ACCELERATED DOCUMENT DISTRIBUTION SYSTEM

REGULATORY INFORMATION DISTRIBUTION SYSTEM (RIDS)

ACCESSION NBR:9406130116 DOC.DATE: 94/06/06 NOTARIZED: NO DOCKET #
FACIL:50-305 Kewaunee Nuclear Power Plant, Wisconsin Public Servic 05000305
AUTH.NAME AUTHOR AFFILIATION
RALEIGH,L. Wisconsin Public Service Corp.
SCHROCK,C.A. Wisconsin Public Service Corp.
RECIP.NAME RECIPIENT AFFILIATION

SUBJECT: LER 94-005-00:on 940509,determined that condenser air ejector radiation monitor,R-15,suddenly increased 1.0E6 CPM which activated high alarm.Cause could not be determined. Troubleshooting was performed.W/940606 ltr.

DISTRIBUTION CODE: IE22T COPIES RECEIVED:LTR 1 ENCL 1 SIZE: 6
TITLE: 50.73/50.9 Licensee Event Report (LER), Incident Rpt, etc.

NOTES:

	RECIPIENT ID CODE/NAME	COPIES LTTR	COPIES ENCL	RECIPIENT ID CODE/NAME	COPIES LTTR	COPIES ENCL
	PD3-3 PD	1	1	LAUFER,R	1	1
INTERNAL:	ACRS	1	1	AEOD/DSP/TPAB	1	1
	AEOD/ROAB/DSP	2	2	NRR/DE/EELB	1	1
	NRR/DE/EMEB	1	1	NRR/DORS/OEAB	1	1
	NRR/DRCH/HHFB	1	1	NRR/DRCH/HICB	1	1
	NRR/DRCH/HOLB	1	1	NRR/DRSS/PRPB	2	2
	NRR/DSSA/SPLB	1	1	NRR/DSSA/SRXB	1	1
	NRR/PMAS/IRCB-E	1	1	REG FILE 02	1	1
	RES/DSIR/EIB	1	1	RGN3 FILE 01	1	1
EXTERNAL:	EG&G BRYCE,J.H	2	2	L ST LOBBY WARD	1	1
	NRC PDR	1	1	NSIC MURPHY,G.A	1	1
	NSIC POORE,W.	1	1	NUDOCS FULL TXT	1	1

NOTE TO ALL "RIDS" RECIPIENTS:

PLEASE HELP US TO REDUCE WASTE! CONTACT THE DOCUMENT CONTROL DESK, ROOM P1-37 (EXT. 504-2065) TO ELIMINATE YOUR NAME FROM DISTRIBUTION LISTS FOR DOCUMENTS YOU DON'T NEED!

FULL TEXT CONVERSION REQUIRED
TOTAL NUMBER OF COPIES REQUIRED: LTTR 27 ENCL 27

RIDS/ADDS RIDS/ADDS RIDS/ADDS

A0

WPSC (414) 433-1598
TELECOPIER (414) 433-5544

NRC-94-071
EASYLINK 62891993

WISCONSIN PUBLIC SERVICE CORPORATION
600 North Adams • P.O. Box 19002 • Green Bay, WI 54307-9002

June 6, 1994

10 CFR 50.73

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

Ladies/Gentlemen:

Docket 50-305
Operating License DPR-43
Kewaunee Nuclear Power Plant
Reportable Occurrence 94-005-00

In accordance with the requirements of 10 CFR 50.73, "Licensee Event Report System," the attached Licensee Event Report for reportable occurrence 94-005-00 is being submitted.

Sincerely,

C. A. Schrock

C. A. Schrock
Manager-Nuclear Engineering

RTS/cjt

Attach.

cc - INPO Records Center
US NRC Senior Resident Inspector
US NRC, Region III

LER\COVERLTR.WP

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)
Kewaunee Nuclear Power Plant	05000305	1 OF 5

TITLE (4) Radiation Monitor Alarm Resulted In An Engineered Safeguard Feature Actuation Of Steam Generator Blowdown Isolation Valves

EVENT DATE (5)			LER NUMBER (6)			REPORT NUMBER (7)			OTHER FACILITIES INVOLVED (8)	
MONTH	DAY	YEAR	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	MONTH	DAY	YEAR	FACILITY NAME	DOCKET NUMBER
05	09	94	94	-- 005 --	00	06	06	94	N/A	05000
									FACILITY NAME: N/A	DOCKET NUMBER: 05000

OPERATING MODE (9)	N
POWER LEVEL (10)	35

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

	20.402(b)		20.405(c)	X	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)		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)
Lynne Raleigh - Plant Licensing	414 388-2560

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

SUPPLEMENTAL REPORT EXPECTED (14)

				EXPECTED SUBMISSION DATE (15)	MONTH	DAY	YEAR
	YES (If yes, complete EXPECTED SUBMISSION DATE)	N	NO				

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

The following is a description of an actuation of steam generator blowdown isolation valves which are engineered safety features. At 1318 hours on May 9, 1994, the condenser air ejector radiation monitor, R-15, suddenly increased to 1.0E6 CPM which activated its high alarm. The monitor's high alarm caused the steam generator blowdown isolation valves and the steam generator blowdown sample isolation valves to close as designed. Sampling determined that the high alarm on R-15 was not caused by primary to secondary leakage. The plant was at 35 percent power when the actuations occurred.

