UPDATE REPORT PREVIOUS REPORT DATE 5/25/83

NRC FORM 366
(12-81)
10 CFR 50

U.S. NUCLEAR REGULATORY COMMISSION

LICENSEE EVENT REPORT

APPROVED BY OMB
3150-0011

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

0 1 A L B R F 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 2 5 9 ⑦ 0 5 1 3 8 3 ⑧ 0 9 1 4 8 3 ⑨
DOCKET NUMBER | EVENT DATE | REPORT DATE

EVENT DESCRIPTION AND PROBABLE CONSEQUENCES ⑩

0 2 During a refuel outage, while performing inspections required by IE
0 3 Bulletin 83-02 on recirculation piping, crack-like indications were
0 4 detected and confirmed by ultrasonic inspection on weld KR-1-37 (T.S.
0 5 3.6.G). There are no redundant systems. There was no effect on the
0 6 public health or safety.
0 7
0 8

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

⑰ LER/RO REPORT NUMBER	EVENT YEAR		SEQUENTIAL REPORT NO.		OCCURRENCE CODE	REPORT TYPE		REVISION NO.
	8 3	—	0 2 3	/	0 1	X	—	1

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

CAUSE DESCRIPTION AND CORRECTIVE ACTIONS ㉗

1 0 Two crack indications, which appear to be intergranular stress corrosion
1 1 cracking, were found on weld KR-1-37. This weld will be repaired before
1 2 startup. A followup report will be submitted to provide the details of
1 3 corrective actions after weld inspections are complete (see LER
1 4 Supplement).

	FACILITY STATUS		% POWER		OTHER STATUS ㉚	METHOD OF DISCOVERY		DISCOVERY DESCRIPTION ㉜
1 5	H	㉘	0 0 0	㉙	NA	B	㉛	Inservice inspection

	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
2 0	N	㊹	

8309210235 830914
PDR ADOCK 05000259
S PDR

NRC USE ONLY

NAME OF PREPARER T. Holder PHONE (205)729-0885

IE22

Tennessee Valley Authority
Browns Ferry Nuclear Plant

Form BF 17
BF 15.2
2/12/82

LER SUPPLEMENTAL INFORMATION

BFRO-50-259 /83023R1 Technical Specification Involved 3.6.C

Reported Under Technical Specification 6.7.2.a.(3) * Date Due NRC ____________

Event Narrative:

Both units 2 and 3 were operating normally at 99% power. Unit 1 was in a refueling outage and was the only unit affected by this event. On 5/13/83, during performance of inspections required by IEB 83-02 on the recirculation piping, two crack-line indications were detected and confirmed by ultrasonic inspection on weld KR-1-37 (T.S. 3.6.G). One crack indication was approximately 19 inches long between 11:30 and 3:00 and the other crack was approximately 9 inches line between 7:00 and 8:30. The crack indications are on the cap side of the weld and have an estimated maximum of 35% and 30% through-wall depth for the longest and shortest crack indications, respectively. There was no effect on the health and safety of the public. There are no redundant systems.

The inspection of recirculation piping, per IEB-83-02, has been completed on unit 1 and crack indications were detected by ultrasonic examination on 33 of the 91 welds inspected. These 33 welds are listed in Attachment A with a description of the cracking indications.

In addition to the inspection of welds on the recirculation system piping, 32 welds on the RHR system piping were inspected by ultrasonic examination. Crack indications were detected on 14 of the 32 welds and these 14 welds are listed in Attachment B with a description of the cracking indications.

A followup report will be submitted to provide full details of corrective actions.

* Previous Similar Events:

BFRO-50-260-82040

Retention: Period - Lifetime; Responsibility - Document Control Supervisor

*Revision: JRP

ATTACHMENT A

RECIRCULATION SYSTEM

WELD NUMBER	LOCATION OF INDICATIONS	THRU WALL DEPTH
KR-1-24	28" Pipe/Elbow	
	Elbow Side of Weld	
	@ 2:30 approx. 2" long	Approx. 10%
	@ 4:30 approx. 2" long	Approx. 17%
	@ 11:00 approx. 3" long	Approx. 25%
	@ 12:35 approx. 4" long	Approx. 8%
	Pipe Side of Weld	
	@ 4:30 approx. 3" long	Approx. 9%
KR-1-45	28" Pipe/Elbow	
	Indications 360° intermittent both sides of the weld	Approx. 23%
KR-1-47	28" Pipe/Elbow	
	Elbow Side of Weld	
	@ 5:00 to 8:00 approx. 21" long	Approx. 23%
	Pipe Side of Weld	
	@ 5:00 to 8:00 approx. 21" long	Approx. 20%
KR-1-48	28" Pipe/Elbow	
	Indications 360° intermittent both sides of the weld	Approx. 28%
KR-1-52	28" Pipe/Elbow	
	Elbow Side of Weld	
	Indications 360° intermittent	Approx. 27%
GR-1-27	28" Pipe/Pump Discharge Side	
	Pipe Side of Weld	
	@ 6:30 approx. 1" long	Approx. 36%
	@ 8:30 approx. 1" long	Approx. 36%
	@ 10:00 to 11:00 approx. 7" long	Approx. 36%
	@ 12:00 to 2:00 approx. 14" long	Approx. 36%
	@ 4:45 approx. 1" long	Approx. 36%
GR-1-56	28" Pipe/Valve	
	Elbow Side of Weld	
	@ 12:30 to 3:00 approx. 17½" long	Approx. 29%
GR-1-57	28" Pipe/Valve	
	Pipe Side of Weld	
	Indications 360° intermittent	Approx. 32%
GR-1-61	28" Pipe/Pipe	
	Upstream Side of Weld	
	@ 5:30 approx. 5" long	Approx 28%
	@ 8:00 approx. 12" long	Approx. 23%
	Downstream Side of Weld	
	@ 7:30 to 11:00 approx. 25" long	Approx. 30%

