

**S.C. ELECTRIC COOPERATIVES' PRIMARY URD CABLE QUALITY
ASSURANCE TESTING PROGRAM**

The primary URD cable purchased by CEE-US for the electric cooperatives will have 18 inch samples cut during each production run and sent to an approved testing lab. The manufacturer will send at least twice the number of samples as needed for the random sampling as noted below. There will always be a sample cut from the beginning of the run and from the end of the run and other samples, if needed, cut at random throughout the run. The test lab will select the following number of samples to be tested:

<u>Order Size</u>	<u>Number of Samples Tested</u>
0-49,999 feet	2 (beginning & end of production run)
50,000-74,999 feet	3 (beginning, middle & end of production run)
over 75,000 feet	4 (beginning, 1/3, 2/3 & end of production run)

The following tests will be performed on the cable samples as per ICEA standards and the SC Electric Cooperatives' Primary Underground Cable Specification:

- 1) **Dimensional Analysis of all Components**
 - a) Diameter over conductor, insulation and insulation shield.
 - b) Thickness of strand shield, insulation, and insulation shield
 - c) Jacket thickness
 - d) Eccentricity
 - e) Convolutions

2) **Microscopic Examination**

Twenty wafers will be examined (both sides of EPR wafers) to check for the following:

- a) Strand shield and insulation voids
- b) Insulation contaminants

- c) Insulation shield voids
- d) Protrusions or irregularities at the conductor shield and insulation shield interfaces
- 3) **Insulation Shield Stripping Tensions and Scoring Test**
- 4) **Neutral Wire Examination**
 - a) Proper size and spacing
 - b) Touching strands
 - c) Indents from strands
- 5) **Hot Oil Test of TRXLP**

To check for internal irregularities

6) **General Appearance**

The test lab will also examine the cable and report on its appearance. The print on the jacket (has to be embedded print) and print on the shields should comply with the cable specification and the national standards. Any unusual features not covered by the standards or specifications should be noted.

The test lab will FAX the test report to Eric Baskin at CEE-US as soon as possible. If there are any gross irregularities in the construction, a sample plug of the cable shall be sent to CEE-US for inspection. The test report should include the CEE-US purchase order number, the cable manufacturer, the cable construction and the manufacturer's QC number of each sample tested.

Revised 4/8/2005 (RCD)