



Carolina Power & Light Company

Brunswick Nuclear Project
P. O. Box 10429
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10CFR50.73

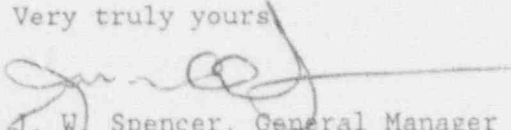
U.S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, D. C. 20555

BRUNSWICK STEAM ELECTRIC PLANT, UNIT 1
DOCKET NO. 50-325
LICENSE NO. DRP-71
LICENSEE EVENT REPORT 1-92-009

Gentlemen:

In accordance with Title 10 of 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 submitted in accordance with the format set forth in NUREG-1022, September 1983.

Very truly yours,



J. W. Spencer, General Manager
Brunswick Nuclear Project

GT/

Enclosure

cc: Mr. S. D. Ebner
Mr. N. B. Le
BSEP NRC Resident Office

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PDR ADOCK 05000325
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EXPIRES: 4/30/92

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-930), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555. ATTENTION TO THE PAPERWORK REDUCTION PROJECT (3150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.

FACILITY NAME (1) Brunswick Steam Electric Plant
Unit 1DOCKET NUMBER (2)
05000325

PAGE (3)

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TITLE (4) CONTAINMENT O2/H2 ANALYZER FAILED WITH THE REDUNDANT MONITOR HAVING ITS EMERGENCY POWER SOURCE INOPERABLE

EVENT DATE (5)			LER NUMBER (6)					REPORT DATE (7)			OTHER FACILITIES INVOLVED (8)	
MCNTH	DAY	YEAR	YEAR	SEQ. NO.	REV. NO.		MONTH	DAY	YEAR	FACILITY NAME	DOCKET NUMBER	
03	31	92	92	-	009	-	04	29	92			

THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR 8: (Check one or more of the following) (11)

OPERATING MODE (9)	POWER LEVEL (10)	20.4.2(b)	20.405(c)	50.73(a)(2)(iv)	73.71(b)
1					
		20.405(a)(1)(i)	50.36(c)(1)	50.73(a)(2)(v)	73.71(c)
	100	20.405(a)(1)(ii)	50.36(c)(2)	50.73(a)(2)(vi)	OTHER (Specify in Abstract and Text)
		20.405(a)(1)(iii)	X	50.73(a)(2)(i)	50.73(a)(2)(vii)(A)
		20.405(a)(1)(iv)		50.73(a)(2)(ii)	50.73(a)(2)(vii)(B)
		20.405(a)(1)(v)		50.73(a)(2)(iii)	50.73(a)(2)(x)

LICENSEE CONTACT FOR THIS LER (12)

NAME Glen M. Thearling, Regulatory Compliance Specialist

TELEPHONE NUMBER

(919) 457-2038

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
X	IP	P	T086	Y	X	EK	P	N152	Y

SUPPLEMENTAL REPORT EXPECTED (14)

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

ABSTRACT (Limit to 1400 spaces, i.e. approximately fifteen single space typewritten lines) (16)

On March 30, 1992, Unit 1 was at 100% reactor power. At 1153 the #1 Emergency Diesel Generator (EDG) was declared inoperable to allow repairs to a leaking fuel oil injector pump.

At 0106 on March 31, 1992, the control operator noted an abrupt increase in indicated Oxygen concentration on the Division 2 Primary Containment Hydrogen/Oxygen (H2/O2) Analyzer 1-CAC-4410 (Teledyne Model 225 CMA-2 H2/O2 Analyzer). A channel check against the Division 1 analyzer 1-CAC-4409 showed that the 1-CAC-4410 analyzer had failed. Since the Division 2 analyzer 1-CAC-4410 was no longer operable, the requirements of T/S 3.0.5 were not satisfied and the Division 1 analyzer 1-CAC-4409 could no longer be considered operable. While having both analyzers inoperable is within the Technical Specifications (TS) Action statements for the Containment Systems Gas Analyzer Systems and Accident Monitoring Instrumentation, the limiting conditions of TS 3.0.5 were invoked. EDG #1 was restored to operable status prior to a Unit shutdown being started.

The H2/O2 analyzer's pump diaphragm had failed allowing Reactor Building air into the analyzer. The introduction of air, with its normal O2 concentration, resulted in the analyzer recording an increased O2 concentration.

EDG #1 was returned to service at 0251 on 3/31/92 and therefore the power supply requirements of Technical Specification 3.0.5 were satisfied.

