Nebraska Public Power District
Nebraska's Energy Leader

NLS2000024
March 23, 2000

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

Gentlemen:

Subject: Licensee Event Report No. 2000-005
Cooper Nuclear Station, NRC Docket 50-298, DPR-46

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

Sincerely,

J. A. McDonald
Plant Manager

/rar
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. Leech
MidAmerican Energy

Cooper Nuclear Station
P.O. Box 98 / Brownville, NE 68321-0098
***Telephone:** (402) 825-3811 / **Fax:** (402) 825-5211*
http://www.nppd.com

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NRC FORM 366 (6-1998) U.S. NUCLEAR REGULATORY COMMISSION

APPROVED BY OMB NO. 3150-0104 EXPIRES 06/30/2001

Estimated burden per response to comply with this mandatory information collection request: 50 hrs. Reported lessons learned are incorporated into the licensing process and fed back to industry. Forward comments regarding burden estimate to the 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. If an information collection does not display a currently valid OMB control number, the NRC may not conduct or sponsor, and a person is not required to respond to, the information collection.

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 5

TITLE (4)

Scaffold Construction Places Plant in a Condition Prohibited by Technical Specifications

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
02	26	2000	2000	-- 005 --	00	03	23	2000		05000
									FACILITY NAME	DOCKET NUMBER
										05000

OPERATING MODE (9)	1
POWER LEVEL (10)	100

THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more) (11)

	20.2201(b)		20.2203(a)(2)(v)	X	50.73(a)(2)(i)
	20.2203(a)(1)		20.2203(a)(3)(i)		50.73(a)(2)(ii)
	20.2203(a)(2)(i)		20.2203(a)(3)(ii)		50.73(a)(2)(iii)
	20.2203(a)(2)(ii)		20.2203(a)(4)		50.73(a)(2)(iv)
	20.2203(a)(2)(iii)		50.36(c)(1)		50.73(a)(2)(v)
	20.2203(a)(2)(iv)		50.36(c)(2)		50.73(a)(2)(vii)

	50.73(a)(2)(viii)
	50.73(a)(2)(x)
	73.71
	OTHER

Specify in Abstract below or in NRC Form 366A

LICENSEE CONTACT FOR THIS LER (12)

NAME	TELEPHONE NUMBER (Include Area Code)
S. R. Mahler, Assistant Manager Nuclear Licensing and Safety	(402) 825-3811

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

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO EPIX		CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO EPIX

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

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

On February 26, 2000, at approximately 1420 Central Standard Time, Operations personnel discovered that scaffolding constructed to support upcoming Refueling Outage maintenance for the reactor building ventilation supply air operated Secondary Containment [EIIS:NG] isolation valve [EIIS:ISV] would prevent the valve from fully closing. The valve was declared inoperable in accordance with Technical Specifications at 1436, the scaffolding obstruction was removed, and the valve was declared operable at 1603.

Further investigation determined that the scaffolding had been constructed between February 16, 2000, and February 21, 2000. Therefore, it was concluded that the valve was not capable of performing its safety function for a period of time that exceeded Technical Specification Limiting Condition for Operation 3.6.4.2, Required Action Completion Time requirements.

Corrective actions include: 1) A walkdown of other installed scaffolding to identify potential adverse interactions with plant equipment; 2) tailgate training to personnel responsible for erecting scaffolding to heighten awareness on the equipment interference issue; 3) notification to operations personnel addressing this issue to ensure this type of information is captured during initial walkdowns; 4) counseling of personnel involved; and 5) proposed revisions to the procedure.

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

PLANT STATUS

Cooper Nuclear Station (CNS) was in Mode 1 at approximately 100% power and had been in continuous operation for 42 days at the time the adverse condition was discovered.

BACKGROUND

The safety objective of the secondary containment system [EIIS:NG] in conjunction with other engineered safeguards and nuclear safety systems is to limit the release to the environs of radioactive materials so that off-site doses from a postulated design basis accident will be below the values of 10CFR100.

