

May 2, 2013

MEMORANDUM TO: John P. Segala, Chief
Licensing Branch 1
Division of New Reactor Licensing
Office of New Reactors

FROM: John McKirgan, Chief /**RA**/
Containment and Ventilation Branch
Division of Safety Systems and Risk Assessment
Office of New Reactors

SUBJECT: TRANSMITTAL OF INPUT TO THE AUDIT REPORT FOR THE
SEPTEMBER 21, 2011, AUDIT TO REVIEW CONVECT-FOIL
QUALIFICATION TEST REPORT FOR THE SAFETY EVALUATION
OF UNITED STATES EVOLUTIONARY PRESSURIZED REACTOR
FINAL SAFETY ANALYSES REPORT SECTION 6.2.2

On September 21, 2011, the United States Nuclear Regulatory Commission (NRC) conducted an audit at the AREVA office in Twinbrook, Maryland, to review the AREVA documents pertaining to the U.S. EPR CONVECT-foil qualification test for the evaluation of the U.S. EPR Final Safety Analysis Report (FSAR) Section 6.2.2, "Containment Heat Removal Systems," of the Design Control Document AREVA submitted to the NRC design certification application. The enclosed input to audit report summarized the SCVB review result. No new RAI was resulted from this audit.

Enclosure: As stated

CONTACT: Shie-Jeng Peng, NRO/DSRA/SCVB
(301) 415-8475

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Docket No. 52-020

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ADAMS/ACCESSION No.:ML13121A528

OFFICE:	NRO/DSRA/SCVB	NRO/DSRA/SCVB:BC
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DATE:	5/02/2013	5/ 02/2013

OFFICIAL RECORD COPY

Attachment – Input of Audit Report

APPLICANT: AREVA NP, INC.

PROJECT: EPR DESIGN CERTIFICATION

SUBJECT: AUDIT REPORT FOR SEPTEMBER 21, 2011, AUDIT TO REVIEW
CONVECT-FOIL QUALIFICATION TEST REPORT RELATED TO THE
SAFETY EVALUATION OF U.S. EPR FSAR SECTION 6.2.2

BACKGROUND

In RAI 416, Question 06.02.01-94, the staff requested demonstration testing of the CONVECT system. In a November 2010 response the applicant indicated that vendor-specific testing was not possible because the vendor had not been selected. In RAI 468, Question 06.02.02-83 the staff again requested demonstration testing of the CONVECT system. The staff noted that vendor-specific testing was not necessary but proof-of-concept testing was necessary for the first-of-a-kind application. In July of 2011 the applicant responded and did not include proof of concept testing in the response. The response provided a general description of “behaviors that are based on simple physics.” The response is not sufficient for the staff to make a finding that the foils and dampers used in CONVECT system are capable of accomplishing the safety function as described in FSAR. Since the staff is unaware of any testing or operating experiences associated with the foils and dampers as described in FSAR, proof of concept testing is needed for the foils and dampers in this first-of-a-kind application. Specifically, the staff requests to audit the qualification test results for the foils and dampers (CONVECT system).

AUDIT APPROACH

The purpose of this audit was to review the document(s) provided by AREVA that pertain to U.S. EPR FSAR Tier 2, Section 6.2.2. The audit was attended by the NRC staff Shie-Jeng Peng.

Documentation Reviewed:

The staff reviewed the following documentation at the AREVA office in Rockville, MD,

38-7011331-000 - Summary of successfully performed AREVA NP Convection Foil Device qualification tests, and Description of TUV Type Test

Audit Summary

The information presented in the document provided the staff with a better understanding of the U.S. EPR CONVECT-Foil design. This information will support the safety evaluation of U.S. EPR FSAR Section 6.2.2. No new RAI is resulted from this audit.