

## LICENSEE EVENT REPORT (LER)

FACILITY NAME (1)

EDWIN I. HATCH, UNIT 1

DOCKET NUMBER (2)

0 5 0 0 0 3 2 1 1 OF 0 7

PAGE (3)

TITLE (4)

Safety Relief Valve Failure to Open

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)																		
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OPERATING MODE (9)		THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR 5. (Check one or more of the following) (11)														
POWER LEVEL (10)	0 2 6	20.402(b)	20.406(c)	X	50.73(a)(2)(iv)	73.71(b)										
		20.406(a)(1)(i)	50.36(c)(1)	X	50.73(a)(2)(v)	73.71(c)										
		20.406(a)(1)(ii)	50.36(c)(2)		50.73(a)(2)(vii)	OTHER (Specify in Abstract below and in Text, NRC Form 365A)										
		20.406(a)(1)(iii)	50.73(a)(2)(i)		50.73(a)(2)(viii)(A)											
		20.406(a)(1)(iv)	50.73(a)(2)(ii)		50.73(a)(2)(viii)(B)											
		20.406(a)(1)(v)	50.73(a)(2)(iii)		50.73(a)(2)(ix)											

LICENSEE CONTACT FOR THIS LER (12)

NAME	TELEPHONE NUMBER
T. L. Elton, Acting Superintendent of Regulatory Compliance	9 1 2 3 6 7 1 7 8 5 1

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

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NRC	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NRC

SUPPLEMENTAL REPORT EXPECTED (14)

YES (If yes, complete EXPECTED SUBMISSION DATE)	NO	EXPECTED SUBMISSION DATE (15)	MONTH	DAY	YEAR
<input type="checkbox"/>	<input checked="" type="checkbox"/>				

ABSTRACT (Limit to 1400 spaces, i.e., approximately fifteen single-space typewritten lines) (16)

On 01/13/85 at approximately 0443 CST during performance of the "RELIEF VALVE OPERABILITY" procedure (HNP-1-3901), the "B" SRV failed to open. Also, the "F" and "G" SRV's primary position indication did not operate as expected.

On 01/13/85 at approximately 1000 CST, while personnel were performing section F.2 of the "SAFETY/RELIEF VALVE POSITION PRIMARY AND SECONDARY INDICATIONS F.T. & C." procedure (HNP-1-3820), the "A" SRV lifted.

The cause of the "B" SRV failing to open was due to open links. The cause of the indication problem with the "F" and "G" SRV's was postulated as being mislabeling of new SRV tail pipe pressure switches installed this refueling outage. The cause of the "A" SRV lifting while testing the "F" SRV was due to a procedural error.

The open links on the "B" SRV were closed, and the "B" SRV was successfully tested. The indication problems with the "F" and "G" SRV's were corrected temporarily. The procedural problems with HNP-1-3820 were corrected on 02/02/85. Future corrective actions are planned.

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## LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

APPROVED OMB NO. 3150-0104  
EXPIRES: 8/31/85

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

A. DESCRIPTION OF EVENTS

All of the Safety Relief Valves (SRV's) were believed [by virtue of the performance of the "MAIN STEAM RELIEF VALVES MAINTENANCE" procedure (HNP-1-6020)] to be operable prior to Startup, thus satisfying the requirements of Tech. Specs. sections 3.5.F.1, 3.6.H.1, and 3.6.H.2.

However, on 01/13/85 at approximately 0443 CST and with the Unit in Startup/Hot Standby at approximately 500 MWt and 927 psig, operations personnel were performing the "RELIEF VALVE OPERABILITY" procedure (HNP-1-3901) in order to satisfy the surveillance requirement of Tech. Specs. section 4.6.H.1.b. During the performance of this procedure, the following occurred:

1. The "B" SRV (1B21-F013B) did not open, Operations Personnel then placed the unit in a 24-hour LCO as required by Tech. Specs. section 3.6.H.1.a.

Since the "B" SRV is one of the seven Automatic Depressurization System (ADS) valves, this LCO also satisfied the 7-day LCO required by Tech. Specs. section 3.5.F.2 (testing required by this section was not performed because, in the judgement of the operations personnel on shift, the "B" SRV was returned to service in a timely manner such that this requirement was no longer applicable).

It should be noted that the "B" SRV would have still functioned as just a relief valve (i.e., it would have still opened at its predetermined value).

2. The remaining SRV's opened:

- a. The six remaining ADS valves (1B21-F013D, E, F, J, K, and L) opened.
- b. The four Low Low Set valves (1B21-F013A, C, G, and H) opened.

