



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

Report Nos.: 50-413/84-56 and 50-414/84-26

Licensee: Duke Power Company
 422 South Church Street
 Charlotte, NC 28242

Docket Nos.: 50-413 and 50-414

License Nos.: CPPR-116 and CPPR-117

Facility Name: Catawba Nuclear Station, Units 1 and 2

Inspection Dates: May 12 - June 25, 1984

Inspection at Catawba Nuclear Station near Rock Hill, South Carolina

Inspectors:	<u><i>Vengeth Brownlee for</i></u>	<u>7/19/84</u>
	P. K. Van Doorn	Date Signed
	<u><i>Vengeth Brownlee for</i></u>	<u>7/19/84</u>
	P. H. Skinner	Date Signed
Approved by:	<u><i>Vengeth Brownlee</i></u>	<u>7/19/84</u>
	V. Brownlee, Section Chief	Date Signed
	Division of Reactor Safety	

SUMMARY

Areas Inspected

This routine unannounced inspection involved 268 inspector-hours on site in the areas of followup of NRC and Licensee identified items (Units 1 and 2); site tours (Units 1 and 2); maintenance observations (Unit 1); fuel receipt and storage (Unit 1); operating staff training (Unit 1); Safety Committee activity (Unit 1); review of operating license issuance (Unit 1); TMI action items; followup of IE Notices (Units 1 and 2); and followup of IE Bulletins (Units 1 and 2).

Results

Of the ten areas inspected, no violations or deviations were identified in nine areas; one violation was found in one area; (Failure to adequately control procured structures, paragraph 3.a and 3.b).

REPORT DETAILS

1. Persons Contacted

- *R. L. Dick, Vice President, Construction
- *G. W. Grier, Corporate QA Manager
- *J. W. Hampton, Station Manager
- *E. M. Couch, Project Administrator
- *T. B. Bright, Engineering Manager
- *L. R. Davison, Project QA Manager
- W. O. Henry, QA Manager, Technical Services
- *J. W. Cox, Superintendent, Technical Services
- R. A. Morgan, Senior QA Engineer
- J. M. Curtis, QA Manager Vendors
- L. E. Vincent, Office Engineer
- C. W. Graves, Operations Superintendent
- *C. L. Hartzell, Licensing and Projects
- R. D. Rogers, Mechanical Engineer
- T. E. Crawford, Operations Engineer
- W. R. McCollum, Performance Engineer
- P. C. McAnulty, Training and Safety Coordinator
- *P. G. Leroy, Licensing Engineer
- D. M. Robinson, Reactor Engineer
- *S. A. Walliser, Operating Experience Management Assistant
- *D. P. Hensley, QA Technician
- H. L. Atkins, QA Surveillance Supervisor
- J. C. Shropshire, QA Engineer Supervisor
- H. D. Mason, QA Engineer
- J. Snyder, Civil Engineer Supervisor
- T. D. Mills, Mechanical Engineer Supervisor
- M. Linderman, Mechanical Engineer
- *T. B. Probst, Administrative Methods Coordinator

Other licensee employees contacted included technicians, operators, and office personnel.

Other Organizations

Bahnson Service Company

- W. M. Crute, Project Engineer
- G. R. Gaston, QC Engineer
- D. B. Williams, QA Engineer

*Attended exit interview

2. Exit Interview

The inspection scope and findings were summarized on June 25, 1984, with those persons indicated in paragraph 1 above. One new violation was identified and is described in paragraph 3 (50-413/84-56-01, 414/84-26-01: Failure to Adequately Control Procured Structures).

