UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION II
SAM NUNN ATLANTA FEDERAL CENTER
61 FORSYTH STREET SW SUITE 23T85
ATLANTA, GEORGIA 30303-8931

October 2, 2001

Carolina Power and Light Company
ATTN: Mr. J. S. Keenan
Vice President
Brunswick Steam Electric Plant
P. O. Box 10429
Southport, NC 28461

SUBJECT: BRUNSWICK STEAM ELECTRIC PLANT - NRC INSPECTION REPORT NOS. 50-325/01-08 AND 50-324/01-08

Dear Mr. Keenan:

On September 14, 2001, the Nuclear Regulatory Commission (NRC) completed an inspection at the Brunswick Steam Electric Plant, Units 1 and 2. The enclosed report documents the inspection results which were discussed on September 18, 2001, with you and other members of your staff.

The inspection was an examination of activities conducted under your license as they relate to the identification and resolution of problems, and compliance with the Commission's rules and regulations, and with the conditions of your operating license. Within these areas, the inspection involved selected examination of procedures and representative records, observations of activities, and interviews with personnel.

On the basis of the sample selected for review, there were no findings of significance identified during this inspection. The team concluded that problems were properly identified, evaluated and resolved within the problem identification and resolution programs.

In accordance with 10 CFR 2.790 of the NRC's "Rules of Practice," a copy of this letter and its enclosure will be available electronically for public inspection in the NRC Public Document Room or from the Publically Available Records (PARS) component of NRC's document system (ADAMS). ADAMS is accessible from the NRC Web-site at http://www.nrc.gov/NRC/ADAMS/index.html (the Public Electronic Reading Room).

Sincerely,

/RA/

Brian R. Bonser, Chief
Reactor Projects Branch 4
Division of Reactor Projects

Docket Nos.: 50-325, 50-324
License Nos.: DPR-71, DPR-62

Enclosure: (See page 2)

Enclosure: Inspection Report No. 50-325/01-08
and 50-324/01-08
w/Attachment:

cc w\encl:
J. J. Lyash, Director
Site Operations
Brunswick Steam Electric Plant
Carolina Power & Light
Electronic Mail Distribution

C. J. Gannon
Plant Manager
Brunswick Steam Electric Plant
Carolina Power & Light Company
Electronic Mail Distribution

Terry C. Morton, Manager
Performance Evaluation and
Regulatory Affairs CPB 7
Carolina Power & Light Company
Electronic Mail Distribution

David C. DiCello, Manager
Regulatory Affairs
Carolina Power & Light Company
Brunswick Steam Electric Plant
Electronic Mail Distribution

Leonard Beller
Licensing Supervisor
Carolina Power and Light Company
Electronic Mail Distribution

William D. Johnson
Vice President & Corporate Secretary
Carolina Power and Light Company
Electronic Mail Distribution

John H. O'Neill, Jr.
Shaw, Pittman, Potts & Trowbridge
2300 N. Street, NW
Washington, DC 20037-1128

Mel Fry, Director
Division of Radiation Protection
N. C. Department of Environment
and Natural Resources
Electronic Mail Distribution

Peggy Force
Assistant Attorney General
State of North Carolina
Electronic Mail Distribution

Robert P. Gruber
Executive Director
Public Staff NCUC
P. O. Box 29520
Raleigh, NC 27626-0520

Public Service Commission
State of South Carolina
P. O. Box 11649
Columbia, SC 29211

Donald E. Warren
Brunswick County Board of
Commissioners
P. O. Box 249
Bolivia, NC 28422

Dan E. Summers
Emergency Management Coordinator
New Hanover County Department of
Emergency Management
P. O. Box 1525
Wilmington, NC 28402

Distribution w/encl: (See page 3)

Distribution w/encl:
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A. Boland (Part 72 Only)
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REGION II

