



August 7, 2000

United States Nuclear Regulatory Commission
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Washington, DC 20555

Operating License 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, the following report is submitted:

LER 316/2000-010-00, "Failure To Verify Position Of Essential Service Water System Valves As Required By Technical Specifications".

The following commitments were identified in this submittal:

- All four ESW valves, 2-ESW-317, 2-ESW-321, 2-ESW-325, and 2-ESW-329, will be added to the procedure used to verify valves that are locked or sealed in position, 02-OHP 4030.STP.035 "Controlled Valve Position Logging," by August 15, 2000.
- The corresponding Unit 1 ESW valves will be added to procedure 01-OHP 4030.STP.035 "Controlled Valve Position Logging," prior to Unit 1 entering Mode 4.

Should you have any questions regarding this correspondence, please contact Mr. Brian A. McIntyre, Acting Director, Regulatory Affairs, at 616/465-5901, extension 1575.

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
B. A. McIntyre
D. Hahn
W. J. Kropp
R. P. Powers
R. Whale
Records Center, INPO
NRC Resident Inspector

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NRC Form 366 (6-1998)		U.S. NUCLEAR REGULATORY COMMISSION				APPROVED BY OMB NO. 3150-0104 EXPIRES 06/30/2001							
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) Donald C. Cook Nuclear Plant Unit 2						DOCKET NUMBER (2) 05000-316		PAGE (3) 1 of 3					
TITLE (4) Failure To Verify Position Of Essential Service Water System Valves As Required By Technical Specifications.													
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			
07	08	2000	2000	-- 010 --	00	08	07	2000	FACILITY NAME	DOCKET NUMBER			
OPERATING MODE (9)		1		THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more) (11)									
POWER LEVEL (10)		100		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)		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 M. B. Depuydt, Regulatory Affairs								TELEPHONE NUMBER (Include Area Code) 616 / 465-5901, x1589					
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).				☒ NO									
Abstract (Limit to 1400 spaces, i.e., approximately 15 single-spaced typewritten lines) (16)													
On July 8, 2000, it was determined that the Technical Specification (TS) required valve position verification for four Auxiliary Feedwater Pump (AFP) room cooler Essential Service Water (ESW) valves installed under a recently implemented design change, was not completed prior to entry into operational Mode 4 (Hot Shutdown). The TS requires that valves that support safety related equipment, and are not locked or sealed, be verified in their correct position at least once per 31 days. This TS requirement was not met, therefore, this LER is submitted in accordance with 10 CFR 50.73 (a)(2)(i)(B), operation or condition prohibited by the plant's Technical Specifications. The apparent cause of the event is inadequate communication and tracking of required changes to Operations department procedures resulting from design changes. The valves were sealed in the correct position on July 9, 2000. Administrative controls within the Operations department were enhanced to provide more effective identification and management of procedure changes resulting from design changes. Flow verifications performed on July 4, 2000, and again on July 7, 2000, show that the valves were in their correct position. A review of valve lineup records and component histories did not identify any manipulation of these valves between May 30, 2000 and July 4, 2000. Reasonable assurance therefore exists that the valves were in their correct positions during the time period in question. Failure to verify the valve positions did not result in mispositioning of the valves, nor did it impact the ability of the coolers to perform their design function.													

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

Conditions Prior to Event

Unit 2 was in Mode 1, Power Operation at 100 percent Rated Thermal Power.

Description of Event

On June 6, 2000, at 1902 hours, Unit 2 entered Mode 4, Hot Shutdown. Unit 2 Technical Specification (TS) 3.7.4.1 for Essential Service Water (ESW) train operability is applicable in Modes 1,2,3 and 4. TS Surveillance Requirement (SR) 4.7.4.1.a requires that at least two essential service water loops be demonstrated OPERABLE "...At least once per 31 days by verifying that each valve (manual, power operated or automatic) servicing safety related equipment that is not locked, sealed, or otherwise secured in position, is in its correct position."

On July 8, 2000, it was determined that the periodic TS valve position verification for four Auxiliary Feedwater Pump (AFW) room cooler ESW valves, 2-ESW-317, 2-ESW-321, 2-ESW-325, and 2-ESW-329 was not completed prior to entry into operational Mode 4, and was not performed between Mode 4 entry and when the problem was identified.

