

NTPC Health & Safety Alert

Electrical Contact Near Miss



Background

A contractor was pulling de-energized cables out the top of an isolated Motor Control Center (MCC) cabinet. There was a gap in the wall of the cabinet that led to an adjacent cabinet, which was live. The contractor was aware of the gap and identified electrical shock and arc potential as a hazard on the Tailboard. The control chosen to reduce the risk was to tape the ground wire to the conductor cables. While pulling the cable through the cabinet the tape was caught and ripped off, freeing the ground wire. The ground wire slid back into the cabinet, entered the gap, and contacted a live conductor resulting in an electrical short and arc flash event within the closed cabinet. Fortunately, there were no injuries.

Practical Guidance

All safe work comes down to proper hazard assessment and control. When determining which controls to put in place always consider the **Hierarchy of Controls**.

The safest option is to eliminate the hazard. In this case if the adjacent cabinet was also de-energized the hazard would have been eliminated.

The effectiveness of the controls diminishes as you move down the hierarchy. PPE is the least effective and the last line of defence between the hazard and the worker.

If the hazard cannot be eliminated it is good practice to implement various levels of controls. If the contractor also installed a barrier (engineering control) over the gap leading to the live cabinet the ground wire would not have been able to contact the live conductor, even if the tape was accidentally removed. The ground wire should also have been taped to the conductor cables in multiple locations with multiple pieces of tape, rather than just one.

When selecting controls for your hazards consider the hierarchy and ask yourself “How effective are my controls? Are there additional controls I can put in place to further reduce the risk?”

For more information contact your Health & Safety Department.

