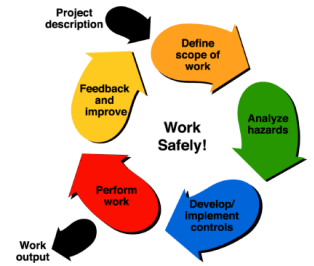


Use Long Form when Hazard ID, Risk Assessment & Work Controls have NOT previously been approved or Work Order has incomplete information



Berkeley Lab Facilities QEW Job Safety Plan



Date of JSP	Person in Charge (PIC)	
	Planner	

Work Order

- Work Order**
- Scope of work provides enough detail to adequately describe all tasks. Y / N.
 - Scope of work on work order falls within approved activity in WPC and all workers are trained & authorized. Y / N.
 - Work Order includes LOTO information: Y / N or N/A.
 - Work Order includes Voltage information and Shock Risk Assessment (SRA): Y / N or N/A.
 - Work Order includes Arc Flash information and Arc Flash Risk Assessment (AFRA): Y / N or N/A.
 - Equipment contains hazardous capacitors (100V and 10J) and Work Order includes Capacitor bus voltage, Capacitor total stored energy in Joules and the Capacitor Discharge wait time: Y / N or N/A.

Use Long Form when any of the above questions are answered No and the Work Order doesn't provide adequate information.

QEW Level: _____	Hazard Class: _____	Voltage: _____ AC/DC	IE: _____ cal/cm ²
Mode: 0 / 1 / 2 / 3	<input type="checkbox"/> Standby*	<input type="checkbox"/> Safety Watch**	Switching: Haz / Non-Haz

Electrical Safe Work Plan or Energized Electrical Work Permit

<p>Electrical Safe Work Plan</p> <ul style="list-style-type: none"> <input type="checkbox"/> Method of Procedure (MOP) <input type="checkbox"/> Switching Tag <input type="checkbox"/> Other written procedure <input type="checkbox"/> N/A 	<p>EEWP - Energized Electrical Work Permit <i>Required for Mode 3 work.</i></p> <ul style="list-style-type: none"> <input type="checkbox"/> Approved EEWP for Mode 3 <input type="checkbox"/> N/A <div style="border: 1px solid black; padding: 5px; width: fit-content; margin-left: auto;"> EEWP#: _____ </div>
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Control of Work Area

- Minimum Approach Boundary: _____ inches
- Will barricade tape be used? Y / N
- Notice
- Caution (for additional hazards other than electrical)
- Warning
- Danger
- Will an Attendant be used?..... Y / N

Job Safety Plan Approval

Position	Name	Signature	Date
Person In Charge (PIC)			
Supervisor, Work/Activity Lead, or Division Approver			
Electrical Safety Officer (ESO)			

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Equipment Conditions	Environmental Conditions
<p>Meets conditions for normal operation: Y / N</p> <ul style="list-style-type: none"> <input type="checkbox"/> Properly installed <input type="checkbox"/> Properly maintained <input type="checkbox"/> All doors and covers closed and fully latched <input type="checkbox"/> No signs of impending failure <input type="checkbox"/> Not labeled as Overduty Equipment <p>Working Clearance: _____ inches per NEC</p> <ul style="list-style-type: none"> <input type="checkbox"/> Condition 1 <input type="checkbox"/> Condition 2 <input type="checkbox"/> Condition 3 	<p>Does the environment present additional hazards that should be addressed? Y / N</p> <ul style="list-style-type: none"> <input type="checkbox"/> Insufficient lighting <input type="checkbox"/> Wet location <input type="checkbox"/> Confined space <input type="checkbox"/> Insufficient/cramped/awkward space <input type="checkbox"/> Heavy traffic <input type="checkbox"/> Fall hazard <input type="checkbox"/> Lookalike equipment <input type="checkbox"/> Noisy environment

