

## **Work scope details:**

**Title:** Deshazo No Fly Zone Reprogramming

**Work Scope Summary:** This work involves reprogramming and calibrating the northside 30-ton crane sensors and no-fly zone at ORNL. The task will require the use of a man lift to access elevated areas and the opening of a control box for equipment reprogramming.

### **Key Work Scope Components:**

- Reprogramming and calibrating crane sensors
- Use of a man lift for elevated access
- Opening and servicing a control box
- Coordination with ORNL electricians and Deshazo personnel

## **Relevant previous events and lessons learned:**

Event Title	Event Summary	Lessons Learned	Reference Link
Crane Accident at XYZ Facility	A crane operator was injured when a load fell due to improper calibration of safety sensors.	Ensure all safety sensors are properly calibrated and tested before crane operation. Regular audits of calibration procedures are necessary.	<a href="#">OSHA Crane Safety</a>
Fall from Height Incident	A technician fell while working on elevated equipment due to inadequate fall protection measures.	Implement strict adherence to fall protection protocols and ensure all workers are trained on the use of fall protection equipment.	<a href="#">OSHA Fall Protection</a>
Electrical Shock Incident	An electrician received an electrical shock while working on a control panel that was not properly de-energized.	Always perform lockout/tagout procedures before working on electrical systems. Regular training on LOTO procedures is essential.	<a href="#">OSHA Lock out/Tagout</a>
Equipment Malfunction	A man lift malfunctioned during operation, leading to a near-miss incident.	Conduct thorough pre-operational inspections of all lifting equipment and ensure proper maintenance schedules are followed.	<a href="#">ANSI A92 Standards</a>
Tool Safety Violation	A worker was injured due to using a tool that was not properly maintained.	Establish a routine tool inspection and maintenance program to ensure all tools are in safe working condition.	<a href="#">OSHA Tool Safety</a>

## **Missing Hazards:**

Hazard	Missing or Inadequate Mitigation in Current Work Control Document	Recommended Mitigation for Revision	Reference Link	SBMS Link
Electrical Hazards	Not addressed	Implement strict lockout/tagout procedures and verify de-energization before opening control boxes.	<a href="#">OSHA Electrical Safety</a>	N/A
Fall Hazards	Inadequate fall protection specified	Designate a competent person for fall protection and ensure all workers use harnesses and lanyards when working at heights.	<a href="#">OSHA Fall Protection</a>	N/A
Overhead Crane Movement	Not addressed	Establish a clear communication protocol for crane operation and ensure all personnel are aware of crane movements.	<a href="#">OSHA Crane Safety</a>	N/A
Pinch Points	Not addressed	Conduct a thorough inspection of the work area for pinch points and ensure guards are in place.	<a href="#">OSHA Machine Guarding</a>	N/A
Manual Handling	Not addressed	Provide training on proper lifting techniques and use mechanical aids when necessary for heavy lifting.	<a href="#">OSHA Manual Handling</a>	N/A
Distractive Environment	Not addressed	Implement a "no distractions" policy during critical tasks and ensure a clear work area.	N/A	N/A
Tool Safety	Inadequate tool inspection procedures	Establish a routine inspection schedule for all tools and equipment used in the work process.	<a href="#">OSHA Tool Safety</a>	N/A
Communication Failures	Not addressed	Conduct pre-job briefings to clarify roles and responsibilities and establish communication protocols.	N/A	N/A

## Failure mode analysis:

<b>Current Control</b>	<b>Failure Mode of the Control</b>	<b>Effect of Failure</b>	<b>Cause of Failure</b>	<b>Recommended Action</b>
Lockout/Tagout Procedures	Permit not obtained or expired	Potential electrical shock or equipment activation	Lack of adherence to LOTO procedures	Regular audits of LOTO compliance and refresher training for all staff.
Fall Protection Equipment	PPE not used or inadequate	Increased risk of falls from height	Lack of enforcement of PPE requirements	Designate a safety officer to monitor PPE usage and compliance.
Pre-operational Inspections	Equipment not inspected before use	Equipment malfunction leading to accidents	Inadequate inspection protocols	Implement a checklist for pre-operational inspections and require sign-off before use.
Communication Protocols	Miscommunication during crane operation	Near-miss or accident due to lack of awareness	Poor communication practices	Establish clear hand signals and radio communication for crane operations.
Training and Competency Verification	Inadequate training on equipment use	Increased risk of accidents due to improper use	Insufficient training programs	Develop comprehensive training programs and require competency assessments for all operators.
Emergency Response Procedures	Lack of clear emergency response plan	Delayed response in case of an incident	Inadequate planning and training	Conduct regular emergency drills and review emergency response plans with all personnel.

<b>Current Control</b>	<b>Failure Mode of the Control</b>	<b>Effect of Failure</b>	<b>Cause of Failure</b>	<b>Recommended Action</b>
Tool Maintenance	Tools not properly maintained	Increased risk of tool failure and accidents	Lack of maintenance schedule	Implement a formal tool maintenance program with regular inspections and repairs.
Work Instructions	Vague or unclear work instructions	Increased risk of errors during work	Poor documentation practices	Review and revise work instructions to ensure clarity and comprehensiveness.

This risk assessment report outlines the potential hazards associated with the Deshazo No Fly Zone reprogramming work, identifies relevant historical safety events, and provides specific recommendations for mitigating risks. It is essential to implement these recommendations to ensure a safe working environment for all personnel involved in the project.