The reactor building isolation and control system serves to trip the reactor building supply and exhaust fans, isolate the normal ventilation system and provide the starting signals for the Standby Gas Treatment (SGT) [EIIS:BH] system in the event of the postulated Loss of Coolant Accident inside the drywell or the postulated fuel handling accident in the reactor building.

Two normally open dampers [EIIS:ISV], in series, are provided in the supply path and the two exhaust paths for reactor building and the two supply and exhaust paths for Reactor Recirculation Motor Generator (MG) set ventilation. Each set of dampers consists of one air actuated damper, supplied by instrument air backed up by an accumulator with an assured one-hour supply capacity, and a motor operated damper. These dampers ensure redundant, diverse isolation capability for the reactor building in the event of a release of radioactive material to the reactor building. These dampers close automatically on a Group 6 (Secondary Containment Isolation) isolation signal. Isolation time is approximately 12 seconds for the air actuated dampers and approximately 90 seconds for the motor operated dampers following receipt of a Group 6 isolation signal.

With the reactor building isolated, the SGT system has the necessary capacity to perform its design function which is to hold the building at a minimum average subatmospheric pressure of 0.25 inches of water (under neutral wind conditions).

The reactor building isolation and control system performs the required isolation actions of the secondary containment system following receipt of the appropriate isolation signals. Following initiation, the air operated reactor building isolation dampers close within approximately 12 seconds, and the motor operated reactor building isolation dampers close within approximately 90 seconds. The reactor building isolation control system also automatically trips the reactor building and MG set supply and exhaust fans and starts the SGT system. Updated Safety Analysis Report (USAR), Section XIV-6.4 analyzes a fuel handling accident with release to the reactor building. This analysis confirms that, assuming an unfiltered release at full reactor building exhaust fan flow for approximately 90 seconds, conservatively assuming isolation via the motor operated damper, followed by a filtered release via the SGT system, releases are well below the site boundary doses permitted by 10CFR100.

The reactor building ventilation unit takes air from the outside atmosphere and distributes it throughout the reactor building. Reactor building exhaust air is drawn into the exhaust plenum by the reactor building exhaust fans and is then exhausted to the reactor building roof area. Reactor building isolation (Primary Containment Isolation System [EIIS:JM] Group 6 Isolation) closes three sets of double isolation valves. One set is located immediately downstream of the ventilation unit. Two sets are located immediately upstream of the exhaust stack exit (one set in each of the two exhaust lines).

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

HV-AOV-257AV is a reactor building ventilation supply valve that is closed and opened by the function of an air operator. This valve is normally opened during plant operation. The air operator consists of an actuator arm and air operator cylinder that rotate during closure and opening of the valve. A scaffold was erected such that it interfered with the potential movement of the actuator arm and air operator cylinder of the valve. The valve would not have been capable of being fully closed if required.

EVENT DESCRIPTION

On February 26, 2000, at approximately 1420 Central Standard Time, Operations personnel discovered that scaffolding constructed to support upcoming Refueling Outage maintenance for Reactor Building Ventilation Supply air operated Secondary Containment isolation valve HV-AOV-257AV would prevent the valve from fully closing. The valve was declared inoperable in accordance with Technical Specifications at 1436, the scaffolding obstruction was removed, and HV-AOV-257AV was declared operable at 1603.

Further investigation determined that the scaffolding had been constructed between February 16, 2000, (scaffolding request approval date) and February 21, 2000 (scaffolding post-construction examination approval date). Therefore, it was concluded that HV-AOV-257AV was not capable of performing its safety function of providing Secondary Containment isolation for a period of time that exceeded Technical Specification Limiting Condition for Operation 3.6.4.2, Required Action Completion Time requirements.

BASIS OF REPORT

This event is reportable under the requirements of 10CFR50.73(a)(2)(i)(B) as any operation or condition prohibited by the plant's Technical Specifications.

