

REGULATORY INFORMATION DISTRIBUTION SYSTEM (RIDS)

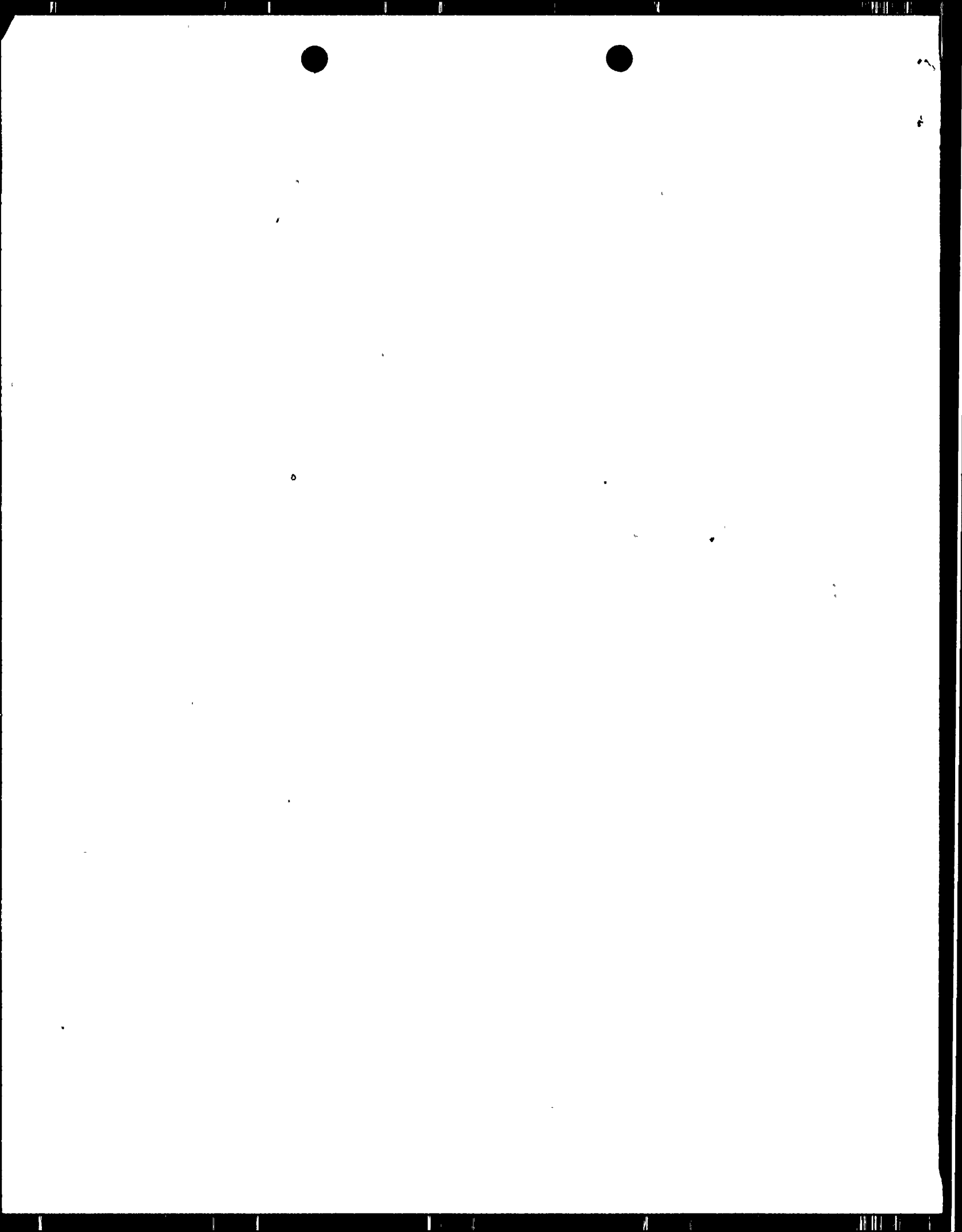
ACCESSION NBR: 8709220580 DDC DATE: 87/09/17 NOTARIZED: NO DOCKET #  
 FACIL: 50-315 Donald C. Cook Nuclear Power Plant, Unit 1, Indiana & 05000315  
 AUTH. NAME AUTHOR AFFILIATION  
 BAKER, K. R. Indiana & Michigan Power Co.  
 SMITH, W. G. Indiana & Michigan Power Co.  
 RECIP. NAME RECIPIENT AFFILIATION

