Nebraska Public Power District

COOPER NUCLEAR STATION
P.O. BOX 98, BROWNVILLE, NEBRASKA 68321
TELEPHONE (402) 825-3811

December 8, 1978

Mr. Karl V. Seyfrit, Director
U.S. Nuclear Regulatory Commission
Office of Inspection and Enforcement
Region IV
611 Ryan Plaza
Suite 1000
Arlington, Texas 76011

Dear Sir:

This report is submitted in accordance with Section 6.7.2.A.6 of the Technical Specifications for Cooper Nuclear Station and discusses a reportable occurrence that was discovered on November 24, 1978. Mr. Eric Johnson was notified of this occurrence on November 27, 1978 and our initial notification was telecopied to your office on November 29, 1978. A licensee event report form is also enclosed.

Report No.: 50-298-78-35
Report Date: December 8, 1978
Occurrence Date: November 24, 1978
Facility: Cooper Nuclear Station
Brownville, Nebraska 68321

Identification of Occurrence:
A condition which probably resulted in a short term reactivity increase that corresponded to a reactor period of less than 5 seconds.

Conditions Prior to Occurrence:
Reactor was at a low power level of approximately 27% of rated thermal power.

Description of Occurrence:
The reactor power was at a reduced level so that surveillance testing of the turbine stop valves and a scheduled rod swap could be accomplished. While at this reduced power level, various pressure settings on Recirculation MG Set "B" Oil Lubrication System were being calibrated and reset if necessary. While performing this work on the lubrication system, Recirculation MG Set "B" was inadvertently tripped due to personnel error. After Recirculation Pump "B" was brought on line, it was discovered that MG Set "B" would not respond to an increase in speed demand. Troubleshooting this problem led to the possibility of a fuse being blown in the control circuitry. Two 1 amp fuses located in the scoop tube

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drive were to be checked. When the lower fuse (F2) was pulled out, the scoop tube drive moved in and caused a sudden increase in speed of the RR MG Set 1B and a subsequent rapid reactor power increase. It is believed that the rate of speed increase was higher than if the speed change was performed from the manual station.

The exact time frame of this power increase cannot be determined though it is believed the duration was less than or equal to 10 seconds. The fuse was put back in as soon as reaction time permitted and also MG Set "B" was tripped by an operator very shortly thereafter; either one or both of these actions terminated the transient. The maximum thermal power observed during the transient was approximately 75% of rated power.

Designation of Apparent Cause of Occurrence:
Personnel error and lack of up to date electrical diagram.

Analysis of Occurrence:
The analysis for this event is presented in Section XIV.5.6 of the Cooper Final Safety Analysis Report. An examination of the off gas recorders after the event did not show a permanent increase in off gas activity; therefore, it is not believed any fuel damage resulted.

Corrective Action:
The fuse was reinserted as rapidly as possible and the personnel involved reviewed the events to prevent a recurrence. The control system manufacturer has been contacted and is providing a current electrical diagram. Upon receipt of the diagram, it will be reviewed by station personnel to insure the as-built condition is reflected. A tag has been added to each scoop tube control unit stating "Do not remove lower fuse while RR MG Set is running." An engineering evaluation of the control system logic will be performed with respect to the scoop tube positioner upon loss of signal and/or control power.

Sincerely,

L. C. Lessor
Station Superintendent
Cooper Nuclear Station

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