

June 25, 2004

APPLICANT: Westinghouse Electric Company

PROJECT: AP1000 Standard Plant Design

SUBJECT: SUMMARY OF APRIL 13, 2004, MEETING WITH WESTINGHOUSE ELECTRIC COMPANY TO DISCUSS DIFFERENCES IN COMPUTER CODE PREDICTIONS OF AEROSOL REMOVAL COEFFICIENTS ASSOCIATED WITH THE AP1000 DESIGN CERTIFICATION REVIEW

On April 13, 2004, a closed meeting was held between the U.S. Nuclear Regulatory Commission (NRC), representatives of Westinghouse Electric Company (Westinghouse, the applicant), representatives of Polestar (Westinghouse's contractor), and representatives of Sandia National Laboratory (NRC's contractor), at NRC Headquarters in Rockville, MD. The purpose of this meeting was to identify the differences between Westinghouse's and NRC's calculation of the AP1000 aerosol removal coefficients. A list of meeting attendees is included as Attachment 1. Attachment 2 contains Westinghouse's handouts (ADAMS Accession Number ML041560212). A summary of the meeting is included below.

The applicant provided the NRC staff and their contractor with a detailed description of the inputs and assumptions used in their aerosol removal calculation. Westinghouse and the NRC focused the discussion on the inputs used in their codes (MAAP and MELCOR respectively). Two major differences in the assumptions used in the calculations were identified. In the early time phase of the double-ended guillotine direct vessel injection (DEDVI) line break accident (3BE-1), MAAP assumed the gap release occurred upon core uncover and MELCOR assumed the gap release occurred upon onset of fuel rod cladding oxidation. In the late time phase of the accident, MAAP assumed that the reactor vessel re-floods and MELCOR did not.

After concluding the discussions, the NRC staff and the applicant identified several action items to address the differences in the aerosol removal calculations. The NRC agreed to rerun the MELCOR calculations assuming re-flooding of the reactor vessel in the late time phase of the accident. The applicant agreed to perform a sensitivity study to analyze how the timing for gap release effects aerosol removal during the early time phase of the accident. The applicant also agreed to provide a breakdown of the natural aerosol removal processes (sedimentation, diffusio-phoresis, and thermophoresis) and total airborne concentration as a function of time. In addition, the applicant agreed to provide a revised response to Open Items 6.4-1, 15.3-1, and 15.3.6-1 which will include a detailed description of the 3BE-1 accident sequence with respect to the re-flooding of the reactor vessel.

Westinghouse handouts may be accessed through the ADAMS system. If you do not have access to ADAMS or if there are problems in accessing the handouts located in ADAMS, contact the NRC Public Document Room (PDR) reference staff at 1-800-397-4209, 301-415-4737 or by e-mail to pdrc@nrc.gov.

Please direct any inquiries concerning this meeting to Lauren M. Quinones-Navarro at 301-415-2007, or lnq@nrc.gov.

/RA/

Lauren Quinones, Project Manager
New Reactors Section
New, Research and Test Reactors Program
Division of Regulatory Improvement Programs
Office of Nuclear Reactor Regulation

Docket No. 52-006

Attachments: 1. List of attendees
2. Westinghouse Handout: AP1000 Thermal Hydraulic Input
(ADAMS Accession Number ML041560212)

cc w/ atts: See next page

Please direct any inquiries concerning this meeting to Lauren M. Quinones-Navarro at 301-415-2007, or lnq@nrc.gov.

/RA/

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ADAMS ACCESSION NUMBER: ML041610002

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DATE	6/9/2004	6/23/2004	6/24/2004

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Distribution for 04/13/04 Meeting Summary dated June 25, 2004

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**NRC CLOSED MEETING ATTENDANCE LIST
AP1000 DESIGN CERTIFICATION
DIFFERENCES IN COMPUTER CODE PREDICTIONS OF AEROSOL REMOVAL
COEFFICIENTS
APRIL 13, 2004**

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J. Colaccino	NRC
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AP 1000

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