

ACCELERATED DISTRIBUTION DEMONSTRATION SYSTEM

REGULATORY INFORMATION DISTRIBUTION SYSTEM (RIDS)

ACCESSION NBR:8902220046 DOC.DATE: 89/02/14 NOTARIZED: NO DOCKET #
 FACIL:50-250 Turkey Point Plant, Unit 3, Florida Power and Light C 05000250
 AUTH.NAME AUTHORITY AFFILIATION
 LYONS, E. Florida Power & Light Co.
 CONWAY, W.F. Florida Power & Light Co.
 RECIP.NAME RECIPIENT AFFILIATION

SUBJECT: LER 89-002-00: on 890116, reactor cooldown required by TS due
 to small unisolable leak of RCS at seal table.

W/8 ltr.

DISTRIBUTION CODE: IE22D COPIES RECEIVED: LTR 1 ENCL 1 SIZE: S
 TITLE: 50.73 Licensee Event Report (LER), Incident Rpt, etc.

NOTES:

	RECIPIENT ID CODE/NAME	COPIES LTTR ENCL	RECIPIENT ID CODE/NAME	COPIES LTTR ENCL
	PD2-2 LA	1 1	PD2-2 PD	1 1
	EDISON, G	1 1		
INTERNAL:	ACRS MICHELSON	1 1	ACRS MOELLER	2 2
	ACRS WYLIE	1 1	AEOD/DOA	1 1
	AEOD/DSP/TPAB	1 1	AEOD/ROAB/DSP	2 2
	ARM/DCTS/DAB	1 1	DEDRO	1 1
	NRR/DEST/ADE 8H	1 1	NRR/DEST/ADS 7E	1 0
	NRR/DEST/CEB 8H	1 1	NRR/DEST/ESB 8D	1 1
	NRR/DEST/ICSB 7	1 1	NRR/DEST/MEB 9H	1 1
	NRR/DEST/MTB 9H	1 1	NRR/DEST/PSB 8D	1 1
	NRR/DEST/RSB 8E	1 1	NRR/DEST/SGB 8D	1 1
	NRR/DLPQ/HFB 10	1 1	NRR/DLPQ/QAB 10	1 1
	NRR/DOEA/EAB 11	1 1	NRR/DREP/RAB 10	1 1
	NRR/DREP/RPB 10	2 2	NRR/DRTS/SIB 9A	1 1
	NUDOCS-ABSTRACT	1 1	REG-FILE 02	1 1
	RES/DSIR/EIB	1 1	RES/DSR/PRAB	1 1
	RGN2 FILE 01	1 1		
EXTERNAL:	EG&G WILLIAMS, S	4 4	FORD BLDG HOY, A	1 1
	H ST LOBBY WARD	1 1	LPDR	1 1
	NRC PDR	1 1	NSIC HARRIS, J	1 1
	NSIC MAYS, G	1 1		

NOTE TO ALL "RIDS" RECIPIENTS:

PLEASE HELP US TO REDUCE WASTE! CONTACT THE DOCUMENT CONTROL DESK,
 ROOM P1-37 (EXT. 20079) TO ELIMINATE YOUR NAME FROM DISTRIBUTION
 LISTS FOR DOCUMENTS YOU DON'T NEED!

