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

Report Nos. 50-369/81-19 and 50-370/81-08

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

Facility Name: McGuire

Docket Nos. 50-369 and 50-370

License Nos. CPPR-83 and CPPR-84

Inspection at McGuire site near Charlotte, North Carolina

Inspector: A R Herdt 7/8/81
L. D. Zajac Date Signed

Approved by: A R Herdt 7/8/81
A. R. Herdt, Section Chief
Engineering Inspection Branch
Engineering and Technical Inspection Division

SUMMARY

Inspection on June 15 - 18, 1981

Areas Inspected

This routine, unannounced inspection involved 32 inspector-hours onsite in the areas of QA records for reactor coolant pressure boundary piping welds (Unit 2); and safety-related piping components (Unit 2); Review of radiographic films for reactor coolant pressure boundary piping welds (Unit 2); Followup of previous inspector identified items (Unit 2); and Followup of licensee identified items (Unit 1).

Results

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

REPORT DETAILS

1. Persons Contacted

Licensee Employees

*J. R. Wells, Corporate QA Manager
*M. Starnes, Senior Construction Engineer
*J. Willis, Project QA Engineer
*G. B. Robinson, QA Engineer
*W. R. Gillespie, Senior QA Technician
J. E. Cavender, Level III NDE Examiner
S. S. Lefler, Design Engineer

Other licensee employees contacted included three technicians and three craftsmen.

Other Organizations

R. J. Patterson, Supervisor NDE, Babcock & Wilcox Construction Co. (B&W)

*Attended exit interview

2. Exit Interview

The inspection scope and findings were summarized on June 18, 1981 with those persons indicated in paragraph 1 above.

3. Licensee Action on Previous Inspection Findings (Unit 2)

(Closed) Deficiency (370/80-08-03) Failure of Ultrasonic procedures to provide adequate instructions for performing and recording examinations. Duke Power Company's letter dated August 7, 1980, advised Region II of corrective actions taken. The response is satisfactory and actions have been taken. The inspector reviewed the revised procedures and considers the corrective actions taken to be satisfactory.

(Closed) Unresolved Item (370/80-12-02) Potential inadequate magnetic particle examination. The individual involved in the unsatisfactory examination was disqualified and re-trained. The welds involved were reinspected by qualified examiners. In addition, several previous welds, examined by the disqualified individual, were re-examined and found to be satisfactory. The corrective actions taken are considered to be satisfactory.

(Closed) Violation (370/81-02-01) Failure to establish adequate controls for storage of installed equipment. Duke Power Company's letter dated May 12, 1981, advised Region II of corrective actions taken. The response is satisfactory and actions have been taken. Construction Procedure 861 was issued to provide controls concerning installed equipment. The inspector reviewed this procedure and toured the plant for evidence of enforcement. No violations were noted. Corrective actions taken are considered to be satisfactory.

(Closed) Unresolved Item (370/81-02-03) Temperature Control of Baking Oven. The rebaking ovens, that operate at 725°F, now have two independent thermometers which provide redundant measurements. All of the portable thermometers used in the holding ovens were placed inside one oven and checked for equal measurements. One thermometer was discarded, others were satisfactory. Corrective actions taken are considered satisfactory.

(CLosed) Unresolved Item (370/81-02-04) Extraneous markings on safety-related stainless steel. The subject marking materials were tested for contaminants and found to be chemically acceptable. The licensee has also started a program which is intended to eliminate unnecessary markings. Corrective actions taken are considered satisfactory.

(Closed) Unresolved Item (370/81-06-01) Base metal and adjacent weld defects on radiographic films were not evaluated. The licensee physically sighted several of the components and found that the subject defects had been removed/repaired. Those that could not be sighted were re-evaluated on the films and were determined to not affect the integrity of the component. Penetration 2M262 was evaluated, assuming cracks may exist, and determined by Design Engineering to be acceptable as is. (See memo to file, MG-81-277, dated 6/18/81). The radiographic records, in each case, were annotated accordingly to address the subject defects. The corrective actions taken are considered satisfactory.

(Closed) Unresolved Item (370/81-06-02), QA records not available for containment penetration alignment. The inspector reviewed records for penetration E103 which verified alignment, however, no QA records could be located for access penetration C-152. The licensee stated that alignment of this penetration can be established by the fact the closure functions properly. The actions taken are considered satisfactory.

(CLosed) Unresolved Item (370/80-08-02) Inadequate certification of visual examiners. The inspector reviewed the revised visual examination procedure (ISI-350 Rev. 12) and the training program and considers the corrective actions taken to be satisfactory.

(Closed) Infraction (370/80-12-01) Inadequate training/qualification of visual examiners. Part of this infraction was reviewed during a previous inspection (See report 81-06). The inspector reviewed the test specimens used for training and qualification and also the practical examination requirements. Corrective actions taken are considered to be satisfactory.

4. Unresolved Items

Unresolved items were not identified during this inspection.

