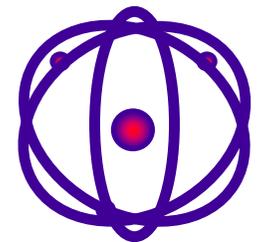

Asbestos - Yes, It's Still Around!

Presented by: Bob & Dave
Lake States Environmental, Ltd.
February 21, 2017

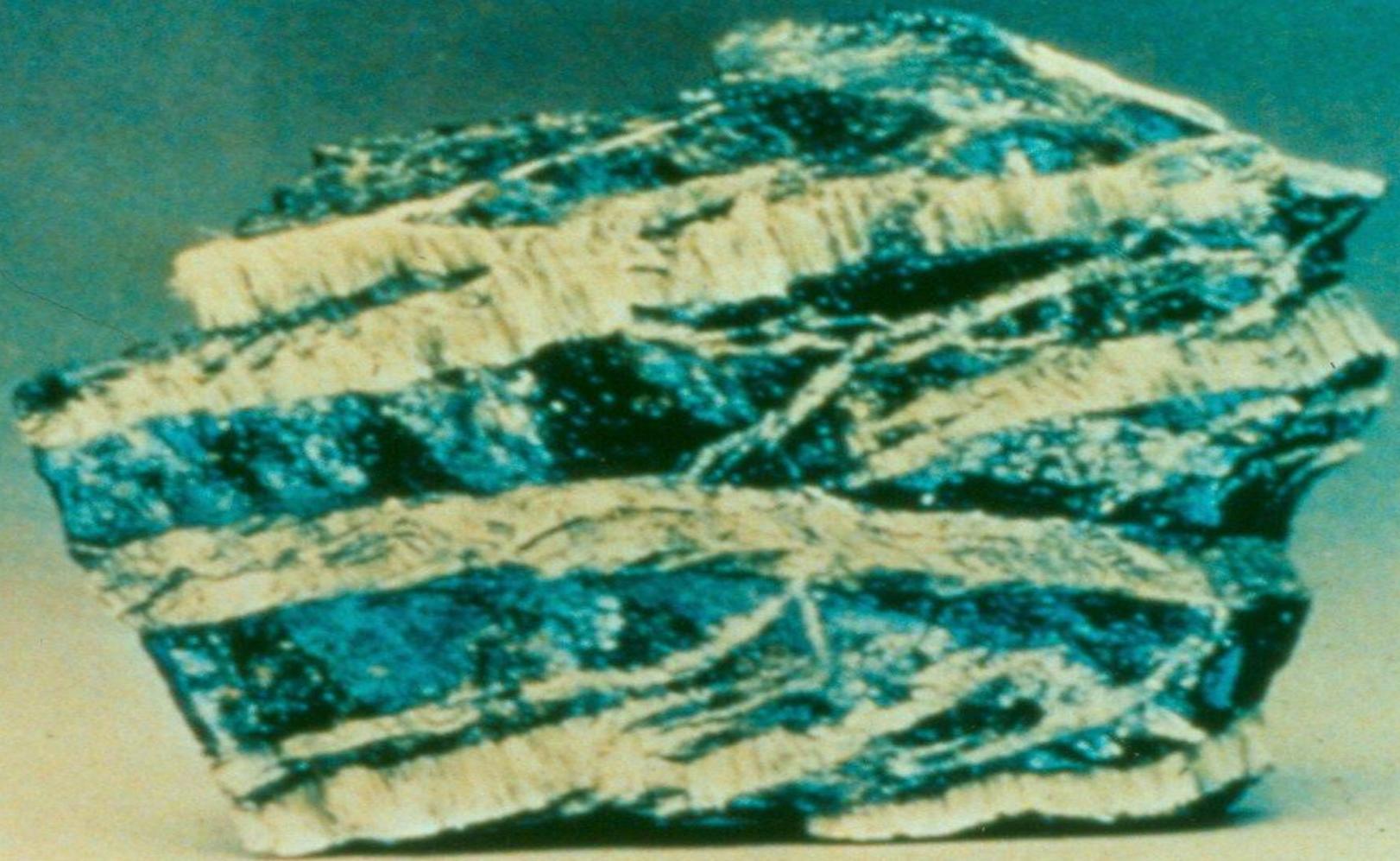




In accordance with the Department of Labor and Industry's statute 326.0981, Subd. 11,

“This educational offering is recognized by the Minnesota Department of Labor and Industry as satisfying **1 hour** of credit toward **Building Officials and Residential Contractors** continuing education requirements.”

For additional continuing education approvals, please see your credit tracking card.



