

May 19, 2015

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

FROM: Phyllis Clark, Project Manager */RA/*  
Licensing Branch 1  
Division of New Reactor Licensing  
Office of New Reactors

SUBJECT: AUDIT SUMMARY OF U.S. EPR DESIGN CERTIFICATION SOURCE  
TERM AND SHIELDING CALCULATIONS

The Radiation Protection and Accident Consequences Branch (RPAC) of the Division of Site Safety and Environmental Analyses (DSEA) and Licensing Branch 1 (LB1) in the U.S. Nuclear Regulatory Commission (NRC) Office of New Reactors (NRO) conducted an audit of AREVA's U.S. EPR source term and shielding calculations (including radiation zoning) for radiation sources outside containment. The audit was conducted in support of the NRC staff review of the U.S. EPR Design Certification. The audit was performed by reviewing the applicant's calculations via the applicant's Electronic Reading Room. In addition, an audit was held at the AREVA Marlborough, MA office on December 9 – 10, 2014. The NRC staff audited documents in the applicant's Electronic Reading Room at the NRC headquarters building in Rockville, MD periodically from November 2014 through March 2015.

A summary of the audit conducted at the applicant's office and the audit of documents in the applicant's Electronic Reading Room are contained in the Enclosure to this memo: Source Term and Shielding Audit Questions and Commitments are in Attachment 1.

CONTACT: Phyllis Clark, NRO/DNRL  
301-415-6447

cc: See next page

Docket No.: 52-020

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Licensing Branch 1  
Division of New Reactor Licensing  
Office of New Reactors

FROM: Phyllis Clark, Project Manager /RA/  
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Division of New Reactor Licensing  
Office of New Reactors

SUBJECT: AUDIT SUMMARY OF U.S. EPR DESIGN CERTIFICATION SOURCE TERM  
AND SHIELDING CALCULATIONS

The Radiation Protection and Accident Consequences Branch (RPAC) of the Division of Site Safety and Environmental Analyses (DSEA) and Licensing Branch 1 (LB1) in the U.S. Nuclear Regulatory Commission (NRC) Office of New Reactors (NRO) conducted an audit of AREVA's U.S. EPR source term and shielding calculations (including radiation zoning) for radiation sources outside containment. The audit was conducted in support of the NRC staff review of the U.S. EPR Design Certification. The audit was performed by reviewing the applicant's calculations via the applicant's Electronic Reading Room. In addition, an audit was held at the AREVA Marlborough, MA office on December 9 – 10, 2014. The NRC staff audited documents in the applicant's Electronic Reading Room at the NRC headquarters building in Rockville, MD periodically from November 2014 through March 2015.

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**Memo: ML15104A213**

**Audit Summary: ML15104A258**

**Appendix: ML15104A295**

**\*via e-mail**

**NRO-002**

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DATE	04/17/2015	04/17/2015	04/27/2015	04/28/2015	05/19/2015

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**December 9 - 10, 2014, Attendance List for Audit of U.S. EPR Design Certification Source Term and Shielding Calculations at AREVA's Office**

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Phyllis Clark	US NRC/NRO
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Nathan Hottle	AREVA NP
Jeffery Seals	AREVA NP
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(Revised 10/14/2014)

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