U. S. NUCLEAR REGULATORY COMMISSION

LICENSEE EVENT REPORT

Update Report; Previous Report Date 7-6-80

CONTROL BLOCK: | | | | | | | (1) (PLEASE PRINT OR TYPE ALL REQUIRED INFORMATION)

0	1	G A E I H 1 (2)	0 0 - 0 0 0 0 0 - 0 0 (3)	4 1 1 1 1 (4)	(5)
		LICENSEE CODE	LICENSE NUMBER	LICENSE TYPE	CAT

CON'T

0 1	REPORT SOURCE L (6)	0 5 0 0 0 3 2 1 (7)	0 7 0 6 8 0 (8)	0 3 3 1 8 1 (9)
		DOCKET NUMBER	EVENT DATE	REPORT DATE

EVENT DESCRIPTION AND PROBABLE CONSEQUENCES (10)

0 2 With the reactor in hot standby and RWCU in normal operation, water was
0 3 found to be coming from insulation on RWCU return line. Investigation
0 4 revealed a crack in the heat affected zone of a stainless steel spool
0 5 piece on the common return to the reactor vessel. Another crack was
0 6 discovered in the middle of the 6" spool piece. There was no effect on
0 7 public health and safety. This is not a repetitive occurrence.
0 8

	SYSTEM CODE	CAUSE CODE	CAUSE SUBCODE	COMPONENT CODE	COMP. SUBCODE	VALVE SUBCODE
0 9	C G (11)	E (12)	X (13)	P I P E X X (14)	B (15)	Z (16)

(17) LER/RO REPORT NUMBER	EVENT YEAR		SEQUENTIAL REPORT NO.		OCCURRENCE CODE	REPORT TYPE		REVISION NO.
	8 0	—	0 8 0	/	0 3	X	—	1

ACTION TAKEN	FUTURE ACTION	EFFECT ON PLANT	SHUTDOWN METHOD	HOURS (22)	ATTACHMENT SUBMITTED	NPRD-4 FORM SUB.	PRIME COMP. SUPPLIER	COMPONENT MANUFACTURER
A (18)	Z (19)	Z (20)	Z (21)	0 0 0 0	Y (23)	Y (24)	L (25)	K 0 5 5 (26)

CAUSE DESCRIPTION AND CORRECTIVE ACTIONS (27)

1 0 The spool piece was sent offsite for metallurgical analysis, and it was
1 1 concluded that the most probable cause of cracking is from stress corro-
1 2 sion; although corrosion fatigue is the second most probable. A new
1 3 spool piece was installed. The unit is now in full compliance with the
1 4 requirements, and no further reporting is required.

	FACILITY STATUS	% POWER	OTHER STATUS (30)	METHOD OF DISCOVERY	DISCOVERY DESCRIPTION (32)
1 5	G (28)	0 0 8 (29)	NA	B (31)	Operator Observation

	ACTIVITY RELEASED	CONTENT OF RELEASE	AMOUNT OF ACTIVITY (35)	LOCATION OF RELEASE (36)
1 6	Z (33)	Z (34)	NA	NA

PERSONNEL EXPOSURES

	NUMBER	TYPE	DESCRIPTION (39)
1 7	0 0 0 (37)	Z (38)	NA

PERSONNEL INJURIES

	NUMBER	DESCRIPTION (41)
1 8	0 0 0 (40)	NA

LOSS OF OR DAMAGE TO FACILITY (43)

	TYPE	DESCRIPTION
1 9	Z (42)	NA

PUBLICITY

	ISSUED	DESCRIPTION (45)	NRC USE ONLY
2 0	N (44)	NA	

8104060647

NAME OF PREPARER C. L. Coggin, Supt. Plt. Eng. Serv. PHONE: 912-367-7851

GPO 917-926

LER #: 50-321/1980-080, Rev. 1
Licensee: Georgia Power Company
Facility Name: Edwin I. Hatch
Docket #: 50-321

Narrative Report
for LER 50-321/1980-080, Rev. 1

On July 6, 1980, with the Unit 1 reactor at 8% power in Hot Standby for HPCI testing, the Operations Department discovered water leaking from the RWCU common return line to the reactor vessel. Investigation revealed a crack running along the heat affected zone and turning out into the stainless steel (A312-304) spool piece about one inch. A second crack was observed in the middle of the 6" spool piece about one inch in length at approximately the same position on the pipe. The spool piece was removed and replaced with one of the same material. The weld-prep and final welds were inspected via dye-penetrant examination. No indications were found during D-P examination. Our Architect/Engineer recommended performing a X-ray examination during our next refueling outage. This has been included in our ISI schedule for the Unit 1 refueling outage. A hydrostatic pressure test was performed at 1.1 times the operating pressure and no leaks were observed. This is not a repetitive occurrence. There was no affect on public health or safety as a result of this incident.

From the metallurgical analysis performed on the spool piece a third crack was found located immediately downstream from the weld that joined the spool piece to the stainless tubing of the RWCU system and was at a sharp angle to the weld.

The three cracks started from the inside surface of the tubing and propogated transgranularly. All three developed over a period of time, and all were similar in nature; thus, they were considered to have been caused by the same delayed-failure mechanism. Based primarily on the branched nature of the cracks and the likely existence of large residual stresses, it was concluded that stress corrosion cracking was the most probable cause of the cracking. The thermal cycling to which the tubing was exposed and the fact that the cracks propogated predominantly transgranularly suggest that corrosion fatigue was a possible cause of the cracking.

The unit is now in full compliance with the requirements, and no further reporting is required.