

A-41
11/17/83

Appraisals Exh. 41

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

Moore 10.30.78
CONSTRUCTION
APPROVAL BY DATE

J. L. B. 10/26/78
QUALITY ASSURANCE
APPROVAL BY DATE

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

*Page CS-1
Page 1
*Page 2
Form M-41A
Form M-41B



Revisions

5
4
4
2
1

RECEIVED
CATAWBA
NOV 06 1978

~~NUCLEAR SAFETY RELATED~~

* Changes included in this revision

**UNCONTROLLED COPY
NOT FOR CONSTRUCTION**

SUPERSEDED

<i>W. K. K. K. K.</i> ORIGINATED BY	4/29/77 DATE	DUKE POWER COMPANY CONSTRUCTION DEPARTMENT	QUALITY ASSURANCE PROGRAM
--	-----------------	---	---------------------------

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 Company 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. 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 Quality 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 Engineer. Supplemental inspection forms may be included as part of the M-41B. Nuclear safety related M-41B's shall be controlled in accordance with Procedure M-41B.

Installation inspection shall be

UNCONTROLLED COPY
NOT FOR CONSTRUCTION
SUPERSEDED

LR Barnes 10-30-78
ORIGINATED BY DATEDUKE POWER COMPANY
CONSTRUCTION DEPARTMENT

QUALITY ASSURANCE PROGRAM

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.

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
PROJECT Mc GUIRE 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.EQUIPMENT DESCRIPTION ESSENTIAL MOTOR CENTER 1EMXASERIAL NUMBER N/ALOCATION EL 750 COL FF-54DRAWING NUMBER(S) MC 1887-01 R-14, MC 1903-01 R-20, MC 1908-01 R-11REFERENCE INSTRUCTIONS M-46 R-2, CP 308 R-4REMARKS BASE ANCHORS TORQUED WITH SN 3226UNCONTROLLED COPY
NOT FOR CONSTRUCTION

SUPERSEDED

Q. C. INSPECTOR / NDE

QC EndeDATE 3/26/76

Q. C. INSPECTOR / ELEC.

LT SgoocDATE 3/26/76

Q. A. APPROVAL

QA ElecDATE 3/26/76

Sheet 1 of 1DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
PROJECT McGuireSerial no. 7
Revision no. 0

SUPPLEMENTAL INSPECTION INSTRUCTIONS

EQUIPMENT DESCRIPTION Electrical Cable Tray and ConduitTYPE OF INSPECTION InstallationDOCUMENTATION 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 device and serial number shall be entered under remarks.
9. Inspect welds and perform NDE as specified on drawings.

UNCONTROLLED COPY
NOT FOR CONSTRUCTION

SUPERSEDED

☒ NUCLEAR SAFETY RELATED☐ NON SAFETY RELATED

PREPARED <u>J S Kennedy</u>	DATE <u>5/2/77</u>
CONST APPROVAL <u>K D Parker</u>	DATE <u>5/2/77</u>
Q. A. APPROVAL <u>H M Hannafin</u>	DATE <u>5/2/77</u>

NUCLEAR REGULATORY COMMISSION

Docket No. 50-413 Original E.A. No. 41

In the matter of Citauba

Staff ✓

Applicant ✓

Ins. request ✓

Cont. in 2014 ✓

Control fee ✓

Other ✓

Reporter Ron Graham

DATE 11/17/83

Witness ✓