The safety significance of this isolated event is minimal.

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)	DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)
Brunswick Steam Electric Plant Unit 1	05000325	YEAR	SEQ NO.	REV NO.	2
		92	009	00	

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

INITIAL CONDITIONS

On March 30, 1992, Unit 1 was at 100% reactor power. At 1153 Emergency Diesel Generator (EDG) #1 was declared inoperable to allow repairs to a leaking fuel oil injector pump. This placed the BSEP Units under a 7 day LCO for Electrical Power Systems. With the emergency power source (#1 EDG) for the 4160 volt Emergency bus #1 (E1) inoperable, Technical Specification (T/S) 3.0.5 allows equipment powered from E1 to be considered operable provided: 1) the normal power source is operable; 2) all redundant subsystems, components, etc. are operable. Therefore, the Division 1 Primary Containment Hydrogen/Oxygen (H2/O2) Analyzer 1-CAC-4409 was considered operable because its normal power supply was available and the redundant Division 2 analyzer 1-CAC-4410 was operable.

EVENT NARRATIVE

At 0106 on March 31, 1992, the control operator noted an abrupt increase in indicated Oxygen concentration on the Division 2 Primary Containment Hydrogen/Oxygen (H2/O2) Analyzer, 1-CAC-4410 (Teledyne Model 225 CMA-2 H2/O2 Analyzer). A channel check against the Division 1 analyzer 1-CAC-4409 showed that the 1-CAC-4410 analyzer had failed. Since the Division 2 analyzer 1-CAC-4410, was no longer operable, the requirements of T/S 3.0.5 were not satisfied and the Division 1 analyzer 1-CAC-4409 could no longer be considered operable.

EDG #1 was returned to service at 0251 on March 31, 1992, and the redundant emergency power supply requirement of Technical Specification 3.0.5 was satisfied. While having both analyzers inoperable is within the Technical Specifications (TS) Action statements for the Containment System Gas Analyzer Systems and Accident Monitoring Instrumentation, the limitations of TS 3.0.5 were invoked. EDG #1 was restored to operable status prior to a Unit shutdown being started.

CAUSE OF EVENT

Maintenance determined the H2/O2 analyzer's pump diaphragm had failed due to normal wear. The Teledyne H2/O2 Analyzer's pump diaphragms (part # K-24) have been wearing out due to the continuous running of the monitor. The current Preventive Maintenance schedule replaces the diaphragms yearly, but the failure history indicates earlier replacement may be required due to the continuous run requirements.

The #1 EDG fuel oil injector pump leak is still being evaluated. Preliminary evaluation findings show this was the original pump that came with the Nordberg diesel (Model FS1316HSC) in the early 1970's and since then no maintenance was required, nor were vendor rebuilds performed. Since initial installation, the vendor increased the torquing requirements used on the injector screws and if an injector is rebuilt these new values are used. The leakage appears to have resulted from pump aging combined with low original injector screw torque requirements.

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

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FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)				PAGE (3)
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TEXT (If more space is required, use additional NRC Form 366A's) (17)

CORRECTIVE ACTIONS

The fuel oil injector pump was replaced and EDG #1 was returned to service on March 31, 1992.

The 1-CAC-4410 O2/H2 analyzer was returned to service on April 2, 1992.

An evaluation (Engineering Evaluation Report #91-0298) has been in progress that would allow the analyzers to be maintained in standby rather than continuous operation. If continuous operation is still determined to be required, a different model pump will be evaluated or increased frequency of preventative maintenance will be required.

SAFETY ASSESSMENT

The safety significance of this event is minimal. The redundant analyzer remained in-service throughout the event. Also, an increase in oxygen concentration in the nitrogen inerted Primary Containment is minimized due to the pneumatic loads being normally aligned to a nitrogen supply. The Final Safety Analysis Report states that oxygen concentration in the containment suppression chamber would take ~ 0.45 day after a Loss of Coolant Accident (LOCA) to reach 5%. During a LOCA the Post Accident Sampling System (PASS) would be available to sample for Hydrogen and Oxygen concentrations. Abnormal Operating Procedures also exist that would allow bypassing the emergency buses and restoration of power to the redundant analyzer in the event of a loss of power.

PREVIOUS SIMILAR EVENTS

None

EIIS COMPONENT IDENTIFICATION

<u>System/Component</u>	<u>EIIS Code</u>
Emergency Diesel Generator	EK
Post Accident Monitoring System/Pump	IP/P