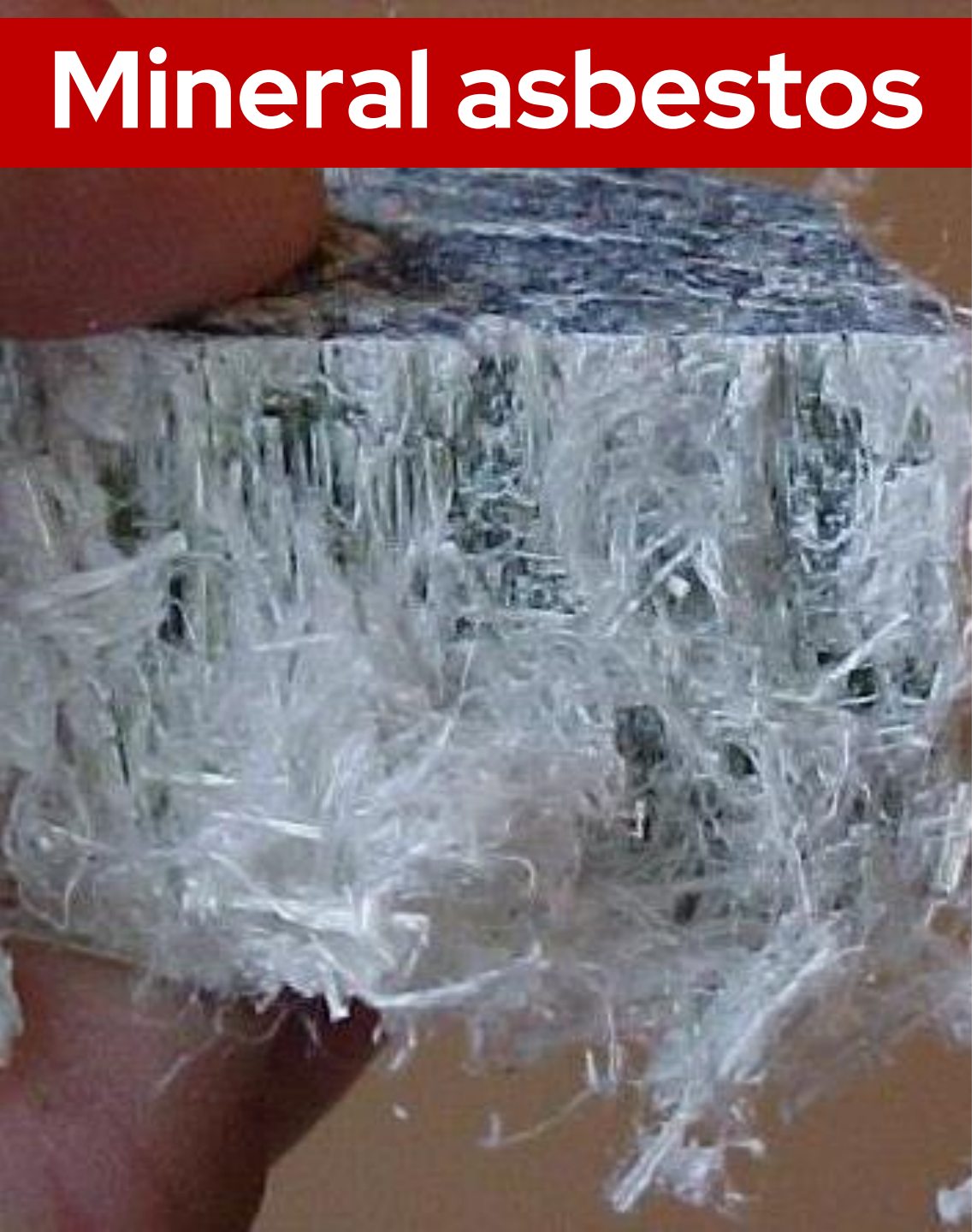
Hazardous Building Materials: Assessment & Abatement

January 7, 2025

Facilities Planning & Management
UNIVERSITY OF WISCONSIN–MADISON

Building Manager Lunch & Learn

Mineral asbestos



Asbestos and lead 100% natural!

Heat resistant | Insulating |
High fiber strength

- Ceiling and floor tiles
- Pipe wrap
- Siding
- Fire retardant
- Thermal and acoustic insulator

