August 13, 2008

MEMORANDUM TO: Kamal Manoly, Chief
Mechanical and Civil Engineering Branch
Division of Engineering
Office of Nuclear Reactor Regulation

FROM: George Thomas, Structural Engineer **/RA/**
Mechanical and Civil Engineering Branch
Division of Engineering
Office of Nuclear Reactor Regulation

SUBJECT: FORTHCOMING PUBLIC MEETING WITH NUCLEAR ENERGY INSTITUTE (NEI) TO DISCUSS DRAFT REGULATORY ISSUE SUMMARY (RIS) ON CONTAINMENT INTEGRATED LEAK RATE TEST INTERVAL EXTENSIONS BEYOND THE APPROVED 15 YEARS

DATE & TIME: Wednesday, September 03, 2008
10:00 a.m. - 11:30 a.m.

LOCATION: U.S. Nuclear Regulatory Commission
One White Flint North, Room O-16B2
11555 Rockville Pike
Rockville, Maryland 20852

PURPOSE: Meet with representatives of NEI to discuss the draft Regulatory Issue Summary (RIS) entitled "Staff Position on Extension of the Containment Type A Test Interval Beyond 15 Years under Option B of Appendix J to 10 CFR Part 50."

CATEGORY 2∗: This is a Category 2 Meeting. The public is invited to participate in this meeting by providing/discussing comments on the draft RIS with the NRC at designated points identified on the agenda.

MEETING CONTACT: George Thomas, NRR/DE/EMCB
301-415-6181
George.Thomas2@nrc.gov

∗ Commission's Policy Statement on "Enhancing Public Participation in NRC Meetings," (67 FR 36920), May 28, 2002

PARTICIPANTS: Participants from the NRC include members of the Office of Nuclear Reactor Regulation.

NRC	NEI
K. Manoly	Julie Keys, et al
M. Murphy	
G. Thomas	
H. Ashar	

Enclosures: 1. Agenda
2. Draft RIS

cc w/encl: See next page

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NRC	NEI
K. Manoly	Julie Keys, et al
M. Murphy	
G. Thomas	
H. Ashar	

ENCLOSURE: 1. Agenda
2. Draft RIS

cc w/encl: See next page

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OFFICE	DE/EMCB	DE/EMCB:BC
NAME	GThomas	KManoly
DATE	08/ 13 /08	08/ 13 /08

OFFICIAL RECORD COPY

Nuclear Energy Institute

cc:

Mr. Anthony Pietrangelo, Vice President
Regulatory Affairs
Nuclear Energy Institute
1776 I Street, NW, Suite 400
Washington, DC 20006-3708
arp@nei.org

Mr. Jack Roe, Director
Operations Support
Nuclear Energy Institute
1776 I Street, NW, Suite 400
Washington, DC 20006-3708
jwr@nei.org

Mr. John Butler, Director
Safety-Focused Regulation
Nuclear Energy Institute
1776 I Street, NW, Suite 400
Washington, DC 20006-3708
jcb@nei.org

Julie Keys, Senior Project Manager
Safety-Focused Regulation
1776 I Street, NW, Suite 400
Washington, DC 20006-3708
jyk@nei.org

Mr. Gary L. Vine, Executive Director
Federal and Industry Activities, Nuclear Sector
2000 L Street, NW, Suite 805
Washington, DC 200036
gvine@epri.com

Mr. Alexander Marion, Executive Director
Nuclear Operations & Engineering
Nuclear Energy Institute
1776 I Street, NW, Suite 400
Washington, DC 20006-3708
am@nei.org

Mr. Jay Thayer, Vice President
Nuclear Operations
Nuclear Energy Institute
1776 I Street, NW, Suite 400
Washington, DC 20006-3708
jkt@nei.org

James H. Riley, Director
Engineering
Nuclear Energy Institute
1776 I Street, NW
Washington, DC 20006-3708
jhr@nei.org

Ms. Barbara Lewis
Assistant Editor
Platts, Principal Editorial Office
1200 G. St., NW, Suite 1100
Washington, DC 20005
Barbara_lewis@platts.com

