



ASBESTOS COMPLIANCE IN ALASKA

Heather Coffman, AKOSH

TOP 5 FACTS ABOUT ASBESTOS

- 1 **More than 107,000 people die each year from asbestos related diseases**
- 2 **Russia is the leading producer of asbestos worldwide, followed by China, Brazil, Kazakhstan, and Canada.**
- 3 **The United States and Canada are the last two industrial nations not to ban asbestos.**
- 4 **Asbestos became increasingly popular among manufacturers and builders in the late 19th century because of its sound absorption, average tensile strength, its resistance to fire, heat, electrical and chemical damage, and affordability.**
- 5 **Asbestos mining began more than 4,000 years ago**

[HTTP://EN.WIKIPEDIA.ORG/WIKI/ASBESTOS](http://en.wikipedia.org/wiki/Asbestos)

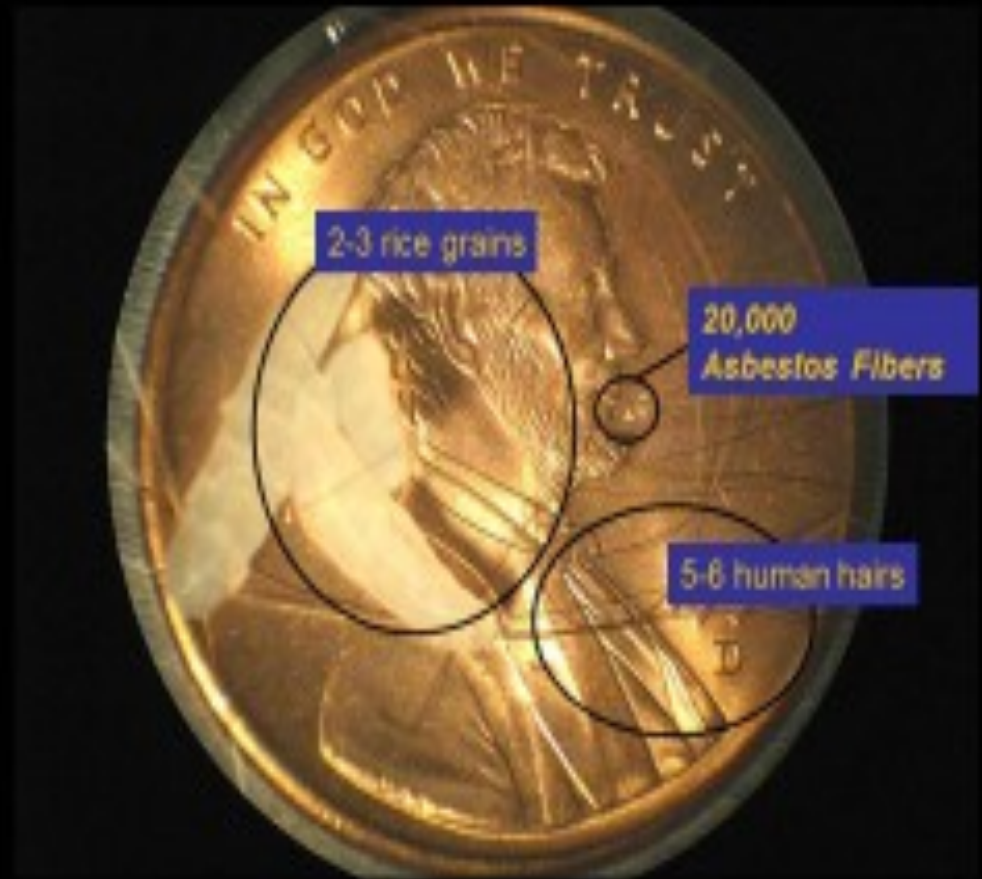
[HTTP://MONOGRAPHS.IARC.FR/ENG/MONOGRAPHS/SUPPL7/SUPPL7-20.PDF](http://monographs.iarc.fr/eng/monographs/suppl7/suppl7-20.pdf)

