

**Florida
Power**
CORPORATION

September 3, 1982
#3F-0982-04
File: 3-0-26

Mr. Harold R. Denton, Director
Office of Nuclear Reactor Regulation
U. S. Nuclear Regulatory Commission
Washington, DC 20555

Subject: Crystal River Unit 3
Docket No. 50-302
Operating License No. DPR-72
NUREG-0737, Item II.K.3.30
Revised Small Break Loss of Coolant Accident Methods
to Show Compliance With 10 CFR Part 50, Appendix K

Dear Mr. Denton:

This letter compliments the proposal made in our letter, dated August 13, 1982, by providing the details of a cooperative evaluation program with the NRC as requested in the July 20, 1982 meeting. The cooperative evaluation program is designed to satisfy the following objectives.

- o Provide the capability for rapid response to Staff concerns.
- o Support the near term approval by the Staff during their evaluation of our Small Break Loss-of-Coolant Accident (SB LOCA) Methods Program (NUREG-0737, Item II.K.3.30) so that we can provide a timely response to Item II.K.3.31 (Plant Specific Calculations to Show Compliance with 10 CFR Part 50.46).
- o Expand the test data base for SB LOCA phenomena by providing two-phase Integrated System Test (IST) data to benchmark calculational tools used to predict long term plant performance with an SB LOCA.
- o Improve the Staff's knowledge of the B&W plant design and increase their confidence in our prediction of plant performance under various transients.

The cooperative evaluation program outlined in the attachment will lead to the development of research priorities and the determination of the most cost-beneficial method of satisfying those priorities. This is responsive to the Staff's request of July 20, 1982, as we understand it.

The near-term test data from GERDA will be evaluated to verify scaling assumptions and predicted loop performance for that facility. The program will also provide a comprehensive data base for computer code benchmarking by the Staff and the Owners. Such codes should then provide the Staff with more confidence in the analytically predicted behavior of B&W plants.

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The GERDA test data would be made available on a proprietary basis to the Staff for their code benchmarking efforts.

This proposed program is a prerequisite to further analysis and testing and will provide input into the design, modification, or confirmation of a test facility, should the evaluation dictate such a need.

The success of this cooperative program is dependent on the commitment of the necessary resources and on all parties striving to reach a common point. As a participating B&W Owner, we will obtain the IST data from the German GERDA facility. We will also support the issuance of a Safety Evaluation Report to close out Item II.K.3.30, so that we all may concentrate on the Item II.K.3.31 work for the operating plants and those plants to be licensed by the NRC staff. We would offer to provide GERDA data to the NRC Staff at no cost for their use in benchmarking TRAC and RELAP 5 provided the NRC Staff provide their models of a B&W plant to B&W for review and QA. This review and QA effort by B&W is expected to be funded by the NRC.

We have selected this approach because it provides near-term IST results from an existing facility representative of the B&W design (GERDA). The program provides an expanded base of knowledge about the B&W design which will aid the Staff in future regulatory actions and will prove invaluable in the decision making process regarding future testing and test facilities.

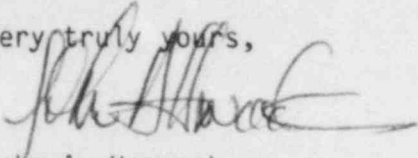
We feel that testing must be technically justified and that it must be supported by a cost-benefit analysis. Changes in the commitments in this letter will be subjected to this analysis before acceptance by the B&W Owners Group.

We have initiated contact with Mr. H. Sullivan of the NRC Staff and established a first meeting date of September 16, 1982, for the Test Advisory Panel on the cooperative evaluation program. We anticipate quarterly briefings to our utilities' Vice Presidents and you to review our progress. To facilitate the initial steps of the program, we request that the NRC Staff provide the preliminary cost-benefit analysis performed by their consultants for various IST alternatives at that time.

