

CATEGORY 1

REGULATORY INFORMATION DISTRIBUTION SYSTEM (RIDS)

ACCESSION NBR: 9804090222 DOC. DATE: 98/04/01 NOTARIZED: NO DOCKET #
 FACIL: 50-316 Donald C. Cook Nuclear Power Plant, Unit 2, Indiana M 05000316
 AUTH. NAME: AUTHOR AFFILIATION
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 RECIP. NAME RECIPIENT AFFILIATION

SUBJECT: LER 98-003-00: on 980304, two pressurizer safety valves
 failed to lift within setpoint tolerance. Caused by setpoint
 drift. Valves were retested & adjustments were made to lower
 setpoints. W/980401 ltr.

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Indiana Michigan
Power Company
Cook Nuclear Plant
One Cook Place
Bridgman, MI 49106



April 1, 1998

United States Nuclear Regulatory Commission
Document Control Desk
Washington, DC 20555

Operating Licenses DPR-74
Docket No. 50-316

Document Control Manager:

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

98-003-00

Sincerely,

J. R. Sampson
Site Vice President

/mbd

Attachment

c: A. B. Beach, Region III
E. E. Fitzpatrick
P. A. Barrett
S. J. Brewer
R. Whale
D. Hahn
Records Center, INPO
NRC Resident Inspector

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LICENSEE EVENT REPORT (LER)

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.

FACILITY NAME (1)
Donald C. Cook Nuclear Plant - Unit 2DOCKET NUMBER (2)
50-316

Page 1 of 3

TITLE (4)

Two Pressurizer Safety Valves Fail to Lift within Setpoint Tolerance

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
03	04	98	98	-- 003 --	00	04	01	98	None.	
									FACILITY NAME	DOCKET NUMBER
OPERATING MODE (9)		5	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)(3)(i)		50.73(a)(2)(iii)		73.71(b)	
			20.2203(a)(1)		20.2203(a)(3)(ii)		50.73(a)(2)(iv)		73.71e	
			20.2203(a)(2)(i)		20.2203(a)(4)		50.73(a)(2)(v)		OTHER	
			20.2203(a)(2)(ii)		50.36(c)(1)		50.73(a)(2)(vii)		(Specify in Abstract below and in Text, NRC Form 366A)	
			20.2203(a)(2)(iii)		50.36(c)(2)		50.73(a)(2)(viii)(A)			
			20.2203(a)(2)(iv)		X 50.73(a)(2)(i)		50.73(a)(2)(viii)(B)			
			20.2203(a)(2)(v)		X 50.73(a)(2)(ii)		50.73(a)(2)(x)			

LICENSEE CONTACT FOR THIS LER (12)

NAME

TELEPHONE NUMBER (Include Area Code)

Mr. Frank Pisarsky, Component Engineering Supervisor

616/465-5901, x2607

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)

YES
(If yes, complete EXPECTED SUBMISSION DATE).

X NO

EXPECTED
SUBMISSION
DATE (15)

MONTH DAY YEAR

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

On March 4, 1998, two of three Unit 2 Pressurizer safety valves, 2-SV-45A and 2-SV-45B, were found to have liftpoints that exceeded their Technical Specification value by more than the one percent tolerance allowed technical specification 3.4.3. This was reported via the ENS under the provisions of 10 CFR 50.72(b)(2)(I), as an unanalyzed condition. This LER is submitted in accordance with 10CFR50.73(a)(2)(ii) and 10CFR50.73(a)(2)(i)(B).

The valves failed to lift within tolerance due to setpoint drift. The valves have been disassembled and inspected, and no cause of the setpoint drift was identified. The safety valve conditions experienced at the Cook Nuclear Plant are similar to current industry trends and concerns. The phenomenon of safety valve setpoint drift outside of design tolerances is common in the nuclear industry, and has been reported in LERs and has been the subject of NRC Information Notices.

The observed liftpoints would not have allowed the Reactor Coolant System to exceed 110 percent of the design pressure, 2735 psig. Allowing for 3 percent accumulation, the peak RCS pressure would have been 2647 psig at the time that all of Pressurizer safety valves would have lifted.

LICENSEE EVENT CONTINUATION

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.

FACILITY NAME (1)		DOCKET NUMBER (2)		LER NUMBER (6)			PAGE (3)
Cook Nuclear Plant - Unit 2		50-316		YEAR	SEQUENTIAL	REVISION	2 OF 3
				98	-- 003 --	00	

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

Conditions Prior to Event

Unit 2 - Mode 5 (Cold Shutdown)

Description of the Event

On March 4, 1998, two of three Unit 2 Pressurizer safety valves, Crosby Valve Model HB-86-PB, (EHS/AB-RV) were found to have liftpoints that exceeded the Technical Specification (T/S) 3.4.3 value by more than the one percent, the allowed tolerance. Valve 2-SV-45A lifted at 2523 psig, 1.52 percent above the 2485 psig T/S value, and valve 2-SV-45B lifted at 2570 psig, 3.42 percent above the T/S value.

Cause of the Event

The valves failed to lift within tolerance due to setpoint drift. The valves have been disassembled and inspected, and no cause of the setpoint drift was identified.

The safety valve conditions experienced at the Cook Nuclear Plant are similar to current industry trends and concerns. The phenomenon of safety valve setpoint drift outside of design tolerances is common in the nuclear industry, and has been reported in LERs and has been the subject of NRC Information Notices.

Analysis of the Event

This event has been determined to be reportable under the provisions of 10 CFR 50.73(a)(2)(ii) as an unanalyzed condition, and under 10 CFR 50.73(a)(2)(I)(B) as an operation prohibited by the plant's Technical Specifications.

The reactor vessel and pressurizer were designed to Section III of the ASME Boiler and Pressure Vessel Code which allows a maximum transient pressure of 2735 psig, 110 percent of the design pressure (2485 psig). The Reactor Coolant System piping, valves and fittings are designed to ANSI B31.1, 1967 Edition, which permits a maximum transient pressure of 2985 psig, 120 percent of the design pressure. The highest found liftpoint, 2570 psig, would not have resulted in the maximum pressure being exceeded. Allowing for 3 percent accumulation prior to the valve's fully opening, the maximum system pressure when all of the pressurizer safety valves were fully open would have been 2647 psig.

Corrective Action

The valves were retested and adjustments were made to lower the setpoints. The valves were partially disassembled and inspected, and no cause of the setpoint drift was identified.

A Technical Specification revision changing the setpoint tolerance to plus or minus 3 percent will be submitted. This will make the Unit 2 Technical Specification consistent with the Unit 1 technical Specification.

LICENSEE EVENT CONTINUATION

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FACILITY NAME (1)		DOCKET NUMBER (2)		LER NUMBER (6)			PAGE (3)
Cook Nuclear Plant - Unit 2		50-316		YEAR	SEQUENTIAL	REVISION	3 OF 3
				98	-- 003 --	00	

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

Failed Component Identification

Pressurizer Safety Valve Plant Designation: 2-SV-45A
2-SV-45B

Manufacturer: Crosby Valve Company
Model: HB-86-BP
EIS Code: AB-RV

Previous Similar Events

315/94-004-00	316/95-003-00
315/92-009-01	316/89-004-00
315/90-016-01	316/92-006-00