

Duke Power Company  
Catawba Nuclear Station  
4800 Concord Road  
York, SC 29745

(803)831-3000



**DUKE POWER**

May 24, 1995

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

Subject: Catawba Nuclear Station  
Docket No. 50-414  
LER 414/95-003

Gentlemen:

Attached is Licensee Event Report 414/95-003 concerning TECHNICAL SPECIFICATION VIOLATION INVOLVING CONTAINMENT ISOLATION VALVES.

This event was considered to be of no significance with respect to the health and safety of the public.

Very truly yours,

A handwritten signature in dark ink, appearing to read 'D. L. Rehn'.

D. L. Rehn

kas

Attachments

xc: Mr. S. D. Ebnetter  
Regional Administrator, Region II  
U. S. Nuclear Regulatory Commission  
101 Marietta Street, NW, Suite 2900  
Atlanta, GA 30323

Marsh & McLennan Nuclear  
1166 Avenue of the Americas  
New York, NY 10036-2774

Mr. R. E. Martin  
U. S. Nuclear Regulatory Commission  
Office of Nuclear Reactor Regulation  
Washington, D.C. 20555

INPO Records Center  
700 Galleria Place  
Atlanta, GA 30339-5957

Mr. R. J. Freudenberger  
NRC Resident Inspector  
Catawba Nuclear Station

9506010173 950524  
PDR ADOCK 05000414  
S PDR

JE22

## LICENSEE EVENT REPORT (LER)

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

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 50.0 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE INFORMATION AND RECORDS MANAGEMENT BRANCH (MNBB 7714), 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)

Catawba Nuclear Station, Unit 2

## DOCKET NUMBER (2)

05000414

## PAGE (3)

1 OF 5

## TITLE (4)

Technical Specification Violation Involving Containment Isolation Valves

EVENT DATE (5)			LER NUMBER (6)			REPORT NUMBER (7)			OTHER FACILITIES INVOLVED (8)	
MONTH	DAY	YEAR	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	MONTH	DAY	YEAR	FACILITY NAME	DOCKET NUMBER
04	24	95	95	-- 003 --	00	05	24	95	N/A	05000

OPERATING MODE (9)	1	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR 5: (Check one or more) (11)							
POWER LEVEL (10)	100	20.402(b)		20.405(c)		50.73(a)(2)(iv)		73.71(b)	
		20.405(a)(1)(i)		50.36(c)(1)		50.73(a)(2)(v)		73.71(c)	
		20.405(a)(1)(ii)		50.36(c)(2)		50.73(a)(2)(vii)		OTHER	
		20.405(a)(1)(iii)	X	50.73(a)(2)(i)		50.73(a)(2)(viii)(A)		(Specify in Abstract below and in Text, NRC Form 366A)	
		20.405(a)(1)(iv)		50.73(a)(2)(ii)		50.73(a)(2)(viii)(B)			
		20.405(a)(1)(v)		50.73(a)(2)(iii)		50.73(a)(2)(x)			

## LICENSEE CONTACT FOR THIS LER (12)

## NAME

D.P. Kimball, Safety Review Group Manager

## TELEPHONE NUMBER (Include Area Code)

(803)831-3743

## COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPDPS	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPDPS

## SUPPLEMENTAL REPORT EXPECTED (14)

YES (If yes, complete EXPECTED SUBMISSION DATE)	X	NO	EXPECTED SUBMISSION DATE (15)	MONTH	DAY	YEAR

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

On April 24, 1995 at 0345 hours, with Unit 2 in Mode 1, Power Operation, two outside containment isolation valves were declared inoperable for work on their respective actuators. Tagouts had been generated for the inside containment isolation valves to be closed to maintain the penetrations operable per Technical Specifications (T/S). However, during the planning and review process for the tagouts, the Unit 2 Senior Reactor Operator (SRO) involved did not require power to be removed from the inside valves as required by T/S and a related T/S Interpretation. Work began on the outside valves on April 24 at approximately 1000 hours. On April 25 at 2142 hours, an SRO was performing a Control Board walkdown when he noticed the valves had been closed but power was not removed. Power was removed at approximately 2245 hours to comply with T/S. This incident is attributed to Work Practices, required document not used. The SRO involved did not review the related T/S Interpretation which clearly stated that power must be removed from these valves to maintain operability. The SRO involved has been counseled on the need to review T/S Interpretations when working with T/S related items. A contributing cause was also assigned due to Management Directions; the tagout process did not require tagouts to receive a second check by an SRO for technical accuracy. Corrective actions include a communication to all Operations personnel on management expectations for human performance. In addition, a requirement was added to provide for a second check by an SRO on all tagouts for technical accuracy.

