

# Nebraska Public Power District

COOPER NUCLEAR STATION P.O. BOX 96. BROWNVILLE, NEBRASKA 68321 TELEPHONE (402)825-3811 FAX (402)825-5206

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NLS980033 February 26, 1998

U.S. Nuclear Regulatory Commission Attention: Document Control Desk Washington, D.C. 20555-0001

Gentlemen:

Subject: Licensee Event Report No. 1998-001 Cooper Nuclear Station, NRC Docket 50-298, DPR-46

The subject Licensee Event Report is forwarded as an enclosure to this letter.

rful Pride in Nebraska

Sincerely,

M. F. Peckham Plant Manager

/lrd Enclosure

cc: Regional Administrator USNRC - Region IV

> Senior Project Manager USNRC - NRR Project Directorate IV-1

Senior Resident Inspector USNRC

NPG Distribution

**INPO** Records Center

W. Turnbull MidAmerica Energy

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NRC FORM 366 (4.95)

#### U.S. NUCLEAR REGULATORY COMMISSION

#### APPROVED BY OMB NO. 3150-0104 EXPIRES 04/30/98

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digits/characters for each block)

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS MANDATORY INFORMATION COLLECTION REDUEST: 50.0 HRS. REPORTED LESSONS LEARNED ARE INCORPORATED INTO THE LICENSING PROCESS AND FED BACK TC INDUSTRY. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE INFORMATION AND RECORDS MANAGEMENT BRANCH (T. 6 F33) 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.

FACILITY NAME (1)

# COOPER NUCLEAR STATION

# DOCKET NU R (2) 05000298

PAGE (3) 1 OF 3

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TITLE (4)

NAME

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Technical Specification Violation Due to Failure To Address Equipment Inoperability During Surveillance Testing

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LICENSEE CONTACT FOR THIS LER (12)

TELEPHONE NUMBER (Include Area Code)

Linda R. Dewhirst, Licensing Engineer

(402) 825-5009

	COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)													
	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO EPIX			CAUSE	SYSTEM	COMPONENT	MANUFAC	TURER	RE	PORTABLE TO EPIX
SUPPLEMENTAL REPORT EXPECTED (14)							EXP	ECTED	MONTH	DA	Y	YEAR		
	YES (If yes,	complete EX	PECTED SUBM	ISSION DATE).		X	NO SUBMISSION DATE (15)		SUBMISSION DATE (15)					

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

On January 27, 1998, it was discovered that closing the Standby Gas Treatment (SGT) system unit crosstie valve during performance of certain surveillance test procedures renders both trains inoperable. This procedural step led to an inadvertent violation of Technical Specifications due to the failure to recognize the vulnerability of SGT operability under the particular surveillance test conditions.

Immediate actions taken included placing the surveillance procedures involving the closure of the crosstie valve on administrative hold, and revising a system operating procedure which operates the crosstie valve to include a caution statement indicating both SGT trains are inoperable unless one train is isolated (non-functional). The surveillance test procedures will be revised such that testing is performed when the SGT system is not required to be operable OR allow testing without closing the crosstie valve. A sampling of surveillance test procedures with similar test conditions will also be reviewed to determine if actions taken during testing adversely affects operable equipment.

NRC FORM 366A

#### U.S. NUCLEAR REGULATORY COMMISSION

# LICENSEE EVENT REPORT (LER)

#### TEXT CONTINUATION

FACILITY NAME (1)	DOCKET		LER NUMBER (	6)	F	AGE (	3)
		YEAR	SEQUENTIAL	REVISION			
COOPER NUCLEAR STATION	05000298	1998	001	00	2	OF	3

TEXT (If more space is required, use additional copies of NRC Form 366A) (17)

#### PLANT STATUS

At the time of the event, the plant was at full power, steady state operation.

## EVENT DESCRIPTION

On January 27, 1998, during the review of several Standby Gas Treatment (SGT) system [EIIS Code: BH] procedures for implementation of Improved Technical Specifications (ITS), it was discovered that surveillance test procedures inadvertently led to a violation of Technical Specifications. The surveillance test procedures include steps for closing the SGT system crosstie valve [EIIS Code: V], necessary to provide removal of decay heat generated in the charcoal and High Efficiency Particulate Air (HEPA) filters [EIIS Code: FLT] resulting from the retention of fission products following a Design Basis Accident Loss of Coolant Accident (DBA LOCA). When the crosstie valve is closed and both SGT system trains are functional, the decay heat removal function is impaired; thus rendering both SGT system trains inoperable. Technical Specifications (TS) require that upon discovery that both trains are inoperable, the plant must be placed in a condition where the SGT system is not required (i.e., cold shutdown). The TS Limiting Condition of Operation (LCO) provides no time requirements for achieving cold shutdown under these circumstances (both SGT trains inoperable). Thus, TS 1.0.J (ITS LCO 3.0.3) must be invoked which applies in cases where an LCO cannot be satisfied because of circumstances in excess of those addressed in the specification which requires that the facility be placed in HOT SHUTDOWN within 6 hours.

