

05-18-2009

At approximately 12:30 pm on May 18, 2009, an Inland Power and Light 6<sup>th</sup> step line apprentice received a 7200 volt electrical contact. The accident site was approximately 4 miles southwest of Davenport, WA at 33100 Knack Road East. The distribution line in question was the Rocklynn South 12.5 kv circuit and there was no one shot installed.

The contact occurred on a 35 foot, full treat, 3 phase tangent pole with an attached single phase tap line that fed one span west to a 15kva overhead transformer and one home. Pole construction spacing consisted of a 2 foot tap line, 4 -1/2 foot neutral, and bonded hardware. The tap cutout was energized. The tap line neutral had been torn down by road construction equipment.

A journeyman lineman and the hot apprentice responded to the damaged neutral call. Both the journeyman and apprentice tailboarded the job. The apprentice would climb up and cut down the damaged portion of the neutral wire. The journeyman would then sleeve on more #4 acsr and send the wire back up on the hand line. The apprentice would then connect a mechanical grounding jumper to the neutral, rig and sag it, and make a permanent jumper.

Following the tailboard discussion, the apprentice climbed the pole and positioned himself at the neutral level and then cut down the broken neutral leaving enough tail to sleeve back on to. As an afterthought, discussed by the journeyman and apprentice, the phase needed to be higher in order for the neutral to have road clearance. As a result, the apprentice then climbed up and belted in below the down guy attachment and below the single phase dead end hardware. The hand line remained at the neutral level. (See attached photo)

The apprentice began to tighten the primary dead end bolt to tighten sag on the phase. This motion turned the dead end bolt. As a result, the energized load side cutout jumper twisted and energized the bolt. The apprentice received a hand to hand electrical contact and said to the journeyman, "I've been hit." before collapsing.

Upon investigation, burn marks were observed on the apprentice's right glove and channel locks. A crescent wrench was also lying at the base of the pole with no visible burn marks. A second point of contact has not been established.

The journeyman called the Inland Power and Light Dispatcher for help, then proceeded to perform a single man pole top rescue. CPR was not necessary and a defibrillator was not deployed. Another Inland crew arrived within ten minutes to assist with the rescue. The fire department arrived within 15 to 20 minutes and transported the apprentice to the Lincoln County Hospital where he was then airlifted to Deaconess Hospital in Spokane, WA.

The injured apprentice is in serious but improving condition presently.

Update: The apprentice is recovering well from his injuries and is now at home.

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**RECOMMENDATIONS:**

1. Two men when working within MAD.
2. Ensure adequate manpower for job.
3. Open cutout to eliminate hazard of neutral return current.
4. Open cutout to eliminate minimum approach distance hazard.
5. Eliminate hazards before performing rescue.

Submitted by Mike Toutloff and Michael Cyr , Accident Investigators

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