Work scope details:

Title: Baker ADX Chopper Motor & Coil Test

Work Scope Summary: This work involves testing de-energized chopper motors and coils using the Baker ADX System. The procedure is designed to support motor troubleshooting and facilitate trend data collection as part of the Predictive Maintenance plan.

Key Work Scope Components:

• Testing of de-energized chopper motors and coils

• Use of Baker ADX testing equipment

• Implementation of safety protocols for electrical testing

• Establishment of clear boundaries and signage around the test area

Relevant previous events and lessons learned:

Event Title	Event Summary	Lessons Learned	Reference Link
Electrical Shock Incident at XYZ Facility	A technician received an electrical shock while testing a live circuit due to improper isolation procedures.	Always ensure that equipment is fully de-energized and isolated before testing. Use proper lockout/tagout procedures.	OSHA Electrical Safety
Equipment Failure During Testing	A testing device malfunctioned, leading to equipment damage and project delays.	Regular maintenance and inspection of testing equipment are crucial to prevent failures during critical operations.	NRC Equipment Safety
Improper Use of PPE	A worker sustained injuries due to not wearing required personal protective equipment while handling heavy equipment.	Ensure that all personnel are trained on the importance of PPE and that it is readily available and used at all times.	OSHA PPE Standards
Inadequate Training on Equipment Use	A worker misused testing equipment due to lack of training, resulting in inaccurate test results.	Comprehensive training programs must be established to ensure all operators are competent in using testing equipment.	ANSI Training Guidelines
Near Miss Due to Trip Hazard	A technician nearly tripped over unsecured test leads during a testing procedure.	Implement strict protocols for cable management to minimize tripping hazards in the work area.	N/A

Missing Hazards:

Hazard	Missing or Inadequate Mitigation in Current Work Control Document	Recommended Mitigation for Revision	Reference Link	SBMS Link
Electrical Shock	Not addressed	Implement strict lockout/tagout procedures and verify de-energization before testing.	OSHA Lock out/Tagout	N/A
Heavy Lifting	Not addressed	Require two-person lifts for the Baker ADX system and provide training on proper lifting techniques.	N/A	N/A
Tripping Hazards	Inadequate mitigation	Establish clear cable management protocols and ensure leads are secured and routed safely.	N/A	N/A
Inadequate PPE	Not addressed	Mandate the use of appropriate PPE (gloves, safety glasses) during testing procedures.	OSHA PPE	N/A
Poor Visibility	Not addressed	Ensure adequate lighting in the testing area and use reflective signage to enhance visibility.	N/A	N/A
Noise Exposure	Not addressed	Monitor noise levels and provide hearing protection if levels exceed permissible limits.	OSHA Noise	N/A
Confined Space	Not addressed	Assess for confined space hazards and implement monitoring and rescue procedures if applicable.	OSHA Confined Space	N/A
Time Pressures	Not addressed	Establish realistic timelines for testing to avoid rushing and potential errors.	N/A	N/A
Lack of Communication	Inadequate mitigation	Implement a communication plan to ensure all team members are aware of hazards and procedures.	N/A	N/A
Equipment Malfunction	Not addressed	Regularly inspect and maintain testing equipment to ensure functionality and safety.	N/A	N/A
Inexperience	Not addressed	Ensure all personnel are adequately trained and certified for the tasks they are performing.	ANSI Training	N/A

Hazard	Missing or Inadequate Mitigation in Current Work Control Document	Recommended Mitigation for Revision	Reference Link	SBMS Link
Overconfidence	Not addressed	Conduct regular safety briefings to remind workers of the importance of following procedures.	N/A	N/A

Failure mode analysis:

Current Control	Failure Mode of the Control	Effect of Failure	Cause of Failure	Recommended Action
Lockout/Tagout Procedures	Permit not obtained or expired	Risk of electrical shock or equipment damage	Lack of awareness or oversight	Ensure all personnel are trained on LOTO procedures and conduct regular audits.
PPE Requirements	PPE not used or inadequate	Increased risk of injury	Overconfidence or lack of enforcement	Conduct regular PPE inspections and enforce compliance through supervision.
Work Instructions	Instructions not followed	Increased risk of accidents	Vague guidance or miscommunication	Revise instructions for clarity and conduct pre-job briefings to ensure understanding.
Communication Processes	Poor communication among team members	Increased risk of errors	Lack of established communication protocols	Implement a standardized communication plan and conduct regular team meetings.

Current Control	Failure Mode of the Control	Effect of Failure	Cause of Failure	Recommended Action
Emergency Response Procedures	Emergency plan not known or practiced	Ineffective response to incidents	Lack of training or drills	Conduct regular emergency response drills and ensure all personnel are familiar with the plan.
Equipment Maintenance	Equipment not maintained	Increased risk of equipment failure	Inadequate maintenance schedule	Establish a routine maintenance program and document all inspections and repairs.
Training and Competency Verification	Lack of training for personnel	Increased risk of accidents	Inadequate training programs	Develop comprehensive training programs and require certifications for all operators.
Access Control	Unauthorized personnel in the test area	Increased risk of accidents	Lack of clear boundaries or signage	Establish clear access control measures and enforce them with physical barriers and signage.
Cable Management	Cables not secured	Trip hazards present	Lack of protocol for cable routing	Implement strict cable management procedures and conduct regular inspections.
Grounding Procedures	Improper grounding of equipment	Risk of electrical shock	Lack of awareness or training	Ensure grounding procedures are clearly defined and that all personnel are trained.

Current Control	Failure Mode of the Control	Effect of Failure	Cause of Failure	Recommended Action
Workload Management	High workload leading to rushed work	Increased risk of errors	Poor planning or scheduling	Implement workload assessments to ensure adequate time is allocated for tasks.
First-time Task	Inexperience with equipment	Increased risk of accidents	Lack of training or supervision	Pair inexperienced workers with mentors and provide additional training as needed.

This risk assessment report provides a comprehensive overview of the potential hazards associated with the Baker ADX Chopper Motor & Coil Test work plan, along with actionable recommendations to mitigate those risks. It is crucial to implement these recommendations to ensure the safety of all personnel involved in the testing process.