5. Review of QA Records (Unit 2)

a. Reactor coolant pressure boundary piping welds

The inspector reviewed QA records for the reactor coolant piping welds, listed below, to determine if applicable requirements were met.

Weld Ident	Pipe Size & Material
NC2FW22-10	10" Stainless Steel
NC2FW22-11	10" Stainless Steel
NC2FW22-26	6" Stainless Steel
NC2FW22-17	14" Stainless Steel
NC2F1-2	36" Stainless Steel
NC2F1-5	31" Stainless Steel

The following type records were reviewed:

(1) visual and dimensional inspections
(2) weld history
(3) nondestructive examinations
(4) weld repairs
(5) welding materials
(6) weld material ce5rtifications
(7) welder qualifications
(8) inspector qualifications

In addition, curren' controls for issuing and storing welding materials were reviewed.

No violations or deviations were noted.

b. Safety-related piping conponents

The inspector reviewed QA records for safety-related piping components, listed below, to determine if applicable requirements were met.

Component Ident.	System	Pipe Size & Material
Globe Valve DY11-23	Boron Recycle	1" Stainless Steel
Globe Valve EE2-6	Reactor Coolant	2" Stainless Steel
Globe Valve CQ3-5	Heat Removal	3/4" Stainless Steel
Spool Piece 2NIP100	Safety Injection	8" Stainless Steel
Elbow Heat #31454	Safety Injection	6" Stainless Steel
Elbow Heat #ZJ3Y	Auxiliary Feedwater	8" Carbon Steel

Elbow Heat #W2854	Auxiliary Feedwater	8" Carbon Steel
Elbow Heat #U4FLH1	Containment Spray	8" Stainless Steel
Elbow Heat #RW9-41835	Heat Removal	8" Stainless Steel
Spool Piece Heat #L01782	Component Cooling	16" Stainless Steel

The following type records were reviewed:

(1) chemical & physical test reports
(2) nondestructive tests
(3) vendor certifications
(4) QA release forms
(5) receipt inspection reports
(6) nonconforming material reports
(7) installation records for cleanliness, fitup, welding and nondestructive examinations
(8) qualifications for welders and nondestructive examiners

No violations or deviations were noted.

c. QA Audits

The inspector reviewed QA audit and surveillance reports related to reactor coolant piping welds and safety-related components.

No violations or deviations were noted.

d. Nonconformance Reports

The inspector reviewed several nonconformance reports related to reactor coolant piping welds and safety-related piping components.

No violations or deviations were noted.

6. Review of Radiolgraphic Films (Unit 2)

The inspector reviewed radiographic films for reactor coolant piping welds, listed below, to determine if the applicable ASME Code requirements were met.

Weld Ident	Pipe Size and Material
NC2FW22-10	10" Stainless Steel
NC2FW22-11	10" Stainless Steel
NC2FW22-17	14" Stainless Steel
NC2F1-2	36" Stainless Steel
NC2F1-5	31" Stainless Steel

No violations or deviations were noted.

7. Preservice Inspection-Observation of Liquid Penetrant Examination (Unit 2)

No preservice inspections were performed at McGuire, Unit 2, during this inspection. The inspector requested the B&W baseline coordinator to schedule a liquid penetrant examination at the Catawba site on June 19, 1981, during the inspector's visit there. This was done and the inspector observed a baseline liquid penetrant examination of a 4-inch diameter safety-related pipe weld. (See Catawba report 81-13).

No violations or deviations were noted.

8. Inspector Followup Items (Unit 2)

(Closed) Inspector Followup Item 370/81-02-05, Non-Retrievable NDE Personnel Records. The licensee presented the inspector with appropriate personnel records for review. The records were satisfactory.

(Closed) Inspector Followup Item 370/81-06-03, Records for administering and for limitations concerning visual acuity are incomplete. The licensee modified their reporting form which now requires annotation as to whether corrective lens are required or not. Also, all NDE personnel are being re-examined for visual acuity by a registered nurse. About one-half of the re-examinations were complete during this inspection. Corrective actions taken are considered to be satisfactory.

9. Licensee Identified Items [50.55(e)] (Unit 1)

(Closed) Item 369/80-10-01, Socket welds do not meet applicable quality standards. On April 3, 1980, Duke notified Region II of a 50.55(e) item concerning under size socket welds. The final Construction Deficiency Report was submitted on May 2, 1980. The report was reviewed by Region II in February 1981 (See report 81-02) and determined to be unsatisfactory. The licensee has subsequently conducted a deeper investigation of Unit 1 socket welds and concluded that the small percentage (less than 2%) of under size sockets in Unit 1 does not warrant any furthe rwork. All under size sockets were in pipe less than 2-inch diameter and were re-welded to provide sufficient weld size. The licensee also advised that the same weld procedure was used on all Unit 1 socket welds, thus supporting their position that the percentage of under size sockets not measured would be less that 2 percent, and those would only be very slightly under size based on the ones detemrined to be under size. The corrective actions taken are considered to be satisfactory.