

July 13, 2015

Ms. Jill S. Monahan, Manager  
Specialized Seismic Option Licensing  
1000 Westinghouse Drive  
Cranberry Township, PA 16066

SUBJECT: PRE-SUBMITTAL AUDIT PLAN FOR REVIEW OF AP1000 SPECIALIZED  
SEISMIC OPTION

Dear Ms. Monahan:

The U.S. Nuclear Regulatory Commission (NRC) staff has prepared a pre-submittal audit plan related to the review of the AP1000® specialized seismic option. The audit plan describes the scope and purpose of the audit, identifies the audit team, and describes the documents required by the NRC staff. The audit plan is enclosed.

The audit will take place at the Westinghouse Rockville Office: 11333 Woodglen Drive, Suite 202, Rockville, MD 20852, on Wednesday, July 15, 2015 and again on Tuesday/Wednesday, July 21-22, 2015.

If you have any questions, please contact the Project Manager, Bruce Bovol, at (301) 415-6715 or [Bruce.Bovol@nrc.gov](mailto:Bruce.Bovol@nrc.gov).

Sincerely,

**/RA/**

Paul Kallan, Acting Chief  
Licensing Branch 4  
Division of New Reactor Licensing  
Office of New Reactors

Project No. 0813

Enclosure:  
As stated

cc: See next page

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NRO-002

OFFICE	DNRL/LB4:LA	DNRL/LB4:LA	DNRL/LB4:BC (A)
NAME	BBavol	RButler (ARedden for)	PKallan
DATE	07/10/15	07/09/15	07/13/15

**OFFICIAL RECORD COPY**

**PRE-SUBMITTAL AUDIT PLAN FOR REVIEW  
OF AP1000 SPECIALIZED SEISMIC OPTION  
JULY 15, 2015 & JULY 21-22, 2015**

**LOCATION:**

This pre-submittal audit will be conducted in two phases and in one location, as defined below:

Phase1:

July 15, 2015  
Westinghouse Office in Rockville, MD

Phase 2:

July 21-22, 2015  
Westinghouse Office in Rockville, MD

**BACKGROUND**

A Specialized Seismic Option for AP1000 standard design is being developed by Westinghouse Electric Company for use in locations with seismic levels typically seen in the west of Mississippi River portions of the western United States and certain other countries. As expressed by Westinghouse, the purpose of the Specialized Seismic Option will be to extend the range of applicability of the AP1000 standard design, by including a different seismic spectrum into the AP1000 plant design. As such, Westinghouse plans to submit an Option topical report on September 2015 addressing the Specialized Seismic Option for staff review and approval. Westinghouse anticipates that this will allow future combined license (COL) applicants with appropriate site conditions to reference the AP1000 Standard Design along with the specialized seismic option in COL applications. This submittal is not applicable to current AP1000 licensees or COL applicants.

In anticipation of the September 2015 Option topical report submittal, Westinghouse has requested a pre-submittal audit of the available technical information supporting the Specialized Seismic Option topical report. The staff plans to review the available technical information and provide feedback accordingly. A determination whether the proposed Option topical report will be acceptable or not is subject to the staff review of the officially submitted Option topical report.

**REGULATORY AUDIT BASES**

- 10 CFR Part 50, Appendix A, General Design Criterion 2, "Design Bases for Protection Against Natural Phenomena"
- 10 CFR Part 50, Appendix S, "Earthquake Engineering Criteria for Nuclear Power Plants"
- 10 CFR 52.47(a)(27) and SECY-93-087

Enclosure

## **REGULATORY AUDIT SCOPE**

The pre-submittal audit team will review calculations and design information associated with the SSO topical report for the AP1000® plant. During Phase 1, the Nuclear Regulatory Commission (NRC) staff will perform an initial review of the available calculations and design information in preparation for the July 21-22, 2015, pre-submittal audit (i.e. Phase 2). The specific scope of this pre-submittal audit will include reviewing calculations and design information within the following review areas:

- Seismic Design Parameters and System Analysis
- Design of Seismic Category I Structures
- Seismic Margin Assessment
- Mechanical Systems and Components

## **INFORMATION AND OTHER MATERIAL NECESSARY FOR THE PRE-SUBMITTAL REGULATORY AUDIT**

The staff requires access to calculations and design information as well as knowledgeable personnel regarding the review areas identified under Section D above, pertaining to the SSO for the AP1000® plant.

## **PRE-SUBMITTAL AUDIT TEAM AND TEAM ASSIGNMENTS**

Jim Xu, Structural Engineering Branch Chief, NRO  
Alissa Neuhausen, Structural Engineer, NRO  
Jinsuo Nie, Structural Engineer, NRO  
Robert Roche, Structural Engineer, NRO  
Marieliz Vera, Structural Engineer, NRO  
George Wang, Structural Engineer, NRO  
Theresa Clark, Mechanical Engineering Branch Chief, NRO  
Tuan Le, Mechanical Engineer, NRO  
Bruce Baval, Project Manager, NRO

<b>Review Area</b>	<b>Reviewer Assignment</b>
Seismic Design Parameters and System Analysis	Jinsuo Nie, Robert Roche
Design of Seismic Category I Structures	Alissa Neuhausen, Marieliz Vera, George Wang
Seismic Margin Assessment	Jinsuo Nie, Robert Roche, Alissa Neuhausen
Mechanical Systems and Components	Tuan Le
Other Supporting Documentation	Alissa Neuhausen, Marieliz Vera, George Wang

## **SPECIAL REQUESTS**

Appropriate handling and protection of proprietary information shall be acknowledged and observed throughout the pre-submittal audit.

## **DELIVERABLES**

The pre-submittal audit team will issue a regulatory audit summary within 90 days after completing the audit. The pre-submittal audit will assist the NRC staff in the preparation for the acceptance review and subsequent review of the SSO topical report for the AP1000® plant.

DC Westinghouse - AP1000 Mailing List  
cc:

(Revised 05/12/2015)

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