September 28, 2009

Mr. Christian B. Larsen
Nuclear Vice President & Chief Officer
Electric Power Research Institute
3420 Hillview Avenue
Palo Alto, CA 94304-1338

SUBJECT: REQUEST FOR ADDITIONAL INFORMATION RE: ELECTRIC POWER RESEARCH INSTITUTE TOPICAL REPORT 1006596, "MATERIALS RELIABILITY PROGRAM (MRP): PRESSURIZED WATER REACTOR INTERNALS INSPECTION AND EVALUATION GUIDELINES (MRP-227 – REV. 0) (TAC NO. ME0680)

Dear Mr. Larsen:

By letter dated January 12, 2009, Electric Power Research Institute (EPRI) submitted for U.S. Nuclear Regulatory Commission (NRC) staff review Topical Report (TR) 1006596, "Materials Reliability Program (MRP): Pressurized Water Reactor Internals Inspection and Evaluation Guidelines." Upon review of the information provided, the NRC staff has determined that additional information (RAI) is needed to capture the initial set of technical questions related to the NRC staff's review of TR MRP-227 to support completion of the review. The NRC staff will however issue another set of RAIs based on its review of the MRP-227 report and its supporting reports. By e-mail dated September 22, 2009, Anne Deema, Senior Project Manager, and I agreed that the NRC staff will receive your response to the enclosed RAI questions within 30 days of issuance of this letter.

In addition, by letter dated August 24, 2009, the NRC requested that EPRI respond to a set of NRC RAIs. The NRC RAIs are available in the Agencywide Documents Access and Management System, Accession No. ML092250603. During a September 10, 2009, conference call with EPRI representatives to discuss these RAIs, the NRC staff decided to provide a written clarification to RAI #12 and withdraw RAI #15 from consideration. The revised RAI #12 is enclosed. By this letter, the NRC staff is no longer requesting a written response to RAI #15.

If you have any questions regarding the enclosed RAI questions, please contact me at 301-415-3610.

Sincerely,

/RA/ by SRosenberg for

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

Project Nos. 669 and 689

Enclosure:
RAI questions

cc w/encl: See next page

If you have any questions regarding the enclosed RAI questions, please contact me at 301-415-3610.

Sincerely,

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

Project Nos. 669 and 689

Enclosure:
RAI questions

cc w/encl: See next page

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BParks, NRR
MHartzman, NRR

EXTERNAL:
ademma@epri.com
jhr@nei.org
vka@nei.org

ADAMS ACCESSION NO.: ML092650329 **NRR-106**

OFFICE	PSPB/PM	PSPB/LA	CVIB/BC	PSPB/BC
NAME	TMensah	DBaxley (CHawes for)	MMitchell	SRosenberg (TMensah for)
DATE	9/24/2009	9/24/2009	9/25/2009	9/28/2009

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Nuclear Energy Institute
Electric Power Research Institute

Project No. 689
Project No. 669

cc:
Mr. Anthony Pietrangelo, Senior Vice
President & Chief Nuclear Officer
Nuclear Generation
Nuclear Energy Institute
1776 I Street, NW, Suite 400
Washington, DC 20006-3708
arp@nei.org

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

Mr. Charles B. Brinkman
Washington Operations
ABB-Combustion Engineering, Inc.
12300 Twinbrook Parkway, Suite 330
Rockville, MD 20852
brinkmcb@westinghouse.com

Mr. James Gresham, Manager
Regulatory Compliance and Plant Licensing
Westinghouse Electric Company
P.O. Box 355
Pittsburgh, PA 15230-0355
greshaja@westinghouse.com

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

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

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

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

Mr. Chris Larsen
Vice President and Chief Nuclear Officer
EPRI
3412 Hillview Avenue
Palo Alto, CA 94304-1338
cblarsen@epri.com

Mr. David J. Modeen
Director, External Affairs
EPRI
1300 W. T. Harris Boulevard
Charlotte, NC 28262-8550
dmodeen@epri.com

Dr. Sean Bushart
EPRI
3412 Hillview Avenue
Palo Alto, CA 94304-1338
sbushart@epri.com

Mr. Kurt Edsinger
EPRI
3412 Hillview Avenue
Palo Alto, CA 94304-1338
kedsinge@epri.com

Mr. Ken Canavan
EPRI
1300 W.T. Harris Boulevard
Charlotte, NC 28262-8550
kcanavan@epri.com

Mr. Greg Selby
EPRI
1300 W. T. Harris Boulevard
Charlotte, NC 28262-8550
gselby@epri.com

Mr. David Steininger
EPRI
3412 Hillview Avenue
Palo Alto, CA 94304-1338
dsteinin@epri.com

Mr. Neil Wilmshurst
EPRI
1300 W. T. Harris Boulevard
Charlotte, NC 28262-8550
nwilmshu@epri.com

REQUEST FOR ADDITIONAL INFORMATION (RAI)

BY THE OFFICE OF NUCLEAR REACTOR REGULATION

TOPICAL REPORT (TR) 1006596, "MATERIALS RELIABILITY PROGRAM (MRP): PRESSURIZED

WATER REACTOR INTERNALS INSPECTION AND EVALUATION GUIDELINES

(MRP-227 – REV. 0)

ELECTRIC POWER RESEARCH INSTITUTE

PROJECT NO. 669

1. The NRC staff requests that the following Electric Power Research Institute (EPRI) documents be submitted expeditiously to the NRC to support the staff's review of Topical Report (TR) Materials Reliability Program (MRP)-227.

   a) MRP-211, "Materials Reliability Program: PWR Internals Age-Related Material Properties, Degradation Mechanisms, Models, and Basis Data - State of Knowledge."
   b) MRP-229, "Materials Reliability Program: Functionality Analysis for B&W Representative PWR Internals."
   c) MRP-230, "Materials Reliability Program: Functionality Analysis for Westinghouse and Combustion Engineering Representative PWR Internals."

2. By letter dated August 24, 2009, the NRC requested that EPRI respond to a set of NRC Requests for Additional Information (RAIs). The NRC RAIs are available in the Agencywide Documents Access and Management System, Accession No. ML092250603. During a September 10, 2009, conference call with EPRI representatives to discuss these RAIs, the NRC staff decided to provide a revision to RAI #12 in writing, and to withdraw RAI #15 from consideration, as shown below:

   RAI-12
   Provide the loading sources that were used in determining the peak stress values for each Pressurized Water Reactor (PWR) Reactor Vessel Internal (RVI) component. Loading sources may include pressure, thermal, deadweight, residual stress (e.g., from fabrication/installation, welding), hydrodynamic, preload, and other sources that contribute to normal loading. Identify which if any of these loading sources produce cyclic or transitory stresses. Transitory loading source may include, for example, mechanical, thermal, hydrodynamic, or pressure transient. Also, indicate the portion of the peak stresses which is due to static loading sources and the portion attributed to cyclic or transitory load sources that may contribute to fatigue.

   The NRC staff believes that plants that have been implementing power uprates will have to assess whether the peak stress values for any given PWR RVI component are affected by

power uprate conditions to determine if their plant is bounded by the assumptions underlying TR MRP-227.

RAI-15 (Withdrawn by the NRC Staff)