



Nebraska Public Power District

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

CNSS948083

March 18, 1994

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

Dear Sir:

Cooper Nuclear Station Licensee Event Report 94-003 is forwarded as an attachment to this letter.

On the previous copy that was sent to you March 17, 1994, the Report Date was inadvertently omitted.

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

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PDR ADDCK 05000298
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LICENSEE EVENT REPORT (LER)

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

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 (MNB 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.

FACILITY NAME (1) COOPER NUCLEAR STATION	DOCKET NUMBER (2) 05000298	PAGE (3) 1 OF 4
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TITLE (4) Technical Specification Violation for Inoperable Radiation Monitors Caused By Improperly Assembled Particulate/Iodine Filter Assemblies

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	15	94	94	-- 003 --	00	03	17	94	FACILITY NAME	DOCKET NUMBER 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 John R. Myers	TELEPHONE NUMBER (Include Area Code) (402) 825-3811
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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
D	IL	MON	KO2O	N					

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 15, 1994, RMV-RM-30B, the Radwaste Building High Range Gaseous Effluent Radiation Monitor, was declared inoperable at 1:48 pm upon discovering a missing O-ring in the lower portion of the sample assembly that could have resulted in an inaccurate sample if the monitor was required to operate. Continued investigation determined that an additional O-ring was missing in the upper portion of the sample assembly. Following O-ring installation and leak testing, the monitor was declared operable at 2:39 pm on February 18. On February 22 at 5:35 pm, two similar monitors, RMV-RM-20B, Turbine Building High Range Gaseous Effluent Radiation Monitor, and RMP-RM-3B, Elevated Release Point High Range Gaseous Effluent Radiation Monitor, were declared inoperable upon determining that O-rings were also missing in the upper portion of the sample assemblies. Following O-ring installation and leak testing, these monitors were returned to service on February 25 at 4:45 pm.

The lower O-ring was not installed during previous surveillance testing or maintenance. The upper O-rings were removed to allow use of an alternate sample cartridge, and were not replaced when the original configuration was restored. Personnel have been made aware of the situation and procedures will be revised to provide additional guidance on the replacement and testing of the sample assembly.

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TEXT CONTINUATION

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

A. Event Description

On February 15, 1994, the particulate/iodine filter sample assembly for the Radwaste Building High Range Gaseous Effluent Radiation Monitor (RW monitor), RMV-RM-30B, was found loose in the sample holder. Investigation revealed an O-ring was missing in the lower portion of the sample assembly. It was determined that the missing lower O-ring had the potential to dilute sample flow during post accident conditions. The monitor was declared inoperable at 1:48 pm. Upon discovery of the condition in the RW monitor, the two similar high range gaseous effluent radiation monitors, RMV-RM-20B, Turbine Building High Range Gaseous Effluent Radiation Monitor, and RMP-RM-3B, Elevated Release Point High Range Gaseous Effluent Radiation Monitor (ERP monitor), were inspected. During this inspection O-rings were found to be installed in the lower portion of the sample assembly. Based upon the as-found conditions, these monitors were considered operable.

On February 18, review of a vendor drawing for the RW monitor filter assembly showed an O-ring in the upper portion of the filter assembly. However, a parts list that indicated the O-rings applicable to the drawing was not available. The O-rings for the sample assembly were replaced as shown on the drawing and upon completion of leakage testing the RW monitor was declared operable at 2:39 pm. Engineering confirmed the drawing's applicability to these installations and a subsequent inspection of the ERP and Turbine Building monitors on February 22 determined that the O-ring for the upper portion of the sample assembly was missing. The monitors were declared inoperable at 5:35 pm. Subsequently, the appropriate O-rings were installed, testing completed, and the monitors declared operable on February 25 at 4:45 pm.

B. Plant Status

The plant was in power operation at approximately 100 percent power at the time of this discovery.

C. Basis for Report

Technical Specification section 3.2.H requires the RW, ERP, and Turbine Building monitors to be operable. In the event the monitors are inoperable, the preplanned alternative method of sampling is to be initiated within 72 hours, and the monitor restored to operability within 7 days. In the as-found condition, the monitors may not have provided representative release rate indications during post accident monitoring. This condition could provide non-conservative indications should a major release have occurred and this is considered a condition prohibited by Technical Specifications, reportable in accordance with 10CFR50.73(a)(2)(i).

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D. Cause

The high range monitors are calibrated on a 12 month frequency. At the time of the calibration, the sample cartridge may be disassembled and the filter paper and iodine cartridge replaced. It is apparent that during a prior calibration the O-ring in the lower portion of the filter assembly of the RW monitor was not installed. The last calibration of the monitor was performed in August 1993. Personnel responsible for performing the most recent calibration were uncertain if the O-ring was present. Based upon this, it is unknown when the O-ring was omitted from the filter assembly.

The missing upper O-ring is attributable to the use of an alternate particulate/iodine cartridge. The best estimate is that use of the alternate cartridge began in 1985. Because of physical differences between the original and alternate cartridges, their use resulted in a loose fit of the particulate filter and iodine cartridge within the sample assembly. To provide a tight fit (i.e., greater compression), the O-ring in the upper portion of the sample assembly was removed. Discussions with the vendor indicated that the O-ring was not required if a tight fit was obtained. When use of the original cartridge was subsequently resumed, the O-ring was not replaced. No instructions were available to the Chemistry Technicians specifying the need for O-rings in this installation, and no technical review of the installation of the alternate cartridge was conducted, resulting in the failure to identify the need for O-rings upon reinstallation of the original cartridge design. Additionally, the existing surveillance procedure did not require leak testing of the particulate/iodine sample assembly.

E. Safety Significance

The high range gaseous effluent radiation monitors operate during accident conditions to predict offsite releases as a basis for protective action recommendations. The initial indications of radioactive releases would be identified by the normal range gaseous effluent radiation monitors. In the event of significant releases, the normal range monitors transfer the indication functions to the high range monitors, and, if releases continue to increase, the normal range monitors will automatically cease operation. Additionally, other indications of accident significance would be utilized in the formulation of protective action recommendations. Dose assessments, utilized as the basis for protective action recommendations, are initially based on indicated noble gas releases, but are updated with field monitoring team data as soon as it is available. It is unlikely that a significant effect regarding the protective action recommendations would have occurred.

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

F. Safety Implications

The safety implications associated with this deficiency are most significant with the plant in operation at full power.

G. Corrective Action

The missing O-rings were replaced and a leak test was conducted prior to returning the monitors to service to ensure the repairs were effective. The normal range monitors utilize a similar sample assembly, but, would not be affected due to installation differences. Standby monitors are also being examined to ensure that these sampling systems are not susceptible to a similar condition.

To prevent recurrence, personnel have been made aware of the situation and the procedures for replacement of the cartridge and filter in the gaseous effluent radiation monitors will be revised to provide guidance on the replacement of the O-rings and require leakage testing when the cartridge and filter or O-rings are replaced.

H. Similar Events

None.

SUPPLEMENTAL INFORMATION

Manufacturer: Kaman Sciences Corporation
Model: KMG-HRH
EIIIS Component Code: MON
EIIIS System Code: IL