ELECTRICAL HAZARD ANALYSIS / WORK PERMIT
For Selected Work Activities on the AC Power Distribution System or Electrical Utilization Equipment

JOB NAME & LOCATION: ________________________________

EFFECTIVE DATES OF PERMIT: Start: ___________ End: ___________

WORK TO BE PERFORMED BY: ________________________________

QUALIFIED PERSON IN CHARGE: ________________________________ PHONE: ___________

PERSON PERFORMING SWITCHING: ________________________________ PHONE: ___________

If not the same as or under the direct supervision of the Qualified Person in Charge,

Does the Work Involve Diagnostic Energized Work? Yes _____ No _____ (Includes LOTO Verification)

Does the Work Involve Manipulative Energized Work? Yes _____ No _____ (Justification Required)

Is an Inspection Required After Work is Completed? Yes _____ No _____ (Reqd. for New AC Pwr. Installs)

If the Work Activity Involves Manipulative Energized Work, State the Justification Here and attach risk assessment following risk assignment guidelines in QAM 12030.

__________________________________________________________________________

DESCRIPTION OF WORK:

ASSOCIATED HAZARDS:

HAZARD MITIGATION: (Indicate electrical shock and arc flash PPE on next page)
SHOCK PROTECTION BOUNDARIES for ENERGIZED WORK
from NFPA 70E Table 130.4(D)(a) for Fixed Circuit Parts and Article 130.4(D). Refer to NFPA 70E Table 130.4(D)(b) for DC system voltages. Indicate if Otherwise.

For 50 to 150 VAC: Shock Protection: Limited Approach: 3’ 6". Restricted Approach: Avoid Contact
For 151 to 750 VAC: Shock Protection: Limited Approach: 3’ 6". Restricted Approach: 1 Ft.

Class _______ Voltage-Rated Gloves and Leather Protectors Required for Subject Work Activity

ARC-FLASH PROTECTION BOUNDARY and REQUIRED PPE for ENERGIZED WORK
The Fermilab Default Arc Flash Boundary is 4 feet (1.2 m) (see ESS Determination 2019-02)
If obtained from tables, enter PPE Category: _____ and Arc Flash Boundary _____ feet and/or inches
If Calculated, Indicate Arc Flash Boundary: ______________ feet and/or inches
If Calculated, Indicate Incident Energy Level for Arc Flash Protection: _______ cal/cm²

PPE Requirements for Shock & Arc Flash Protection are Fully Described in NFPA 70E, Article 130.7. Indicate if Otherwise. Clothing Must be Non-Melting, may be Untreated Natural Fiber, Unless Specified as Arc Rated (AR).

<table>
<thead>
<tr>
<th>PPE Category</th>
<th>PPE and Clothing Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Long-Sleeve Cotton Shirt, Long Cotton Pants, Safety Glasses, Hearing Protection, Leather Gloves (0 to 1.2 cal/cm²)</td>
</tr>
<tr>
<td>1</td>
<td>Cotton Clothing under AR Coverall, Safety Glasses, Hard Hat, Arc-rated Face Shield, Hearing Protection, Leather Protectors or Gloves, Leather Work Shoes (&gt;1.2 to 4 cal/cm²)</td>
</tr>
<tr>
<td>2</td>
<td>Cotton Clothing under AR Coverall, Safety Glasses, Hard Hat, Double-Layer Switching Hood, Hearing Protection, Leather Protectors or Gloves, Leather Work Shoes (&gt;4 to 8 cal/cm²)</td>
</tr>
<tr>
<td>3</td>
<td>Cotton Clothing under AR Flash Suit Jacket and Pants (25 cal/cm²), Safety Glasses, Hard Hat, Hard Hat Liner, Flash Suit Hood, Hearing Protection, Leather Protectors or Gloves, Leather Work Shoes (&gt;8 to 25 cal/cm²)</td>
</tr>
<tr>
<td>4</td>
<td>Cotton Clothing under Multilayer AR Flash Suit Jacket and Pants (40 cal/cm²), Safety Glasses, Hard Hat, Hard Hat Liner, Flash Suit Hood, Hearing Protection, Leather Protectors or Gloves, Leather Work Shoes (&gt;25 to 40 cal/cm²)</td>
</tr>
</tbody>
</table>

PREPARED BY: ___________________________ Date: _____________
APPROVED BY: ___________________________ Date: _____________

ADDITIONAL APPROVALS FOR MANIPULATIVE ENERGIZED WORK

Approval of D/S Electrical Coordinator __________________________________________
Approval of Area Division/Section Head __________________________________________
Approval of Fermilab Directorate _______________________________________________
# Job Briefing Signature Sheet

Person(s) Conducting Briefing: ___________________________  Date: _____________

Personnel Present at the Job Briefing will Sign Below, thereby Indicating their Understanding of the Scope of Work and Associated Hazard Mitigation Requirements.

<table>
<thead>
<tr>
<th>Print Name</th>
<th>Fermi ID #</th>
<th>Div/Sec or Company</th>
<th>Signature</th>
</tr>
</thead>
</table>

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*WARNING: This manual is subject to change. The current version is maintained on the ESHQ Section website.*