



UNITED STATES
 NUCLEAR REGULATORY COMMISSION
 REGION II
 101 MARIETTA ST., N.W., SUITE 3100
 ATLANTA, GEORGIA 30303

Report Nos. 50-324/82-30 and 50-325/82-30

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:	<u>A. K. Henderson for</u>	<u>9/2/82</u>
	D. O. Myers	Date Signed
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	L. W. Garner	Date Signed
	<u>J. Chase / C. W. Burger for</u>	<u>9/3/82</u>
	J. Chase	Date Signed
Approved by:	<u>C. W. Burger</u>	<u>9/3/82</u>
	C. Burger, Section Chief, Division of Project and Resident Programs	Date Signed

SUMMARY

Inspection on July 15 - August 15, 1982

Areas Inspected

This inspection involved 279 inspector hours on site in the areas of review of Licensee Event Reports, Followup on Bulletins, Followup on significant events, operational safety verification, followup of plant transients and safety system challenges, review and audit of surveillance activities and independent inspection.

Results

Of the seven areas inspected, two violations were identified (Failure to follow procedures, paragraphs, 10.b and 11.b).

DETAILS

1. Persons Contacted

Licensee Employees

- A. Bishop, Technical and Administrative Manager
- J. Boone, Engineering Supervisor
- R. Coburn, Director QA/QC
- J. Cook, E&RC Foreman
- *C. Dietz, General Manager, Brunswick
- J. Dimmette, Mechanical Maintenance Supervisor
- W. Dorman, QA Supervisor
- E. Enzor, I&C Electrical Maintenance Supervisor
- M. Hill, Maintenance Manager
- P. Howe, Vice President Technical Services
- J. Jeffries, Manager Corporate Nuclear Safety
- R. Morgan, Plant Operations Manager
- D. Novotny, Regulatory Specialist
- G. Oliver, E&RC Manager
- *R. Poulk, Regulatory Specialist
- L. Tripp, RC Supervisor
- W. Tucker, Operations Manager
- E. E. Utley, Executive Vice President
- 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 July 18, 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. Followup on Bulletins

(Closed) IEB-79-15 Deep Draft Pump Deficiencies. The licensee's final response for IEB 79-15, dated December 20, 1979, was reviewed.

The inspector has no further questions on this subject. IE Bulletin 79-15 is closed.

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. Additional in-plant reviews and discussions with plant personnel, as appropriate, were conducted for those reports indicated by an asterisk.

UNIT 1

- | | |
|---------------|--|
| 1-81-007 (3L) | Discrepancy in level indications between suppression pool level transmitters, 1-CAC-LT-2601 and 2602, due to insufficient venting of 2602 transmitter. |
| *1-82-48 (3L) | No. 2 Diesel Generator, tripped due to generator reverse power while performing PT-12.2b. |
| 1-82-52 (3L) | Primary containment atmosphere oxygen analyzer, 1-CAC-AT-1259-2, out of calibration. |
| 1-82-57 (3L) | Primary containment atmosphere analyzer, 1-CAC-AT-1259, indicated upscale drywell oxygen concentration. |
| 1-82-58 (3L) | Recorder chart paper jammed on suppression chamber water temperature recorder, 1-CAC-TR-778. |
| *1-82-50 (3L) | Intermittent "Full Out" indication of control rod 38-39. |
| 1-82-65 (3L) | Primary containment atmosphere oxygen analyzer, 1-CAC-AT-1259-2, indicated upscale oxygen concentration in drywell. |
| 1-82-66 (3L) | Post-accident monitoring control room recorder/indicator, 1-CAC-AR-1263, indicated downward trend in drywell oxygen concentration. |
| *1-82-68 (3L) | Post-accident drywell particulate radiation detection instrument, 1-CAC-AQH-1262-1, tripped and would not restart. |
| *1-82-78 (3L) | No. 2 Diesel Generator tripped due to low jacket water pressure. |
| *1-82-79 (3L) | While running 1D RHR service water pump for suppression pool cooling, the pump tripped. |

UNIT 2

- *2-80-76 (3L) Reactor low pressure switch, of 2-B21-PS-N021D, out of calibration.
- 2-80-97 (3L) Following completion of operations with 2B RHR pump, suppression pool level exceeded maximum value.

The inspectors have no further questions at this time.

7. Onsite Review Committees

The inspectors attended the scheduled monthly Plant Nuclear Safety Committee (PNS) Meeting and several special PNSC meetings conducted during the period of July 15 through August 15, 1982.

The inspectors verified the following items:

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

No violations were identified.

8. 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 prerequisite were met, system restoration was completed and test results were adequate.

The selected procedures reviewed attested conformance with applicable Technical Specifications, they had received the required administrative review and they were performed within the surveillance frequency prescribed.

<u>PROCEDURE</u>	<u>TITLE</u>	<u>DATE OF REVIEW</u>
PT 1.11	Core Performance Parameter Check	7/16/82
PT A 3	Reactor Low Pressure, Channel Calibration & FCN. Test	8/20/82

PT A8	Reactor Vessel Shroud Level Channel Calibration and Functional Test	07/24/82
PT A21.1	Primary Containment Isolation System	07/29/82
PT 17.7P	Fire Suppression Water System	08/04/82
PT 46.3P	Control Bldg. Chlorine Detection System	08/06/82
PT 11.0	ASME Section XI Safety/Relief Valve Test	08/15/82

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.