3. Licensee Action on Previous Inspection Findings (92701) (92702)

- a. (Closed) Unresolved Item 413/82-15-01, 414/82-12-01: Structural Weld Deficiencies. The inspector verified that the items described by this item and documented on Nonconforming Item Report (NCI) Nos. 14,967; 14,969 and 14,970 were properly evaluated and the generic review of these items was being considered under CDR 413, 414/82-02 at the time of the previous inspection. The case of undersize welds and welds not of the type required by applicable drawings on the lugs of the boric acid tank was a vendor item and was not identified by the licensee. This item was documented on NCI 14,972. These welds were in violation of the approved drawing D-76-410, Rev. 4. Licensee evaluation indicated the discrepancies were acceptable as is. Therefore this is in violation of 10 CFR 50 Appendix B, Criterion VII and is identified as violation 413/84-56-01, 414/84-26-01: Failure to Adequately Control Procured Structures.
- b. (Closed) Unresolved Item 414/81-20-02: Weld Discrepancies on Vendor Supplied Structure. This item concerned weld undercut and undersize welds on a vendor supplied Reactor Building B Frame which did not meet the applicable code (AWS D1.1) requirements. Specification CNS-1144.04-00-0002, Rev. 1 requires welds to meet AWS D1.1. The licensee documented this problem on NCI 12,892 after the item was identified by the NRC inspector. Evaluation showed the structure was acceptable as is. However, since this item was not identified by the licensee, this is a second example of violation 413/84-56-01, 414/84-26-01: Failure to Adequately Control Procured Structures.
- c. (Closed) Unresolved Item 413, 414/83-05-01: Generic Evaluation of Vendor Welding Discrepancies. Due to the multiple welding discrepancies found by the NRC and the licensee, the inspector had previously questioned whether vendor welding had been adequately reviewed. The licensee conducted a detailed study of vendor welding discrepancies and appears to have taken appropriate corrective action relative to this area.
- d. (Closed) Unresolved Item 413/83-36-03, 414/83-31-03: WPS-BSC-32, Thickness Range Qualification. This item involved a concern whether a Bahnsen HVAC welding procedure and welders qualified to that procedure were properly qualified in accordance with the applicable codes relative to thickness ranges. The qualifications appear to be in accordance with code requirements and the procedures and welder qualification documents have been clarified to reduce confusion. These actions are considered adequate.

- e. (Closed) Unresolved Item 413/84-33-02, 414/84-19-02: Verification of Adequate Design of Instrument Air Tubing to Safety Related Valves. The licensee responded officially to this item on June 8, 1984. The licensee has changed this tubing from a non-safety-related designation to safety-related. In addition, licensee evaluation showed that crimping of the tubing was improbable and that functional redundancy existed for these lines. This item is related to violation 413/84-33-01, 414/84-19-01 and CDR 413, 414/84-14. Licensee Actions are considered adequate.
- f. (Closed) Unresolved Item 413/84-33-04: Verification of Adequate Control of Paint on Stainless Steel Materials. Further inspection showed the licensee had adequate controls in place. These controls have been formalized in procedure CP-848, Rev. 1. Licensee controls are considered adequate.
- g. (Closed) Violation 413/83-36-01, 414/83-31-01: Eye Examination. Responses for this item was submitted on December 15, 1983 and January 23, 1984. The inspector reviewed and verified implementation of the licensee's actions described in the responses and considers these actions acceptable.
- h. (Closed) Violation 413/83-36-02, 414/83-31-02: Quality Records Discrepancies. The licensee responded to this item on December 15, 1983. The inspector reviewed and verified implementation of the licensee actions described in the responses and considers these actions to be acceptable.
- i. (Closed) Violation 413/83-56-03: Inadequate Documentation of Cable Radius Problems on R6A No. 352 and Incomplete Evaluation of NCI 13522. The response for this item was submitted on April 6, 1984. The inspector reviewed and verified implementation of the corrective actions described in the response and considers these actions to be acceptable.
- j. (Closed) Violation 413/84-33-01: Inadequate Instructions to Control Instrumentation Installations. Responses for this item were submitted on June 8, 1984 and June 13, 1984. The inspector reviewed and verified implementation of the corrective actions described in the responses and considers these actions to be acceptable.
- k. (Closed) Violation 413/84-33-03: Failure to Maintain Fuel Pool Cleanliness Records. The responses for this item was submitted on June 8, 1984. The inspector reviewed and verified implementation of actions described in the licensee response and considers these actions acceptable.

- l. (Closed) Violation 413/84-33-06: Failure to Provide all Training as Specified in NRC Material License No. SNM-1920. The response for this item was submitted on June 8, 1984. The inspector reviewed and verified implementation of the corrective actions described in the response and considers these actions acceptable.
- m. (Closed) Violation 413/84-44-01: Inspection of Safety-Related Components. The response for this item was submitted on June 8, 1984. The inspector reviewed and verified implementation of actions described in the licensee response and considers these actions acceptable. It is noted that Part 2 of this violation is being deleted from the violation by separate correspondence and will be reviewed at a later date.