The "Miracle Mineral"





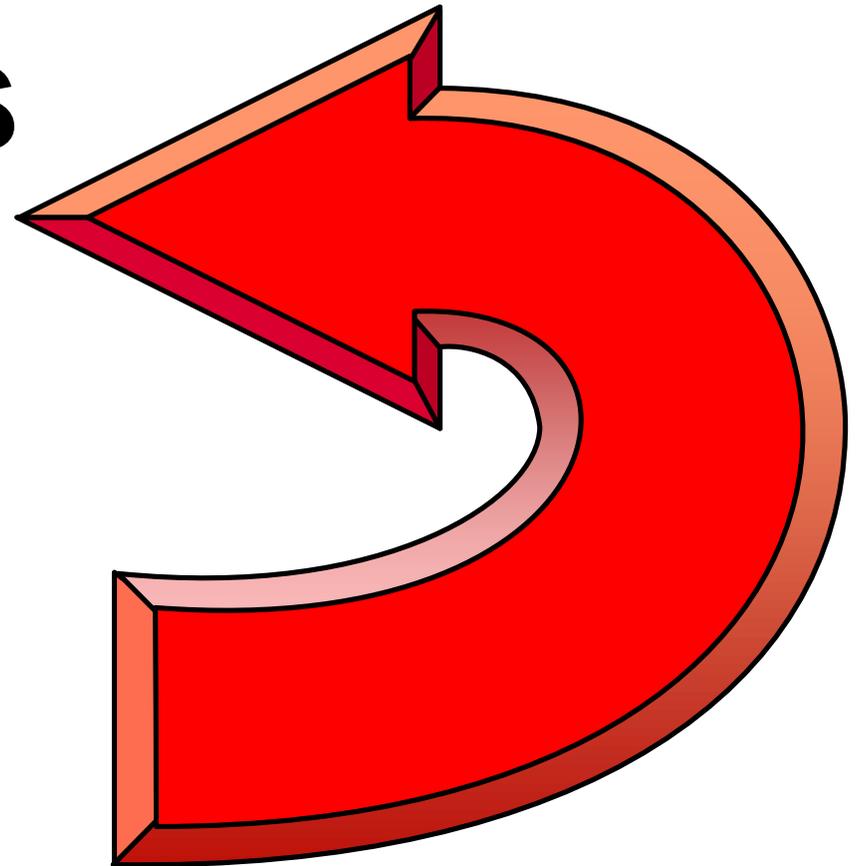
When is Asbestos dangerous?

- Asbestos is dangerous when it gets in the air and you breathe or swallow it



TYPES OF ASBESTOS

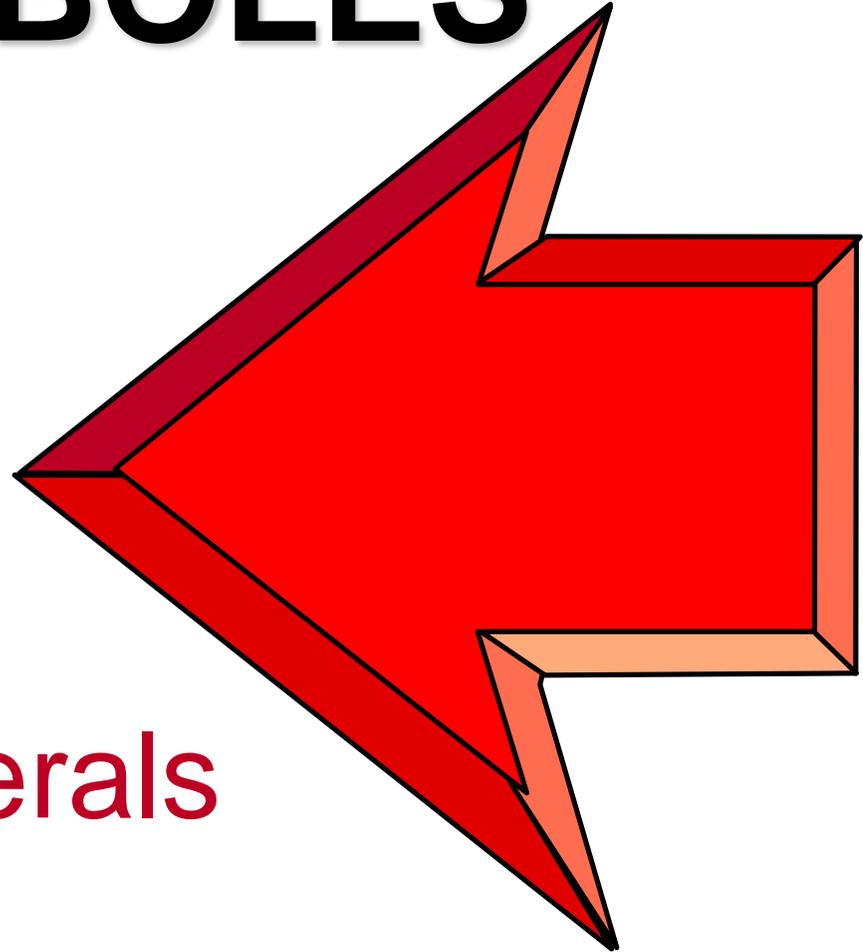
- **Amphiboles**
- **Serpentine**





AMPHIBOLES

- ▶ Shorter fibers
- ▶ Straight
- ▶ Rigid (not flexible)
- ▶ **Very Hard to Wet**