AGENDA FOR THE SEPTEMBER 03, 2008, PUBLIC MEETING

BETWEEN THE NUCLEAR ENERGY INSTITUTE (NEI) AND

THE U.S. NUCLEAR REGULATORY COMMISSION (NRC)

TO DISCUSS DRAFT REGULATORY ISSUE SUMMARY (RIS) "STAFF POSITION ON

EXTENSION OF CONTAINMENT TYPE A TEST INTERVAL BEYOND 15 YEARS UNDER

OPTION B OF APPENDIX J TO 10 CFR PART 50"

Time	Topic	Lead
10:00 am – 10:15 am	Opening Remarks and Introductions	NRC
10:15 am – 10:30 am	Description of the RIS	NRC
10:30 am – 11:10 am	NEI Comments on the RIS Public Comments on the RIS	NEI Public
11:10 am – 11:25 am	Discussion	NRC/NEI
11:25 am – 11:30 am	Closing and Adjournment	

ENCLOSURE 1

UNITED STATES
NUCLEAR REGULATORY COMMISSION
OFFICE OF NUCLEAR REACTOR REGULATION
WASHINGTON, DC 20555-0001

NRC REGULATORY ISSUE SUMMARY 2008-XX
STAFF POSITION ON EXTENSION OF THE CONTAINMENT TYPE A TEST INTERVAL BEYOND 15 YEARS UNDER OPTION B OF APPENDIX J TO 10 CFR PART 50

ADDRESSEES

All holders of operating licenses for nuclear power reactors, except those who have permanently ceased operations and have certified that fuel has been permanently removed from the reactor vessel.

INTENT

The U.S. Nuclear Regulatory Commission (NRC) is issuing this regulatory issue summary (RIS) to clarify and reiterate its position and expectations concerning an acceptable justification when the NRC would consider a request for an extension of the Type A test (also known as integrated leak rate test or ILRT) interval beyond the 15 years allowed under Option B, "Performance-Based Requirements," of Appendix J, "Primary Reactor Containment Leakage Testing for Water-Cooled Power Reactors," to Title 10, Part 50, "Domestic Licensing of Production and Utilization Facilities," of the *Code of Federal Regulations* (10 CFR Part 50).

This RIS requires no action or written response on the part of an addressee.

BACKGROUND INFORMATION

In 1995, the NRC amended Appendix J to 10 CFR Part 50 to provide an optional performance-based Option B for the containment leakage testing requirements. Licensees of operating reactors have voluntarily adopted the Appendix J, Option B requirements in the plant technical specifications. The Option B requirements are implemented in accordance with the guidelines contained in Regulatory Guide (RG) 1.163, "Performance-Based Containment Leak-Test Program." This RG endorses, with certain exceptions, the Nuclear Energy Institute (NEI) guideline NEI 94-01 "Industry Guideline for Implementing Performance-Based Option of 10 CFR Part 50, Appendix J." One of the performance-based leakage-test requirements of Option B is that a Type A test must be conducted (1) after the containment system has been fully constructed and before the plant's initial operation and (2) at a periodic interval based on historical performance of the overall containment system.

NEI 94-01, Revision 0, issued in July 1995 specifies that the interval for the Option B periodic Type A tests may be extended from the initial 48 months to as long as 10 years, if acceptable performance is established based on at least two consecutive successful Type A test results. Section 9.2.3 of the recent NEI 94-01, Revision 2, specifies that the Type A test interval may be extended to as long as 15 years if acceptable performance history is established and maintained. This performance is established based on two consecutive successful Type A tests

ENCLOSURE 2

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and other requirements in NEI 94-01. The NRC staff documented its position on the approved Revision 2 of the NEI 94-01 guideline in the safety evaluation report (SER) dated June 25, 2008 (Agencywide Documents Access and Management System (ADAMS) accession number ML081140105), which will also be reflected in the next revision to RG 1.163.

