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

Report Nos. 50-413/80-12 and 50-414/80-12

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

Facility Name: Catawba Nuclear Station, Units 1 & 2

Docket Nos. 50-413 and 50-414

License Nos. CPPR-116 and CPPR-117

Inspection at Catawba site near Rock Hill, South Carolina

Inspector: C. M. McFarland for 6-17-80
G. F. Maxwell Date Signed

Approved by: J. K. Rausch 6-17-80
J. K. Rausch, Acting Section Chief, RCES Branch Date Signed

SUMMARY

Reporting Period: May 1-30, 1980

Areas Inspected

This routine resident inspection involved 103 inspector-hours on site in the areas of material receipt, handling and storage; vessels and pumps; containment penetrations; structural and pipe welding; Class IE electrical equipment installations; and pipe supports.

Results

Of the six areas inspected, no items of noncompliance or deviations were identified in five areas; two items of noncompliance were found in one area (Deficiency - failure to require housekeeping inspections of areas containing Class IE equipment and Deficiency - failure to include all of the electrical measuring and test equipment in the applicable DPC procedure).

DETAILS

1. Persons Contacted

Licensee Employees

*D. G. Beam, Project Manager
*D. L. Freeze, Project Engineer
*S. W. Dressler, Senior Construction Engineer
*R. A. Morgan, Senior QA Engineer
*L. R. Davison, Senior QC Engineer
*H. D. Mason, QA Engineer
*D. K. Stacey, QA
*J. C. Shopshire, QA
*H. L. Atkins, QA

Other licensee employees contacted included 32 construction craftsmen, six technicians, eight mechanics, two security force members, and eight office personnel.

Other Organizations

Hartford Steam Boiler Inspection and Insurance Company

*J. W. Kosko, Authorized Nuclear Inspector (ANI)
*C. F. Toegel, ANI

*Attended exit interview

2. Exit Interview

The inspection scope and findings were summarized on May 9, 23, and 30, 1980 with those persons indicated in Paragraph 1 above.

3. Licensee Action on Previous Inspection Findings

Closed - Unresolved item numbered 413/414/80-07-02, Coating Applicator Qualifications. It could not be determined how Duke assures that coatings personnel are qualified to apply the various coatings materials. A construction procedure, CP-455, has been written to assure that site coatings personnel are adequately trained and qualified.

4. Unresolved Items

Unresolved items were not identified during this inspection.

5. Material Receipt, Handling and Storage - Units 1 & 2

The inspector observed the receipt, handling and storage of materials; the following observations were made:

a. Receipt inspection; materials received from Tube Turns Manufacturing Company purchase order numbered F226 release 917. The material was received, inspected and documented in accordance with DPC procedure P-1.

b. Storage of materials which have not been released for construction installation:

(1) The inspector toured all of the outside storage areas which contained safety-related materials that have not been released for installation.

(2) The inspector toured all of the site warehouse storage areas.

(3) During the various tours the inspector observed; materials being properly stored on supports, materials being covered and segregated as required, identification of nonconforming materials, and identification attached to materials to assure traceability.

c. Storage of safety-related equipment that has been released for installation:

(1) Observed the stored condition of: safety injection pumps 1A, 1B, 2A, 2B; Units 1 and 2 positive displacement pumps and centrifugal charging pumps numbered 1A, 1B, 2A, and 2B.

(2) With the exception of safety injection pump 1A and unit 1 positive displacement pump the stored conditions of the above pumps were found to be as required by their applicable storage inspection P-3A forms. The former pump was found to have cable, scrap iron and debris on top of the pump and its motor. The latter pump had trash, iron and debris on it and its' motor. The inspector brought these unsatisfactory conditions to the attention of the responsible DPC QC inspector who had them corrected (reference DPC corrective action notices numbered M-455 and M-456).

d. During the various tours associated with the above observations the inspector observed the rigging and handling of several safety related pipe spool pieces (both stainless steel and carbon steel), several safety-related valves and plate steel. Their were no instances whereby unsatisfacotry rigging practices were observed.

e. Housekeeping of auxiliary building and reactor buildings:

(1) During tours the inspector observed that in general safety-related piping and mechanical equipment were not being subjected to unsatisfactory housekeeping conditions other than two pieces of ASME Class B stainless steel which were found laying in water at elevation 543', column 56 MM of the auxiliary building. The inspector brought this unsatisfactory condition to the attention

of the responsible QC representative who required that this condition be corrected. DPC corrective action notice numbered M-467 was prepared.