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We are reviewing GERDA test specifications and have initiated financial arrangements with the Germans. We are willing to participate in a joint panel with the NRC as outlined in this letter. This program is one we can support both financially and technically and we invite the NRC to join us in this effort. Your timely concurrence is needed because of the near term financial commitment involved.

Very truly yours,



John A. Hancock,
Vice President
Nuclear Operations

Attachments:

Bright (W02)C3-1

cc: Mr. W. J. Dircks
Mr. V. Stello, Jr.

Mr. J. P. O'Reilly
Regional Administrator, Region II
U. S. Nuclear Regulatory Commission
Office of Inspection & Enforcement
101 Marietta Street N.W. Suite 3100
Atlanta, GA 30303

ATTACHMENT

TEST ADVISORY GROUP

The Test Advisory Group (TAG) will consist of members from the NRC and Industry whose job will be to evaluate test data which supports the B&W designed NSS and to prepare a cost-benefit analysis of any identified future testing needs.

An orderly way to proceed would be to:

- o Identify relevant technical phenomenon in codes used to analyze the B&W system and list all current testing support for these phenomenon.
- o Evaluate GERDA as a source of additional benchmarks for other phenomenon.
- o Perform a cost-benefit analysis of identified tests and test facilities to address residual phenomenon.

The general approach proposed by the B&W Owners Group is to take advantage of near term available test facilities and test results to decide if additional testing is needed.

GERDA will provide data to benchmark relevant phenomenon associated with natural circulation, interruption, and refill with an SB LOCA. In addition, several B&W designed plants will be starting up within the next two years and the Owners plan to evaluate plant testing as a source of useful two loop data.

The completion of the program proposed by the Owners will provide a reasonable technical basis for the identification of additional testing needs and will supply useful data to confirm or modify the design of additional test facilities.

An outline of the B&W Owners approach to the Test Advisory Group is provided for convenience of review. A schedule has also been prepared to integrate the activities of the Test Advisory Group and related support work to be performed by the Owners to culminate in the preparation of a final report on testing needs to support the B&W designed plant.

OUTLINE FOR TEST ADVISORY GROUP (TAG) WORK

- Objective
- o Evaluate Testing Needs
 - o Develop Cost-Benefit Analysis for Future Testing

1. Members:

- o NRRES - Sullivan (Chair)
- o B&W Owners Group Analysis Subcommittee
- o B&W
- o Reactor System
- o EPRI

2. Scope

- o Develop List of Phenomena that Codes Need to Simulate
- o Identify Benchmark Needs
- o Evaluate the acceptability of current data
- o Evaluate the Acceptability of GERDA/Plant Testing to Satisfy Phenomenon of Interest
- o Identify Possible Way to Fill Residual Testing Needs Utilizing Cost-Benefit Analysis

TAG will not manipulate or control GERDA Testing or Code Benchmarking by the Owners.

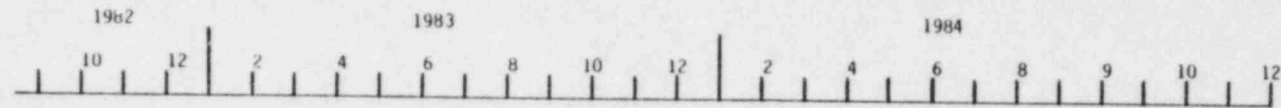
3. Products

- o Listing of Phenomena in Codes that Data Must Support
- o Phenomena Supported by Current Information
- o Phenomena Supported by GERDA/Plant Testing
- o Cost-Benefit Analyses of Facilities to Address Residual Issues