9. Maintenance Observations

Maintenance activities were observed and reviewed throughout the inspection period to verify that activities were accomplished using approved procedures, the activity was within the skill of the designated trade and that the work was done by qualified personnel. Where appropriate, limiting conditions for operation 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 the applicable Maintenance Procedure and the Technical Specifications.

Observations and reviews were performed of the diesel generator flexible drive coupling repair and post maintenance testing. A review of the post maintenance operability functional test of diesel generator no. 4 revealed that it had tripped during initial testing because a pressure switch isolation valve and a jacket water pump discharge valve were not properly aligned. Prior to the test, operations personnel had removed their clearance and returned the cleared items to their normal position. However, a complete check of valve and breaker line-ups was not performed. Operations personnel indicated that they had not been informed of the scope of work performed and thus were unaware that any alignment checks in excess of those specified on the clearance were necessary. The clearance form delineated the valve manipulations which had established the clearance boundary; but did not address changes maintenance personnel had made during the course of their work within that boundary. The licensee is evaluating a means of ensuring appropriate operations personnel are aware of changes made within a clearance boundary as a result of maintenance activities. This is an Inspector Followup Item 324, 325/82-30-01.

During the above diesel generator functional testing, it was also determined that a check valve had been installed backwards. The licensee is evaluating the need for additional supervision when work is performed using a technical manual instead of a written procedure. This is an Inspector Followup Item 324, 325/82-30-02.

Review of the trouble ticket, clearance form, vendor technical manual and other documentation indicates that definitive instructions for post maintenance testing were not provided. Inspection Report 324, 325/82-26 issued a violation associated with failure to have a program to ensure performance of post maintenance testing, i.e., stroke timing per Technical Specifications. The licensee has committed to develop a program to delineate post maintenance testing requirements in accordance with ANSI 18.7 prior to restart of both units.

No violations were identified in this area.

10. 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.

- a. On July 17, 1982 Unit 1 reactor experienced an intermediate range monitor high flux scram from 1% of full power. The apparent cause of the high flux was a sudden, substantial increase in feedwater flow initiated by a malfunctioning feedwater throttle valve, FW-177. Other than the reactor protection system, no engineered safety features were challenged. The unit proceeded to cold shutdown without further incidents.

Prior to the event, the reactor was being shutdown in accordance with the action statement of Technical Specification 3.6.1.1. (See local leak rate test discussion in Inspection Report 324, 325/82-28.)

- b. On August 5, 1982, with Unit 1 in cold shutdown, the core spray system was inadvertently initiated, resulting in division I core spray injection into the vessel. Vessel level increased from 185" to 210" before the pump was manually shutdown. Switching the I-B2 battery charger from float to equalize, following a battery discharge test, induced a low voltage condition on the 125 VDC bus resulting in tripping of emergency core cooling system (ECCS) logic for the division I core spray system. This event occurred because licensee personnel failed to perform step XI C.4 of MI 10-2J as specified. A similar event occurred on September 11, 1981 when a battery charger was switched from the float to equalize mode. Corrective action for the September event included a change to maintenance instruction, MI 10-2J, Equalizing Plant Batteries, step XI C.4 which precluded using the equalize mode of the 1-B2 battery charger.

Technical Specification 6.8.1.a requires written procedures be implemented for the applicable procedures recommended in Appendix A of Regulatory Guide 1.33, November 1972. Item I.1 of the guide specifies that maintenance, which can affect the performance of safety-related equipment, be performed in accordance with written procedures. Failure to implement MI 10-2J properly is a violation of Technical Specification 6.8.1.a. (325/82-30-04).

One violation was identified in this area.

11. Operational Safety Verification

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

Technical Specification. Through log review and direct observation during tours, the inspector verified compliance with selected Technical Specification 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 System).

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 one satisfactory condition. See paragraph 11.B.

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.

b. Failure to Implement FP-14

During routine tour of diesel generator building on July 7, 1982, the inspector observed stacks of paper towels placed around and next to the diesel generators. These towels were apparently placed to catch lube oil leaks and fuel oil spills. This was reported to the Licensee. The inspector verified that the towels were removed on July 11, 1982. On July 14, 1982 the inspector again observed lube oil soaked towels around diesel generator no. 1. On July 20, 1982, the inspector observed the same towels around the diesel. The inspector discussed the matter with the plant manager and the towels were promptly removed.

On July 18, 1982, a member of the fire protection support group conducted a weekly fire inspection per FP-14 of the diesel generator building. Review of the FP-14 checklist indicates that no corrective action was required. Step III A of FP-14 states that "inspectors are to note any condition which could adversely affect the fire protection status of the area". Failure to note and correct the above mentioned condition (adverse to the fire protection of the area) is a failure to implement FP-14. This constitutes a violation of Technical Specification 6.8.1.F, which requires that written procedures for the fire protection program be implemented (324, 325/82-30-03).

c. RHR Room Cooler Design Deficiency

On July 31, 1982 as a result of an IE Bulletin 79-01 B review, the licensee determined that on a loss of a non-safety grade air system, the exhaust dampers for the residual heat removal (RHR) room coolers would fail shut. Closure of the dampers trips the cooler fans; thereby, rendering the room cooler system inoperable. At the time this discrepancy was identified, both Units 1 and 2 were in cold shutdown. Appropriate limiting conditions for operation were implemented as required by the Technical Specifications. Plant modifications have been installed such that on loss of control air, the exhaust dampers fail open, thus maintaining room cooler operability. The inspectors have no further questions at this time.

One violation was identified in this area.