

A 04/06/78

REGULATORY INFORMATION DISTRIBUTION SYSTEM (RIDS)
DISTRIBUTION FOR INCOMING MATERIAL

50-296

REC: OREILLY J P
NRC

ORG: FOX H S
TN VALLEY AUTH

DOCDATE: 03/28/78
DATE RCVD: 04/03/78

DOCTYPE: LETTER NOTARIZED: NO

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SUBJECT:

LICENSEE EVENT REPT (RO 50-296/78-004) ON 03/15/78 CONCERNING DURING
QUALIFICATION TESTING OF BENDIX ELEC CONNECTORS IDENTICAL TO THOSE USED IN
THE PRIMARY CONTAINMENT, THREE OF FIVE TEST SPECIMENS FAILED DURING SIMULATED
LOCA CONDITIONS... W/ENCL.

PLANT NAME: BROWNS FERRY - UNIT 3

REVIEWER INITIAL: XJM
DISTRIBUTOR INITIAL: *ml*

***** DISTRIBUTION OF THIS MATERIAL IS AS FOLLOWS *****

INCIDENT REPORTS
(DISTRIBUTION CODE A002)

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ROSA**W/ENCL

EXTERNAL: LPDR'S
ATHENS, AL**W/ENCL
TIC**W/ENCL
NSIC**W/ENCL
ACRS CAT B**W/16 ENCL

COPIES NOT SUBMITTED PER
REGULATORY GUIDE 10.1

DISTRIBUTION: LTR 45 ENCL 45
SIZE: 1P+2P+1P

CONTROL NBR: 780950045

***** THE END *****

004

TENNESSEE VALLEY AUTHORITY

CHATTANOOGA, TENNESSEE 37401

MAR 28 1978

REGULATORY DOCKET FILE COPY

Mr. James P. O'Reilly, Director
U.S. Nuclear Regulatory Commission
Office of Inspection and Enforcement
Region II
230 Peachtree Street, NW., Suite 1217
Atlanta, Georgia 30303

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DIVISION

1978 APR 3 PM 5 26

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Dear Mr. O'Reilly:

TENNESSEE VALLEY AUTHORITY - BROWNS FERRY NUCLEAR PLANT UNIT 3 -
DOCKET NO. 50-296 - FACILITY-OPERATING LICENSE DPR-68 - REPORTABLE
OCCURRENCE REPORT BYFO-50-296/784

The enclosed report provides details concerning three of five test specimens which failed during simulated LOCA conditions and during qualification testing of Bendix electrical connectors identical to those used in the primary containment. This report is submitted in accordance with Browns Ferry unit 3 Technical Specification 6.7.2.A.(9).

Very truly yours,

TENNESSEE VALLEY AUTHORITY

H. S. Fox
Director of Power Production

Enclosure

cc (Enclosure):

Director (3)

Office of Management Information and Program Control
U.S. Nuclear Regulatory Commission
Washington, DC 20555

Director (40)

Office of Inspection and Enforcement
U.S. Nuclear Regulatory Commission
Washington, DC 20555

App 2
5/11

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1. The first step in the process is to identify the problem or issue that needs to be addressed. This involves gathering information and understanding the context of the problem.

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1928, 1929, 1930

ST. LOUIS, MO., MAY 1, 1912

1950年10月1日
 1950年10月1日

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(2) 1974-1975

Initial report by participants at 10:00 AM on 10/24/74

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60	61								68	69						74	75							80
DOCKET NUMBER											EVENT DATE							REPORT DATE						

EVENT DESCRIPTION AND PROBABLE CONSEQUENCES (10)

0 2 | During qualification testing of Bendix electrical connectors

0 3 | identical to those used in the primary containment, three of five

0 4 | test specimens failed during simulated LOCA conditions. There

0 5 | was no effect on the public health or safety since this was

0 6 | a laboratory test.

