Work scope details:

Title: Replace failed Blemco Controller on the Hot water side of 8713 main AHU

Work Scope Summary: - The task involves replacing a malfunctioning Blemco Controller that is part of the hot water system in the main Air Handling Unit (AHU) at location 8713.

Key Work Scope Components: - Identification and removal of the failed Blemco Controller. - Installation of a new Blemco Controller. - Testing and verification of the new controller's functionality. - Ensuring the hot water system is operational post-replacement. - Documentation of the replacement process and any changes made.

Relevant previous events and lessons learned:

Event Title	Event Summary	Lessons Learned	Reference link
Worker Unexpectedly Sprayed With Hot Water Resulting in Small First Degree Burn	On September 27, 2018, a Logistics Division Central Shops employee was sprayed with hot water while performing maintenance on boiler system BHW-5, resulting in a first degree burn. The system was secured, and the worker received medical treatment.	This event emphasizes the need to evaluate past hazard assessments for low hazard work. The basis for grading hazards needs better definition.	Link
Unexpected Shutdown of Building 9720-82 Air Handling Unit (AHU)	On January 8, 2017, an AHU at Building 9720-82 failed due to a ground fault on the VFD. The unit was shut down properly after troubleshooting and correcting the issue.	Proper troubleshooting and adherence to procedures are crucial for resolving equipment failures effectively.	Link
Employee Injury During Hot Water System Leak Attempt	On March 7, 2019, an employee was injured while attempting to stop a leak in a hot water central heating system.	Ensure proper safety measures and training are in place when dealing with hot water systems to prevent injuries.	Link
Severe Thermal Burns During Hot Water Pipe Removal	On December 27, 2001, two employees suffered severe thermal burns during the removal of a hot water return pipe.	Highlight the importance of safety protocols and protective equipment when working with hot water systems.	Link

Missing Hazards:

Hazard	Missing or Inadequate Mitigation in Current Work Control Document	Recommended Mitigation for Revision	Reference link	SBMS Link

Electrical Hazards	Not specifically addressed beyond basic electrical work controls	Ensure guards and safety interlocking devices are functional, place warning signs, and use safe-holding safeguarding	OSHA Electrical Hazards	Link
Hot Water Exposure	Not addressed	Insulate or guard pipes carrying hot water, provide rest breaks in heat stress conditions, and use anti-scald devices	OSHA Hot Water Exposure	Link
Unexpected Equipment Activation	Partially addressed under Lock/Tag/Verify procedures	Implement comprehensive Hazardous Energy Control Program and ensure compliance with safety regulations	Hazardous Energy Control Program	Link
Ergonomic Strain	Not specifically addressed	Implement ergonomic assessments, replace heavy materials with lighter alternatives, and improve work policies	OSHA Ergonomic Hazards	Link
Time Pressure and Work Stress	Not addressed	Develop strategies to manage work stress, implement effective controls to protect workers from psychosocial hazards	NIOSH Psychosocial Hazards	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 risks	Oversight or administrative error	Ensure all permits are valid and reviewed before work begins
Personal Protective Equipment (PPE)	Inadequate or improper use of PPE	Increased risk of injury	Lack of training or awareness	Conduct PPE training and ensure proper PPE is available and used
Work instructions & safety procedures	Instructions not followed or misunderstood	Increased risk of errors and accidents	Poor communication or unclear instructions	Provide clear, detailed instructions and conduct pre-job briefings

Work Hand-off / Turnover	Poor communication during hand-off	Misunderstanding of task status, leading to errors	Lack of standardized hand-off procedures	Implement a standardized hand-off protocol with clear communication
Lockout/Tagout procedures	Failure to properly lockout/tagout equipment	Risk of accidental energization	Inadequate training or procedural lapses	Reinforce lockout/tagout training and audits
Exposure Assessment	Inaccurate risk assessment	Unidentified hazards leading to exposure	Insufficient data or analysis	Conduct thorough risk assessments and update regularly
Manual Material Handling	Improper handling techniques	Risk of musculoskeletal injuries	Lack of ergonomic training or aids	Provide ergonomic training and use lifting aids
Emergency Response Plan	Inadequate emergency procedures	Delayed response to incidents	Lack of training or unclear procedures	Regularly review and drill emergency response plans