

March 31, 2014

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

FROM: William (Billy) Gleaves, Sr. Project Manager /RA/  
Licensing Branch 1  
Division of New Reactor Licensing  
Office of New Reactors

SUBJECT: SUMMARY OF FEBRUARY 25, 2014, PUBLIC MEETING WITH  
AREVA NP, INC., TO DISCUSS U.S. EPR DESIGN CERTIFICATION  
"GROUP B & C" CLOSURE SCHEDULE

On Tuesday, February 25, 2014, the U.S. Nuclear Regulatory Commission (NRC) held a Category I public meeting with AREVA, NP, Inc., in the form of a public meeting supported by a public teleconference bridge line. The purpose of this public meeting was to discuss with AREVA the closure of certain chapters of those designated as "Group B and Group C" (with Group B chapters being Chapters 4, 6, 9, 15, and 18, and Group C chapters being Chapters 1, 3, 7, 11, 12, 14, 16, 19, and 20) of the U.S. EPR Design Certification (DC) application Final Safety Analysis Report (FSAR). The titles for the Group B chapters are as follows: Chapter 4, "Reactor"; Chapter 6, "Engineered Safety Features"; Chapter 9, "Auxiliary Systems"; Chapter 15, "Transient and Accident Analyses"; and Chapter 18, "Human Factors Engineering." Group C chapter titles are as follows: Chapter 1, "Introduction and General Description of the Plant"; Chapter 3, "Design of Structures, Components, Equipment and Systems"; Chapter 7, "Instrumentation and Controls" (I&C); Chapter 14, "Verification Programs" (including ITAAC); Chapter 16, "Technical Specifications" (TS); and Chapter 19, "Probabilistic Risk Assessment and Severe Accident" (PRA).

This public meeting with AREVA was a follow-up to the October 24, November 15, November 21, December 17, 2013, and January 30, 2014, public meetings regarding Groups A, B, and C closure issues and schedule. The public notice for this meeting is available through both the NRC website under public meetings and through the Agencywide Documents and Management System (ADAMS) at Accession No. ML14038A334. The meeting notice included the meeting agenda. This meeting and teleconference was attended by 9 AREVA staff, representatives, or U.S. EPR combined operating license (COL) applicants, and 21 NRC staff. Two members of the public joined the meeting and did not offer comments. A list of the meeting attendees is included in Enclosure 1 to this summary.

The meeting started at 9:00 A.M. in Room T-10A1, at the NRC headquarters complex, beginning with the remarks by the NRC Senior Project Manager (PM), Billy Gleaves, followed by comments by the NRC Branch Chief for Licensing Branch 1, John Segala, which was followed by AREVA's presentations. Mr. Segala's comments were with regard to progress on Chapters 5 and 8 (part of Group A) for closure of the review of the U.S. EPR FSAR. The NRO's Safe

Closure Plan includes Group A chapters for closure in FY2014. By closure, the Office of New Reactors (NRO) intends that the NRC's Final Safety Evaluation Reports (FSER) for these chapters will be issued in FY2014. AREVA had identified chapters for inclusion into Group A because of their confidence in completion to support Final Safety Evaluation Report (FSER) issuance in FY2014. However, during the process to close the open items (OIs) associated with Chapters 5 and 8, issues have been identified that require additional work before AREVA can complete these FSAR chapters. For example, for Chapter 5, the challenge to the NRC staff review is understanding the design changes AREVA is planning that will ultimately affect the FSAR and the NRC staff's FSER. The NRC staff requests AREVA to include in its planning, the need for a public meeting on the proposed changes to Chapter 5. With regard to FSAR Chapter 8, in February 2014, the NRC staff discussed with AREVA inconsistencies, and the need to revise the FSAR. The staff notes that AREVA must provide markups to the FSAR as soon as possible, although the NRC staff now understands those markups may be 2 weeks later than estimated. More recently, AREVA identified a "safe shutdown" issue that may result in additional changes. The NRC staff encouraged AREVA to identify issues in the FSAR and also cautioned AREVA to be aware of the impact on delays to achieving the CY2014 goals and to assign priorities as appropriate.