ERROR PRECURSORS

<p><i>Instructions:</i></p> <p>1. Select any and all error precursors from LIST A.</p>	<p align="center">List A: Possible Error Precursors</p> <p>Task Demands: <i>when specific mental, physical, or team requirements to perform a task either exceed the capabilities or challenge the limitations of the individual assigned to the task.</i></p> <ul style="list-style-type: none"> <input type="checkbox"/> Time pressure (in a hurry) <input type="checkbox"/> High workload (memory requirements) <input type="checkbox"/> Simultaneous or multiple tasks <input type="checkbox"/> Repetitive actions or monotony (risk of complacency) <input type="checkbox"/> Critical steps or irreversible acts <input type="checkbox"/> Lack or unclear standards <input type="checkbox"/> Other (specify) _____ <input type="checkbox"/> N/A <p>Work Environment: <i>when general influences of the workplace, organizational, and cultural conditions affect individual performance.</i></p> <ul style="list-style-type: none"> <input type="checkbox"/> Distractions/interruptions <input type="checkbox"/> Changes/departures from routine <input type="checkbox"/> Confusing displays or controls or Look-alike equipment <input type="checkbox"/> Workarounds/out of service instrumentation <input type="checkbox"/> Obscure electrical supplies or configurations <input type="checkbox"/> Unexpected equipment conditions <input type="checkbox"/> Personality conflicts <input type="checkbox"/> Other (specify) _____ <input type="checkbox"/> N/A <p>Individual Capabilities: <i>when an individual's unique mental, physical, and emotional characteristics do not match the demands of the specific task.</i></p> <ul style="list-style-type: none"> <input type="checkbox"/> Unfamiliar with, or first time performing task <input type="checkbox"/> Lack of knowledge <input type="checkbox"/> New technique not used before <input type="checkbox"/> Imprecise communication habits <input type="checkbox"/> Lack of proficiency or experience <input type="checkbox"/> Other (specify) _____ <input type="checkbox"/> N/A; workers have shown proficiency for task & procedures
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	<p>Human Nature: <i>when traits, dispositions, and limitations common to all persons are more likely to cause mistakes in adverse environments. Consider whether there would be significant adverse impact if additional controls are not implemented. (Circle those that apply in current situation).</i></p> <table style="width: 100%; border: none;"> <tr> <td style="width: 50%;">Stress (limits attention)</td> <td style="width: 50%;">Habit patterns</td> </tr> <tr> <td>Assumptions</td> <td>Complacency/overconfidence</td> </tr> <tr> <td>Mind-set</td> <td>Inaccurate risk perception</td> </tr> <tr> <td>Mental shortcuts (biases)</td> <td>Limited short-term memory</td> </tr> </table>	Stress (limits attention)	Habit patterns	Assumptions	Complacency/overconfidence	Mind-set	Inaccurate risk perception	Mental shortcuts (biases)	Limited short-term memory
Stress (limits attention)	Habit patterns								
Assumptions	Complacency/overconfidence								
Mind-set	Inaccurate risk perception								
Mental shortcuts (biases)	Limited short-term memory								

ERROR PRECURSORS

<p><i>Using the Possible Error Precursors identified as a concern and checked from LIST A (Task Demands, Work Environment, Individual Capabilities and Human Nature) in Instructions 1.</i></p> <p>2. Identify and circle controls in LIST B that would help control or prevent the error precursors that you have identified</p> <p>Possible Controls are not 1 for 1 solutions for Error Precursors in List A</p> <p>Combinations may be used to reduce the likelihood of error</p>	<p style="text-align: center;">List B: Possible Controls</p> <ol style="list-style-type: none"> 1. Reduce overall risk upfront. <ul style="list-style-type: none"> <input type="checkbox"/> Identify ways to avoid reliance on PPE and move up the hierarchy of controls. 2. Develop and adhere to a written Electrical Safe Work Plan. <ul style="list-style-type: none"> <input type="checkbox"/> Step-by-step procedure read, outcome understood. <input type="checkbox"/> Circle the task to be performed, check off each task as it is completed. <input type="checkbox"/> Assign person to manage the procedure. 3. Self-check with verbalization. <ul style="list-style-type: none"> <input type="checkbox"/> Stop, Think, Act, Review (STAR). <input type="checkbox"/> Verbalize intent before, during, and after each task. 4. Establish clear communications. <ul style="list-style-type: none"> <input type="checkbox"/> Limit unnecessary chatter, move bystanders away. <input type="checkbox"/> Shutdown/slow down noise-producing machinery. <input type="checkbox"/> Use three-way communication methods: verbal repeat back of all procedure steps before execution, and verbal confirmation that each step is complete. <input type="checkbox"/> Use of the phonetic alphabet for clarity. 5. Stop when unsure. <ul style="list-style-type: none"> <input type="checkbox"/> Verify initial conditions prior to starting a procedure, and final conditions at the end. <input type="checkbox"/> Establish hold points to verify conditions. <input type="checkbox"/> Stop and obtain further direction when unable to follow a procedure or process step or if something unexpected occurs. <input type="checkbox"/> Maintain a questioning attitude. 6. Flagging and Blocking. <ul style="list-style-type: none"> <input type="checkbox"/> Identify (flag) equipment and controls that will .be operated or opened. <input type="checkbox"/> Prevent access (block) to equipment and controls that should not be operated or opened.
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