4. Independent Inspection Effort (71302, 92706) (Units 1 and 2)

- a. The inspectors conducted tours of various plant areas. During these tours, various plant conditions and activities were observed to determine that they were being performed in accordance with applicable requirements and procedures. No significant problems were identified during these tours and the various evolutions observed were being performed in accordance with applicable procedures.
- b. The inspector observed Emergency Procedure review and training being conducted at the licensee simulator training center for an operator crew. The inspectors also reviewed results of these reviews from additional crews. Specific scenarios included in this observation were steam generator tube rupture and loss of all A. C. power.

No violations or deviations were identified.

5. Maintenance Observation (Unit 1) (71302)

Station maintenance activities of selected systems and components were observed/reviewed to ascertain that they were conducted in accordance with the requirements. The inspector verified licensee conformance to the requirements in the following areas of inspection: (1) that the activities were accomplished using approved procedures, and functional testing and/or calibrations were performed prior to returning components or systems to service; (2) quality control records were maintained; (3) that the activities were accomplished by qualified personnel; and, (4) parts and materials used were properly certified. Work requests were reviewed to determine status of outstanding jobs and to assure that priority is assigned to safety-related equipment maintenance which may affect system performance.

No violations or deviations were identified.

6. Fuel Receipt and Storage (60501) (Unit 1)

During the inspection period, the inspector observed the receipt, handling and storage of nuclear fuel. Attributes used for inspection included security procedures, access control, health physics procedures, physical damage protection and debris control, proper storage spacing to prevent inadvertent criticality, record keeping and license compliance.

In addition, the inspector reviewed fuel manufacturer shipping documents, documents required by Department of Transportation, operation department documents, and quality assurance documents of three shipments.

No violations or deviations were identified.

7. Operating Staff Training (41301) (Unit 1)

The inspector reviewed operating staff training. The purpose of this review was to confirm that the licensee has trained the operating staff, a continuing program of training is being conducted and replacement personnel received training or have experience equivalent to that required by originally selected personnel.

No violations or deviations were identified.

8. Offsite Review Committee Activities (Units 1 and 2) (40301)

The inspector reviewed the activities of the offsite review committee (Nuclear Safety Review Board - NSRB). The NSRB charter was reviewed with respects to the draft copy of Catawba Technical Specifications, the Final Safety Analysis Report section 13.4.2.1, and Duke - 1 (Amendment 6) Quality Assurance Program section 17.2.1.2.2. The inspector also reviewed NSRB meeting minutes 83-01 dated June 14, 1983 and CN 84-01 dated April 26, 1984. In addition, the audit schedule for Catawba nuclear station for 1984 was reviewed. This schedule included all Technical Specification audit requirements. The inspector provided several comments of an editorial nature for consideration during a subsequent revision of the NSRB charter.

No violations or deviations were identified.

9. Review of Operating License Issuance (Unit 1) (94300)

- a. During this reporting period the inspectors reviewed various areas of Unit 1 for operating license issuance. These areas include, but were not limited to, a review of the construction and preoperational inspection program, a review of all violations and unresolved items and the status of these items, a review of the preoperational test program, with emphasis on the commitments identified in the Final Safety Analysis Report, and a review of construction status. The results of these reviews were transmitted to Region II NRC management for consideration during regional assessment of overall licensee readiness for operation.

- b. Regional management (Messrs. J. A. Olshinski, R. C. Lewis, J. P. Stohr, H. C. Dance, and V. L. Brownlee) participated in a detailed site tour and attended a management meeting to review plant status and open issues on June 4, 1984.

No violations or deviations were identified.

10. TMI Action Plan Verification and Follow-up (92701)

This inspection was conducted to verify the adequacy of implementation of licensee commitments made to the NRC. The previously inspected items identified for follow-up actions were reviewed for closure. The commitments were made in response to the requirements of NUREG-0660, NRC Action Plan Developed as a result of the TMI-2 Accident, published May 1980, Revised August 1980; NUREG-0737, Classification of TMI Action Plan Requirements, published November 1980; and NUREG-0694, TMI-Related Requirements for New Operating Licenses, published June 1980.

The verification adequacy was based upon personal observations in the plant and review of licensee documents.

I.C.4, Control Room Access - Senior Licensee Management has issued the necessary criteria to be applied in determining the need for control room access on an individual basis. This criteria was issued to those persons with the authority to grant permanent control room access. This criteria is provided by Intrastation Letter Catawba Nuclear Station dated June 11, 1984, file no: CN-271.90. Item I.C.4 and Inspector Followup Item 84-29-05 are closed.