AREVA responded that it is committed to this closure process. Their identification of issues is a result of it following procedures developed specifically for this process and has resulted in the early identification of issues for correction. AREVA understands that the NRC staff needs more information regarding the issues identified by AREVA and suggested that regular weekly calls be used to provide status and additional information, as it becomes available. In addition, AREVA stated that its "closure plan" letter regarding the process for completing chapters in Groups B and C is forthcoming. With regard to the current grouping of chapters within Groups B and C, AREVA stated that they anticipate progress such that, in the future, chapters may have to be moved between groups, for example, it may be necessary to move Chapter 20 on Fukushima-Daichi related issues from Group C to Group B.

The Lead Project Manager, George Wunder, suggested that the NRC staff update the NRC's public website status and schedule for the U.S. EPR Design Certification application based on information submitted to date for chapters in Group A, to which AREVA agreed.

AREVA's presentation of the meeting slides (referenced in Attachment 2) began at 9:30 a.m.

AREVA stated that the fees for NRC staff for the FSAR review are a very significant part of AREVA's budget for the project. AREVA asked that the NRC staff ensure that NRC's planned expenditure of resources aligns with AREVA's plans as outlined in the current and future closure plan letters. The NRC staff stated that it will be closing chargeable task codes where the review is not required. The NRC staff stated that, in order to comply with AREVA's request to suspend review in certain chapters, a temporary closure process will be employed whereby current Safety Evaluation Reports (SERs) will be reviewed, updated, and notated in such a way that when the chapter is reactivated, the reviewer will know the status of the review and that what is left to resolve. The NRC staff committed to collect this information from Branch Chiefs and relay to AREVA as soon as practicable.

AREVA stated that the latest revision to the FSAR, which is Revision 6, is due to NRC on April 3, 2014. However, that Revision 6 will not include a Revision 6 to Chapter 10 due to

recent NRC staff Requests for Additional Information (RAI). AREVA plans to submit a "redline-strikeout version of the Chapter 10 FSAR in CY2014 with a partial submittal for the Final Revision 6, FSAR Chapter 10 in CY2015.

AREVA requested that the NRC staff collect information on NRC's schedule for completion of SERs for Group A, including any resource limitations, so that this information can be considered in AREVA's plans for completion of Group A FSAR chapters.

Starting on Slide 10, the U.S. EPR DC FSAR Chapter 3, in its slides, AREVA identified that this chapter activities planned for 2014 are review of the seismic time-history methodology for structural critical sections and completion of audits on critical sections, fuel rack design, and design specifications. AREVA requested a clarification conference call for draft RAI 629, Question 03.07.02-80. However, the NRC Chapter PM noted that this call has been completed. The Branch Chief for the Seismic/Structural review, Jim Xu, noted that with regard to the Critical Sections Audit for 26 sections, a delay so that the completion of all critical section designs are complete before any of the NRC staff audit may delay the overall review.

AREVA took an action to lay-out its expectations for all NRC staff reviews and dates to apply resources for its upcoming FSAR Revision 6 submittal.

In its slides for U.S. EPR DC FSAR Chapter 7, AREVA identified major RAIs and FSAR changes. AREVA stated that design work on digital instrumentation and controls (I&C) system to be described in Chapter 7 will not be completed until second Quarter of CY2016.

With regard to RAI 505, Question 07.01-33, the NRC staff took an action to confirm that an audit of the incore trip setpoint report ANP-10287P was necessary, and whether a revision to the RAIs is possible.

With regard to FSAR Chapter 18, related to human factors engineering, AREVA noted that it plans to put development of this chapter on hold until resolution of digital I&C issues from FSAR Chapter 7. The NRC staff noted that it provided feedback to AREVA on a November 21, 2013, meeting on Human Factors Engineering.

In its slides for U.S. EPR DC FSAR Chapter 4 related to nuclear fuel design, AREVA identified major RAIs and FSAR changes. With regard to the outstanding open issue of the reactor guide tube testing, associated with RAI 600, AREVA stated that they have planned to perform those tests in April 2014 in Richland, WA. AREVA plans to submit its response to RAI 600 following completion and evaluation of those tests and expects submittal in the fourth Quarter CY2014. With regard to Seismic Reconciliation as it relates to the Fuel Seismic review, the NRC staff stated that as long as Chapter 4 is expected to be submitted before Chapter 3, a reconciliation letter for Chapter 3 is expected from AREVA.

