

**OKANOGAN COUNTY
P.U.D.**

ACCIDENT

January 24, 2009

Investigated and Reported by
Tony Bird
IBEW Local 77 Accident Investigator

On Saturday, January 24, 2009 at approximately 8:00am, a primary 7620 volt arc flash burn accident occurred to an Okanogan County P.U D line crew foreman while performing maintenance on a 3 phase 1000kva 277/480 pad mount transformer near Brewster WA.

On the day of the accident the crew arrived at the job sight and went through a thorough tailboard during which it was discussed that the feed was still hot and what precautions needed to be taken. It was also mentioned that the elbows on the transformer had been exceptionally difficult to remove perhaps because of the old silicone, and the decision was made to clean the bushings while the transformer was de-energized

The line crew consisted of a foreman, two journeymen lineman and a 6th step apprentice. There was also a journeyman meter man at the job sight. The line crew was scheduled to perform maintenance on the transformer that had shown hot secondary connections with infrared observations. The transformer was fed from a primary sectionalizer 160ft away. The 3 phases feeding the transformer were parked on insulated parking bushings and were still energized in the transformer. The insulated feed through bushing in the H1A position was a temporary feed being used to keep a single phase lateral to the north energized. This lateral was normally in the H1B position on a permanent feed through, well bushing, however in order to de-energize the transformer it was transferred to the H1A temporary feed through standoff position. The elbows at the H1B, H2B, and H3B positions were all 3 in their original positions. These cables fed a seasonal de-energized transformer to the south.

As the work began journeyman 2 and the 6th step apprentice were cutting off the secondary splices that had shown bad and were splicing on new pieces of wire. Journeyman 1 was standing near the divider between the primary and secondary cabinets assisting journeyman 2 and the apprentice while they were splicing out the wire. The foreman was kneeling on a blue plastic tarp on the primary side of the cabinet immediately behind journeyman 1. The foreman was cleaning the H1A well bushing and the meterman was standing approximately 6 feet behind the transformer looking toward the secondary side. The meterman (in his words) said he saw a flash and heard a noise. At that time journeyman 1 states he turned and saw the foreman on his feet moaning with flames on his feet and left shoulder. Upon seeing this, journeyman 1 tackled the foreman and put the flames out with his hands, while journeyman 2 called 911 and the hot apprentice ran to the sectionalizer to isolate the line with a long stick.

Immediately the crew began first aid and removed the burned cotton gloves from the foreman's hands and applied snow to the burns. After about twenty minutes the aid car arrived at the scene and transported the foreman to the Brewster hospital. The determination was to then transport to the Pangborn airport in Wenatchee where the foreman was flown to Harborview medical center in Seattle. The foreman received medical treatment and was released the following day.

The elbow that was previously parked on the H3A Insulated parking bushing was now lying unprotected in the transformer. There were indications of electrical contact marks on the front lip of the transformer, as well as on the concentric ground wires on the primary side of the cabinet.

RECOMMENDATIONS

1. Provide safety watch at all times.
2. Use protective cover on energized apparatus.
3. Identify, Isolate, Test and Ground
4. Always use your safe work practices and procedures.