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ACCESSION NBR:8805230009 DOC.DATE: 88/05/13 NOTARIZED: NO DOCKET #
FACIL:50-250 Turkey Point Plant, Unit 3, Florida Power and Light C 05000250
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RECIP.NAME RECIPIENT AFFILIATION

SUBJECT: LER 88-005-00:on 880415,loss of flowpath from boric acid storage tanks to RCS due to coupling failure.

DISTRIBUTION CODE: IE22D COPIES RECEIVED:LTR 1 ENCL 1 W/8 ltr. SIZE: 4
TITLE: 50.73 Licensee Event Report (LER), Incident Rpt, etc.

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RIDS/ADDS

RIDS/ADDS

C Form 366
33)

U.S. NUCLEAR REGULATORY COMMISSION
APPROVED OMB NO. 3150-0104
EXPIRES: 8/31/88

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1)	DOCKET NUMBER (2)	PAGE (3)
Turkey Point Unit 3	0 5 0 0 0 2 5 0	1 OF 0 3

TITLE (4) Loss of Flowpath from Boric Acid Storage Tanks to Reactor Coolant System Due to Coupling Failure of the 3B Boric Acid Transfer Pump (BATP) and Seal Failure of the 3A BATP

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)
0 4	1 5	8 8	8 8	0 0 5	0 0	0 5	1 3	8 8	Turkey Point Unit 4	0 5 0 0 0 2 5 1
										0 5 0 0 0

OPERATING MODE (9)	1
POWER LEVEL (10)	1 0 0

THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more of the following) (11)

20.402(b)	20.405(c)	50.73(a)(2)(iv)	73.71(b)
20.405(a)(1)(i)	50.36(c)(1)	50.73(a)(2)(v)	73.71(c)
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)	X 50.73(a)(2)(i)	50.73(a)(2)(viii)(A)	
20.405(a)(1)(iv)	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
Gabe Salamon, Compliance Engineer	AREA CODE 3 0 5 2 4 6 - 6 5 6 0

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
X	C A	C P L G	G 2 0 0	N					
X	C A	S E A L	G 2 0 0	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 April 14, 1988, at 0305, the 3B Boric Acid Transfer Pump (BATP) was taken out of service (OOS) due to the pump's failure to deliver flow. Technical Specification (TS) 3.6.b.4 requires a flow path from the boric acid storage tanks (BAST) when a reactor is critical. On April 15, at 1315, a Nuclear Operator reported that the 3A BATP seal tank was showing no water. As both pumps which were aligned to Unit 3 were now OOS, no flow path from the BASTs to Unit 3 for which credit could be taken existed. This placed the unit in TS 3.0.1, which requires that action be initiated within one hour to place the unit in a mode in which TS 3.6.b.4 does not apply (MODE 3). At 1415, the 4A BATP was aligned to Unit 3. The unit exited TS 3.0.1 and entered TS 3.6.d.2, which permits continued power operation with one of the three required BATPs OOS for 24 hours. IST of the 3B BATP was completed and the pump was returned to service at 1715 on April 15, at which time the unit exited TS 3.6.d.2. The cause of the 3B BATP's failure was a loose set screw in the motor/pump coupling. The cause of the 3A BATP's seal water level decrease was a failed seal. The 4A BATP was realigned to provide a boric acid flowpath to Unit 3, and the 3B BATP was returned to service at 1715 on April 15. The mechanical seal for the 3A BATP was replaced, and the pump was returned to service at 1600 on April 18.

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(9-83)

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FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	
Turkey Point Unit 3	0 5 0 0 0 2 5 0	8 8	0 0 5	0 0	0 2 OF 0 3