Docket No:	50-325, 50-324
License No:	DPR-71, DPR-62
Report No:	50-325/01-08, 50-324/01-08
Licensee:	Carolina Power & Light (CP&L)
Facility:	Brunswick Steam Electric Plant, Units 1 & 2
Location:	8470 River Road SE Southport, NC 28461
Dates:	August 27 - 31 and September 10-14, 2001
Inspectors:	J. Brady, Senior Resident Inspector, Harris, (Team Leader) R. Gibbs, Senior Reactor Inspector, DRS E. Guthrie, Resident Inspector, Brunswick (Assistant Team Leader)
Approved by:	B. Bonser, Chief Reactor Projects Branch 4 Division of Reactor Projects

Enclosure

SUMMARY OF FINDINGS

Adams Template:

IR 05000325-01-08, IR 05000324-01-08, on 08/27/2001- 09/14/2001, Carolina Power and Light Company. Brunswick Steam Electric Plant, Units 1 & 2, annual baseline inspection of the identification and resolution of problems. Corrective action program was acceptable.

The inspection was conducted by resident and regional inspectors. No findings of significance were identified.

Identification and Resolution of Problems:

- Based on the results of the inspection, no findings of significance were identified. The implementation of the corrective action program was acceptable. The licensee was effective at identifying problems and placing them into the corrective action program as evidenced by the review of corrective action program documents, corrective action program trend reports, operating experience review items, and items from system health reports. When conditions adverse to quality were identified, the licensee generally identified the appropriate causes, and developed and implemented effective corrective actions. For some complex issues, corrective action documentation did not adequately reflect those actions that were actually taken to correct the problem and prevent repetition. Based on discussions conducted with plant employees from various departments, the inspectors determined that a reluctance to report safety concerns did not exist.

Report Details

4. OTHER ACTIVITIES (OA)

4OA2 Problem Identification and Resolution

a. Effectiveness of Problem Identification

(1) Inspection Scope

The inspectors reviewed items selected across the three strategic performance areas (reactor safety, radiation safety, and physical protection) to verify that problems were being properly identified, appropriately characterized, and entered into the corrective action program (CAP) for evaluation and resolution. The inspectors reviewed licensee procedure CAP-NGGC-0200, Corrective Action Program, Revision 2, which describes the administrative process for initiating and resolving problems. A condition report (CR) is initiated to document problems. A CR is generated in the licensee's Passport Action Tracking system as an Action Request (AR).

The inspectors reviewed NRC inspection reports and Licensee Event Reports (LERs), and discussed the routine observation of the licensee's problem identification and resolution program with the resident inspectors.

In addition, the inspectors reviewed a sample of maintenance rule (a)(1) items, including associated ARs, to verify that maintenance rule equipment deficiencies were being appropriately entered into the CAP and the maintenance rule program. Corrective action, goals, and monitoring for these items were also reviewed.

The inspectors toured the plant with operators to assess the material condition of plant systems important to safety, and to determine if deficiencies existed that had not been entered into the CAP. Specifically, the service water, low pressure coolant injection, safety-related direct current (DC) electrical systems, and instrumentation and control circuitry were walked down. Licensed reactor operators, and security, health physics, maintenance, engineering, and a number of supervisory personnel were interviewed to evaluate the threshold at which issues were being identified.

The inspectors reviewed operating logs, observed an operations shift turnover meeting and a number of morning status meetings to determine if problems identified were being entered into the corrective action program.

Operating experience items, including selected NRC generic communications, were reviewed to determine if they had been evaluated for applicability, and whether problems identified through these reviews were entered into the CAP.

The inspectors reviewed a listing of all open engineering service requests (ESRs), not associated with a CR, to determine whether any included adverse conditions that should have been entered into the corrective action program. Additionally the inspectors verified that issues reported on ESRs were being evaluated in a timely manner.

A review of licensee audits and self assessments (focusing on problem identification and resolution) was performed by the inspectors to determine whether they were consistent with NRC findings, and whether the assessments were performed in accordance with the licensee's commitments to the NRC; to determine if assessment findings were entered into the licensee's corrective action program; and to determine if corrective actions were completed to resolve identified program deficiencies. Corrective actions resulting from the audits and self-assessments were evaluated. In addition, trend reports for the past twelve months were reviewed to evaluate CAP effectiveness.

(2) Issues and Findings

The inspectors determined that the licensee was effective at identifying problems and placing them into the CAP. In general, the threshold for documenting problems was at an appropriate level.