REQUIRED NUMBER OF DIGITS/CHARACTERS  
FOR EACH BLOCK

BLOCK NUMBER	NUMBER OF DIGITS/CHARACTERS	TITLE
1	UP TO 46	FACILITY NAME
2	8 TOTAL 3 IN ADDITION TO 05000	DOCKET NUMBER
3	VARIES	PAGE NUMBER
4	UP TO 76	TITLE
5	6 TOTAL 2 PER BLOCK	EVENT DATE
6	7 TOTAL 2 FOR YEAR 3 FOR SEQUENTIAL NUMBER 2 FOR REVISION NUMBER	LER NUMBER
7	6 TOTAL 2 PER BLOCK	REPORT DATE
8	UP TO 18 -- FACILITY NAME  8 TOTAL -- DOCKET NUMBER 3 IN ADDITION TO 05000	OTHER FACILITIES INVOLVED
9	1	OPERATING MODE
10	3	POWER LEVEL
11	1 CHECK BOX THAT APPLIES	REQUIREMENTS OF 10 CFR
12	UP TO 50 FOR NAME 14 FOR TELEPHONE	LICENSEE CONTACT
13	CAUSE VARIES 2 FOR SYSTEM 4 FOR COMPONENT 4 FOR MANUFACTURER NPRDS VARIES	EACH COMPONENT FAILURE
14	1 CHECK BOX THAT APPLIES	SUPPLEMENTAL REPORT EXPECTED
15	6 TOTAL 2 PER BLOCK	EXPECTED SUBMISSION DATE

**LICENSEE EVENT REPORT (LER)**  
**TEXT CONTINUATION**

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 50.0 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE INFORMATION AND RECORDS MANAGEMENT BRANCH (MNBB 7714), 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)		DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)
Catawba Nuclear Station, Unit 2		05000 414	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	2 OF 5
			95	- 003	- 00	

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

**BACKGROUND**

The Nuclear Sampling [EIS:KN](NM) system provides a means of obtaining samples from safety related systems during normal plant operation. Included in the NM system are sample lines from each Steam Generator [EIS:SG](S/G) blowdown line and each S/G upper shell area. Containment isolation valves [EIS:V] are located on each line such that the operator may select sample flow from either the upper shell or the blowdown line of each S/G. Downstream of these valves, a common header is formed that exits containment. A single containment isolation valve is provided for outside containment isolation.

These valves are designated as follows:

2NM197B (2NM217B), S/G 2B (2D) Upper Shell Sample Containment Isolation  
2NM200B (2NM220B), S/G 2B (2D) Blowdown Sample Header Containment Isolation  
2NM201A (2NM221A), S/G 2B (2D) Sample Header Containment Isolation (Outside)

Technical Specification (T/S) 3.6.3 requires the above valves to be Operable in Modes 1 (Power Operation), 2 (Startup), 3 (Hot Standby), and 4 (Hot Shutdown). With one or more of the valves inoperable, action is required to maintain at least one isolation valve Operable in each affected penetration [EIS:PEN] and:

- Restore the inoperable valve(s) to Operable status within four hours, or
- Isolate each affected penetration within four hours by use of at least one deactivated automatic valve secured in the isolation position, or
- Isolate each affected penetration within four hours by use of at least one closed manual valve or blind flange, or
- Be in at least Hot Standby within the next six hours and in Cold Shutdown within the following 30 hours.

**EVENT DESCRIPTION**

April 24, 1995  
~0300

Unit 2 was in Mode 1 at 100% power. The Unit 2 Senior Reactor Operator (SRO) provided information to a Non-licensed Operator (NLO) for development of tagouts for work planned on valves 2NM201A and 2NM221A. The instructions given were to develop a repair tagout that would place tags on valves 2NM201A and 2NM221A, and to open and tag their respective 600V breakers [EIS:52]. To maintain operability of these two penetrations, instructions were given to develop a separate tagout that would close 2NM197B, 2NM200B, 2NM217B, and 2NM220B and place tagout stickers on the Main Control Board [EIS:MCBD] switches [EIS:33] for these valves.

LICENSEE EVENT REPORT (LER)  
TEXT CONTINUATION

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 50.0 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE INFORMATION AND RECORDS MANAGEMENT BRANCH (MNBB 7714), 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)	DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)
Catawba Nuclear Station, Unit 2	05000 414	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	3 OF 5
		95	003	00	

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

April 24, 1995

- ~0330 The tagouts were completed and given to the Unit 2 SRO for review.
- 0345 Upon his approval of the tagouts, the Unit 2 SRO declared 2NM201A and 2NM221A inoperable and made the required entries into the Technical Specification Action Item Logbook (TSAIL). Note: The SRO inadvertently entered T/S 3.6.1.1 in lieu of T/S 3.6.3.
- ~0410 The tagouts were taken to the Control Room and given to the Operator At The Controls (OATC). The OATC performed the "Control Room Acknowledgment" of the tagout as required. The affected components were then positioned as directed by the tagout sheets and tagout stickers were placed on the Main Control Board.
- Note: At this time, valves 2NM197B, 200B, 217B, and 220B were closed but not deactivated as required by T/S.
- 0730 Operations signed the Work Orders for 2NM201A and 2NM221A, giving clearance for Maintenance to begin work.
- ~1000 Maintenance began work on 2NM201A and 2NM221A. The Work Orders required the actuators to be removed from each valve (removal of the actuator causes the valve to open).

