



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

Report No.: 50-414/85-41

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

Docket No.: 50-414

License No.: CPPR-117

Facility Name: Catawba

Inspection Conducted: September 17 - 20, 1985

Inspector: *T. E. Conlon* for  
A. B. Ruff

10-3-85  
Date Signed

Approved by: *T. E. Conlon*  
T. E. Conlon, Section Chief  
Engineering Branch  
Division of Reactor Safety

10-3-85  
Date Signed

SUMMARY

Scope: This routine, unannounced inspection entailed 27 inspector-hours on site in the areas of electrical components and systems; electrical cables and terminations; and Instrument Components and Systems. Observation of Work and Work Activities and review of quality records were examined in the above areas.

Results: One violation was identified - Documentation of storage inspection activities for safety-related cables.

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## REPORT DETAILS

### 1. Persons Contacted

#### Licensee Employees

- \*L. R. Davison, Project QA Manager
- \*T. R. Gill, Electrical/Instrument Technical Support
- \*W. G. Goodman, QA Inspection Superintendent
- \*K. W. Schmidt, QA Engineer
- \*F. P. Schiffley, II, Licensing Engineer
- \*D. B. O'Brien, Administrative Methods
- \*E. G. Williams, Project QA Technician
- T. Mill, Construction Electrical Engineer
- P. Honeycutt, QA Receiving Inspector
- D. James, QA Technician
- W. Reynolds, Engineer, Electrical Technical Support

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

#### NRC Resident Inspector

- \*P. K. Van Doorn, Senior Resident Inspector

\*Attended exit interview

### 2. Exit Interview

The inspection scope and findings were summarized on September 20, 1985, with those persons indicated in paragraph 1 above. The inspector described the areas inspected and discussed in detail the inspection finding. No dissenting comments were received from the licensee.

Violation 50-414/85-41-01, Documentation of Storage Inspection Activities for Safety-Related Cables, paragraph 3.

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

(Closed) Unresolved Item 50-414/84-45-04, Determine the Adequacy of the Procedure and Inspection Records for Special Storage and Maintenance of Safety-Related Cables. At the time when this unresolved item was identified, specification No. CNS-1390.01-00-0139, Procedure for Handling, Storage, and Shipment of Cables, called for a periodic inspection (not to exceed 1 year) of each reel of cable stored outdoors, and Procedure P-3, General and Special Storage and Maintenance Inspection Requirements, called for a periodic inspection in this area. The inspector was informed that

inspections were performed monthly in this area. Since the requirements were general, all records were not available for these monthly inspections. Consequently, both the specification and procedure were changed to require monthly inspections. Since the issue of the new requirements, all monthly inspection records for this inspection could not be located. This is identified as violation 50-414/85-41-01, Incomplete Documentation of Storage Inspection Activities for Safety-Related Cables. The inspector toured the cable storage yard and observed that all safety-related cable reels were protected in accordance with the requirements in the specification. In addition, a discussion with the cable yard inspector revealed that inspections were performed at least once a month and in many cases twice a month. The cable yard inspector also stated that when discrepancies from the specification were observed, they were corrected immediately. The licensee issued a nonconforming report to notify personnel and management of this problem and to specify corrective action to prevent recurrence. The QC receiving inspectors were instructed to perform and document inspection of cable storage yards in accordance with P-3 requirements. Based on the above, no response to this violation is required.

#### 4. Unresolved Items

Unresolved items were not identified during this inspection.

#### 5. Electrical (Cables and Termination) - Observation of Work and Work Activities, and Review of Quality Records [51063B, 51064B, 51065B and 51066B]

The following procedures were examined to determine the requirements for receiving inspection, storage and maintenance of electrical cables, cable installation, identification of cable and raceways, separation, cable termination and QC Acceptance requirements.

Procedure M41B, Serial No. 2, Cable Tray Hangers.

Procedure CP-301, Control of Electrical Cable Tray Hanger Inspection and Rework.

Procedure M41B, Serial No. 9, Cable Routing Installation.

Procedure M41B, Serial No. 15, Cable Terminations.

Procedure CP-691, Administrative Control of Cable Termination.

Procedure M-53A, Serial No. FP-10, Mechanical and Cable Penetration Firestops (Not Including Reactor Building).

Procedure CP-469, Procedure for Installing and Reentering Penetration Firestops, Pressure Seals, and Flood Seals.

Procedure P-3, General and Special Storage Maintenance.

Procedure P-1, Receiving Inspection.

Procedure CP-371, General Storage Requirement for Equipment and Materials.

The following safety-related cables were examined to verify that installation and records for installation, receiving and storage were in accordance with requirements.

