

Critical Issues

- The task of updating the construction license implies for the ARN the responsibility of reviewing, analysing and evaluating the present design and those modifications that the license holder could propose.

Critical Issues

- The preliminary analysis carried out by ARN establishes the following critical issues:
 - **1. Re-assessment of the Protocol of Understanding dated 1977, and particularly the concept of break related to the CNA II project.**
 - **2. Verification of the core present design, as concerns coupled neutronic and thermal hydraulic aspects, under normal operation conditions and foreseen accidental conditions.**

Critical Issues

- **3. As concerns the fuel element (FE), the idea is to consider it with a frozen design, unless the analysis of the core behaviour during a LOCA shows the need of re-designing it after concluding that no other alternative is available.**
- **4. Verification of the safety systems design (control rod shut down system, boron injection system, emergency cooling system, and boron dosing system) depending upon the concept of break update and its implications on the NPP nuclear safety.**
- **5. Relationship between NASA and ARN concerning the above mentioned critical issues.**

Initial actions taken by ARN

- **1. *Assessment of present trends about the concept of break as regards GRS and DOE-Battelle, in order to verify its impact on the nuclear safety of the present plant design.***
- **2. *Within the framework of the agreement NRC-CAMP, development of a PARCS/Relap5 version adapted to the CNA II core design together with Purdue University.***
- **3. *Feasibility study on the basis of a conceptual analysis of a FE re-design for CNA II with Purdue University, having in mind the study performed for Bruce NPP in Canada, and the experience acquired by GRS on the RBMK reactor at Ignalina, Lithuania.***
- **4. *Assessment of present trends on the basis of the emergency systems design together with GRS and DOE-Idaho National Laboratory.***

Initial actions taken by ARN

- **5. *The ARN suggests two communication levels to be implemented with the Design Authority:***

5.1 *the Regulatory Level and*

5.2 *the Technical level*

Initial actions taken by ARN

- ***In the regulatory level, communications shall be established using the formal tools already in force, and although they may involve technical considerations, they are essentially regulatory.***
- ***In the Technical level, an exchange of technical information between Regulator and Regulated concerning items to be agreed will be welcome. Each part will be able to give its point of view without this implying either a regulatory decision or an adoption of any of the points of view by both parts.***
- ***In order to implement this technical level in the case of the critical issues already mentioned, the appointment of two representatives is proposed, one from NASA and the other from ARN, who would enable the decision making towards the solution of the identified critical issues.***