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Naval Facilities Engineering Command

Abstract of an Accident

96-3

ACCIDENT TYPE:	Electrocution
INJURY:	Fatality
TYPE OF WORK:	Electrical Substation
EQUIPMENT:	34.5 KV Overhead Switch

DESCRIPTION OF THE ACCIDENT:

A contractor worker was installing a high voltage cable support bracket onto the main switch support column of an electrical substation. His supervisor held the bracket in place while the worker stood on a fiberglass ladder next to an energized 34.5KV buss and bolted the bracket in place. During this operation, the worker reached out with his right hand and touched an insulator of the 34.5KV buss and was shocked. High voltage electricity entered his right hand, traveled through his body and exited from multiple locations causing burns to his face, hands, waist, upper back, and internal organs. He collapsed and fell from the ladder, later dying from his injuries.

DIRECT CAUSE:

Work was performed adjacent to a 34.5KV electrical circuit without the required safe clearance, without securing the electrical circuit and not using high voltage electrical PPE. The injured worker was a laborer and not qualified to work on or near high voltage electricity.

CONTRIBUTING CAUSES:

- Activity Hazard Analysis was not being applied by the contractor's site superintendent
- Weekly on-site safety training was not conducted
- Site specific safety training was not conducted prior to this phase of work

LESSONS LEARNED:

- Always request an electrical outage when work is required to be accomplished on or near high voltage circuits.
- Contractor safety plan implementation to be site specific is critically important.
- Phase hazardous analysis could have prevented this mishap by not allowing work to be performed by unqualified workers and properly identifying the hazards associated with this work area.
- Worker safety awareness is essential in preventing accidents by using only qualified workers and preventing unsafe conditions.

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