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ACCESSION NBR: 8910020137 DOC. DATE: 89/09/26 NOTARIZED: NO DOCKET #
 FACIL: 50-400 Shearon Harris Nuclear Power Plant, Unit 1, Carolina 05000400
 AUTH. NAME AUTHOR AFFILIATION
 SCHWABENBAUER Carolina Power & Light Co.
 RICHEY, R.B. Carolina Power & Light Co.
 RECIP. NAME RECIPIENT AFFILIATION

SUBJECT: LER 89-015-00: on 890827, fuel handling bldg equipment hatch
 not installed as required during fuel movement.

W/8 ltr.

DISTRIBUTION CODE: IE22T COPIES RECEIVED: LTR 1 ENCL 1 SIZE: 5
 TITLE: 50.73/50.9 Licensee Event Report (LER), Incident Rpt, etc.

NOTES: Application for permit renewal filed. 05000400

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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
	DEDRO	1 1	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/PEB 10	1 1	NRR/DOEA/EAB 11	1 1
	NRR/DREP/RPB 10	2 2	NUDOCS-ABSTRACT	1 1
	REG FILE 02	1 1	RES/DSIR/EIB	1 1
	RGN2 FILE 01	1 1		
EXTERNAL:	EG&G WILLIAMS, S	4 4	L ST LOBBY WARD	1 1
	LPDR	1 1	NRC PDR	1 1
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Carolina Power & Light Company

HARRIS NUCLEAR PROJECT
P.O. Box 165
New Hill, NC 27562

SEP 26 1989

File Number: SHF/10-13510C
Letter Number: HO-890097 (0)

U.S. Nuclear Regulatory Commission
ATTN: NRC Document Control Desk
Washington, DC 20555

SHEARON HARRIS NUCLEAR POWER PLANT UNIT 1
DOCKET NO. 50-400
LICENSE NO. NPF-63
LICENSEE EVENT REPORT 89-015-00

Gentlemen:

In accordance with Title 10 to the Code of Federal Regulations, the enclosed Licensee Event Report is submitted. This report fulfills the requirement for a written report within thirty (30) days of a reportable occurrence and is in accordance with the format set forth in NUREG-1022, September 1983.

Very truly yours,

R. B. Richey, Manager
Harris Nuclear Project

RBR:djs

Enclosure

cc: Mr. R. A. Becker (NRR)
Mr. W. H. Bradford (NRC - SHNPP)
Mr. S. D. Ebnetter (NRC - RII)

8910020137 890926
DR ALOCK 05000400
PDC

MEM/LER-89-015/1/OS1

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11

LICENSEE EVENT REPORT (LER)

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 60.0 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE RECORDS AND REPORTS MANAGEMENT BRANCH (P-530), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.

FACILITY NAME (1) SHEARON HARRIS NUCLEAR POWER PLANT UNIT 1	DOCKET NUMBER (2) 0 5 0 0 0 4 0 0	PAGE (3) 1 OF 04
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TITLE (4) **FUEL HANDLING BUILDING EQUIPMENT HATCH NOT INSTALLED AS REQUIRED DURING FUEL MOVEMENT DUE TO PROCEDURAL DEFICIENCIES**

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)
08	27	89	89	015	000	09	26	89		0 5 0 0 0

