



UNITED STATES
 NUCLEAR REGULATORY COMMISSION
 REGION II
 101 MARIETTA STREET, N.W.
 ATLANTA, GEORGIA 30303

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Report Nos. 50-324/82-44 and 50-325/82-44

Licensee: Carolina Power & Light Company
 411 Fayetteville Street
 Raleigh, NC 27602

Facility Name: Brunswick

Docket Nos. 50-324 and 50-325

License Nos. DPR-62 and DPR-71

Inspection at Brunswick site near Wilmington, North Carolina

Inspectors: CW Hill for 12/2/82
 D. O. Myers Date Signed

CW Hill for 12/2/82
 L. W. Garner Date Signed

Approved by: PK Hardin for 12/2/82
 P. Bemis, Section Chief, Division of Project and Resident Programs Date Signed

SUMMARY

Inspection on October 15 - November 15, 1982

Areas Inspected

This inspection involved 186 inspector hours on site in the areas of review of licensee event reports, review and audit of surveillance activities, operational safety verification, followup of plant transients, review and audit of maintenance activities, safety committee reviews and independent inspection.

Results

Of the seven areas inspected, no violations were identified in six areas and one violation was identified in one area. (Failure to maintain fire barriers, paragraph 5, applies to both units).

DETAILS

1. Persons Contacted

Licensee Employees

- A. Bishop, Technical Support Manager
- J. Boone, Engineering Supervisor
- L. Boyer, Assistant to General Manager
- G. Campbell, Mechanical Maintenance Supervisor (Unit 2)
- G. Cheatham, E&RC Manager
- R. Coburn, Director QA/QC
- J. Cook, E&RC Foreman
- R. Creech, I&C/Electrical Maintenance Supervisor (Unit 2)
- *C. Dietz, General Manager
- J. Dimmette, Maintenance Manager
- W. Dorman, QA Supervisor
- *E. Enzor, Director Regulatory Compliance
- J. Harness, Plant Operations Manager
- W. Hatcher, Security Specialist
- P. Howe, Vice President, Brunswick Nuclear Project
- J. Jefferson, I&C/Electrical Maintenance Supervisor (Unit 1)
- W. Martin, Principle Engineer/Operations
- G. Milligan, Principle Engineer Onsite Nuclear Safety Section
- R. Poulk, Senior Regulatory Specialist
- C. Treubel, Mechanical Maintenance Supervisor (Unit 1)
- L. Tripp, RC Supervisor
- W. Tucker, Operations Manager
- V. Wagner, Director, Planning and Scheduling

Other licensee employees contacted included technicians, operators and engineering staff personnel.

*Attended exit interview

2. Exit Interview

The inspection scope and findings were summarized on November 15, 1982, with those persons indicated in paragraph 1 above. Meetings were also held with senior facility management periodically during the course of this inspection to discuss the inspection scope and findings.

3. Licensee Action on Previous Inspection Findings

Not inspected.

4. Unresolved Items

Unresolved items were not identified during this inspection.

5. Operational Safety Verification

The inspector verified conformance with regulatory requirements throughout the reporting period by direct observation of activities, tours of facilities, discussions with personnel, reviewing of records and independent verification of safety system status. The following determinations were made:

- Technical Specifications. Through log review and direct observation during tours, the inspector verified compliance with selected Technical Specifications Limiting Conditions for Operation.
- By observation during the inspection period, the inspector verified the control room manning requirements of 10 CFR 50.54(k) and the Technical Specifications were being met. In addition, the inspector observed shift turnovers to verify that continuity of system status was maintained. The inspector periodically questioned shift personnel relative to their awareness of plant conditions.
- Control room annunciators. Selected lit annunciators were discussed with control room operators to verify that the reasons for them were understood and corrective action, if required, was being taken.
- Monitoring Instrumentation. The inspector verified that selected instruments were functional and demonstrated parameters within Technical Specification limits.
- Safeguard system maintenance and surveillance. The inspector verified by direct observation and review of records that selected maintenance and surveillance activities on safeguard systems were conducted by qualified personnel with approved procedures, acceptance criteria were met and redundant components were available for service as required by Technical Specifications.
- Major components. The inspector verified through visual inspection of selected major components that no general condition exists which might prevent fulfillment of their functional requirements.
- Valve and breaker positions. The inspector verified that selected valves and breakers were in the position or condition required by Technical Specifications for the applicable plant mode. This verification included control board indication and field observation (Safeguard Systems).
- Fluid leaks. No fluid leaks were observed which had not been identified by station personnel and for which corrective action had not been initiated, as necessary.
- Plant housekeeping conditions. Observations relative to plant housekeeping identified no unsatisfactory conditions.

