

Wilson Construction
Electrical Contact
Accident Report
October 8, 2019

Reported by

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Accident Investigator
Local 77

On Tuesday, October 8, 2019, there was a high voltage contact on the Kalispel Tribal Utilities (KTU) (host employer) electrical system in Airway heights Washington.

The accident occurred at approximately 3:00 p.m. on the above-mentioned date, involving a five-man N.E.C.A contract crew working for Wilson Construction. The crew consisted of one-line crew Foreman, one Journeyman Lineman and three (count) Third-step Apprentices. The overall scope of the work was an underground high voltage cable replacement/upgrade. The day of the accident, the crew was given a documented tailboard in the morning outlining the expectations of the day.

On the afternoon of the accident all five crew members were working together at a pad mounted switch gear cabinet labeled #07, terminating new cable and installing fault finders. The Foreman gave instructions to the Journeyman and one Apprentice to go approximately 500 yards away to a three-phase primary cable junction enclosure labeled # 3 and replace three 200-amp elbow terminations with test point elbows, and also install faultfinders at that location. The Foreman told the Journeyman and the Apprentice that the cable they were going to be working on was deenergized. This was based on information the Foreman previously received from the KTU site representative. The Foreman also gave the Apprentice an elbow ground to use on the cable.

Once the Journeyman and the Apprentice arrived at junction enclosure #3 and prior to commencing the work, the Apprentice informed the Journeyman that the Foreman instructed them to use the grounded elbow. The Journeyman elected not to use the ground based on the information he received from the Foreman that the cable was deenergized and the fact the crew had no insulated live line tools on site to install the protective ground. Once the cabinet was opened, the Journeyman removed all three elbows by hand from their insulated/isolation points (four ways). The Journeyman then kneeled on the ground in front of the junction enclosure, took the A phase elbow by hand and touched the end of the elbow probe on the concentric ground in the junction enclosure. He then inserted by hand a metal ratcheting probe tool into the elbow where it made contact with the non-insulated portion of the elbow probe that was energized at 7200 volts. He received a high voltage contact and was knocked backwards losing his grip on the elbow and probe tool. The probe tool still inside the elbow then contacted the grounded junction enclosure creating an arc. The probe tool still in the elbow then came to rest on the insulated portion (tip) of elbow probe and the junction enclosure.

The Apprentice immediately called the Foreman, the Foreman called the contractor's Safety Representative and left a voicemail message that an accident had occurred. The Foreman and the other two Apprentices traveled from the pad-mounted switchgear #7 to junction enclosure #3 (accident site). Upon arrival and checking on the Journeyman and Apprentice at that location, the Foreman used high voltage rubber gloves to remove the probe tool from the elbow. He then closed the lid of the junction enclosure with all three elbows still unsecured and removed from their individual insulated termination points (four ways). The Foreman instructed the crew to then travel to junction enclosure #4 approximately 200 yards away. After arriving at junction enclosure #4 and upon inspection, the elbows feeding junction enclosure #3 (accident site) were not stood off/open and the cable was energized. At this point the Foreman, using high voltage rubber gloves in conjunction with an MD6 press tool, removed all three elbows that were tagged as the feed to junction enclosure #3, and placed them on insulated standoff bushings.

The KTU site representative arrived to investigate what had caused an operation on the utility's equipment. The Foreman informed the KTU site representative what had taken place and realized that there was miscommunication on what circuits were and were not energized. Assuming a circuit had tripped/locked out, the Foreman and the KTU site representative traveled to the pad mounted switch gear #7, approximately 300 yards away. The Foreman then retrieved a high voltage detector from his truck to test the circuits. It was concluded that the fused circuit at the pad mount switch gear in question was energized and that the recloser up line had operated but did not trip/lock out. While at this location, the contractor's Safety Representative returned the Foreman's voicemail/call and instructed the Foreman to immediately get the injured Journeyman to the hospital. The Foreman then transported the Journeyman in the contractor's work truck to Deaconess Medical Center Hospital in Spokane, where he was treated and released the same day, receiving an entrance wound on his hand and exit wounds on his knee and lower leg.

Recommendations:

- Follow all safe work practices, Identify, Isolate, Test and Ground
- Always use proper testing equipment, live line tools and grounds for task at hand
- Immediately call emergency services (911) in the event of any high voltage contact



Site of Accident - Three phase Junction Enclosure #3



Probe tool in the A phase elbow at Junction Enclosure #3