AECL
TECHNOLOGIES INC.

October 01, 2004

Our File: 108US-01321-021-001
108US-ACNU04-0025L
Your File: Project No. 722

U.S. Nuclear Regulatory Commission,
Document Control Desk,
Washington, D.C. 20555

Attention: Ms. B. Sosa
Project Manager, ACR

Reference:

1. Letter J. Kim to G. Archinoff, "NRC Staff Comments Comparing Information in 108US-03510-LS-001 Rev. 0 "Safety Analysis Code Validation Methodology" to DG-1120", August 30, 2004.

Re: **ACR-700: Transition Phase Activities and Objectives**

This letter identifies objectives AECL Technologies wishes to accomplish during the remainder of the ACR-700 Pre-Application Phase. The timeframe covers the Transition Phase from issuance of the Pre-Application Safety Assessment Report (PASAR) by the NRC and submittal of the Design Certification Application by AECL Technologies.

The submittal date for the Design Certification Application is currently under review, but it will be delayed from the previous target date of March 2005. The delay is due to a delay in receipt of a positive response from the Dept. of Energy (DOE) to Dominion Energy's proposal for the North Anna Combined License Project. Preparation of the Design Certification Application by AECLT is an integral part of the proposal; hence a delay in the start of the COL Project affects the production schedule for the Design Certification Application. A decision by DOE was originally expected in the May to July 2004 timeframe, however a decision is currently not expected until November 2004 at the earliest. Once DOE's position is known, the ACR-700 project schedule will be reviewed and a new submittal date for the application will be determined. Notwithstanding this delay, AECLT remains committed to proceeding with the Design Certification process and requests continued NRC engagement in the Pre-Application process.

The objectives of the Transition Phase are summarized as follows:

1. Resolve remaining issues on certain Focus Topics.
2. Resolve issues in other areas identified during Pre-Application and which are critical to achieving a successful Design Control Document (DCD).

D070

AECL
TECHNOLOGIES INC.

Table 1 lists the topics that will be the focus of the Transition Phase, along with the desired outcomes. The Focus Topics and desired outcomes may change depending on the content of the PASAR and further discussion with NRC staff.

Focus Topic 2, Evaluation Models, follows on from the previous Focus Topic 3, Computer Codes and Validation Adequacy. We believe it is important to reach a common understanding on the breadth and depth of information required by NRC staff with respect to Evaluation Models. Recent feedback from NRC staff (Reference 1) indicates the need for further dialog in this area.

We would like to discuss NRC deliverables for the transition phase. We anticipate submitting topical reports in support of the focus topics during the transition phase, and that NRC staff will issue Safety Evaluation Reports in the framework of the ACR-700 project. This will facilitate incorporating the topicals by reference in the DCD.

If you have any questions regarding this letter please contact me at (301) 332-9152.

Yours sincerely,

Glenn Archinoff
Manager ACR Licensing

Table 1 – Focus Topics for Transition Phase

1. **Reactor Physics Codes and Coolant Void Reactivity**
   Desired outcome: NRC staff accepts that AECL's plan for physics code enhancements is consistent with DCD requirements. NRC staff is kept apprised of progress in dealing with coolant void reactivity issues.
2. **Evaluation Models**
   Desired outcome: NRC staff agrees with AECL's proposed list of detailed evaluation models to be submitted, and accepts that the approach for submitting the required information for each evaluation model will meet regulatory requirements.
3. **Fuel**
   Desired outcome: NRC staff accepts AECL's proposed approach (document scope and schedule) for providing information to support the adequacy of the fuel design.
4. **Safety Analysis**
   Desired outcome: Based on presentations made by AECL, NRC staff becomes familiar with the scope, methodology, assumptions and results of analysis of the key design basis accidents and agrees the scope is consistent with what is required for a DCD.
5. **Thermal Hydraulics**
   Desired outcome: NRC staff accepts that the responses to RAIs address the issues satisfactorily. Additional outstanding issues are identified and either resolved, or there is an agreed path forward for their resolution.
6. **Class 1 Pressure Boundary**
   Desired outcome: NRC concludes that the proposed criteria for design of the Class 1 pressure boundaries provides an acceptable basis for review and acceptance, pending successful resolution of design interfaces with the surrounding plant SSCs that will be resolved following DCD submittal.