SUBJECT: LER 87-019-00: on 870818, during performance of shift  
 surveillances, determined that RHR sys flow below 3,000 gpm  
 surveillance requirement. Caused by procedural inadequacy. RCS  
 level increased & required flow established. W/870917 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	2 2
	AEOD/DOA	1 1	AEOD/DSP/NAS	1 1
	AEOD/DSP/ROAB	2 2	AEOD/DSP/TPAB	1 1
	DEDRO	1 1	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/SGB	1 1
	NRR/DLPQ/HFB	1 1	NRR/DLPQ/QAB	1 1
	NRR/DOEA/EAB	1 1	NRR/DREP/RAB	1 1
	NRR/DREP/RPB	2 2	NRR/DRIS/SIB	1 1
	NRR/PMAS/ILRB	1 1	<u>REG FILE</u> 02	1 1
	RES DEPY GI	1 1	RES TELFORD, J	1 1
	RES/DE/EIB	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 1					PAGE (3) OF 03	
TITLE (4) Reactor Coolant System Flow Less Than Required During Refueling Due to Procedural Inadequacy																
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)			
08	18	87	87	019	00	09	17	87					0 5 0 0 0			
OPERATING MODE (9)		THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more of the following) (11)														
6		20.402(b)				20.405(c)				50.73(a)(2)(iv)				73.71(b)		
POWER LEVEL (10)		20.405(a)(1)(i)				50.36(c)(1)				50.73(a)(2)(v)				73.71(c)		
0 1 0 0		20.405(a)(1)(ii)				50.36(c)(2)				50.73(a)(2)(vii)				OTHER (Specify in Abstract below and in Text, NRC Form 366A)		
		20.405(a)(1)(iii)				50.73(a)(2)(i)				50.73(a)(2)(viii)(A)						
		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 K. R. Baker - Operations Department Superintendent										TELEPHONE NUMBER AREA CODE 6 1 6 4 6 5 1 - 5 9 0 1 1						
COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)																
CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NRC		CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NRC						
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 August 18, 1987, at 1120 hours, with the Unit in the refueling Mode and the reactor vessel head in place, but not bolted, the Residual Heat Removal System (RHRS) flow (Reactor Coolant System [RCS] cooling loop) was reduced to less than 3000 gallons per minute (GPM) as required by procedures to drain the RCS to half-loop level for required maintenance. This is done to prevent air binding of the RHRS pump.

Although meeting the intent of Technical Specification 3.9.8.1 for refueling mode RHRS, the surveillance requirement of 3000 GPM was not met. The action statement for T.S. 3.9.8.1 requires that containment integrity be established within four hours if there is no operating ( $\geq 3000$  GPM) RHRS loop. This was not done due to the requirement not being recognized.

