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AUTH.NAME AUTHOR AFFILIATION
ROOT,L.D. Iowa Electric Light & Power Co.
RECIP.NAME RECIPIENT AFFILIATION
KEPPLER,J.G. Region 3, Chicago, Office of the Director

SUBJECT: Responds to IE Bulletin 80-17, "Failure of Control Rods to Fully Insert During Scram at BWR," Preliminary training of operators completed.Full training will be completed by 800803.Items 2,3 & 6.a will be discussed in subsequent ltr.

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Iowa Electric Light and Power Company

July 17, 1980
LDR-80-198

LARRY D. ROOT
ASSISTANT VICE PRESIDENT
NUCLEAR GENERATION

Mr. James G. Keppler
Office of Inspection and Enforcement
U. S. Nuclear Regulatory Commission
Region III
799 Roosevelt Road
Glen Ellyn, Illinois 60137

Re: Duane Arnold Energy Center

Subject: IE Bulletin 80-17, Failure of Control Rods to Fully Insert During a Scram at a BWR

Supplemental Report #1

File: A-101a, NRC-2, Bulletin 80-17

Dear Mr. Keppler:

In partial response to your letter transmitting the subject bulletin concerning the manual scram failure event at TVA's Browns Ferry Unit No. 3, we have completed the Licensee Action Items 4, 5, 6.b), 6.c), and 7 activities at DAEC. These activities include DAEC and NSSS vendor review of reactor scram emergency operating procedures, development of surveillance test procedures (STP) for periodic monitoring of the scram discharge volume, consideration of Standby Liquid Control System (SLCS) two pump operation, and verification that the DAEC RPT is ATWS related. The following discussion is provided to briefly describe the actions taken at DAEC to address these NRC IE bulletin concerns.

Bulletin Item 4. The DAEC emergency operating procedure for reactor scram (Integrated Plant Operating Instructions (IPOI), Section III, Reactor Scram) was modified by adding an attachment to address the operator actions discussed in the subject bulletin Items 4.a) through 4.d). The IPOI modification was reviewed by the NSSS vendor. This procedure is presently being further reviewed by the DAEC Operations Supervisor and Shift Supervising Engineers, (SSEs) and will be modified to incorporate NSSS vendor comments and to include valve numbers, switch numbers, instrument setpoints, etc. to provide as much clarity as possible for the operators.

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In response to Bulletin Item 4.e), preliminary training of the operators in the Browns Ferry occurrence has been completed. Full training including the review of the final revised reactor scram IPOI and Browns Ferry Unit No. 3 Partial Insertion Scram Sequence of Events by all DAEC licensed reactor operators will be completed by August 3, 1980.

Bulletin Item 5. A surveillance procedure (BS-6, Scram Discharge Volume and Piping Water Test) was prepared to monitor the scram discharge volume for residue water on a daily basis. The test procedure was implemented on Wednesday, July 9, 1980 and was satisfactorily completed on a daily basis up to and including Monday, July 14, 1980. At that time the surveillance testing frequency was extended to weekly (7 days) as allowed in the subject bulletin. The testing procedure (BS-6) and results are available for NRC inspection at DAEC upon request.

Bulletin Item 6.b). In the event of high suppression pool temperature, a single train of RHR and RHR service water is initiated typically in order to reduce the temperature. In the event that additional cooling is required, additional cooling subsystems are sequentially added to maintain the suppression pool temperature as low as practical, but in any case within the DAEC Technical Specification limits (Refer to DAEC Tech. Spec. Paragraph 3.2.B and Table 3.2-B). We believe that sequentially adding cooling subsystems as required to ensure compliance with the suppression pool Tech. Spec. temperature limits in lieu of operating "all available suppression pool cooling whenever the suppression pool exceeds the normal operating temperature limit" is a more prudent operating philosophy.

Bulletin Item 6.c). As requested, the possibility of increasing SLCS flow (i.e. 2 pump operation) has been reviewed per 10 CFR 50.59.

Presently the DAEC SLCS is designed for single pump operation only. FSAR Section 3.9 and Technical Specification Sections 3.4 and 4.4 specify 1 pump operation and testing of the SLCS. The proposed change to increase SLCS flow will require electrical hardware changes (described below) and FSAR/Technical Specification changes.

In addition, a number of possible areas of unreviewed safety questions have been identified which would need to be addressed and resolved prior to further consideration of a change to SLCS 2 pump operation. These areas include the following:

1. Currently, the SLCS is designed for single pump operation. The system selector switch precludes operation of two pumps simultaneously. Any design change to enable simultaneous operation must be reviewed to determine any impact on plant reliability.

Bulletin Item 6.c). (cont.)

2. Running of two pumps simultaneously could reduce the available NPSH to below that required by the pump design. New NPSH calculations should be performed prior to making system modifications for simultaneous two pump operation.

3. It is recommended that operational data be obtained for 2 pump operation which demonstrates that the pump discharge accumulators are effective in dampening the positive displacement pump surges.

4. Two pump simultaneous operation will increase the flow rate in the SLCS which will increase the frictional pressure drop in the discharge piping. Proper functioning of the pump discharge relief valve requires confirmation of this mode of operation. Also, the events for which the system is to be available require definition so that the associated reactor pressure can be determined. In addition, if the relief valve opens, SLCS flow will recycle resulting in reduced system effectiveness.

Bulletin Item 7. This item is not applicable to DAEC since we have an ATWS related RPT System.

The results of the DAEC scram testing and implementation of the additional prompt notification requirements required in the subject bulletin (Licensee Action Items 2, 3, and 6.a)) will be discussed in subsequent correspondence. If you have any questions or desire further information concerning this matter, please contact this office.

This response is true and accurate to the best of my knowledge and belief.

IOWA ELECTRIC LIGHT AND POWER COMPANY

By: Philip D. Ward FOR L. Root
Larry D. Root
Assistant Vice President
Nuclear Generation

LDR/DT/rs

Subscribed and sworn to before me on this 17th day of July, 1980.

Steven G. Gerhart
Notary Public In and For
The State of Iowa

STEVEN G. GERHART
My Commission Expires
September 30, 1980

Enclosure

Docket No. 50-0331

cc: U. S. Nuclear Regulatory Commission
Office of Inspection and Enforcement
Division of Reactor Operations Inspection
Washington, D.C. 20555

U. S. Nuclear Regulatory Commission,
c/o Document Management Branch
Washington, D.C. 20555

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NRC Resident Inspector-DAEC