- Radioactive releases. The inspector verified that selected liquid and gaseous releases were made in conformance with 10 CFR 20 Appendix B and Technical Specification requirements.
- Radiation controls. The inspector verified by observation that control point procedures and posting requirements were being followed. The inspector identified no failure to properly post radiation and high radiation areas.
- Security. During the course of these inspections, observations relative to protected and vital area security were made, including access controls, boundary integrity, search, escort, and badging.

During a routine tour of the control building on October 26, the inspector noted an open cable penetration in the overhead of the cable spreading room. Further investigation revealed that there was no ongoing work, fire watches stationed or fire patrol posting on either side of the breached barrier that would have indicated that the licensee was aware of the condition.

The inspector notified the shift supervisor who also investigated, concurred with the findings and promptly initiated a limiting condition for operation (LCO) for Technical Specification 3.7.8, which established a fire watch patrol through the area.

Further licensee investigation revealed that three additional four inch cable conduits were open on the west wall of the cable spreading room. All openings were associated with an interrupted plant modification. The licensee reported that the conduits were properly sealed and the LCO terminated within two hours of the discovery. The integrity of the penetrations were last verified intact on September 3, 1982 when LCO 1-82-947 was closed. The licensee is investigating the incident. Having non-functional fire barrier penetrations without established fire watches is a violation of Technical Specification 3.7.8 (324, 325/82-44-01).

6. Review of Licensee Event Reports

The below listed Licensee Event Reports (LER's) were reviewed to determine if the information provided met NRC reporting requirements. The determination included adequacy of event description and corrective action taken or planned, existence of potential generic problems and the relative safety significance of each event. These reports are considered closed.

Unit I

1-82-49 (3L) Primary containment atmosphere oxygen analyzer, 1-CAC-AT-1263-2, exhibited an erratic indication of drywell oxygen concentration.

- i-82-54 (3L) RCIC system turbine automatically started on reactor low level but tripped due to immediate closure of RCIC turbine control valve, 1-E51-V9.
- 1-82-60 (3L) During channel functional test of HPCI system CST suction low water level instrumentation PT-03.1.2P, CST level low instrument, 1-E41-LSL-N002, did not actuate within specification.
- 1-82-71 (3L) During visual inspection of HPCI system CST suction low water level instrument, 1-E41-LSL-N003, it was found that instrument reference sensing leg root isolation valve, 1-E41-V150, was closed and the instrument inoperable.
- 1-82-91 (3L) While reviewing surveillance testing program, PT16.2, it was determined that a drywell temperature detection instrument was located at 86 feet instead of 90 feet in drywell.
- 1-82-101 (3L) Test procedures did not cover valve time testing of the respective divisions I and II LPCI inboard isolation valves, 1(2)-E11-F015 A and B.
- 1-82-102 (3L) During SRM channel functional test, PT-01.2.1a, SRM "A" was rendered inoperable due to a broken detector cable and a bent drive tube and SRM "C" failed to exhibit a decreasing count rate when the detector was fully withdrawn.
- 1-82-104 (3L) Reactor instrumentation isolation excess flow check valve, 1-B21-F047C, located at RIP X-53B, failed to seat and isolate as required.

UNIT 2

- 2-82-76 (3L) CST level low instrument, 2-E41-LSL-N003, did not actuate and repeat within the required calibration tolerances.
- 2-82-113 (3L) High reactor coolant conductivity occurred during startup and load changes for a period of 26 hours and 8 minutes.
- 2-82-114 (3L) Control rod 38-39, had simultaneous "full-in" and "full-out" position indication while fully withdrawn.

The inspectors have no further questions at this time.

7. Surveillance Testing

The surveillance tests detailed below were analyzed and/or witnessed by the inspector to ascertain procedural and performance adequacy.