Asbestos and lead 100% natural

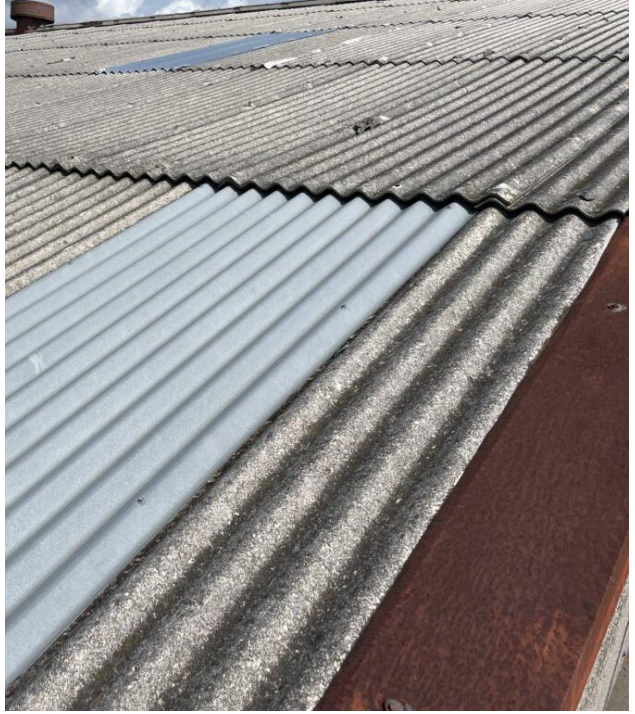
Durable & moisture resistant

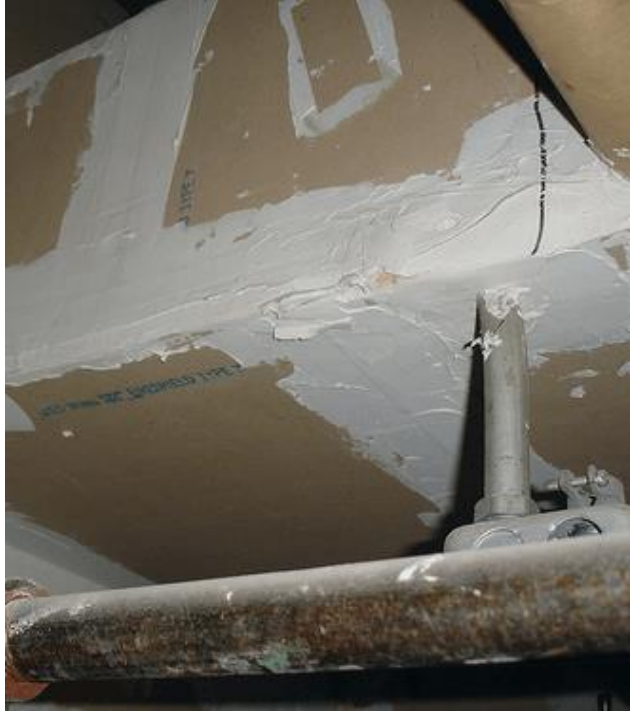
- Pipes
- Fittings
- Pigments
- Paints
- Solder
- Stained glass

Mineral lead

Three primary sources of asbestos on campus:

- Pipe wrap
- Floor tile and mastic (glues)
- Blown-in Insulation





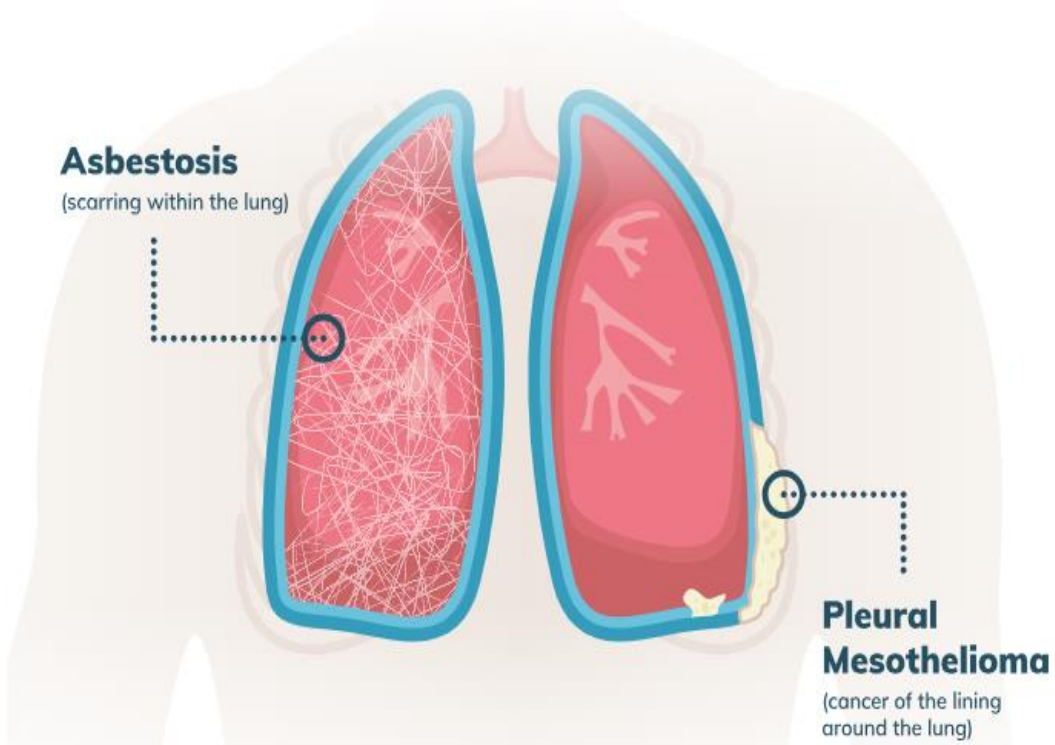
Other sources of asbestos

- Spray-on fireproofing and texturing
- Joint compound
- Wallboard / siding / transite
- Chalkboards / countertops
- Research furnaces and ovens

Health hazards of asbestos:

Why are we so particular about abatements?

Inhalation hazard is the biggest concern related to asbestos fibers



Common Symptoms in Mesothelioma and Asbestosis

Shortness of breath

Loss of weight and appetite

Persistent dry cough

General fatigue and weakness

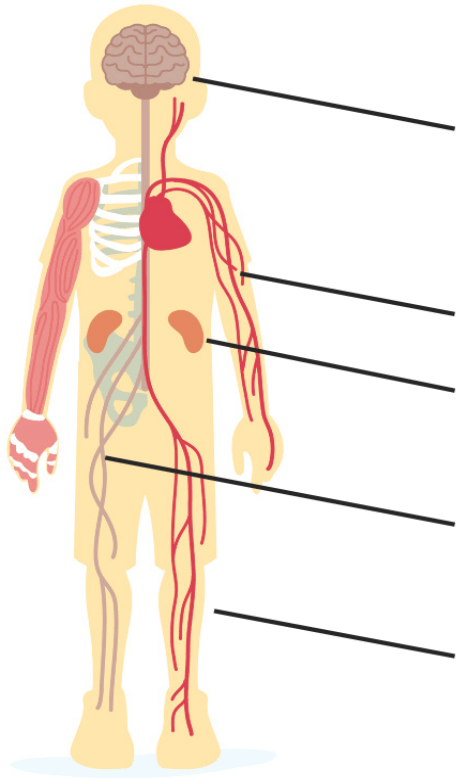
Chest pain and tightness

Potential sources of lead on campus

Health hazards of lead

Some of the damaging effects of lead exposure

There is no safe level of lead for children or adults. Symptoms of lead exposure may not appear, but damage can still occur. Lead poisoning can cause a coma, seizure or death, although that is rare.