CAUSE

The root cause of the subject condition is ineffective communication between the operator and the scaffolding job supervisor.

Several factors contributed to this condition. The procedure does not explicitly require the Operator to document whether or not any potential equipment interference concerns exist as a result of the pre-construction examination. The procedure provides minimal details on what types of things to look for with equipment interferences. The movement path of air operators like the subject valve is not widely known by plant personnel. The scaffold builders were experienced contractors but did not have extensive site specific knowledge of CNS equipment characteristics and functions.

SAFETY SIGNIFICANCE

The safety significance of this event is low. The Secondary Containment air operated isolation valve could not completely close however, the redundant motor operated valve in the reactor building ventilation supply flowpath was available to provide the required safety function for Secondary Containment isolation.

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

A Probabilistic Safety Assessment risk evaluation of the event provided the following conclusion:

Considering the severe nature of the plant damage states which dominate Large Early Release Frequency (LERF) and the associated primary containment failure mode, the benefits provided by the engineered safety features of secondary containment are negligible in reducing LERF. The relatively benign release magnitudes for analyzed design basis accidents and the deterministic plant response for those accidents provide negligible contribution to the overall LERF spectrum. Therefore it follows that the risk significance of reactor building ventilation failure to isolate within the assumptions of USAR, Chapter XIV, Analysis of Design Basis Accidents, is also negligible. The safety functions provided by secondary containment equipment, such as reactor building ventilation isolation and SGT do not help mitigate the consequences of the severe accidents which contribute to baseline LERF for CNS. Consequently, any degraded conditions for these systems do not have an adverse impact on LERF, and would be well within the acceptance limits for changes to the probabilistic based LERF.

This event was also evaluated to determine if the event should be classified as a Safety System Functional Failure (SSFF). The results of the evaluation demonstrated that CNS retained the ability to:

A. Shut down the reactor and maintain it in a safe shutdown condition.
B. Remove residual heat.
C. Control the release of radioactive material.
D. Mitigate the consequences of an accident.

Therefore, this event is not reportable as a SSFF in accordance with the guidance contained in Nuclear Energy Institute 99-02, Draft Revision D, or under the provisions of 10CFR50.73(a)(2)(v).

CORRECTIVE ACTIONS

Immediate Actions:

The system/component was declared inoperable and entry into Technical Specification Limiting Condition for Operation 3.6.4.2, Secondary Containment, was initiated.

Upon discovery of the condition, the scaffold was removed/altered to eliminate the interference.

Other installed scaffolding was examined by Operations Department personnel to detect in other potential adverse interactions with plant equipment. No other instances were identified.

Tailgate training was administered to personnel responsible for erecting scaffolding to heighten the awareness on the equipment interference issue.

Operations was notified (via electronic-mail) of this issue to ensure this type of information is captured during scaffold pre-construction walkdowns.

Intermediate Corrective Actions:

Operations issued a standing order to address scaffolding/equipment interferences, effective until the scaffolding procedure is revised.

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

The personnel involved with this condition have been counseled on this event.

Additional Corrective Actions:

CNS will revise the appropriate station procedure for scaffolding construction and control to: 1) enhance the discussion on equipment interferences; 2) add requirements for Operations to document potential equipment interferences during the pre-construction examination; and, 3) require the scaffold erection personnel to acknowledge any potential equipment interferences identified.

PREVIOUS EVENTS

There have been no previous reportable events identified where scaffolding construction has impacted the ability of components to perform their safety function.

Correspondence No: NLS2000024

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 NL&S Manager at Cooper Nuclear Station of any questions regarding this document or any associated regulatory commitments.

COMMITMENT	COMMITTED DATE OR OUTAGE
CNS will revise the appropriate station procedure for scaffolding construction and control to: 1) enhance the discussion on equipment interferences; 2) add requirements for Operations to document potential equipment interferences during the pre-construction examination; and, 3) require the scaffold erection personnel to acknowledge any potential equipment interferences identified.	May 14,2000