The completed test procedures examined were analyzed for embodiment of the necessary test prerequisites, preparations, instructions, acceptance criteria and sufficiency of technical content.

The selected tests witnessed were examined to ascertain that current, written approved procedures were available and in use, that test equipment in use was calibrated, that test prerequisites were met, system restoration was completed and test results were adequate.

The selected procedures perused attested conformance with applicable Technical Specifications, they appeared to have received the required administrative review and they apparently were performed within the surveillance frequency prescribed.

<u>Procedure</u>	<u>Title</u>
PT 1.1.12P	High Steam Line Radiation Channel Functional Test
PT 4.1.3.	Radwaste Effluent Radiation Monitoring System Channel Functional Test
PT 4.1.8	Off-Gas HI Rad Operability Check
PT 55.3 PC	Reactor Vessel Level Loop Calibrations
PT 12.2a	No. 1 Diesel Generator Monthly Load Test

The inspector employed one or more of the following acceptance criteria for evaluating the above items:

10 CFR
ANSI N18.7
Technical Specifications

Of the areas inspected, no violations or deviations were identified.

8. Maintenance Observations

Maintenance activities were observed and reviewed throughout the inspection period to verify that activities were accomplished using approved procedures or the activity was within the skill of the trade and that the work was done by qualified personnel. Where appropriate, limiting conditions for operations were examined to ensure that, while equipment was removed from service, the technical specification requirements were satisfied. Also, work activities, procedures, and work requests were reviewed to ensure adequate fire, cleanliness and radiation protection precautions were

observed, and that equipment was tested and properly returned to service. Acceptance criteria used for this review were as follows:

Maintenance Procedures
Technical Specifications

Maintenance activities observed or reviewed were:

WORK REQUEST #

1-E-2925
1-E-82-4037
1-E-82-3963
1-E-82-2937
1-E-82-3980
1-E-82-3981
1-E-82-2327

Outstanding work requests that were initiated by the operations group were reviewed to determine that the licensee is giving priority to safety-related maintenance and not allowing a backlog of work items to permit a degradation of system performance.

Inspectors also reviewed the results of the "Quality Assurance Audit of the Brunswick Plant Operations Units 1 and 2," performed by the corporate QA group. The review was to ensure that findings and concerns were properly classified.

Inspectors also reviewed the licensee's program of trouble ticket tracking for control room instrumentation. The program was developed in response to the number and duration of problems associated with indicators used by operators. Licensee management will periodically review the listing of the subject work orders in an effort to prioritize work and reduce the time operators are without indicators. The program will apply to technical specification as well as balance of plant instruments.

Of the areas inspected no violations were identified.

9. Followup of Plant Transients and Safety System Challenges

During the period of this report, a followup on plant transients and safety system challenges was conducted to determine the cause; ensure that safety systems and components functioned as required; corrective actions were adequate; and the plant was maintained in a safe condition.

On October 28, Unit 2 was shutdown for traversing in-core probe repair and a drywell entry. The shutdown was performed per procedure and without incident. The subsequent drywell entry revealed a leak on the residual heat removal (RHR) suction line off of recirculation loop A. The leak was due to a five inch crack in the weld area of the first weld downstream of the manual isolation valve 2-E11-F067. (See LER 2-82-130 for details) The

pipng is 20 inch diameter carbon steel. Incomplete samples of the flaw area were removed for analysis; but the analysis proved inconclusive as to the mechanism of failure.

Licensee investigations included ultrasonic testing of associated welds on the RHR piping in the drywell, a records review by company experts, and a review of previous testing data and radiographic films. No other defects were found. Region II Engineering Programs Branch inspectors were onsite to assist in weld repair inspections. (See IE Report No. 324/325-82-41). The repair was still in progress at the close of the report period.

No violations were identified.

10. Onsite Review Committees

The inspectors attended the regular monthly Plant Nuclear Safety Committee (PNSC) meeting and several special PNSC meetings conducted during the period of October 15 through November 15, 1982.

The inspectors verified the following items:

- Meeting were conducted in accordance with Technical Specification requirements regarding quorum membership, review process, frequency and personnel qualifications;
- Meeting minutes were reviewed to confirm that decisions/recommendations were reflected and follow-up of corrective actions were completed.

No violations were identified.