EFFECTS ON CHILDREN

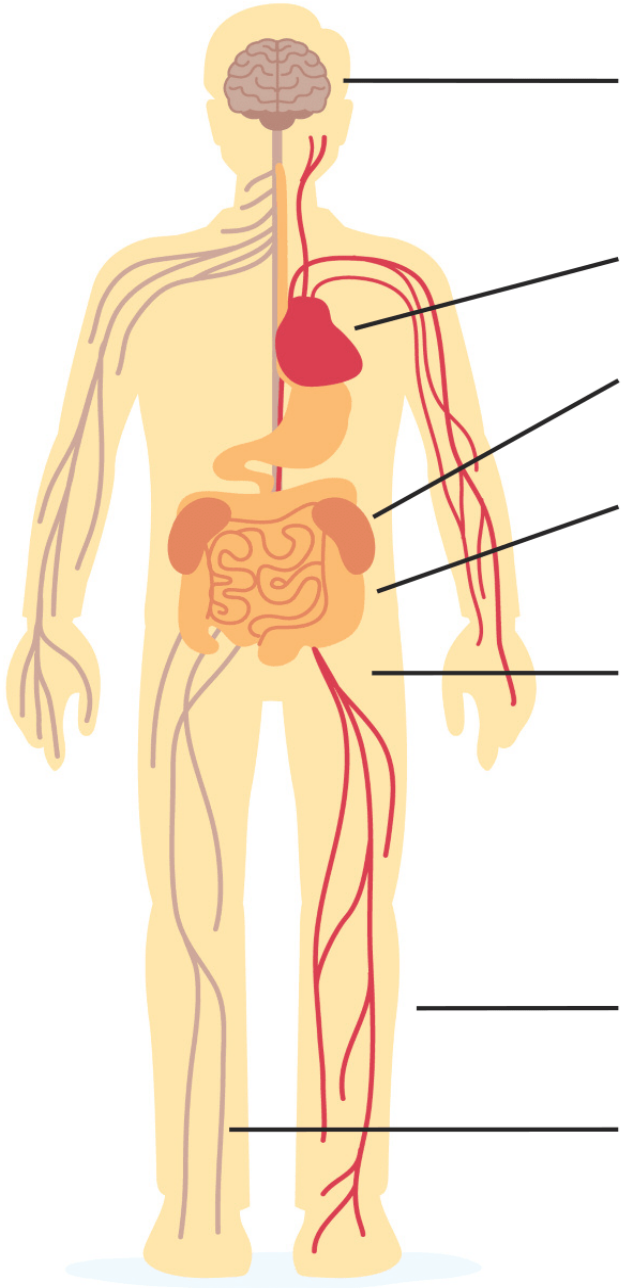
Brain: Behavior problems, lower IQ, hearing loss, learning disabilities

