CATEGORY 1

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ACCESSION NBR:9812010196 DOC.DATE: 98/11/23 NOTARIZED: NO DOCKET #
FACIL:50-315 Donald C. Cook Nuclear Power Plant, Unit 1, Indiana M 05000315
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RECIP.NAME RECIPIENT AFFILIATION

SUBJECT: LER 98-042-00:on 981023,two RHR pumps ran with unit depressurized,contrary to UFSAR Section 9.6.3.2.Caused by inadequate communications within operations organization. Procedures have been revised.With 981123 ltr.

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RD

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November 23, 1998

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 98-042-00, "Contrary to UFSAR Section 9.6.3.2, 2 RHR Pumps Run with the Unit Depressurized".

Sincerely,

John R. Sampson

J. R. Sampson
Site Vice President

/mbd

Attachment

c: J. L. Caldwell (Acting), Region III
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NRC Resident Inspector

NRC Form 366 (6-1998) U.S. NUCLEAR REGULATORY COMMISSION

APPROVED BY OMB NO. 3150-0104 EXPIRES 06/30/2001

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 1	05000-315	1 of 3

TITLE (4)

Contrary to UFSAR Section 9.6.3.2, 2 RHR Pumps Run with the Unit Depressurized

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
10	23	98	98	-- 042 --	00	11	23	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	0.2201 (b)	0.2203(a)(2)(v)	0.73(a)(2)(i)	0.73(a)(2)(viii)
		0.2203(a)(1)	0.2203(a)(3)(i)	X 0.73(a)(2)(ii)	0.73(a)(2)(x)
		0.2203(a)(2)(i)	0.2203(a)(3)(ii)	0.73(a)(2)(iii)	3.71
		0.2203(a)(2)(ii)	0.2203(a)(4)	0.73(a)(2)(iv)	THER
		0.2203(a)(2)(iii)	0.36(c)(1)	0.73(a)(2)(v)	
		0.2203(a)(2)(iv)	0.36(c)(2)	0.73(a)(2)(vii)	Specify in Abstract below or n NRC Form 366A

LICENSEE CONTACT FOR THIS LER (12)

NAME	TELEPHONE NUMBER (Include Area Code)
Mr. Larry Weber, Operations Manager	616/465-5901, x2443

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)	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 October 23, 1998 with Unit 1 in Mode 5, Cold Shutdown, and the West Residual Heat Removal (RHR) pump in service for decay heat removal, the East RHR pump was started to facilitate minimum flow measurements for the East RHR minimum flow loop. The reactor coolant system (RCS) was vented to atmosphere at this time through a Pressurizer Power Operated Relief valve. Operation of the second pump is contrary to UFSAR Section 9.3.6.2, which states, "Only one RHR pump will be operated when the RCS is open to the atmosphere to prevent damaging both pumps in the unlikely event that the suction valve from the RCS should close." This was determined to constitute a condition outside the design basis, and to be reportable as an LER in accordance with 10 CFR 50.73(a)(2)(ii).

The root cause of this event is inadequate communications within the Operations organization, coupled with a lack of teamwork, and planning/scheduling deficiencies. 1 and 2-OHP 4021.017.001 have been revised to incorporate the precaution against running 2 RHR pumps while vented to atmosphere. A presentation on lessons learned and the limitation on RHR pump operation with the RCS vented to atmosphere has been made to all shifts. The Operations Department Procedure Review Manual was revised to require the Operations Training Specialist to review procedure revisions to determine appropriate familiarization and training requirements. The Operations Department Guidance Policy will be revised to incorporate additional requirements for briefings and decision making.

This event was evaluated and determined to have no safety significance, as the RHR suction valves were open with the power removed from the valves. At no time was the health or safety of the public at risk.

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

Conditions Prior to Event
Unit 1 was in Mode 5, Cold Shutdown

Description of Event
On October 23, 1998, Unit 1 was in cold shutdown, vented to atmosphere via Pressurizer Power Operated Relief valve 1-NRV-153, the reactor vessel full, and the Pressurizer maintained at approximately 50 percent. The West Residual Heat Removal (RHR) was in service for decay heat removal.

Testing was scheduled to perform ultrasonic flow measurement of the East RHR pump on minimum flow. Early in the shift, the Unit Supervisor and Reactor Operator reviewed the Job Order activity (JOA) and the RHR procedure attachment referenced by the JOA, 1-OHP 4021.017.001 "Operation of the Residual Heat Removal System" Attachment 1, in preparation for the testing. It was decided that the procedure attachment provided the necessary guidance to operate the East RHR pump on minimum flow. It was also decided that specific procedure direction was not required to perform the pump start and testing, as it was considered skill of the trade. Attachments 2 and 3 to the OHP were considered for use, but were not reviewed completely, as the attachment titles referred to transferring RHR pumps, which the crew did not intend to do. The precaution against operation of both RHR pumps with the reactor coolant system (RCS) vented to atmosphere is contained in Attachments 2 and 3. The precaution was therefore not reviewed prior to the start of the East RHR pump.