For the U.S. EPR DC FSAR Chapter 6, the NRC staff and AREVA discussed the status of various Chapter 6 RAIs. AREVA stated that it plans to submit completed RAI responses and FSAR Chapter 6 in CY2016.

In its slides for the U.S. EPR DC FSAR Chapter 15, related to transient and accident analyses, AREVA identified major RAIs and FSAR changes. The NRC staff provided status updates to the RAIs as available. During this discussion the NRC staff took actions to do the following: (1) confirm NRC staff completion of RAI 582, Question 15.08-1, and anticipated transient

without scram (ATWS) review of information in the AREVA electronic reading room; (2) confirm that RAI 17, Question 15.00.03-1, was closed when RAI 627 was issued; (3) confirm to AREVA that the only ACRS Main Committee letters to the commission are on the U.S. EPR DC application, aircraft impact assessments, and long term recirculation

With regard to the Generic Safety Issue (GSI)-191 for reactor recirculation sumps, AREVA plans to address the Advisory Committee on Reactor Safeguards (ACRS) questions from the May 2013 meeting sometime in late 2015 or early 2016.

For U.S. EPR DC FSAR Chapter 19, the NRC staff and AREVA discussed the status of various Chapter 19 RAIs and an audit. AREVA stated that it plans to submit completed RAI responses and FSAR Chapter 19 in the second Quarter of CY2016. The meeting participants discussed the analysis of mid-loop operations, during reactor refueling.

The NRC staff took an action to evaluate previous design certifications for its evaluations of mid-loop operations for other design certifications. AREVA took an action to provide FSAR markups for its response to RAI 579, Question 19.03.06.06 before the next planned conference call. In addition, AREVA was to identify by the end of the week, products and timelines to address this mid-loop review issue in Chapters 5 and 19 with FSAR markups. An additional action for the NRC staff was for the Project Manager to schedule a short follow-up public meeting on this issue closely following the conference call. The Director of the NRO stated that this issue is an "office priority" and is a "closure priority."

On an administrative topic, AREVA took an action to add all Chapter 19 RAIs to its Chapter 19 Closure Plan.

Before the break for lunch, the NRC staff received comments from the public. The questions pertained to the process for issuing and making public, RAIs for the U.S. EPR Project. The NRC action was to send the commenter a pamphlet describing the entire Part 52 process. Lunch was from 12:05 P.M. to 12:55 P.M.

For the U.S. EPR DC FSAR Chapter 20, a chapter intended to capture the review of issues not given in the Final Safety Evaluation Report (FSER), such addressing the of Fukushima-Daichi related issues, the NRC staff and AREVA discussed the status of related RAIs. AREVA stated that it plans to submit completed RAI responses and FSAR information by fourth Quarter of CY2014, including three planned audits and the planned March 14, 2014, meeting. The three audits are planned to address the following:

1. AREVA "time to boil" analysis
2. main control room heat up analysis, and 3) S-RELAP5 code audit.

AREVA stated that it will be ready to support the Main Control Room (MCR) audit in the second Quarter of CY2014. In addition, AREVA stated that it plans for a May 19, 2014, meeting to discuss design changes including the elimination of provisions for venting of the containment building

For the U.S. EPR DC FSAR Chapter 9, the NRC staff and AREVA discussed the status of various Chapter 9 RAIs. AREVA stated that it plans to submit completed RAI responses and

FSAR Chapter 9 by the third Quarter of CY2015. This date includes the completion of an NRC audit of the Spent Fuel Cask Transfer Facility.

For the U.S. EPR DC FSAR Chapter 11, the NRC staff and AREVA discussed the status of various Chapter 11 RAIs. AREVA stated that it plans to submit completed RAI responses and FSAR Chapter 11 by the fourth Quarter of CY2015. There is a meeting planned for March 5, 2014, on RAI 625, Question 11.05-29 on Radioactive Waste Management.

