



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

Report Nos. 50-413/80-08 and 50-414/80-08

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

Facility Name: Catawba Nuclear Station

Docket Nos. 50-413 and 50-414

License Nos. CPPR-116 and CPPR-117

Inspection at Catawba site near Rock Hill, South Carolina, May 12-16, 1980, and  
at Duke Power Center, Charlotte, North Carolina, May 14, 1980

Inspector: C. R. McFarland  
C. R. McFarland

6-27-80

Date Signed

Approved by: J. K. Rausch  
J. K. Rausch, Acting Section Chief, RCES Branch

6-27-80

Date Signed

SUMMARY

Inspection on May 12-16, 1980

Areas Inspected

This routine, announced inspection involved 33 inspector-hours in the areas of review of IE Bulletins, 10 CFR 50.55(e) items, and a review of alleged safety hazards.

Results

Of the areas inspected, no items of noncompliance or deviations were identified.

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## DETAILS

### 1. Persons Contacted

#### Licensee Employees

- \*J. R. Wells, Corporate QA Manager
- \*D. G. Beam, Project Manager
- \*D. L. Freeze, Project Engineer
- \*L. R. Davison, Senior QC Engineer
- \*S. W. Dressler, Senior Construction Engineer
- W. G. Rixon, Senior Planning & Facilities Engineer
- R. A. Morgan, Senior QA Engineer (QAE)
- J. C. Shropshire, QAE Mechanical, Welding
- H. D. Mason, QAE Civil, Electrical
- D. E. DeMart, Civil Design Engineer
- R. Bucy, Mechanical Design Engineer
- R. Gamburg, Mechanical Design Engineer
- T. H. Heitman, Licensing Engineer
- D. L. Powell, Employee Relations Supervisor
- C. M. Melton, Senior Safety Assistant, Supervisor

Other licensee employees contacted included one welder, one welding QC inspector, the site safety engineer and two safety assistants.

#### Other Organizations

Hartford Steam Boiler Inspection & Insurance Company

\*J. W. Kosko, Authorized Nuclear Inspector (ANI)

NRC Resident Reactor Inspector (RRI)

\*G. F. Maxwell

\*Attended exit interview

### 2. Exit Interview

The inspection scope and findings were summarized on May 16, 1980 with those persons indicated in Paragraph 1 above. No new items of noncompliance or unresolved items were identified in the areas inspected.

### 3. Licensee Action on Previous Findings

a. (Closed) Deficiency 413/414/79-12-02, Failure to follow quality assurance (QA) procedure P-1. The inspector and the Region II (RII) staff have reviewed the DPC response letters dated August 6, September 10, and October 1, 1979. DPC has revised procedure P-1 to correct the

deficiency. The inspector reviewed the following QA surveillance reports for activities affected by the change to procedure P-1 and the receiving inspection report, form P-1A:

<u>Report</u>	<u>Title</u>	<u>Report Period</u>
M-1	Receipt Storage & Issue of Items	Oct-Dec. 1979, Apr. 1980
M-2	Receipt & Storage of Mechanical Equipment	Oct. 1979 - Feb. 1980
C-19	Civil Electrical - Instrumentation Material Receipt and Storage	Oct.-Dec. 1979, Mar.-Apr. 1980

- b. (Closed) Unresolved Item 413/414/79-12-03, Engineer specification requirements for vendor certification test. The inspector discussed the subject item with DPC staff and reviewed documentation regarding vendor certification test reports for cables. DPC specification CNS-1354.01-00-0001 and its addendum 2, revision 2, dated September 27, 1979 were used in the review. As an additional measure to further ensure that manufacturers' documentation clearly indicates what tests were performed, Duke has requested that the manufacturers provide a listing of the tests performed during the production of cables in accordance with 1PCEAS-68-516.
- c. (Closed) Unresolved Item 414/80-02-01, Weld and base metal grinding on refueling water storage tank (RWST), Unit 2. Richmond Engineering Construction Inc. (RECO) has measured the areas in question, inspected the welds and base-metal, and reviewed the stress analysis of the RWST in light of the local under-thickness. DPC has participated in the field measurement work, reviewed the RECO stress analysis based on the local under-thickness; DPC concurred with RECO that the structural integrity of the tank is satisfactory. The inspector reviewed documentation of the above and discussed the subject with responsible DPC staff.

4. Unresolved Items

No new unresolved items were identified during this inspection.

5. Independent Inspection

The inspector and the RRI toured the Unit 1 and 2 facilities, observed work inside the reactor buildings, auxiliary building and the control room. Discussions were held with various crafts personnel and office staff concerning plant construction. The inspector observed a repair to the fuel pool liner and reviewed the records of the repair.

6. Licensee Identified Items (LII) 10 CFR 50.55(e)

- a. (Closed) Item 413/414/80-08-01, Refueling water storage tank (RWST) capacity. The inspector reviewed the DPC report to RII dated January 16,

1980, discussed the corrective action with responsible DPC staff and reviewed the design documentation.

Design drawings have been changed for the RWST's for units 1 and 2 to provide a 45 degree elbow turned down and equipped with a vortex preventer. This new arrangement is located inside each tank and attached to the outlet nozzle.