<u>Cable No.</u>	<u>Reel No.</u>	<u>Type</u>
2*EPC 525	QC 93242B	3X500G8
2*EPC 524	QC 93242B	3X500G8
2*EPC 672	QC 93336	3XJ500G8
2*EPC 671	QC 93336	3XJ500G8
2*EPC 538	QC 8166	37X12G1
2*EPC 529	66168	37X12G1
2*NS 534	574050	1SPTX16G3
2*CA 770	114439	19X12G1
2*IAE 509	31477	8X12G1
2*CA 596	23662A	4X12G1
2*LD 527	8323	12X12G1
2*IPE 588	012209	3X10G2
2*VF 551	QC23659	4X12G1
2*NB 516	36724	12X12G1
2*NI 688	15145	3X12G1

The cables were examined to requirements listed in the above procedures. Records indicated that the cables met procurement requirements, were properly identified, and approved for use. The installation (pull sheets) and termination records for the cables were examined and found to be acceptable.

A field inspection was made for the above cables. Routing was verified for several node points listed on the cable pull cards at the two end points of the cable. Fire protection wrapping was installed on some of the cable trays. This installation obscured some of the node points. The cables and raceways were properly identified. Raceway loading met loading requirements and cable separation was adequate. Cable terminations were verified except for those that would disrupt planned plant operations, such as cable being energized and termination cabinets locked. Termination points for most of the cables inspected were sealed to provide visual indication of QC inspections. This seal is for control and record purposes. Cable reels were also inspected in the cable yard and all were noted to be properly protected from damage and adverse environment.

The following cable supports and anchorages were examined in the field to insure that they were installed to requirements. The procedures listed above were used in this examination. Completed QC inspection records also verified that supports were installed properly.

<u>Cable Support</u>	<u>Building/Elev.</u>	<u>Column</u>
93A	Aux/601' 8"	6'6"N of 62, JJ
92A	Aux/601' 8"	W of JJ-62
89A	Aux/600' 9"	S of JJ-62
91A	Aux/600' 4"	9'N of 61, 16'4"E of HH
91A	Aux/600' 4"	8'4"E of HH, 9'N of 61

The following fire stops for electrical cable that penetrate different fire areas were examined in the field. The procedures listed above were used in this examination. This examination showed that fire stops were installed satisfactorily and a review of QC inspection records also indicated that fire stops were satisfactory.

Fire Stops: JAX-518W12, JAX-518W13, HAX517W17, HAX517W19, HAX-516W28, FAX-354AW42, FAX-354-AW43, FAX-393F-7, FAX-393F-2, CAX260-F-22, CAX260F-4, CAX260F23, GRU2-19, GRU2W-25, HAX516F-31, HAX516F-46, HAX516F-57, HAX516F-55.

Variation Notices 49277, 48976, 49118, 49243 and 49229 were examined to insure that they were properly processed. The Variation Notices were incorporated in the as-built electrical installation document which consists of cable pull cards and a location drawing.

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

6. Electrical (Components and Systems) - Observation of Work and Work Activities and Review of Quality Records [51054B and 51056B]

The inspector selected 120 Volt AC power panels 2ERPA, B, C and D for examination to verify that the as-built installation were in accordance with approved drawings, procedures and specification. The above equipment was properly inspected upon receipt at the site. It was located and anchored in accordance with design drawings. The protection against on-going construction activities was adequate, and QC inspections had been performed and documented in accordance with procedures.

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

8. 10 CFR 21 Reportable Item That May Apply to Catawba

The licensee was informed of a 10 CFR 21 item that was filed with the NRC concerning an intake silence on diesel generators manufactured by American Air Filter Company. Due to an improper manufacturing process, the intake silencers could come loose and be ingested in the turbo charger. The Part 21 gave recommended actions to be taken by the user and indicated that the likelihood of the presence of the flaw is much lower if the engines have already been in service. The licensee stated that one diesel would be inspected starting the week of September 23, and the other after completion of Hot Functional Testing.

9. Instrument Components and System-Record Review [52055]

a. Personnel Qualification Records

The qualification records for several quality assurance personnel and the training records for two crews of craft personnel in the instrumentation and electrical areas were examined. QA personnel records showed qualifications meet requirements and are being maintained in a current status and they are sufficient to reasonably support qualifications. The training and indoctrination for craft personnel to Catawba procedures specification and revisions thereof is usually conducted by the craft supervisors. The craft supervisor conducts this training for his workers that are designated by a specific crew number. When classroom training is performed individuals are usually required to sign an attendance sheet and this is filed under the proper crew number training records. Catawba also uses on-the-job training but this is not documented. The crew training records shows that training is being performed and indicates that it is the craft supervisor's responsibility to insure that his crew is trained in their areas of work.

The licensee stated that the Personnel Department checks to confirm attributes and experiences that are listed on employment applications and these are further judged to be valid during pre-employment interviews.

b. Nonconformance and Deviation Reports

The inspector selected the following nonconforming item reports (NCIs) for examination to verify compliance with QA procedures.

NCIs: 19652, 19678, 19824, 19883, 19886, 18626, 19517, 18321, 18448, 19080

The records were complete, legible, reviewed by QA personnel, and readily retrievable. The NCI's adequately described the deficiency and the corrective action appeared to be proper for the circumstances. The NCIs were dispositioned and closed out in a timely manner with the appropriate review for reportability.

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