October 14, 2009

APPLICANTS: AREVA NP, INC.

PROJECT: U.S. EPR

SUBJECT: SUMMARY OF AUGUST 6, 2009, PUBLIC MEETING WITH AREVA NP, INC., TO DISCUSS RESOLUTION OF REQUESTS FOR ADDITIONAL INFORMATION RELATED TO CHAPTER 19 OF THE U.S. EPR FSAR

On August 6, 2009, a Category 1 public meeting was held between the U.S. Nuclear Regulatory Commission (NRC) staff and representatives of AREVA NP, Inc. (AREVA). The meeting was held at the U.S. Nuclear Regulatory Commission Office at 12300 Twinbrook Parkway, Rockville, Maryland. The purpose of this meeting was to discuss with AREVA resolution of Requests for Additional Information (RAIs) on Probabilistic Risk Assessment (PRA), Severe Accident (SA), and Reliability Assurance Program (RAP) related to Chapter 19 (including Sections 17.4 and 17.6), Probabilistic Risk Assessment and Severe Accident Evaluation, of the U.S. EPR Final Safety Analysis Report (FSAR) contained in the AREVA Design Certification Application. The meeting notice with the agenda can be found in the Agencywide Documents Access and Management System (ADAMS) Accession No. ML091910272. The agenda included designated times for public interactions with the staff. Enclosure 1 lists the meeting attendees, which includes members of the public.

The meeting started at 9:00 a.m. (Eastern Time). After the opening remarks and introductions of the attendees, meeting ground rules and logistics were announced. The staff then briefly reviewed the meeting agenda. The staff began the business portion of the meeting with an introduction on the review of Chapter 19 of the U.S. EPR FSAR, the need for RAIs, and the importance of technically correct and complete responses to the RAIs in a timely manner. The staff emphasized that the objective of the aforementioned is to conduct a thorough review to identify and communicate to the applicant the potential issues and concerns, the resolution of which will assist the staff in its determination of findings related to public health and safety, and minimize the number of Open Items (OIs) to be presented to the Advisory Committee on Reactor Safeguards (ACRS). The staff reminded AREVA that responses to RAIs received after September 1, 2009, would likely not have the opportunity for complete staff review and, therefore, the staff's technical evaluation and conclusion, based on these responses, would not be incorporated in the Safety Evaluation Report (SER) that will be provided to ACRS; consequently, those items affected by these responses will remain as OIs.

The staff informed AREVA that on Chapter 19, there were 28 RAIs containing 367 questions, 23 of which were unanswered to date, and on Sections 17.4 and 17.6, there were 3 and 2 RAIs containing 20 and 2 questions, respectively. The staff added that two more draft RAIs containing one question each were in progress. The staff went into more specifics and provided the following:

> For FSAR Section 19.1.4.1 "Level 1 Internal Events," there are six unanswered questions from RAI 227, Questions 19-284, 19-287, 19-292 through 19-295, primarily related to digital instrumentation and control (I&C), and two from RAI 257, Questions 19-316 and 19-318; AREVA has committed to respond to the first six questions by

September 18, 2009, and to Questions 19-316 and 19-318 by August 17, 2009. The staff further mentioned that there was one unresolved issue involving the digital I&C topical report ANP-10273P that might impact PRA; currently, this report is in review by the staff under FSAR Chapter 7.

For FSAR Section 19.1.4.2 “Level 2 Internal Events,” there are eight unanswered questions from RAI 262, Questions 19-319 through 19-326, related to AREVA MAAP 4.0.7 calculations for use in MELCOR confirmatory assessment task. AREVA’s response is expected by August 31, 2009. In addition, there are four unresolved issues from the response to RAI 133, Questions 19-230, 19-232, 19-233 and 19-240, related to Severe Accident Evaluation. The staff informed AREVA that the unresolved issues related to Questions 19-230, 19-233 and 19-240 might lead to follow-up RAIs, and the response to Question 19-232c was still being evaluated. No timeline has been established for the resolution of these issues, and some of these may remain as OIs.

At the conclusion of the above presentation and discussions, the public was given an opportunity to interact with the NRC staff. There were no formal comments or questions from members of the public. The staff continued as follows:

For FSAR Section 19.1.5 “External Events,” there are two unanswered questions: one is RAI 234, Question 19-304 involving seismic margin analysis, and the other (being finalized) involving reactor coolant pump fire. The response to Question 19-304 is expected by October 30, 2009; however, a response date for the question related to reactor coolant pump fire has not been established yet, because the question has not been issued in final form. In addition, there were a few unresolved issues related to seismic hazard analysis, which would probably be captured as a COL Action Item.

For FSAR Section 19.1.6.1 “Level 1 Shutdown,” the staff informed that there were no additional unanswered questions or unresolved issues, but that some parts of RAI 257, Question 19-316 (related to 19.1.4.1) would apply to the shutdown PRA, and a response is expected by August 15, 2009.

