

Work scope details:

Title: Building 7965D Mold Remediation

Work Scope Summary: - This work package outlines the hazards and controls necessary for conducting mold remediation activities at Building 7965D. The project involves setting up a containment barrier for drywall removal, establishing ventilation controls, and performing a series of decontamination efforts. These efforts include the removal of drywall and ceiling tiles, cleaning of walls and floors, conducting pre- and post-air quality tests, cleaning the entire HVAC system, and installing self-adhesive film for floor protection.

Key Work Scope Components: - Setup of containment barrier for drywall removal - Establishment of ventilation controls connected to the containment barrier - Removal of drywall and ceiling tiles (both wet and dry) - Cleaning of walls and floors - Pre- and post-air quality testing - Cleaning of the entire HVAC system - Installation of self-adhesive film for floor protection

Relevant previous events and lessons learned:

Event Title	Event Summary	Lessons Learned	Reference link
Asbestos Containing Building Material Removed Without Following Requirements for Asbestos Work	During the week of February 22, 2016, a worker removed a wood-frame storage cage at Sector 1-14 of the Klystron Gallery, which involved the removal of drywall with joint compound that contained up to 2% asbestos. Neither the worker nor the Area Manager realized that the joint compound contained asbestos, leading to non-compliance with SLAC's asbestos work requirements.	Ensure thorough review of material reports and proper communication of hazardous material presence to all workers. Implement comprehensive training and adherence to safety protocols.	Link
Workplace Exposure to Mold: A Serious Respiratory Threat	Multiple workers at the New Jersey Lottery warehouse developed serious respiratory problems after exposure to moldy lottery tickets. Remediation required drywall removal and ceiling tile replacement to address airborne spores.	Implement regular air quality monitoring and timely remediation to prevent prolonged exposure. Ensure proper ventilation and use of protective equipment.	Link
Machine Operator Crushed Due to Lack of Lockout/Tagout Procedures	A 47-year-old machine operator was crushed between the plates of a plastic injection mold while performing maintenance work, due to a lack of proper lockout/tagout procedures.	Strict adherence to lockout/tagout procedures is critical to prevent accidents during maintenance. Regular safety audits and training are essential.	Link
Common Accidents in Remediation Work and How to Prevent Them	Industry analysis from 2024 highlights a spike in remediation-site accidents due to chemical exposure, inadequate air quality control, and improper PPE usage. Slips, trips, and falls frequently occur during drywall removal and equipment use.	Emphasize the importance of PPE, air quality control, and proper training to prevent chemical exposure and physical injuries. Regular safety drills and equipment checks are necessary.	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 in current controls	Ensure guards are in place, functional safety interlocking devices, warning signs, and adherence to manufacturer's operation manual	N/A	Link
Mold Exposure	Not addressed	Implement mold remediation procedures, recognize mold hazard conditions, and provide training on mold exposure symptoms and health effects	EPA Mold Guide , OSHA Mold Hazards , CDC Mold Evaluations	Link
Asbestos Contamination	Not addressed	Follow OSHA and EPA regulations for asbestos handling, provide training on health hazards, and implement protective measures	NIEHS Asbestos Guide , OSHA Asbestos Hazards	Link
Chemical Exposure	Not addressed	Implement hierarchy of controls for chemical exposure, including elimination, substitution, and engineering controls	OSHA Chemical Hazards , CDC Hierarchy of Controls	Link
Inadequate Ventilation	Not addressed	Ensure proper ventilation systems are in place to control airborne substances and hazardous gases	Navy Ventilation Guide	Link
Improper PPE Usage	Not addressed	Implement a comprehensive PPE program, provide training on proper usage, and regularly assess PPE compliance	OSHA PPE Program	Link

Slips, Trips, and Falls	Partially addressed under Elevated Work	Maintain walking areas, ensure proper lighting, and use non-slip footwear	OSHA Slips, Trips, Falls Prevention	Link
High Workload and Stress	Not addressed	Implement workload management strategies, provide stress management resources, and schedule high-exposure tasks during off-peak times	OSHA Hazard Prevention	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 violations	Miscommunication or oversight in permit management	Implement a digital tracking system for permit status and reminders
Personal Protective Equipment (PPE)	Inadequate or improper use of PPE	Increased risk of exposure to mold and contaminants	Lack of training or awareness	Conduct regular PPE training and audits
Work instructions for hazard introduction steps	Instructions not followed or misunderstood	Increased risk of accidents or exposure	Poor communication or lack of clarity in instructions	Simplify and clarify instructions; conduct pre-job briefings
Isolation of hazardous energy sources	Failure to isolate energy sources	Risk of electrical shock or equipment damage	Incomplete lockout/tagout procedures	Implement a double-check system for energy isolation
Inspecting Ladders Guide	Ladders not inspected or faulty	Risk of falls and injuries	Negligence or lack of inspection protocol	Establish a mandatory ladder inspection checklist
Pre-job brief using NNFD-FRM-058	Brief not conducted or incomplete	Lack of awareness of hazards and controls	Time constraints or oversight	Schedule mandatory pre-job briefs with attendance tracking
Containment barrier setup	Barrier not properly erected	Spread of mold and contaminants	Inadequate training or supervision	Provide detailed setup training and supervision
Ventilation controls	Ventilation not properly established	Poor air quality and spread of contaminants	Equipment failure or improper setup	Regular maintenance and testing of ventilation systems

Cleaning of HVAC system	Incomplete cleaning	Recirculation of mold spores	Inadequate cleaning procedures	Develop a comprehensive cleaning protocol with quality checks
Post-air quality testing	Testing not conducted or inaccurate	Undetected air quality issues	Faulty equipment or procedural errors	Use calibrated equipment and verify results with a second test