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 MINECK, D.L. Iowa Electric Light & Power Co.
 RECIP. NAME RECIPIENT AFFILIATION
 DAVIS, A.B. Region 3 (Post 820201)

SUBJECT: Responds to NRC 901214 ltr re violations noted in Insp Rept
 50-331/90-20. Corrective actions: priority review board
 established to ensure appropriate priorities assigned to
 planned improvements & fire extinguishers inspected.

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Iowa Electric Light and Power Company

January 14, 1991
NG-91-0049

Mr. A. Bert Davis
Regional Administrator
Region III
U. S. Nuclear Regulatory Commission
799 Roosevelt Road
Glen Ellyn, IL 60137

Subject: Duane Arnold Energy Center
Docket No: 50-331
Op. License DPR-49
Response to Notice of Violation
Transmitted with NRC Inspection
Report 90020

File: A-102, A-103

Dear Mr. Davis:

This letter and attachment are provided in response to the Notice of Violation regarding certain activities at the Duane Arnold Energy Center.

We share the concern in your letter of December 14, 1990, regarding the violation which involved operation of the reactor in the restrictive region of the power to flow map during single loop operation. The need to identify, prioritize, and act conclusively on issues related to plant safety is a matter that will continue to receive a high level of attention. We recognize that we can improve the tracking of activities and the identification and elimination of barriers to the effective completion of work. We are taking a number of steps to do that. A Priority Review Board has been established to ensure that appropriate priorities are assigned to planned improvements. On January 2, 1991, we implemented a planning strategy which will improve our ability to identify and then complete our most important long-term activities on schedule. Responsible individuals will be held accountable to meet these schedules. Individual performance will be appraised relative to their success in doing so. We are confident these actions will aid all levels of our work force in the prioritization and completion of work activities.

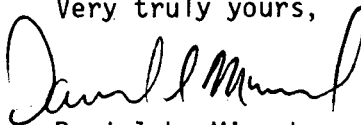
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Mr. A. Bert Davis
January 14, 1991
Page 2

If you have any questions, please do not hesitate to contact me.

Very truly yours,



Daniel L. Mineck
Manager, Nuclear Division

DLM/SC/pwj

Attachment: 1) Response to Notice of Violation

cc: U. S. NRC Document Control Desk (Original)
L. Liu
L. Root
R. McGaughy
S. P. Sands (NRR)
NRC Resident Inspector - DAEC
Commitment Control No. 900365

NRC NOTICE OF VIOLATION 1

Technical Specifications (TS) 3.6.F.2.b states that "During SLO (Single Loop Operation) and core thermal power greater than the limit specified in Figure 3.3-1 (Thermal Power vs Core Flow Limits for Thermal Hydraulic Stability Surveillance), core flow must be greater than or equal to 39% of rated...."

Contrary to the above, between the time period of October 2, 1990, at 12:32 a.m. (CDT) and October 3, 1990, at 2:39 p.m. (CDT), the licensee operated the reactor in SLO with core thermal power greater than the limit specified in Figure 3.3-1 (80% load line) with core flow less than 39% of rated. Actual power during this time period was approximately 47% with core flow at approximately 36% of rated.

This is a Severity Level IV Violation (Supplement 1).

1. RESPONSE TO NOTICE OF VIOLATION 1

a. Corrective Actions Taken and the Results Achieved:

This event occurred because the measurements of core flow which were used as part of a procedure to verify compliance with Figure 3.3-1 of the plant Technical Specification were not accurate. As stated in Licensee Event Report 90-018 Rev. 1, the principal cause of the core flow inaccuracies was the omission, during a recent calibration of core flow instrumentation, of an offset needed to account for fluid temperature and density variations. A contributing cause was inherent limitations of the core flow measurement system at low flows.

Calibration of the core flow instrument loop was successfully completed in December, 1990. This calibration helped to identify the cause of the flow inaccuracies and assured proper instrument operation. The procedure used to calibrate the flow instrumentation has been revised to ensure the instrument is calibrated with the appropriate offset. As a temporary measure to provide greater assurance that all instrument offsets are included in instrument calibrations, a review of historical calibration records to determine proper offset values is now required prior to each calibration. A quarterly review of the instrument calibrations is planned to verify that instrument offsets have been used properly.

