CATEGORY 1

REGULATORY INFORMATION DISTRIBUTION SYSTEM (RIDS)

ACCESSION NBR:9807140094 DOC.DATE: 98/07/06 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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SAMPSON,J.R. Indiana Michigan Power Co.
RECIP.NAME RECIPIENT AFFILIATION

SUBJECT: LER 98-002-01:on 980224,determined that PORV inoperability resulted in condition outside design basis.Caused by commication failure.Revised annunciator response procedures & distributed lessons learned memo.W/980706 ltr.

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TITLE: 50.73/50.9 Licensee Event Report (LER), Incident Rpt, etc.

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AEP
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July 6, 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:

98-002-01

Sincerely,

John R. Sampson

J. R. Sampson
Site Vice President

/mbd

Attachment

c: A. B. Beach, Region III
E. E. Fitzpatrick
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Records Center, INPO
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IE22

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NRC Form 366 (4-95) U.S. NUCLEAR REGULATORY COMMISSION

APPROVED BY OMB NO. 3150-0104

EXPIRES 04/30/98

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

LICENSEE EVENT REPORT (LER)

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

FACILITY NAME (1)	DOCKET NUMBER (2)	PAGE (3)
Cook Nuclear Plant Unit 2	50-316	1 of 3

TITLE (4)

PORV Inoperability Results in Condition Outside Design Basis

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
02	24	98	98	--	002	--	01	07	06	98	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)(2)(v)	X 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)	50.73(a)(2)(v)	Specify in Abstract below or in NRC Form 366A
		20.2203(a)(2)(iv)	50.36(c)(2)	50.73(a)(2)(vii)	

LICENSEE CONTACT FOR THIS LER (12)

NAME	TELEPHONE NUMBER (Include Area Code)
Mr. Mark Ackerman, Licensing Manager	616/465-5901, x2604

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).	X NO				

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

On February 24, 1998, Cook Nuclear Plant was informed by the Senior Resident Inspector that the Office of Nuclear Reactor Regulations (NRR) had provided a position concerning Pressurizer Power Operated Relief Valves (PORVs) operability requirements in Modes 1, 2, and 3. NRR concluded that the backup air supply system must be operable in those modes for the applicable Pressurizer PORVs to be operable. As a result of this conclusion, a Unit 2 PORVs, 2-NRV-152, could have been inoperable for seven months in 1994. This condition was determined reportable under 10CFR50.72(b)(2)(i) and an ENS notification was made at 1826 hours on March 4, 1998. This LER, however, is submitted under 10CFR50.73(a)(2)(i)(B) for a condition prohibited by the Technical Specifications, as it was determined that the unanalyzed condition which existed did not significantly compromise plant safety.

The root cause of this event was communication failure. Cook failed to realize that clarification of the operability requirements for the PORV backup air supply included in our correspondence to the NRC had not been acknowledged by the NRC in the SER issued for Technical Specification Amendment 161. 2-NRV-152 was restored to operable status in October 1994. Operability of the backup air supply, including the control air system check valves, is verified on an 18 month frequency by surveillance. The Operations annunciator response procedures were revised to require entry into TS 3.4.11 if the nitrogen bottle pressure drops below 900 psig. A lessons learned memorandum has been routed to licensing personnel responsible for T/S amendment development. Two emergency operating procedure mitigation strategies exist for controlling RCS pressure following a Steam Generator Tube Rupture (SGTR) event. These are restoration of normal control air to the PORVs and recovery without pressure control. Given that guidance is provided for pressure control without the PORVs following a SGTR event, the condition of 2-NRV-152 did not present a risk to the health and safety of the public for the period it was inoperable in 1994.

LICENSEE EVENT REPORT (LER)
TEXT CONTINUATION

FACILITY NAME (1)	DOCKET NUMBER(2)	LER NUMBER (6)					PAGE (3)
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TEXT *(If more space is required, use additional copies of NRC Form (366A)* **(17)**

CONDITIONS PRIOT TO EVENT
Unit 2 was in Mode 5, cold shutdown

DESCRIPTION OF EVENT
On August 3, 1992, the Pressurizer Power Operated Relief Valve (PORV) 2-NRV-152 was stroked using the backup air supply. The valve failed to stroke within the required 6 seconds. The cause of the failure was determined to be a leaking normal air header check valve, 2-CA-711. During the test, the leaking check valve allowed the backup air to leak into the normal air header and prevented the PORV from receiving an adequate supply of pressurized air.