Blood: Anemia

Kidneys: Damage to the kidneys

Nervous system: Damage to the nervous system

Body: Decreased bone and muscle growth



EFFECTS ON ADULTS

Brain: Memory loss, lack of concentration, headaches, irritability, depression

Cardiovascular: High blood pressure

Kidneys: Abnormal function and damage

Digestive system: Constipation, nausea and poor appetite

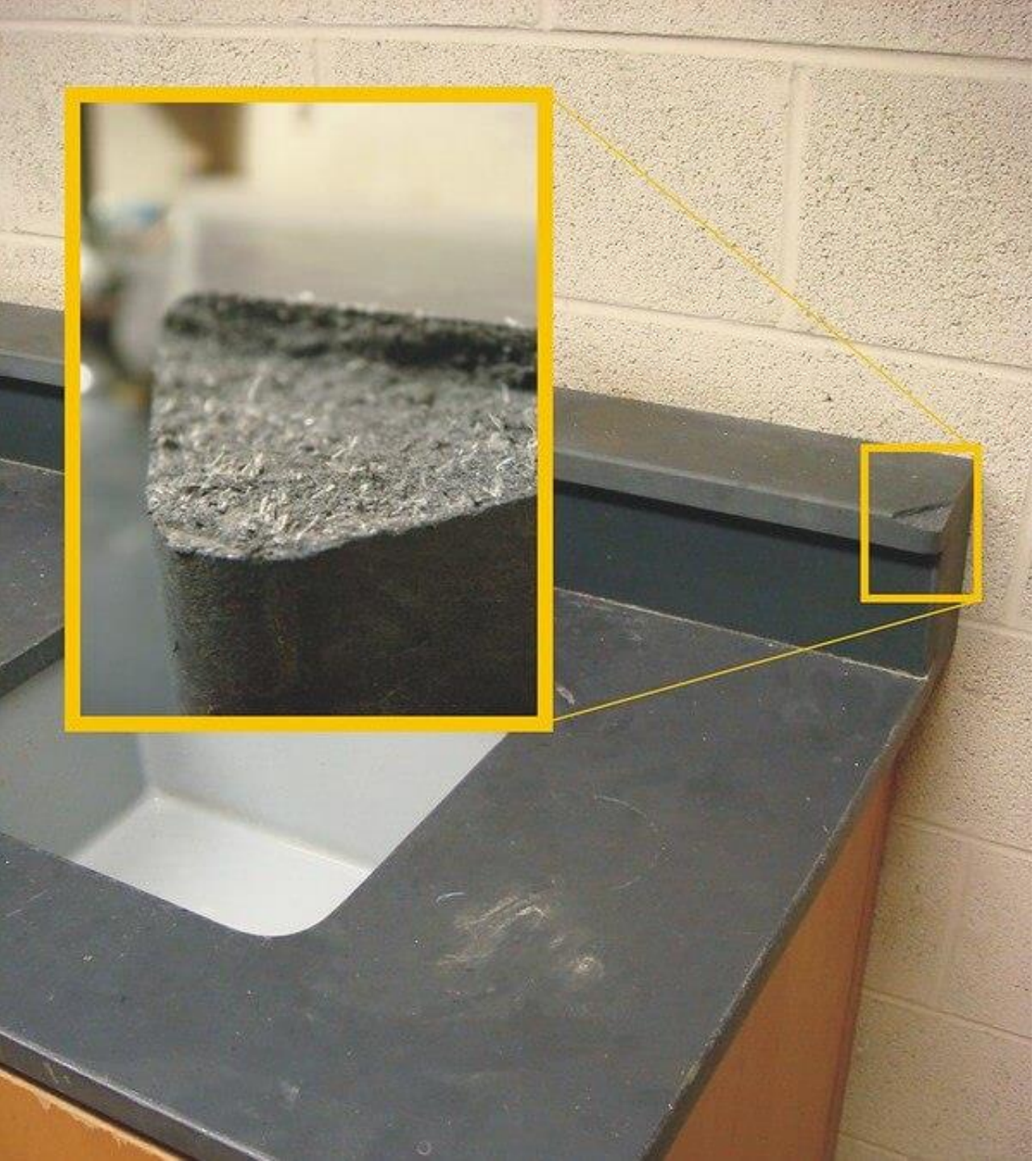
Reproductive system
Men: Decreased sex drive and sperm count, sperm abnormalities
Woman: Spontaneous miscarriage

Body: Fatigue, joint and muscle pain

Nervous system: Damage including numbness and pain in the extremities

Projects and HBM

- When to think about it?
- What types of projects need it?
- How does this all work?



Projects & Work Orders: When do you have to think about asbestos?

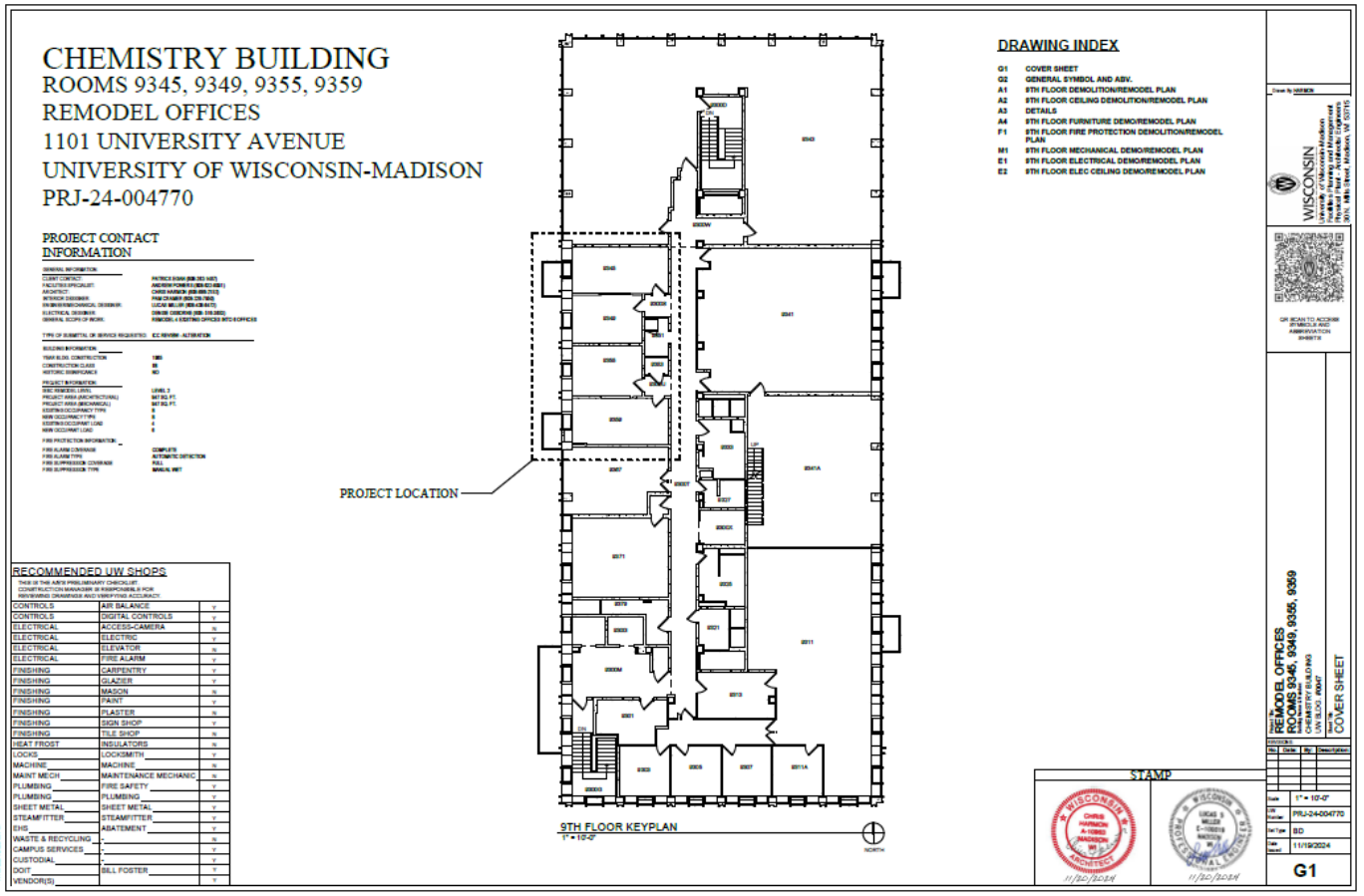
On any project that involves moving or damaging:

- Floor tiles
- Non-epoxy countertops or lab benches
- Steam lines
- Hot water lines
- Ceiling tiles, drywall, or window caulk

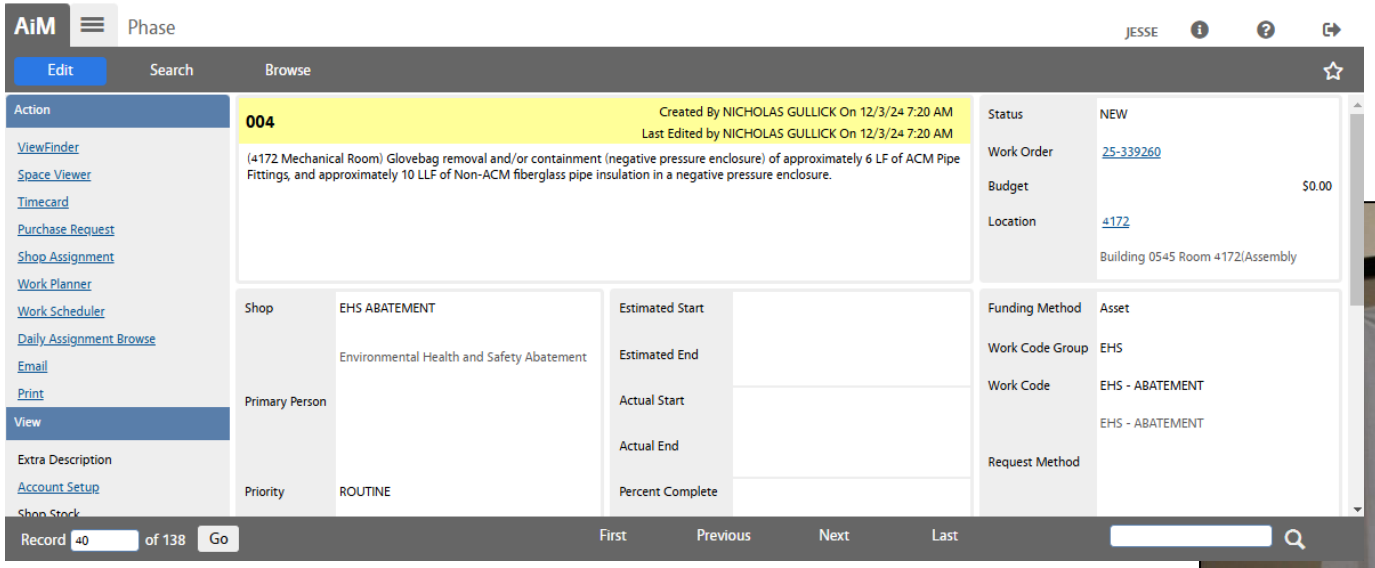
Projects:
Capital Project Team

- 100% of assessment and abatement work will be handled by a 3rd party contractor.
- UW's HBM Shop is unlikely to be involved

Projects: FP&M Architects & Engineers

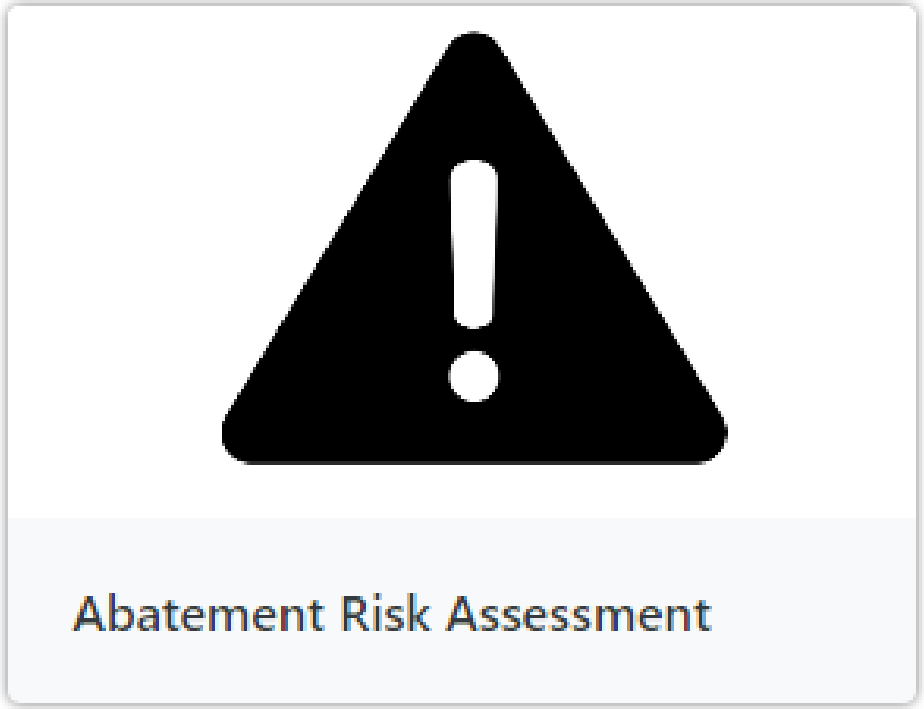


UW's HBM Shop provides assessments & coordinates abatements through the Project Manager.



