



UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION II
101 MARIETTA STREET, N.W.
ATLANTA, GEORGIA 30323

Report No.: 50-414/85-28

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

Docket No.: 50-414

License No.: CPPR-117

Facility Name: Catawba 2

Inspection Conducted: July 22-26, 1985

Inspector: A. B. Ruff 8/7/85
A. B. Ruff Date Signed

Approved by: T. E. Conlon 8-7-85
T. E. Conlon, Section Chief Date Signed
Engineering Branch
Division of Reactor Safety

SUMMARY

Scope: This routine, unannounced inspection involved 36 inspector-hours on site in the areas of instrument components and systems, observation of work, record review and review of procedures.

Results: One violation was identified - Missing or Nonexistent CP-438, Instrument Protection, Records

REPORT DETAILS

1. Persons Contacted

Licensee Employees

- *E. M. Couch, Project Manager
- *T. B. Bright, Engineering Manager
- *L. R. Davison, Project Quality Assurance (QA) Manager
- *B. Childers, General Maintenance Supervisor
- *R. Biven, Electrical Instrument Supervisor
- *T. D. Mills, Construction Electrical Engineer
- *E. G. Williams, QA Project Technical
- *C. S. Kelley, Instrument/Electrical Technical Support
- *R. G. Hull, Instrument/Electrical Technical Support

Other licensee employees contacted included construction craftsmen, engineers, technicians, security office members, and office personnel.

NRC Resident Inspector

- *P. H. Skinner, Senior Resident Inspector

*Attended exit interview

2. Exit Interview

The inspection scope and findings were summarized on July 26, 1985, with those persons indicated in paragraph 1 above. The inspector described the areas inspected and discussed in detail the inspection findings. No dissenting comments were received from the licensee.

Inspector Followup Item 50-414/85-28-01, Review of Receiving, Seismic, and Environmental Qualification Records for Instruments, paragraph 6.

Violation 50-414/85-28-02, Missing or Nonexistent CP-438, Instrument Records, paragraph 6.

The licensee did not identify as proprietary any of the materials provided to or reviewed by the inspector during this inspection.

3. Licensee Action on Previous Enforcement Matters

This subject was not addressed in the inspection.

4. Unresolved Items

Unresolved items were not identified during the inspection.

5. Instrument Components and Systems - Procedures Review (52051)

The Construction Department Quality Assurance Program was reviewed to determine whether the safety analysis report (SAR) requirements concerning the safety-related instrumentation area have been translated into procedures, specifications, and drawings. The activities and applicable procedures reviewed are detailed as follows.

a. Preparation, Review and Approval of Procedures and Quality Records

The preparation, review, approval, revision and distribution of Quality Assurance (QA) procedures for Construction Department and QA Project Division personnel is controlled by Procedure A-1, Preparation and Issue of QA Procedures, and F-1, Construction Procedures. These procedures provide instruction in the preparation of procedures and assigns responsibility to insure that the proper technical expertise is factored into the procedures. The review of completed work procedures and inspection documents are performed by the various working groups at Catawba. After the documents are turned over to Project QA for final review and approval they become records. QA-301 Rev. 8, Management of Project QA Records, covers this review and approval action. QA-301 states that personnel that perform this record review are to be trained.

b. Receipt Inspection

The receipt inspection is controlled by Procedure P-1, Rev. 20, Receiving Inspection, which establishes the method to assure that items received at the site meet the requirements of the procurement documents (Specifications). P-1 requires visual inspection, vendor document review, identification verification, and compliance with the required storage level. Additionally, the procedure defines acceptance criteria to determine status and required documentation.

c. Handling and Storage

Procedure P-3, Rev. 18, General and Special Storage Maintenance Inspection Requirements, establishes measures to assure that items are stored and maintained in accordance with purchase documents and other established requirements. This procedure defines the source of storage, maintenance requirements, frequency of inspections, and the necessary documentation.

CP-438, Rev. 3, Instrument Protection, applies to the instrument after it is installed. It establishes measures to assure that instrument protection and/or storage maintenance requirements are considered and initiated, if necessary.

d. Installation, Inspection and Construction Testing

QA Procedure M-61, Instrumentation Process Control and Inspection; F-1, Construction Procedures; CP-623, Origination and Routing of Instrumentation Process Control, and Drawing ICS-A-20, Instrument Standards - Installation Field Practices establishes the requirements inspection, and documentation for instrument equipment installation. The M-61 Procedure is supplemented by supplemental inspection instructions designated by M61D Serial Numbers. These serial number instructions listed below provide specific installation verifications and acceptance criteria for instrument and components.