(2) During these tours the inspector observed that in general the in place installed condition of Class IE is not unacceptable; however, there were several unsatisfactory housekeeping conditions related to Class IE cable tray and cable. The inspector observed and was informed by DPC QC personnel that there has never been a planned-systematic inspection to verify the adequacy of housekeeping in work areas for Class IE equipment. The following are some of the types of unsatisfactory housekeeping conditions which were observed:

(a) In the auxiliary building at elevation 543' at column 55 (FF); a temporary electrical cable and an unused 10' board laying inside a class IE cable tray which contained Class IE cable and scaffolding laying on top of a installed 10-inch wide "electro-plate" Class IE cable tray at column 52-53 GG-HH.

(b) In the auxiliary builidng at elevation 577' two Class IE installed cables laying on the floor in an area which has previously contained some standing water columns 50-51 JJ and 52 HH also at column 53-54 HH a 4' piece of unused board was laying inside an installed CLass IE cable tray.

(c) The tops of several Class IE panels located outside and around unit 1 battery rooms had their tops damaged. Their tops appear to have been damaged by workers who used them as supports while conducting other work activities above the panels. Panels involved are 1ECD, 1EID, 1ECC, 1ECC, 1EIC, 1ECA and 1EIA.

(d) In the auxiliary building at elevation 560' south corner a piece of support steel approximately 4' long was laying on top of Class IE cables which were in a Class IE cable tray. The inspector observed that a worker was setting on top of the piece of support steel.

(e) In Unit 1 reactor building inside the containment at elevation 57' at approximately 156 degrees two pipes 3' diameter and 2' in length and two valves were laying inside an installed Class IE cable tray.

(f) In the auxiliary building at elevation 543' column 56-FF a Class B pipe was supported by the rungs of an installed Class IE cable tray which was located above the pipe.

The inspector brought all of the above unsatisfactory conditions to the attention of DPC management personnel. Each of the specific unsatisfactory conditions were corrected and the electrical QC department was given directions to start bi-weekly housekeeping

inspections of work areas adjacent to Class IE equipment. The inspector was informed that these bi-weekly inspection will continue and will be conducted per CP-371 until sufficient confidence can be established to require only monthly housekeeping inspections.

(3) The inspector informed the licensee that failure to inspect and verify adequacy of housekeeping in work areas adjacent to Class 1E equipment is contrary to Criterion XIII of Appendix B to 10 CFR 50, as implemented by Duke's Topical Report, paragraph 17.1.13.2 and IEEE 336-1971, section 5.1.2 which requires inspections to be made to verify adequacy of housekeeping in work areas that contain Class 1E equipment. However, since sufficient corrective action has been taken to correct the specific unsatisfactory conditions and action has been taken to preclude repetition, this item of noncompliance, identified as deficiency 413/414/80-12-01 Housekeeping, does not require a written response.

(e) Storage of Class 1E equipment; the inspector observed the insulation resistance testing of diesel generators 2A and 2B both stators and rotors and reviewed the electrical storage inspection P-3A forms for six other pieces of Class 1E equipment that has specified minimum insulation resistance valves. As a result, the inspector observed that the insulation resistance measuring devices which were being used in conducting the tests did not display tags or marks to show that they had been checked to assure that their displayed readings are accurate. A review of the site procedure which delineates the requirements for the control and calibration of test equipment DPC QA procedure 0-1, chart C-1 does not include requirements for insulation resistance testing equipment to be controlled under the DPC calibration program. The inspector informed the licensee that all measuring and testing equipment, used in activities affecting the quality of Class 1E equipment is to be calibrated for accuracy in accordance with a written procedure. Failure to do this is contrary to Criterion XII of Appendix B to 10 CFR 50, as implemented by Duke's Topical Report, paragraph 17.1.12.2 and IEEE 336-1971 section 2.5.2. This is an item of noncompliance, a deficiency identified as 413/414/80-12-02, Calibration of measuring devices.

The inspector was informed by DPC management personnel that the applicable DPC QA procedure 0-1 chart C-1 would be reviewed to determined if it contains or lists all of the measuring and test equipments that is used in the activities affecting the quality of Class 1E equipment.

Except as noted no items of noncompliance or deviations were identified in the areas inspected.