[HTTP://MINERALS.USGS.GOV/MINERALS/PUBS/COMMODITY/ASBESTOS/MCS-2011-ASBES.PDF](http://minerals.usgs.gov/minerals/pubs/commodity/asbestos/mcs-2011-asbes.pdf)

[HTTP://WWW.ASBESTOSDISEASEAWARENESS.ORG/ARCHIVES/12724](http://www.asbestosdiseaseawareness.org/archives/12724)

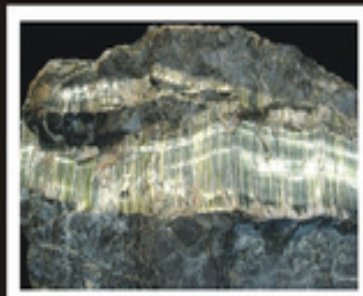


How small is asbestos?



www.AsbestosDiseaseAwarenessOrganization.org

ASBESTOS



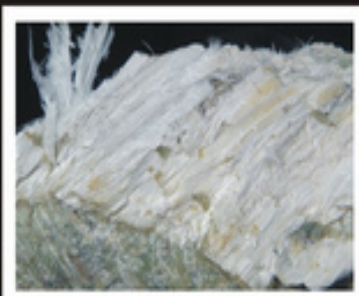
CHRYSOTILE



AMOSITE



CROCIDOLITE



TREMOLITE

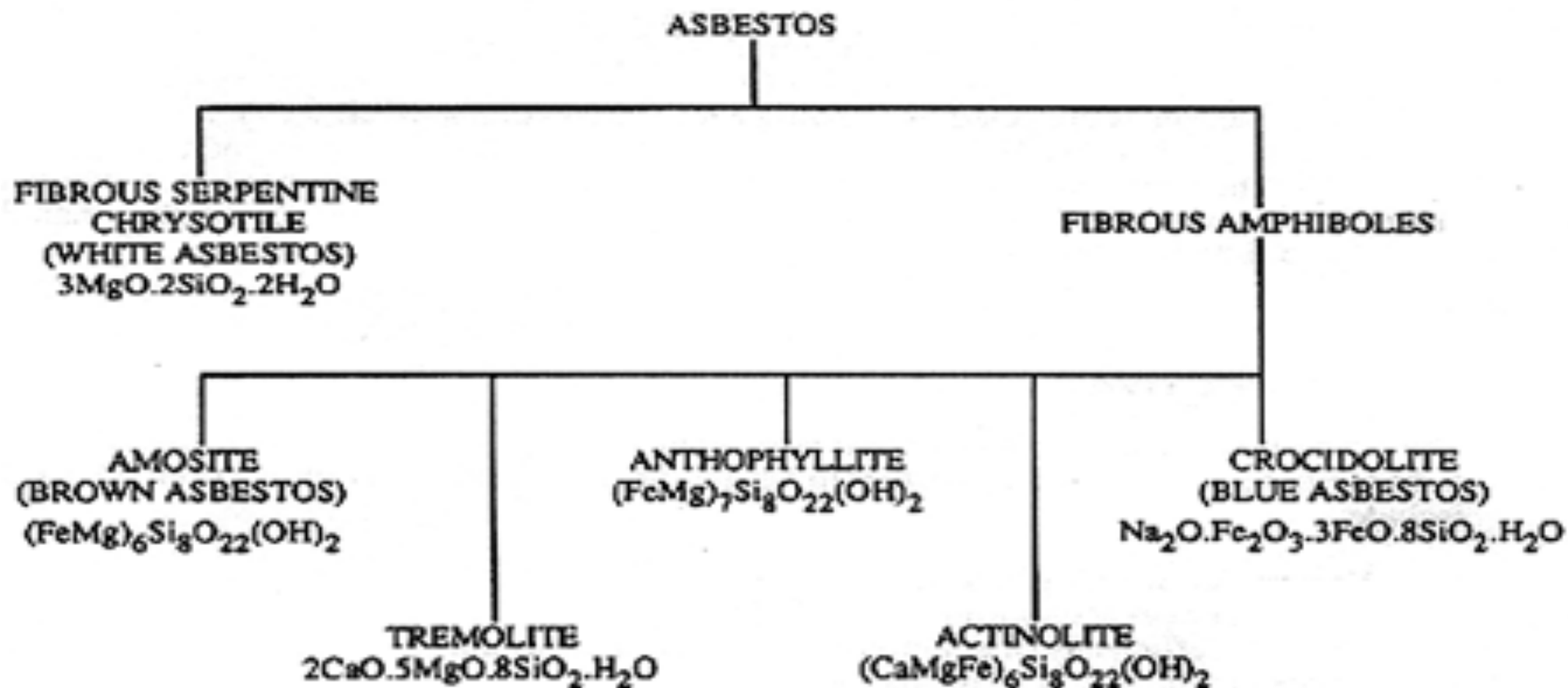


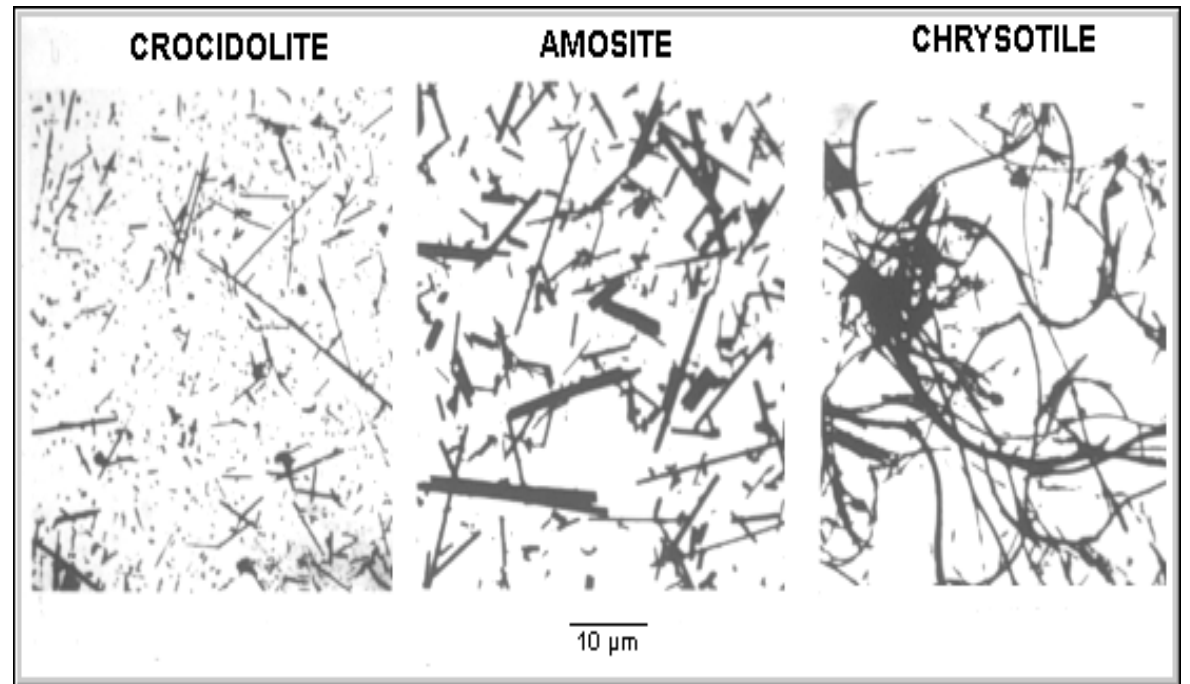
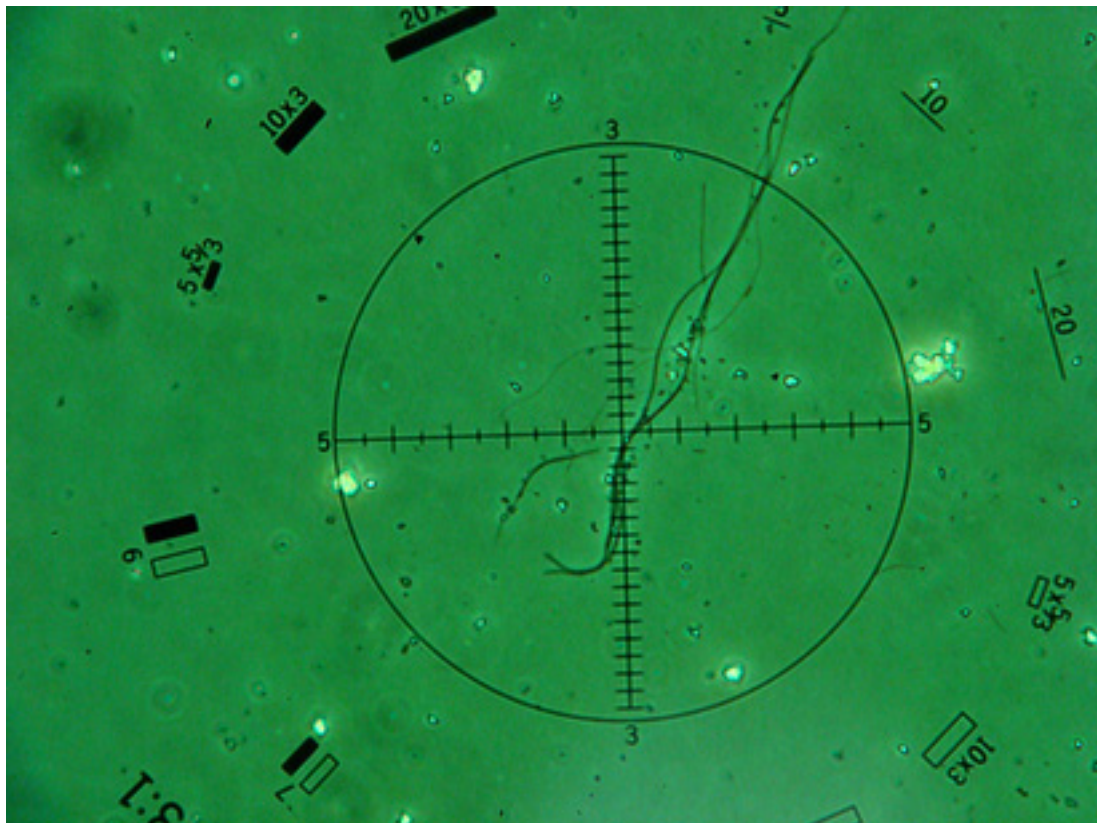
ACTINOLITE