The cause of the high alarm signal from R-15 could not be conclusively determined. However, corrective actions were taken to isolate the pre-amplifier from its ground to decrease the interference on the detector channel. It appears that this action has decreased the interference on the channel.

The radiation monitor was returned to service on May 13, 1994, at 0904 hours.

DESCRIPTION OF EVENT

At 1318 hours on May 9, 1994, with the plant at 35 percent power, an automatic closure of the steam generator blowdown isolation valves [ISV] (BT-2A, BT-2B, BT-3A, BT-3B) and steam generator blowdown sample isolation valves (BT-31A, BT-31B, BT-32A, BT-32B) occurred. The actuation occurred when the condenser air ejector radiation monitor [MON], R-15, increased its count rate to the detector's maximum reading (1.0E6 CPM) and generated a high alarm signal. The nominal alarm setpoint for R-15 is 50,000 CPM. Radiation monitor R-15 is installed directly in the condenser air ejector effluent stream and is intended to provide early indication of a steam generator tube leak.

In response to the alarm, the operators immediately implemented operating procedure A-RM-45, "Abnormal Radiation Monitoring System." In accordance with the procedure, operations verified that all automatic actuations occurred as designed. Operations also implemented procedure A-RC-36D, "Reactor Coolant Leak." The Radiation Protection and Chemistry groups were notified of the event. Procedure RC-C-88, "Primary-Secondary Leak Rate Data," which determines R-15 air ejector and Reactor Coolant System gaseous activity was performed. The sampling performed as part of these procedures indicated that the high alarm on R-15 was not caused by primary to secondary leakage. R-15 was declared out of service and steam generator blowdown was re-established. The detector was returned to service on May 13, 1994, at 0904 hours.

CAUSE OF EVENT

The cause of steam generator blowdown isolation and sampling isolation could not be conclusively determined. Since the sampling and testing associated with the required procedures identified that a primary to secondary leak did not exist, the cause was suspected to be due to electromagnetic interference. A new radiation monitoring system was installed during the 1994 refueling outage. This event occurred during start up from the outage. The new radiation monitor R-15 was in service approximately six days before this event occurred.

Following this event, the detector was removed from its housing and inspected. The Geiger Mueller (GM) tube and its connections appeared to be in good condition with no evidence of moisture intrusion. Troubleshooting determined that the detector was operating within specifications. Therefore, neither the detector nor any detector components were replaced.

Interference with the signal sent from the detector was also investigated. It was suspected that interference was occurring on the shielded cable which connects the detector to the pre-amplifier. The pre-amplifier and detector are each grounded to separate I-beams in the turbine building. The shielding of the cable is connected to the detector housing and the pre-amplifier chassis. If a potential difference existed between the detector and pre-amplifier grounds, a current could be induced through the shield. A current passing through the shield could induce electromagnetic interference (EMI) on the signal carrying conductors in the cable between the pre-amplifier and the detector, which may have resulted in R-15 alarming.

ANALYSIS OF THE EVENT

This report is being submitted in accordance with 10 CFR 50.73(a)(2)(iv) as an actuation of steam generator blowdown isolation valves which are engineered safety features. Blowdown isolation is considered an engineered safety feature because the valves receive a signal to close when an auxiliary feedwater pump receives a signal to start. The valves are required to close to ensure steam generator inventory under postaccident conditions. The circuitry which initiates closure of the blowdown isolation valves on a condenser air ejector high radiation signal is not an engineered safety feature. This event was also reported in accordance with 10 CFR 50.72(b)(2)(ii) on May 9, 1994 at 1518 hours central standard time.

Since the steam generator blowdown isolation valves and the steam generator blowdown sample isolation valves closed as designed and the actuations did not place the plant in an unanalyzed condition, there were no safety implications associated with this event.

CORRECTIVE ACTIONS

1. The pre-amplifier chassis was isolated from the I-beam by placing a half inch thick plastic sheet between the pre-amplifier and the I-beam. The plastic prevents the formation of a ground loop. This appears to have decreased the interference on the channel.

2. Troubleshooting performed for cause determination found the detector within its recommended calibration.

ADDITIONAL INFORMATION: None.

SIMILAR EVENTS:

LER 94-001 "Failure of Radiation Detector Results in Actuation of Steam Generator Blowdown Isolation"

LER 93-002 "Failure of Radiation Detector Results in Actuation of Steam Generator Blowdown Isolation"

LER 89-010 "Improper Detector Installation and a Loose Electric Connection Cause Two Separate Actuations of Steam Generator Blowdown Isolation (An ESF System)"

EQUIPMENT FAILURES: None.