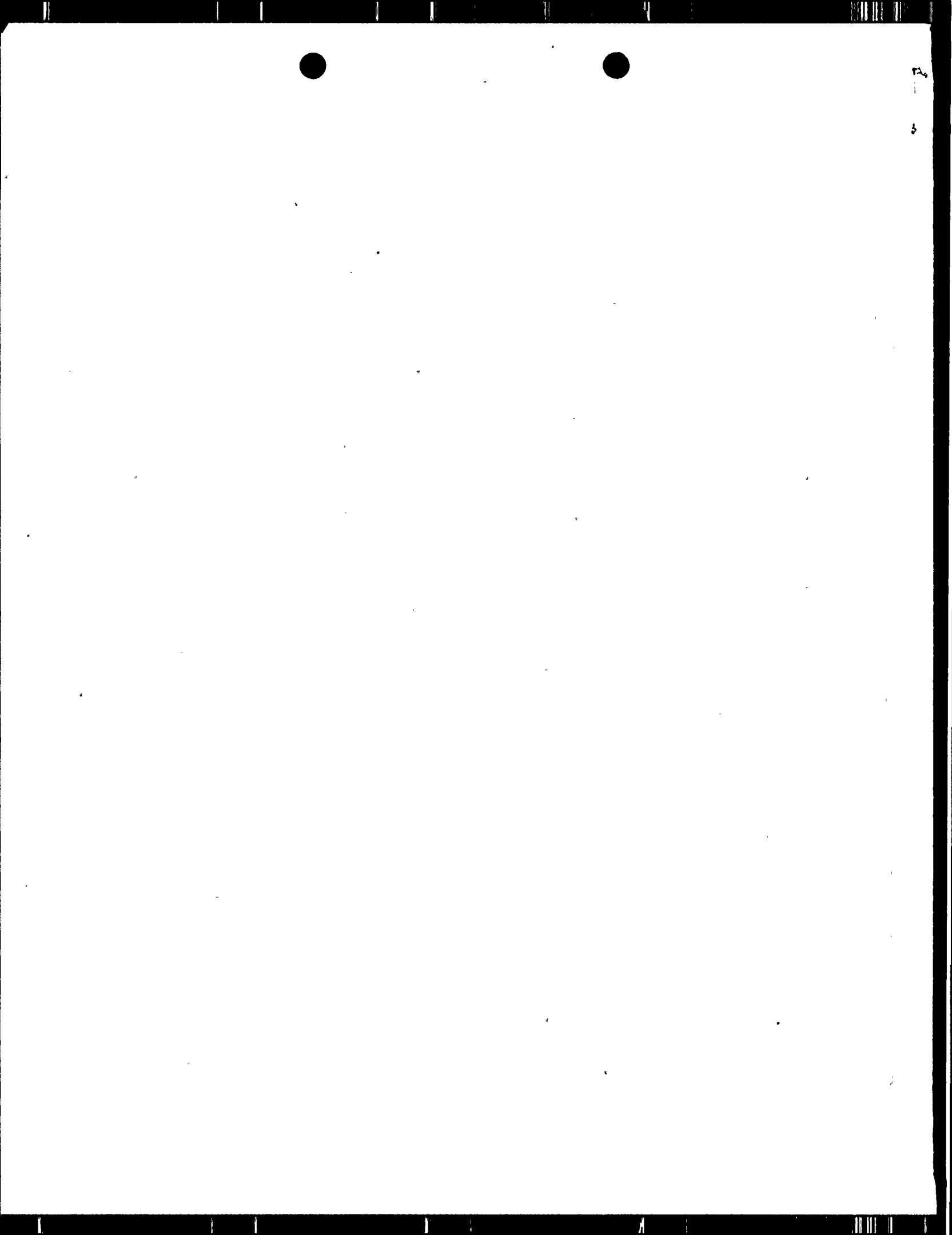
This event was caused by the procedural inadequacy which allowed for reduction of the RCS flow below 3000 gpm.

The requirement was recognized at 2030 hours while taking surveillance readings. The RCS level was then increased to allow greater than 3000 gpm flow. The required flow was established at 2050 hours.

The appropriate procedures will be changed as needed prior to the next refueling in order to ensure the requirements of T.S. 3.9.8.1 are addressed.

8709220580 870917  
PDR ADOCK 05000315  
S PDR

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## LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

APPROVED OMB NO. 3150-0104

EXPIRES: 8/31/88

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)		
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER			
D. C. Cook Nuclear Plant - Unit One	0   5   0   0   0   3   1   5	8   7	-   0   1   9	-   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 One was in Mode 6 (Refueling) after completion of the fuel load with the Reactor Vessel Head (EIIS/AB-RPV) set, but not bolted, and the Reactor Coolant System (RCS) (EIIS/AB) water level at the Reactor Vessel Head flange level.

