CENTERIOR ENERGY

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Michael D. Lyster
VICE PRESIDENT - NUCLEAR

January 6, 1992
PY-CEI/NRR-1433 L

U.S. Nuclear Regulatory Commission
Document Control Desk
Washington, D.C. 20555

Perry Nuclear Power Plant
Docket No. 50-440
LER 91-024

Dear Sir:

Enclosed is Licensee Event Report 91-024 for the Perry Nuclear Power Plant.

The required submittal date for LER 91-024 was January 3, 1992. However, due to unanticipated delays this LER is being submitted 1 (one) working day after the required due date. The Perry NRC Resident Inspector and NRC Region III were notified of the delay on January 3, 1992.

Sincerely,

M. D. Lyster

Michael D. Lyster

MDL:RWG:sc

Enclosure: LER 91-024

cc: NRC Project Manager
NRC Sr. Resident Inspector
NRC Region III

IE22
1/1

NRC FORM 366
(6-89)

U.S. NUCLEAR REGULATORY COMMISSION

LICENSEE EVENT REPORT (LER)

APPROVED OMB NO. 3150-0104
EXPIRES 4/30/92

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 50.0 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE RECORDS AND REPORTS MANAGEMENT BRANCH (P-530), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.

FACILITY NAME (1)	DOCKET NUMBER (2)	PAGE (3)
Perry Nuclear Power Plant, Unit 1	0 5 0 0 0 4 4 0	1 OF 0 4

TITLE (4): Loss of Emergency Service Water System Loop Due to Inadvertent Isolation of Keepfill System

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)
										0 5 0 0 0
1 2	0 4	9 1	9 1	- 0 2 4 -	0 0	0 1	0 6	9 2		0 5 0 0 0

OPERATING MODE (9)	1	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more of the following) (11)			
POWER LEVEL (10)	1 0 0	20.402(b)	20.405(c)	50.73(a)(2)(iii)	73.71(b)
		20.405(a)(1)(i)	50.36(c)(1)	X 50.73(a)(2)(iv)	73.71(c)
		20.405(a)(1)(ii)	50.36(c)(2)	50.73(a)(2)(v)	OTHER (Specify in Abstract below and in Text, NRC Form 366A)
		20.405(a)(1)(iii)	X 50.73(a)(2)(i)	50.73(a)(2)(vii)(A)	
		20.405(a)(1)(iv)	50.73(a)(2)(ii)	50.73(a)(2)(vii)(B)	
		20.405(a)(1)(v)	50.73(a)(2)(iii)	50.73(a)(2)(x)	

LICENSEE CONTACT FOR THIS LER (12)

NAME	TELEPHONE NUMBER
Henry L. Hegrat, Compliance Engineer, Extension 6185	AREA CODE 2 1 6 2 5 9 - 3 7 3 7

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 fifteen single-space typewritten lines) (16)

On December 4, 1991, a Perry Plant Operator (PPO) performing a weekly check of the Emergency Service Water (ESW) keepfill system discovered the keepfill system pressure reading approximately 3.5 psig. The keepfill system pressure is required to be > 13 psig when the ESW A loop is in standby. The PPO checked the position of keepfill isolation valve 1P45-F720A and found it closed. The ESW A loop and associated loads were declared inoperable in accordance with the applicable Technical Specification Action Statements.

The mispositioning of valve 1P45-F720A was attributed to personnel error. The last authorized repositioning of 1P45-F720A occurred on November 21, 1991. Interviews of personnel performing work in the vicinity of the keepfill isolation valve did not reveal the source of the error. It was therefore assumed that the valve mispositioning was an unintentional error by an unidentified person.

To prevent recurrence of a similar incident involving the keepfill isolation valve, the required valve position will be changed from normally open to locked open. Additionally, all licensed and non-licensed plant operators will receive training on this event as part of requalification training.

I. Introduction

On December 4, 1991, at 2115, the Emergency Service Water (ESW) [BI] A loop was declared inoperable due to a mispositioned valve. At the time of the event, the plant was in operational Condition 1 (Power Operation) at 100 percent of rated thermal power with the Reactor Pressure Vessel [RPV] at approximately 1025 psig and saturated conditions.

