



January 31, 2000

United States Nuclear Regulatory Commission  
Document Control Desk  
Washington, DC 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 Report System, the following report is being submitted:

LER 315/99-031-00, "Valves Required to Operate Post-Accident Could Fail to Open Due to Pressure Locking/Thermal Binding."

No commitments were identified in this submittal.

If you have any questions, please contact Mr. Robert C. Godley, Director, Regulatory Affairs, at 616/465-5901, extension 2698.

Sincerely,

A handwritten signature in black ink, appearing to read 'M. W. Rencheck'.

M. W. Rencheck  
Vice President – Nuclear Engineering

/mbd  
Attachment

c: J. E. Dyer, Region III  
R. C. Godley  
D. Hahn  
W. J. Kropp  
R. P. Powers  
R. Whale  
Records Center, INPO  
NRC Resident Inspector

# LICENSEE EVENT REPORT (LER)

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

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS MANDATORY INFORMATION COLLECTION REQUEST: 50.0 HRS. REPORTED LESSONS LEARNED ARE INCORPORATED INTO THE LICENSING PROCESS AND FED BACK TO INDUSTRY. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE INFORMATION AND 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

FACILITY NAME (1) <b>Cook Nuclear Plant Unit 1</b>		DOCKET NUMBER (2) <b>05000-315</b>	PAGE (3) <b>1 of 1</b>
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TITLE (4)  
**Interim - Valves Required to Operate Post-Accident Could Fail to Open Due to Pressure Locking/Thermal Binding**

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	
12	30	1999	1999	-- 031 --	00	01	31	2000	DC Cook - Unit 2	50-316	
									FACILITY NAME	DOCKET NUMBER	

OPERATING MODE (9)	-	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more) (11)								
POWER LEVEL (10)	00	20.2201 (b)			20.2203(a)(2)(v)			50.73(a)(2)(i)		50.73(a)(2)(viii)
		20.2203(a)(1)			20.2203(a)(3)(i)			50.73(a)(2)(ii)		50.73(a)(2)(x)
		20.2203(a)(2)(i)			20.2203(a)(3)(ii)			50.73(a)(2)(iii)		73.71
		20.2203(a)(2)(ii)			20.2203(a)(4)			50.73(a)(2)(iv)		OTHER
		20.2203(a)(2)(iii)			50.36(c)(1)			X 50.73(a)(2)(v)		Specify in Abstract below or n NRC Form 366A
20.2203(a)(2)(iv)			50.36(c)(2)			50.73(a)(2)(vii)				

LICENSEE CONTACT FOR THIS LER (12)	
NAME <b>M. B. Depuydt, Regulatory Compliance</b>	TELEPHONE NUMBER (Include Area Code) <b>616/465-5901, x1589</b>

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)			
X	YES	(If Yes, complete EXPECTED SUBMISSION DATE).			NO	MONTH	DAY	YEAR
						04	17	2000

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

On December 30, 1999, with both units defueled, a preliminary calculation review determined that the valves which provide a suction path from the containment sump to the Emergency Core Cooling System (ECCS) pumps and the valves which align Residual Heat Removal to the upper containment spray header were susceptible to Pressure Locking/ Thermal-Binding (PLTB) following a Loss of Coolant Accident. The degree of calculated PLTB was sufficient to exceed the capability of the respective valve actuators and potentially render the valves incapable of opening under accident conditions. This could challenge the ability of ECCS to provide long term cooling.

This discovery represents "a condition that alone could have prevented fulfillment of a safety function" to remove residual heat and to mitigate the consequences of an accident. A 4-hour non-emergency ENS notification was made pursuant to 10CFR50.72(b)(2)(iii).

The investigation for this condition is still in progress. The associated calculations are in the review and approval process. However, design changes to prevent PL/TB for these valves have been initiated and will be completed prior to unit restart, if required.

A supplement to this LER will be submitted upon finalization of the referenced calculations. This is expected to be complete by April 17, 2000.