

REGULATORY INFORMATION DISTRIBUTION SYSTEM (RIDS)

ACCESSION NBR: 8704290132 DOC. DATE: 87/04/24 NOTARIZED: NO DOCKET #  
 FACIL: 50-315 Donald C. Cook Nuclear Power Plant, Unit 1, Indiana & 05000315  
 AUTH. NAME AUTHOR AFFILIATION  
 BAKER, K. R. Indiana & Michigan Electric Co.  
 SMITH, W. G. Indiana & Michigan Electric Co.  
 RECIP. NAME RECIPIENT AFFILIATION

SUBJECT: LER 87-004-00: on 870408, unit shut down due to unidentified reactor coolant sys leakage per Tech Spec 3.4.6.2. Caused by leakage greater than 1gpm from letdown isolation valve. Leakage sources repaired. W/870424 ltr.

DISTRIBUTION CODE: IE22D COPIES RECEIVED: LTR 1 ENCL 1 SIZE: 4  
 TITLE: 50.73 Licensee Event Report (LER), Incident Rpt, etc.

NOTES:

	RECIPIENT ID CODE/NAME	COPIES LTTR ENCL	RECIPIENT ID CODE/NAME	COPIES LTTR ENCL
	PD3-3 LA	1 1	PD3-3 PD	1 1
	WIGGINGTON, D	1 1		
INTERNAL:	ACRS MICHELSON	1 1	ACRS MOELLER	1 1
	AEOD/DOA	1 1	AEOD/DSP/ROAB	2 2
	AEOD/DSP/TPAB	1 1	NRR/DEST/ADE	1 0
	NRR/DEST/ADS	1 0	NRR/DEST/CEB	1 1
	NRR/DEST/ELB	1 1	NRR/DEST/ICSB	1 1
	NRR/DEST/MEB	1 1	NRR/DEST/MTB	1 1
	NRR/DEST/PSB	1 1	NRR/DEST/RSB	1 1
	NRR/DEST/SCB	1 1	NRR/DLPQ/HFB	1 1
	NRR/DLPQ/GAB	1 1	NRR/DOEA/EAB	1 1
	NRR/DREP/EPB	1 1	NRR/DREP/RAB	1 1
	NRR/DREP/RPB	2 2	NRR/PMAS/ILRB	1 1
	NRR/PMAS/PTSB	1 1	<u>REG FILE</u> 02	1 1
	RES SPEIS, T	1 1	RGN3 FILE 01	1 1
EXTERNAL:	EG&G GROH, M	5 5	H ST LOBBY WARD	1 1
	LPDR	1 1	NRC PDR	1 1
	NSIC HARRIS, J	1 1	NSIC MAYS, G	1 1

## LICENSEE EVENT REPORT (LER)

FACILITY NAME (1) D. C. Cook Nuclear Plant - Unit One	DOCKET NUMBER (2) 0 5 0 0 0 3 1 5	PAGE (3) 1 OF 0 3
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TITLE (4) Unit Shutdown Due to Unidentified Reactor Coolant System Leakage as per Technical Specification 3.4.6.2
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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 NAMES		DOCKET NUMBER(S)
0 4	0 8	8 7	8 7	0 0 4	0 0 0	4	2 4	8 7			0 5 0 0 0

THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more of the following) (11)											
OPERATING MODE (9)		1									
POWER LEVEL (10)		9 0									
		20.402(b)									
		20.405(a)(1)(i)									
		20.405(a)(1)(ii)									
		20.405(a)(1)(iii)									
		20.405(a)(1)(iv)									
		20.405(a)(1)(v)									
		20.405(c)									
		50.38(c)(1)									
		50.38(c)(2)									
		50.73(a)(2)(i)									
		50.73(a)(2)(ii)									
		50.73(a)(2)(iii)									
		50.73(a)(2)(iv)									
		50.73(a)(2)(v)									
		50.73(a)(2)(vi)									
		50.73(a)(2)(vii)									
		50.73(a)(2)(viii)(A)									
		50.73(a)(2)(viii)(B)									
		50.73(a)(2)(ix)									
		73.71(b)									
		73.71(c)									
		OTHER (Specify in Abstract below and in Text, NRC Form 366A)									

