



**HITACHI**

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MFN 09-466  
July 10, 2009

U.S. Nuclear Regulatory Commission  
Document Control Desk  
Washington, D.C. 20555-0001

Subject: Implementation of PRIME Models and Data in Downstream Methods,  
NEDO-33173, Supplement 4, July 2009

By Reference 1, GE Hitachi Nuclear Energy (GEH) committed to issue a supplement to the GEH Licensing Topical Report, NEDC-33173P (Methods LTR) (Reference 2) that describes the implementation of the PRIME code models and inputs into the downstream safety analysis codes and include a schedule to complete that implementation. The PRIME supplement is attached as Enclosure 1. GEH anticipates that the upgrade to the downstream safety codes will be completed by December 2010.

The purpose of the supplement is to address the implementation of Limitation 12 of the NRC Safety Evaluation (SE) (Reference 3) addressing the Methods LTR. Limitation 12 requires the use of the PRIME thermal-mechanical methods (Reference 2) in future license applications for extended power uprate (EPU) and maximum extended load line limit analysis plus (MELLIA+) after PRIME and its applications are approved. The supplement: (1) identifies the specific codes and internal models to be modified, (2) documents any adaptations of the PRIME models to support the interface with each affected code, and (3) describes the software testing to determine acceptable implementation.

As stated in Reference 1, GEH understands that the NRC will conduct an audit once the implementation and testing is complete to confirm consistency with the approved process. Additionally, the NRC audit report will be included as an attachment to the Methods LTR or appendix to the Method LTR SE. Subsequently, GEH will implement PRIME in the related affected downstream codes upon issuance of the staff's audit findings and incorporation into the Methods LTR, or issuance of an appendix to the Methods SER.

If you have any questions, please contact Mike Lalor at (408) 925-2443 or me.

Sincerely,



James F. Harrison  
Vice President, Fuel Licensing  
Regulatory Affairs  
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Project No. 710

Reference:

1. GEH Letter, JF Harrison (GEH) to Document Control Desk (US NRC), Subject: NEDC-33173P-Implementation of Limitation 12, February 27, 2009, MFN 09-143.
2. GEH Licensing Topical Report, NEDC-33173P, Applicability of GE Methods to Expanded Operating Domains, February 2006.
3. NRC Letter, HK Nieh (US NRC) to RE Brown (GEH), Subject: Final Safety Evaluation for General Electric (GE)-Hitachi Nuclear Energy Americas, LLC (GHNE) Licensing Topical Report (LTR) NEDC-33173P, Applicability of GE Methods to Expanded Operating Domains, January 17, 2008, MFN 08-089.

Enclosure

1. Implementation of PRIME Models and Data in Downstream Methods, NEDO-33173, Supplement 4, July 2009.

cc: MC Honcharik, NRC  
SS Philpott, NRC  
AA Lingenfelter, GNF/Wilmington  
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**Document Components:**

001 MFN 09-466 Cover Letter.pdf

002 MFN 09-466 Enclosure 1 Non-Proprietary.pdf