No violations or deviations were identified.

11. IE Bulletins (units 1 and 2) (92703)

The following IE Bulletins were reviewed to ensure receipt, evaluation, and appropriate implementation:

- a. (Closed - Unit 1) IE Bulletin 80-18: Minimum Flow Through Centrifugal Charging Pump. See paragraph 12.a.
- b. (Closed - Units 1 and 2) IE Bulletin 82-02: Degradation of Threaded Fasteners in the Reactor Coolant Pressure Boundary of PWR Plants. Discussions with Region II engineering personnel indicate that this bulletin is not applicable to Catawba.
- c. (Closed - Units 1 and 2) IE Bulletin 83-03: Check Valve Failures in Raw Water, Cooling Systems of Diesel Generators. Discussions with Region II engineering personnel indicate that this bulletin is not applicable to Catawba.

- d. (Closed - Units 1 and 2) IE Bulletin 83-05: ASME Nuclear Code Pumps and Spare Parts Manufactured by the Hayward Tyler Pump Company. Licensee review and response dated July 29, 1983 indicated that the subject components and parts were not utilized by Catawba. The licensee actions are considered satisfactory.
- e. (Closed - Units 1 and 2) IE Bulletin 83-06: Nonconforming Materials Supplied by Tube-line Corporation. The licensee review disclosed several items have been supplied by Tube-line to Catawba. Evaluations showed these items to be acceptable as is. This licensee responded to NRC on November 18, 1983 and December 30, 1983. The inspector reviewed the licensee actions and considers them satisfactory.
- f. (Closed - Units 1 and 2) IE Bulletin 83-07: Apparently Fraudulent Products Sold by Ray Miller, Inc. A review by the licensee documented in a response submitted on March 20, 1984 indicated that Ray Miller products were not purchased for the Catawba project. Licensee actions are considered satisfactory.
- g. In addition to the bulletins identified above the inspector reviewed actions taken by the licensee for bulletins 78-08, 79-18, 80-10, 80-12, 81-01 and 83-04. These bulletins are examples of bulletins that were concerned with an operating plant and required no response since Catawba was in a construction status. The inspector reviewed the licensee's actions in response to these bulletins to incorporate corrective actions into operating activities. Based on this review, the inspector considers the licensee actions taken on bulletins concerned with operational activities issued during the construction phase to be acceptable.

No violations or deviations were identified.

12. Followup of IE Information Notices (Units 1 and 2) (92701)

The inspector reviewed licensee actions relative to IE Information Notices to ensure receipt, review and implementation of appropriate corrective actions. The inspector reviewed licensee actions for IEN Nos. 83-01, 83-02, 83-03, 83-04, 83-07, 83-08, 83-11, 83-13, 83-14, 83-15, 83-16, 83-17, 83-18, 83-20, 83-22, 83-25, 83-26, 83-31, 83-32, 83-34, 83-35, 83-36, 83-37, 83-38, 83-39, 83-40, 83-41, 83-42, 83-43, 83-44, 83-45, 83-47, 83-51, 83-53, 83-55, 83-58, 83-59, 83-60, 83-61, 83-62, 83-63, 83-66, 83-67, 83-68, 83-69, 83-71, 83-72, 83-73, 83-74, 83-76, 83-77, 83-80, 83-82, 83-83, 83-84, 84-05, 84-06, 84-08, 84-12, 84-13, 84-14, 84-21, 84-25, 84-26, 84-27, 84-28, and 84-30.

No violations or deviations were identified.