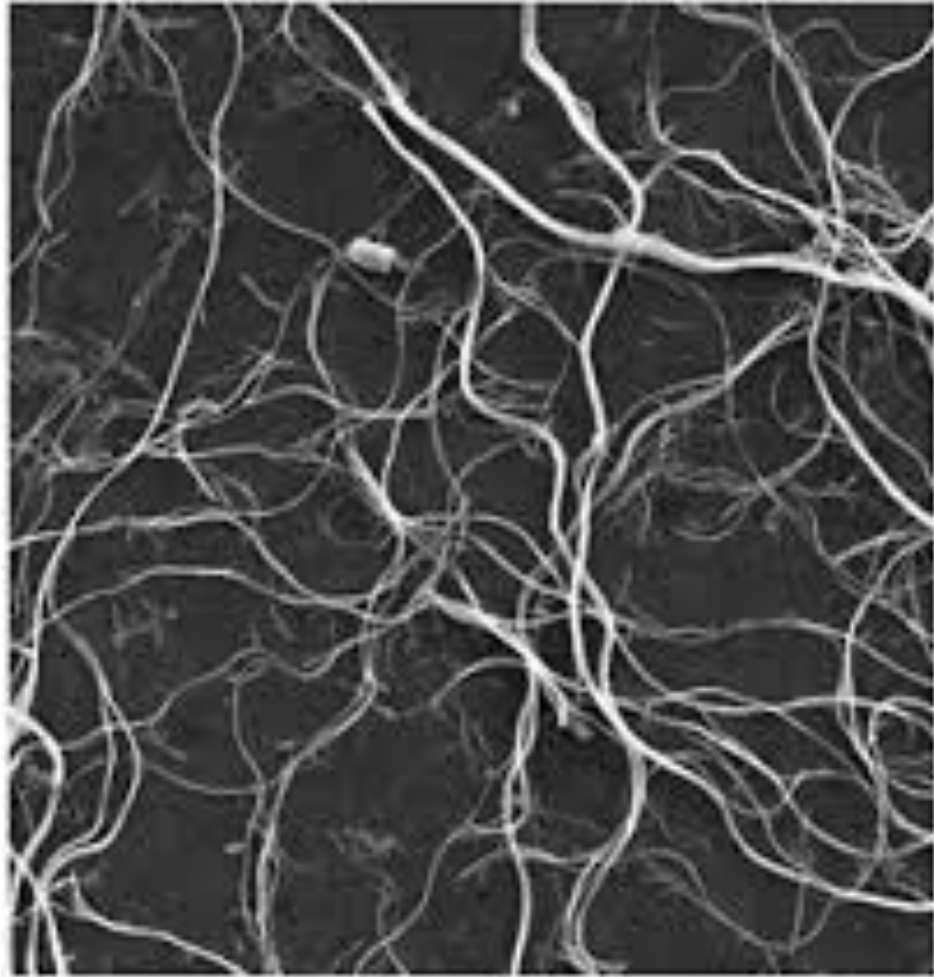


ANTHOPHYLLITE

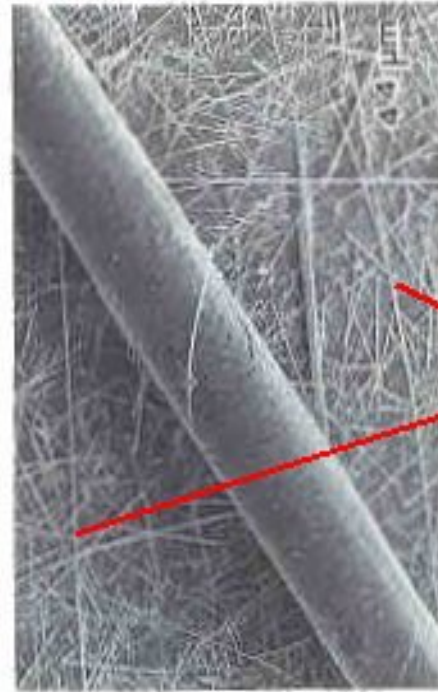
ASBESTOS MINERALS AND FORMULAS







Chrysotile