Work Orders not from A&E

UW's HBM Shop provides assessments & coordinates abatements

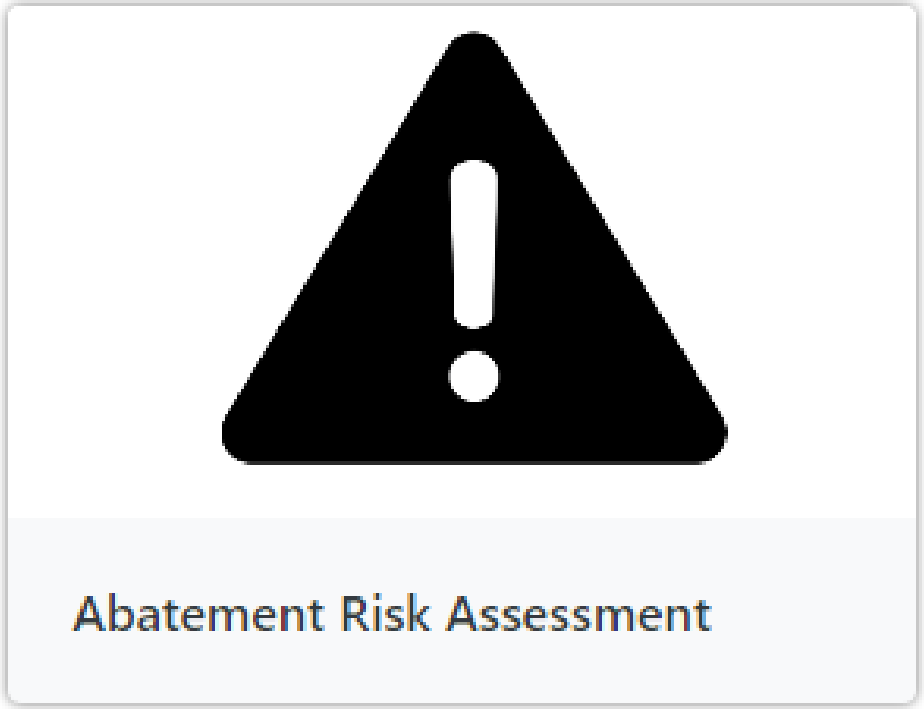


Assessments

Contact Physical Plant Customer Service

- Use the Abatement Risk Assessment Tile
- Request an assessment for asbestos/lead
- Provide pictures for the most accurate assessment

Assessments

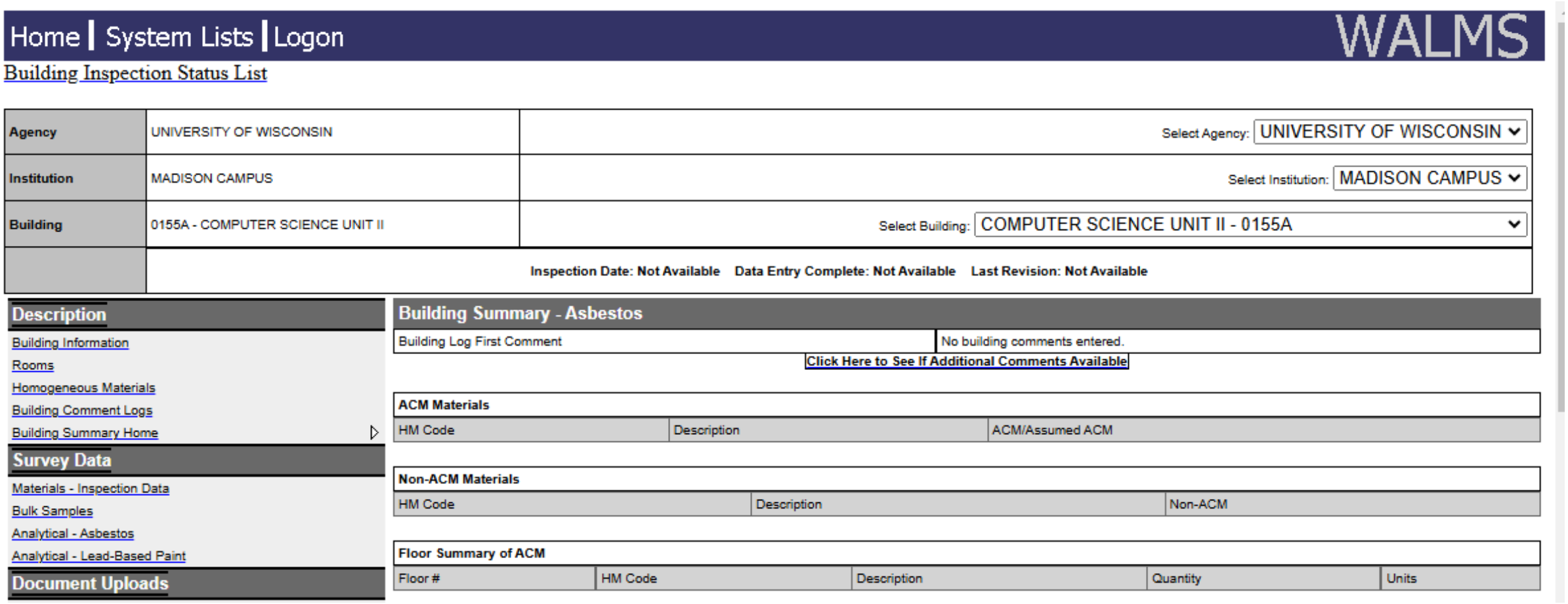


- Customer Service creates an assessment work order or phase within a work order for the HBM Team
- HBM Team receives the work order in AssetWorks
- Work order for assessment enters our queue for database review and/or physical sampling

Can we just email the HBM team directly?

abatement@fpm.wisc.edu

Assessment in WALMs



Assessments on site

Warning: Sampling is destructive!