13. Licensee Identified Items 50.55(e) (Units 1 and 2) (99020)

- a. (Closed) CDR 414/80-21-04 (SD 80-05): Cracked Control Rod Guide Tube Support Pins. The licensee submitted responses to this item on April 30, 1980; August 30, 1983 and January 11, 1984. The inspector reviewed and verified implementation of corrective actions identified in the responses and considers these actions to be satisfactory.
- b. (Closed) CDR 413, 414/80-22-02 (SD-80-08): Inadequate Minimum Flow Through the Centrifugal Charging Pumps. Response to this item was submitted on January 7, 1981. The inspector reviewed and verified implementation of corrective actions for this item and considers these actions to be satisfactory.
- c. (Closed) CDR 413/81-17-09 (CDR 413/81-11): Failure of Borg-Warner Component Cooling System Motor Operated Gate Valve During Dry Cycling. Responses for this item were submitted on July 1, 1981; March 27, 1984 and April 11, 1984. The inspector reviewed and verified implementation of corrective actions identified in the responses and considers these actions to be satisfactory.
- d. (Closed) CDR 413, 414/82-02: Miscellaneous Structural Welds do not meet the requirements of the Design Drawings or Inspection Procedure. The responses for this item were submitted on February 23, 1982 and September 1, 1982. The inspector reviewed and verified implementation of corrective actions identified in the responses and considers the licensee actions to be satisfactory.
- e. (Closed) CDR 413, 414/83-03: Control Schemes for Modulating Active Valves may not allow the valves to reach their Fail Safe Mode in a harsh environment. The response for this item was submitted on April 8, 1983. The inspector reviewed and verified implementation of corrective actions described in the response and considers these actions to be satisfactory.
- f. (Closed) CDR 413/83-17: Special Welding Bosses Installed in Lieu of Restrictors. The responses for this item were submitted on December 22, 1983; February 3, 1984; March 29, 1984; April 13, 1984 and May 24, 1984. The inspector reviewed and verified implementation of corrective actions described in the response and considers these actions to be satisfactory.
- g. (Closed) CDR 413/84-04: Partial Penetration Welds Undersized. The responses for this item submitted on April 25, 1984; May 22, 1984 and June 13, 1984. The inspector reviewed and verified implementation of corrective actions described in the responses and considers these actions to be satisfactory.

- h. (Closed) CDR 413/84-13: Debris found in 12-inch UHI Piping. The response for this item was submitted on June 7, 1984. The inspector reviewed and verified completion of actions described in the response for Unit 1 and considers these actions to be satisfactory.
 - i. (Closed) CDR 413/84-14: Non-Qualified Manual Valves Between Qualified IE Solenoid Valves and Safety Related Valve Actuators. The responses for this item were submitted on June 8, 1984 and June 13, 1984. The inspector reviewed and verified implementation of actions described in the response and considers these actions to be satisfactory.
14. Licensee Action on Previously Identified Inspection Findings (Units 1 and 2) (92701)
- a. (Closed) Inspector Followup Item (413/83-26-02). Containment Spray System Functional Test Procedure Comments. The licensee has resolved the inspectors comments on this procedure. This resolution was in the form of a change to the procedure and clarification of the testing described in Final Safety Evaluation Report Chapter 14 provided in revision 8. The inspector considers the licensee action to be satisfactory.
 - b. (Closed) Inspector Followup Item (413/83-26-03). Ice Condensor Functional Test Procedure Comments. The licensee has resolved the inspectors comments on this procedure. This resolution was in the form of a change to the procedure. The inspector considers the licensee actions to be satisfactory.
 - c. (Closed) Inspector Followup Item (413/83-39-01). DG Fuel Oil System Cold Functional Test Comments. The licensee has resolved the inspector comments on this procedure. This resolution was in the form of a change to the test procedure. The inspector considers the licensee actions to be satisfactory.
 - d. (Closed) Inspector Followup Item (413/83-17-02, 414/83-16-03). Modification of the Boron Injection System. This item concerned the deletion of the boron injection tank in the Final Safety Analysis Report (FSAR). This deletion was accomplished by revision 10 to the FSAR. The inspector reviewed this revision with respect to this change and considers the licensee action to be satisfactory.
 - e. (Closed) Inspector Followup Item (413/84-20-03). FSAR Electrical Diagram Errors. Figures 8.1.2.1 and 8.3.1.3 were previously identified as having errors shown for several breaker positions. These figures have been corrected by revision 10 to the FSAR. The inspector reviewed these revisions and considers the licensee actions to be satisfactory.

- f. (Closed) Inspector Followup Item (413/84-33-05). DG Lube Oil System Operating Procedure. A previous review of this procedure identified that the requirements of FSAR section 9.5.7.2.1 had not been incorporated into Operating Procedure (OP) /1/A/6550/02, DG Lube Oil System. A revision to the procedure has been provided. This revision incorporates the requirements of FSAR Section 9.5.7.2.1. The inspector reviewed this revision and considers the licensee actions to be satisfactory.

- g. (Closed) Inspector Followup Item (413, 414/83-10-01). Review of Official Audit Reports. This item concerned required followup inspection of corrective actions required by certain corporate audits. The inspector reviewed implementation of these corrective actions and considers the licensee actions to be satisfactory.

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