

CNRO-2008-00007

February 27, 2008

U. S. Nuclear Regulatory Commission
Washington, DC 20555-0001
Attention: Document Control DeskDOCKET: NRC Project No. 744 **52-017**

SUBJECT: Response to USNRC Pre-application Quality Assurance Audit of Grand Gulf and North Anna Combined License Application Activities

REFERENCE:

1. Entergy Operations, Inc. (EOI) letter to USNRC – Application for Combined License for Grand Gulf Unit 3 (CNRO-2008-00008), dated February 27, 2008.
2. USNRC letter to Mr. William K. Hughey – U.S. Nuclear Regulatory Commission Pre-Application Quality Assurance Audit of North Anna and Grand Gulf Combined License Application Activities, CNRI-2008-00002, dated November 20, 2007.
3. Dominion Virginia Power, North Anna Unit 3 Combined License Application Response to NRC Pre-application Quality Assurance Audit of North Anna COL Application Activities (Letter No. NA3-08-002), dated January 17, 2008.

Dear Sir or Madam:

On September 10 - 14, 2007, the U.S. Nuclear Regulatory Commission (NRC) staff conducted an audit of activities related to development of the Grand Gulf and North Anna combined license applications (COLAs). The audit, dated November 20, 2007, was documented in NRC audit report Nos. PROJ0741-2007-001 and PROJ0745-2007-001 (Reference 2). The report included one Audit Response Request (ARR) for which NRC requested a response (ARR 3.8.1).

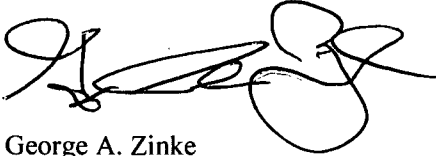
Entergy's response to the ARR 3.8.1 is provided in Attachment 1 to this letter and is consistent with the response provided by Dominion (Reference 3). The AAR states that General Electric – Hitachi Nuclear Americas LLC (GEH) and the COL applicants should address the findings from an earlier Entergy/Dominion audit of GEH activities and provide a description of the corrective actions taken to resolve the findings in the GEH QA program in the context of the COLA.

On October 9 - 12, 2007, Entergy/Dominion performed a follow-up surveillance and continued to review and follow-up on corrective action activities to ensure that the actions taken were effective at resolving the identified issues prior to the COLA submittal. Entergy determined that corrective actions have been completed with respect to the findings potentially affecting the COLA. Entergy has also determined that none of those findings affected the completeness and accuracy of the COLA as submitted on February 27, 2008 (Reference 1). In addition, GEH developed and is implementing Preventive Actions (PA's) where appropriate to ensure the issues do not recur.

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KRO

Should you have any questions, please contact me.

Sincerely,

A handwritten signature in black ink, appearing to read 'G. Zinke', with a large, stylized flourish at the end.

George A. Zinke
Manager, New Plant – QA/QC/NRC
Entergy Operations
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Attachment: Attachment 1 (Summary of GEH Actions to Address Dominion / Entergy Audit Findings)

cc: Mr. T. A. Burke (ECH)
Mr. E. E. Collins (USNRC/R-IV)
Mr. S. P. Frantz (Morgan, Lewis & Bockius)
Mr. B. R. Johnson (GE-Hitachi)
Ms. M. Kray (NuStart)
Mr. J. R. McGaha (ECH)
Mr. E. R. Oesterle (USNRC/NRO/DNRL/DDLO/NG)
Mr. L. R. Plisco (USNRC/R-II)

Resident Inspectors' Office: GGNS

ATTACHMENT 1
Summary of GEH Actions to Address Dominion / Entergy Audit Findings

1. **LO - CAR - 2007 - 00077 (GEH CAR 43392) identified that GEH Engineering procedures (EOPs) utilized for New Plant Projects (NPP) ESBWR design that are related to testing, including qualification testing, do not address that qualification tests must be performed to cover "the most adverse design conditions."**

GEH performed an analysis and determined that all tests were conducted to the "most adverse design conditions." However, it was determined that procedure EOP 35-3.00 could be enhanced. GEH implemented a Preventive Action (PA) item to address this procedure and prevent recurrence. The PA included more prescriptive language concerning performance of tests to evaluate the "most adverse design conditions" and any other pertinent requirements that should be replicated from the codes and standards in EOP 35-3.00.

Since testing performed by GEH was to the most adverse design conditions, the completeness and accuracy of the COL Application was not affected by this finding.

2. **LO - CAR - 2007 - 00078 (GEH CAR 43393) identified that the QA group reviews of and concurrence in quality-related procedures for ESBWR design activities required by 10 CFR 50.34(f)(3)(iii)(C) are not formalized and not consistently implemented by GEH.**

GEH performed an analysis and determined that this is a documentation issue. Most procedures were reviewed by one of three reviewers, but records do not exist to demonstrate that all EOPs were reviewed by GEH QA at time of issuance. However, the affected procedures have been reviewed in various audits. Given the EOPs with documented reviews, EOPs with undocumented reviews, and EOPs which have been reviewed by QA in audits (internal and external), no remedial action to review previously issued EOPs is deemed necessary. The GEH analysis indicates that, through QA group activities, the procedures have been determined to address the necessary QA requirements. GEH revised their procedures that govern the development and revision of procedures to require the QA review and concurrence. An additional preventive action is underway to provide instructions that will ensure the consistency of the QA reviews.

