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REGULATORY INFORMATION DISTRIBUTION SYSTEM (RIDS)

ACCESSION NBR: 9206020321 DOC. DATE: 92/05/27 NOTARIZED: NO DOCKET #
 FACIL: 50-389 St. Lucie Plant, Unit 2, Florida Power & Light Co. 05000389

AUTH. NAME AUTHOR AFFILIATION
 SIENKIEWICZ, S. Florida Power & Light Co.
 SAGER, D.A. Florida Power & Light Co.
 RECIP. NAME RECIPIENT AFFILIATION

SUBJECT: LER 92-002-00: on 920430, containment pressure channel "C" sensing line for containment pressure instrument PT-07-2C process line in containment capped. Caused by personnel error. Cap on channel "C" removed. W/920527 ltr.

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	RGN2	FILE 01	1	1					
EXTERNAL:	EG&G BRYCE, J.H		3	3	L ST LOBBY WARD			1	1
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May 27, 1992

L-92-156
10 CFR 50.73

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

Re: St. Lucie Unit 2
Docket No. 50-389
Reportable Event: 92-002
Date of Event: April 30, 1992
Containment High Pressure Channel "C"
Inoperable due to being capped

The attached Licensee Event Report 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
D. A. Sager
Vice President
St. Lucie Plant

DAS/JWH/kw

Attachment

cc: Stewart D. Ebnetter, Regional Administrator, USNRC Region II
Senior Resident Inspector, USNRC, St. Lucie Plant

DAS/PSL #704-92

060077

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PDR ADOCK 05000389
S PDR

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LICENSEE EVENT REPORT (LER)

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 30.8 HOURS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE RECORDS AND REPORTS MANAGEMENT BRANCH (P-633), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20548, AND TO THE PAPERWORK REDUCTION PROJECT 3150-0114, OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.

FACILITY NAME (1) St. Lucie Unit 2		DOCKET NUMBER (2) 0 5 0 0 0 3 8 9	PAGE (3) 1 OF 0 3
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TITLE (4) Containment Pressure Channel Inoperable Resulting in a Condition Prohibited by Technical Specifications due to Personnel Error

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	3 0	9	2	0	0	5	2	N/A		01510101
0	4	3 0	9	2	0	0	5	2	N/A		01510101

OPERATING MODE (9) 5	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)		20.405(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 Scott W. Sienkiewicz, Shift Technical Advisor	TELEPHONE NUMBER AREA CODE 4 0 7 4 6 5 - 3 5 5 0
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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

SUPPLEMENTAL REPORT EXPECTED (14)

<input type="checkbox"/> YES (If yes, complete EXPECTED SUBMISSION DATE)	<input checked="" type="checkbox"/> NO	EXPECTED SUBMISSION DATE (15)	MONTH	DAY	YEAR
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ABSTRACT (Limit to 1400 spaces. i.e. approximately fifteen single-space typewritten lines) (16)

On April 30, 1992, the NRC site resident identified that penetration #58, the containment pressure channel "C" sensing line for containment pressure instrument PT-07-2C, had its process line in containment capped, rendering the pressure instrument inoperable. Containment pressure instrument PT-07-2C provides 1 of 4 containment pressure signals to initiate Engineered Safety Features Actuation System and Reactor Protection System trip actions. A review of this event identified that containment pressure channel "C" is estimated to have been inoperable since 4-13-89. This is the earliest date that documented evidence verified that channel "C" was uncapped.

The root cause of containment pressure channel "C" being inoperable is the inadvertent capping of the sensing line inside of containment due to personnel error. Contributing factors were inadequate identification of open ended process lines that are required to be kept open and the lack of procedure to check the lines to ensure they are open prior to unit startup.

Corrective actions for this event: 1) The cap on containment pressure channel "C" was removed. 2) All four of the instrument lines were blown down to ensure they were not obstructed. 3) The corresponding Unit 1 instrument lines were blown down to ensure they were not obstructed. 4) Open ended process lines will be appropriately identified with tags/stickers to ensure that the lines are not inadvertently capped. 5) A procedure will be developed to inspect/verify that other open ended process lines inside of containment that are required to be open are unobstructed prior to going into mode 4.

**LICENSEE EVENT REPORT (LER)
TEXT CONTINUATION**

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUIREMENT: 15.1 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE RECORDS AND REPORTS MANAGEMENT BRANCH (P-608), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20545, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0114), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.

FACILITY NAME (1) St. Lucie Unit 2	DOCKET NUMBER (2) 05000389	LER NUMBER (6)			PAGE (3)		
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER			
		92	002	00	02	OF	03

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

DESCRIPTION OF THE EVENT

On April 30, 1992, St. Lucie Unit 2 was in mode 5 for a refueling outage. During a routine containment (EIS:NH) inspection, the NRC Site Residents found that penetration #58, the containment pressure channel "C" sensing line for containment pressure instrument PT-07-2C (EIS:IK), had its process line in containment capped. This prevented the transmitter from detecting containment pressure, thereby rendering the instrument inoperable.

