

**Work scope details:**

Title: Remove Ceiling Tile >1 Asbestos

Work Scope Summary: - The work involves the removal of ceiling tiles that contain more than 1% asbestos. This task requires careful handling and disposal of hazardous materials to ensure safety and compliance with relevant regulations.

Key Work Scope Components: - Identification of ceiling tiles containing asbestos - Safe removal of asbestos-containing ceiling tiles - Proper disposal of hazardous materials - Compliance with safety regulations and guidelines - Use of personal protective equipment (PPE) and safety protocols

**Relevant previous events and lessons learned:**

Event Title	Event Summary	Lessons Learned	Reference Link
Bldg. 169 Floor Tile Removal	<p>During D&amp;D activities at Building 169, workers used an electric saw to cut a portion of a floor, which later was found to have asbestos-containing material (ACM). As a precaution, the workers wore respiratory protection and full tyvek suits. An asbestos floor tile sample indicated negative results for ACM on the tile, but tested positive on the attached black mastic. Work was stopped, and the area was sealed off/posted as an ACM area. The Health and Safety Team believes that the workers were not exposed to asbestos. The entire floor will be removed as an ACM project.</p>	<p>Required asbestos exposure protections were not utilized in two instances at Hanford. A misunderstood verbal communication led workers to believe that all the asbestos hazards were removed when they weren't, and personnel without complete asbestos PPE entered a radiological buffer area (RBA) to seal and cover the containers.</p>	<a href="#">Link</a>
Ceiling Tile Incident	<p>An employee was holding a ladder for a sheet metal worker who was removing ceiling tile. Material fell from the ceiling, and the employee felt some of it get into her left eye. HPT surveyed the employee and found no contamination. The employee was wearing the specified PPE at the time.</p>	<p>Presume that fallen ceiling tiles contain asbestos until proven otherwise. Never assume that materials are asbestos-free; if a spill has taken place, material should be treated as Presumed Asbestos-Containing Material (PACM) until determined otherwise.</p>	N/A
Uncontrolled Asbestos Spread	<p>A self-employed roofing contractor, Stephen Wilks, was prosecuted for the uncontrolled spread of asbestos during the replacement of asbestos cement roof sheets on three garages. Workers improperly cleared asbestos debris without proper controls, leading to contamination. Mr. Wilks pleaded guilty for breaching UK asbestos safety regulations.</p>	<p>Proper safety compliance, PPE, and hazardous materials handling are crucial to prevent contamination and legal consequences.</p>	<a href="#">Link</a>

Fatal Fall Incident	A 29-year-old Hispanic laborer fatally fell through the roof of an old building during renovation work. The crew was unexpectedly assigned to work on the deteriorated roof without adequate safeguards, leading to the fatal fall.	Emphasizes the need for hazard recognition and the authority to refuse unsafe work.	<a href="#">Link</a>
Asbestos Worker Injury	An Ecuadorian asbestos and demolition worker was injured when an HVAC duct fell, causing him to fall six feet. The accident revealed a lack of safety compliance, and the worker settled for \$4 million.	Highlights the importance of providing proper fall protection, including guardrails on scaffolds.	<a href="#">Link</a>

**Missing Hazards:**

Hazard	Missing or Inadequate Mitigation in Current Work Control Document	Recommended Mitigation for Revision	Reference link	SBMS Link
Improper asbestos handling	No specific controls for improper handling	Implement strict handling procedures and training for safe asbestos handling	<a href="#">NJ Asbestos Regulations</a>	<a href="#">Link</a>
Falling debris during ceiling tile removal	Not addressed	Implement debris containment measures and PPE for ceiling tile removal	<a href="#">Ceiling Tile Removal Safety</a>	<a href="#">Link</a>
Inadequate PPE usage	General PPE guidelines, but not specific to all scenarios	Conduct regular PPE audits and training specific to tasks	<a href="#">Potentially Inadequate PPE</a>	<a href="#">Link</a>
Ladder safety issues	General ladder safety, but lacks specific hazard identification	Develop comprehensive ladder safety training and hazard identification	<a href="#">Ladder Safety Rules</a>	<a href="#">Link</a>
Miscommunication regarding asbestos presence	Not specifically addressed	Implement clear communication protocols and signage for asbestos presence	<a href="#">Asbestos Communication</a>	<a href="#">Link</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>
Written permits for the work activity	Permit not obtained or expired	Unauthorized work leading to regulatory non-compliance	Lack of permit review or oversight	Implement a permit tracking system and regular audits
Personal Protective Equipment (PPE)	PPE not used or inadequate	Exposure to asbestos, leading to health risks	Insufficient training or oversight	Conduct regular PPE training and inspections
Work instructions & safety procedures	Instructions not followed	Increased risk of accidents and exposure	Miscommunication or lack of understanding	Enhance training and communication of procedures
ORNL subject area requirements	Non-compliance with hazard controls	Regulatory penalties and unsafe work conditions	Lack of awareness or updates	Regularly update and communicate requirements
Discuss group/individual responsibilities	Responsibilities unclear	Ineffective task execution and safety breaches	Poor communication or documentation	Conduct pre-job briefings and clarify roles
Availability/location of materials, tools, etc.	Materials/tools unavailable	Delays and unsafe improvisation	Poor planning or inventory management	Implement inventory checks and planning meetings
Response if work cannot be performed as planned	Inadequate response plan	Increased risk of accidents or exposure	Lack of contingency planning	Develop and train on contingency plans
Training - Asbestos Worker	Workers not current in training	Increased risk of exposure and non-compliance	Training schedule not maintained	Implement a training tracking system
PPE & Access - Respiratory protection	Respiratory protection not specified or used	Health risks due to asbestos inhalation	Lack of specification or enforcement	Specify and enforce respiratory protection protocols
Approved HEPA Vacuum Cleaner	HEPA vacuum not used or malfunctioning	Ineffective cleanup leading to asbestos exposure	Equipment failure or improper use	Regular maintenance and checks of HEPA vacuums
Inspect ladder prior to use	Ladder not inspected	Falls and injuries	Neglect or lack of inspection protocol	Implement mandatory ladder inspection checklist