Once it was discovered that the closure of the crosstie valve rendered both trains inoperable, a review of past performances of the surveillance procedures was performed. The results indicated that surveillance testing had been conducted routinely (at a frequency of approximately once per cycle) at power. Though the surveillance test procedures are sufficient for their intended purpose (acceptable results have been demonstrated), they do not adequately address the impact to SGT operability and the plant conditions required to perform testing.

The surveillance procedures involving the closure of the crosstie valve were immediately placed on administrative hold. One system operating procedure was identified as operating the crosstie valve, and it was immediately revised to include a caution statement that closing the crosstie valve renders both SGT trains inoperable unless one train is isolated (non-functional).

#### BASIS FOR REPORT

Performance of the subject surveillance procedures at power results in a violation of TS, therefore this event is being reported as a violation of Technical Specifications under 10 CFR 50.73(a)(2)(i)(B).

## CAUSE

The cause of this event is a failure to recognize the vulnerability of both trains of the SGT system being inoperable when the crosstie valve is closed under the conditions of the surveillance test (unit is at power, both trains are functional).

A contributing factor is an incorrect description of the decay heat removal function in the Updated Safety Analysis Report (USAR).

NRC FORM 366A

4-951

U.S. NUCLEAR REGULATORY COMMISSION

LICENSEE EVENT REPORT (LER)

TEXT CONTINUATION

FACILITY NAME (1)	DOCKET		LER NUMBER	6)	F	AGE (3	()
		YEAR	SEQUENTIAL	REVISION			
COOPER NUCLEAR STATION	COOPER NUCLEAR STATION 05000298	1998	001	00	3	OF	3

TEXT (If more space is required, use additional copies of NRC Form 366A) (17)

## SAFETY SIGNIFICANCE

This event had potential significance. In the event of a DBA LOCA, both trains are automatically started and, upon verification that both subsystems are operating and reactor building pressure is less than or equal to minus 0.25 inches water gage, the redundant train is shut down to a standby condition. The potential exists that without decay heat removal, the filters in SGT unit which is shut down would reach ignition temperatures, which could also affect the operability of the in-service unit. However, there is a low probability that the event would actually occur. A probabilistic safety analysis (PSA) was performed which addresses the probability of a DBA LOCA occurring at the same time the surveillance test was being performed and the croastie valve was closed. The probability greater than 1 x 10E-6. Thus, based on a probabilistic comparison, this event does not pose a significant safety risk. Note also that the condition with the crosstie valve closed only existed for a short period of time while the surveillance was being performed. Following the completion of the surveillance, the procedures provide instructions to open the crosstie valve to its throttled position.

The significance of this event is further mitigated by the fact that there is a dependence on SGT run time and time to ignition temperature due to the decay heat of fission products deposited on the charcoal filters following a DBA LOCA. An engineering evaluation demonstrates that with the crossile valve closed, the charcoal filter in the non-operating train could reach ignition temperature in approximately 3.4 hours; however this is based on the assumption that the train had been operating for ten days following the event.

## CORRECTIVE ACTIONS

The surveillance test procedures will be revised such that testing is performed when the SGT system is not required to be operable OR conduct testing without closing the crosstie valve.

A sampling of surveillance test procedures with similar test conditions will be reviewed to determine if actions taken during testing adversely affects operable equipment.

The USAR will be updated to correctly describe the decay heat removal function of the crosstie valve.

# PREVIOUS EVENTS

The following are events with similar circumstances:

LER 1995-014, "Procedural Error That Could Result in Compromising Secondary Containment Integrity During Accident Conditions"

LER 1997-007-00, "Opening of a Torus to Drywell Vacuum Breaker"

# Correspondence No: NLS980033

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The following table identifies those actions committed to by the District in this document. Any other actions discussed in the submittal represent intended or planned actions by the District. They are described to the NRC for the NRC's information and are not regulatory commitments. Please notify the Licensing Manager at Cooper Nuclear Station of any questions regarding this document or any associated regulatory commitments.

COMMITMENT	COMMITTED DATE OR OUTAGE
Update the USAR to clearly define the safety function of the SGT system crosstie valve.	N/A
Review a sampling of surveillance test procedures with similar test conditions to determine if actions taken during testing adversely affects operable equipment.	N/A
Revise SGT surveillance procedures such that testing is to be performed when the SGT system is not guired to be operable OR allow testing without the closing the crosstie valve.	N/A
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PROCEDURE NUMBER 0.42

**REVISION NUMBER 5**