CP&L

Carolina Power & Light Company
P.O. Box 10429
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AUG 3 0 1999

SERIAL NO: BSEP 99-0145 10 CFR 50.73

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

BRUNSWICK STEAM ELECTRIC PLANT, UNIT NOS. 1 AND 2
DOCKET NOS. 50-325 AND 50-324
LICENSE NOS. DPR-71 AND DPR-62
LICENSEE EVENT REPORT 1-1999-007-00

Gentlemen:

In accordance with the Code of Federal Regulations, Title 10, Part 50.73, Carolina Power & Light Company submits the enclosed Licensee Event Report. This report fulfills the requirement for a written report within thirty (30) days of a reportable occurrence. No commitments are contained in this document.

Please refer any questions regarding this submittal to Mr. Keith R. Jury, Manager - Regulatory Affairs, at (910) 457-2783.

Sincerely,

Jeffrey J. Lyash
Director - Site Operations
Brunswick Steam Electric Plant

SFT
Enclosure: Licensee Event Report

IE22

cc:

U. S. Nuclear Regulatory Commission
ATTN: Mr. Luis A. Reyes, Regional Administrator
Atlanta Federal Center
61 Forsyth Street, SW, Suite 23T85
Atlanta, GA 30303-3415

U. S. Nuclear Regulatory Commission
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Ms. Jo A. Sanford
Chair - North Carolina Utilities Commission
P.O. Box 29510
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NRC FORM 366 (6-98) U.S. NUCLEAR REGULATORY COMMISSION

APPROVED BY OMB NO. 3150-0104
EXPIRES 06/30/2001

Estimated burden per response to comply with this mandatory information collection request: 50 hrs. Reported lessons learned are incorporated into the licensing process and fed back to industry. Forward comments regarding burden estimate to the 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. If an information collection does not display a currently valid OMB control number, the NRC may not conduct or sponsor, and a person is not required to respond to, the information collection.

LICENSEE EVENT REPORT (LER)

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

FACILITY NAME (1)	DOCKET NUMBER (2)	PAGE (3)
Brunswick Steam Electric Plant (BSEP), Unit No. 1	05000325	1 OF 3

TITLE (4)

Control Building Emergency Air Filtration System Actuation During Chlorine Car Replacement

EVENT DATE (5)			LER NUMBER (6)			REPORT DATE (7)			OTHER FACILITIES INVOLVED (8)	
MONTH	DAY	YEAR	YEAR	SEQUENTIAL NO.	REVISION	MONTH	DAY	YEAR	FACILITY NAME	DOCKET NUMBER
07	31	1999	1999	-- 007 --	00	08	30	1999	BSEP Unit 2	05000324
									FACILITY NAME	DOCKET NUMBER

		THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more) (11)							
OPERATING)	1		20.2201(b)		20.2203(a)(2)(v)		50.73(a)(2)(i)		50.73(a)(2)(viii)
POWER LEVEL (10)	100		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)		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)
Steven F. Tabor, Project Analyst - Regulatory Affairs	(910) 457-2178

COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO EPIX		CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO EPIX

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 July 31, 1999, at 1141 hours, with both units operating at rated power and while replacing the on-site chlorine tank car, the two chlorine detectors located outside of the service water building actuated. By design the Control Building Emergency Air Filtration (CBEAF) system actuated and aligned to the chlorination protection mode. During tank car replacement, personnel using portable monitoring instruments did not detect the presence of chlorine gas. Immediately following the event, the area in the vicinity of the tank car was again checked for the presence of residual chlorine. Upon verifying that there was no indication of chlorine gas in the area, the affected chlorine detectors were reset and the CBEAF system restored to its normal configuration by 1209 hours. At 1522 hours, a four-hour non-emergency event report (Event Number 35976) was made in accordance with 10 CFR 50.72(b)(2)(ii). The cause of this occurrence is attributed to a small amount of residual chlorine gas, which escaped from the chlorinating system piping during the tank car uncoupling process. There were no inappropriate actions identified. As a conservative measure, chlorination system configuration and the current practices used during chlorine tank car uncoupling will be evaluated to determine whether possible process enhancements could be implemented to minimize reportable occurrences. This event is being reported in accordance with the requirements of 10 CFR 50.73 (a)(2)(iv) in that, the condition resulted in the automatic actuation of an engineered safety feature.