TOTAL NUMBER OF COPIES REQUIRED: LTTR 45 ENCL 44

A/10-4

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1) Turkey Point Unit 3										DOCKET NUMBER (2) 0 5 0 0 0 2 5 0										PAGE (3) 1 OF 4						
TITLE (4) Reactor Cooldown Required by Technical Specifications due to Small Unisolable Leak of Reactor Coolant System at Seal Table																										
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	1	16	89	89	002	00	02	14	89	Turkey Point Unit 4					0 5 0 0 0 2 5 1											
OPERATING MODE (9) 3			THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more of the following) (11)																							
POWER LEVEL (10) 0 0 0		20.402(b)					20.406(e)					50.73(a)(2)(iv)					73.71(b)									
		20.406(a)(1)(i)					50.38(e)(1)					50.73(a)(2)(v)					73.71(c)									
		20.406(a)(1)(ii)					50.38(e)(2)					50.73(a)(2)(vi)					OTHER (Specify in Abstract below and in Text, NRC Form 366A)									
		20.406(a)(1)(iii)					50.73(a)(2)(i)					50.73(a)(2)(viii)(A)														
		20.406(a)(1)(iv)					50.73(a)(2)(ii)					50.73(a)(2)(viii)(B)														
		20.406(a)(1)(v)					50.73(a)(2)(iii)					50.73(a)(2)(ix)														
LICENSEE CONTACT FOR THIS LER (12)																										
NAME Edward Lyons, Compliance Engineer										TELEPHONE NUMBER AREA CODE 310 524 161 - 6731																
COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)																										
CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NRC		CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NRC																
B	A	B	T	B	G	W	1	2	0	Y																
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 January 16, 1989, at 1915, with Unit 3 in Hot Standby (mode 3, 547F, 2325 psig) and Unit 4 defueled, a normal cooldown of Unit 3 was initiated due to a small pressure boundary leak of the Reactor Coolant System (RCS). The leak was identified while performing an overpressure leak test of the RCS. The leak (approximately 12 drops per minute) was emanating from a crack in the flux mapping system thimble guide tube J-12. In addition, weepage was evident from guide tube J-7 and from the high pressure seal at E-5. Unit 3 reached cold shutdown at 1050 on January 17, 1989. Liquid penetrant (PT) examination was performed on all of the guide tubes above the seal table for both Unit 3 and 4. These examinations identified several other indications. All of the guide tubes with unacceptable indications have been repaired or replaced. Two guide tube segments that were replaced were sent to an offsite materials laboratory. Based on the evaluations performed, it was concluded that the two cracks in those guide tubes were caused by transgranular stress corrosion cracking. The defects initiated from the outer surface of the tubes. FPL will reinspect the Unit 3 and 4 guide tubes using PT. This reinspection will be performed for Unit 3 during its next refueling outage and for Unit 4 during its next refueling outage.

8902220046 890214
PDR ADOCK 05000250
S PDC

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

FACILITY NAME (1) Turkey Point Unit 3	DOCKET NUMBER (2) 0 5 0 0 0 2 5 0	LER NUMBER (6)			PAGE (3)		
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER			
		8 9	— 0 0 2	— 0 0	0 2	OF	0 4

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

DESCRIPTION OF THE EVENT

On January 16, 1989, at 1915, with Unit 3 in Hot Standby (mode 3, 547F, 2325 psig), a normal cooldown of Unit 3 was initiated due to a small pressure boundary leak of the Reactor Coolant System (RCS) (EIIIS: AB). At 1516 on January 16, 1989, a leak test of the RCS pressure boundary was commenced in accordance with procedure OP 1004.1, "Reactor Coolant System - System Leak Test Following RCS Opening". At approximately 1648 the leak inspection team reported to the control room a leak of approximately 12 drops per minute at incore flux mapping system guide tube J-12. The leakage was emanating from a crack between the guillotine isolation valve and the Reactor Vessel, and was therefore, unisolable. In addition, weepage was evident from guide tube J-7 and from the high pressure seal at E-5. Technical Specification 3.1.3.a states, "If reactor coolant leakage exists through a fault in the system boundary that cannot be isolated (ex. vessels, piping, valve bodies) the reactor shall be shutdown, and cooldown to cold shutdown shall be initiated within 24 hours." At 1824 the Plant Supervisor - Nuclear instructed the Reactor Control Operator to prepare for RCS cooldown. At 1915 a normal cooldown of the RCS was initiated in accordance with plant procedures. Unit 3 reached cold shutdown at 1050 on January 17, 1989 without further incident.

Following cooldown, all of the Unit 3 guide tubes above the seal table were inspected using liquid penetrant examination (PT). Indications were present in the following guide tubes: J-7, J-12, H-4, M-3, N-12. The weepage from E-5 was originating from a Swagelok fitting located above the guide tube.

Following examination of the Unit 3 guide tubes, the Unit 4 guide tubes were examined by PT. Guide tube conduit H-1 contained rounded indications similar to some of those in Unit 3.