7. IE Bulletins (IEB)

- a. (Closed) 413/414/79-BU-23, Potential Failure of Emergency Diesel Generator Field Exciter Transformer. The inspector reviewed the DPC responses dated November 1, 1979 and March 13, 1980 and discussed the subject with DPC staff. Provisions have been made to adequately limit the flow of circulating currents. A full load operation test has been completed successfully.
- b. (Closed) 413/414/79-BU-25, Failure of Westinghouse BFD Relays in Safety-Related Systems. As stated in the DPC responses dated January 4, 1980, none of the Westinghouse BFD/NBFD relays specified in this bulletin are used or planned for use in safety-related systems at the Catawba station.
- c. (Closed) 413/414/80-BU-03, Loss of Charcoal From Standard Type II, 2 inch, Tray Adsorber Cells. The inspector reviewed documentation that supports the DPC response dated March 24, 1980. All charcoal adsorber units, except the containment cleanup units, are different designs than those described in the IEB 80-03. The containment cleanup units utilize tray-type charcoal adsorbers fabricated by using spot welded construction; not rivets as noted in the bulletin. An inspection of the units by the manufacturer indicated no sign of sagging, perforated screens or any other defect that would permit the leakage of charcoal from the cells.

8. Safety Concerns Expressed by Site Employee

An employee at the Catawba site expressed safety concerns to the NRC Resident Reactor Inspector (RRI). He then guided the RRI and the DPC site safety engineer on a plant tour, pointing out his concerns. Later, the employee stated his concerns to the Charlotte area news media. Some of his concerns were printed in the Charlotte Observer on May 15, 1980. Region II investigators subsequently held telephone conversations with the employee. Most of the concerns were related to personnel safety rather than nuclear safety and Region II passed the personnel safety concerns to the South Carolina Occupational Safety and Health Administrative (OSHA). The employee also contacted both the state and federal OSHA offices. The South Carolina OSHA has conducted an investigation at the site and reportedly found no items of material significance.

The employee's concerns relative to nuclear safety, in most cases, were vague and general. The items that could be identified were investigated during this inspection with findings as given in the next section. No items of nuclear safety concern were found.

- a. The employee expressed a concern that welding had been done improperly based on:
1. the employee's observation of welders working from improper scaffolding and his belief that the welder would not weld properly from such scaffolds.
  2. that one welding inspector had been strongly criticized by a supervisor for rejecting unsatisfactory welds and had been almost fired for doing his job as an inspector.
  3. that the employee had witnessed a welder quenching a hot weld with a damp cloth.

Relative to item a.1, the inspector discussed the subject with craft workers, QC and QA inspectors, and safety assistants and supervisors. There were no statements made that supported the alleged concern. These workers stated that scaffolds and platforms are built to satisfy the craft workers including welders, additional work areas are provided upon request, and craft work including welding is not started until the worker, or welder is satisfied that the work platform is safe and adequate for the job requirements. No related concerns were expressed to support the employee's concern.

Relative to item a.2 the inspector discussed the concern with the welding QC inspector identified by the concerned employee. The welding QC inspector stated that his supervisor had not threatened him with firing. The subject welding QC inspector stated that he is not intimidated by occasional critical comments by craft supervisors, and he is aware of his supervisor's support and desire that he inspect as required by the QC inspection procedures.

Relative to item a.3 the inspector discussed the quenching of welds with the welder identified by the concerned employee. The welder stated that he has not practiced, nor witnessed the quenching of welds at the Catawba site. The inspector discussed the quenching of welds with the ANI, and knowledgeable DPC workers. These persons have stated that they had not witnessed, nor were aware of quenching of welds at Catawba. There were no statements that supported the employee's concern relative to quenching.

- b. The employee expressed a concern that the Catawba plant was being built improperly. The nuclear related plant design has been reviewed by the NRC and a license to construct the two unit plant was issued on August 7, 1975. Region II has conducted approximately eighty inspections to date and has found the general construction of the plant is being performed according to DPC procedures, and is inspected by the DPC, ASME and USNRC inspection programs. The inspector's review of these programs, observations at the site during this inspection and previous inspections, discussions with the persons contacted as noted in Paragraph 1, and private discussions with fifty-seven construction



craftsmen (including the concerned employee) during the November 13-16, 1979 inspection (as reported in reports numbered 50-413/79-21 for Unit 1 and 50-414/79-21 for Unit 2) provide substantive evidence of proper workmanship. No one professed knowledge of any poor work that had not been found by QC and properly corrected. The concerned employee did not discuss any item related to nuclear safety related equipment or craft work on nuclear safety related components during his interview with the NRC on November 15, 1979. There were no statements that supported the employee's current concern relative to the plant being built improperly.

c. On April 28, 1980, the employee had expressed concerns to the RRI relative to the following:

1. off center piping positioned in piping penetrations in the auxiliary buildings.
2. grout poured onto a wet concrete floor.
3. piping connected with a mechanical connector.
4. handling of carbon steel piping and stainless steel piping and hardware during construction.

Relative to Item c.1., the inspector and the RRI observed the off center piping and reviewed the requirements. According to the specifications, piping extending through the auxiliary building wall need not be in the center of the penetration at room temperature.

Relative to Item c.2., approved procedures permit the placement of grout on a wetted concrete floor (wetted without puddles).

Relative to Item c.3., mechanical connectors are permitted by specification for certain systems.

Relative to Item c.4., the procedures permit placement of carbon steel and stainless steel piping and valves on the floor or in contact with other material during construction.

The employee's concerns are apparently based on erroneous information. They are not based on the requirements as stated in specifications and procedures used on the Catawba project. The inspector's review of the work and his discussions with the workers provided no evidence nor statements that support the validity of the employee's concerns.