Docket No. 50-346

License No. NPF-3

Serial No. 855

September 9, 1982

TOLEDO EDISON

RICHARD P. CROUSE
Vice President
Nuclear
(419) 259-5221

Mr. Harold R. Denton, Director
Office of Nuclear Reactor Regulation
United States Nuclear Regulatory Commission
Washington, D.C. 20555

Dear Mr. Denton:

This letter compliments the proposal made in the Toledo Edison letter of August 25, 1982 (Serial No. 848) by providing the details of a cooperative evaluation program with the NRC as requested in the July 20, 1982 meeting on NUREG-0737, Item II.K.3.30, "Revised Small Break (SB) LOCA Methods to show compliance with 10 CFR 50, Appendix K." The cooperative evaluation program is designed to satisfy the following objectives.

- Support the near term approval by the Staff during their evaluation of our SB LOCA Methods Program (II.K.3.30) so that we can provide a timely response to II.K.3.31.

- 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.

- 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-effective method of satisfying those priorities. This is responsive to the Staff request of July 20, 1982 as Toledo Edison understands 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 code benchmarking by Staff and the Owners. Such codes should then provide the Staff with more confidence in the analytically predicted behavior of B&W plants. The GERDA test data would be made available on a proprietary basis to the Staff for their code benchmarking efforts.

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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 all parties striving to reach a common point. The success of this effort, thus is dependent on the commitment of the necessary resources. As a participating B&W Owner, Toledo Edison will obtain the integral systems test data from the German GERDA facility. We expect that the NRC Staff will support the issuance of an SER which will close out Item II.K.3.30 so that II.K.3.31 work on the operating plants and those plants to be licensed by the NRC staff will proceed without further diversion of Owner and Staff resources. As stated above, we would offer to provide GERDA data to the NRC Staff at no cost for their use in benchmarking TRAC and RELAP 5 computer codes provided that 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 test results from an existing facility representative of the B&W design. The program provides an expanded base of knowledge about the B&W design which will aid the Staff in understanding the B&W design and will provide invaluable in the decision making process regarding future testing and test facilities.

We feel that future 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 criteria before acceptance by Toledo Edison.

We have initiated contact with H. Sullivan of the NRC Staff and established a first meeting date of September 16, 1982. 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.

Toledo Edison is reviewing GERDA test specifications and have initiated financial arrangements with the Germans through the B&W Owners Group. 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,

RPC:LDY:lab
attachments

cc: W. J. Dircks
V. Stello
DB-1 NRC Resident Inspector

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Attachment 1

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:

- Identify all relevant technical phenomenon in codes used to analyze the B&W system and list all current testing support for these phenomenon.
- Evaluate GERDA as a source of additional benchmarks for other phenomenon.
- 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 any 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, 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:
- Evaluate Testing Needs
- Develop Cost Benefit of Future Testing

1. Members:

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

2. Scope:

- Develop List of Phenomena that Codes Simulate
- Identify Benchmark Needs
- Evaluate the Acceptability of Current Data
- Evaluate the Acceptability of GERDA/Plant Testing to Satisfy POI
- Identify Possible Ways to Fill Residual Testing Needs and Cost Benefit

Evaluate panel will not manipulate/control GERDA Testing or Code Benchmarking by the Owners.

3. Products:

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

4. Conditions:

- List is Composed of Phenomena, Not Licensing Concerns
- Commitment of Resources by all Participating Parties
- We Will Provide Data to Benchmark TRAC. NRC to Agree to Certify a Deck for B&W Plants to be Approved by B&W
- Reports Must Include All Participants' Positions (i.e. Dissenting Views)

INTEGRATED SCHEDULE FOR TAG AND OWNERS GROUP ACTIVITIES