The inspectors concluded that external industry operating experience and NRC generic communications had been evaluated for plant applicability, and both internal and external operating experience issues had been incorporated into the CAP. Audits performed by the licensee's Nuclear Assessment Section and Performance Evaluation Section, and the licensee's self assessment programs were effective in identifying deficiencies in the CAP. Deficiencies identified by audits and self-assessments were entered into the CAP.

b. Prioritization and Evaluation of Issues

(1) Inspection Scope

The inspectors reviewed a sample of corrective action documents (CRs/ARs) to determine if the licensee appropriately characterized problems and entered them into the CAP for evaluation and resolution. The documents reviewed are listed in the Attachment. The inspectors reviewed the corrective action documents to determine if the licensee found the appropriate causes, and, if appropriate, identified corrective action to prevent recurrence (including common cause and generic concerns). The corrective action documents selected for review were those having generic application to site wide programs, and those associated with plant systems that have risk significance determined by the plant-specific probabilistic risk assessment. These systems included low pressure coolant injection, service water, safety DC electrical systems, and instrumentation and control circuitry. The review included all problems identified for these systems including maintenance items and engineering items. The inspectors also reviewed corrective action documents to determine if they were being properly classified based on the licensee's definition of significance levels in procedure CAP-NGGC-0200.

The inspectors reviewed the ARs initiated by the licensee in response to NRC Non-Cited Violations (NCVs) issued during the last year, to verify that the licensee had appropriately addressed the associated issues. Those NCVs and corresponding ARs are listed in the Attachment. Not all corrective actions were complete for the two NCVs identified in the last year. Consequently the inspectors reviewed those actions that were complete.

The inspectors observed various meetings where corrective action issues were discussed, to verify that risk insights were being used in prioritization and evaluation of issues. The inspectors also reviewed the plant's weekly plan of activities and risk profiles to assess that risk information was employed in work planning and scheduling.

(2) Issues and Findings

The inspectors determined that when conditions adverse to quality were identified, the licensee entered those conditions into the CAP and generally identified the appropriate causes and developed and implemented effective corrective actions. The inspectors determined that the licensee properly classified discrepant conditions. However, the inspectors identified that for some complex issues, corrective action documentation did not adequately reflect those actions that were actually taken to correct the problem and prevent repetition.

c. Effectiveness of Corrective Actions

(1) Inspection Scope

The inspectors reviewed the corrective action documents listed in the Attachment to verify that the licensee had identified or implemented corrective actions commensurate with the safety-significance of the issue. For those items designated as significant adverse conditions, the inspectors evaluated the effectiveness of the actions taken and whether the actions had prevented repetition. The inspectors also verified that common causes and generic concerns were addressed where appropriate.

The inspectors reviewed selected station internal performance indicators and reports, and discussed safety system status with plant personnel. Significant material condition issues with plant safety systems were verified to be in the CAP.

(2) Issues and Findings

Corrective actions developed and implemented for plant equipment problems were generally effective in correcting the equipment deficiencies. The inspectors found that the scope and depth of corrective actions taken by the licensee were appropriate for the severity and risk significance of the problem identified. Where repetition had occurred, the licensee's trending program and rework program had identified the failures as such and the licensee had prescribed additional corrective action to address the cause.

d. Assessment of Safety-Conscious Work Environment

(1) Inspection Scope

The inspectors interviewed licensee operations, maintenance, security, chemistry, health physics, engineering, and supervisory personnel to develop a general view of the safety-conscious work environment and to determine whether any conditions existed that would cause workers to be reluctant to raise safety concerns. The inspectors queried licensee employees to determine whether any conditions existed that would cause employees to be reluctant to raise safety concerns. The inspectors also reviewed the licensee's employee concerns program which provides an alternate method to the CAP for employees to raise safety concerns and remain anonymous.

(2) Issues and Findings

The inspectors concluded that licensee management emphasized the need for all employees to identify and report nonconforming conditions using the appropriate methods established within their administrative programs. Methods available included deficiency log entries, work requests, CRs, and the employee concerns program. These methods were readily accessible to all employees. Licensee management encouraged all employees to promptly identify nonconforming conditions through the CAP. Based on discussions conducted with plant employees from various departments, the inspectors determined that a reluctance to report safety concerns did not exist.