CAUSE OF THE EVENT

Metallurgical examinations were performed on sections of the J-7 and J-12 guide tubes. Based on the results of the evaluations performed, it is concluded that the cracks/indications in the guide tubes were caused by transgranular stress corrosion cracking. The defects initiated from the outer (OD) diameter surface of the tubes and most likely resulted from chloride contamination. The source of the presumed chloride contamination is not known at this time.

The cause of the weepage from the E-5 conduit fitting was not specifically identified.

ANALYSIS

The amount of leakage from the guide tubes was very small and well within the capabilities of the normal makeup system. Unit 3 was cooled down in a normal manner without further incident. Based on this, the health and safety of the public was not affected.

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

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 9	— 0 0 2	— 0 0	0 3	OF	0 4

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

Following Unit 3 cooldown, the affected sections of the leaking guide tubes J-7 and J-12 were removed and sent to an offsite materials laboratory for evaluation. Based on the results of the evaluations it was concluded that indications on the guide tubes were caused by transgranular stress corrosion cracking. The defects initiated from the OD surface of the tube and most likely resulted from chloride contamination. Since maintenance activities are performed frequently above the seal table but not below the seal table, it is believed that the presumed chloride contamination is limited to above the seal table. The evaluations performed also indicated that detection of the defects can be accomplished using PT examinations.

CORRECTIVE ACTIONS

- 1) Unit 3 was cooled down, and all of the guide tubes were examined by PT. These examinations revealed five guide tubes with unacceptable indications on the tube.
- 2) A plant modification was performed to replace the affected sections of guide tubes J-7 and J-12.
- 3) The indications on guide tubes H-4, M-3 and N-12 were removed with a burr or hand file. Following removal of the indications, wall thickness verifications were performed on the tubes. The areas were then examined by PT to ensure the indications were completely removed.
- 4) The Swagelok fitting at E-5 was disassembled and reworked. The fitting exhibited no leakage when returned to service.
- 5) The Unit 3 guide tubes were verified to be leak free at full pressure.
- 6) The guide tubes above the seal table in Unit 4 were examined by PT. The indications at location H-1 will be removed prior to Unit 4 entering mode 4.
- 7) Plant procedures require that the seal table area be visually inspected for leakage following an opening and reclosing of the RCS. In addition, FPL will reinspect the guide tubes between the seal table and the high pressure fitting for Unit 3 and 4 using PT. This reinspection will be performed for Unit 4 during the next refueling outage for Unit 4, and for Unit 3 during the next refueling outage for Unit 3.
- 8) The guide tubes between the seal table and the high pressure fittings will be cleaned with an appropriate solvent to remove any residual chlorides on the guide tubes. This action will be completed prior to entering mode 4 for Unit 4 and during the next refueling outage for Unit 3.
- 9) FPL will attempt to identify the source of the presumed chloride contamination. Additional corrective actions to prevent recurrence will be taken, as appropriate, depending on the results obtained.

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

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 9	— 0 0 2	— 0 0	0 4	OF	0 4

TEXT (If more space is required, use additional NRC Form 368A's) (17)

ADDITIONAL INFORMATION

Although Turkey Point has had RCS leaks in the past, no LER's were identified that describe a similar event.

The guide tube material is ASTM A213, 304 SS, cold drawn and heat treated.



FPL

P.O. Box 14000, Juno Beach, FL 33408-0420

FEBRUARY 14 1989

L-89-50
10 CFR 50.73

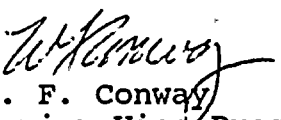
U. S. Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, D. C. 20555

Gentlemen:

Re: Turkey Point Unit 3 and 4
Docket Nos. 50-250 and 50-251
Reportable Event: 250-89-02
Date of Event: January 16, 1989
Reactor Cooldown Required by Technical Specifications due to
Small Unisolable Leak of Reactor Coolant System at Seal Table

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,


W. F. Conway
Senior Vice President - Nuclear

WFC/RHF/cm

Attachment

cc: Malcolm L. Ernst, Acting Regional Administrator, Region II,
USNRC
Senior Resident Inspector, USNRC, Turkey Point Plant

IE22
1/1