Electrical incident

16 March 2020

Incident overview

A 24-year-old electrician suffered serious burns to his forearms, hands and face when he touched a live electrical circuit and caused an arc flash explosion. The incident took place at a data centre under construction in Macquarie Park.

The investigation

- SafeWork NSW inspectors responded to the incident.
- SafeWork NSW commenced an investigation to determine the cause and circumstances of the incident.
Safety information

Businesses are reminded of their duty to identify hazards and manage risks to health and safety in accordance with the provisions of the Work Health and Safety Act 2011 and Work Health and Safety Regulation 2017.

This includes eliminating or minimising electrical risks, so far as is reasonably practicable.

In NSW, it’s prohibited to work on live electrical equipment unless one or more exceptions apply. The code of practice for managing electrical risks in the workplace outlines when working live in permitted, and how to do it.

Working de-energised eliminates significant electrical risks.

To isolate electrical supply, you must:

- consult with the person who manages or controls the workplace about timing of the work, and tell anyone who may be affected
- identify the circuit that needs to be isolated
- disconnect active conductors from the relevant source - there may be multiple sources - and stand-by systems, generators and photovoltaic systems, as well as auxiliary supplies, from other boards
- if a removable or rack-out circuit breaker or combined fuse switch is used, make sure it’s racked-out or removed, then locked open and danger tagged
- earth each high-voltage exposed part after proven de-energised
- lock the isolating switch, or remove and tie back relevant conductors, to protect those carrying out the electrical work
- tag the switching points, to provide general information to those at the workplace
- test that the relevant circuits have been de-energised, along with any other relevant conductors, and re-test as necessary.

‘Test for 'dead' before you touch’, always.

Further information

- Electrical work guidance material
- Electrical safety video
- Electrical arc flash hazard management guideline

The information contained in this publication is based on knowledge and understanding at the time of writing. No conclusions should be drawn from the information in this publication about the cause of the incident or the culpability of any party.