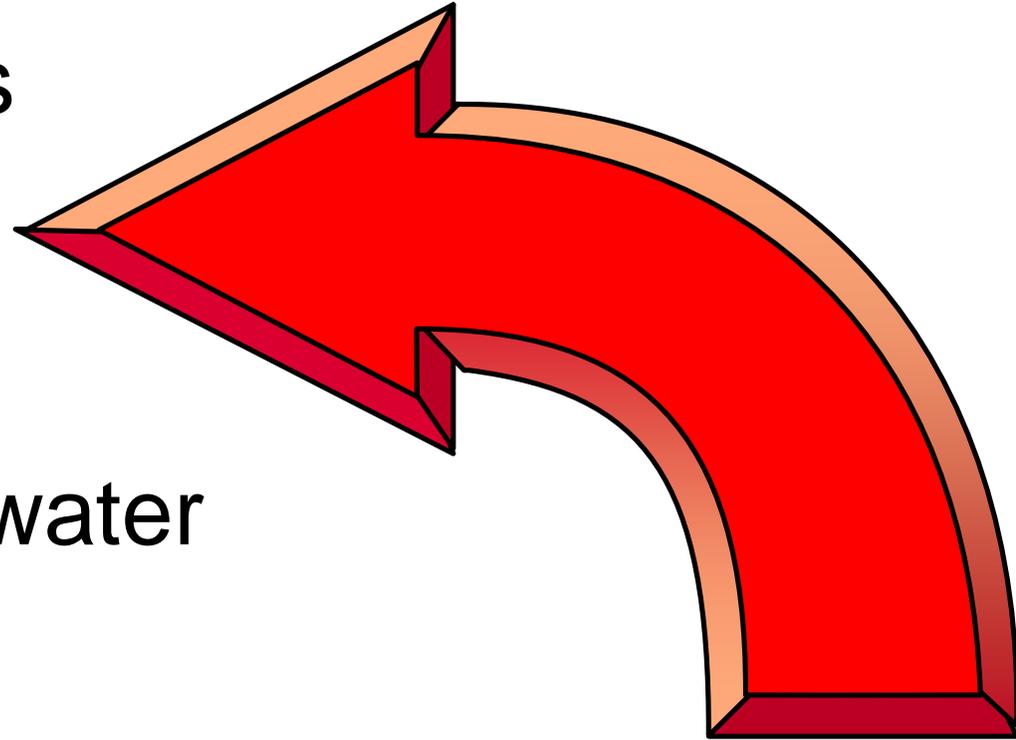
Amphibole Minerals

- Amosite - brown
- Crocidolite - blue



SERPENTINE

- ▶ Long, curvey fibers
- ▶ Flexible fibers
- ▶ Wettable fibers...
with amended water



Serpentine Mineral

- Chrysotile - white

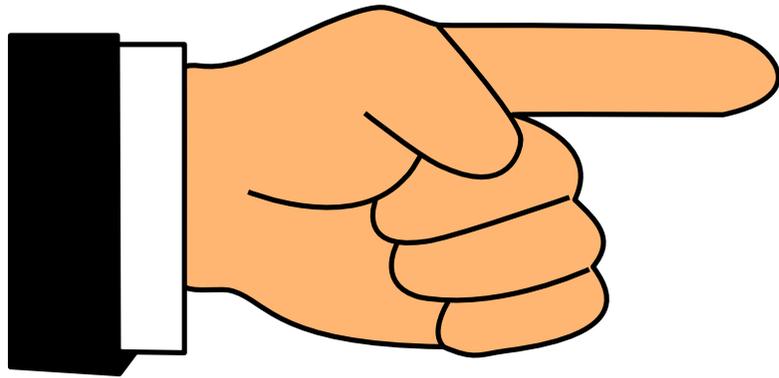


MORE ABOUT ASBESTOS

- Bundles of fibers which break apart easily
- Fibers are microscopic
- Very aerodynamic - float for days
- Strong as steel
- Resists breakdown from heat
- Resists breakdown from chemicals
- The best insulator
 - Temperature
 - Sound
 - Electricity
- Cheap



DEFINITIONS



- Friable
- Non-friable



FRIABLE ASBESTOS

- Asbestos that can be crumbled or pulverized by hand pressure.
- Friable asbestos is more dangerous because the fibers are more likely to get in the air.





