

Overwork Contributes to Serious Burn Injury

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Burn Injury Narrative

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A journeyman electrician with over twenty years of experience was assigned to work on an electrical circuit in an electrical vault that contained voltages exceeding 4000 volts. He was fatigued from excessive overtime. Including the day of the accident, he had worked over eighty hours in the previous 5 days. He had intended to de-energize the circuit before beginning work. Unfortunately, he de-energized the wrong circuit. He went to the energized circuit to begin work and an electrical arc-flash/blast occurred. As the work was intended to be done de-energized, he was not wearing personal protective equipment, such as a face shield or insulating gloves.

He was thrown backwards but did not fall or lose consciousness. He suffered burns to his face, neck and hand. Burn treatment required hospitalization for about a week.



Non-Contact, High-Voltage Detector

Injuries such as these may be prevented by taking the following steps:

- Accurately identify the equipment to be worked on and the energy isolating devices that will de-energize it.
- Establish an “electrically safe work condition” whenever possible. De-energize it, lock it out, ground it and test it.
- Always test for the absence of voltage at the location of the work. When working with voltages exceeding 600 volts, attach a hot stick to a high voltage detector. This will keep the electrician a safe distance from a possible arc flash/blast.
- Attach grounding cables/straps with the appropriate voltage and current ratings with a hot stick.
- Schedule jobs to avoid excess overtime by employees.
- Proper personal protective equipment should always be used.
- Never wear rings, watches or other jewelry when working with electricity.

Please consider the above information as you make safety decisions or recommendations for your company or constituency. The information in this narrative is based on preliminary data only and does not represent final determinations regarding the nature of the incident or conclusions regarding the cause of the injury.

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