

ACCELERATED DISTRIBUTION DEMONSTRATION SYSTEM

REGULATORY INFORMATION DISTRIBUTION SYSTEM (RIDS)

ACCESSION NBR: 9006080219 DOC. DATE: 90/06/04 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.
 RECIPIENT NAME RECIPIENT AFFILIATION

SUBJECT: LER 90-013-00: on 900503, TS violation due to unplanned release caused by misaligned valve.

W/9 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

	RECIPIENT ID CODE/NAME	COPIES LTTR ENCL	RECIPIENT ID CODE/NAME	COPIES LTTR ENCL
	PD2-1 LA BECKER, D	1 1 1 1	PD2-1 PD	1 1
INTERNAL:	ACNW	2 2	ACRS	2 2
	AEOD/DOA	1 1	AEOD/DSP/TPAB	1 1
	AEOD/ROAB/DSP	2 2	DEDRO	1 1
	NRR/DET/ECMB 9H	1 1	NRR/DET/EMEB9H3	1 1
	NRR/DLPQ/LHFB11	1 1	NRR/DLPQ/LPEB10	1 1
	NRR/DOEA/OEAB11	1 1	NRR/DREP/PRPB11	2 2
	NRR/DST/SELB 8D	1 1	NRR/DST/SICB 7E	1 1
	NRR/DST/SPLB8D1	1 1	NRR/DST/SRXB 8E	1 1
	REG FILE 02	1 1	RES/DSIR/EIB	1 1
	RGN2 FILE 01	1 1		
EXTERNAL:	EG&G STUART, V.A	4 4	L ST LOBBY WARD	1 1
	LPDR	1 1	NRC PDR	1 1
	NSIC MAYS, G	1 1	NSIC MURPHY, G.A	1 1
	NUDOCS FULL TXT	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!

FULL TEXT CONVERSION REQUIRED
 TOTAL NUMBER OF COPIES REQUIRED: LTTR 36 ENCL 36

Alo-4



2
4

CP&L

Carolina Power & Light Company

P. O. Box 165 • New Hill, N. C. 27562

R. B. RICHEY
Manager
Harris Nuclear Project

JUN 04 1990

Letter Number: HO-900103 (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 90-013-00

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:sh

Enclosure

cc: Mr. R. A. Becker (NRR)
Mr. S. D. Ebnetter (NRC - RII)
Mr. J. E. Tedrow (NRC - SHNPP)

9006080219 900604
FOR ADOCK 05000400
S FDC

ER 90-013/1/051



LICENSEE EVENT REPORT (LER)

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 50.0 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 0 4
---	---	-----------------------------

TITLE (4) **TECHNICAL SPECIFICATION VIOLATION DUE TO AN UNPLANNED RELEASE CAUSED BY A MISALIGNED VALVE.**

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	5	0	9	0	1	0	6	0	N/A	0 5 0 0 0
										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) 1 0 0	<input type="checkbox"/> 20.402(b)	<input type="checkbox"/> 20.406(e)	<input type="checkbox"/> 50.73(a)(2)(iv)	<input type="checkbox"/> 73.71(b)	OTHER (Specify in Abstract below and in Text, NRC Form 366A)
	<input type="checkbox"/> 20.406(a)(1)(i)	<input type="checkbox"/> 50.38(e)(1)	<input type="checkbox"/> 50.73(a)(2)(v)	<input type="checkbox"/> 73.71(c)	
	<input type="checkbox"/> 20.406(a)(1)(ii)	<input type="checkbox"/> 50.38(e)(2)	<input type="checkbox"/> 50.73(a)(2)(vii)		
	<input type="checkbox"/> 20.406(a)(1)(iii)	<input checked="" type="checkbox"/> 50.73(a)(2)(i)	<input type="checkbox"/> 50.73(a)(2)(viii)(A)		
	<input type="checkbox"/> 20.406(a)(1)(iv)	<input type="checkbox"/> 50.73(a)(2)(ii)	<input type="checkbox"/> 50.73(a)(2)(viii)(B)		
<input type="checkbox"/> 20.406(a)(1)(v)	<input type="checkbox"/> 50.73(a)(2)(iii)	<input type="checkbox"/> 50.73(a)(2)(ix)			

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) (16)

The plant was operating in Mode 1, Power Operation, at 100 percent reactor power on May 6, 1990. During operation of the Waste Gas System (WGS) between May 3, 1990 at 1016 hours and May 6, 1990 at 0815 hours, a valve misalignment caused an unplanned release from the WGS to the Waste Process Building Vent Stack 5. The dose rates from the release were calculated to be less than .012 percent of the Technical Specifications (TS) limit. However, the TS surveillance requirement for prerelease calculations was not complied with.

The cause of the event was a misaligned valve in the WGS resulting in an unplanned release following system start-up.

Corrective actions include the correct positioning of the valve, procedure changes and training of applicable personnel.

There were no safety consequences as a result of this event. Postrelease calculations were performed and determined that the dose from the release was well within acceptable limits and the release was through a monitored vent stack.