In the interim, the NRC staff has approved one-time extension of the Type A test interval under Option B from 10 years to 15 years for the vast majority of operating reactors. The staff granted these approvals based on a licensee's demonstration of acceptable plant-specific performance of the containment and risk insights through (1) results of at least the two most recent consecutive successful Type A tests, (2) proper and effective plant-specific implementation of the LLRTs (Type B and Type C tests) and the CISI program in monitoring and managing age-related containment degradation issues before and during the extension period, and (3) a supporting plant-specific risk assessment.

SUMMARY OF ISSUE

Issue:

Several licensees with approved one-time 15-year ILRT intervals have submitted license amendment requests to the NRC seeking further extensions of the interval for periods ranging from 3 months to 15 months beyond the currently approved 15 years. This RIS provides the NRC's expectations concerning an acceptable justification for ILRT interval extension requests beyond the approved performance-based interval of 15 years.

Consistent with the position described in its SER dated June 25, 2008 (ADAMS accession number ML081140105) for topical report NEI 94-01, Revision 2, the NRC staff emphasizes that requests for extension of the performance-based Type A test interval beyond the required 15 years should be infrequent and used only for compelling reasons. The staff, therefore, included a limitation/condition in Section 4.1 of the stated SER that the licensee must demonstrate to the NRC staff an unforeseen emergent condition if it has to utilize the provision of Section 9.1 of NEI 94-01, Revision 2, with regard to extension of the Type A test interval by up to 9 months. The staff position on any extension of the ILRT interval beyond the approved 15 years is described below.

Staff Position:

Except under compelling circumstances, licensees should conduct the Type A tests within the approved15-year interval without seeking extensions. The staff notes that the approved 15-year ILRT interval is a significant period of time between Type A tests. Licensees know the due date for the next Type A test years in advance and also know that the due date is not likely to coincide exactly with a routine refueling outage. Therefore, licensees should plan well ahead to conduct the ILRT within the normal 15-year due date. However, the staff notes that licensees do have some built-in flexibility for the conduct of the ILRT as described in the following two paragraphs.

Consistent with Section 9.2.2 of NEI 94-01, the test interval for a Type A test is defined as the time period from the completion of a Type A test to the start of the next test. Licensees should use this definition for routine scheduling and planning of the next ILRT to the month and year.

This means that a licensee who has determined the due date for a Type A test using the stated interval definition gains limited flexibility by being able to commence the test no later than the last day of the month in which it becomes due, without seeking NRC approval.

Further, Section 9.2.2 of NEI 94-01 states, "If the test interval ends while primary containment integrity is either not required or it is required solely for shutdown activities, the test interval may be extended indefinitely. However, a successful Type A test shall be completed prior to entering the operating mode requiring primary containment integrity." This provision gives the licensee some more flexibility for the conduct of Type A tests, without NRC approval, to accommodate plant circumstances as time draws closer to the normal 15-year ILRT due date. The licensee should document such discretionary extensions in the Type A test program records.

Any extension of the Type A ILRT interval beyond the approved 15 years, with the exception of the built-in leeway periods available as described in the previous two paragraphs, will require NRC approval through a license amendment. Consistent with Section 3.1.1.2 of the staff SER for topical report NEI 94-01, Revision 2, the NRC staff will consider requests for extensions beyond the approved 15 year interval only under compelling circumstances. This applies even if the licensee wants to use the provision in Section 9.1 of NEI 94-01, Revision 2, related to extending the ILRT interval beyond the required performance-based interval. The requests should have a compelling basis in the form of a sound technical justification and/or undue hardship or unusual difficulty and pose minimal safety risk. In addition to establishing the compelling basis for an extension, the requests should demonstrate acceptable plant-specific containment performance by providing the supporting plant-specific information discussed in the last paragraph of the Background Information section of this RIS, including the plant-specific risk-informed analysis. The licensee should demonstrate that the containment does not have a history of significant degradation issues. The NRC will not consider ILRT interval extension requests that are solely the result of poor planning; that are solely for convenience; that solely achieve dose savings that are not significant; or that are solely motivated by resource savings, cost savings, or reduced outage time.

