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U.S. Nuclear Regulatory Commission  
11555 Rockville Pike  
Rockville, MD 20852

**Reply to Notice of Violation No. 05200020/2013-203**

Ref. 1: Letter, Kerri Kavanagh (NRC) to Pedro Salas (AREVA NP Inc.), "Nuclear Regulatory Commission Inspection Report No. 05200020/2013-203 and Notice of Violation," November 26, 2013.

This letter and its enclosures provide AREVA NP Inc.'s (AREVA NP) reply to the Notice of Violation (NOV) issued to AREVA NP by the U.S. Nuclear Regulatory Commission (NRC) in a letter dated November 26, 2013 (Reference 1). The NOV was generated from the NRC's inspection of AREVA NP's quality assurance program implementation for the U.S. EPR Design Certification (DC) application.

The NOV identifies two examples where AREVA NP failed to adequately implement measures to ensure that conditions adverse to quality are promptly identified and corrected. The NOV states that in the first example, AREVA NP failed to evaluate the extent of condition for the input errors in the RELAP5/MOD2-B&W thermal-hydraulics code input decks developed for a large break loss-of-coolant accident (LBLOCA) analysis. In the second example, AREVA NP failed to evaluate the extent of condition for the programmatic issue of open design change requests (DCRs) that were suspended when work was delayed in 2010 and not identified as needing to be completed to support continuation of the DC application.

Attachment A to this letter addresses the reason for the violation, corrective steps that have been taken and the results achieved, corrective steps that will be taken, and the date when full compliance will be achieved. Attachment B identifies the commitments being made by AREVA NP to the NRC.

If you have any questions related to this submittal, please contact Ms. Gayle Elliott, Product Licensing Manager, at 434-832-3347 or via e-mail at [Gayle.Elliott@areva.com](mailto:Gayle.Elliott@areva.com).

Sincerely,

A handwritten signature in black ink, appearing to read 'Pedro Salas', with a large, sweeping flourish underneath.

Pedro Salas, Director  
Regulatory Affairs  
AREVA NP Inc.

**AREVA NP INC.**

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IEDI  
NRO

cc: Kerri A. Kavanagh, Chief  
Quality Assurance Vendor Inspection Branch  
Division of Construction Inspection and Operational Programs  
Office of New Reactors

Enclosures:

1. Attachment A, "Inspection Report Number 05200020/2013-203 Reply to Notice of Violation"
2. Attachment B, "Table of AREVA NP Commitments"

## Attachment A

### Inspection Report Number 05200020/2013-203 Reply to Notice of Violation

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#### I. Restatement of Notice of Violation 05200020/2013-203

Criterion XVI, "Corrective Action," of Appendix B, "Quality Assurance Criteria for Nuclear Power Plants and Fuel Reprocessing Plants," to Title 10 of the Code of Federal Regulations (10 CFR) Part 50, "Domestic Licensing of Production and Utilization Facilities," states, in part, that "Measures shall be established to assure that conditions adverse to quality, such as failures, malfunctions, deficiencies, deviations, defective material and equipment, and nonconformances are promptly identified and corrected."

Section 16.0, "Corrective Action," of AREVA NP Inc.'s ANP-10266, Revision 4, "AREVA NP, Inc., Quality Assurance Plan (QAP) for Design Certification of the U.S. EPR Topical Report," dated December 13, 2012, subsection 16.2, "General," states in part that, "procedures are established by AREVA NP Inc. to ensure prompt identification and correction of conditions adverse to quality, such as failures, malfunctions, deficiencies, deviations, defective material and equipment, and nonconformances during the design, procurement, fabrication, inspection and testing of items."

Contrary to the above, as of September 12, 2013, AREVA NP Inc. failed to adequately implement measures to assure that conditions adverse to quality, such as failures, malfunctions, deficiencies, deviations, defective material and equipment, and nonconformances are promptly identified and corrected in two examples. In the first example, AREVA NP Inc. failed to evaluate the extent of condition for the input errors in the RELAP5/MOD2-B&W input decks developed for a large break loss-of-coolant accident (LBLOCA) analysis. In the second example, AREVA NP Inc. failed to evaluate the extent of condition for the programmatic issue of open design change requests (DCRs) that were suspended when work was delayed in 2010 and not identified as needing to be completed to support restart of the Design Certification application.

