

**Work scope details:**

Title: Mock-Up for 7920 Tank Pit Repairs at Building 7930

Work Scope Summary: - The work involves setting up a mock-up area on the third floor of Building 7930, directly above the Truck Bay, to practice using seven 24-foot extension tools. This practice session is intended to prepare workers for repairs at the 7920 tank pit by simulating the working conditions, including overhead clearance and the use of a scissor lift, to ensure safety and efficiency in a hazardous environment.

Key Work Scope Components: - Selection of the third floor of Building 7930 for mock-up due to overhead clearance. - Practice and familiarization with seven 24-foot extension tools. - Use of an approved scissor lift to simulate working conditions. - Preparation for work in the hazardous environment of the 7920 tank pit. - Ensuring worker safety and efficiency through practice in a controlled environment.

**Relevant previous events and lessons learned:**

Event Title	Event Summary	Lessons Learned	Reference link
Laborer Severely Injured in Fall from Scissor Lift	A construction laborer fell 60 feet due to a gap between the scissor lift and the building. The scissor lift had a broken deck extension locking pin, causing the platform to retract and the worker to fall.	Ensure all equipment is in proper working condition, particularly safety mechanisms like locking pins, to prevent accidents.	<a href="#">Link</a>
Use of Mockups in Demolition Planning	Mockups are recommended for developing task plans and training workers in complex or hazardous environments.	Utilize mockups to enhance worker preparedness and safety in hazardous tasks.	<a href="#">Link</a>
Recurring Fall Protection Violations Involving Activities Using Scissor Lifts	Multiple incidents of workers exceeding scissor lift boundaries without fall protection. Immediate actions were taken, and a causal analysis was initiated.	Implement strict adherence to fall protection protocols and conduct regular training to prevent boundary violations.	<a href="#">Link</a>
Scissor Lift Collapse in Clearwater, Florida	A scissor lift collapsed, resulting in one fatality and one injury during construction.	Regular maintenance and inspection of scissor lifts are crucial to prevent structural failures.	<a href="#">Link</a>
Overview of Scissor Lift Accidents	Overview of serious and fatal injuries from scissor lift accidents, highlighting falls, tip-overs, and lack of compliance with safety standards.	Emphasize compliance with OSHA standards and provide comprehensive training to reduce accidents.	<a href="#">Link</a>
OSHA Database on Scissor Lift Accidents	Database of workplace accidents involving scissor lifts, including falls and improper use of extension tools.	Use the database to identify trends and improve safety measures in hazardous environments.	<a href="#">Link</a>

**Missing Hazards:**

Hazard	Missing or Inadequate Mitigation in Current Work Control Document	Recommended Mitigation for Revision	Reference link	SBMS Link
Ergonomic Stress	No mention of ergonomic assessments or controls	Conduct ergonomic assessments, provide special tools, and implement worker rotation and stretch breaks	N/A	<a href="#">Link</a>
Hazardous Energy Sources	No specific controls for hazardous energy sources	Implement Lock/Tag/Verify procedures and manage subcontractor/vendor work	N/A	<a href="#">Link</a>
Fall from Scissor Lift	No specific mention of scissor lift fall hazards	Implement specific fall protection measures for scissor lifts	<a href="#">OSHA Scissor Lift Safety</a>	<a href="#">Link</a>
Equipment Malfunction (Scissor Lift)	No mention of equipment malfunction controls	Conduct regular maintenance checks and ensure proper training for scissor lift operation	<a href="#">Herc Rentals Safety</a>	<a href="#">Link</a>
Improper Use of Extension Tools	No mention of extension tool hazards	Implement lockout/tagout procedures and regular inspections of extension tools	<a href="#">OSHA Electrical Safety</a>	<a href="#">Link</a>
Inadequate Safety Compliance	No mention of compliance evaluation	Regularly review and update safety compliance measures and involve workers in evaluations	<a href="#">OSHA Hazard Prevention</a>	<a href="#">Link</a>
Inadequate Training and Familiarization	No mention of training for specific equipment	Ensure all operators are fully trained and certified for specific equipment	<a href="#">Covectr Training</a>	<a href="#">Link</a>

**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 administrative error	Implement a permit tracking system and conduct regular audits
Precautions, step warnings, Hold Points	Steps not followed or ignored	Increased risk of accidents or injuries	Lack of awareness or training	Conduct regular training and enforce compliance checks
Personal Protective Equipment (PPE)	PPE not worn or inadequate	Exposure to hazardous conditions	Non-compliance or insufficient supply	Ensure PPE availability and enforce mandatory usage
Work instructions for information	Instructions not followed or misunderstood	Inefficient or unsafe work practices	Poor communication or unclear instructions	Simplify instructions and conduct briefings before work
ORNL subject area requirements	Non-compliance with requirements	Legal and safety violations	Lack of knowledge or oversight	Regular training and compliance audits
Group/individual responsibilities	Roles not understood or executed	Confusion and potential safety breaches	Poor communication or unclear roles	Define roles clearly and conduct role-specific training
Availability/location of materials, tools	Tools/materials not available or misplaced	Delays and potential safety risks	Poor inventory management	Implement inventory control and pre-checks
Response if work cannot be performed as planned	Inadequate response to changes	Increased risk of accidents or delays	Lack of contingency planning	Develop and communicate contingency plans
Potential error traps	Error traps not identified or mitigated	Increased likelihood of errors	Lack of awareness or analysis	Conduct error trap analysis and implement mitigations
Work Hand-off / Turnover	Poor hand-off leading to miscommunication	Errors or safety incidents	Lack of structured hand-off process	Implement structured hand-off protocols
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
Emergency Response	Inadequate emergency response	Increased severity of incidents	Lack of planning or training	Develop and drill emergency response plans