



**INTEROFFICE MEMORANDUM**  
**Oregon Occupational Safety & Health Division**

**TO:** ALL OSHA  
**DATE:** January 24, 2008  
**FROM:** Peggy Munsell, Manager of Standards and Technical Resources  
**SUBJECT:** Required clearances from the neutral conductor

This is a response to a question raised as to the required clearance from the neutral conductor on a high voltage electrical system (600V or greater). The National Electrical Safety Code (NESC) sets rules for the practical safeguarding of persons during the installation, operation or maintenance of electrical supply lines, communication lines and associated equipment. The NESC 2002 edition section 23 states that *neutral conductors that are **effectively grounded** throughout their length and associated with circuits of 0 to 22 kV to ground may have the same clearance as guys. All other neutral conductors of supply circuits shall have the same clearance as the phase of the circuit with which they are associated. Transmission lines of 22 kV and above do not carry a neutral.*

Therefore, neutral conductors that are **effectively grounded** are considered to have zero potential and are **not** considered energized for the purposes of the restricted space that is defined in 437-002-0047 and 437-003-0047 Working Near Overhead High Voltage Lines and Equipment.

**1926.960(p)** defines effectively grounded as *intentionally connected to earth through a ground connection or connections of sufficiently low impedance and having sufficient current-carrying capacity to prevent the buildup of voltages.* Normally on a high voltage electrical system a copper wire connected to the system going directly down the utility pole to ground/earth provides effective grounding. If there is no evidence of a system fault and the grounds appear to be connected you can be fairly certain the system in that area is effectively grounded. That does not mean you can physically touch the neutral wire. Neutral wires are normally within 10 feet of primary conductors. Restricted space entry of the primary conductors would be a violation of the ten-foot rule.