II. Description of the Event

On December 4, 1991, at 2115, a Perry Plant Operator (PPO) performing a weekly check of the Emergency Service Water (ESW) keepfill system discovered the keepfill system pressure reading approximately 3.5 psig. At the time of the event the ESW A loop was thought to be in the standby mode. In this configuration, the required pressure for the keepfill system is greater than or equal to 13 psig. Upon discovery of the abnormal reading the PPO immediately notified the Control Room. The PPO subsequently checked the position of ESW keepfill isolation valve 1P45-F720A and found it closed. At the direction of the Control Room 1P45-F720A was opened and flow was heard through the valve. The PPO opened downstream sample collection isolation valve 1P45-F723A and vented a steady flow of air for approximately five minutes. The ESW A loop was then filled and vented in accordance with System Operating Instruction (SOI) P45/P49, Emergency Service Water and Screen Wash Systems (Unit 1).

Concurrent with these activities, the Control Room declared ESW A loop inoperable and took the appropriate actions required by applicable Technical Specifications sections. The Control Complex Chilled Water System loop A (P42) and Control Room HVAC/Emergency Recirculation System (M25/M26) train A were made inoperable as a result of the ESW A loop inoperability. Train B of M25/M26 was out of service due to a scheduled outage. The inoperability of both trains of M25/M26 required entry into the Technical Specification 3.0.3 action statement.

At 2330 hours on December 4, 1991, a four-hour notification was made to the NRC pursuant to the requirements of 10CFR50.72(b)(2)(iii)(D). This event is additionally being reported under the corollary reporting requirements of 10CFR50.73(a)(2)(v)(D) and 10CFR50.73(a)(2)(i)(B). The ESW A loop operability was restored when the fill and vent operation was completed.

III. Cause Analysis

The mispositioning of valve 1P45-F720A, which resulted in the ESW A loop inoperability was attributed to personnel error. The last authorized repositioning of the ESW keepfill isolation valve was performed on November 21, 1991, during a quarterly surveillance test. Interviews with personnel who performed work in or near the area of the valve did not reveal the source of the apparent error. It was therefore assumed that the valve mispositioning was an unintentional error by an unidentified person. The last weekly check of the ESW

keepfill system pressure was performed on November 27, 1991, with satisfactory results.

All manipulations of valve 1P45-F720A require completion of a Verification Checklist with the exception of repositionings covered by test procedures. Valve repositioning for 1P45-F720A for the above referenced testing required independent verification of the valve's position for restoration. No other documentary evidence could be found to justify repositioning the subject valve after the testing completed on November 21, 1991.

After that date, the ESW A loop was operated on the following dates:

- 11/28/91 - to support a storage tank discharge
- 11/29/91 - to support a Division 1 Diesel run
- 12/01/91 - to support a storage tank discharge
- 12/03/91 - to support a storage tank discharge

Valve 1P45-F720A was not required to be operated for any of the above activities.

IV. Safety Analysis

The primary function of the ESW keepfill system is to prevent water hammer during ESW system startup from a standby or secured status. The ESW system is comprised of three independent loops. The system is designed such that the occurrence of any single active or passive failure will not reduce the safety-related functional performance of the Emergency Core Cooling System (ECCS). The ESW system is capable of supplying cooling water to the equipment on two of the three ESW loops following a single failure. The ESW A loop supplies the following loads:

- RHR Heat Exchanger A
- Division 1 Diesel Generator Heat Exchanger
- Emergency Closed Cooling Heat Exchanger A
- Unit 2 Fuel Pool Cooling and Cleanup Heat Exchanger A (normally isolated)

An automatic start signal for the ESW A loop in the configuration which existed at the time of discovery on December 4, 1991, could have resulted in damage to the A loop due to water hammer. The ESW system safety function would not have been compromised in the event that the ESW A loop was lost if damage had occurred. This event is therefore considered not to be safety significant.

V. Similar Events

Several occurrences of mispositioned valves have been documented over the last two years in LERs 89-24, 90-34, 90-38, and 90-41. The latter three LERs involved mispositionings attributed to unintentional personnel errors. None of these events resulted in the inoperability of the ESW system.

VI. Corrective Actions

The required position for the ESW keepfill isolation valves 1P45-F720A(B) have been changed from normally open to locked open to prevent future occurrences of this event. Additionally, all licensed and non-licensed plant operators will receive training on this event as part of requalification training.

Energy Industry Identification System Codes are identified in the text as [XX].