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 FACIL: 50-261 H.B. Robinson Plant, Unit 2, Carolina Power & Light Co 05000261
 AUTH. NAME AUTHOR AFFILIATION
 JURY, K.R. Carolina Power & Light Co.
 YOUNG, D.E. Carolina Power & Light Co.
 RECIP. NAME RECIPIENT AFFILIATION

SUBJECT: LER 94-020-01: on 940831, TS violation due to mispositioned valves occurred. Caused by personnel error. Operator involved w/valves misposition counseled. W/941205 ltr.

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10 CFR 50.73

Carolina Power & Light Company
Robinson Nuclear Plant
PO Box 790
Hartsville SC 29551

Robinson File No.: 13510C
Serial: RNP/94-1934

DEC 05 1994

United States Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, DC 20555

H. B. ROBINSON STEAM ELECTRIC PLANT, UNIT NO. 2
DOCKET NO. 50-261/LICENSE NO. DPR-23
LICENSEE EVENT REPORT NO. 94-020-01

Gentlemen:

The enclosed Supplemental Licensee Event Report (LER), is submitted in accordance with 10 CFR 50.73. The revised information is identified by a right hand margin bar.

Very truly yours,

Dale E. Young
D. E. Young
Plant General Manager

RDC:rdc
Enclosure

c: Mr. S. D. Ebnetter, Regional Administrator, USNRC, Region II
Ms. B. L. Mozafari, USNRC Project Manager, HBRSEP
Mr. W. T. Orders, USNRC Senior Resident Inspector, HBRSEP

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NRC FORM 366 (5-92)			U.S. NUCLEAR REGULATORY COMMISSION			APPROVED BY OMB NO. 3150-0104 EXPIRES 5/31/95				
LICENSEE EVENT REPORT (LER)										
(See reverse for required number of digits/characters for each block)										
FACILITY NAME (1) H. B. ROBINSON STEAM ELECTRIC PLANT, UNIT NO. 2						DOCKET NUMBER (2) 050-261		PAGE (3) 1 OF 5		
TITLE (4) TECHNICAL SPECIFICATION VIOLATION DUE TO MISPOSITIONED VALVES										
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	31	94	94	-- 020 --	01	12	05	94	FACILITY NAME	DOCKET NUMBER
										05000
										05000
OPERATING MODE (9)		N		THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (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 K. R. Jury: Manager - Licensing/Regulatory Programs								TELEPHONE NUMBER (Include Area Code) (803) 857-1363		
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 15 single-spaced typewritten lines) (16) On August 31, 1994, H. B. Robinson Steam Electric Plant (HBRSEP), Unit No. 2 was operating at 100% power. Following review of a report of main steam line drain line root isolation valves being in the "open" position, an initial determination was made that a condition existed that was outside the design basis of the plant, since these valves are considered to be containment isolation valves. Technical Specifications (TS) 1.7 and 3.6 collectively require that these valves be closed during normal operation. Subsequent reviews have shown that operating with the affected valves in the open position was within the design basis of the plant. These valves are normally operated under administrative controls; however, from August 6 to August 29, 1994, the configuration of these valves were not administratively controlled. As such, the plant was operating in a condition prohibited by TS. This event was caused by personnel error. Specifically, an operator error during plant startup activities resulted in the valves not being returned to their closed position. Upon discovery of this condition, the mispositioned valves were placed in the closed position. The operator involved with the valves' misposition was counselled.										
This report is submitted pursuant to 10 CFR 50.73 (a)(2)(i) as a condition										

NRC FORM 366A
(5-92)

U.S. NUCLEAR REGULATORY COMMISSION

APPROVED BY OMB NO. 3150-0104
EXPIRES 5/31/95

LICENSEE EVENT REPORT (LER)

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)
H. B. ROBINSON STEAM ELECTRIC PLANT, UNIT NO. 2	050-261	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	2 OF 5
		94	020	01	

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

I. DESCRIPTION OF EVENT

On August 31, 1994, H. B. Robinson Steam Electric Plant (HBRSEP), Unit No. 2 was operating at 100% power. At 0805 hours, following review of a report of main steam (EIIS Code: SB) line drain line root isolation valves (EIIS Code: ISV) being in the "open" position, an initial determination was made that a condition existed that was outside the design basis of the plant. Specifically, on August 29, 1994, a Senior Control Operator (SCO) performing Job Performance Measures (JPMs) discovered six manual containment isolation valves in the one inch lines used for isolation of the drains for each Main Steam Isolation Valve (MSIV) (EIIS Code: ISV) to be in the "open" position.

The NRC was notified of this condition via the Emergency Notification System (ENS) on August 31, 1994 at 0856 hours pursuant to 10 CFR 50.72(b)(1)(ii)(B) as a condition outside the design basis of the plant.

Subsequent reviews have shown that this condition was within the design basis of the plant; however, since the condition involved discovery of containment isolation valves in the "open" position, the plant was operating in a condition prohibited by TS.

II. CAUSE OF EVENT

This event was caused by personnel error. The results of the investigation revealed that a total of fifteen main steam line drain line root isolation valves, normally referred to as "above and below seat drain valves," had been manipulated when the reactor was in hot shutdown. On August 6, 1994, six of these valves were to be closed to establish containment integrity during the performance of procedure GP-005, "Power Operation." Prior to that time, with the reactor in the hot shutdown condition and the MSIVs closed, the MSIV drain line root isolation valves had been throttled open, as authorized by procedure GP-002, "Cold Shutdown to Hot Subcritical at No Load Tavg," to allow for Reactor Coolant System (RCS) temperature control. To achieve temperature control, the root isolation valve for the two MSIV drain lines for each MSIV must be opened, one additional valve for each MSIV downstream of one of the root valves must be opened, and finally the downstream isolation for the root valves are throttled, by the direction of the control room. Adjusting temperature in this manner is routinely directed by a licensed Reactor Operator (RO) in the control room via communication to an Auxiliary Operator (AO) in the field.