4OA6 Management Meetings

.1 Exit Meeting Summary

The inspectors presented the inspection results to J. Keenan, and other members of licensee management at the conclusion of the inspection on September 18, 2001. The licensee acknowledged the findings presented.

The inspectors asked the licensee whether any of the material examined during the inspection should be considered proprietary. No proprietary information was identified.

PARTIAL LIST OF PERSONS CONTACTED

Licensee

A. Brittain, Manager Security
D. DiCello, Manager Regulatory Affairs
W. Dorman, Manager Nuclear Assessment Section
J. Franke, Manager Brunswick Engineering Support Section
N. Gannon, Plant General Manager
J. Gawron, Training Manager
S. Hamilton, Radiation Protection Manager
J. Keenan, Site Vice President
J. Lyash, Director of Site Operations
W. Noll, Manager Operations
E. O'Neil, Manager Site Support Services
E. Quidley, Manager Maintenance
H. Wall, Manager Outage and Scheduling

NRC

T. Easlick, Senior Resident Inspector, Brunswick
B. Bonser, Chief, Reactor Projects Branch 4

ITEMS OPENED, CLOSED AND DISCUSSED

None.

LIST OF DOCUMENTS REVIEWED

Condition Reports/ Action Requests

CR/AR No.	Description/Title
00005020	Exceeding 200 degrees F Temperature Limit
00005030	Transient On 2-4A Feed Water Heater Drains
00016677	AOP-23 Entry: Condensate/Feedwater Transient
00020680	#2 DG Inoperability Due To Raise Load Above 1500
00010258	DC MOV Electrical Over-current Protection
00005640	DC MOV Overloads
00010056	Quality Of Root Cause Analyses Not Meeting Expectations
00028449	RHR Sample Valve Inoperability
00045513	M&TE Traceability Concern
00024824	Johnston Pump Curve Issue for Service Water Pumps
00030115	Henry Pratt Space Mate 20" Valve
00009592	2B Nuclear SW Pump Strainer Through-wall Failure
00020388	Procedure Adherence (M&TE Admin) Adverse Trend
00045187	M&TE Traceability Concern
00022090	1A CSW Pump Strainer Through Wall Leak
00031407	Through-wall CSW Strainer Leak
00024048	2B NSW Strainer Thin Wall
00022923	2A NSW Strainer Thin Wall
00032181	1-SW-CS-V101 Failed
00044551	WO 30302-Incorrect Edition of ASME Section XI Referenced
00044612	Code Reconciliation not Performed on Installed Bolting
0021264	Inability to Place Standby CW Lube Water Strainer in Service

00023720	1-E11-FT-N007B Concerns
00021412	250V A Battery Bus Ground
00026802	MCC Breaker Stab Engagement Concern (2-E51-F029)
00031148	Battery Bank 1B-2 Inoperable due to Cell #1 Failure
00031562	More Explicit Functional Failure Definition for Batteries
00028985	Degradation of Breakers in HB3/4, 5A, and 6A
00022398	RCIC Water in Oil
00017254	Battery Discharge Test Interruption
00023552	Missed Unavailability Event and (A)(1) Classification
00022041	2A-2 Battery, Cell 27 Found Cracked
00023932	2B Main Transformer Fire
00022073	Missed Diesel Generator Inoperability
00026921	Locked High Radiation Area Potential Trend
00043460	Unreliable Level Instruments Challenge Plant Reliability
00030505	Adverse Trend in Repeat Work in Maintenance
00044717	Work Deferral, Delays, System Unavailability
00046855	Repeat Missed Unavailability for System 4060-(A)(3)
00031451	Adverse Trend in Human Performance (Maintenance)
00028012	1A Condensate Phase Separator Overfill - AOP-5 Entry
00028676	Found DDT Room Floor Covered With Resin
00026671	Individual Unable To Hear ED Alarm Due To High Noise
00022397	Unit 1 CPS Portion of ESR-0000137 Installed Incorrectly
00029061	Unit Two MSR Dose Estimate
00046096	Negative Trend In Drill & Exercise Performance PI