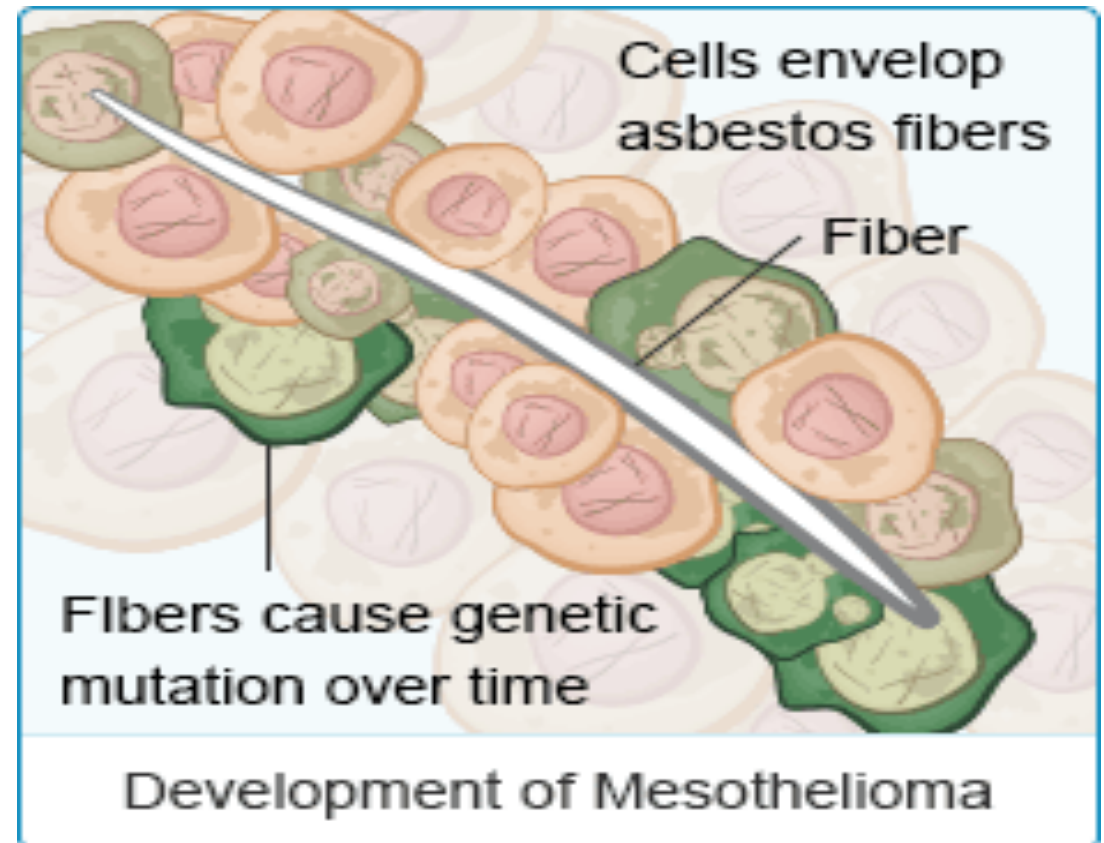


Amosite asbestos fibers seen under electron microscope appear as tiny, fine, straight images.

