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April 7, 1983

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Mr. Richard C. DeYoung
Office of Inspection and Enforcement
U. S. Nuclear Regulatory Commission
Washington, DC 20555

SUBJECT: Arkansas Nuclear One - Unit 1
Docket No. 50-313
License No. DPR-51
Notice of Violation and Proposed
Imposition of Civil Penalty EA 83-15

Gentlemen:

This is in response to NRC's letter of March 8, 1983, (1CNA038302) from Mr. John T. Collins, Region IV Regional Administrator and the associated Notice of Violation relating to our discovery on December 16, 1982, of two inoperable reactor building pressure transmitters. This discovery occurred near the beginning of the Unit 1 fifth refueling outage. Of the affected transmitters, one provides input to a recorder in the control room and the other instrument provides a signal to one of the three Engineered Safeguards Actuation System (ESAS) channels. The inoperable condition was a result of plugs that had been installed in the input ports to the transmitters and was discovered by Arkansas Power and Light Company (AP&L) technicians working in the vicinity of the installed transmitters in the reactor building. These plugs were removed and the transmitters were recalibrated and subsequently returned to service. Therefore, compliance was achieved prior to restart following the fifth refueling outage.

As discussed in a meeting with members of the NRC/Region IV staff on February 18, 1983, an investigation was undertaken by AP&L in an attempt to determine the cause of this event. This investigation included a review of procedures affecting the subject transmitters, a review of operating logs, transmitter testing, and personnel interviews.

A review of the related procedures that would have affected the subject transmitters revealed that a Reactor Building Integrated Leak Rate Test (ILRT) was performed February 20, 1981, during the unit's fourth refueling outage. Prior to performance of the ILRT, the procedure required a number of transmitters, including the two in question, be removed from the reactor building to prevent damage due to high pressure. Instead, due to the difficulty in removing the transmitters, a procedure change was initiated to

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allow installation of plugs in the transmitter sensing ports. Although no record of this procedure change presently exists, the affected transmitters were plugged rather than removed during the fourth refueling outage. The ILRT procedure also required that transmitter restoration action be taken, with sign-off's for both action and restoration. All sign-off's on the procedure used during the ILRT had been completed including restoration steps, and a check of the other transmitters on the ILRT list verified that plugs had indeed been removed.

A comparison of reactor building pressure readings for each of the ESAS instruments taken from the operating logs and the pressure recorder indicates that all four transmitters were in service during the cycle as they exhibit similar trends.

An effort was made to determine if a plugged transmitter could have an output that varied as much as the trend data indicates (high to low variations of 2 psi during cycle) using a spare transmitter. The test results indicated that a plugged transmitter would respond to temperature changes in a manner similar to actual variations in reactor building pressure to temperature. This testing indicated that a change of approximately 70°F is required to indicate a pressure change of 2 psi. Further investigation indicates that a temperature change of this magnitude is feasible. The above data, however, is insufficient to reach a conclusion that the transmitters were or were not plugged during the previous cycle of operation.

The possibility that this event occurred as a result of deliberate action during the current refueling outage was investigated by Arkansas Power & Light Company Corporate Security in cooperation with the Federal Bureau of Investigation. While the FBI has not taken the incident on as a case, they have, and are continuing to assist us in interviewing personnel involved with the incident. In particular, the FBI is assisting us by interviewing personnel that are no longer employed by AP&L. Although the results of the investigation to date have not been conclusive, there is enough evidence to warrant continued efforts in this direction.

Although the results of the above investigation were not conclusive, the cause of the event must be classified as either a procedural deficiency, a personnel error or a deliberate act. In any event, the investigation has lead us to review our conduct of operation. We have identified three areas where enhancements to our programs are appropriate in light of the findings of the investigation. These areas are discussed below.

The first of these areas is training of station personnel in procedural compliance. Approximately a year ago, a program was undertaken to enhance proper attention to detail and attitude during performance of procedures. Although this incident, if it did occur during our fourth refueling outage, would have been before this training, we believe it prudent to conduct additional and continuing training for our personnel on administrative controls, reasons for the controls, and relationship of the controls to regulation.

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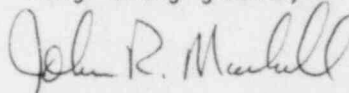
A second area which was closely reviewed was procedure adequacy and assurance of controls over vital instrumentation. As a result of this review, a new procedure has been developed for each unit to act as a final verification of physical alignment of vital instrumentation before a unit is returned to service following an extended outage. This new procedure was used at the end of the the recently completed Unit 1 refueling outage and following the forced outage of Unit-2 in January and February of this year. Also, Intrumentation and Control procedures are being evaluated to incorporate standardized instructions where appropriate for the removal and return to service of vital instrumentation.

The third area being reinforced are policies dealing with procedural control and responsibility. A directive will be issued by April 15, 1983, that deals directly with procedural compliance, responsibilities, the potential problems resulting from not following procedures, and the individual's exposure to disciplinary action for not following procedures.

The investigation conducted as a result of this event did not firmly establish the cause of the event, nor establish that the plugs were in place during plant operation. However, assuming the violation was not the result of deliberate action as discussed above, we recognize the possibility that previous operating practices may have contributed to the situation and therefore we will not contest the proposed civil penalty.

Attached is a check in the amount of \$20,000 as required by the civil penalty imposed on Arkansas Power and Light Company. This letter and check satisfy the requirements imposed on AP&L by the Notice of Violation.

Very truly yours,



John R. Marshall
Manager, Licensing

JRM:DW:s1

Attachments

cc: Mr. John T. Collins
Regional Administrator
U. S. Nuclear Regulatory Commission
Region IV
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