- Floor tiles
- Wallboard
- Pipe wrap
- Drywall

Behind the scenes: Sampling

Samples are sent out for analysis

- State Lab of Hygiene for polarized light microscopy (PLM)
- EMSL Analytical in IL for transmission electron microscopy (TEM)
- Results can take 24 hrs. to 10+ days
- $100 – $300/sample

Assessment Results

- No asbestos detected
- Work may continue without abatement

Assessment Results

- Sample shows asbestos is present
- Work may not continue until the abatement is complete

Estimates & Proposals

- UW-Madison – AG Hall – Rooms 136,140,146 - Madison – Wisconsin – Mechanical Grinding
- UW-Project # PRJ-24-004748

This proposal is based on a verbal description of the areas and the estimated time and material involved in completing the project in conformance with government regulations.

Proposal: Asbestos Removal and Disposal – Mechanical Grinding

- Removal of approximately 1,920 Sq. Ft. of Carpeting, Floor Tile and Associated Mastic on Plywood.
  - Suite 140-140A, 140C, 140E, 140F, 140 G – Phase 2 Area.
  - Mastic to be removed using Mechanical Means.
  - Work activity will include grinding the wood floor for removal of associated mastic.
- Removal of approximately 1,201 Sq. Ft. of Carpeting, Floor Tile and Associated Mastic on Plywood.
  - Suite 146-146A, 146B, 146C, 146E, 146F – Phase 2 Area.
  - Mastic to be removed using Mechanical Means.
  - Work activity will include grinding the wood floor for removal of associated mastic.
- Removal of approximately 1,055 Sq. Ft. of Carpeting, Floor Tile and Associated Mastic on Plywood.
  - Suite 136-136A, 136B, 136D, 136E – Phase 3 Area.
  - Mastic to be removed using Mechanical Means.
  - Work activity will include grinding the wood floor for removal of associated mastic.

  - **UW-Madison will supply a certified electrician to wire in KPH power panel.**
  - All work to be field verified by KPH Environmental Corporation prior to on-site activity.
  - Upgrade to Flame Retardant Poly.
  - Negative Pressure Enclosures will be utilized for abatement activities.
  - 10-day Wisconsin Dept. of Natural Services Permit – $1,325.00 – Fee Included

Not to Exceed Cost Amount: **$30,600.00**

- Estimates are requested for the scope of work from UW approved abatement contractors
- The contractor may request a site visit to the location to view the scope of work

Assessment Results

- Customer agrees with the estimate
- Add abatement phase to the work order
- Purchase order is requested

SCHEDULING AWARENESS:
Lots of moving parts

1. 10-day DNR Notification Permit
2. Building occupants

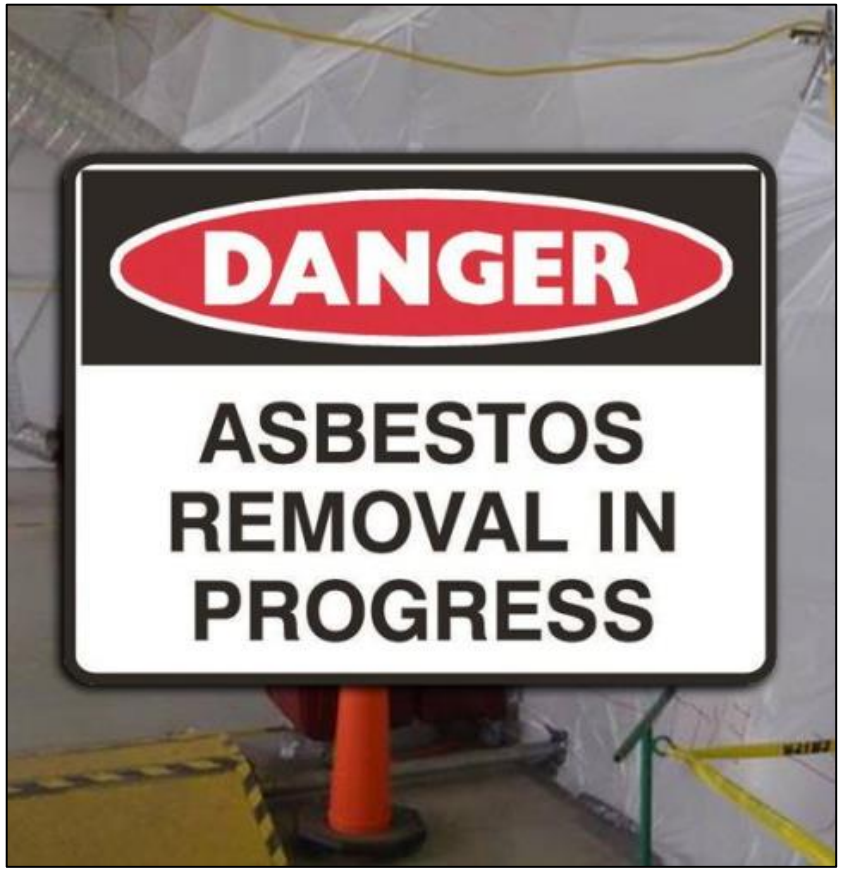
   Building Manager notifies the occupants!
3. Contractor
4. Physical Plant trades
5. HBM Licensed Abatement Inspector