This event is being reported in accordance with 10CFR50.73(a) (2) (i) (B) as a Technical Specification violation.

LICENSEE EVENT REPORT (LER)
TEXT CONTINUATION

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 500 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		
		9 0	— 0 1 3	— 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 100 percent reactor power on May 6, 1990. On May 3, 1990 the Waste Gas System (WGS) was being restarted following a three day outage to replace the Waste Gas System Recombiner rupture disc. The Waste Gas System Operating Procedure instructs the operator to line up the Oxygen Analyzer Sample Return to the Compressor Suction. The operator opened the Analyzer return to Waste Process Building Heating, Ventilating, and Air Conditioning (HVAC) Valve 1WG-24, instead of the Analyzer Sample Return to Compressor Suction, 1WG-26. As the system was operating, the Radwaste Control Room noted a decrease in the online Waste Gas Decay Tank (WGDT) Pressure. At 0815 hours on May 6, 1990 the improper valve line up was discovered and corrected terminating the unplanned release.

CAUSE:

The root cause of the event was personnel error in the misalignment of valve 1WG-24. The following conditions are considered to be contributing factors for this error:

- 1) There are nine analyzers in the WGS which have a similar valve alignment, where the instrument outlet goes to either the HVAC vent or to the WGS Compressor suction. The Oxygen Analyzer is arranged opposite from the other instruments in that the HVAC valve is on the left and the WGS compressor suction valve is on the right.
- 2) None of these nine valves to the HVAC vent are identified as a potential release path by having the valve handwheel painted purple as in other plant release paths. As a potential release path, these valves should have been subject to independent verification, but the operating procedure did not require independent verification.
- 3) Sample return to HVAC header isolation valves which are in series with the sample return valves are normally open per the Operating Procedure due to their location and accessibility. The Header Valves, 1WG-23 and 1WG-27, are located approximately 15 feet above the floor in a cubicle limiting the accessibility of these valves even by a ladder.

MEM/LER-90-013/4/OS1

LICENSEE EVENT REPORT (LER)
TEXT CONTINUATION

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 500 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 (8)			PAGE (3)	
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER		
		9 0	- 0 1 3	- 0 0	0 3	OF 0 4

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

ANALYSIS:

There were no safety consequences as a result of this event. The volume of gas released was calculated to be 1,595 cubic feet with a total dose of .000014 mRad Gamma Air and .0000049 mRad Beta Air. This is .012 percent of the allowable dose by Technical Specification 3.11.2.1. A nonroutine postrelease calculation was performed and determined the resulting dose rates:

	<u>DOSE FOR RELEASE</u>	<u>LIMITS (10CFR20)</u>
Total Body Dose Rate	.058 mrem/year	500 mrem/year
Skin Dose Rate	.12 mrem/year	3000 mrem/year
Organ Dose Rate	0.0 mrem/year	1500 mrem/year

Technical Specification surveillance requirements 4.11.2.1.1 and 4.11.2.1.2 require that from dose rates gaseous effluents be determined to be within the above limits in accordance with the methodology and parameters of the Off-Site Dose Calculation Manual (ODCM). The ODCM requires that a WGDT be sampled and a prerelease dose calculation be performed before the contents of a WGDT can be released. This prerelease calculation was not performed since this was an unplanned release. The ODCM also requires that based on the prerelease calculations, the Waste Process Building Stack Radiation Monitor alarm setpoint be reset to reflect the contribution of a WGDT release. During the release, the monitor high alarm setpoint was at 56,000 microcuries/second. If a prerelease calculation had been performed the monitor alarm setpoint would have been 16,900 microcuries/second, which would have been more conservative than the actual monitor high alarm setpoint.

This event is being reported in accordance with 10CRF50.73(a) (2) (i) (B) as a Technical Specification violation.

There have been no similar events reported.

CORRECTIVE ACTION/ACTIONS TO PREVENT RECURRENCE:

- 1) Procedure OP-120.07 has been revised to require independent verification for Valves 1WG-23 and 1WG-27. Valves will be maintained SHUT during normal operations, except as required to be open for instrument calibration.
- 2) Appropriate plant personnel have been counseled regarding the impact of the mispositioned valve.
- 3) Appropriate release valves will be painted purple to identify them as a potential release path.

MEM/LER-90-013/5/OS1

LICENSEE EVENT REPORT (LER)
TEXT CONTINUATION

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 50.0 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 9 0	LER NUMBER (8)			PAGE (3)		
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER			
		90	013	00	4	OF	04

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

EIIS CODE INFORMATION:

Waste Gas System	WE
Waste Gas Recombiner	WE
Heating, Ventilating, and Air Conditioning	VH
Waste Gas Decay Tank	WE
Waste Gas Evaporator	WE
Radiation Monitor	IL
Continuous Air Monitor	IL
Waste Process Building Vent Stack	VL

MEM/LER-90-013/6/OS1