Applicants Exh. 41

A-41
11/17/83

FORM A-10 REVISION 0	Procedure M-41	PAGE CS- 1	REVISION 5

ELECTRICAL EQUIPMENT INSTALLATION INSPECTION	DUKE POWER COMPANY CONSTRUCTION DEPARTMENT QUALITY ASSURANCE PROGRAM COVER SHEET
10.30.78 / CONSTRUCTION APPROVAL BY / DATE — 10/30/78 / QUALITY ASSURANCE APPROVAL BY / DATE	

LIST OF PAGES, FORMS, & ATTACHMENTS VALID FOR THIS REVISION:

	Revisions
*Page CS-1	5
Page 1	4
*Page 2	4
Form M-41A	2
Form M-41B	1

NUCLEAR ~~SAFETY RELATED~~

* Changes included in this revision

1. PURPOSE
The purpose of this procedure is to establish the requirements for inspection and documentation for electrical equipment installation.

2. SCOPE
This procedure covers the inspection and documentation for the installation of all nuclear safety related electrical equipment. Any other electrical equipment, as deemed necessary by Duke Power Compnay Management may be included to effect a quality installation. Receiving inspection shall be covered under Procedure P-1. Storage inspection shall be covered under Procedure P-3.

3. RESPONSIBILITY
The Senior Quality Control Engineer shall be responsible for carrying out the inspection requirements of this procedure and for documenting these inspections. He shall also be responsible to initiate corrective action forms when found necessary during the course of inspection.

The Project Senior Quality Assurance Engineer shall be responsible for initiating nuclear safety related Supplemental Inspection Instructions (Form M-41B) and approving all Form M-41B's and for reviewing and approving all inspection documentation.

The Project Engineer shall be responsible for initiating non-nuclear safety related M-41B's and for approving safety related M-41B's. | 4

4. INSPECTION
Quality Control Inspectors certified in accordance with Construction Quality Assurance Procedures shall verify that the installation of electrical equipment is in accordance with approved Design Engineering and Construction installation information. Supplemental information may be obtained from approved manufacturer's drawings.

Detailed inspection instructions for each type of electrical equipment shall be provided by Supplemental Inspection Instructions (Form M-41B). Nuclear safety related M-41B's shall be prepared by Project Quality Assurance Staff, non-nuclear safety related M-41B's shall be prepared by the Project Engineer's Staff, and all M-41B's shall be approved by the Project Senior Qual'ty Assurance Engineer and Project Engineer. Nuclear safety related M-41B's may be used as instructions for the inspection of non-nuclear safety related electrical equipment if designated by the Project Engi[illegible]l inspection forms may be included as part of the M-41B. Nuclear safe[illegible]elated M-41B's shall be controlled in accordance with Proced[illegible]

| 4

Installation inspection shall be

documented on Form M-41A and any supplemental forms required by M-41B's. Calibrated equipment specified by M-41B's shall be calibrated in accordance with Procedure 0-1 for nuclear safety related inspections.

5. CORRECTIVE ACTION
Corrective action shall be as specified in Procedure M-40.

6. REPORTING
Form M-41A - Equipment Installation Inspection.
Form M-41B - Supplemental Inspection Instructions.
Form M-40C - Random Inspection Worksheet.

FORM M-41A	REVISION 2

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
PROJECT McGUIRE UNIT 1

ELECTRICAL EQUIPMENT INSTALLATION INSPECTION

THE FOLLOWING ELECTRICAL EQUIPMENT HAS BEEN INSPECTED AND FOUND TO BE INSTALLED IN ACCORDANCE WITH THE INDICATED DRAWINGS AND INSTRUCTIONS.

