

NRR-PMDAPEm Resource

From: Wang, Alan
Sent: Monday, April 28, 2014 1:48 PM
To: SEITER, JEFFERY ALAN
Cc: Burkhardt, Janet
Subject: Grand Gulf Nuclear Station Audit Plan Regarding Maximun Extended Load Line Limit Plus Amendment Request (TAC MF2798)
Attachments: MELLLA Plus AUDIT PLAN.docx

Jeff,

By letter dated September 25, 2013 (Agencywide Document Access and Management System (ADAMS) Accession No. ML13269A140), Entergy Operations Inc. (Entergy, the licensee) submitted a license amendment request (LAR) to allow Grand Gulf Nuclear Station, Unit No. 1 (GGNS) to operate in the expanded maximum extended load line limit analysis plus (MELLLA+) domain. During review of the amendment, the US Nuclear Regulatory Commission (NRC) staff identified several open items associated with the safety analyses that warrant resolution with an audit. As such the NRC staff and Entergy Operatiosn, Inc. agreed to an audit from April 23 to April 25, 2014, at General Electric Hitachi (GEH), in Wilmington, North Carolina. Attached is the NRC staff's proposed agenda for the audit. If you have any questions regarding the Audit Plan please let me know.

Alan Wang
Project Manager (Grand Gulf Nuclear Station)
Nuclear Regulatory Commission
Division of Operating Reactor Licensing
Alan.Wang@NRC.gov
Tel: (301) 415-1445
Fax: (301) 415-1222

Hearing Identifier: NRR_PMDA
Email Number: 1251

Mail Envelope Properties (Alan.Wang@nrc.gov20140428134700)

Subject: Grand Gulf Nuclear Station Audit Plan Regarding Maximun Extended Load Line
Limit Plus Amendment Request (TAC MF2798)
Sent Date: 4/28/2014 1:47:52 PM
Received Date: 4/28/2014 1:47:00 PM
From: Wang, Alan

Created By: Alan.Wang@nrc.gov

Recipients:
"Burkhardt, Janet" <Janet.Burkhardt@nrc.gov>
Tracking Status: None
"SEITER, JEFFERY ALAN" <jseiter@entergy.com>
Tracking Status: None

Post Office:

Files	Size	Date & Time
MESSAGE	1127	4/28/2014 1:47:00 PM
MELLLA Plus AUDIT PLAN.docx		23656

Options
Priority: Standard
Return Notification: No
Reply Requested: No
Sensitivity: Normal
Expiration Date:
Recipients Received:

AUDIT PLAN
MINIMUM STABLE FILM BOILING TEMPERATURE
AND QUENCH MODELS
ENTERGY OPERATIONS, INC
GRAND GULF NUCLEAR STATION, UNIT 1

Purpose and Scope

By letter dated September 25, 2013 (Agencywide Document Access and Management System (ADAMS) Accession No. ML13269A140), Entergy (the licensee) submitted a license amendment request for maximum extended load line limit analysis plus (MELLLA+). The proposed amendment request would allow operation in the expanded MELLLA+ domain. During review of the amendment, the US Nuclear Regulatory Commission (NRC) identified several open items associated with the safety analyses that warrant resolution with an audit including:

- Relevancy of supporting data for minimum stable film boiling temperature (T_{min}) at high pressures.
- Physical basis of the TRACG quench model.
- Implementation of the T_{min} and quench models in TRACG.

Audit Agenda

The audit will take place from April 23 to April 25, 2014, at General Electric Hitachi (GEH), in Wilmington, North Carolina.

The staff audit will include reviews of the following areas:

- Review of methodologies associated with the following:
 - Recognition of T_{min} supporting data at high pressures
 - Physical basis of the TRACG quench model
 - Implementation of the T_{min} model in the TRACG code
 - Implementation of the quench model in the TRACG code
- Identification of any departures from an approved analysis method
- Assessment of adherence to NRC-approved methodology
- Assessment of compliance to NRC-accepted quality assurance processes related to code maintenance

Audit Team

The audit team will consist of:

- Tai Huang, Reactor Systems Branch Technical Reviewer, NRR
- Ashley Guzzetta, Reactor Systems Branch Technical Reviewer, NRR
- Christopher Jackson, Chief, Reactor Systems Branch, NRR
- Peter Yarsky, Senior Reactor Systems Engineer, RES

In addition, the following will participate via WebEX;

- Steve Bajorek, Senior Technical Advisor for Thermal-Hydraulics, RES
- Alan Wang, Grand Gulf Project Manager, NRR (optional)
- Jose March-Leuba, Contractor, Oak Ridge National Laboratory (optional)

The following support personnel are requested:

- Licensing Staff from Entergy Operations
- Cognizant staff engineers from GEH (specifically thermal hydraulic code developers and analysts)

Documents Requested for Staff Examination

The staff requests that documentation pertaining to the methodologies listed above be made available including:

- TRACG Model Description Licensing Topical Report
- TRACG Qualification Licensing Topical Report
- Relevant test reports for referenced experimental data
- Associated Q/A review documents for pertinent TRACG model corrections and updates to include internal review documentation
- Access to design record files associated with TRACG T_{min} and Quench models

Logistical Considerations

It is preferred if GEH can furnish staff to process searches in the design record files and retrieve documents from that system for staff review during the audit. Electronic searching would be preferred, such as by record number or key word. The following logistics are also requested:

- Telephone available to call NRC Headquarters if necessary
- Private space for internal NRC staff discussion separate from the licensee or GEH staff
- A white board in the conference room to assist in discussion
- A projector and screen for presentations

Documentation of Audit

Within 45 days of the audit, the NRC staff will prepare a detailed audit report documenting the information reviewed during the audit, and any open items identified as a result of the audit. The NRC staff will also document its understanding of the proposed resolution of any identified open items. The audit report will be provided to the licensee in draft form for proprietary markup.