



The photo to the left is the end result from a series of tests that were conducted in the summer of 1993 on a typical building wire, THHN/THWN. Seven trenches were dug 30 inches deep and 500 feet long to see if Conductor Size, Insulation Material, Insulation Thickness and the Type of Insulation had any effect on the signal strength for tracer wire. While we all know that just about every copper wire can carry a signal, not all wires are capable of carrying a signal after being buried for long periods of time.

After the trenches were uncovered in 1995, the THHN/THWN wires clearly showed severe blistering, thus rendering the ability of THHN to carry a signal worthless. They concluded this test by attempting to send a signal through this trench, which they were unable to detect. This is due to penetration of the very thin layer of Nylon jacketing the PVC insulation around the copper conductor.



In 1995, while talking to an engineer from a gas utility company, we learned that most companies had already changed to Polyethylene insulated tracer wire to prevent such a disaster from happening just 12 inches over some of the largest gas pipelines in America.