WELD NUMBER	LOCATION OF INDICATIONS	THRU WALL DEPTH
GR-1-64	28" Elbow/Pump Intake Side	
	Elbow Side of Weld	
	Indications 360° intermittent	Approx. 33%
GR-1-54	28" Pipe/Elbow	
	Indications 360° intermittent	
	both sides of the weld	Approx. 45%
GR-1-58	28" Elbow/Pump Intake Side	
	Pipe Side of Weld	
	Indications 360° intermittent	Approx. 45%
GR-1-1	28" Pipe/Pump Discharge Side	
	Pipe Side of Weld	
	@ 2:00 to 5:00 approx. 21" long	Approx.6%
	@ 6:30 to 8:00 approx. 10½" long	Approx. 8%
	@ 10:00 approx. 1" long	Approx. 10%
GR-1-2	28" Pipe/Valve	
	Pipe Side of Weld	
	Indication 360° intermittent	Approx. 15%
GR-1-3	28" Pipe/Valve	
	Pipe Side of Weld	
	Indications 360° intermittent	Approx. 33%
KR-1-2	28" Pipe/Elbow	
	Pipe Side of Weld	
	@ 11:30 to 12:30 approx. 7" long	Approx. 6%
	@ 2:00 to 8:00 approx. 42" long	Approx. 15%
	Elbow Side of Weld	
	@ 2:30 to 3:30 approx. 7" long	Approx. 8%
KR-1-3	28" Pipe/Tee	
	Pipe Side of Weld	
	Indication 360° intermittent	Approx. 43%
GR-1-60	28" Pipe/Elbow	
	Pipe Side of Weld	
	@ 4:00 approx. 3" long	Approx. 29%
	Elbow Side of Weld	
	@ 11:30 to 1:30 approx. 14" long	Approx. 18%
	@ 10:00 approx. 3" long	Approx. 36%
KR-1-25	28" Pipe/Tee	
	Pipe Side of Weld	
	@ 8:00 to 3:00 approx. 49" long	Approx. 14%
KR-1-15	22" End Cap	
	Pipe Side of Weld	
	@ 5:00 to 7:00 approx. 12" long	Approx. 14%
	Cap Side of Weld	
	Indications 360° intermittent	Approx. 27%

WELD NUMBER	LOCATION OF INDICATIONS	THRU WALL DEPTH
KR-1-12	22" Pipe/Cross	
	Pipe Side of Weld	
	@ 7:00 approx. 3" long	Approx. 6%
KR-1-34	22" Pipe/Cross	
	Pipe Side of Weld	
	@ 6:00 approx. 4" long	Approx. 8%
	@ 3:00 approx. 6" long	Approx. 6%
KR-1-37	22" End Cap	
	Cap Side of Weld	
	@ 11:30 to 3:00 approx. 19" long	Approx. 35%
	@ 7:00 to 8:30 approx. 9" long	Approx. 35%
KR-1-14	Sweepolet Weld	
	Saddle Side of Weld	
	@ 5:30 approx. 2" long	Approx. 10%
	@ 6:20 approx. 2" long	Approx. 10%
	Header Side of Weld	
	@ 11:20 approx. 9" long	Approx. 19%
KR-1-20	Sweepolet Weld	
	Header Side of Weld	
	@ 2:00 approx. 1" long	Approx. 29%
KR-1-36	Sweepolet Weld	
	Saddle Side of Weld	
	@ 12:00 to 3:00 approx. 18" long	Approx. 25%
	@ 8:00 to 9:00 approx. 6" long	Approx. 25%
KR-1-42	Sweepolet Weld	
	Header Side of Weld	
	@ 4:00 approx. 1" long	Approx. 38%
	@ 10:00 approx. 1" long	Approx. 20%
KR-1-16	12" Pipe/Elbow	
	Pipe Side of Weld	
	Indications 360° intermittent	Approx. 35%
KR-1-18	12" Pipe/Elbow	
	Pipe Side of Weld	
	Indications 360° intermittent	Approx. 35%
KR-1-21	12" Pipe/Elbow	
	Pipe Side of Weld	
	Indications 360° intermittent	Approx. 35%
KR-1-22	12" Pipe/Elbow	
	Pipe Side of Weld	
	Indications 360° intermittent	Approx. 35%
GR-1-41	12" Pipe/Tee	
	Pipe Side of Weld	
	@ 11:00 to 1:00 approx. 6" long	Approx. 12%
	@ 9:00 approx. 3" long	Approx. 8%