CAUSE OF THE EVENT

The cause of containment pressure channel "C" being inoperable was the inadvertent capping of the sensing line inside containment due to personnel error. Investigation of this event did not indicate who installed the cap or the classification of the individual involved. Therefore, it is not possible to determine whether the personnel error was cognitive or procedural. Contributing factors to this event included unusual characteristics to the work location that directly related to the error, i.e., inadequate identification on the open ended process lines that are required to be kept open, and the absence of an approved plant procedure for checking the lines to ensure that they are open prior to unit startup.

ANALYSIS OF EVENT

Penetration #58 provides 1 of 4 containment pressure signals to initiate Engineered Safety Features Actuation System (ESFAS) (EIS:BQ) and Reactor Protection System (RPS) (EIS:JC) trip actions. Extensive investigation did not reveal who installed the cap nor did it indicate when or why the cap was installed. The containment pressure channel is estimated to have been inoperable since 4-13-89. This conservative date is the earliest date that documented evidence identifies that the channel was operable. On 4-13-89 a flow test was performed by pressurizing the process line which verified flow through the line with no obstructions.

During the period of time that channel "C" was inoperable (4-13-89 to 4-22-92) other channels were taken out of service for maintenance/testing. Plant Technical Specifications 3.3.1 and 3.3.2 require that with the number of operable channels one less than the minimum operable channels (3), one channel is to be placed in bypass and the other placed in the tripped condition within 1 hour. Also, all functional units affected by the bypassed/tripped channel shall be placed in the bypassed/tripped condition. This action statement was not adhered to. Therefore, this event is reportable under 10 CFR 50.73.a.2.i as "any operation or condition prohibited by the Plant Technical Specifications."

During the 36 month period since the last satisfactory test, plant records indicate that the total percentage of time that another channel was bypassed was approximately 0.5%. A review of the Unit 2 Final Safety Analysis Report (FSAR) for the effects on the RPS/ESFAS with one channel effectively isolated indicates that the RPS/ESFAS would still function in a two-out-of-three coincidence logic. The fourth channel is essentially an installed spare to allow for on line testing/maintenance of the system. If another channel was rendered out of service, the RPS/ESFAS logic would be two-out-of-two coincidence logic and would still provide adequate protection.



**LICENSEE EVENT REPORT (LER)
TEXT CONTINUATION**

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION
REQUEST: 26.3 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE RECORDS
AND REPORTS MANAGEMENT BRANCH (P-602), U.S. NUCLEAR REGULATORY COMMISSION,
WASHINGTON, DC 20546, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0104), OFFICE
OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.

FACILITY NAME (1) St. Lucie Unit 2	DOCKET NUMBER (2) 05000389	LER NUMBER (6)			PAGE (3)		
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER			
		92	002	00	03	OF	03

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

ANALYSIS OF EVENT, cont'd.

Since the RPS and ESFAS are designed for redundancy and diversity, the loss of a containment pressure signal does not compromise plant safety. During an accident condition, the containment pressure signal is considered a back up signal for the initiation of RPS signals and ESFAS signals, with the exception of the containment spray actuation signal (CSAS). CSAS receives its input from containment pressure high-high coincident with a safety injection actuation signal (EIS:BO). If CSAS does not automatically actuate then plant procedures and training direct the plant operators to manually actuate protective systems when required by plant conditions.

This event was evaluated assuming a loss of automatic initiation of the containment spray system (EIS:BE), a conservative worst case scenario. Containment spray is not credited with preventing or mitigating core damage in the case of a main steam line break (MSLB) event. When analyzing the loss of coolant accident (LOCA) the lack of containment spray results in lower peak clad temperatures, due to increased containment pressure acting back on the RCS leak. In addition, no increase in radiological consequences is expected since fission product control systems remain intact. A Probabilistic Risk Assessment (PRA) was performed to assess the potential risk impact of PT-07-2C sensing line being capped. The PRA showed that the estimated change in mean core damage frequency is 3.9E-8 / reactor year. The estimated core damage frequency contribution due to this event is not considered important as defined by the IPE Generic Letter 88-20 screening criteria. Conclusions from this evaluation indicated that for both a LOCA and a MSLB, containment integrity would be preserved and the public health and safety would not be affected.

CORRECTIVE ACTIONS

1. The cap on containment pressure channel "C" was removed.
2. All four of the instrument lines were blown down to ensure they were not obstructed. An evaluation determined that if the other open ended process lines were inadvertently capped the condition would be self identified due to blockage of the process flow.
3. The corresponding Unit 1 instrument lines were blown down to ensure they were not obstructed.
4. Open ended process lines will be appropriately identified with tags/stickers to ensure that the lines are not inadvertently capped.
5. A procedure will be developed to inspect/verify that other open ended process lines inside of containment that are required to be open are unobstructed prior to going into mode 4

ADDITIONAL INFORMATION

- 1) Component Failures
None
- 2) Previous Similar Events
None