4. Assumptions/Commitments

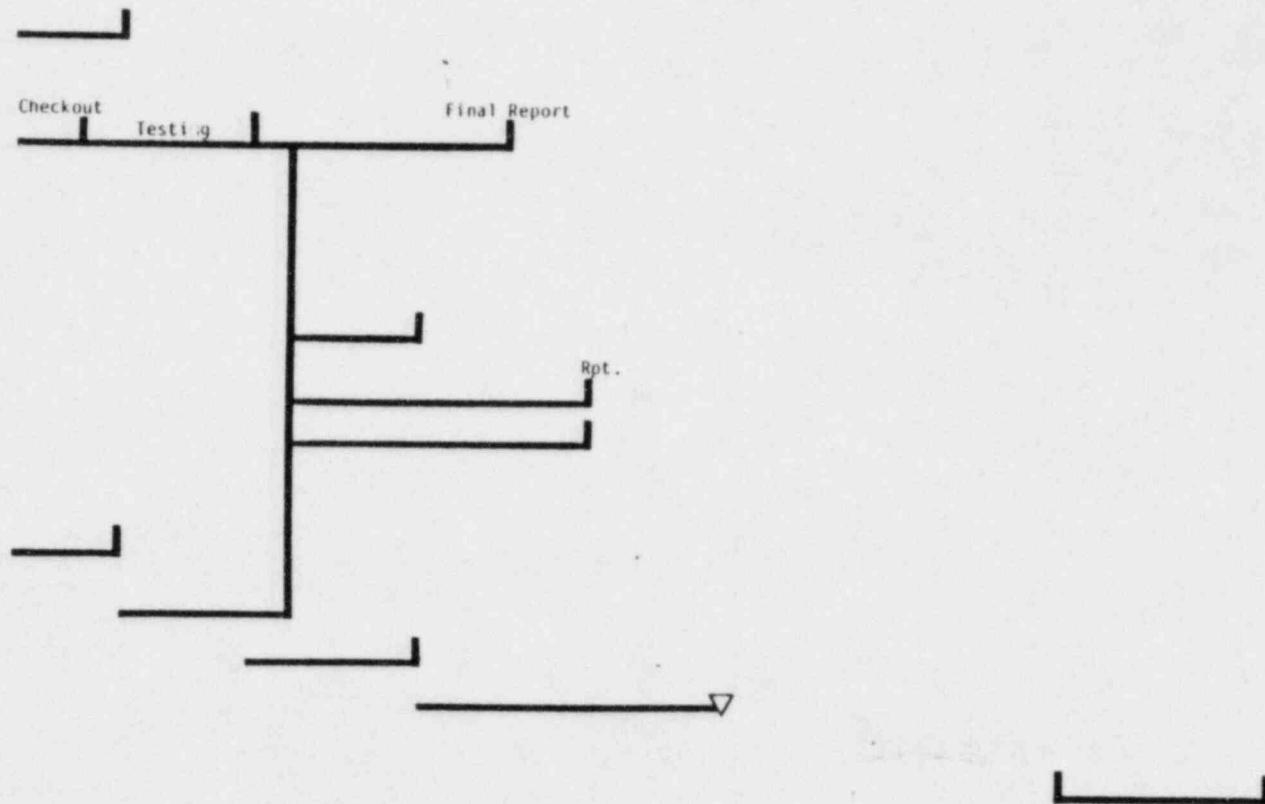
- o List is composed of phenomena, Not Licensing Concerns
- o Commitment of Resources by all Participating Parties
- o B&W Owners Will Provide Data to Benchmark TRAC. NRC to Agree to Certify a Deck for B&W Plants to Be Approved by B&W.
- o Reports must include All Participants' Positions (e.g., Dissenting views)

INTEGRATED SCHEDULE FOR TAG AND OWNERS GROUP ACTIVITIES



▽ SER-IC1
 ▽ SER-11K.3.30

- 1. SB LOCA Program
- 2. IST Data
 - GERDA
 - Plant Testing
- 3. Code Benchmarks
 - CRAFT (limited) for 11.K.3.31 only
 - RELAP-5
 - TRAC (NRC)
- 4. Test Advisory Panel
 - Approach/List of Phenomena
 - Review of Existing Info
 - Evaluate GERDA Data
 - Interim Report
 - Final Report



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