ArevaEPRDCPEm Resource

From: Tesfaye, Getachew
Sent: Tuesday, February 02, 2010 2:36 PM
To: DUNCAN Leslie E (AREVA NP INC)
Cc: Carneal, Jason; Forsaty, Fred; Lu, Shanlai; GUCWA Len T (EXT); ArevaEPRDCPEm Resource
Subject: Audit Plan - Ch 15 and TRs Audit in Lynchburg February 4 and 5
Attachments: Audit Plan Areva US EPR Lynchburg_2010-02-04_final.doc

Les,
Attached please find the subject audit plan. The purpose of the audit is to review documentation regarding EPR Fuel Design Topical Report and Realistic Large Break LOCA. Access to the documentation will allow the NRC staff to proceed in its review of the subject topical and technical reports and the FSAR.

Thanks,
Getachew

Hearing Identifier: AREVA_EPR_DC_RAIs
Email Number: 1127

Mail Envelope Properties (0A64B42AAA8FD4418CE1EB5240A6FED10DF74EAE8E)

Subject: Audit Plan - Ch 15 and TRs Audit in Lynchburg February 4 and 5
Sent Date: 2/2/2010 2:35:31 PM
Received Date: 2/2/2010 2:35:34 PM
From: Tesfaye, Getachew

Created By: Getachew.Tesfaye@nrc.gov

Recipients:
"Carneal, Jason" <Jason.Carneal@nrc.gov>
Tracking Status: None
"Forsaty, Fred" <Fred.Forsaty@nrc.gov>
Tracking Status: None
"Lu, Shanlai" <Shanlai.Lu@nrc.gov>
Tracking Status: None
"GUCWA Len T (EXT)" <Len.Gucwa.ext@areva.com>
Tracking Status: None
"ArevaEPRDCPEm Resource" <ArevaEPRDCPEm.Resource@nrc.gov>
Tracking Status: None
"DUNCAN Leslie E (AREVA NP INC)" <Leslie.Duncan@areva.com>
Tracking Status: None

Post Office: HQCLSTR02.nrc.gov

Files	**Size**	**Date & Time**
MESSAGE	354	2/2/2010 2:35:34 PM
Audit Plan Areva US EPR Lynchburg_2010-02-04_final.doc	76398	

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

MEMORANDUM TO: Joseph Colaccino, Branch Chief
EPR Projects Branch 1
Division of New Reactor Licensing
Office of New Reactors

FROM: Joseph Donoghue, Branch Chief
Reactor Systems, Nuclear Performance, and
Code Review Branch
Division of Safety Systems and Risk Assessment
Office of New Reactors

SUBJECT: Audit Plan for Review of Documents Related to EPR Fuel Design Topical Report and Realistic Large Break LOCA (RLBLOCA)

The Reactor Systems, Nuclear Performance, and Code Review Branch (SRSB) have prepared an audit plan related to the review of the EPR Fuel Design Topical Report and Realistic Large Break LOCA. At the conclusion of this audit a public meeting will be held to discuss the results.

The audit plan describes the scope and purpose of the audit, identifies the audit team, and provides a list of those documents required by the U.S. Nuclear Regulatory Commission (NRC) staff. The audit plan is attached. The audit will take place on February 4 and 5, 2010 as previously discussed and coordinated with AREVA. The details and location of the public meeting is provided on the NRC web site.

Enclosure: As stated

CONTACT: Fred Forsaty, NRO/DSRA/SRSB
(301) 415-8523

MEMORANDUM TO: Joseph Colaccino, Chief
EPR Projects Branch 1
Division of New Reactor Licensing
Office of New Reactors

FROM: Joseph Donoghue, Branch Chief
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Enclosure: As stated

DISTRIBUTION: SLu CBeyer/PNNL DCaraher/ISL

ACCESSION NUMBER: ML

OFFICE	NRO/DSRA/SRSB	NRO/DSRA/SRSB
NAME	F Forsaty	J Donoghue
DATE	01/ /2010	01/ /2010

OFFICIAL RECORD COPY

Audit Plan Regarding EPR Fuel Design Topical Report, Realistic Large Break LOCA (RLBLOCA), and FSAR Section 15.6.5

