CATEGORY 1

REGULATORY INFORMATION DISTRIBUTION SYSTEM (RIDS)

ACCESSION NBR:9706250446 DOC.DATE: 97/06/13 NOTARIZED: NO DOCKET #
FACIL:50-400 Shearon Harris Nuclear Power Plant, Unit 1, Carolina 05000400
AUTH.NAME AUTHOR AFFILIATION
VERRILLI,M. Carolina Power & Light Co.
CLARK,B.H. Carolina Power & Light Co.
RECIP.NAME RECIPIENT AFFILIATION

SUBJECT: LER 97-014-00:on 970514,SI occurred during SSPS surveillance testing.Caused by inattention to detail during recent rev to surveillance test procedure being used.Revised deficient surveillance procedures.W/970613 ltr.

DISTRIBUTION CODE: IE22T COPIES RECEIVED:LTR 1 ENCL 1 SIZE: 24
TITLE: 50.73/50.9 Licensee Event Report (LER), Incident Rpt, etc.

NOTES:Application for permit renewal filed. 05000400

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CATEGORY 1 DOCUMENT

CP&L

Carolina Power & Light Company
Harris Nuclear Plant
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JUN 13 1997

U.S. Nuclear Regulatory Commission
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Serial: HNP-97-129
10CFR50.73

SHEARON HARRIS NUCLEAR POWER PLANT UNIT 1
DOCKET NO. 50-400
LICENSE NO. NPF-63
LICENSEE EVENT REPORT 97-014-00

Sir or Madam:

In accordance with Title 10 to the Code of Federal Regulations, the enclosed Licensee Event Report is submitted. This report describes a safety injection event caused during Solid State Protection System surveillance testing.

Sincerely,

B. H. Clark
Plant General Manager
Harris Plant

MV

Enclosure

c: Mr. J. B. Brady (HNP Senior NRC Resident)
Mr. L. A. Reyes (NRC Regional Administrator, Region II)
Mr. V. Rooney (NRC - NRR Project Manager)

NRC FORM 366 (4-95) U.S. NUCLEAR REGULATORY COMMISSION

APPROVED BY OMB NO. 3150-0104
EXPIRES 04/30/98

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS MANDATORY INFORMATION COLLECTION REQUEST: 50.0 HRS. REPORTED LESSONS LEARNED ARE INCORPORATED INTO THE LICENSING PROCESS AND FED BACK TO INDUSTRY. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE INFORMATION AND RECORDS MANAGEMENT BRANCH (T-6 F33), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555-0001, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.

LICENSEE EVENT REPORT (LER)

(See reverse for required number of digits/characters for each block)

FACILITY NAME (1)	DOCKET NUMBER (2)	PAGE (3)
Harris Nuclear Plant Unit-1	50-400	1 OF 3

TITLE (4)

Safety Injection during Solid State Protection System surveillance testing.

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 NAME	DOCKET NUMBER
5	14	97	97	-- 014 --	00	6	13	97	FACILITY NAME	DOCKET NUMBER 05000

OPERATING MODE (9)	5
POWER LEVEL (10)	0%

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

	20.2201(b)		20.2203(a)(2)(v)		50.73(a)(2)(i)		50.73(a)(2)(viii)
	20.2203(a)(1)		20.2203(a)(3)(i)		50.73(a)(2)(ii)		50.73(a)(2)(x)
	20.2203(a)(2)(i)		20.2203(a)(3)(ii)		50.73(a)(2)(iii)		73.71
	20.2203(a)(2)(ii)		20.2203(a)(4)	X	50.73(a)(2)(iv)	X	OTHER
	20.2203(a)(2)(iii)		50.36(c)(1)		50.73(a)(2)(v)		Specify in Abstract below or in NRC Form 366A
	20.2203(a)(2)(iv)		50.36(c)(2)		50.73(a)(2)(vii)		

LICENSEE CONTACT FOR THIS LER (12)

NAME	TELEPHONE NUMBER (Include Area Code)
Michael Verrilli Sr. Analyst - Licensing	(919) 362-2303

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)			EXPECTED SUBMISSION DATE (15)	MONTH	DAY	YEAR
YES (If yes, complete EXPECTED SUBMISSION DATE).	X	NO				

ABSTRACT (Limit to 1400 spaces, i.e., approximately 15 single-spaced typewritten lines) (16)

On May 14, 1997, with the plant in mode 5 for refueling outage 7, a Safety Injection (SI) signal was generated, which caused SI system valves to automatically align and allow gravity forced flow from the Refueling Water Storage Tank to the Reactor Coolant System. This occurred during surveillance testing on the Solid State Protection System (SSPS).

The cause of this event was inattention to detail during a recent revision to the surveillance test procedure being used. This revision was approved approximately 3 weeks before the outage to incorporate testing that would verify the proper function of the individual inputs for the SSPS general warning circuitry. During the revision process, personnel that completed and reviewed the procedure revision did not realize that positioning a particular SSPS switch would remove the steam line low pressure SI signal blocking feature.

Corrective actions included revising the deficient surveillance procedures and counseling the individuals involved in the revision preparation, review, and approval process.

