

Collider-Accelerator Department
Energized Circuit Work Permit

Permit for Working "On or Near" Energized Components

FOR SUB-RANGE B

Current > 10ma and AC Voltage from 50V to 132V rms or DC Voltage 50-300

This permit is required to allow work on energized electrical systems in accordance with ES&H Standard 1.5.0. and C-A OPM 1.5. This permit applies to all personnel who work at the C-A Complex.

Location/Circuit: CA complex – Generic Permit

CA Group:

System Description:

Description of task:

Manipulation of 50 – 132 volt circuits

Voltages are measured to ground. No line to line voltage within the control zone may exceed 250 volts peak to peak.

Justification:

Critical Systems that must be kept operational to avoid a greater hazard.

Start Date and Time: **FEBRUARY 28, 2004**

Estimated Finish Date and Time: **FEBRUARY 28, 2005**

✓ Electrical massive ground, live terminals

✓ Mechanical conditions

✓ Environmental conditions

✓ Working space constraints

✓ Obstructions in area

✓ Other energized circuits/parts

Describe Hazards: (See ES&H Standard 1.5.0, Appendix III for guidance)

Electrical shock, Blast, Flash

High currents can create high temperatures, and melt wires and components.

Procedures of Task

Procedure: Refer to C-A-OPM-ATT 1.5b

Warnings Specified: Follow NFPA 70E or Local Postings

Clearance Zones: Follow NFPA 70E or Local Postings

Personnel Protective Equipment: Follow NFPA 70E or Local Postings

Approval to proceed: *Jon Sandberg*
 (Signature of Department Chair/Division Head or Formal Designee)

Date: 3/22/04

REQUIRED FOR CIRCUITS ABOVE 600 Vac OR 6000 Vdc TO GROUND:

Independent Reviewer(s): Not applicable to this permit
 (Signature)

Safety Information for Manipulation of Sub-range B Energized Circuits

1. Identify and locate:
 - Power sources and shutoff devices
 - Emergency telephones
2. Establish work area:
 - Notify affected personnel
 - Cordon off work area
3. Remove conductive apparel
4. Review NFPA 70E for proper Personal Protective Equipment.
5. Wear Safety Glasses.
6. Measurement technique:
 - Ground one terminal of tester
 - Measure to ground
 - Use one hand at a time
7. Use “WIGGY” or similar tester to verify voltage levels are < 132Volts RMS AC or 50-300 Volts DC to ground
8. Stop work and report to supervisor in any warning conditions exist
9. STOP if terminal cannot be reached or is not in sight
10. Perform Work
 - Remove one lead at a time
 - Insulate energized unterminated wires
11. To remove fuse, use fuse puller
12. All wires shall be terminated or taped and secured
 - Identify all energized unterminated wires
13. On completion of work:
 - Remove all materials and equipment
 - Close enclosures
 - Remove barriers
 - Notify affected personnel
 - Remove locks and tags
 - Re-energize equipment
 - Report to supervisor