0 7 |

0 8 | _____ 8

0	9	SYSTEM CODE X X (11)		CAUSE CODE E (12)	CAUSE SUBCODE A (13)	COMPONENT CODE P E N E T R (14)				COMP. SUBCODE D (15)	VALVE SUBCODE Z (16)			
7	8	9	10	11	12	13	14	15	16	17	18	19	20	
(17) LER/RO REPORT NUMBER		EVENT YEAR 7 8 (21) (22)		— (23)	SEQUENTIAL REPORT NO. 0 0 4 (24) (25) (26)		— (27)	OCCURRENCE CODE 0 1 (28) (29)		REPORT TYPE T (30)		— (31)	REVISION NO. 0 (32)	
ACTION TAKEN F (18)		FUTURE ACTION Z (19)		EFFECT ON PLANT A (20)	SHUTDOWN METHOD A (21)		HOURS 0 1 4 6 (22)		ATTACHMENT SUBMITTED Y (23)		NPRD-4 FORM SUB. N (24)		PRIME COMP. SUPPLIER L (25)	COMPONENT MANUFACTURER B 2 0 0 (26)
33	34	35	36	37	38	39	40	41	42	43	44	45	46	47

CAUSE DESCRIPTION AND CORRECTIVE ACTIONS (27)

1 0 The cause was a design deficiency. Three Bendix connectors, P/N 10-214036-78p,
1 1 shorted between pins on the unpotted side. The short was caused by the entry of
1 2 moisture through the grommet on the rear of the connector. The connectors in the
1 3 primary containment, applicable to the safety systems required to be operational
1 4 during a LOCA, were potted with 3M Scotchcast. The potted connectors were qualified

FACILITY STATUS		% POWER		OTHER STATUS (30)		METHOD OF DISCOVERY		DISCOVERY DESCRIPTION (32)	
1	5	Z	(28)	0	9 5 (29)	N.A.	C (31)	During special test	

ACTIVITY CONTENT
RELEASED OF RELEASE

1 6 7 8 9 10 11

Z Z

33 34

AMOUNT OF ACTIVITY (35)

N.A.

44

LOCATION OF RELEASE (36)

N.A.

45 80

PERSONNEL EXPOSURES									
NUMBER			TYPE	DESCRIPTION					
1	7	0	0	0	(37)	2	(38)	N.A.	

PERSONNEL INJURIES		DESCRIPTION		41	
NUMBER					
1	8	0	0	0	40
				N.A.	

7		8		9		11		12		80	
				LOSS OF OR DAMAGE TO FACILITY		(43)					
				TYPE		DESCRIPTION					
1	9	Z	(42)	N.A.							

PUBLICATION		DESCRIPTION (45)		NRC USE ONLY	
ISSUED	Y (44)	Press release on March 16, 1978			

NAME OF PREPARER:

PHONE:

Cause Description and Corrective Actions (Continued)

by laboratory test.

Report Number : BFRO-50-296/784
Report Date : March 28, 1978
Occurrence Date : March 15, 1978
Facility : Browns Ferry Nuclear Plant Unit 3

Identification of Occurrence

Three Bendix electrical connectors, P/N 10-214036-78p, failed qualification testing at Wyle Laboratories. The test specimens were the same type connectors as those presently used in primary containment.

Conditions Prior to Occurrence

Unit at approximately 95-percent power.

Description of Occurrence

Pin-to-pin shorts occurred in connectors during simulated LOCA conditions.

Designation of Apparent Cause of Occurrence

Moisture entered the rear of the connectors through the grommets. This moisture, combined with impurities, caused pin-to-pin shorts.

Analysis of Occurrence

Test results indicated that identical connectors used in primary containment could possibly fail during a LOCA. The unit was removed from service for corrective action. Since this test was conducted in a laboratory, no effects existed upon public health or safety.

Corrective Action

Connectors in primary containment were potted with 3M Scotchcast to provide an adequate seal against moisture. The potted connectors were qualified by laboratory test.