear Energy Institute

Project No. 689

cc: Via email

Mr. John Butler, NEI
jcb@nei.org

Distribution: Mtg w/NEI 11/18/04
ADAMS/PUBLIC OGC ACRS

Email (NRC)

BSheron
DMatthews
CHaney
EMcKenna
SBlack/MJohnson
BThomas
MRubin
JWermeil
RLandry
GMencinsky
SDinsmore
GImbro
DFischer
GHammer
KChang
MSnodderly
TCollins
RBarrett/CGrimes
HHamzehee
CAder
DMcIntyre, OPA
CJackson
CFairbanks

VIA e-mail

bertdunn@framatome-anp.com
rcharvey@duke-energy.com
draleigh@scientech.com
louis.quintana@ge.co,
tony.browning@nmcco.com
Richard.Hill@gene.ge.com
robert.e.jacquith@us.westinghouse.com
ngchapma@bechtel.com
NJSTRING@SOUTHERNCO.COM

david_a_bajumpaa@dom.com