The following are some examples (not all-inclusive) of justifications that the NRC would not consider acceptable for an ILRT interval extension:

- The primary reason for the extension is to allow the test to be conducted in the outage following the ILRT due date.
- Including the ILRT in the refueling outage before the scheduled due date significantly impacts planning for the outage and also the overall length of the outage.
- The large number of containment projects included in the scope of the refueling outage before the ILRT due date would complicate the performance of the ILRT.
- Performing the ILRT during the outage before the due date places additional burden on station resources.
- Extension of the ILRT interval will decrease plant unavailability and the associated costs.

- Deferring the ILRT would reduce the dose from the radiation exposure resulting from performance of the ILRT by a small or insignificant amount as a direct result of activities in the previous outage before the ILRT due date.

The following is an example (not all-inclusive) of a circumstance in which the NRC would consider a request for a one-time extension of the ILRT interval beyond the approved 15-year interval.

- The licensee has major repair/modification/replacement activities (e.g., replacing major equipment such as steam generators, reactor pressure vessel head, pressurizer, large penetrations) scheduled for the outage following the ILRT due date that require the containment pressure boundary to be breached (e.g., creation of large construction openings) in order to facilitate the repair/modification or replacement, and these activities cannot be scheduled for an earlier outage. This situation would put the licensee in a position of having to perform system pressure tests in two consecutive refueling outages if the ILRT were to be performed by the original due date. Performing the Type A ILRT concurrent with the post-repair containment pressure test before startup following the repair/modification or replacement would provide a more comprehensive test of the restored containment for leakage and structural integrity.

Timeliness Standard for Extension Requests:

Licensees should normally submit the license amendment request for extension of the Type A test interval beyond the approved 15-year performance-based interval, which is not already a built-in leeway period discussed previously, to the NRC at least 9 months before the planned start of the last refueling outage that would end before the current ILRT due date. While an extension request is pending, the licensee should continue to include in its planning the conduct of the ILRT during the last refueling outage before the ILRT due date.

BACKFIT DISCUSSION

This RIS reiterates the staff position and expectations concerning an acceptable justification for extension requests of the performance-based ILRT interval beyond the approved 15 years, with respect to the guidance in RG 1.163 and topical report NEI 94-01, Revision 2. It also informs licensees of the limited built-in flexibility available within the stated guidance for regulatory leeway with regard to the performance-based ILRT interval. The RIS imposes no new regulatory requirements and requires no action or written response. Therefore, it does not constitute a backfit under 10 CFR 50.109, “Backfitting,” and the staff did not perform a backfit analysis.

FEDERAL REGISTER NOTIFICATION

A notice of opportunity for public comment was not published in the *Federal Register* because this RIS is informational and pertains to a staff position that does not represent a departure from current regulatory requirements.

CONGRESSIONAL REVIEW ACT

In accordance with the Congressional Review Act (5 U.S.C. Sections 801–808), the NRC has

determined that this RIS is not a major rule and has verified this determination with the Office of Information and Regulatory Affairs of the Office of Management and Budget (OMB).

PAPERWORK REDUCTION ACT STATEMENT

This RIS does not contain new or amended information collection requirements subject to the Paperwork Reduction Act of 1995 (44 U.S.C. 3501 et seq.). Existing requirements were approved by the Office of Management and Budget, approval number 3150-0011.

Public Protection Notification

The NRC may not conduct or sponsor, and a person is not required to respond to, a request for information or an information collection requirement unless the requesting document displays a currently valid OMB control number.

CONTACT

Please direct any questions about this matter to the technical contacts listed below or to the appropriate project manager in the Office of Nuclear Reactor Regulation (NRR).

Michael Case, Director
Division of Policy and Rulemaking
Office of Nuclear Reactor Regulation

Technical Contacts: George Thomas, NRR
301-415-6181
Email: gxt4@nrc.gov

Hansraj Ashar, NRR
301-415-2851
Email: hga@nrc.gov

Note: NRC generic communications may be found on the NRC public Web site,http://www.nrc.gov, under Electronic Reading Room/Document Collections