The Operations Shift Supervisor was not contacted to assist in making the decision to start the East RHR pump without specific procedural direction, nor was he present at the shift briefing where the decision was discussed. The Shift Supervisor was in the Control Room at the time of the pump start, but did not ensure proper procedural use, and did not recall the prohibition against running both pumps with the RCS depressurized. The East RHR pump was started at 0916 hours EST, run on minimum flow until the flow measurements were performed, and shut down at 0932 hours..

Later in the same shift, while reviewing 1-OHP 4021.017.001 Attachment #2 in preparation for performance of a surveillance on the West RHR pump, the Unit 1 Reactor Operator reviewed precaution 2.2, "Simultaneous operation of both RHR pumps with the RCS vented to atmosphere is not permitted", and realized that the evolution performed earlier in the shift has been a violation of the procedure. The Unit Supervisor, Shift Supervisor and Shift Technical Advisor were informed of the procedure violation. The Shift Technical advisor determined that the simultaneous operation of the pumps had been contrary to statements in the UFSAR.

Cause of Event
The root cause of this event is inadequate communications within the Operations organization, coupled with a lack of teamwork, and planning/scheduling deficiencies.

On September 12, 1997, it was identified that the existing Operations procedures allowed for operation of the RHR system outside the design basis, by allowing operation of both RHR pumps at the same time. A procedure change was implemented the same day, adding a precaution to the applicable procedures prohibiting simultaneous operation of both RHR pumps. Training on this procedure change and the need to limit system operation to one pump with the RCS vented to atmosphere was never provided. Poor verbal communication was manifested by the failure to communicate the actual procedural changes within the organization, as no process existed to facilitate the communication with the shifts or with the Operations training personnel. Communications within the Operations department also failed to ensure that management expectations were clear to the crew regarding the need for procedures for safety related equipment.

A lack of teamwork was also evident in this event. The Unit Supervisor failed to contact the Shift Supervisor when it was decided that the procedure could be "made" to work, but would require taking an action not covered by the procedure.

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

Planning and scheduling allowed work to be planned, scheduled and sent to the Control Room when the unit conditions were not as required to perform the work. Currently, no process exists to ensure plant conditions remain the same as they were when the job was scheduled, nor are there any contingencies provided should conditions change. Job Orders also lack sufficient detail for the shifts to ensure that the conditions that currently exist match the conditions that existed when the job was originally planned and scheduled.

Analysis of Event

This event was evaluated and determined to be reportable under 10 CFR 50.73(a)(2)(ii), as a condition or event outside the design basis. UFSAR Section 9.3.6.2 states, "Only one RHR pump will be operated when the RCS is open to the atmosphere to prevent damaging both pumps in the unlikely event that the suction valve from the RCS should close."

The UFSAR statements and prohibition against simultaneous operation of the RHR pumps is intended to protect one train of RHR should the suction isolation valves automatically close on a high RCS pressure signal. If both pumps were running and the suction valves went closed, both trains of RHR would potentially be lost due to pump failure.

The RCS was not in a reduced inventory situation as the vessel was full, and the RHR suction valves were open with power removed. Although the operation of both pumps simultaneously was specifically prohibited by the UFSAR, this event had no safety significance, as the pumps were protected from loss of suction flow by having the power removed from the valves.

Corrective Actions

A presentation on lessons learned and the limitation on RHR pump operation with the RCS vented to atmosphere has been made to all shifts. The need to utilize the "procedure need" flowchart was included in the presentation. The Shift Supervisor has reviewed his expectations with the crew, and discussed department expectations and standards with them.

OPM.002, "Operations Department Procedure Review Manual", was revised to require the Operations Training Specialist to review procedure revisions to determine appropriate familiarization and training requirements.

Procedures 1-OHP 4021.017.001 and 2-OHP 4021.017.001 have been revised to incorporate the precaution against running 2 RHR pumps while vented to atmosphere.

Operations Head Instruction (OHI) 2000, "Operations Department Guidance Policy", will be revised to strengthen the role of the Shift Supervisor in determining the need for a procedure for a particular evolution.

Appropriate work control process procedures will be revised to require JOAs to contain more information, including the conditions required to perform the work, and any contingencies required if plant conditions are different than planned for.

Failed Component Identification

Not Applicable

Previous Similar Events

315/97-016-00