On March 9, 1994, T/S Amendment 161 on Relief Valves – Operating, Technical Specification (T/S) 3.4.11, was issued by the NRC. The amendment added surveillance requirement 4.4.11.1.c and required that at least once per 18 months the solenoid operated air control valves and check valves in the PORV control systems be operated through one complete cycle of full travel.

At the time of the 1992 surveillance test T/S amendment 161 had not yet been issued, and the job order to repair the check valve was delayed until the next refueling outage. On March 9, 1994, the amendment was issued and subsequently, on October 5, 1994, the check valve was repaired, restoring the PORV to an operable status. The 7 month period between T/S amendment issuance and check valve repair placed Unit 2 in an unanalyzed condition, as the new surveillance requirement could not have been met. However, consistent with our understanding of the T/S requirements at the time, the Action Statement was not entered.

CAUSE OF THE EVENT
The root cause of this event was our failure to realize that clarification of our understanding regarding operability requirements for the backup air supply, docketed in our proposed TS letter to the NRC, had not been acknowledged by the NRC in the amendment's safety evaluation report (SER). Additionally, we had not placed this clarification in the T/S bases to ensure understanding.

Cook Nuclear Plants' position had been that the backup air supply to the pressurizer PORVs was required when the reactor coolant system was in a condition requiring low temperature overpressure protection. This position had been stated in previous submittals that responded to Generic Issue 70, (Generic Letter 90-06, AEP: NRC: 1131A) concerning operation of the pressurizer PORVs and stated in part that "...the proposed new testing should not be construed as an indication that the backup air supply is required to be operable in Modes 1, 2, and 3." Therefore, in March of 1994 when TS amendment 161 was received, it was consistent with our understanding of the purpose of the backup air supply at the time, that 2-NRV-152 would not be declared inoperable. However, it is acknowledged that the SER for amendment 161 did not specifically address the backup air supply requirement. It is not known whether this was considered by the reviewer but not credited.

An NRC review of PORV operations during a routine inspection questioned the practice of not requiring backup air supply operability in Modes 1, 2, and 3. Based on an evaluation performed by NRR, it was determined that a backup air supply was required to be operable to support PORV operability in Modes 1, 2, and 3, based on the strict wording of the T/S.

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TEXT *(If more space is required, use additional copies of NRC Form (366A)* (17)

ANALYSIS OF THE EVENT

This event was reported under the provisions of 10 CFR 50.72(b)(2)(ii), as a condition which was found while the reactor was shutdown, which if found while the reactor was operating, would have resulted in the nuclear power plant being in an unanalyzed condition. After further evaluation it was determined that the condition did not significantly compromise plant safety. Therefore, this LER is submitted under the provisions of 10CFR50.73(a)(2)(i)(B), for a condition prohibited by T/S, as the valve was inoperable longer than allowed by T/S and no compensatory actions were taken.

Section 14.2.4 of the Updated Final Safety Analysis Report (UFSAR) utilizes the pressurizer PORVs as a means of pressure control following a Steam Generator Tube Rupture (SGTR). In support of this action, the Technical Specifications require at least two PORVs to be available in Modes 1, 2, and 3. It has been assumed that control air to containment could be restored following certain accident scenarios including SGTR. OHP 4023.E-3, "Steam Generator Tube Rupture", directs the operators to restore control air to containment as part of the recovery sequence. The Control Air Compressors (CAC) are powered from an onsite emergency bus. Additionally, non-essential service water, required to support CAC operation, would be powered from the diesel generators during a SGTR with a concurrent loss of offsite power. Therefore, normal control air would be available to support PORV operation during a SGTR event.

In the unlikely event control air could not be restored to the PORVs, Emergency Operating Procedure guidance is also provided to mitigate a SGTR event without reactor coolant system pressure control via the PORVs utilizing other depressurization actions. As a result, the condition of 2-NRV-152 did not present a risk to public health and safety.

CORRECTIVE ACTIONS

In October of 1994, 2-NRV-152 was repaired and restored to operable status.

Operability of the backup air supply including the control air system check valves is verified on an 18 month frequency via surveillance procedure 1-OHP 4030.STP.060 and Attachment 2 to normal operating procedure 2-OHP 4021.001.004.

Operations Department annunciator response procedures were revised in April of 1998 to require entry into TS 3.4.11, Relief Valves – Operating, Modes 1, 2, and 3 in the event the nitrogen bottle pressure drops to less than 900 psig.

A lessons learned memorandum was routed to licensing personnel responsible for TS amendment development.

FAILED COMPONENT IDENTIFICATION

Not Applicable

PREVIOUS SIMILAR EVENTS

None