For the U.S. EPR DC FSAR Chapter 12, the NRC staff and AREVA discussed the status of various Chapter 12 RAIs. AREVA stated that it plans to submit completed RAI responses and FSAR Chapter 12 by the fourth Quarter of CY2015. AREVA stated that it had no plans to work on issues related to Chapter 12 during CY 2014.

For the U.S. EPR DC FSAR Chapter 01, the NRC staff and AREVA discussed the status of the Chapter. AREVA stated that it plans to submit completed RAI responses and FSAR Chapter 01 by the second Quarter of CY2016. Due to the content of Chapter 01, it is planned to be completed just prior to the conclusion of the review.

For the U.S. EPR DC FSAR Chapter 14, the NRC staff and AREVA discussed the status of various Chapter 14 RAIs. AREVA stated that it plans to submit completed RAI responses and FSAR Chapter 14 by the third Quarter of CY2016. AREVA plans for no NRC interactions in CY 2014.

For the U.S. EPR DC FSAR Chapter 16, the NRC staff and AREVA discussed the status of various Chapter 16 RAIs. AREVA stated that it plans to submit completed RAI responses and FSAR Chapter 16 by the third Quarter of CY2016. The NRC action from this discussion was to provide two relevant audit reports by email to AREVA.

Following the completion of the meeting discussion agenda, the NRC staff requested questions or comments from the public. Hearing no further questions, the meeting was adjourned at 1:50 P.M.

Docket No.: 052-0020

cc: See next page

FSAR Chapter 9 by the third Quarter of CY2015. This date includes the completion of an NRC audit of the Spent Fuel Cask Transfer Facility.

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For the U.S. EPR DC FSAR Chapter 16, the NRC staff and AREVA discussed the status of various Chapter 16 RAIs. AREVA stated that it plans to submit completed RAI responses and FSAR Chapter 16 by the third Quarter of CY2016. The NRC action from this discussion was to provide two relevant audit reports by email to AREVA.

Following the completion of the meeting discussion agenda, the NRC staff requested questions or comments from the public. Hearing no further questions, the meeting was adjourned at 1:50 P.M.

Docket No.: 052-0020

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**ADAMS Accession No.: ML14065A394**

**\*via email**

**NRC-001**

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<b>NAME</b>	WGleaves	JMcLellan	GWunder
<b>DATE</b>	03/14/2014	03/18/2014	03/31/2014

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**U.S. Nuclear Regulatory Commission**  
**Public Meeting, February 25, 2014**  
**AREVA NP Inc. To Discuss U.S. EPR**  
**Design Certification Closure – Group B & C**  
**9:00 a.m. – 1:50 p.m.**  
**U.S. Nuclear Regulatory Commission**

<b>Name</b>	<b>Organization</b>
Billy Gleaves	U.S. NRC/NRO/DNRL/LB1
John Segala	U.S. NRC/NRO/DNRL/LB1
George Wunder	U.S. NRC/NRO/DNRL/LB1
Michael Miernicki	U.S. NRC/NRO/DNRL/LB1
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Lynn Mrowca	U.S. NRC/NRO/DSRA/SPRA
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Pedro Salas	AREVA NP, Inc.
Nathan Hottle	AREVA NP, Inc.
Rocky Sgarro	PPL
John Leighliter	AREVA NP, Inc.
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Antonio Dias	U.S. NRC/NRO/DSRA/BPFP

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Mike Eudy	U.S. NRC/NRO/DNRL/LB1
Mark Finley	UniStar
Ray Lewis	AREVA NP, Inc.
Paul Pieringer	NRC
*S.K. Mitra	NRC
*Ruth Thomas	Self
*Ryan Sprengel	Mitsubishi (MHSI)
Jimmy Xu	U.S. NRC/NRO
Mike McCoppin	U.S. NRC/NRO/DSRA/RPAC

\*Attended by Conference Bridge.



AREVA slide presentation for February 25, 2014, Meeting  
ADAMS Number: ML14055A155

Enclosure 2

DC AREVA - EPR Mailing List  
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(Revised 03/24/2014)

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