<u>M-61D Serial Numbers and Revisions</u>	<u>Title</u>
I-1, Rev. 1	Safety Class Tubing
I-2, Rev. 2	Instrument Tube Supports Erected in accordance with the ASME NF code
I-3, Rev. 8	Safety/Related (Use Code 9) Instrument Installation
I-4, Rev. 8	Soleniod Valves
I-5, Rev. 0	Soleniod Valves - Active Control Valve Installations
I-6, Rev. 4	Thermowell (TW), Test Well (TX) Installation
I-7, Rev. 0	Pressure Test Connections (PX), FEs with Taps Only
I-8, Rev. 7	Instrumentation Final Walk- through
I-9, Rev. 0	Root Valve Assembly Configura- tion
I-10, Rev. 1	Configuration of Instrument Reservoirs
I-11, Rev. 0	Use Code 8 Items Which Form a Part of the Pressure Boundary
I-12, Rev. 0	Flow Glasses (FG), Level Glasses (LG)
M-1, Rev. 2	Process Tubing Erection Inspection

e. Material and Component Identification

The material and equipment identification is verified as part of P-1 inspection activity and various instrumentation process control installations, and inspections. During any portion of receipt inspection, storage, installation, or routine inspections when an item is identified as not conforming with QA, Design or Code requirements, the item is processed as a nonconforming item in accordance with Procedure Q-1, Control of Nonconforming Items.

f. Construction Testing and Calibration

The licensee's representative stated testing and calibration in the instrumentation area was not performed by the construction department. These types of activities are performed by the startup group in the Power Production Department.

g. Change Control

QA Procedures G-1, Document Control, and CP-631, Unit 2 Change Management, establishes measures to assure that all QA Condition documents and/or their revisions are controlled at the work site. This control also includes retrievability and status of work resulting from issuance of documents and their revisions.

Within the areas examined, no violations or deviations were identified.

6. Instrument Components and Systems - Work Observation (52053) and Records Review (52055)

The inspector selected the following instruments and components for an examination of field work and records review:

<u>Instrument and/or Component</u>	<u>Description</u>
2NCFT5000	Reactor Coolant (RC) Flow Transmitter
2NCLT5150	Pressurizer Level Transmitter
2NCP5153	Pressurizer Level Indicator (Receiving gage) in the Control Room. Receives signal from 2NCLT5150
2NCPT5150	Pressurizer Pressure Transmitter
2SMPT5080	SG A Steam Line Pressure Transmitter

Instrument and/or ComponentDescription

2SMP5080

Steamline Pressure Indicator
(Receiving gage) in the Control
Room Receives Signal from
2SMPT5080

2NCRD5860

Resistance Detector for RC Temp

2NCCR5860 and 2NCP5860

Recorder and Temperature indi-
cator (Receiving gage) in the
Control Room. Items receive
signal from 2NCRD5860

The location, orientation, mounting, anchoring, identification, clean-
liness, physical protection, redundancy, separation, tubing runs and
slopes, where applicable, were examined to insure that they complied
with drawings including instrument standard ICS-A-20 and the applicable
M-61 Instrument Process Control and Inspection Documents.

Where applicable, the M-61 Installation and Inspection Records, P-1
Receiving Records and P-3 Storage Records for the above listed items
were reviewed.

The P-1A receiving Inspection Report for Pressure Transmitter 2SMPT5080
has a Quality Release (QR) that was contingent on a successful
completion of an environmental qualification test. No records were
available with this P-1A report to indicate that this was accomplished.
A licensee's representative did find a new QR that indicated that the
qualification test was successful. The seismic and environmental
qualification records are located at the Duke Power Company's General
Offices. The licensee also indicated that some receiving gauges such as
2NCP5860 and 2SMP5080 are standard stock items. These are assigned QA
Condition #1 status and fall under 10 CFR 50 Appendix B requirements.
The receiving inspection, and seismic qualification for these gauges
along with environmental qualification records for instrument
2NCFT5000, LT5150, PT5150, 2SMPT5080 and 2NCRD5860 will be examined on
a future inspection. This is identified as Inspector Followup Item
(IFI) 50-414/85-28-01, Review of Receiving, Seismic, and Environmental
Qualification Records for Instruments.

After an instrument is installed, its protection and any special
maintenance is reviewed and documented by the Equipment Maintenance
Department. This requirement is specified in CP-438, Instrument
Protection. The CP-438 records for instruments 2NCFT5000, LT5150,
PT5150, 2SMPT5080 and 2NCRD5860 could not be located. This is
identified as violation 50-414/85-28-02, Missing or Nonexistent CP-438,
Instrument Records.

An as-built drawing verification was performed for the orientation and physical location of instrument No. 2NCRD5860, Resistance Detector, and 2NCFT5000, Flow Transmitter. Drawings CN2680-1 Rev. 8, Nozzle Identification and Location Primary Loops, Reactor Coolant System, and CN2499-01.10 Rev. 28, Instrument Location Reactor Building Elevation 565' and Below, were used for this verification.

QA-300, Construction Surveillance, requires periodic audits of the construction program activities. Two surveillance Reports, C85-51 and C85-63, in the instrumentation area were examined. This examination showed that surveillances were performed in accordance with a planned schedule, records were sufficiently detailed to verify intent, findings were reported for evaluation and corrective action, followup action was taken and that surveillance personnel were independent of work that was being observed.

Within the areas examined, no violations or deviations other than the one reported above were identified.