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(5-92)

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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.

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II. CAUSE OF EVENT (Continued)

A breakdown in communication and improper work practices during plant startup activities resulted in nine of the valves not being returned to their closed position. On August 6, 1994, during performance of GP-005, the SCO in the control room directed an SCO in the field to isolate the MSIV drain line valves. The SCO in the field was not made aware that this direction was specifically for performance of plant startup activities in accordance with GP-005. Therefore, under the impression that the valves were being manipulated for RCS temperature control only, the SCO in the field, in turn, directed two AOs to complete this task while he observed. Because the other nine root isolation valves, including the six containment isolation valves, are normally open when using the above and below seat drains for temperature control, these valves were not closed. Subsequently, the SCO who had been in the field improperly documented on the official copy of procedure GP-005 that all fifteen of the valves had been verified closed, when in fact, the six isolation valves had not been returned to the closed position as required.

III. ANALYSIS OF EVENT

Technical Specifications (TS) 3.6 requires that the containment integrity shall not be violated unless the reactor is in the cold shutdown condition. As defined in part, by TS 1.7, containment integrity is considered to exist when all non-automatic containment isolation valves not required for normal operation are closed and blind flanges are properly installed where required. The basis of TS 3.6 states that the RCS must be in the conditions of cold shutdown in order to relax containment integrity. This ensures that the release of radioactive materials from the containment atmosphere will limit the site boundary radiation doses to within the dose guidelines values of 10 CFR 100.11 during accident conditions.

The Updated Final Safety Analysis Report (UFSAR), sections 15.1.4, "Inadvertent opening of a Steam Generator Relief or Power Operated Relief Valve," and 15.6.3, "Steam Generator Tube Rupture," bound accident conditions resulting from steam flow from all six containment isolation valves in the "open" position.

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H. B. ROBINSON STEAM ELECTRIC PLANT, UNIT NO. 2	050-261	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	4 OF 5
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III. ANALYSIS OF EVENT (Continued)

UFSAR Section 15.1.4 states that the most limiting case of a stuck open steam generator relief valve is bounded at power by the analysis of a 10 percent load increase analyzed in UFSAR Section 15.1.3, "Increase in Steam Flow (Excess Load)." The most limiting steam generator relief valve remaining open (i.e., steam generator safety relief valve) after a reactor trip, is bounded by a main steam line break analyzed in UFSAR Section 15.1.5, "Main Steamline Break Event." In both cases, fuel failure does not occur. Radiological releases occur only in the case of the main steam line break analysis, but due to the preservation of fuel integrity, the radiological source term consists of activity from the secondary side plus a small contribution of Reactor Coolant System (RCS) activity, and the resulting doses are calculated to be a small fraction of the 10 CFR 100.11 limits. The Steam Generator Tube Rupture event in UFSAR Section 15.6.3 also does not result in fuel failure, so the source term available for release consists of activity contained in 131 klbm of RCS released into the affected steam generator plus the secondary activity present. All activity which reaches the steam generator is assumed to be released to the atmosphere, and this assumption bounds the effects of the six containment isolation valves in the "open" position. The resulting calculated doses from a steam generator tube rupture are also a small fraction of the 10 CFR 100.11 limits.

In the case of a reactor trip with an uncontrolled depressurization of a steam generator, including a tube rupture or tube leak, Emergency Operating Procedures and Abnormal Operating Procedures (EOPs/AOPs) have provisions to isolate the above and below seat drain lines.

This report is submitted pursuant to 10 CFR 50.73 (a)(2)(i) as a condition prohibited by TS:

IV. CORRECTIVE ACTIONS

Upon discovery of this condition, the mispositioned valves were placed in the closed position. A safety analysis was completed which determined that the current (i.e., closed) containment isolation configuration regarding manually closed isolation valves meets license requirements and license bases documentation.

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H. B. ROBINSON STEAM ELECTRIC PLANT, UNIT NO. 2	050-261	YEAR 94	SEQUENTIAL NUMBER 020	REVISION NUMBER 01	5 OF 5

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IV. CORRECTIVE ACTIONS (Continued)

Expectations for documenting equipment manipulations conducted in the field have been reinforced. The SCO that signed for all fifteen valves being closed has been counselled.

An evaluation of temperature control practices during hot shutdown conditions has been conducted. This evaluation concludes that the preferred method of temperature control is by utilization of the above and below seat drain valves. The design of the valves and associated piping exceed the maximum temperature and pressure conditions of the steam system. As such, specific valve design (i.e., globe) is considered appropriate for throttling steam applications, and the valve seat and disc material provide superior erosion resistance during severe service duty. Use of these valves and associated piping for this application is appropriate and remains within the design parameters of the plant.

To ensure plant configuration is appropriately maintained when using these valves for temperature control, procedures are being revised to provide an appropriate temperature band and instructions on how to maintain temperature with the MSIVs closed.

V. ADDITIONAL INFORMATION

A. Component Failures

None

B. Previous Similar Events

The following Licensee Event Reports (LERs) reported valve misposition events:

LER 87-013

LER 87-015