

June 4, 2002

MEMORANDUM TO: Christopher I. Grimes, Program Director
Policy and Rulemaking Program
Division of Regulatory Improvement Programs
Office of Nuclear Reactor Regulation

FROM: Peter C. Wen, Project Manager */RA/*
Policy and Rulemaking Program
Division of Regulatory Improvement Programs
Office of Nuclear Reactor Regulation

SUBJECT: SUMMARY OF MAY 15, 2002, MEETING WITH THE NUCLEAR
ENERGY INSTITUTE REGARDING CONTAINMENT INTEGRATED
LEAK RATE TESTING ISSUES

On May 15, 2002, the NRC staff held a public meeting with representatives of the Nuclear Energy Institute (NEI) and the Electric Power Research Institute (EPRI) to discuss issues related to the extension of the containment integrated leak rate test (ILRT) interval for plants that have implemented 10 CFR 50, Appendix J, Option B. NEI plans to propose a permanent interval increase to, perhaps, as much as 20 years. Attachment 1 lists attendees at the meeting. Attachment 2 is a set of handouts presented at the meeting by the industry representatives.

NEI provided background and current status of the project it undertook in support of revising the industry guidance and associated requirements for containment ILRT test interval. Since the last NRC-NEI meeting in July 2001, NEI has issued interim guidance to its members for performing plant-specific risk impact assessments in support of one-time ILRT interval extensions and has conducted an industry survey of ILRT failures and containment degradation events. The survey results are intended to provide additional data to determine if the frequency of occurrences of identification of leakage paths identifiable only by ILRT has changed since the previous survey results done by NRC and EPRI to support Appendix J, Option B rulemaking in 1995.

The industry representative stated that 58 plants (91 units) responded to the NEI survey. The results of this survey along with the previous NUREG-1493 survey results boost the total sample size of ILRTs which have been performed and will be included in the study from 144 to 182. While the new data is still being assessed, the preliminary results indicate that there are no cases among the 182 ILRT samples where a containment leakage event with large leakage would not be detected by a local leakage-rate test, containment inspection, or other alternate means.

The industry representatives discussed a methodology to generically assess the risk impact associated with the change in ILRT test interval. They proposed to use the guidance described in Regulatory Guide 1.174, "An Approach for Using Probabilistic Risk Assessment In Risk-Informed Decisions On Plant-Specific Changes to the Licensing Basis" to perform the risk impact assessment. One of the key inputs to perform this risk impact assessment is the likelihood of a pre-existing large flaw in the containment that would have been detected had an ILRT been conducted. The current survey data indicate that there are zero (0) such instances. There are many statistical methods available to use this data to estimate the likelihood of a pre-existing large flaw in the containment. The industry representatives presented their plan and a proposed schedule to use an expert elicitation process to develop a refined frequency and size of a large containment leakage path. Industry's draft materials regarding its risk assessment approach, ILRT failure database, and expert elicitation process are provided as Attachment 3.

The staff and the industry representatives exchanged ideas on what should be included in the expert elicitation process. The group agreed that a telephone conference or a meeting will be held prior to industry conducting its expert panel meeting, currently scheduled for June 2002.

Regarding NEI's proposed risk impact assessment methodology, the staff provided the following comments for industry consideration in its developing process:

- The applicability of performance data to determine the frequency of a large flaw in the containment liner and possible corrosion mechanisms.
- The specific characteristics of containments (large dry, sub-atmosphere, ice condenser, BWR, etc.).
- Potential degradation of uninspectable (inaccessible) portions of the containment.
- Aggregate effects of extending the test intervals for Appendix J Type B and Type C tests on containment leak-tight integrity and an ILRT test interval.

Having completed discussion of the agenda items, the group adjourned. Representatives of the NRC and the industry agreed that this meeting had been useful for the exchange of information on the discussion subject.

Project No. 689

Attachments: As stated

cc w/atts: See next page

The industry representatives discussed a methodology to generically assess the risk impact associated with the change in ILRT test interval. They proposed to use the guidance described in Regulatory Guide 1.174, "An Approach for Using Probabilistic Risk Assessment In Risk-Informed Decisions On Plant-Specific Changes to the Licensing Basis" to perform the risk impact assessment. One of the key inputs to perform this risk impact assessment is the likelihood of a pre-existing large flaw in the containment that would have been detected had an ILRT been conducted. The current survey data indicate that there are zero (0) such instances. There are many statistical methods available to use this data to estimate the likelihood of a pre-existing large flaw in the containment. The industry representatives presented their plan and a proposed schedule to use an expert elicitation process to develop a refined frequency and size of a large containment leakage path. Industry's draft materials regarding its risk assessment approach, ILRT failure database, and expert elicitation process are provided as Attachment 3.

