Work scope details:

Title: BL5 DD Chopper Shielding Mockup

Work Scope Summary: - The task involves assembling a wooden mockup of the proposed DD chopper shielding and installing it at BL5 to test its fitting.

Key Work Scope Components: - Assembly of wooden mockup - Proposed DD chopper shielding design - Installation at BL5 - Test fitting of the mockup

Relevant previous events and lessons learned:

Event Title	Event Summary	Lessons Learned	Reference link
Worker Fatality in Schenectady	A 23-year-old worker was killed on his first day at a tree service company in Schenectady, New York, in May 2016. He was instructed to feed tree parts into a wood chipper without prior training and was fatally pulled into the machine. The employer was cited by OSHA for safety violations related to the use of wood chippers and lack of proper training for employees during equipment installation and operation.	Ensure proper training and safety protocols are in place before operating machinery. Emphasize the importance of supervision and safety measures during equipment installation and operation.	Link
Fatal Accident with Veneer Chipper Fan	OSHA reports a fatal accident where an employee was struck and killed by a veneer chipper fan (wood shaper) during workplace operations. The summary provides details about the employee's exposure to mechanical key hazards during machinery installation or testing but is brief on carpentry-specific roles or mockup/test fitting context.	Highlight the need for identifying mechanical hazards and implementing safety measures during machinery installation and testing.	Link
Training Scenario with Wood Chipper	A training scenario depicted and investigated by OSHA and the FACE program shows a worker fatally injured while feeding branches into a wood chipper during a test fitting operation. A climbing rope became entangled in the chipper, pulling or throwing the worker into the machine and breaking his neck. Investigators highlighted the need for safety watches and proper installation/inspection protocols before operating or test fitting with dangerous equipment.	Implement safety watches and thorough inspection protocols before operating or test fitting with hazardous equipment.	Link

Missing Hazards:

Hazard	Missing or Inadequate Mitigation in Current Work Control Document	Recommended Mitigation for Revision	Reference link	SBMS Link
Lack of proper training and supervision during assembly and installation	No mention of training and supervision protocols in the current document	Implement comprehensive training programs and supervision protocols for assembly and installation processes	OSHA Safety Management, Assembly Line Safety Practices, Ensuring Safety in Assembly Line Work	Link
Mechanical hazards during installation and test fitting	Lack of detailed risk assessment for mechanical hazards	Conduct structured Hazard Identification and Risk Assessment (HIRA) for mechanical hazards during installation and test fitting	Equipment Installation and Commissioning HIRA, Mechanical Machinery Hazards, EHS Risk Assessments	Link
Time pressures and high workload	No strategies to manage workload and time pressures	Implement workload management strategies and ensure adequate staffing to prevent time-related stress	Weblio, Weblio Example Sentences, Weblio Sentence Content	Link
Distractive environment and imprecise communications	No controls for minimizing distractions and improving communication	Implement hierarchy of hazard controls to minimize distractions and establish clear communication protocols	Hierarchy of Hazard Controls, CCOHS Hazard Controls, OSHA Regulations	Link
First-time evolution and vague guidance	No specific guidance for new processes or unclear instructions	Develop clear guidelines and procedures for new processes and ensure clarity in instructions	Weblio, Weblio Example Sentences, Weblio Sentence Content	Link
Failure to implement safety watches and inspection protocols	No mention of safety watches and inspection protocols	Establish regular safety watches and inspection protocols to identify and mitigate hazards	OSHA Hazard Prevention, Common Hazards During Safety Inspections, Essential Hazard Control Strategies	Link
Inadequate use of Personal Protective Equipment (PPE)	No specific mention of PPE use and protocols	Ensure proper use of PPE through training and enforcement of PPE protocols	Weblio, Weblio Example Sentences, Weblio Sentence Content	Link

Failure mode analysis:

Current control	Failure mode of the control	Effect of Failure	Cause of Failure	Recommended action
Written permits for the work activity	Permit not obtained or expired	Unauthorized work leading to safety hazards	Oversight or miscommunication	Implement a checklist to verify permit status before work begins
Precautions, step warnings, Hold Points	Steps not followed or ignored	Increased risk of accidents or incomplete work	Lack of training or awareness	Conduct mandatory training sessions and enforce adherence to procedures
Personal Protective Equipment (PPE)	PPE not used or inadequate	Increased risk of injury	Lack of availability or awareness	Ensure PPE availability and conduct PPE compliance audits
Work instructions for information	Instructions not followed or misunderstood	Incorrect assembly or installation	Vague instructions or language barriers	Simplify and clarify instructions; provide translations if necessary
ORNL subject area requirements	Non-compliance with specific requirements	Regulatory non-compliance and potential fines	Lack of awareness or updates	Regularly update and communicate requirements to all team members
Discuss group/individual responsibilities	Miscommunication of roles	Task overlap or neglect leading to delays	Poor communication or unclear roles	Conduct pre-job briefings to clarify roles and responsibilities
Follow work instructions & safety procedures	Deviations from procedures	Safety incidents or quality issues	Time pressure or overconfidence	Reinforce the importance of procedure adherence through regular reminders
Availability/location of materials, tools, etc.	Materials/tools not available when needed	Delays in project timeline	Poor inventory management	Implement a robust inventory tracking system
Previous experiences / lessons learned	Lessons not applied	Repeat of past mistakes	Lack of documentation or review	Document lessons learned and review them before similar projects
Response if work cannot be performed as planned	Inadequate contingency plans	Project delays or safety risks	Lack of foresight or planning	Develop and communicate contingency plans for potential issues

Potential error traps with the job	Error traps not identified	Increased likelihood of errors	Lack of experience or oversight	Conduct error trap analysis and implement preventive measures
Take a minute before: work start & leaving work area	Skipping the pause for safety	Increased risk of accidents	Time pressure or complacency	Enforce mandatory safety pauses and monitor compliance
Work Hand-off / Turnover	Poor communication during hand-off	Misunderstandings leading to errors	Lack of standardized hand-off procedures	Develop and implement a standardized hand-off protocol
Stop Work: Unsafe act or condition	Failure to stop work when necessary	Continued unsafe conditions	Lack of empowerment or awareness	Empower workers to stop work and provide training on recognizing unsafe conditions
Emergency Response	Inadequate emergency response	Increased severity of incidents	Lack of training or unclear procedures	Conduct regular emergency response drills and update procedures as needed