3. The Safety/Relief Valve Position Primary Indicators (i.e., the tail pipe pressure switches) required by item 13.a of Tech. Specs. Table 3.2-11 and by Tech. Specs. section 3.6.H.1 for the "F" and "G" SRV's (1B21-F013F and 1B21-F013G) were not functioning properly as explained below:

- a. When the "F" SRV was opened, the "amber safety/blowdown tailpipe high pressure indicating light" for the tail pipe pressure switch (1B21-N301G) for the "G" SRV came on in Control Room panel number 1H11-P602.
- b. When the "G" SRV was opened, the "amber safety/blowdown tailpipe high pressure indicating light" for the tail pipe pressure switch (1B21-N301F) for the "F" SRV came on in Control Room panel number 1H11-P602.

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4. All other indications during testing of the "F" and "G" SRV's operated correctly as detailed below:

- a. The Safety/Relief Valve Position Secondary Indicators (i.e., the 0° to 600° F recorder -- MPL number 1B21-R614) required by item 13.b of Tech. Specs. Table 3.2-11 showed a temperature increase for the "F" SRV when it was opened, and likewise for the "G" SRV.
- b. During this test, the recorder functioned in that it did register temperature increases when the applicable SRV was opened; however, its associated alarm did not function in conjunction with the recorder. Thus, personnel issued an LCO which was issued at approximately 1000 CST and terminated at approximately 1600 CST) on it and complied with action f as required by item 13.b of Tech. Specs. table 3.2-11.

5. Both of the indicators worked correctly (except as noted in A.4.b for the alarm for the recorder) for the other SRV's that were tested (except for "B" which would not open as previously noted in A.1).

B. DETAILS OF IMMEDIATE INVESTIGATIONS PERFORMED AND/OR IMMEDIATE CORRECTIVE ACTIONS TAKEN

1. Why the "B" SRV did not open:

- a. Details of Investigation:

An immediate investigation performed by operations and engineering personnel revealed that:

- 1) Links BB56 & BB58 which had been previously opened in Control Room panel 1H11-P628 for the performance of the "MAIN STEAM RELIEF VALVES MAINTENANCE" procedure (HNP-1-6020) had not been closed.
- 2) The Lifted Wire and Jumper tags which had been attached when these links were opened were still in place.
- 3) The Lifted Wire and Jumper tags which had been attached when the links for the "H" SRV were opened were still in place; however, the links were closed as now required.

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## b. Corrective Action(s) Taken:

- 1) Plant personnel closed links BB56 and BB58 in panel 1H11-P628 at approximately 0830 CST.
- 2) Plant personnel removed the Lifted Wire and Jumper tags in panel 1H11-P628 (i.e., for both the "B" and "H" SRV's) at approximately 0830 CST.
- 3) Operations personnel performed HNP-1-3901 for the "B" SRV and proved it operable at approximately 0930 CST.

## 2. Why the tailpipe pressure switches for the "F" and "G" SRV's were reversed:

## a. Details of Investigation:

- 1) At approximately 1000 CST, I and C Personnel performed section F.2 of the "SAFETY/RELIEF VALVE POSITION PRIMARY AND SECONDARY INDICATORS F.T.&C." procedure (HNP-1-3820) (only tests the control room part of the circuits) for the "F" and "G" SRV's in order to attempt to verify that the control room portion of the wiring was correct.
- 2) However, while I and C personnel were opening links and placing jumpers (per HNP-1-3820) to test the wiring logic for the "F" SRV, the "A" SRV lifted. A procedural review into why testing the "F" SRV resulted in the lifting of the "A" SRV revealed a procedural error.
- 3) The test was performed (per section F.2 of HNP-1-3820) to the extent that I and C personnel could determine that there were no wiring discrepancies for either the "F" or "G" SRV's in the control room.

## b. Corrective Action(s) Taken:

No immediate corrective actions were taken; however, on 02/02/85, HNP-1-3280 was revised.

C. DETAILS OF REMAINDER OF INVESTIGATIONS PERFORMED AND/OR CORRECTIVE ACTIONS TAKEN

## 1. Why the "B" SRV did not open:

## a. Details of Investigation:

The root cause of the "B" SRV's not opening was personnel error in that the responsible personnel did not properly perform system restoration for the "B" SRV on Data Package 2 of HNP-1-6020:



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- 1) Electricians "Y" and "Z" had completed restoration of 9 of the 11 SRV's, leaving only SRV's "A" and "H" to be restored per HNP-2-6020.

Links BB56 and BB58 in panel 1H11-P628 formerly (i.e., before this outage) connected the actuation circuitry of the "A" SRV and its solenoid, but due to changes implemented per DCR 81-138, they are now associated with the "B" SRV.