EXAMPLE

EQUIPMENT DESCRIPTION ESSENTIAL MOTOR CONTROL CENTER 1EMXA

SERIAL NUMBER N/A

LOCATION EL 750 Col FF-54

DRAWING NUMBER(S) MC 1887-01 R-14, MC 1903-01 R-20, MC 1908-01 R-11

REFERENCE INSTRUCTIONS M-46 R-2, CP 308 R-4

REMARKS BASE ANCHORS TORQUED WITH SN 3226

UNCONTROLLED COPY
NOT FOR CONSTRUCTION

SUPERSEDED

Q. C. INSPECTOR/NDE QC Ende DATE 3/26/76

Q. C. INSPECTOR/ELEC. IT Sgood DATE 3/26/76

Q. A. APPROVAL QA Elec DATE 3/26/76

FORM M-41B	REVISION 1

Sheet 1 of 1

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
PROJECT McGuire

Serial no. 7
Revision no. 0

SUPPLEMENTAL INSPECTION INSTRUCTIONS

EQUIPMENT DESCRIPTION Electrical Cable Tray and Conduit

TYPE OF INSPECTION Installation

DOCUMENTATION REQUIRED M-41A

INSPECTION INSTRUCTIONS:

1. Verify, on a sampling basis, that conduit which have been cut are free of burrs.

2. Verify that conduit supports are correctly fabricated and anchored.

3. Verify that cable tray is the correct size, at the correct elevation, in the correct location, with the correct spacing. Generally, an eyeball measurement is adequate although a ruler may be required in some questionable areas. The most critical location dimension is minimum horizontal and vertical spacing between trays.

4. Verify that cable tray hangers are constructed from the correct materials, dimensionally correct (the most critical dimension is spacing between rungs), and assembled correctly (bolted or welded).

5. Verify that the cable tray hangers are anchored correctly (welding to embedded plate is acceptable in lieu of bolted concrete anchors) in the correct location along the tray within tolerances specified on the design drawings. If not specified this tolerance shall be ± 6 inches.

6. Verify that splice plates and tray clamps are correctly installed.

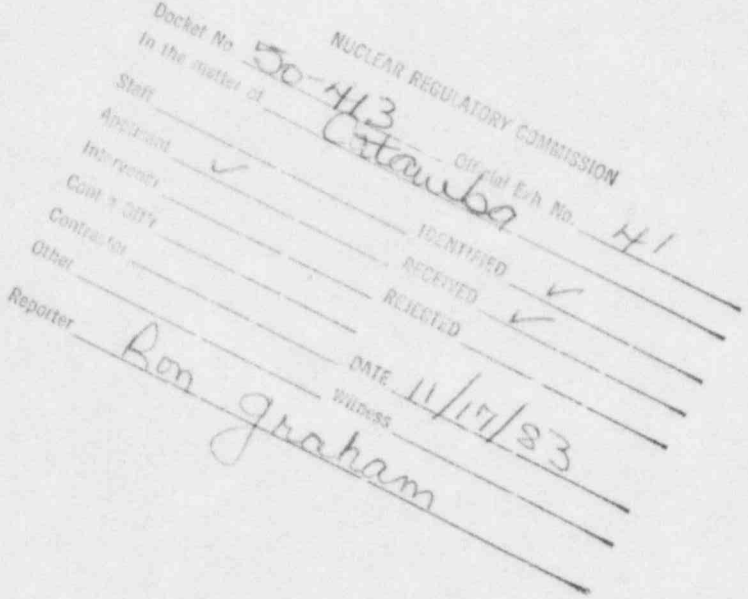
7. Verify that there is no apparent physical damage.

8. Verify, on a sampling basis, that torque requirements specified for the area of cable tray and conduit are met. The type torque de[illegible] and serial number shall be entered under remarks.

9. Inspect welds and perform NDE as specified on drawings.

☒ NUCLEAR SAFETY RELATED ☐ NON SAFETY RELATED

PREPARED	J S Kennedy	DATE 5/2/77
CONST APPROVAL	K D Parker	DATE 5/2/77
Q. A. APPROVAL	H M Hamilton	DATE 5/2/77


NUCLEAR REGULATORY COMMISSION
Docket No. 50-413
In the matter of Catawba
Staff
Applicant ✓
Intervenor
Cont'n Off't
Contractor
Other
Reporter Ron Graham
Official Exh. No. 41
IDENTIFIED ✓
RECEIVED ✓
REJECTED
DATE 11/17/83
Witness