The subject valves are skid-mounted intermediate cooler outlet isolation valves that were added as part of the AFW room cooler installation design change during the recent outage. The procedure used to operate the system, 12-OHP 4021.019.001, Revision 18, "Operation of the Essential Service Water System," included the new valves. However, the four valves were not added to the surveillance procedures used to comply with TS 4.7.4.1, 02-OHP 4030.STP.022E, "East Essential Service Water System Test" and 02-OHP 4030.STP.022W, "West Essential Service Water System Test." The omission was discovered during troubleshooting for an unrelated ESW system flow problem, reported under LER 316/2000-009-00, and was applicable to all four AFW room coolers.

This LER is being submitted in accordance with 10 CFR 50.73 (a)(2)(i)(B), for any operation or condition prohibited by the plant's Technical Specifications, as the requirements of TS SR 4.7.4.1.a was not met.

Cause of Event

The missed surveillance was the result of failure to incorporate the four valves installed by the design change into the appropriate Operations surveillance procedures. The apparent cause of the event was inadequate communication and tracking of required Operations procedure revisions related to design changes within the Operations department.

Primary contributing factors included inadequate guidance to define the role of Operations department representatives interfacing directly with the design change process, failure to ensure procedure impacts were communicated to appropriate personnel in the organization, and inadequate preparation of personnel selected to represent the Operations Department in the design change process, in that they were not fully aware of the duties associated with that role.

Analysis of Event

The design change installed two safety-related 100 percent capacity room coolers in the Unit 2 turbine driven AFW pump room and one 100 percent capacity room cooler in each of the motor driven AFW rooms. The safety related function of the AFW Pump Room Ventilation System is to maintain the pump room ambient temperature at or below the maximum design ambient temperature. The coolers are designed to maintain the rooms less than 85 degrees F when the pumps are not operating and less than 104 degrees F with the respective Auxiliary Feedwater pump in operation, and were installed to facilitate protection of the pump and associated equipment from certain postulated high energy line break events. 2-ESW-317, 2-ESW-321, 2-ESW-325 and 2-ESW-329 are room cooler skid-mounted ESW outlet shutoff valves.

If the valves were not in the correct position, the AFW room coolers would not perform as designed and the AFW rooms could overheat as a result. Flow verifications performed on July 4, 2000, during system diagnostics, and again on July 7,

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

2000, show that the coolers were passing flow. Difficulties experienced with AFW pump room cooler flow, as documented in LER 316/2000-009-00, were determined to be related to the throttled position of the ESW isolation valves located downstream of the subject valves. A review of valve lineup records and component histories did not identify any manipulation of these valves between May 30, 2000, and July 7, 2000. Reasonable assurance therefore exists that the valves were in their correct positions during the time period in question. Failure to verify the valve positions did not result in mispositioning of the valves, nor did it impact the ability of the coolers to perform their design function. This event had minimal safety impact.

Corrective Actions

All four valves were sealed in the correct positions on July 9, 2000. Consequently the 31-day Technical Specification position verification surveillance for valves that are not locked or sealed is no longer applicable to 2-ESW-317, 2-ESW-321, 2-ESW-325, and 2-ESW-329 and surveillance procedures 02-OHP 4030.STP.022E and 02-OHP 4030.STP.022W will not be revised to include these valves. All four valves will be added to the procedure used to verify valves that are locked or sealed in position, 02-OHP 4030.STP.035 "Controlled Valve Position Logging," by August 15, 2000. The valves will be also added to procedure 01-OHP 4030.STP.035 "Controlled Valve Position Logging," prior to Unit 1 entering Mode 4.

To prevent recurrence, an Operations department desktop guide was implemented on July 20, 2000 that provides formal controls for identification and tracking of necessary procedure revisions related to design changes within the Operations department, notification of the Operations procedures group, production of procedure markups, and notification of any subsequent design change package revisions. Guidance was also provided to ensure that Operations personnel who are selected to directly interface with the design change process are familiar with the design change process and understand their related duties and responsibilities.

Evaluation of the extent of condition relative to this event is in progress, and will be completed in accordance with the Corrective Action program. An initial review of other Unit 2 design changes completed during the recent extended outage was conducted to ensure that other newly installed valves were added to surveillance procedures as necessary.

Previous Similar Events

None