- 2) Electricians "Y" and "Z" were pulled off the SRV work to go work on problems with 1B21-F006A.
- 3) Maintenance electrician "X" reviewed the completed MWO's and then signed off the HNP-1-6020, Data Package steps 8 and 9 for the electricians "Y" and "Z". Thus, he was signifying (without actual knowledge) that the performance of and independent verification of the closing of links BB56 and BB58 (and removal of associated LW&J tags) in panel 1H11-P628 had been done, when in fact the links were still open, and the tags were still attached. However, when electrician "X" initialed steps 8 and 9 for electricians "Y" and "Z", he felt that steps 8 and 9 had been performed (by the review of the completed MWOs) and that electricians "Y" and "Z" had failed to initial steps 8 and 9 in error.
- 4) Additionally, electrician "W" signified that the functional test for the "B" SRV had been performed when in fact there was no way it could have functioned (due to open links BB56 and BB58).

b. Corrective Actions Taken:

- 1) The individual (i.e., electrician "X") who affixed other's initials to the Data Package attesting to the closing of links and removal of LW&J tags received the severest of disciplinary actions.
- 2) The individual (i.e., electrician "W") who signed off a procedural step signifying that the "B" SRV correctly responded to the testing (when it could not have) received severe disciplinary action.
- 3) A member of supervision who reviewed the paperwork in the two above instances could have detected one or more of the non-compliances with the procedure by actual observation of the work or by review of the paperwork. Allowing less than acceptable work resulted in discipline to supervision.

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

## 2. Why the tailpipe pressure switches for the "F" and "G" SRVs were reversed:

## a. Details of Investigation:

- 1) Personnel performed a wiring check of the "F" and "G" SRV tail pipe pressure indication wiring from the drywell penetration to the control room. Completion of this check showed no apparent discrepancies.
- 2) Personnel then reviewed the test results of section F.1 of the HNP-1-3820 (i.e., Tailpipe Pressure Switch Functional Test including the Drywell Portion) that had been previously performed with acceptable results for "F" and "G" SRV's on 12/31/84.
- 3) The results indicated that the equipment operated correctly. That is when the tail pipe pressure switch labeled (in the drywell) for the "F" SRV was pressurized to its trip point, the proper tail pipe pressure indication was activated in the control room, and likewise for "G".
- 4) Thus, no specific "root cause" for the incorrect operation of the tailpipe pressure switches for the "F" and "G" SRV's could be determined. However, the following gives the most logical hypothesis (and reasoning by which it was determined) for the "root cause":
  - a) During this outage, all of the SRV's tail pipe pressure switches were replaced with new environmentally qualified switches (by the "ATTS" modification per DCR number 81-138).
  - b) The "F" and "G" SRV's are located in close proximity to each other, and there wiring terminates in a common junction box.
  - c) Apparently, when contractor personnel installed the new SRV tail pipe pressure switches, they inadvertently mislabeled the tail pipe pressure switches for the "F" and "G" SRV's.

## b. Corrective Actions taken:

- 1) A temporary DCR was implemented on 01/15/85 at approximately 1630 CST. This DCR rolled wiring (outside of the drywell) for the tailpipe pressure switches for the "F" and "G" SRV's to correct the indication problem.
- 2) On 01/15/85 at approximately 2120 CST, operations personnel performed HNP-1-3901 for the "F" and "G" SRV's, and all indications were properly received in the Control Room.

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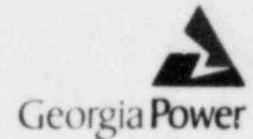
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D. FUTURE CORRECTIVE ACTIONS

The following corrective actions will be taken:

1. Maintenance and Engineering personnel together will review, and revise as necessary, HNP-1-6020 to accurately reflect all changes resulting from DCR 81-138 (i.e., link changes, ADS valve listing changes, and Low-Low Set Valve listing changes, etc.).
2. Maintenance and Engineering personnel together will review a sufficient sampling of procedures (approximately 25) to ensure that the procedures were accurately revised to reflect all changes resulting from DCR work (for example, link changes, ADS valve listing changes, and Low-Low Set Valve listing changes, etc.). This is being done to determine if this is an isolated incident or a systematic one. Pending the outcome of this review, additional corrective action may be required.
3. During the next outage of sufficient duration, plant personnel will conduct further investigation into the "root cause" of the reversal of the tailpipe pressure switch indication for the "F" and "G" SRV's.
4. After conclusion of D.3, appropriate corrective action(s) will be determined and implemented.

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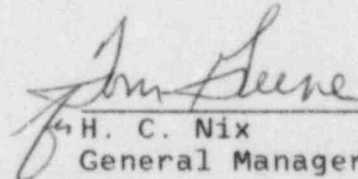
Edwin I. Hatch Nuclear Plant

February 12, 1985  
GM-85-129

PLANT E. I. HATCH  
Licensee Event Report  
Docket No. 50-321

United States Nuclear Regulatory Commission  
Document Control Desk  
Washington, D. C. 20555

Attached is Licensee Event Report No. 50-321/1985-002. This report is required by 10CFR 50.73(a)(2)(iv) and 10CFR 50.73(a)(2)(v).

  
H. C. Nix  
General Manager

*JLL*  
HCN/TLE/vlz

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