Description of Event

On August 18, 1987 at 1120 hours, the operating Residual Heat Removal System (RHRS) (EIIS/AB) loop flow was reduced to less than 3000 gallons per minute (GPM) in accordance with operating procedures to permit draining the RCS to half loop level for required maintenance. This reduction in flow is necessary in order to prevent air binding of the RHRS pump (EIIS/BP-P) due to vortexing while at half-loop.

Half-loop level was achieved at 1303 hours on August 18, 1987. At 2030 hours during performance of shift surveillances, the requirement for 3000 GPM RHRS flow in accordance with Technical Specification (T.S.) 3.9.8.1 during Mode 6 operation was recognized and the RCS level was promptly increased to five inches above half-loop level. At 2050 hours the RHRS flow was raised to greater than 3000 GPM.

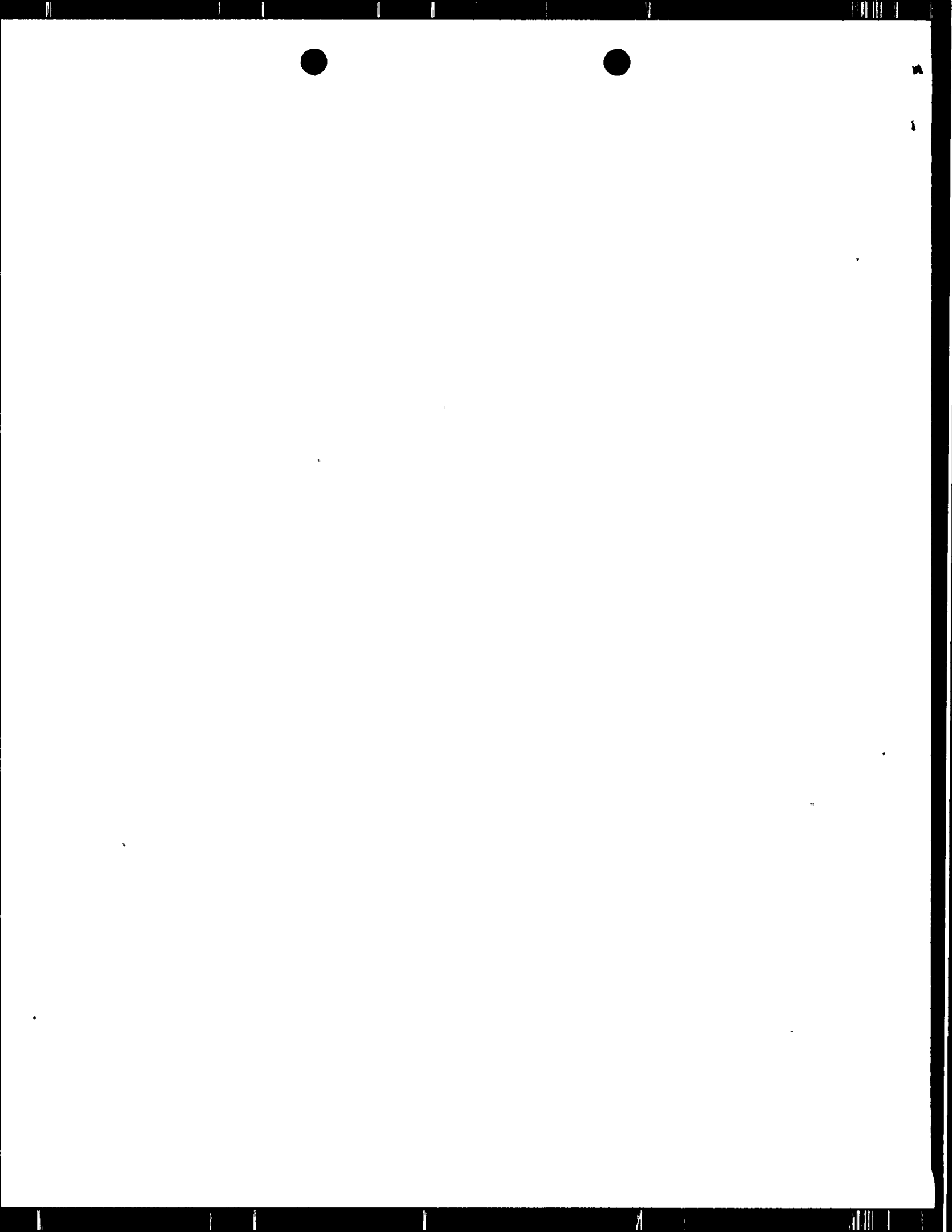
The action statement for T.S. 3.9.8.1 requires that containment integrity be established within four hours if there is no operating RHRS loop. With the RHRS flow below the 3000 GPM surveillance requirement, there was technically no operating RHRS loop. Containment integrity was not established as required since the requirement was not recognized until nine hours and ten minutes after the flow reduction.