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

EVENT

On April 14, 1988, at 0305, with both units in MODE 1, the 3B Boric Acid Transfer Pump (BATP) (EIIS:CA) was taken out of service (OOS) due to the pump's failure to deliver flow. Turkey Point has four BATPs: two designated Unit 3 and two designated unit 4, and 3 Boric Acid Storage Tanks (BAST). Any of the pumps or tanks can be aligned to either unit. Technical Specification (TS) 3.6.c.2 requires three BATPs to be operable during dual unit operation. TS 3.6.b.4 requires the establishment of one flow path from the BASTs when a reactor is critical. With the 3B BATP OOS, three pumps remained operable, and entry into a TS action statement was not required. The pump was repaired by 0540 on April 15, however, it was not returned to service at that time as inservice testing (IST) was not yet complete. On April 15, at 1315, on his normal rounds, a Nuclear Operator reported that the 3A BATP seal tank was showing no water and the nitrogen cover gas pressure, which should have been greater than 35 psig, was at 15 psig and decreasing. At the time of this event, the 4A and 4B BATPs were aligned to Unit 4, the 3A BATP was OOS, and though the 3B BATP was capable of delivering flow to Unit 3, it too was technically OOS. As both pumps which were aligned to Unit 3 were OOS, no flow path from the BASTs to Unit 3 for which credit could be taken existed. Failure to have a flow path places the unit in TS 3.0.1, which requires that action be initiated within one hour to place the unit in a mode in which TS 3.6.b.4 does not apply (MODE 3). Preparations to enter mode 2 were initiated. At 1415, the 4A BATP was aligned to Unit 3. The unit exited TS 3.0.1 and entered TS 3.6.d.2, which permits continued power operation with one of the three required BATPs OOS, provided that it is restored to operable status within 24 hours. IST of the 3B BATP was completed and the pump was returned to service at 1715 on April 15. With only the 3A BATP now OOS and three BATPs operable, the unit exited TS 3.6.d.2.

CAUSE OF EVENT

The cause of the 3B BATP's failure to deliver adequate flow was a loose set screw in the coupling between the pump motor and the pump. The loose set screw permitted the motor to turn without imparting any motive force to the pump. The cause of the set screw becoming loose is not known as no excessive vibration was noted and the pump had been operating satisfactorily.

Th cause of the 3A BATP's seal water level decrease was a failed seal. The seal is cooled by inleakage of water from the seal tank. This water is pressurized by a nitrogen cover.

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	
Turkey Point Unit 3	0 5 0 0 0 2 5 0	8 8	— 0 0 5	— 0 0	0 3 OF 0 3

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

ANALYSIS OF EVENT

During this event, both units were in MODE 1. With a unit in MODE 1, an emergency boration path is required. Even though the 3A BATP was OOS and the 3B BATP was technically OOS, the 3B BATP had the coupling set screw tightened and was available for use had emergency boration been required. In fact, no emergency boration was required as no transients or events requiring emergency boration occurred. Additionally, upon discovery of the loss of flowpath, one of the Unit 4 BATPs was quickly aligned to provide a flowpath to Unit 3. Additionally, the flowpath from the Refueling Water Storage Tank to the charging pumps and the safety injection pumps was available. Based on the above, the health and safety of the public were not affected.

CORRECTIVE ACTIONS

1) The 4A BATP was realigned to provide a boric acid flowpath to Unit 3 at 1415 on April 15.

2) IST of the 3B BATP was initiated at 1350 on April 15, completed satisfactorily, and the 3B BATP was returned to service at 1715 on April 15.

3) The mechanical seal for the 3A BATP was replaced, and the pump was returned to service at 1600 on April 18.

ADDITIONAL DETAILS

The BATPs are manufactured by Goulds, Inc., model number 3196-ST-8. The mechanical seals are manufactured by Durametallic.

Similar occurrences: a previous BATP seal failure was reported in LER 250-87-17.

P. O. BOX 14000 JUNO BEACH, FL 33408-0420

FPL

MAY 13 1988

L-88-225
10 CFR 50.73

U. S. Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, D. C. 20555

Gentlemen:

Re: Turkey Point Units 3 and 4
Docket Nos. 50-250 and 50-251
Reportable Event: 88-05
Date of Event: April 15, 1988
Loss of Flowpath from Boric Acid Storage Tanks to Reactor Coolant System Due to Coupling Failure of 3B Boric Acid Transfer Pump (BATP) and Seal Failure of 3A BATP

The attached Licensee Event Report (LER) is being submitted pursuant to the requirements of 10 CFR 50.73 to provide notification of the subject event.

Very truly yours,

D A Sager

W. F. Conway
Senior Vice President - Nuclear

WFC/SDF/gp

Attachment

cc: Dr. J. Nelson Grace, Regional Administrator,
Region II, USNRC
Senior Resident Inspector, USNRC, Turkey Point Plant

SDF3.LER

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