LICENSEE CONTACT FOR THIS LER (12)								TELEPHONE NUMBER			
NAME K. R. Baker, Operations Superintendent								AREA CODE 6 1 6			
								4 6 5 1 - 5 9 1 0 1 1			

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
<input type="checkbox"/> YES (If yes, complete EXPECTED SUBMISSION DATE)								<input checked="" type="checkbox"/> NO				

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

On April 8, 1987, At 0503 hours, a unit shutdown was completed as a result of unidentified reactor coolant system (RCS) leakage greater than the one gallon per minute (gpm) limit of Technical Specification 3.4.6.2 action item b. The maximum leakage during this event was 1.16 gpm. Leakage was first determined to be greater than one gpm at 2256 hours on April 7, 1987. The unit shutdown was started at 0100 hours on April 8, 1987, and an unusual event was declared. The unusual event was terminated at 0745 hours, after the major source of RCS leakage was isolated.

The major source of leakage was identified as a letdown isolation valve packing leak. The leakage sources have been repaired and no further corrective actions are required.

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## LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

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		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER			
D. C. Cook Nuclear Plant - Unit One	0 5 0 0 0 3 1 5	8 7	— 0 0 4	— 0 0	0 2	OF	0 3

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

Conditions Prior to Occurrence

Unit 1 - Mode 1 (Power Operation) - 90 percent reactor thermal power.

Description of Event

On April 7, 1987, increased radiation levels were observed on the containment particulate radiation monitors (EIIS-ILRI). A reactor coolant system (RCS) (EIIS-AB) leak rate test was started at that time and completed at 0909 hours. The unidentified leakage was determined to be .42 gpm as compared to .27 gpm from the previous leak rate test. The next RCS leak rate test, completed at 2003 hours, determined the unidentified leakage to be .5 gpm. The next RCS leak test, completed at 2256 hours, determined the unidentified leakage to be 1.16 gpm which was greater than the 1 gpm unidentified RCS leakage limit of Technical Specification (T.S.) 3.4.6.2.

The procedure for excessive RCS leakage was initiated at 2256 hours. After determining the leak could not be remotely isolated, a unit shutdown was started at 0100 hours on April 8, 1987, and an unusual event was declared. The unit shutdown was complete at 0503 hours.

A containment entry was made and the following sources of leakage were found: a packing leak on an RCS air operated letdown isolation valve (EIIS-CBISV) and a bonnet to body seal leak on a charging line check valve (EIIS-CBSHV) (second check valve from RCS).

The letdown isolation valve packing leak was the major leak found. This was isolated via a manual isolation valve (EIIS-CBISV) inside containment at 0718 hours on April 8, 1987. The unusual event was terminated at 0745 hours.

There were no inoperative structures, components or systems that contributed to or resulted from this event. The NRC was notified of this event via ENS at 0105 hours on April 8, 1987.

Cause of the Event

Unidentified leakage greater than one gpm, which could not be isolated, required the unit shutdown as per the requirements of T.S. 3.4.6.2, action item b. As described earlier, the leakage was later identified as coming from two sources.

The leakage from these sources, while not always predictable, is not considered to be an abnormal degradation of the RCS boundary.

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

Analysis of Event

This event is considered reportable under the criteria set forth in 10 CFR 50.73 (a)(2)(i).

The maximum recorded RCS leakage for this event was 1.16 gpm which was well below the capacity of the make up system; therefore, control of RCS inventory was never in jeopardy.

Upon review of the leakage sources, it was determined that a rapid degradation was unlikely.

Based on the above it is concluded that this event had no adverse effect on the public health and safety.

Corrective Action

The leakage sources have been repaired and no further corrective actions are required.

Failed Components Identification

None

Previous Similar Events

Previous similar events were reported in licensee event reports 50-315-81-62 and 50-315-78-08.



**INDIANA & MICHIGAN ELECTRIC COMPANY**

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April 24, 1987

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

Operating License DPR-58  
Docket No. 50-315

Document Control Manager:

In accordance with the criteria established by 10 CFR 50.73  
entitled Licensee Event Reporting System, the following  
report is being submitted:

87-004-0

Sincerely,

W. G. Smith, Jr.  
Plant Manager

/afh

Attachment

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