The staff and the industry representatives exchanged ideas on what should be included in the expert elicitation process. The group agreed that a telephone conference or a meeting will be held prior to industry conducting its expert panel meeting, currently scheduled for June 2002.

Regarding NEI's proposed risk impact assessment methodology, the staff provided the following comments for industry consideration in its developing process:

- The applicability of performance data to determine the frequency of a large flaw in the containment liner and possible corrosion mechanisms.
- The specific characteristics of containments (large dry, sub-atmosphere, ice condenser, BWR, etc.).
- Potential degradation of uninspectable (inaccessible) portions of the containment.
- Aggregate effects of extending the test intervals for Appendix J Type B and Type C tests on containment leak-tight integrity and an ILRT test interval.

Having completed discussion of the agenda items, the group adjourned. Representatives of the NRC and the industry agreed that this meeting had been useful for the exchange of information on the discussion subject.

Project No. 689

Attachments: As stated

cc w/atts: See next page

DISTRIBUTION: See attached page

ADAMS Accession Nos.:

Package: ML021560196

Memo: ML021560177

Slides: ML021480513

NRC-001

OFFICE	PM:RPRP	BC:EMEB	BC:SPSB	BC:SPLB	SC:RGEB
NAME	PWen	GImbro	MJohnson	JHannon	SWest
DATE	05/23/2002	05/31/2002	06/03/2002	06/03/2002	06/04/2002

OFFICIAL OFFICE COPY

cc: Mr. Ralph Beedle
Senior Vice President
and Chief Nuclear Officer
Nuclear Energy Institute
Suite 400
1776 I Street, NW
Washington, DC 20006-3708

Mr. Anthony Pietrangelo, Director
Risk & Performance Based Regulation
Nuclear Energy Institute
Suite 400
1776 I Street, NW
Washington, DC 20006-3708

Mr. Biff Bradley
Nuclear Energy Institute
Suite 400
1776 I Street, NW
Washington, DC 20006-3708

Mr. Richard Lockett
Nuclear Energy Institute
Suite 400
1776 I Street, NW
Washington, DC 20006-3708

DISTRIBUTION: MTG. SUMMARY w/NEI Re ILRT Test Interval Extension Dated

Hard Copy

ADAMS-PUBLIC

RPRP r/f

OGC

ACRS

PWen

EMail

S. Collins/J. Johnson

B. Sheron

W. Borchardt

D. Matthews/F. Gillespie

C. Grimes/S. West

G. Holahan/S. Black

J. Hannon/S. Weerakkody/J. Pulsipher

M. Johnson/M. Rubin/M. Snodderly

C. Casto/R. Barrett

G. Imbro/D. Terao/H. Ashar

P. Koltay

L. Abramson, RES

J. Birmingham

S. Brock, OGC

JShea, OEDO

OPA

**NRC-NEI Meeting on Containment ILRT Issues
LIST OF ATTENDEES
May 15, 2002**

<u>NAME</u>	<u>ORGANIZATION</u>
John Hannon	NRR/DSSA/SPLB
Sunil Weerakkody	NRR/DSSA/SPLB
James Pulsipher	NRR/DSSA/SPLB
Michael Johnson	NRR/DSSA/SPSB
Mark Rubin	NRR/DSSA/SPSB
Mike Snodderly	NRR/DSSA/SPSB
Gene Imbro	NRR/DE/EMEB
David Terao	NRR/DE/EMEB
Hans Ashar	NRR/DE/EMEB
Peter Koltay	NRR/DIPM/IIPB
Lee Abramson	RES/DRAA/PRAB
Sara Brock	OGC
Peter Wen	NRR/DRIP/RPRP
Biff Bradley	NEI
Rich Lockett	NEI
John Gisclon	EPRI
Ken Canavan	DS&S
Tom Loomis	Exelon
Bill Brice	Entergy
Deann Raleigh	US Scientech.
Altheia Wyche	Serch/Bechtel