

BWR OWNERS' GROUP

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Proprietary Notice

This letter transmits GEH proprietary information in accordance with 10 CFR 2.390. Upon removal of Enclosure 1, the balance of the letter may be considered non-proprietary.

BWROG-13013
January 31, 2013

Project Number 691

Mr. David L. Skeen
Director, Japan Lessons Learned Project Directorate
Office of Nuclear Reactor Regulation
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001

SUBJECT: Transmittal of NEDC-33771P Revision 1 and NEDO-33771 Revision 1, Boiling Water Reactors Owners' Group Technical Report, "GEH Evaluation of the FLEX Implementation Guidelines", January 2013 (TPN: BWROG-TP-13-002)

ENCLOSURES:

1. NEDC-33771P, Revision 1, "GEH Evaluation of the FLEX Implementation Guidelines" January 2013 – GEH Proprietary Information – Class III (Confidential) (TPN: BWROG-TP-13-002)
2. NEDO-33771, Revision 1, "GEH Evaluation of the FLEX Implementation Guidelines" January 2013 – GEH Non-proprietary Information – Class I (Public) (TPN: BWROG-TP-13-002)
3. Affidavit, dated January 2013

Dear Mr. Skeen:

As part of the continuing dialogue between the Nuclear Regulatory Commission (NRC) and nuclear plant licensees in responding to the Commission's Order EA-12-049, "Order Modifying Licenses with Regard to Requirements for Mitigation Strategies for Beyond-Design-Basis External Events," the Boiling Water Reactors Owners' Group (BWROG) is providing the subject report to the Staff for their information.

The Nuclear Energy Institute (NEI), in cooperation with its utility members, the Pressurized Water Reactor Owners' Group (PWROG), and the BWROG, developed NEI 12-06, "Diverse and Flexible Coping Strategies (FLEX) Implementation Guide," to assist the industry in responding to the Commission's Order EA-12-049 for evaluating and mitigating beyond design basis external

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events that result in extended loss of all AC power (ELAP) and Ultimate Heat Sink (UHS) events.

As part of the implementation plan of NEI 12-06, the BWROG performed evaluations of generic Boiling Water Reactor (BWR) responses to ELAP events to demonstrate the efficacy of the FLEX strategies. The enclosed BWROG report is the result of those evaluations for several representative BWR plant designs.

The purpose of the evaluations was to create generic timelines of the plant response to an ELAP event, based on the current technical capabilities of each representative BWR plant design. These generic timelines were used to generate a set of overarching evaluation windows of the critical safety functions. These overarching evaluation windows can be used to guide the site-specific evaluations for developing the procedural actions necessary to implement the FLEX strategies at a given BWR, i.e., response time for deployment of auxiliary equipment.

The evaluations endeavored to ensure all relevant technical issues applicable to the ELAP events were considered, including differences in BWR design across the fleet. These technical issues include current industry initiatives to optimize mitigation actions in the BWROG emergency procedure guidelines (EPGs) and to evaluate the feasibility of augmenting the capabilities of key plant equipment for responding to the ELAP event; for example, extending Reactor Core Isolation Cooling (RCIC) system operation.

It should be noted that although the BWROG evaluations were performed for representative plant types, these evaluations are considered to be neither bounding nor prescriptive for plants of the same or similar design. Plant-specific evaluations are necessary to confirm the applicability of the representative plant response and to identify any differences in plant response due to plant-specific design configurations, thermal power levels, etc. Alternative approaches may also be evaluated and implemented, if appropriate, based on the initial results of the plant-specific evaluations.

Based upon the initial results of this evaluation, the BWROG has initiated additional analyses for the BWR/6 design with Mark III containments to develop additional strategies for containment cooling that are not currently included in this revision of the report. These additional strategies specifically address actions necessary to mitigate the suppression pool heat-up during ELAP events that could challenge containment integrity. These strategies include suppression pool inventory addition/letdown, alternate suppression pool cooling methods, and/or aligning FLEX equipment to provide AC power to installed plant equipment for containment heat removal.

The BWROG currently plans to make those results available to the Staff once they are completed and reviewed by the BWROG members.

A substantial portion of the BWROG membership has endorsed this letter. However, majority endorsement should not be interpreted as a commitment of any individual member to a specific course of action.

Please note that Enclosure 1 contains GE Hitachi Nuclear Energy (GEH) proprietary information of the type that GEH maintains in confidence and withholds from public disclosure. The information has been handled and classified as proprietary to GEH as indicated in its affidavit, also included in the report. The affidavit contained in Enclosure 3 identifies that the information contained in Enclosure 1 has been handled and classified as proprietary to GEH. GEH hereby requests that the information in Enclosure 1 be withheld from public disclosure in accordance with the provisions of 10 CFR 2.390 and 9.17.

We have attached Enclosure 2, the non-proprietary version of Enclosure 1, for public disclosure.

The BWROG is looking forward to continued discussions with the Staff regarding these matters. We hope you find this report informative and useful. If you have any questions, please do not hesitate to contact me or Terri Farthing, BWROG Project Manager (910-819-5040.)

Regards,

A handwritten signature in black ink, appearing to read 'Ted Schiffley II', with a stylized flourish at the end.

Frederick P. "Ted" Schiffley, II
Chairman
BWR Owners' Group

Enclosures

cc: K.A. McCall – BWROG Interim Program Manager
T.V. Farthing – BWROG Project Manager
T.M. Parker – Xcel
H. Goodman, BWROG Vice Chairman
Michael R. Johnson, EDO, NRC
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Robert M. Taylor, NRR/JLD, NRC
Raj Auluck, NRR/JLD, NRC
Jessica Kratchman, NRC
Joe Golla, NRC

ENCLOSURES

1. GEH Evaluation of the FLEX Implementation Guidelines (NEDC-33771P, Rev. 1)
TPN: BWROG-TP-13-002

2. GEH Evaluation of FLEX Implementation Guidelines (NEDO-33771, Rev. 1)
TPN: BWROG-TP-13-002

3. Affidavit, dated January 2013