OPERATING MODE (8) 1	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more of the following) (11)									
POWER LEVEL (10) 0 9 5	<input type="checkbox"/> 20.402(b)	<input type="checkbox"/> 20.405(c)	<input type="checkbox"/> 50.73(a)(2)(iv)	<input type="checkbox"/> 73.71(b)						
	<input type="checkbox"/> 20.405(a)(1)(i)	<input type="checkbox"/> 50.38(c)(1)	<input checked="" type="checkbox"/> 50.73(a)(2)(v)	<input type="checkbox"/> 73.71(c)						
	<input type="checkbox"/> 20.405(a)(1)(ii)	<input type="checkbox"/> 50.38(c)(2)	<input type="checkbox"/> 50.73(a)(2)(vi)	OTHER (Specify in Abstract below and in Text, NRC Form 366A)						
	<input type="checkbox"/> 20.405(a)(1)(iii)	<input type="checkbox"/> 50.73(a)(2)(i)	<input type="checkbox"/> 50.73(a)(2)(viii)(A)							
	<input type="checkbox"/> 20.405(a)(1)(iv)	<input type="checkbox"/> 50.73(a)(2)(ii)	<input type="checkbox"/> 50.73(a)(2)(viii)(B)							
	<input type="checkbox"/> 20.405(a)(1)(v)	<input type="checkbox"/> 50.73(a)(2)(iii)	<input type="checkbox"/> 50.73(a)(2)(x)							

LICENSEE CONTACT FOR THIS LER (12)									
NAME RICHARD SCHWABENBAUER REGULATORY COMPLIANCE TECHNICIAN							TELEPHONE NUMBER		
							AREA CODE 9 1 9 3 6 2 - 2 6 6 9		

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
<input type="checkbox"/> YES (If yes, complete EXPECTED SUBMISSION DATE)							<input checked="" type="checkbox"/> NO				

ABSTRACT (Limit to 1400 spaces, i.e., approximately fifteen single-space typewritten lines) (18)

The plant was operating in Mode 1, Power Operation, at 95 percent reactor power on August 27, 1989. Plant personnel were in the process of transferring spent fuel from the shipping cask to the spent fuel storage pool. Following the movement of the fifth fuel element at 1130 hours, it was discovered that the Fuel Handling Building (FHB) operating floor equipment hatch was in the storage location on the operating deck, and not installed as required. Fuel movement was immediately stopped. The equipment hatch was then installed and fuel movement resumed. SHNPP Final Safety Analysis Report (FSAR), Page 9.1.4-7 assumes that no irradiated fuel, outside of sealed casks, will be handled or transported inside the FHB, unless the operating floor equipment hatch to the unloading area is in place.

The removal of the hatch cover would prevent the FHB Emergency Exhaust System from performing its intended function in the event of a postulated fuel handling accident.

The event was caused by procedural inadequacies.

Corrective actions will include procedure revisions and personnel training.

This event is being reported in accordance with 10CFR50.73 (a)(2)(v) as it resulted in the plant being in an unanalyzed condition.

LICENSEE EVENT REPORT (LER)
TEXT CONTINUATION

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 60.0 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE RECORDS AND REPORTS MANAGEMENT BRANCH (P-530), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.

FACILITY NAME (1) SHEARON HARRIS NUCLEAR POWER PLANT UNIT 1	DOCKET NUMBER (2) 0 5 0 0 0 4 0 0	LER NUMBER (6)			PAGE (3)	
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER		
		8 9	0 1 5	0 0	0 2	OF 0 4

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

DESCRIPTION:

The plant was operating in Mode 1, Power Operation, at 95 percent reactor power on August 27, 1989. Preparations for the transfer of spent fuel were in progress on the night of August 26, 1989. At this time, it was reported to the senior reactor operator (SRO) assigned to the Fuel Handling Building (FHB) that all prerequisites for the handling of spent fuel were complete with the exception of the Spent Fuel Bridge Crane start-up check list of Attachment III to Fuel Handling Procedure (FHP)-020, Fuel Handling Operations. Removal of some minor interference delayed completion of the check list until the morning of August 27, 1989. The operation was turned over to another SRO on the morning of August 27, 1989. This SRO also understood that all prerequisites were met. The SRO began the transfer of spent fuel at 0701 hours.

Following the movement of the fifth fuel element at 1130 hours, it was discovered that the FHB operating floor equipment hatch was in its storage location on the operating deck, and not installed as required. Upon this discovery, fuel movement was immediately stopped. The equipment hatch was then installed and fuel movement resumed.

