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April 12, 2002

U.S. Nuclear Regulatory Commission
ATTN: Document Control Desk
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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 being submitted:

LER 316/2002-002-00: "Technical Specification 3.9.4.c was Violated During Core Alteration"

The following commitments were identified in this submittal:

- Procedure 01(02)-OHP-4030.STP.041 will be revised to ensure that the methods used to establish refueling integrity provided for Penetrations CPN-74 and CPN-29 recognize that the Containment Control Air headers may be cross-tied and check whether the jumper are in place. The completion date for this revision is scheduled prior to its usage during the next refueling outage.
- Unit 1 and Unit 2 Type B and C Leak Rate Testing Procedures 01(02)-EHP-4030-234-203 will be revised to ensure that steps are added for documenting the placement of the containment control air header cross tie jumpers in the Proceduralized Temporary Modification Log. The completion date for this revision is scheduled prior to its usage during the next refueling outage.

Should you have any questions regarding this correspondence, please contact Mr. Gordon P. Arent, Manager, Regulatory Affairs, at 616/697-5553.

Sincerely,

A handwritten signature in black ink that reads 'Joseph E. Pollock'.

Joseph E. Pollock
Site Vice President

JM/pae

Attachment

IE22

c: G. P. Arent
A. C. Bakken
L. Brandon
J. E. Dyer, Region III
R. W. Gaston
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NRC Resident Inspector
Records Center, INPO

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 hours. Reported lessons learned are incorporated into the licensing process and fed back to industry. Send comments regarding burden estimate to the Records Management Branch (T-6 E6), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by internet e-mail to bjs1@nrc.gov, and to the Desk Officer, Office of Information and Regulatory Affairs, NEOB-10202 (3150-0104), Office of Management and Budget, Washington, DC 20503. If a means used to impose information collection does not display a currently valid OMB control number, the NRC may not conduct or sponsor, and a person is not required to respond to, the information collection.

1. FACILITY NAME Donald C. Cook Nuclear Plant Unit 2	2. DOCKET NUMBER 05000-316	3. PAGE 1 of 3
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4. TITLE
Technical Specification 3.9.4.c was Violated During Core Alteration

5. EVENT DATE			6. LER NUMBER				7. REPORT DATE			8. OTHER FACILITIES INVOLVED	
MONTH	DAY	YEAR	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	MONTH	DAY	YEAR	FACILITY NAME	DOCKET NUMBER	
02	12	2002	2002	-- 02 --	00	04	12	2002	D.C. Cook	05000-316	
									FACILITY NAME	DOCKET NUMBER	

9. OPERATING MODE	6	11. THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check all that apply)								
10. POWER LEVEL	0	20.2201(b)	20.2203(a)(3)(ii)	50.73(a)(2)(ii)(B)	50.73(a)(2)(ix)(A)					
		20.2201(d)	20.2203(a)(4)	50.73(a)(2)(iii)	50.73(a)(2)(x)					
		20.2203(a)(1)	50.36(c)(1)(i)(A)	50.73(a)(2)(iv)(A)	73.71(a)(4)					
		20.2203(a)(2)(i)	50.36(c)(1)(ii)(A)	50.73(a)(2)(v)(A)	73.71(a)(5)					
		20.2203(a)(2)(ii)	50.36(c)(2)	50.73(a)(2)(v)(B)	OTHER Specify in Abstract below or in NRC Form 366A					
		20.2203(a)(2)(iii)	50.46(a)(3)(ii)	50.73(a)(2)(v)(C)						
		20.2203(a)(2)(iv)	50.73(a)(2)(i)(A)	50.73(a)(2)(v)(D)						
		20.2203(a)(2)(v)	X 50.73(a)(2)(i)(B)	50.73(a)(2)(vii)						
		20.2203(a)(2)(vi)	50.73(a)(2)(i)(C)	50.73(a)(2)(viii)(A)						
		20.2203(a)(3)(i)	50.73(a)(2)(ii)(A)	50.73(a)(2)(viii)(B)						

12. LICENSEE CONTACT FOR THIS LER

NAME Johnny Mathis, Regulatory Affairs	TELEPHONE NUMBER (Include Area Code) (616) 465-5901, X1578
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13. COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO EPIX	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO EPIX

14. SUPPLEMENTAL REPORT EXPECTED				15. EXPECTED SUBMISSION DATE		
YES (If Yes, complete EXPECTED SUBMISSION DATE).	X	NO		MONTH	DAY	YEAR

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

On February 12, 2002, Technical Specification (TS) 3.9.4.c was violated when the 100 PSI Control Air to Containment Control Air Header #2 Train 'B' Containment Isolation Valve, 2-XCR-101[EIIS:LK:SHV], was stroked open during core alterations with open test connections on both sides of the valve, one inside containment and one outside. This configuration provided direct access from the containment atmosphere to the outside atmosphere. The apparent cause was determined to be ineffective procedural control (02-OHP-4030.STP.041). The preferred method for establishing refueling integrity for 2-CPN-74 in the procedure does not consider the possibility that the control air ring headers may be cross-tied. A contributing cause was that the installation of containment control air header cross-tie jumpers was not documented in the Proceduralized Temporary Modification Log on January 20, 2002.

Upon discovery that the preferred method used to maintain refueling integrity for 2-CPN-74 was ineffective, an alternate method was established and valve 2-XCR-101 was visually confirmed to be intact and closed. The Temporary Modification Log Index was reviewed to verify that other Temporary Modifications were logged. The containment control air cross-tie jumpers were documented in the log at that time.