With the exception of the aforementioned RHRS loop inoperability, there were no inoperable structures, components or systems that contributed to this event.

Cause of Event

This event was caused by the procedural inadequacy which allowed for reduction of the RCS flow below 3000 GPM.

The 3000 GPM surveillance requirement satisfies two separate portions of the Limiting Conditions for Operation of T.S. 3.9.8.1. The first being the minimum flow for boron dilutions and the second being the assurance of adequate heat removal.



## LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)		
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER			
D. C. Cook Nuclear Plant - Unit One	0   5   0   0   0   3   1   5	8   7	—   0   1   9	—   0   0	0   3	OF	0   3

TEXT (If more space is required, use additional NRC Form 368A's) (17)

During cold shutdown operation (Mode 5), the flow requirement for dilutions and decay heat removal are addressed by two separate Technical Specifications. T.S. 3.1.1.3 for boron dilutions requires a minimum of 3000 GPM flow. T.S. 3.4.1.3 for heat removal requires that one coolant loop be circulating the RCS with no specific flow requirements given.

The involved procedures were written based on the Mode 5 requirements with the more restrictive Mode 6 requirements not recognized.

Analysis of Event

This event was determined to be reportable as per 10CFR50.73(a)(2)(i).

Since there were no boron dilutions during the period of time the RCS flow was below 3000 GPM, that portion of T.S. 3.9.8.1 LCO was met.

The remainder of the LCO for T.S. 3.9.8.1 is intended to ensure adequate decay heat removal capability is available. The procedure directed flow of approximately 2000 GPM is well above the actual flow required for decay heat removal. Therefore, since adequate decay heat removal capacity was always maintained, it is concluded that this condition did not constitute a significant safety problem as defined by 10 CFR 50.59.