Although a QA review and concurrence wasn't documented, appropriate QA measures for developing the COL Application existed in the current GEH procedures, therefore, the completeness and accuracy of the COL Application was not affected by this finding.

3. **LO - CAR - 2007 - 00079 (GEH CAR 43394) identified that the QA role in design and analysis activities required by 10 CFR 50.34(f)(3)(iii)(H) is not prescribed by GEH procedures.**

GEH performed an analysis and determined that this is a requirement for new plant activities to use appropriate techniques to ensure necessary QA items, such as inspections and tests, are adequately considered. GEH also developed and provided training to personnel performing the review function to ensure an understanding of QA techniques. GEH is

ATTACHMENT 1**Summary of GEH Actions to Address Dominion / Entergy Audit Findings**

performing a review/revision of the design control procedures to ensure appropriate instructions are provided for reviewers to address QA requirements.

The requirements identified by this finding are applicable to the completion of detailed design as it supports procurement, fabrication, and construction. This level of design completion is beyond what was necessary to support completion of the COL Application. Therefore, the completeness and accuracy of the COL Application was not affected by this finding.

- 4. LO - CAR - 2007 - 00080 (GEH CAR 43395) identified that the quality-related procedures used for the NPP ESBWR COL projects do not address and reconcile the differences between the commitments of P&P 70 - 11 and NEDO - 11209 - 4A (RG 1.28, Rev. 2, and ANSI N45.2 series standards are the basis of this program and the references in the procedures) and those described for the COL project through the ESBWR DCD and the COL QA Project Plan (RG 1.28, Rev. 3 and ASME NQA - 1 - 1983 are stated as the basis for the program, but are not addressed in the procedures).**

GEH performed an analysis and determined that the cause of this item was confusing or incomplete management systems, standards, policies, or administrative controls. There existed no document defining how GEH meets the requirements of NQA -1 -1983 through the use of the provisions given in Reg. Guide 1.28. The project quality plan should contain clarification and determine methods of implementation for any gaps in the approved GEH quality program and contractual requirements. GEH reviewed the contractual documents to ensure correct QA requirements were stated. In addition, a review of their procedures was conducted to ensure measures are in place to address differences between the GEH QA program and contractual requirements. A review of NRC Reg. Guide 1.28, Rev. 3 identified that the programmatic requirements applicable to the COL Application development are essentially equivalent between the ANSI N45.2-based GEH QA program and an NQA-1-1983 based program. For continued work, GEH is performing an analysis of the differences between the QA standards stated in the GEH program and those invoked by contract and addressing these differences in their project procedures.

Based on the equivalency of the QA requirements for the application, the completeness and accuracy of the COL Application was not affected by this finding.

- 5. LO - CAR - 2007 - 00081 (GEH CAR 43396) identified that COLA Section 9.2.5 had reached the comment resolution phase but contained errors in nomenclature and Section identification numbers. According to the status of this COLA Section, comments had been resolved and the reviews were completed that should have identified such errors.**

GEH performed an analysis of this item and determined that the document was inappropriately provided to the audit team for review since it had not been processed through the normal final review and verification steps that would likely have identified such errors. The identified section was corrected through the implementation of the design process. All COL Application sections authored by GEH were subjected to this independent review process. In addition, a

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Summary of GEH Actions to Address Dominion / Entergy Audit Findings

subsequent acceptance review of COL Application sections was conducted by Entergy / Dominion to confirm the incorporation of comments on draft documents and the accuracy of the sections.

Since the GEH independent verification reviews were completed along with the client acceptance reviews, the completeness and accuracy of the COL Application was not affected by this finding.

- 6. LO - CAR - 2007 - 00082 (GEH CAR 43397) identified that established controls (EPI 20-6) for transmittal of design information (TODI) was not implemented for the ESBWR projects for Entergy and Dominion.**

GEH evaluated the condition and determined that the procedure instruction steps were written using instruction steps and responsibilities that could be misinterpreted and confusing. Additionally, new persons were tasked to handle the transmittals and not provided complete instructions. This resulted in a small number of TODIs and Requests for Information (RFI) not being stored in the configuration management (CM) database for such controlled design documents. GEH reviewed the Configuration Management (CM) logs and the eMatrix records against the project RFI tracking logs. All TODI CM logs and eMatrix records have been restored/updated consistent with the letter logs for RFIs processed as TODIs. The CM database records are being maintained up-to-date through weekly review of Projects RFI tracking logs. The written instructions to project personnel were revised to clarify the process steps and the ESBWR project personnel were trained on the revised instructions.

The identified deficiency was corrected prior to the GEH prepared COL sections being finalized, therefore, the completeness and accuracy of the COL Application was not affected by this finding.