

August 13, 2004

ORGANIZATION: ATOMIC ENERGY OF CANADA LIMITED (AECL)

SUBJECT: SUMMARY OF MEETING HELD ON JULY 20-22, 2004, TO DISCUSS
ACR-700 SEVERE ACCIDENTS

On July 20-22, 2004, Andrzej Drozd, Jay Lee, Robert Palla, and Laura Dudes from the Office of Nuclear Reactor Regulation (NRR) and Richard Lee and Sudhamay Basu from the Office of Nuclear Regulatory Research (RES) participated in a meeting with Atomic Energy of Canada Limited (AECL) at the Chalk River Laboratory (CRL) in Ontario, Canada to: (1) obtain information on AECL's research and development programs (existing and planned) to address severe accident issues for ACR-700; (2) obtain information on existing and planned experimental data in support of the ACR-700 license application; and (3) obtain information on the Modular Accident Analysis Package for CANDU (MAAP-CANDU) code as well as its ACR-700 version to understand the use of the code for severe accident analysis of ACR-700. For a list of meeting attendees refer to Enclosure 1.

AECL presented its research program on fuel/cladding, pressure tube and calandria tube performance under accident conditions. The current program relates to existing CANDU designs although much of the data can be used, according to AECL, to support the ACR-700 design. A limited number of confirmatory tests for ACR-700 is planned in the near future. The scope of the research program appears adequate to support the ACR-700 licensing activity. NRC will need to review the data from existing as well as planned experimental data bases. These data have not been provided yet, and AECL should be requested to provide these data in a timely manner so that the projected licensing schedule can be maintained. AECL also presented a "high level" overview of the MAAP-ACR700 (ACR-700 version of MAAP-CANDU) code. MAAP-ACR700 will be used to perform severe core damage accident analysis for ACR-700. It is anticipated that the MAAP-ACR700 version will be ready later in 2004 and its assessment will take another year after that. AECL agreed to schedule a separate meeting to address deterministic evaluations, ACR-700 severe accident design features and specific MAAP model details.

Additional details on the material covered in this meeting may be accessed through the ADAMS system under Accession No. ML042120214. 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 pdr@nrc.gov.

/RA/

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

Project No. 722

Enclosure: As stated

cc w/encls: See next page

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/RA/

James Kim, Project Manager
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Project No. 722

Enclosure: As stated

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ADAMS ACCESSION NUMBER: ML042230441-Package

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| DATE | 8/11/04 | 8/12/04 |

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Attendance List
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on Severe Accidents
July 20-22, 2004

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| Brock Sanderson | AECL |
| Mani Mathew | AECL |
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| Matt Krause | AECL |
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ACR-700

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