Procedures

ADM-NGGC-0101, Maintenance Rule Program, Rev 13

ADM-NGGC-0200, Passport Action Tracking, Rev 1

CAP-NGGC-200, Corrective Action program, Rev. 2

CAP-NGGC-201, Self-Assessment Program, Rev. 4

CAP-NGGC-202, Operating Experience Program, Rev. 2

EGR-NGGC-0005, Engineering Service Requests, Rev. 15

Maintenance Documents

Maintenance Rule Data Base - Functional Failures that Occurred Between June 2000 and June 2001; Scoping Documents, Performance Criteria, and Performance Data for Selected Systems; and Performance Criteria for Systems in (a)(1)

WRJO 00106647, 1-B21-LT-N042B-6 Is Leaking/Needs Replacing

WRJO 00106645, 1-B21-LT-N042A-6 Is Leaking/Needs Replacing

WRJO 00151338, 00071688, 2-C72-PSH-N003A-D Calibrate Per ESR

Various work requests and work orders identified in action items for the corrective action ARs listed above

Engineering Documents

ESR 9800438, Rev. 0, Evaluate DC MOV Stroke Time Methodology

ESM-97-002, Rev. 0, Evaluation Report for MSR/Heater Drain Vibration Transient Analysis at the Brunswick Nuclear Plant

ESR 9600397, Rev. 0, Evaluate Change to FSAR

Various ESRs identified in action items for the corrective action ARs listed above

Self- Assessments

Assessment 991803, Conduct Self-Assessment of BNP HWC Management

Assessment 14940, Brunswick Station Human Performance

Assessment 8068-06, Identification/Problem Resolution Effectiveness

Assessment 9917, BNP Site ALARA Performance

Assessment 9920, Respiratory Protection Program

Assessment 27439, Dose Assessment Process

Assessment AR 27631, assignment 03, Brunswick Vendor Manual Program (VMP)

Assessment 01-26816, Work Management: Follow-up and Post PassPort Implementation

Assessment 27397, Technical Training Comprehensive Program Evaluation

Nuclear Assessment Section Assessments

RR-CA-00-01, RNP, BNP, HNP, Round Robin Corrective Action Program Self Assessment

RR-SC-01-01, BNP, HNP Round Robin Security Assessment

Brunswick Nuclear Plant NAS Issues/Concerns/Strengths/Weaknesses/IMC's since June 1, 2000.

Brunswick Nuclear Plant NAS Issues/Concerns/Strengths/Weaknesses/IMC's Identified Since June 1, 2000.

Performance Evaluation Support Assessments

2000 2nd, 3rd, and 4th Quarter PES Oversight Reports

2001 1st and 2nd Quarter PES Oversight Report

Operating Experience Issue Documents/ NRC Information Notices/ NRC Generic Letters

00026613 OE11686 Failure of Diesel Generator

00024717 OE11460 Appendix R Scenario, Potential Loss of DG

00026643 OE11713 - SP Gravity Methodology Incorrect for Batteries

00026329 OE11677 - Auxiliary Feed Pump Shaft Seized on Start

00026331 OE11680 - Power Range NI set Nonconservatively

00044941 OE12324 - RCIC Steam Isolation Valve Failed to Close

00043426 OE12336 - Failure of Diesel Generator Cylinders

00028874 10CFR21 01-03 GE Type AK-15/25 Circuit Breakers

00027451 Evaluation of Okonite EQ Tape

00027349 IN 00-21 Detached Check Valve Disk not Detected

Previously Identified NRC Findings

Item ID No.		AR No.	Title
00-04-01	NCV	00024597	Site Manhole Corrective Actions
00-04-03	NCV	00023552	Failure to Consider Unit 1 Battery Unavailability

Licensee Event Reports

50-324/2000-02-00, Main Transformer Fault Results in Reactor Scram

Other Documents

Brunswick Nuclear Plant Site Key Performance Indicator Report, July 2001

Brunswick Plant Corrective Action Program Trend Reports for 1st and 2nd Quarter 2001, and 3rd and 4th Quarter 2000