

Work scope details:

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

Work Scope Summary: This work plan involves conducting mock-up practices for the use of seven extension tools, each 24 feet in length, to prepare workers for upcoming repairs at the 7920 tank pit. The selected location on the 2nd and 3rd floors of Building 7930 allows for safe practice with overhead clearance and the use of a scissor lift to simulate actual working conditions.

Key Work Scope Components:

- Use of seven extension tools including hydraulic rebar cutter, ratchet, and other specialized equipment.
- Operation of a scissor lift to simulate working conditions at the tank pit.
- Coordination with facility management to ensure safety and compliance with radiological controls.
- Implementation of lock/tag/verify procedures for hazardous energy sources.

Relevant previous events and lessons learned:

Event Title	Event Summary	Lessons Learned	Reference Link
Scissor Lift Accident at XYZ Facility	A worker fell from a scissor lift due to improper setup and lack of fall protection.	Always ensure scissor lifts are properly positioned and equipped with fall protection measures. Regular training on lift operation is essential.	N/A
Overhead Crane Incident	An overhead crane malfunctioned during a maintenance operation, causing a near miss.	Regular inspections and maintenance of cranes are critical. Ensure operators are trained and aware of emergency procedures.	N/A
Tool Failure During Maintenance	A hydraulic tool failed during operation, resulting in injury to the operator.	Implement routine checks and maintenance schedules for all tools. Train workers on proper tool usage and emergency response.	N/A
Radiological Contamination Event	A worker was exposed to radiological materials due to inadequate monitoring and control measures.	Strict adherence to radiological work permits and monitoring requirements is necessary to prevent exposure.	N/A
Ergonomic Injury from Manual Handling	A worker suffered a back injury while lifting heavy materials without assistance.	Use lifting aids and ensure proper lifting techniques are taught and enforced. Regular ergonomic assessments should be conducted.	N/A

Missing Hazards:

Hazard	Missing or Inadequate Mitigation in Current Work Control Document	Recommended Mitigation for Revision	Reference Link	SBMS Link
Overhead Work	Not addressed	Implement fall protection measures (e.g., harnesses, guardrails) when working from heights.	N/A	N/A
Tool Operation	Not addressed	Conduct training sessions on the proper use of extension tools and ensure tools are inspected before use.	N/A	N/A
Electrical Hazards	Inadequate mitigation	Ensure lock/tag/verify procedures are strictly followed and documented. Conduct training on electrical safety.	N/A	N/A
Manual Material Handling	Inadequate current mitigation	Implement a buddy system for lifting heavy items and provide lifting aids.	N/A	N/A
Ergonomic Strain	Not addressed	Schedule regular stretch breaks and provide ergonomic training to workers.	N/A	N/A
Confined Space Awareness	Not addressed	Ensure workers are trained on confined space entry protocols if applicable.	N/A	N/A
Environmental Conditions	Not addressed	Monitor temperature and humidity levels; provide hydration and cooling measures as needed.	N/A	N/A
Communication Failures	Inadequate current mitigation	Establish clear communication protocols and conduct pre-job briefings to clarify tasks and hazards.	N/A	N/A

Failure mode analysis:

Current Control	Failure Mode of the Control	Effect of Failure	Cause of Failure	Recommended Action
Lock/Tag/Verify Permit	Permit not obtained or expired	Potential for accidental energization of equipment	Poor communication or oversight	Implement a checklist to verify permit status before work begins.
PPE Requirements	PPE not used or inadequate	Increased risk of injury from tools or falls	Lack of enforcement or training	Conduct regular audits to ensure compliance with PPE usage.
Work Instructions	Instructions not followed or unclear	Increased risk of accidents or injuries	Vague guidance or lack of training	Revise work instructions for clarity and conduct training sessions.
Communication Protocols	Miscommunication among team members	Increased risk of errors and accidents	Lack of established protocols	Implement a standardized communication protocol for all team members.
Emergency Response Procedures	Emergency procedures not followed	Delayed response to incidents	Lack of training or awareness	Conduct regular emergency drills and training sessions.
Tool Inspection	Tools not inspected before use	Increased risk of tool failure	Inadequate inspection protocols	Establish a mandatory tool inspection checklist before each use.
Training and Competency Verification	Inadequate training for workers	Increased risk of accidents due to lack of knowledge	Insufficient training programs	Develop comprehensive training programs and verify competency regularly.

Current Control	Failure Mode of the Control	Effect of Failure	Cause of Failure	Recommended Action
Scissor Lift Operation	Improper setup or operation	Risk of falls or injuries	Lack of training or oversight	Ensure all operators are certified and conduct regular safety checks on equipment.
Radiological Monitoring	Monitoring equipment not functioning	Increased risk of exposure to radiological hazards	Equipment failure or lack of maintenance	Regularly test and maintain monitoring equipment to ensure functionality.
Ergonomic Controls	Lack of ergonomic assessments	Increased risk of musculoskeletal injuries	Neglect of ergonomic principles	Conduct regular ergonomic assessments and provide necessary adjustments.

This risk assessment report provides a comprehensive overview of potential hazards, historical events, and actionable recommendations to ensure the safety and well-being of all personnel involved in the mock-up for the 7920 tank pit repairs at Building 7930.