FACILITY NAME (1)	DOCKET	LER NUMBER (6)			PAGE (3)
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	
Brunswick Steam Electric Plant, Unit No. 1	05000325	1999	- 007 --	00	2 OF 3

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

Energy Industry Identification System (EIIS) codes are identified in the text as [xx].

INITIAL CONDITIONS

On July 31, 1999, the Brunswick Steam Electric Plant (BSEP) Units 1 and 2 were operating at rated power. At approximately 1030 hours, purging of the on-site chlorine tank car piping was initiated to support replacement of the car since the car was determined to be empty at that time.

EVENT NARRATIVE

On July 31, 1999, at approximately 1135 hours, the chlorine tank car exchange procedure was initiated. During the disconnect operation, portable monitoring instruments and ammonia were being utilized to detect the presence of chlorine; however, no indication of chlorine gas was detected. Once disconnected, subsequent monitoring did not detect the presence of chlorine gas. At 1141 hours, the control room received alarms indicative of a chlorine leak in the chlorine loading area and the Control Building Emergency Air Filtration (CBEAF)/[VI] system actuated as designed and aligned to the chlorination protection mode. Abnormal operating procedure, 0AOP-34, "Chlorine Emergencies," was entered for both units. Further observation determined that two of the four service water building loading area chlorine detectors had actuated.

Immediately following the event, the area in the vicinity of the tank car was again checked for the presence of residual chlorine. Upon verifying that there was no indication of chlorine gas in the area, the affected chlorine detectors were reset and the CBEAF system restored to its normal configuration by 1209 hours. At 1522 hours, a four-hour non-emergency event report (Event Number 35976) was made in accordance with 10 CFR 50.72(b)(2)(ii), for a condition that resulted in the automatic actuation of an engineered safety feature (ESF).

This event is being reported in accordance with the requirements of 10 CFR 50.73 (a)(2)(iv) in that the condition resulted in the automatic actuation of an engineered safety feature.

EVENT CAUSE

The cause of this occurrence is attributed to a small amount of residual chlorine gas, which escaped from the chlorinating system piping during the tank car uncoupling process. There were no inappropriate actions identified.

CORRECTIVE ACTIONS

As a conservative measure, chlorination system [KF] configuration and the current practices used during chlorine tank car uncoupling will be evaluated to determine whether possible process enhancements could be implemented to minimize reportable occurrences.

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

SAFETY ASSESSMENT

This occurrence has low safety significance since detection equipment functioned as designed and the chlorine tank car was empty at the time of the occurrence. The quantity of residual chlorine gas which was released during this occurrence is considered so minimal that the safety of the indibiduals involved with the chlorine car replacement activity was not jeopardized.

The chlorine detection system consists of eight chlorine sensors. Four of these sensors are located on the outside wall of the service water building and the other sensors are located in the intake of the CBEAF system. The CBEAF system intake chlorine detectors are designed to actuate upon detection of chlorine gas at a concentration of 1 ppm to ensure the safety of control room personnel. The chlorine detectors located in the intake of the CBEAF system did not actuate during this event and, as such, the safety of control room personnel was not impacted during this occurrence.

PREVIOUS SIMILAR EVENTS

A 1997 occurrence involving CBEAF actuation due to a valid chlorine detector actuation signal was reported in LER 1-99-003. That event was caused by a chlorination system piping failure and, as such, the resulting corrective actions could not reasonably have been expected to prevent the recent occurrence.

COMMITMENTS

None