WELD NUMBER	LOCATION OF INDICATIONS	THRU WALL DEPTH
GR-1-46	12" Pipe/Elbow Pipe Side of Weld Indications 360° intermittent	Approx. 20%

ATTACHMENT B

RESIDUAL HEAT REMOVAL SYSTEM

WELD NUMBER	LOCATION OF INDICATIONS	THRU WALL DEPTH
DSRHR 1-4	24" Pipe/Elbow	
	Elbow Side of Weld	
	@ 11:00 to 2:00 approx. 18" long	Approx. 30%
	@ 8:30 approx. 1" long	Less than 10%
DSRHR 1-4A	24" Elbow/Elbow	
	Upstream Side of Weld	
	Indication 360° intermittent	Approx. 44%
DRHR-1-4	24" Pipe/Elbow	
	Pipe Side of Weld	
	@ 7:00 approx. 1" long	Less than 10%
	@ 9:00 approx. 1" long	Less than 10%
	@ 10:30 approx. 1" long	Less than 10%
DSRHR-1-5	24" Pipe/Elbow	
	Elbow Side of Weld	
	@ 2:00 approx. 7" long	31%
	@ 8:00 to 12:00 approx. 25" long	31%
DSRHR-1-8B	24" Pipe/Elbow	
	Pipe Side of Weld	
	@ 12:00 to 3:00 approx. 20" long	Approx. 41%
	Elbow Side of Weld	
	@ 1:00 to 3:00 approx. 14" long	Approx. 31%
DRHR-1-8	24" Pipe/Valve	
	Pipe Side of Weld	
	@ 11:00 approx. 5" long	Approx. 25%
DSRHR-1-9	20" Pipe/Elbow	
	Elbow Side of Weld	
	@ 7:00 to 11:00 approx. 28" long	Approx. 29%
DSRHR-1-10	20" Pipe/Elbow	
	Pipe Side of Weld	
	@ 12:00 approx. 3" long	Approx. 30%
	@ 10:30 approx. 3" long	Approx. 12%
	Elbow Side of Weld	
	@ 12:00 approx. 6" long	Approx. 23%
DSRHR-1-11	20" Pipe/Elbow	
	Elbow Side of Weld	
	@ 6:00 to 9:00 approx. 19" long	Approx. 24%
DRHR-1-15	24" Pipe/Valve	
	Pipe Side of Weld	
	@ 6:00 approx. 8" long	Approx. 30%
DRHR-1-17	24" Pipe/Valve	
	Pipe Side of Weld	
	Indications 360° intermittent	Approx. 31%

WELD NUMBER	LOCATION OF INDICATIONS	THRU WALL DEPTH
DRHR-1-18	24" Pipe/Tee	
	Pipe Side of Weld	
	@ 12:00 to 3:00 approx. 20" long	Approx. 16%
	@ 7:00 approx. 4" long	Approx. 20%
DRHR-1-20	20" Elbow/Valve	
	Elbow Side of Weld	
	Indications 360° intermittent	Approx. 43%
DRHR-1-5	24" Elbow/Valve	
	Elbow Side of Weld	
	Indication 360° intermittent	Approx. 36%

TENNESSEE VALLEY AUTHORITY
CHATTANOOGA, TENNESSEE 37401
1750 Chestnut Street Tower II

83 SEP 19 A9:55

September 14, 1983

Mr. James P. O'Reilly, Director
U.S. Nuclear Regulatory Commission
Suite 2900
101 Marietta Street, NW
Atlanta, Georgia 30303

Dear Mr. O'Reilly:

TENNESSEE VALLEY AUTHORITY - BROWNS FERRY NUCLEAR PLANT UNIT 1 - DOCKET NO. 50-259 - FACILITY OPERATING LICENSE DPR-33 - REPORTABLE OCCURRENCE REPORT BFRO-50-259/83023 - REVISION 1

The enclosed report is a supplement to my letter to you dated May 25, 1983 concerning intergranular stress corrosion cracking in recirculation system pipe welds. This report is submitted in accordance with Browns Ferry unit 1 Technical Specification 6.7.2.a(3).

Very truly yours,

TENNESSEE VALLEY AUTHORITY

H. J. Green
Director of Nuclear Power

Enclosure
cc (Enclosure):
    Document Control Desk
    U.S. Nuclear Regulatory Commission
    Washington, D.C. 20555

    Records Center
    Institute of Nuclear Power Operations
    Suite 1500
    1100 Circle 75 Parkway
    Atlanta, Georgia 30339

    NRC Inspector, Browns Ferry

OFFICIAL COPY

IE 22
1/1