260800S01 TESTING OF ELECTRICAL SYSTEMS: Med/High-Voltage Testing Procedures

1. Use equipment made by one of the following and abide by their operating rules for their respective equipment:

    1. Associated Research, Inc.
    2. J. G. Biddle Company
    3. Hipotronics, Inc.
    4. Von Corporation

2. Clear cable of all equipment, switchboard, etc. For elbows, install connecting plugs. On cable end, insulate by high voltage taping, insulating jar or plastic. All terminations and splices shall be complete and properly grounded. All adjacent equipment shall be grounded.

3. A sphere gap in parallel with the 100,000 volt D.C. "Hipot" tester shall be calibrated for sparkover at 70 KV D.C.

4. Megger all cables and record the readings before and after the Hi-Pot test.

5. Measure temperature and humidity before the Hi-Pot Test and include these reading on the Test Report.

6. The direct current test voltage shall be applied in increments of 5 KV and shall be left at that step for 1 minute. Saturate cable for 15 minutes at test voltage in 5 below.

7. Test
    1. 15 KV cables with open terminations at 65 KV D.C.
    2. 15 KV cables with elbow termination at 54 KV D.C.

8. Record
   Leakage current at each step and at end of saturation time.

9. Acceptance
   The above procedure with less than 100 microamperes of current registered. Most cables shall read less than 10 microamperes.

10. Proof test on existing cable at 35 KV for 7.1 and 35 KV for 7.2 above.

11. After test (in order listed):
    1. Turn tester power off.
    2. Discharge tester and cable through a resistive discharge device (8 MEGOHM discharge stick).
    3. Ground cable through a grounding means (#12 AWG THW wire to ground).
    4. Disconnect tester.

12. For Safety:
    1. Wear high voltage gloves at all times.
    2. Treat cable and tester as high voltage at all times.
    3. Remember, D.C. static charges can be harmful.

13. All tests must be made in the presence of the job Engineer and shall be recorded on a form sheet signed by the person performing the test and dated. A copy shall be submitted to the Engineer.