NRC Form 366
(9-83)

U.S. NUCLEAR REGULATORY COMMISSION
APPROVED OMB NO. 3150-0104
EXPIRES: 8/31/85

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1)	DOCKET NUMBER (2)	PAGE (3)
EDWIN I. HATCH, UNIT I	0 5 0 0 0 3 2 1	1 OF 0 3

TITLE (4)

THROUGH WALL INDICATION ON WELD.

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)
1 2	1 5	8 4	8 4	0 2 5	0 1	0 7	1 8	8 5		0 5 0 0 0
										0 5 0 0 0

OPERATING MODE (9)		THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more of the following) (11)			
5		20.402(b)	20.405(c)	50.73(a)(2)(iv)	73.71(b)
POWER LEVEL (10)		20.405(a)(1)(i)	50.36(c)(1)	50.73(a)(2)(v)	73.71(c)
0 0 0		20.405(a)(1)(ii)	50.36(c)(2)	50.73(a)(2)(vii)	OTHER (Specify in Abstract below and in Text, NRC Form 366A)
		20.405(a)(1)(iii)	50.73(a)(2)(i)	50.73(a)(2)(viii)(A)	
		20.405(a)(1)(iv)	X 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	TELEPHONE NUMBER
	AREA CODE
Steven B. Tipps, Superintendent of Regulatory Compliance	9 1 2 3 6 7 - 7 8 5 1

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	
B	L K	P S P	9 9 9	N							

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 fifteen single-space typewritten lines) (16)

On December 15, 1984, with the reactor mode switch in the refuel position and the unit shutdown for refueling, inservice inspection tests (ISI) were being performed on selected pipe welds using the magnetic particle inspection method. During this testing, a linear through wall crack approximately 2 3/4 inches long was discovered in weld 1T48-2CPI-18-PID-6. This weld is located in the 18 inch nitrogen inerting and purge line between drywell penetration X-25 and inboard primary containment isolation valve 1T48-F307.

The crack was ground out. The weld was repaired and satisfactorily inspected. Five additional welds in the same line were magnetic particle inspected, and both the subject weld and the next weld in the line were radiographed. No additional failure indications were detected.

No actual safety consequences resulted from this event nor were the health and safety of the public affected.

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FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)
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TEXT (If more space is required, use additional NRC Form 366A's) (17)

This 30 day LER is required by 10CFR 50.73(a)(2)(ii) due to the potential loss of containment function or integrity.

On December 15, 1984, with the reactor mode switch in the refuel position and the unit shutdown for refueling, in service inspection tests (ISI) were being performed on selected pipe welds using the magnetic particle inspection method. During this testing, a linear through wall crack approximately 2 3/4 inches long was discovered in weld 1T48-2CPI-18-PID-6. This weld is located in the 18-inch nitrogen inerting and purge line between drywell penetration X-25 and inboard primary containment isolation valve 1T48-F307.

This event had no effect on other systems of Unit 1, nor did it impact the operation of Unit 2.

No actual safety consequences resulted from this event nor were the health and safety of the public affected. However, had a catastrophic failure of the weld occurred, primary containment integrity could not have been maintained.

The crack was ground out. The weld was repaired and satisfactorily inspected. Five additional welds in the same line were magnetic particle inspected, and both the subject weld and the next weld in the line were radiographed. No additional failure indications were detected.

The corresponding weld in the Unit 2 nitrogen inerting line was checked using the magnetic particle inspection method. No failure indications were detected.

An engineering evaluation was conducted to determine the cause of the failure:

Visual and radiographic analysis of the crack, examination of the pipe geometry in the area of the failure, and the system operating conditions indicate that the crack was caused by thermally induced stress. The time at which the crack occurred cannot be determined.

A two-inch nitrogen makeup line enters the eighteen-inch purge line on the opposite side and approximately two feet upstream from the crack. Makeup flow is controlled and drywell pressure is monitored during a makeup evolution, but makeup gas temperature is not monitored. A "NITROGEN INERT SYSTEM MAKE-UP LOW TEMPERATURE" alarm exists, but there is no response indicated in any annunciator response procedure. Cold gas, entering the purge line from the makeup line would make contact with the purge line in the area of the weld, the contour of which would make it the most likely spot for a thermally induced failure to occur.

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

A previous similar event was reported in LER 50-366/1984-001 in which a large crack was discovered in the vent header in the torus. Examination of the crack indicated that it was due to brittle fracture caused by the injection of cold nitrogen into the drywell during inerting. The design of the Nitrogen Inerting system was evaluated in accordance with NRC Inspection and Enforcement Bulletin (IEB) number 84-01 and General Electric Service Information Letter (SIL) number 402 and modifications were made to prevent the recurrence of similar thermally induced fractures. The Nitrogen Makeup system was not included in that evaluation because it was beyond the scope of the directives.

To prevent recurrence of this event, the following actions will be taken for both Unit 1 and Unit 2:

1. The setpoint for the "NITROGEN INERT SYSTEM MAKE-UP LOW TEMPERATURE" annunciator is to be raised from 0°F to 10°F.

2. The "DRYWELL AND TORUS INERTING SYSTEM TROUBLE" annunciator response procedure (HNP-1/2-2525) will be revised to include the above mentioned annunciator and the direction to terminate the makeup flow when the annunciator occurs.

3. The "PRIMARY CONTAINMENT ATMOSPHERIC CONTROL SYSTEM" operating procedure (HNP-1/2-1500) will be revised to require the stopping of nitrogen makeup flow if the "NITROGEN INERT SYSTEM MAKE-UP LOW TEMPERATURE" annunciator is actuated.

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Edwin I. Hatch Nuclear Plant

July 18, 1985
GM-85-448

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. 50-321/1984-025, Rev. 1. This report is required by 10CFR 50.73(a)(2)(ii).

Harvey Nix

H. C. Nix
General Manager

HCN/SBT/vlz

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