Please Post

Naval Facilities Engineering Command

Abstract of an Accident

01-1

Accident Type: **Electrical**
Injury: **Flash Burns**
Type of Work: **Splicing Underground High Voltage Cable**
Equipment Involved: **Chance Phasing Tool**

DESCRIPTION OF THE ACCIDENT:
A contractor employee was injured while preparing to splice a new underground cable to an existing cable in a manhole. After prepping the cable for splicing, the electrician went to the Power House to phase test and perform continuity tests on the cable going to the manhole where the cable was to be spliced. He verified that the switch to the pier was open and that lock out tag was still in effect. He then tested the cable he was told was the load to the pier with a tick tracer and discovered a tone. His supervisor then requested the cables be tested. The electrician went for the high voltage tester, removed the arrestor from the load elbow and tried to insert the probe of the phasing tool into the arrestor opening, causing an arc, which resulted in flash burns to his arms and the side of his face.

DIRECT CAUSE:
Improper equipment - Adapter on the testing tool was not changed to the bushing required to test the elbows.

CONTRIBUTING CAUSE:
- Employee was not wearing the required personal protective equipment.
- Load side of the switchgear was not properly identified. The source side had been identified as the load side of the switch.
- A site specific Activity Hazard Analysis had not been prepared for this phase of the project, therefore there was no written procedure for high voltage testing.

LESSONS LEARNED:
- Personnel protective equipment must be worn during High Voltage testing. This includes face shield, high voltage electrical gloves, sleeves, etc.
- Phasing Tools must be used in accordance with the manufactures recommendations contained in the operation manual for that tool.
- Training must be provided to all personnel evolved in high voltage testing, to be sure all parties understand how testing will be carried out and how the testing equipment is to be operated.
- A written site specific Activity Hazardous Analysis for each phase of the project, identifying all hazards, equipment to be used, and safe guards to be taken to avoid hazards must be provided and followed.
- All cables tagged out of service must be grounded. Temporary grounding is essential for safety.
- All switches and switchgear must be labeled for ready identification of the circuits, which they supply.

YOUR SAFETY CONTACT IS....