Shearon Harris Nuclear Power Plant (SHNPP) Final Safety Analysis Report (FSAR), Page 9.1.4-7 assumes that no irradiated fuel, outside of sealed casks, will be handled or transported inside the FHB unless the operating floor equipment hatch to the unloading area is in place. The event resulted in the plant being in an unanalyzed condition.

CAUSE:

The process of handling spent fuel involves several site procedures. Corrective Maintenance (CM)-M0300, Spent Fuel Cask Handling (IF-300 Cask), includes steps for removing the operating deck cover (step 7.1.3) and the closing of the FHB railroad car door. The operating deck hatch cover is also removed by CM-M0300 (step 7.14.1) prior to moving the cask back to the loading bay. There is no intermediate step in CM-M0300 that reinstalls the deck cover prior to spent fuel movement.

In the applicable Fuel Handling Procedure, FHP-020, there are 14 prerequisites (covering 1 page) and 44 Precautions and Limitations (P&L) (covering 16 pages). A large number of P&Ls are operating limitations on crane and hoist operation and fuel assembly manipulation. The prerequisites do not require signoff, and also do not list the hatch cover as a prerequisite. The hatch cover is listed as a P&L. Standard practice requires operators to verify prerequisites and review P&Ls prior to commencing an activity. However, P&Ls routinely are limits to be observed while performing an activity, not conditions that must be established prior to the activity. The account by the SRO who initiated fuel movement is that he understood that the hatch cover was a prerequisite and had been previously checked.

LICENSEE EVENT REPORT (LER)
TEXT CONTINUATION

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

CAUSE: (continued)

While the position of the hatch cover could have been discovered during the review of P&Ls it was not. The error resulted because applicable procedures did not call out the replacement of the hatch cover, did not identify replacement as a prerequisite and because replacement was "buried" in a large number of P&Ls.

SAFETY CONSEQUENCES:

The FHB design includes an Emergency Exhaust System. The function of this system is to (1) actuate on high radiation in the FHB, (2) isolate the non-nuclear ventilation to the operating floor, (3) create a negative pressure of - 1/8" water gauge in the operating floor area, and (4) exhaust the FHB air through High Efficient Particulate Air (HEPA) and charcoal filters.

The system is designed to limit doses from a postulated fuel handling accident to less than the guidelines of 10CFR Part 100. With the hatch cover not in place, the volume and potential leakage paths increase. In particular the supply ventilation ducts for the unloading bay are not isolated by the actuation signal for the FHB emergency exhaust. Also, while the FHB access door was closed at the time of the event, the leak tightness of the door is not tested.

While a fuel handling accident did not occur while the hatch cover was off, the off-site dose consequences of such an accident would be higher. With the hatch cover removed, the normal air supply system would remain open to the loading area and probably prevent the FHB emergency exhaust system from performing its intended function.

This event is being reported in accordance with 10CFR50(a)(2)(v), as it resulted in the plant being in an unanalyzed condition.

There have been no similar events reported.

CORRECTIVE ACTIONS/ACTIONS TO PREVENT RECURRENCE:

1. The FHB operating floor equipment hatch was installed prior to any further fuel movement.
2. FHP-020 will be revised to include placement of the hatch cover as a prerequisite.
3. FHPs will be revised to include signoffs for prerequisites, and the P&Ls will be reviewed for items that should be moved to the prerequisite section.
4. CM-M0300 will be revised to include a step to replace the hatch cover after the spent fuel cask has been placed in the decontamination pit.

LICENSEE EVENT REPORT (LER)
TEXT CONTINUATION

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		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER			
		8 9	— 0 1 5	— 0 0	0 4	OF	0 4

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

CORRECTIVE ACTIONS/ACTIONS TO PREVENT RECURRENCE:

- 5. This event will be reviewed with appropriate personnel involved with fuel movement.

EIIS CODE INFORMATION:

Fuel Handling Building

ND

Spent Fuel Bridge Crane

DF