The Single Loop Operation (SLO) surveillance test that verifies that the plant is being operated in the acceptable region of

Figure 3.3-1 of the plant Technical Specification, has been modified to include additional load-line margin as a factor of conservatism to ensure any future SLO will remain within limits. In addition, to compensate measure for the inherent limitations of the core flow measurement system at low flows, the surveillance test now includes a correlation of core flow to core plate differential pressure in addition to flow transmitter output. This method was not previously included in our procedure. The more conservative value of core flow will be used. The surveillance test now also requires a reactor engineer verify the core flow meets SLO requirements.

b. Corrective Actions to be Taken to Prevent Recurrence:

To compensate for the inherent limitations of the core flow measurement system and improve its performance, a core flow instrument loop calibration will now be performed following the start of each operating cycle. The procedure to implement this calibration will be in place by March 31, 1992, prior to startup from the cycle 11/12 refueling outage.

A plan is being developed to verify the instrument offset values currently in use. This plan will be completed by February 28, 1991. Subsequent to this, application and control of offsets for plant instrumentation will be reviewed, with the goal of improved controls for the use of these values.

c. Date When Full Compliance Will be Achieved

Full compliance was achieved on October 3, 1990 when reactor operation was restored to core thermal power levels allowed by Figure 3.3-1 of the plant Technical Specifications.

NRC NOTICE OF VIOLATION 2

Technical Specification (TS) 6.8.1 states in part that written procedures involving nuclear safety covering fire protection program implementation shall be prepared and implemented.

- a. Fire Protection Surveillance Test Procedure (STP)NS13E005 (Portable Fire Extinguishing Equipment Inspection) requires designated fire extinguishers to be inspected monthly.

Contrary to the above, the licensee failed to adequately perform STP NS13005 which was completed on October 16, 1990. This resulted in at least four designated fire extinguishers not being inspected during the month of October, 1990.

- b. DAEC Administrative Procedure 1412.4 (Planned Impairments to Fire Protection Systems) establishes requirements to take compensatory measures when designated fire protection systems are impaired.

Contrary to the above, the licensee failed to implement a fire watch to compensate for the loss of sprinkler system number twelve, as required by DAEC Administrative Procedure 1412.4, on October 10, 1990, from about 8:50 a.m. (CDT) to about 2:30 p.m. (CDT). This resulted in sprinkler system number twelve, which protects safe shutdown equipment, being out of commission without any compensatory measures established.

2. RESPONSE TO NOTICE OF VIOLATION 2a

- a. Corrective Actions Taken and the Results Achieved:

The fire extinguishers in question were inspected by the Fire Marshall immediately upon notification of the problem by the Resident Inspectors. A special inspection of all fire extinguishers in the Reactor and Turbine Buildings was completed on November 21, 1990. Inspection of the remaining extinguishers was completed on December 14, 1990.

In a letter, dated November 20, 1990, the contract organization performing the fire extinguisher inspections was placed on notice that their recent performance was unacceptable.

The Fire Marshall and Fire Protection Coordinator observed the contract personnel during the December 14, 1990 inspection of fire extinguishers. Deficiencies in the procedure and deficiencies in the performance of the inspections have been noted and corrected.

Permanent extinguisher locations have now been labeled, and procedure changes that reference those locations have also been completed. These actions will aid in proper completion of the surveillance and will help to ensure that transient fire extinguishers are not confused with the designated extinguishers for a given area when the inspections are performed.

- b. Corrective Actions to be Taken to Prevent Recurrence:

See above.

c. Date When Full Compliance Will be Achieved:

Full compliance was achieved on December 14, 1990 when the designated fire extinguishers were verified to have been inspected.

3. Response to Notice of Violation 2b

a. Corrective Actions Taken:

A fire watch was established at the time the violation was discovered by the plant Fire Protection Coordinator.

b. Corrective Actions to be taken to Prevent Recurrence:

The Operations Department will be retrained on Administrative Control Procedure (ACP) 1412.4 by April 28, 1991, to more thoroughly acquaint them with major additions made in January, 1990. Training on the procedure is included in the Operator Regualification Program on a biennial basis. This administrative control procedure contains attachments that aid in identifying what portions of the fire suppression system are isolated when given valves are closed. With these attachments the operators can better assess the impact of tagouts on the operability of fire protection systems protecting safety related components. This procedure has been disseminated to the Operations Shift Supervisors in the interim prior to formal retraining.

We now require that tagout requests that could impair fire protection systems be accompanied to the Control Room with a completed Fire Protection Impairment Request (FPIR). This will allow the Control Room personnel who issues the tags to compare the the actual tagout to the evaluation performed by the Fire Marshal. If the Control Room personnel determine the tagout impairs fire protection systems not evaluated in the original FPIR they are required to request that the FPIR be reevaluated.

c. Date When Full Compliance Will be Achieved:

Full Compliance was achieved on October 10, 1990 with the establishment of the required fire watch.