Nebraska Public Power District

COOPER NUCLEAR STATION
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CNSS948191

June 24, 1994

U.S. Nuclear Regulatory Commission
Document Control Desk
Washington, D.C. 20555

Dear Sir:

Cooper Nuclear Station Licensee Event Report 94-009, is forwarded as an attachment to this letter.

Sincerely,

R. L. Gardner
Plant Manager

RLG/nc

Attachment

cc: L. J. Callan
G. R. Horn
J. M. Meacham
R. E. Wilbur
V. L. Wolstenholm
D. A. Whitman
INPO Records Center
NRC Resident Inspector
R. J. Singer
CNS Training
CNS Quality Assurance

IE22

NRC FORM 366 (5-92) U.S. NUCLEAR REGULATORY COMMISSION

APPROVED BY OMB NO. 3150-0104
EXPIRES 5/31/95

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 50.0 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE INFORMATION AND RECORDS MANAGEMENT BRANCH (MNBB 7714), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555-0001, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.

LICENSEE EVENT REPORT (LER)

(See reverse for required number of digits/characters for each block)

FACILITY NAME (1)	DOCKET NUMBER (2)	PAGE (3)
COOPER NUCLEAR STATION	05000298	1 OF 4

TITLE (4) Inadequate Load Shed and Logic System Surveillance Testing Resulting in Inoperability of Safety Systems

EVENT DATE (5)			LER NUMBER (6)			REPORT DATE (7)			OTHER FACILITIES INVOLVED (8)	
MONTH	DAY	YEAR	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	MONTH	DAY	YEAR	FACILITY NAME	DOCKET NUMBER
05	25	94	94	-- 009 --	00	06	24	94		05000
									FACILITY NAME	DOCKET NUMBER 05000

OPERATING MODE (9)	N	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more) (11)					
POWER LEVEL (10)	100	20.402(b)		20.405(c)		50.73(a)(2)(iv)	73.71(b)
		20.405(a)(1)(i)		50.36(c)(1)		50.73(a)(2)(v)	73.71(c)
		20.405(a)(1)(ii)		50.36(c)(2)		50.73(a)(2)(vii)	OTHER
		20.405(a)(1)(iii)	X	50.73(a)(2)(i)		50.73(a)(2)(viii)(A)	(Specify in Abstract below and in Text, NRC Form 366A)
		20.405(a)(1)(iv)		50.73(a)(2)(ii)		50.73(a)(2)(viii)(B)	
		20.405(a)(1)(v)		50.73(a)(2)(iii)		50.73(a)(2)(x)	

LICENSEE CONTACT FOR THIS LER (12)

NAME	TELEPHONE NUMBER (Include Area Code)
John R. Myers	(402) 825-3811

COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPRDS		CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPRDS
E	EC	BKR	W120	Y						

SUPPLEMENTAL REPORT EXPECTED (14)			EXPECTED SUBMISSION DATE (15)	MONTH	DAY	YEAR
X	YES (If yes, complete EXPECTED SUBMISSION DATE).	NO		08	19	94

ABSTRACT (Limit to 1400 spaces, i.e., approximately 15 single-spaced typewritten lines) (16)

On May 16, 1994, a tie wrap was discovered on the undervoltage trip device for the 480 VAC feeder breaker for MCC-N. This breaker is designed to trip during a loss of offsite power, a function which the tie wrap prevented. On May 23, additional investigation determined that the load shedding of other MCCs was not verified during surveillance testing. On May 25 it was determined that there were additional 480 VAC loads which were not procedurally verified to load shed (the station air compressors and Control Rod Drive pumps). At 1:14 pm, both DGs were declared inoperable due to inadequate surveillance testing and a Notification of Unusual Event was declared. The continuing investigation into this condition also revealed that a contact in the load shedding circuit of the Service Water Booster Pumps, 4160 VAC loads, was not tested. A plant shutdown was subsequently commenced. It was determined that there were contacts in additional systems which were not tested in accordance with Technical Specification requirements for Logic System Functional Testing.

The cause of this condition is being investigated, and will be reported in a supplement to this LER. Testing is being conducted to verify equipment performance. Corrective actions will be reported in the LER supplement.