Corrective Action

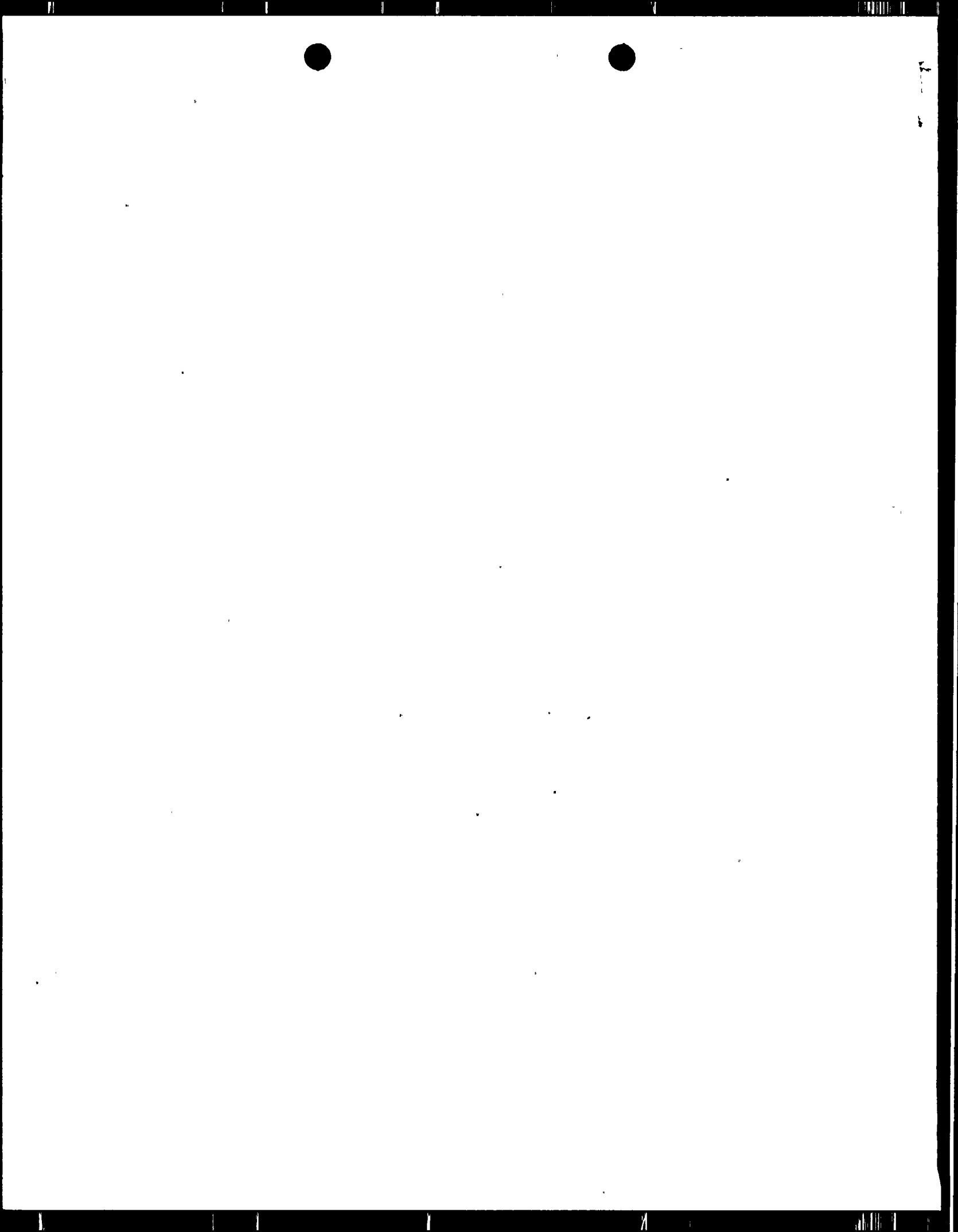
A proposed amendment to the Technical Specifications has been submitted to reduce the subject RHRS flow requirement to 2000 GPM. If this amendment is approved and received prior to the next refueling then no procedure revisions will be needed, if not; then the involved procedures will be revised in order to address the requirements of T.S. 3.9.8.1.

Failed Component Identification

None

Previous Similar Events

None





Indiana Michigan  
Power Company  
Cook Nuclear Plant  
P.O. Box 458  
Bridgman, MI 49106  
616 465 5901



September 17, 1987

United States 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:

87-019-00

Sincerely,

A handwritten signature in dark ink, appearing to read 'W. G. Smith, Jr.', with a stylized flourish at the end.

W. G. Smith, Jr.  
Plant Manager

/afh

Attachment

cc: J. E. Dolan  
A. B. Davis, Region III  
R. F. Kroeger  
H. B. Brugger  
R. W. Jurgensen  
NRC Resident Inspector  
R. C. Callen  
G. Charnoff, Esq.  
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