Communication

- Sample results (is there a need for abatement)
- Abatement phase request
- Emails with Project Delivery Team and vendor to arrange
  - Scope
  - Estimate / contracted amount
  - Date(s) of work
  - Work is complete & approved

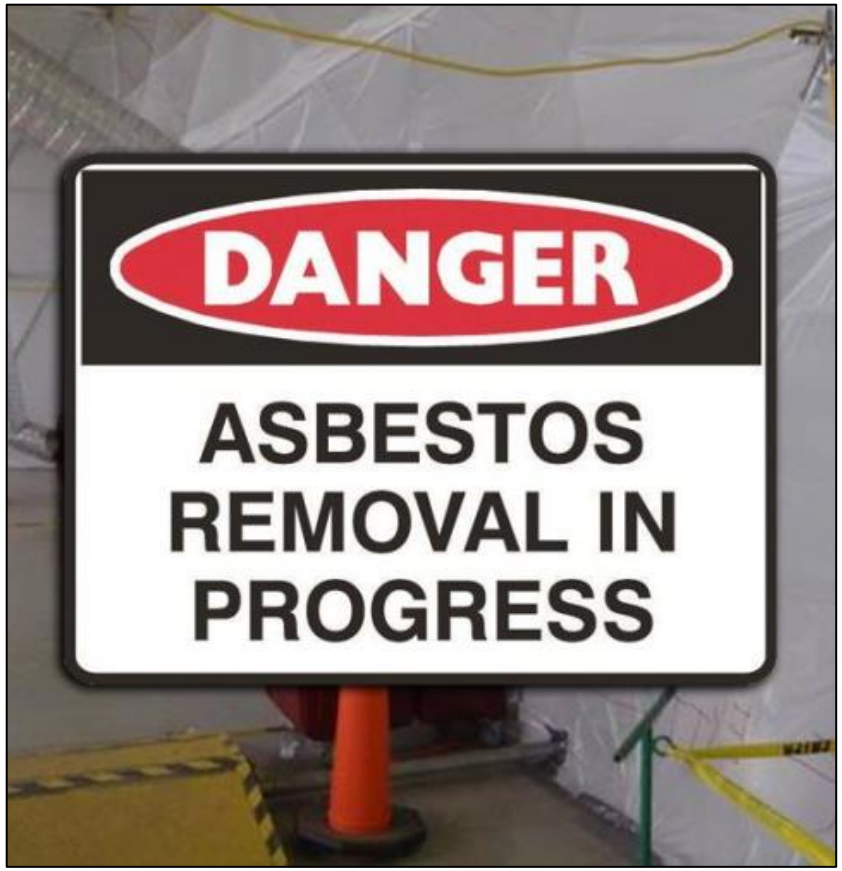
Abatement Oversight

- All contracted abatement is completed with oversight from the HBM Team
- Pre-site inspection to confirm contractor has all appropriate licensure, environmental controls to protect building occupants, and PPE for the abatement workers

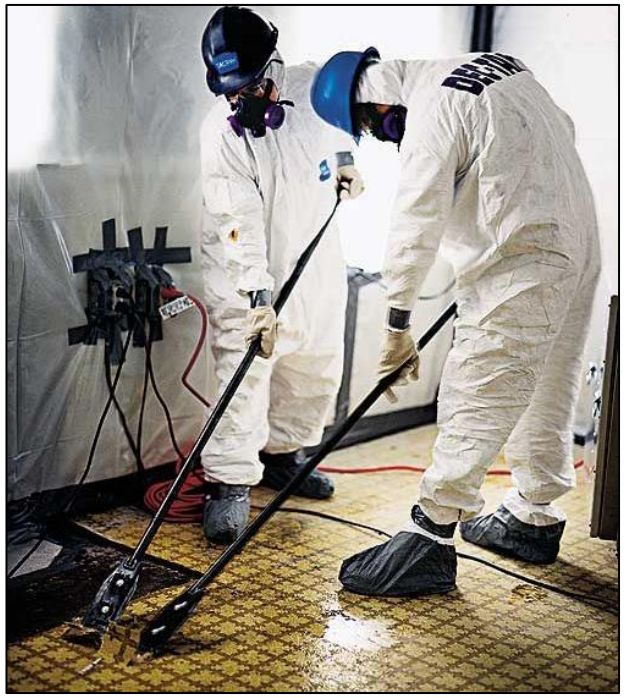


Abatement Oversight

- Air sampling may be conducted concurrently with abatement projects
- There is a clearance inspection to confirm contractors have completed the work as specified and the area is safe for continued use



In-house abatements by Carpentry/Glazers & Paint Shop



Asbestos

- Floor tiles
  - up to 120 sq. ft.
- Chalkboards
- Countertops
- ACM poured flooring repairs

Lead paint

- Small projects only

Costs:

The unit requesting the abatement pays – including change orders

- Mechanical spaces belong to FP&M and are covered by Physical Plant
- Work is approved for payment by HBM following clearance

Change Orders

Expect this

Find this

Need this

Behind the Scenes – Disposal

Contact information

- Jesse Decker | Director of Employee & Facility Safety
- Chris Heidel | HBM Coordinator
- Jillian Demus | HBM Specialist (beginning 01/13/2025)
- **FPM Abatement email – abatement@fpm.wisc.edu**

Hazard Building Material Abatements

Woooooooo!!!

Questions?

Jesse Decker
Director of Employee & Facility Safety

How did we do?

Please take this short survey

go.wisc.edu/building-manager-survey