NON-FRIABLE ASBESTOS

- Asbestos that cannot be crumbled or pulverized by hand pressure.





ASBESTOS CONTAINING MATERIAL - ACM

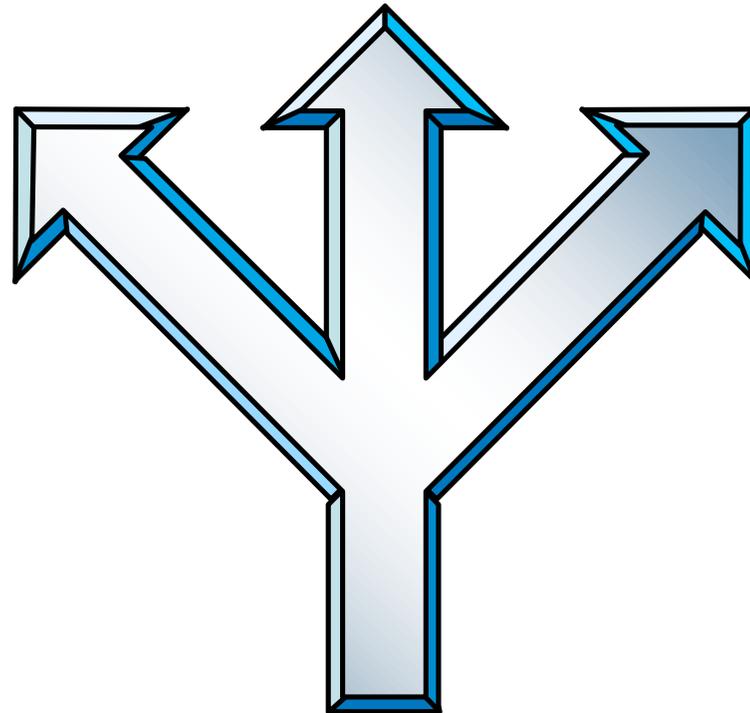
ACM is defined as a material containing greater than 1 % of an asbestos mineral.





CATEGORIES OF ACM

- Surfacing material
- Thermal system insulation (TSI)
- Miscellaneous Materials





SURFACING MATERIAL

- An asbestos containing material that is **sprayed, troweled-on** or otherwise applied to surfaces (such as acoustical plaster on ceilings and fireproofing materials on structural members, or other materials on surfaces for acoustical, fireproofing, and other purposes).