6. Vessels and Pumps - Units 1 and 2

   a. Observed the stored conditions of both reactor vessel closure heads and noted:

      (1) Unit 1 vessel closure head has three instrumentation parts not covered as required per CP-354 and CP-356.

      (2) Unit 2 vessel closure head had indications that large amounts of water had leaked into the area in which it is stored.

      The inspector brought these concerns to the attention of the responsible DPC management personnel. As a result the covers were placed back on the instrumentation parts. In addition the roof of the temporary building which contains Unit 2 vessel closure head was checked for leaks.

   b. Observed the stored condition of Unit 1 pressurizer and Unit 1 reactor coolant pump casing numbered 1B.

   c. Observed the stored condition of Unit 1 and Unit 2 reactor vessels.

   In the areas inspected, no items of noncompliance or deviation were identified.

7. Containment Penetrations Units 1 & 2

   a. The inspector observed partial installation of Unit 1 mechanical penetration numbered M-273 at elevation 557' 3". The penetration was designed and manufactured to contain a pipe for the Unit 1 chemical and volume control system. Observed the fit-up and welding of the penetration weld identified as 1NV511-13; also observed the inspection activities of the assigned DPC welding inspector who conducted the inspections on weld joint 1NV511-13.

   b. The welders who were involved in conducting the preparation, fitup and welding of weld joint 1NV511-13 were qualified for the processes being applied (welders sysmbols N-82 and A-41). The inspector who conducted the inspections of weld joint 1NV511-13 was certified to the level of inspections that he conducted.

   c. Evaluated the material certifications for penetration M-273 pipe sleeve, seal ring, restraining ring and the shear ring.

   In the areas inspected, no items of noncompliance or deviation were identified.

8. Welding Structural and Piping - Units 1 and 2

   a. Observed the fit-up and partial completion of weld joints on Unit 1 containment liner plate adjacent to the equipment access hatch. The weld joints numbered 1-9-4S, 1-9-5S, 1-7-5S, 177178, 203H, 202H, 177H and 176H were tacked and welded by welders who were qualified to the processes being applied. Observed the process application at various

steps noting that correct size electrodes, voltage, gas flow, travel and current was being applied by the assigned welders (symbols t-34 and T-50). Evaluated the QA records associated with the plate steel surrounding unit 1 containment weld joints numbered 1-6-4S, 1-7-4S and 1151152. Evaluated the qualification records for the DPC welding inspector who had been assigned to inspect the aforementioned weld joints and found him to be qualified to the level of inspections which he was conducting.

b. Observed the inspection of two completed welds on Unit 2 containment dome plate steel. The welds (2-3-27-11L and 2-3-27-2LL) were completed by a welder who was qualified to the process being applied. The completed welds were found to be acceptable per procedure L-353; therefore L-300.

c. Observed the fit-up of weld joint 2NV64-13 on a class B, 4" pipe. The welder who performed the fit-up (symbol N-94) was qualified to the process being applied. Observed the final welding pass on weld joint 2KC182-10 a class C, 6" pipe. The completed weld was visually found to be free of cracks, undercut or other unsatisfactory characteristics. The welder who completed the weld was found to be qualified to the process that was applied.

In the areas inspected, no items of noncompliance or deviation were identified.

9. Electrical Installations Units 1 & 2

The inspector participated in an inspection conducted by other Region II NRC inspectors. The inspection was associated with: 125V battery 1A, 125V bus 1EDA; distribution panel 1EPA; safety injection pump motor 1A; centrifugal charging pump motor 1A and 1B; motor operated valves numbered 1RN51A, 1RN52B, 1RN48B, 1RN50B and 1RN49A; inverter 1EID; bus 1ERPD; distribution panel 1EOD; battery chargers 1ECD and 1ECA; disctirbution panels 1ERPA and 1ERPD. The details of the inspection associated with the afore noted Class 1E equipment is documented in IE Region II inspection reports numbered 50-413/414/80-11.

10. Pipe Supports - Units 1 and 2

The inspector participated in an inspection conducted by another Region II NRC inspector relative to the field welds on pipe supports numbered 1-RFW-59, 1-ARN-3839, 1-AKC-3590, 1-ANR-3149, 1-RRN-238-1, 1-ANV3726 and 1-RRN338. The details of the inspection associated with the aforementioned welds are documented in IE Region II inspection report numbered 50-413/414/80-10.