The refueling integrity procedures will be revised to ensure that the methods used to establish refueling integrity for Penetrations CPN-74 and CPN-29 recognize that the Containment Control Air headers may be cross-tied. Unit 1 and Unit 2 Type B and C Leak Rate Testing procedures will be revised to ensure that steps are added for documenting the placement of the containment control air header cross tie jumpers in the Proceduralized Temporary Modification Log.

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

Conditions Prior to Event

Unit 1 - 100 percent power
Unit 2 - MODE 6

Description of Event

On February 12, 2002, Technical Specification (TS) 3.9.4.c was violated when the 100 PSI Control Air to Containment Control Air Header #2 Train 'B' Containment Isolation Valve, 2-XCR-101 [EIIIS:LK:SHV], was stroked open during core alterations with open test connections on both sides of the valve, one inside containment and one outside. This configuration provided direct access from the containment atmosphere to the outside atmosphere.

A post event investigation of this incident revealed that on January 20, 2002, as part of preparation for 10 CFR 50 Appendix J, Type B & C leak rate testing of Containment Isolation Valve 2-XCR-101, the # 1 and # 2 Containment Control Air headers were cross-tied with air hose jumpers. The purpose of cross-tying the Control Air headers was to allow the # 2 headers to be fed by the # 1 headers while the Containment Isolation Valve for the # 2 headers (2-XCR-101) was isolated from the system for leak rate testing. Jumper installation was performed by Attachment 5 of the B & C Leak Rate procedure, but was not logged in the Proceduralized Temporary Modification Log in the control room as required by the Temporary Modification Procedure. The cross-tie jumpers were left in place to support scheduled maintenance activities on the control air valve 2-XCR-101.

On January 26, 2002, in further preparation for Type B & C leak rate testing of valve 2-XCR-101, Lineup Sheet 1 of the procedure isolated valve 2-XCR-101 from the rest of the Control Air System by closing the upstream shut off valve and the downstream shutoff valves for the 50 and 85 psi Control Air Containment Ring Headers. The line-up also opened test connection valves on both sides of valve 2-XCR-101, one inside containment and one outside. This alignment was left in place, via a clearance, to support maintenance activities on valve 2-XCR-101. At the time, refueling integrity for Penetration CPN-74 was established by using an Option from the Refueling Integrity Procedure 02-OHP-4030.STP.041 which consisted of closing valve 2-XCR-101.

On February 9, 2002, when refueling integrity was reestablished via Procedure 02-OHP-4030.STP.041, the procedurally designated preferred method (Option) was used to establish refueling integrity for penetration 2-CPN-74. This method of demonstrating refueling integrity involves confirming that the penetration is actively pressurized by control air. By being pressurized, the penetration would not provide direct access from the containment atmosphere to the outside atmosphere. Subsequently, this method of verification was determined to be ineffective if the control air headers are cross-tied. Another method of establishing refueling integrity, one which closes 2-XCR-101, or otherwise closes off the penetration, should have been used.

On February 12, 2002 during core alterations maintenance activities on valve 2-XCR-101 stroked the valve open with test connections open on both sides of the penetration thus creating an actual path from the atmosphere inside containment to the atmosphere outside containment.

Technical Specification (TS) 3.9.4.c requires, in part, that each containment building penetration providing direct access from the containment atmosphere to the outside atmosphere be either closed by an isolation valve, blind flange, manual valve, or equivalent. During the time maintenance stroked valve 2-XCR-101, a breach of refueling integrity resulted. This breach of integrity is prohibited by TS and is therefore reportable in accordance with 50.73(a)(2)(i)(B).

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

Cause of Event

The apparent cause was determined to be ineffective procedural control (02-OHP-4030.STP.041). The preferred method for establishing refueling integrity for 2-CPN-74 in the procedure does not consider the possibility that the control air ring headers may be cross-tied.

A contributing cause was that the installation of containment control air header cross-tie jumpers was not documented in the Proceduralized Temporary Modification Log on January 20, 2002.

Analysis of Event

The Bases for TS 3.9.4.c states that the requirements on containment building penetration closure and operability ensure that a release of radioactive material within the containment will be restricted from leakage to the environment. The operability and closure restrictions are sufficient to restrict radioactive material release from a element rupture based upon the lack on containment pressurization potential while into refueling mode.

The loss of refueling integrity was limited to the time it took to cycle valve 2-XCR-101 open and closed. Therefore public health and safety was not impacted as a result of this event.

Corrective Actions

Upon discovery that the preferred method used to maintain refueling integrity for 2-CPN-74 was ineffective, another method from procedure 02-OHP-4030.STP.041 was initiated and valve 2-XCR-101 was visually confirmed to be intact and closed.

The Temporary Modification Log was reviewed to determine if other Temporary Modification were un-logged. The containment control air cross-tie jumpers were documented in the log at that time.

The refueling integrity procedures will be revised to ensure that the methods used to establish refueling integrity provided for Penetrations CPN-74 and CPN-29 recognize that the Containment Control Air headers may be cross-tied and check whether the jumpers are in place. The completion date for this revision is scheduled prior to its usage during the next refueling outage.

Unit 1 and Unit 2 Type B and C Leak Rate Testing procedures will be revised to ensure that steps are added for documenting the placement of the containment control air header cross tie jumpers in the Proceduralized Temporary Modification Log. The completion date for this revision is scheduled prior to its usage during the next refueling outage.

Previous Similar Events

LER 316-2002-01-00: This event resulted from a mis-aligned valve during performance of procedure 02-EHP-4030-0234-203, Unit 2 B & C Leak Rate Testing, which violated refueling integrity while fuel movement was in progress. A refueling tag was inadvertently lifted and the component re-positioned. This was a human performance error. The corrective action associated with LER 316-2002-001-00 would not have prevented this incident from occurring.