This issue has been identified as Violation 05200020/2013-203-01.

#### II. AREVA NP's Reply to the Notice of Violation

AREVA NP performed an Apparent Cause Evaluation to determine the reason for Violation 05200020/2013-203-01.

##### (1) Reason for the Violation

The Apparent Cause for the violation was a failure of AREVA NP's corrective action screening team to appropriately identify potential programmatic impacts during the condition report (CR) screening process. Human performance factors, including failure to fully adhere to Administrative Procedure 1717-06, "Corrective Action Program – WebCAP," and inattention to detail, resulted in failure to perform an extent of condition review for each of the issues mentioned in the violation. Specifically, the CR screening team focused on the technical or process problems related

specifically to these issues, and the consideration of an extent of condition review was overlooked.

(2) Corrective Steps that Have Been Taken and the Results Achieved

AREVA NP has taken the following actions to correct these conditions and achieve compliance:

1. An extent of condition review was performed to ensure accurate traceability of required DCRs and CRs that remain to be completed in support of the DC application. The U.S. EPR DC project schedule was updated to incorporate and track significant DCRs and CRs.
2. A review was performed to identify whether code restrictions based on allowed column width for code input existed for other software used by AREVA NP. Engineering applications were investigated, and a list of potentially affected codes was developed. Individual reviews of these codes are ongoing and are being performed by the appropriate personnel. An error notice was assigned to the codes identified as being subject to input restrictions, as well as to codes with possible limitations that have not yet been reviewed by the appropriate personnel. These error notices will alert all users to potential limitations of the code to minimize human performance errors while mitigating actions are being developed.

(3) Corrective Steps That Will Be Taken

1. An FSAR Chapter Freeze procedure will be implemented to capture the finalization of licensing basis information for the U.S. EPR DC. This procedure will include review of CRs that are potentially relevant to a particular FSAR chapter to ensure they are completed or closed, and a review of all approved DCRs to ensure they are fully incorporated by the FSAR change process into the affected FSAR chapter.
2. Training will be provided to AREVA NP's Engineering and Projects organization and to those individuals directly engaged in the U.S. EPR DC screening process for future CRs. Emphasis will be placed on extent of condition considerations during the significance level classification process of AREVA NP's Corrective Action Program.
3. Each code that was identified as having a potential input restriction will be investigated. AREVA NP will identify the reasons for the code limitations and possible impacts if bounds are not observed. Subsequently, the identified input errors will be corrected.
4. AREVA NP will evaluate process and programmatic improvements to minimize the potential for human performance errors. These improvements will be implemented as appropriate so that conditions adverse to quality are promptly identified and corrected.

(4) Date When Full Compliance Will be Achieved

All corrective actions will be completed by May 16, 2014.

**Attachment B**

Table of AREVA NP Commitments

<b>Action Number</b>	<b>Action</b>	<b>Completion Date</b>
2013-203-1	An FSAR Chapter Freeze procedure will be implemented to capture the finalization of licensing basis information for the U.S. EPR DC. This procedure will include review of CRs that are potentially relevant to the particular FSAR chapter to ensure they are completed or closed, and a review of all approved DCRs to ensure they are fully incorporated by the FSAR change process into the affected FSAR chapter.	February 28, 2014
2013-203-2	Training will be provided to AREVA NP's Engineering and Projects organization and to those individuals directly engaged in the U.S. EPR DC screening process for future CRs. Emphasis will be placed on extent of condition considerations during the significance level classification process of AREVA NP's Corrective Action Program.	February 28, 2014
2013-203-3	Each code that was identified as having a potential input restriction will be investigated. AREVA NP will identify the reasons for the code limitations and possible impacts if bounds are not observed. Subsequently, the identified input errors will be corrected.	May 16, 2014
2013-203-4	AREVA NP will evaluate process and programmatic improvements to minimize the potential for human performance errors. These improvements will be implemented as appropriate so that conditions adverse to quality are promptly identified and corrected.	February 28, 2014