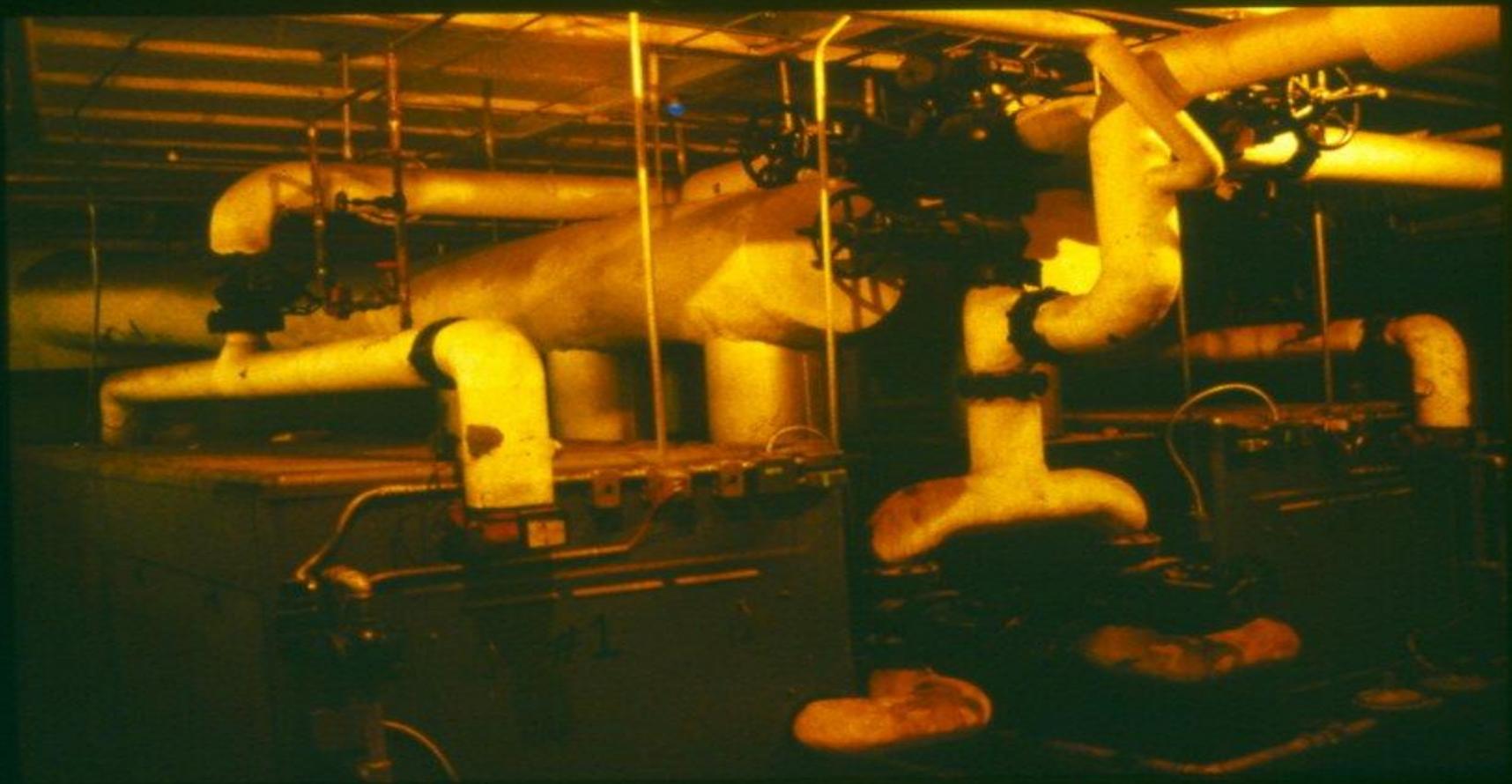


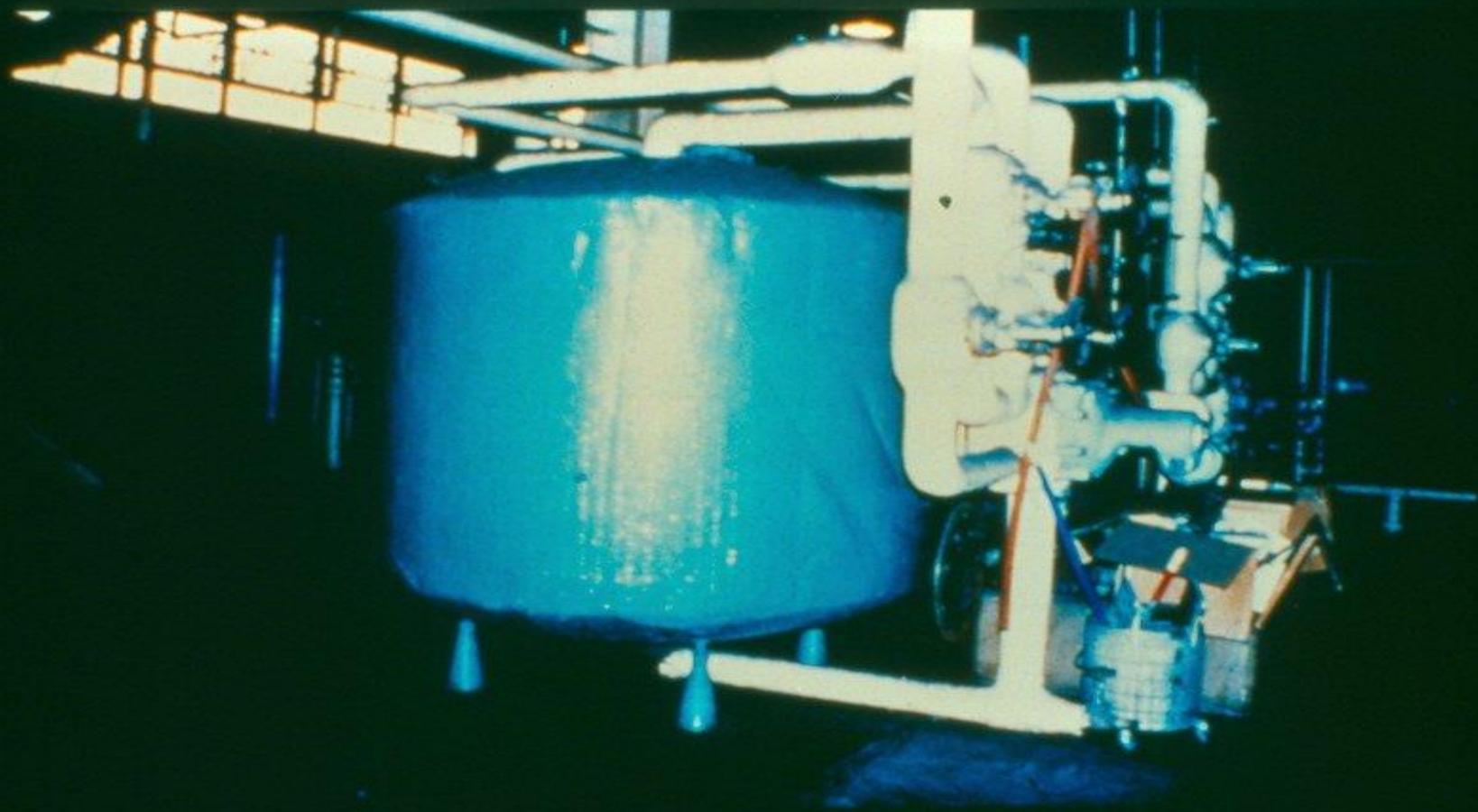


THERMAL SYSTEM INSULATION (TSI)

- Asbestos containing materials applied to pipes, fittings, boilers, breeching, tanks, ducts or other structural components to prevent heat loss or gain.

TSI ACM contains more than 1% asbestos.







12 - 27



AUG 5 '8



MISCELLANEOUS

- Any other type of asbestos containing material.





Health Effects of Exposure to Asbestos

Asbestos Diseases





Asbestos can Kill You...

- When you work around asbestos, you must work carefully. Avoiding accidental disturbances is important.
- When asbestos is in the air, it gets into your body when you breathe and when you swallow.



When is Asbestos Dangerous?

- Asbestos is silent and deadly. You cannot see, hear, feel, taste, smell, or touch the small asbestos fibers that enter your body.
- It doesn't make you cough or sneeze, nor make you throat or skin itch.
- But if it is in the air, you can breath it. That's when asbestos is dangerous!



How do we know that asbestos can make you sick?

- We have been accumulating information for decades, tracking life and death histories of workers who's jobs involved exposure to asbestos.
- Over time it has become apparent that workers who were exposed to asbestos developed and died from diseases we now know are caused by asbestos.



Asbestos Diseases

Asbestosis

Lung Cancer

Mesothelioma

Other (GI) Cancers



How much asbestos is dangerous?

- There is no safe level of exposure to asbestos.
- But we do know that most diseases associated with the exposure to asbestos are dose-related.
- Asbestosis, Lung Cancer and Digestive System cancers are all dose-related.
- Mesothelioma is different. It appears to be incidence related, with dose not being much of a factor.