For FSAR Section 19.1.6.3 “Level 2 Shutdown,” there were two unanswered questions, one from RAI 227 (Question 19-298) and the other from RAI 257 (Question 19-317), which were related to the maintenance of passive autocatalytic recombiners, and venting during mid-loop, respectively. A response for the first question is expected by August 28, 2009, and for the second, by August 17, 2009.

For FSAR Section 19.1 “Miscellaneous,” there are three unresolved issues in 19.1.2.4: Questions 19-164 (RAI 26), 19-247 (RAI 138), and 19-279 (RAI 197) have been issued to seek additional information related to the first issue which involves thermal barrier cooling design change; Questions 19-274 (RAI 197), 19-296 (RAI 227) to seek additional information related to the second issue which involves emergency feedwater system design change; and Question 19-297 (RAI 227) to seek additional information related to the third issue which involves potential future design changes. The staff asked how the potential future design changes would be captured in the PRA. The staff also added that AREVA has committed in its U.S. EPR Design Certification application to maintain and update PRA consistent with the PRA standard and Regulatory Guide (RG) 1.200. AREVA will look into it; however, AREVA informed that if the potential design changes do not have significant impact, then it would not update the PRA.

At the conclusion of the above presentation and discussions, the public was given an opportunity to interact with the NRC staff. A member of the public asked the staff whether there were regulatory requirements for updating PRA based on future design changes. The staff reiterated that there were no regulatory requirements; however, according to the Standard Review Plan (SRP), the applicant needs to address PRA maintenance in the application.

Following the lunch break, the discussion resumed and proceeded in line with the agenda. The staff added,

> For FSAR Section 19.2 "Severe Accidents," there were four unanswered questions: Questions 19-305 and 19-306 from RAI 234 involving containment performance, and Questions 19-312 and 19-313 from RAI 236 involving stabilized ZrO_2 thermo-mechanical behavior, and severe accident mitigation design alternatives (SAMDA). A response to the two questions from RAI 234 is expected by October 30, 2009, and a response to the two questions from RAI 236 by September 11, 2009. In addition, there is one unresolved issue related to Question 19-243 from RAI 133 involving the technical basis for severe accident management. The response to that question is still being reviewed by the staff. When the staff mentioned about the possibility of additional clarifying questions that could result from this review, AREVA suggested a possible audit, instead of issuing additional RAIs, to further clarify staff's questions.
>
> For FSAR Section 17.4 "Reliability Assurance Program," there was one unanswered question, which relates to the exclusion of fire water distribution system, sprinkler/deluge system, and core melt stabilization system from the scope of the RAP. A response date has not yet been established.

Finally, the staff summarized that nearly 400 questions have been asked, out of which 25 remained unanswered. There were ten unresolved issues. The staff also informed that it was working to resolve as many issues as possible before Phase 2 of the review ends.

At the conclusion of the above presentation and discussions, the public was given an opportunity to interact with the NRC staff. There were no formal comments or questions from members of the public.

The meeting was formally adjourned at 1:44 p.m. (Eastern Time).

Meeting slides are included in Enclosure 2 to this meeting summary, and can be found in ADAMS (Accession Number ML092180039).

FOLLOW-UP ITEMS

1) AREVA requested clarification on a pressure of 175 psi cited in RAI 257, Question 19-317. The staff agreed to revisit the RAI and its context, and respond to AREVA;

2) Staff to consider AREVA's suggestion to have an audit in early September for clarifications on certain unresolved issues, which could help the staff to possibly close some of those issues. The staff will inform AREVA on a decision.

Questions regarding this meeting can be directed to Prosanta Chowdhury at 301-415-1647 or via email at Prosanta.Chowdhury@nrc.gov.

Sincerely,

/RA/

Prosanta Chowdhury, Project Manager
US EPR Projects Branch
Division of New Reactor Licensing
Office of New Reactors

Docket No.: 52-020

Enclosures:
1. List of Attendees
2. Meeting Slides (ML092180039)

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ADAMS ACCESSION Number: ML092370586 (Pkg) ML092370587 (Summary) NRO-002

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DATE	09/14/09	09/12/09	09/14/09	10/14/09	

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Meeting with AREVA NP to Discuss Resolution of Requests for Additional Information Related to Chapter 19 of the U.S. EPR FSAR
August 6, 2009

Attendance Lists

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Theresa Clark	U.S. NRC
Lynn Mrowca	U.S. NRC
Hanh Phan	U.S. NRC
Ed Fuller	U.S. NRC
Don Dube	U.S. NRC
Florian Jansen	U.S. NRC/ Foreign Assignee
Goutam Bagchi	U.S. NRC
Bret Tegeler	U.S. NRC
Getachew Tesfaye	U.S. NRC/ by phone
Mohsein Khatib-Rahbar	ERI/ NRC Contractor
Roy Karimi	ERI/ NRC Contractor
Zhe Ynan	ERI/ NRC Contractor
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