APPLICANT:	AREVA NP, Inc.
APPLICANT CONTACT:	Les Duncan
TIME:	8:00 am to 4:00 pm on 02/04/2010 and 8:00 am to 4:00 pm on 02/05/2010
LOCATION:	AREVA NP, Inc., Lynchburg, VA
REVIEWERS:	Fred Forsaty (NRO, Audit Lead and Reviewer) Shanlai Lu (NRO) Jason Carneal (NRO) Getachew Tesfaye (NRO) Carl Beyer, PNNL (PNNL) David Caraher (ISL)

Scope and Purpose

The purpose of the audit is to review documentation regarding EPR Fuel Design Topical Report and Realistic Large Break LOCA. Access to the documentation will allow the NRC staff to proceed in its review of the subject topical and technical reports and the FSAR.

Audit Agenda

The audit will be conducted at the AREVA offices in Lynchburg Virginia. The date of the audit has been coordinated with the applicant and will take place on February 4, 2010 from 8:00 AM – 4:00 PM and February 5, 2010 from 8:00 AM – 4:00 PM.

To achieve the review goals in an efficient manner, the staff assembled an interdisciplinary audit team. The audit team will include experts from NRC and consulting organizations. To facilitate and expedite the work, it is foreseen that the audit will be attended by representatives from AREVA who will introduce the audit topics and provide supporting documents and technical evidence to the reviewers. The staff will document the audit findings in an audit report.

A detailed agenda is provided in Attachment A.

A- RLBLOCA Topical Report

- Core stored energy (RAI-47). Audit will consist of related reanalysis (Revision 1) and a review of the S-RELAP5 input to confirm the implementation of the stored energy,
- Vessel Pressurization and possible critical flow deficiency (RAI-41). Audit will consist of reviewing the input files for the S-RELAP5 runs that were made
- Adjustment of LP liquid inventory calculation (RAI-42).
- Adjustment of LP and core collapsed level plots (RAI-43).
- Core Reflood prior to LP being Filled (RAI-44). Audit will be a discussion of how MPR correlation was implemented in S-RELAP5, Review of the UPTF model.
- Use of UO2 thermal conductivity correction for transient calculations (RAI-45). Audit S-RELAP5 input to verify the proposed correction has been implemented.
- Accumulator liquid temperature sampling (RAI-46). Audit the range used for the latest set of RLBLOCA calculations.
- Audit will also look at the methodology for determining the limiting case for each of the safety parameters, PCT, local oxidation, and core wide oxidation

B- Fuel Mechanical Design TR

- M5 Guide Tube (Assembly) Axial Growth (RAI- 46, 47, 48 and 49) and holddown cracking at TMI-1 and the Crystal River
- Cladding Strain (RAI-52)
- Hydride Limit (RAI-51)
- Rod Bow (RAI- 24)

Required Documentation

The staff will require access to reference documents supporting AREVA's responses to the above RAIs.

Special Requests

The NRC requests that AREVA provide the requested references, workspace for NRC staff to review the documents, and a telephone for contacting NRC headquarter staff (if necessary) as coordinated through the project manager.

Audit Products

Within 45 days of the exit meeting the NRC staff will generate an audit summary report and audit summary. The report will describe the outcome of the NRC review of documentation and summarize that information required for the NRC to make a regulatory decision regarding. The audit summary will provide a list of the audited documents and non-proprietary conveyance of the NRC staff's technical evaluation.

Attachment A

Draft Agenda

Thursday, February 04, 2010: AUDIT – Proprietary

08:00-08:15	Entrance / Opening Statements	[NRC/AREVA]
08:15-09:00	Overview: RLBLOCA and Fuel TR	[AREVA]
09:00-12:00	Documentation Review and Discussion	[NRC/AREVA]
12:00-12:45	Break	[NRC]
12:45-15:00	Documentation Review and Discussion	[NRC/AREVA]
15:00-16:00	NRC Internal Caucus	[NRC]
16:00	**Adjourn**	

Friday, February 05, 2010: AUDIT – Proprietary

08:00-08:15	Entrance / Opening Statements	[NRC/AREVA]
08:15-11:00	Documentation Review and Discussion	[NRC/AREVA]
15:00-16:00	NRC Internal Caucus	[NRC]
12:00-13:00	Break	[NRC]
13:00-15:00	Public Meeting	[NRC/AREVA]
15:00-16:00	Summary and Exit Meeting	[NRC/AREVA]
16:00	**Adjourn**	