This condition is being reported per 10CFR50.73.a.2.iv as an unplanned Engineered Safety Feature actuation. This report also satisfies the 90-Day Special Report requirement contained in Technical Specification 3.5.2 Action Statement b, for Emergency Core Cooling System (ECCS) actuations that result in ECCS injection into the RCS. Though water was injected into the RCS via gravity feed from the RWST, this event did not include a plant cooldown and did not constitute an actuation cycle for the affected safety injection nozzles. Therefore, the SI nozzle usage factor did not increase from its previous value of 0.2.

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Shearon Harris Nuclear Plant - Unit #1	50-400	97	-- 014 --	00	2 OF 3

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

EVENT DESCRIPTION:

On May 14, 1997, the plant was in mode 5 for refueling outage 7. The Reactor Coolant System (RCS) was depressurized with one pressurizer safety valve removed and the Residual Heat Removal (RHR) system in service for temperature control. At approximately 1417 hours, Instrument & Control Technicians received approval and commenced the "18-month Solid State Protection System Actuation Logic and Master Relay" Maintenance Surveillance Test (MST-I0072). This procedure requires one technician in the main control room and one at the Solid State Protection System (SSPS) test panel. At approximately 1427 hours, the technician at the test panel performed step 7.1.5, Row 3a, which requires the positioning of SSPS Train A memory switch to position #1. Unknown to the technician at this time, taking the memory switch to position #1 removed the memory ground circuit continuity, which allowed the previously blocked SI signals to become unblocked. Since Pressurizer and Steam Generator pressures were below the SI signal setpoint and the circuits were now unblocked, an A-train SI signal was generated.

Operators in the main control room confirmed the following equipment realignment consistent with a SI signal; (1) "A" Emergency Diesel Generator started and the "A" Emergency Safeguards Sequencer ran program "C", (2) "A" RHR pump started and ran in recirculation, (3) "A" Emergency Service Water (ESW) pump started and "A" ESW header realigned from normal to ESW alignment, (4) Safety Injection flow path valves (1SI-1, 1SI-4, and 1CS-291) opened, which aligned gravity flow from the Refueling Water Storage Tank (RWST) to the RCS.

At approximately 1429, operators secured the "A" RHR pump to prevent overheating the pump while in recirculation, and at 1430, SI valves 1SI-1 and 1SI-4 were closed to secure gravity flow to the RCS. RCS standpipe level indicators showed a 2 inch increase in RCS level due to the SI gravity flow from the RWST.

At approximately 1457, the "A" EDG was secured and at 1500, the control room staff exited emergency and abnormal operating procedures and returned to normal Mode-5 operating procedures for system restoration and realignments.

CAUSE:

The cause of this event was personnel error (inattention to detail) on the part of plant personnel involved in a recent revision to the surveillance test procedure (MST-I0072) being used. This revision was approved approximately 3 weeks before the outage to incorporate testing that would verify the proper function of the individual inputs for the SSPS general warning circuitry. Personnel involved in preparing and reviewing the procedure revision did not realize that positioning the A-train memory switch to the #1 position would remove the steam line low pressure SI signal blocking feature.

SAFETY SIGNIFICANCE:

The were no safety consequences associated with this event. The plant configuration that existed at the time of this event only allowed gravity flow from the RWST to the RCS. Operators promptly secured this flow, resulting in a level increase of approximately 2 inches. Components responded as required for the SI signal and following the event, systems were restored to their previous mode 5 alignments.

This condition is being reported per 10CFR50.73.a.2.iv as an unplanned Engineered Safety Feature actuation. This report also satisfies the 90-Day Special Report requirement contained in Technical Specification 3.5.2 Action Statement b, for Emergency Core Cooling System (ECCS) actuations that result in ECCS injection into the RCS. Though water was injected into the RCS via gravity feed from the RWST, this event did not include a plant cooldown and did not constitute an actuation cycle for the affected safety injection nozzles. Therefore, the SI nozzle usage factor did not increase from its previous value of 0.2.

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

PREVIOUS SIMILAR EVENTS:

LER #95-9 reported an unplanned ESF actuation during Auxiliary Feedwater System surveillance testing on October 5, 1997, which resulted in the Emergency Safeguards Sequencer actuating the SI program. The cause of this event was inadequate/incorrect procedure guidance. Corrective actions included correcting the deficient procedures and strengthening the procedure review and approval process, but did not prevent the personnel error that occurred during the procedure revision process that resulted in LER 97-14.

LER #95-11 reported a reactor trip and safety injection event which occurred during SSPS surveillance testing on November 5, 1995. This event however, was caused by a component failure when a blocking contact failed to maintain continuity. Therefore, the corrective actions for the November 1995 event would not be expected to prevent LER #97-14, which was caused by personnel error during a procedure revision.

CORRECTIVE ACTIONS COMPLETED:

1. Surveillance test procedures MST-I0072 and MST-I0073 were initially placed on administrative hold, then were revised to correct the technical aspects which caused this event. This was completed on May 27, 1997.

2. The individuals that were involved in preparing, reviewing, and approving MST-I0072 and MST-I0073 were counseled on the need for attention to detail during procedure development/revisions. This was completed on May 27, 1997.