



ARKANSAS POWER & LIGHT COMPANY  
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April 4, 1983

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Director of Nuclear Reactor Regulation  
ATTN: Mr. J. F. Stolz, Chief  
Operating Reactors Branch #4  
Division of Licensing  
U. S. Nuclear Regulatory Commission  
Washington, DC 20555

SUBJECT: Arkansas Nuclear One - Unit 1  
Docket No. 50-313  
License No. DPR-51  
Reactor Trip Breaker Failure

Gentlemen:

The purpose of this letter is to confirm agreements reached and provide information requested via a telephone conversation (on April 4, 1983) among Mr. Gus Lainas et al. of NRC/NRR, Messrs. Johnson, Seidle and Callan of NRC/Region IV, and Mr. John Griffin et al. of AP&L.

As you are aware, ANO-1 experienced a failure of a single undervoltage trip device to trip a reactor trip breaker (RTB) on March 23, 1983. This failure occurred during refueling shutdown conditions while performing rod patch verification testing. Although this failure would not in itself have prevented proper operation of the reactor trip system, this event has been the subject of numerous discussions between AP&L and NRC, culminating in meetings at NRC's Bethesda offices on March 30, 31, April 1 and April 2, 1983.

Prior to the referenced meetings, NRC/Region IV issued a confirmatory action letter (CAL) dated March 25, 1983, (1CNA038309) from Mr. J. T. Collins to Mr. J. M. Griffin. Per the above telephone conversation, we understand that this CAL will be superseded by a safety evaluation report (SER) to be issued by NRC/NRR. We further understand that no response to the CAL is required. During the course of the referenced telephone conversation, AP&L was asked to provide certain information to support the development of this SER. This information is provided below.

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Item 1

Subsequent to the March 23 RTB failure, AP&L made a decision to install a design change to provide for shunt trip actuation of the RTBs in conjunction with the presently installed undervoltage trip. This decision was reflected in the CAL. However, following a somewhat detailed review by NRC/NRR, AP&L was directed (on the afternoon of April 1, 1983) not to proceed with the modification as currently designed. AP&L complied with this direction by discontinuing all activities (involving tie in of the system) that same afternoon. Although all hardware and cabling associated with this design change has been installed, no electrical terminations have been made. As there were no tie-ins actually made to the existing RPS and trip circuitry the installed hardware, cabling and associated installation activities will not affect the operation of the RTBs or other systems. The operability of the RTBs has been subsequently verified and the as-left condition of the modification has been reviewed by the NRC resident inspector.

Item 2

AP&L has been requested to perform an additional one time test of the RTB undervoltage trip devices. This testing will be performed as follows:

- A. Ten tests will be completed;
- B. All breakers will be tested simultaneously using the Undervoltage (UV) trip device;
- C. At least five minutes will elapse between test repetitions;
- D. All breaker operations will be visually verified;
- E. Acceptance criteria for completion of this testing requires that all breaker operations be successful;
- F. This testing will be completed prior to criticality.

Item 3

AP&L has been asked to describe the surveillance testing frequency of the RTBs. Each RTB is tested monthly as required by Technical Specification 4.1 (Table 4.1-1). This testing is normally accomplished by testing one of four reactor protection system channels each week, such that all four tests are completed each month. At six month intervals, each breaker is removed and preventative maintenance performed as required per IE Bulletin 79-09 and General Electric Service Letter No. 175.

Item 4

AP&L has been requested to confirm that the RTB maintenance procedure conforms to the requirements of IE Bulletin 79-09 and GE Service Advice Letter No. 175. As discussed in AP&L's response to IE Bulletin 83-04 dated March 21, 1983, (OCAN038323) AP&L believed that the applicable maintenance procedures were in compliance prior to the March 23 RTB trip failure.

The results of AP&L's investigation of the March 23, 1983, RTB trip failure and resulting clarification from the RTB vendor were reviewed against the existing procedure. As a result of this review, clarifying modifications were made to the RTB maintenance procedure. We are confident the revised procedure adequately incorporates the requirements of IE Bulletin 79-09 and

GE Service Advice Letter No. 175, and reflects the information gathered following the March 23 RTB failure. Additional changes may be incorporated in the future if items are discovered which could enhance the effectiveness of the procedure.

Subsequent to the March 23, 1983, failure, the revised maintenance procedure has been utilized for adjustment and testing of all RTBs. Documentation of this maintenance and subsequent testing has been provided to the NRC resident inspector for his review.

Item 5

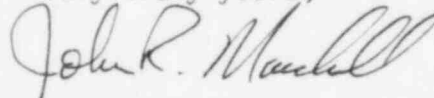
As requested, AP&L personnel will meet with your staff on April 5, 1983, to discuss AP&L procedures relevant to RTB testing and maintenance.

Item 6

AP&L was requested to confirm that tie-in of the shunt trip modification (for RTB trip on manual and/or RPS signal) will not be implemented prior to NRC review and approval. Although AP&L's position is that the modification does not constitute an Unreviewed Safety Question as defined by 10CFR50.59, and thus does not require NRC approval, we will, nonetheless, comply with NRC's request and will not complete the tie-ins prior to NRC approval. This design change will be submitted to you for review and approval, as requested, under the provisions of 10CFR50.54f.

The above information is provided in response to your requests via the above referenced telephone conversation to support your development of an SER relative to this issue. As you are aware, NRC issuance of the SER is the only restraint to proceeding to criticality; therefore, your expeditious response is required. As discussed in the subject telephone conversation, we understand control rod manipulations (e.g., Rod Drop Test, etc.) may proceed provided the shutdown margin requirements of the Technical Specifications are maintained via dissolved boron in the reactor coolant.

Very truly yours,



John R. Marshall  
Manager, Licensing

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