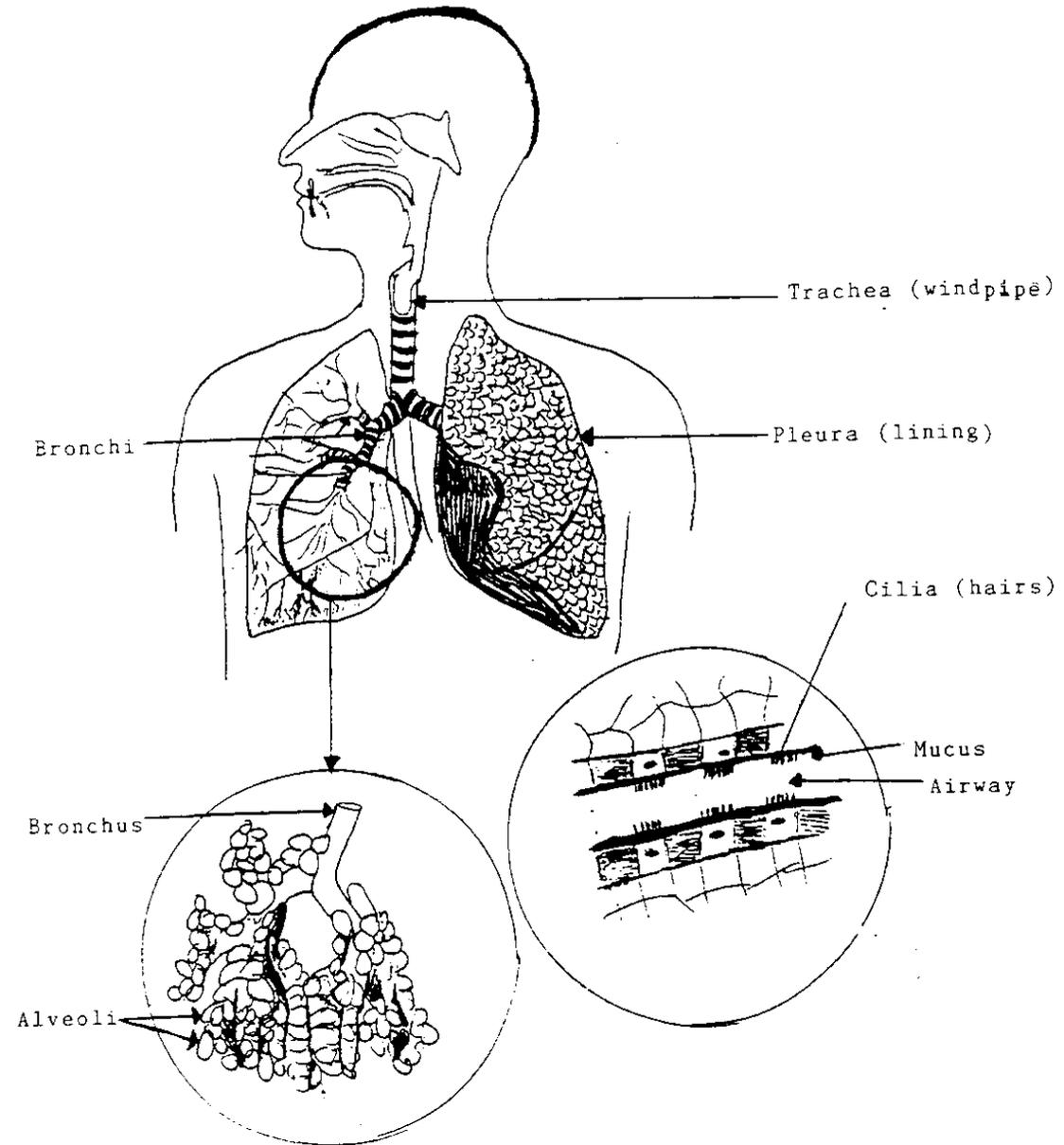
Latency Period

- The time between when a person is exposed to a hazard and when the symptoms develop from the exposure.
- The latency period is between 10 to 40 years

Your body has its own natural defense to help eliminate asbestos

But some of the tiny fiber can still
pass through these defenses







Asbestosis

Scarring of the Lung Tissue

Specifically the Alveoli membranes



Lung Cancer

Cancer in the Lung



Mesothelioma

Cancer of the Plural Lining(s)

Pleural mesothelioma

Chest cavity

Peritoneal mesothelioma

Abdomen (belly)



Mesothelioma

- This is also the one disease that is only caused by exposure to asbestos.
- It is often referred to as the "Marker Disease" for exposure to asbestos sometime in a worker's past.



Other Cancers

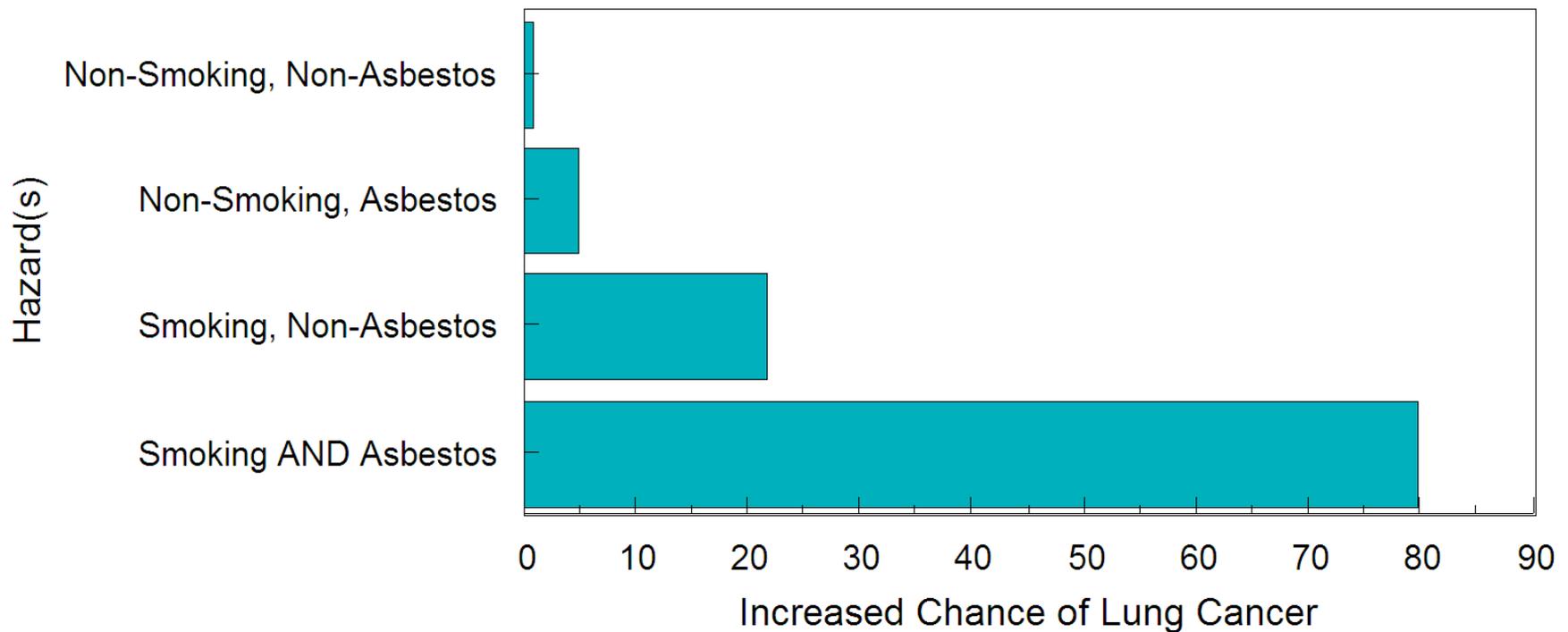
Other Cancers can include:

Mouth, tongue, throat, voicebox, esophagus, stomach, intestinal, colon, rectal, and liver cancer.

Smoking and Asbestos Exposure

- The Synergistic Effect - Multiplying Effect

Synergistic Effect of Combining Smoking and Asbestos Hazards



People who work with Asbestos over a certain period of time will be required to have medical exams

These exams come at no cost to the worker





How is it determined if a material contains Asbestos?

- First off, most materials are “guilty” until proven otherwise by sampling.
- Samples are sent to a lab for testing.
- This sample must be collected by an MDH certified Asbestos Inspector.
- The sample is analyzed under a Polarized Light Microscope (PLM) to determine content.
- The lab sends out a report indicating if the sample contains Asbestos and at what %.



Let's see what we find in our room

1. Ceiling Tile
2. Ceiling Tile Adhesive
3. Vermiculite
4. Pipe Insulation on Riser
5. Floor Tile
6. Linoleum
7. Flooring Adhesive (multiple layers)
8. Paper between sub-floor and underlayment

Asbestos Related Resources

Minnesota Asbestos Statutes, Rules, Forms and Other Information

Minnesota Statutes, sections 326.70 to 326.81 – Asbestos Abatement Act: These statutes apply to regulated parties conducting asbestos-related work in Minnesota.

<https://www.revisor.mn.gov/statutes/?id=326&view=chapter>

Minnesota Rules Parts 4620.3000 to 4620.3724: <https://www.revisor.mn.gov/rules/?id=4620&view=chapter>

Minnesota Online Asbestos-Related Work Notification:

<http://www.health.state.mn.us/divs/eh/asbestos/prof/onlinenot/index.html>

Minnesota Department of Health – Asbestos Information:

<http://www.health.state.mn.us/divs/eh/asbestos/index.html>

Minnesota Pollution Control Agency - Assistance and Information

- Training: Asbestos Program staff provide training to contractors
- MPCA staff: Scott Parr, 651-757-2638
- Minnesota Dept. of Health, 651-201-4620
- Asbestos: Homeowner information, Minn. Dept. of Health

Wisconsin Asbestos Statutes, Rules, Forms and Other information

Wisconsin Statute Chapter 254: <http://docs.legis.wi.gov/statutes/254.pdf> Environmental Health - Describes public health and other responsibilities for detection, treatment and response to lead hazard exposure. This is the *law* that the state legislature passed that enabled/required the Department of Health Services to develop and enforce *rules (below)* that provide detailed requirements that are required to be followed to satisfy the purpose and intent of the law. Both the statute and the rule must be followed to be legal. Any and all rules must be consistent with the *law* that enables that rule.

Wisconsin Statute Chapter 159: http://docs.legis.wisconsin.gov/code/admin_code/dhs/110/159 Certification and Training Course Requirements for Asbestos Activities.

Wisconsin Forms

- Asbestos Certification Application – Individual: <https://www.dhs.wisconsin.gov/forms/f4/f44017.pdf>
- Asbestos Certification Application – Company: <https://www.dhs.wisconsin.gov/forms/f4/f44002.pdf>
- Asbestos Occupant Protection Plan: <https://www.dhs.wisconsin.gov/forms/f4/f44016.pdf>

WI Department of Health Services – Assistance and Information

- Contact Info.: Lead and Asbestos section, P.O. Box 2659, Madison, WI 53701 608-261-6876
- DHS Asbestos Program: <https://www.dhs.wisconsin.gov/asbestos/index.htm>

Wisconsin Department of Natural Resources

- Asbestos Removal and Notification: <http://dnr.wi.gov/topic/Demo/Asbestos.html>



Thank You for joining us!

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