April 25, 1995

- 2142 During a Control Board walkdown, the Unit 2 Control Room SRO recognized that valves 2NM197B, 200B, 217B, and 220B were closed but still had power available (closed indications were lit).
- ~2245 To comply with T/S, power was removed from 2NM197B, 200B, 217B, and 220B by opening and tagging each valve's 600V breaker.

CONCLUSION

The root cause of this event is Work Practices; required document not used. A Technical Specification Interpretation exists for T/S 3.6.3 which clearly states that containment isolation valves are considered Operable if they are maintained closed with power removed. To ensure Operators are aware of existing T/S

# **LICENSEE EVENT REPORT (LER)** **TEXT CONTINUATION**

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 50.0 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE INFORMATION AND RECORDS MANAGEMENT BRANCH (MNB 7714), 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)	DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)
Catawba Nuclear Station, Unit 2	05000 414	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	4 OF 5
		95	003	00	

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

Interpretations, Technical Specifications that have related Interpretations are highlighted in the Operations T/S manuals. When planning and reviewing the tagouts for 2NM197B, 2NM200B, 2NM217B, and 2NM220B the Unit 2 SRO did not review the associated Interpretation. As a result, the SRO failed to recognize the need to remove power from the subject valves. The need to review T/S Interpretations when working with T/S related items has been reinforced with the SRO involved in this event.

A contributing cause of less than adequate Management Directions has also been assigned to this event. When planning and reviewing the tagout, the Unit 2 SRO was the only person required by the tagout process to perform a technical review of the accuracy of the tagout. To ensure the appropriate levels of technical review are in place for tagouts, Operations now requires that all tagouts receive a second check by an SRO for technical accuracy. This requirement has been communicated to all Operations shifts and is currently being performed. Operations Management Procedure (OMP) 2-18, Tagout Removal and Restoration Procedure will be revised to include this requirement. Also during this event, the Unit 2 SRO inadvertently listed T/S 3.6.1.1 in TSAIL in lieu of T/S 3.6.3. The SRO has indicated that he reviewed both T/S sections, but referenced the wrong T/S in TSAIL. The TSAIL has been updated to reflect the correct T/S. In addition, Operations has communicated to all shifts a requirement for an independent SRO review of all TSAIL entries. The TSAIL process will be changed add this requirement.

Due to this event, as well as other recent events that involved less than adequate Work Practices, Station and Operations management met with all Operations Shift Managers (OSMs) on May 8, 1995. During this meeting, these events were reviewed and specific expectations for human performance improvements were discussed. Following this meeting, the Operations Superintendent held group "time outs" with all Operations work groups to reinforce expectations for human performance improvement.

A review of reportable events for the past two years indicates that Technical Specification violations due to less than adequate document use practices by Operations is a recurring problem. LER 413/93-012 involved a Technical Specification violation for entering Mode 3 with an inoperable Auxiliary Feedwater Pump [EIS:P]. The root cause was attributed to less than adequate document use practices because Operations personnel did not correctly apply the requirements of the related T/S and T/S Interpretation.

## CORRECTIVE ACTIONS

### SUBSEQUENT

- 1) Operations removed power from the four NM valves involved in this event to comply with T/S.
- 2) The Unit 2 SRO involved in this event was counseled on the requirements to review T/S Interpretations when working with T/S related items.

# LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 50.0 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE INFORMATION AND RECORDS MANAGEMENT BRANCH (MNBB 7714), 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)	DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)
Catawba Nuclear Station, Unit 2	05000 414	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	5 OF 5
		95	- 003 -	00	

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

- 3) A requirement that all tagouts receive a second check by an SRO for technical accuracy was communicated to all Operations shifts.
- 4) The Operations Superintendent has held "time out" sessions with all Operations work groups to reinforce management expectations for human performance improvement.
- 5) Management expectations for human performance improvement was communicated to all OSMs.
- 6) Operations has communicated to all shifts a requirement for an independent SRO review of all TSAIL entries.

## PLANNED

- 1) OMP 2-18 will be revised to require all tagouts to receive a second check by an SRO for technical accuracy.
- 2) The TSAIL process will be changed to require an independent SRO review of all TSAIL entries.

## SAFETY ANALYSIS

During this event, outside containment isolation valves 2NM201A and 2NM221A were declared inoperable on April 24 at 0345 hours. Work was started on these valves on April 24 at approximately 1000 hours. At this time the actuators were removed, which caused the valves to automatically open. On April 25 at 2142 hours, an SRO discovered that the inside containment isolation valves (2NM197B, 2NM200B, 2NM217B, and 2NM220B) did not have power removed as required to maintain operability of the affected penetrations. Power was removed at approximately 2245 hours. During the time period from initially declaring the outside valves inoperable until power was removed from the inside valves to complete stoppage, all four inside valves remained in the closed position. The basis for T/S 3.6.3 is to require operability of containment isolation valves to ensure that the containment atmosphere will be isolated from the outside environment in the event of a release of radioactive material inside containment. With the inside valves closed during the time frame in question, the basis for this T/S was met. Therefore, the health and safety of the public was not affected by this event.