A. Event Description

On May 16, 1994, while verifying fuse configurations of the safety related 480 VAC busses, a tie wrap was found on the undervoltage trip device for the feeder breaker for MCC-N. This breaker is designed to trip during a loss of offsite power, a function which was defeated by the tie wrap. An evaluation of the potential effect of this condition on Diesel Generator (DG) operability indicated that although the tie wrap would prevent the breaker from tripping during conditions requiring a load shed, it would not result in a load greater than that for which the Diesel Generator was designed. Inspections of similar 480 VAC breakers were completed on May 17, with no other restraining devices being found. An investigation team was formed on May 18, with a charter to investigate the cause of this event and recommend corrective actions. On May 23, investigation team members questioned the adequacy of the surveillance procedure used to perform the load shed testing. Additional investigation determined that the load shedding of the non-safety MCCs was not verified during the surveillance. A review of computer records indicated that five of the breakers which feed non-safety loads tripped during the surveillance, however, no indication that the feeder breaker for MCC-N tripped was noted. Additionally, no indication that the feeder breakers for MCC-OG1 and MCC-MR tripped was found. The operability of DG 1, assuming both MCC-N and MCC-OG1 would not load shed, and DG 2, assuming MCC-MR would not load shed, was reviewed on May 24. It was concluded that the condition would not result in a load greater than that for which the DGs were designed.

On May 25 it was determined that there were additional 480 VAC loads which were not verified to load shed (the station air compressors and Control Rod Drive pumps, which were transferred to another bus during the surveillance test). At 1:14 pm, both DGs were declared inoperable due to the inadequate surveillance testing and a Notification of Unusual Event was declared. In accordance with Technical Specification requirements in Section 3.5.F.2, a load reduction to 25 percent power was initiated. The continuing investigation into this condition also revealed that a contact in the load shedding circuit of the Service Water Booster Pumps, 4160 VAC loads, was bypassed during the load shed testing. A plant shutdown was subsequently initiated when it was evident from the investigation performed that operability of the DGs could not be assured. Cold shutdown was reached at 11:57 pm on May 26.

A. Event Description (continued)

It was determined that there were contacts in additional systems which were not tested in accordance with Technical Specification requirements for Logic System Functional Testing. Based upon an analysis of systems required to be operable for existing plant conditions, Service Water, Reactor Equipment Cooling, 4160 VAC Bus 1F, and 4160 VAC Bus 1G were declared inoperable on June 11 at 2:30 pm. Additional systems affected but which had been demonstrated operable by special testing are Standby Gas Treatment, High Pressure Coolant Injection, Reactor Core Isolation Cooling, Standby Liquid Control, Reactor Water Cleanup, Primary Containment, Secondary Containment, and the Reactor Recirculation valves associated with Low Pressure Coolant Injection.

B. Plant Status

At the time of initial discovery the plant was in operation at approximately 100 percent power.

C. Basis for Report

Failure to perform the required tests is a condition contrary to Technical Specifications, resulting in a required shutdown, thus reportable in accordance with 10CFR50.73(a)(2)(i).

D. Cause

The cause of this condition is still under investigation, and will be reported in a supplement to this LER.

E. Safety Significance

As noted in Section G below, the feeder breakers for the Service Air Compressor, MCC-N, MCC-OG1 (all on DG 1), MCC-V, and MCC-MR (both on DG 2) were found not to trip as required during testing. Calculations indicate that upon a loss of offsite power the diesel generators would have been capable of loading successfully even with these loads not shed. Therefore, the DGs can be considered to have been capable of performing their required function, even though declared inoperable. All of the logic system contacts were found to operate as designed, therefore there would have been no impact to operability of the involved systems.

F. Safety Implications

The effect of the inadequate testing is most significant with the plant in power operation. As such, there are no safety implications beyond those discussed in Section E above.

G. Corrective Action

Procedures were written or revised to test the load shed logic and the components not previously tested as required by the Technical Specifications for Logic System Functional Testing. These tests are presently (as of June 20) being performed. To date the feeder breakers for MCC-OG1, Station Air Compressor A, MCC-V, and MCC-MR were found not to trip as required. Preliminary indications are that the breakers for MCC-OG1 and Station Air Compressor A failed to trip due to binding in the undervoltage trip device. Further investigations are being conducted to determine the cause of the failures and actions to prevent recurrence, and will be reported in a supplement to this LER. The contacts which had not been previously tested in accordance with Logic System Functional Test requirements were tested and found to operate correctly.

H. Similar Events

Inadequate surveillance testing has been the subject of the following LERs:

LER 93-011, Secondary Containment Surveillance Methodology Failed to Identify Leakage Path between Secondary Containment and the Radwaste Building.

LER 93-019, Nonconservative Testing Methodology Discovered During Local Leak Rate Testing.

LER 93-027, ASME Section XI Inspection and Test Requirements Associated with Safety-Related Portions of the Service Water and Reactor Equipment Cooling System

I. Supplemental Information

Manufacturer: The breakers are Westinghouse Model DB-50.