Energized Electrical Work Permit
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CENTENNIAL
A BILFINGER COMPANY

I. General Information

Location / work area:_____ Project start date:_____

Start time:_____ am pm Project duration (days or hours):_____

Date of request:_____

Description of circuit/equipment (include a sketch or diagram):

Scope of work:

Requester name/title:_____ / _____

II. Justification For Energized Work

Justification for energized work request (choose all that apply):

☐ Infeasible ☐ Greater Hazard ☐ <50 Volts ☐ Client Written Direction

Detailed analysis on why the circuit/equipment can NOT be de-energized:

Name of person completing the justification analysis: _____

III. Shock Hazard Analysis

Nominal voltage:_____ (volts) Maximum voltage:_____ (volts)

Approach Boundaries (indicate feet & inches, example **3'6"**)

Limited approach:_____ Restricted approach:_____ Prohibited approach:_____

IV. Flash Hazard Analysis

Arc flash boundary (indicate feet & inches, example **3'6"**):_____ Hazard/risk category (0-4):_____

V. Personal Protective Equipment

Choose all that apply:

☐ Hardhat ☐ Safety glasses ☐ Arc rated face shield ☐ Arc rated clothing

☐ Balaclava ☐ Leather work boots ☐ Rubber insulated gloves ☐ Arc flash hood

☐ Leather gloves ☐ Hearing protection ☐ Other: _____

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VI. Safe Work Practices

Choose all that apply (VR = Voltage Rated):

☐ Restrict Access ☐ Barricades ☐ Communication equipment ☐ Warning signs/tags

☐ Non-conductive ladders ☐ Insulated (VR) tools ☐ Insulated (VR) mat/blanket

☐ Voltage testing/measuring tools ☐ Other: _____

VII. Pre-Job Requirements

Check all that apply:

☐ Review diagrams, work orders, manuals ☐ Inspect PPE, insulating materials, tools

☐ Notify affected personnel ☐ Test voltage (testing/measuring equipment)

☐ Conduct pre-job briefing ☐ Remove conductive apparel/jewelry

☐ Determine emergency response ☐ Verify personnel have been trained

☐ AHA completed/reviewed ☐ Centennial / JV job planning/briefing checklist

VIII. Essential Personnel

Electrically Qualified Person: _____
(attached credentials [i.e. journeyman card or similar])

Standby personnel: _____ _____

CPR/FA trained person(s): _____ Date of training: _____

_____ Date of training: _____

IX. Approval For Energized Work (signature required)

SSR / PGM: _____ Date: _____

HSEQ Team Representative: _____ Date: _____

Customer / Facility Manager: _____ Date: _____

Subcontractor Management: _____ Date: _____

Additional notes / space:

Centennial Energized Electrical Work Permit Instructions

PART I. GENERAL INFORMATION

DESCRIPTION OF CIRCUIT/EQUIPMENT/JOB LOCATION:

The description of the circuit to be worked in an energized state shall be detailed and include a sketch or drawing showing all potential sources of hazardous energy and anticipated voltages.

SCOPE OF WORK:

Include all features of work and job steps involved that will potentially expose workers to energized parts.

PART II. JUSTIFICATION FOR ENERGIZED WORK REQUEST

JUSTIFICATION OF WHY THE CIRCUIT/EQUIPMENT CANNOT BE DE-ENERGIZED OR THE WORK IS DEFERRED UNTIL THE NEXT SCHEDULED OUTAGE:

Centennial and our joint ventures will ensure that all efforts are exhausted to accomplish electrical work in an electrically safe work condition due to the increased risk and potential for injury that energized electrical work encompasses. Centennial/JV will only authorize energized work if one or more of the following conditions are satisfactorily met:

Greater Hazard: Energized work shall be permitted where the subcontractor can demonstrate that de-energizing introduces additional or increased hazards. Examples include: life support equipment, deactivation of emergency alarm systems or shut down of hazardous location ventilation equipment.

Infeasibility: Energized work shall be permitted where the subcontractor can demonstrate that the task to be performed is infeasible in a de-energized state due to equipment design or operational limitations. Examples include: Performing diagnostics and testing, Start up or troubleshooting.

Less than 50 Volts: Energized electrical conductors and circuit parts that operate at less than 50 volts to ground shall not be required to be de-energized where the capacity of the source and any over current protection between the energy source and the worker are considered and it is determined that there will be no increased exposure to electrical burn or to explosion due to electrical arcs.

Client Written Direction: Energized work shall be permitted in scenarios where the client has indicated that the work may not be completed in an energized state. Written justification from the client's management must accompany the completed permit.

Please indicate one of the above justifications from the drop down menu for completing this work/task in an energized state and provide a detailed analysis on why it is absolutely necessary to complete the work in an energized state in the corresponding box.

PART III. SHOCK HAZARD ANALYSIS

This section will indicate the approach distances (in feet) for both qualified and unqualified personnel for all shock protection boundaries (limited approach, restricted approach and prohibited approach) This information may be found in NFPA 70E Table 130.4 (D)(a) for alternating current systems and Table 130.4 (D)(b) for direct current voltage systems. These boundaries are based on voltage range, type and equipment and circuit parts.

PART IV. INCIDENT ENERGY ANALYSIS

An analysis will be conducted to determine the flash protection boundary and the hazard/risk category for the work or task. Where an arc flash protection boundary is not completed, for the purpose of this plan, a 4 foot default boundary will be used. For larger potential fault currents, a incident energy analysis will need to be performed to determine the arc flash protection boundary. Additionally, the hazard/risk category will be determined either through the completed incident energy analysis or alternatively by consulting NFPA 70E Table 130.7 (C)(15)(a) [AC Systems] or 130.7 (C)(15)(b) [DC Systems]. Please state the flash protection boundary and hazard/risk category.

PART V. PERSONAL PROTECTIVE EQUIPMENT (PPE)

The arc flash protection boundary is intended to trigger the need for PPE that will protect the worker(s) from thermal injuries. The required PPE used for entering the flash protection boundary may be determined by consulting the incident engery analysis, referencing NFPA 70E Table 130.5 (G) or by consulting the NFPA 70E Table 130.7 (C)(15)(a) for AC Systems and Table 130.7 (C)(15)(b) for DC Systems. Please use this section of the permit to indicate all PPE that will be required for the job/task.

PART VI. SAFE WORK PRACTICES

The limited approach boundary is the closest distance that an unqualified person may approach energized parts. Please use this section to indicate what methods will be used to ensure that unqualified workers access will be restricted as well as what specific measures an electrically qualified person will use to ensure their safety while working within the limited approach boundary.

PART VII. PRE-JOB REQUIREMENTS

This section will include a meeting of all affected personnel where site specific conditions are discussed and tools/equipment will be inspected prior to work. The Centennial/JV Energized Work Job Planning/Briefing Checklist will be reviewed and site specific emergency response will be coordinated.

PART VIII. ESSENTIAL PERSONNEL

This section is used to identify job/task essential personnel. The electrically qualified person will be identified and proof of their qualification will accompany the completed energized electrical work permit. Standby personnel will also be identified in this block along with CPR/FA training with dates.

PART IX. APPROVAL FOR ENERGIZED WORK

This section includes all parties responsible for approving the Energized Electrical Work Permit prior to performing the work. Required approval includes:
1) The Centennial/JV Senior Site Representative (SSR)
2) An HSEQ Team Representative
3) The customer or facility manager
4) A member of the subcontractor management team that will be performing the energized work.