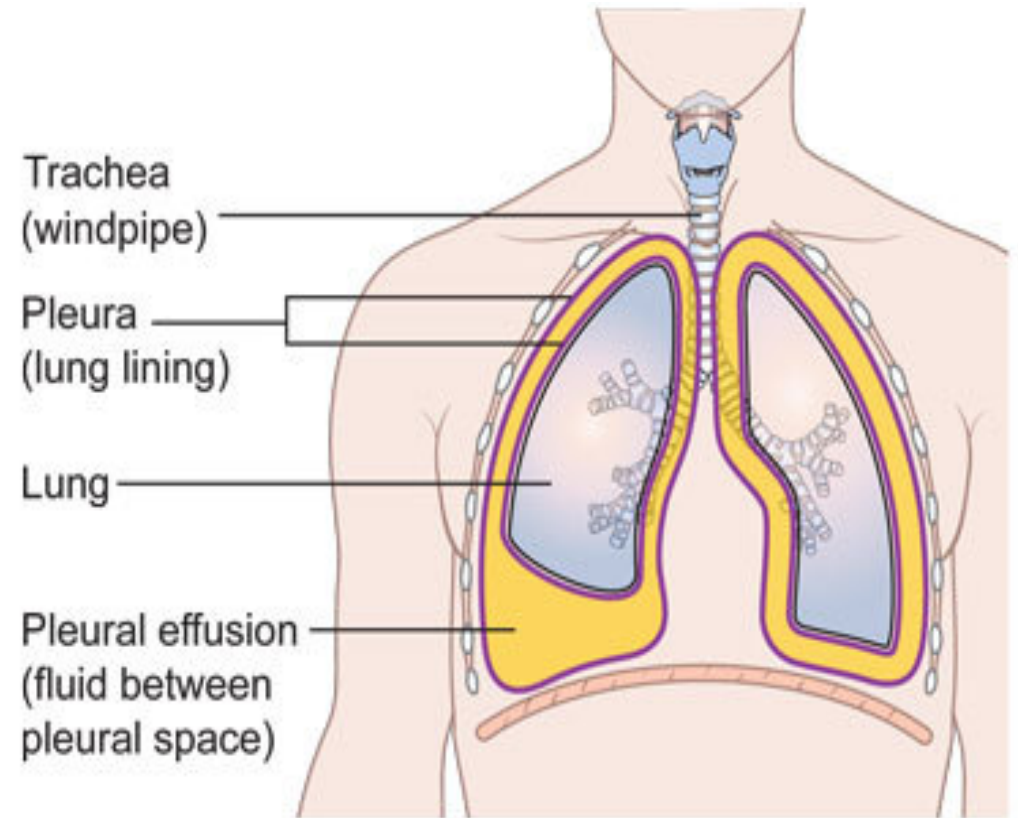
Human Hair

ASBESTOS HEALTH HAZARDS

- ASBESTOSIS- scar –like tissue formed in the lungs (pulmonary fibrosis)
- MESOTHELIOMA- Cancer that affects the lining of the lungs, chest cavity, or abdomen (aggressive, usually fatal)



- LUNG CANCER
- PLEURAL EFFECTS
 - Pleural plaques
 - Fluid in the pleural space
 - Diffuse thickening and fibrosis of the pleura
 - Folded Lung (an area of pleural fibrosis rolls into the lung, making a portion of the lung airless)



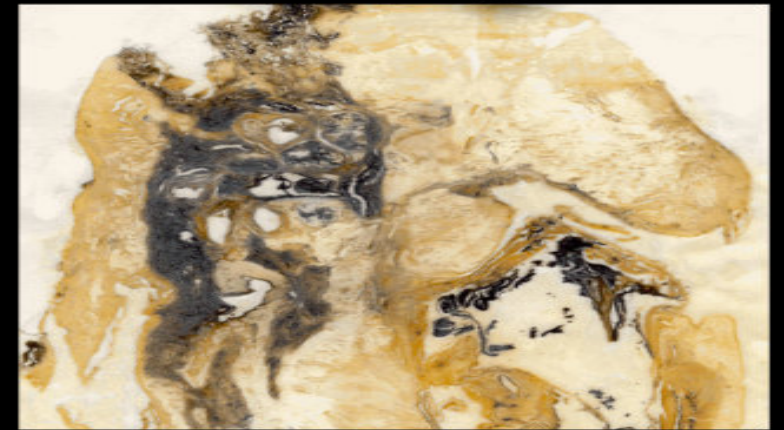
Normal Lung



Heavy Asbestos Exposure



Mesothelioma Effected Lung



JURISDICTION IN ALASKA

FEDERAL OSHA, AKOSH, EPA



FEDERAL OSHA

- Private employers working aboard ferries on navigable waters
- Off-shore oil rigs
- Artificial islands
- Federal civilian employers on military bases
- Private contractors at missile defense facilities-Cape Lisburne Air Force Station; Point Lay Air Force Distance Early Warning Station; Eareckson Air Station (Shemya Island, US DOD); Fort Greely (Delta Junction, US ARMY)
- Coast Guard Locations- USCG Integrated Support Command, Ketchikan and Kodiak; USCG Air Station, Sitka; USCG 17th District Command, Juneau
- Federal National Guard employees
- Private employers at Denali National Park
- All shipbuilding and repair on and off water

AKOSH

- State and other non-federal public employers working aboard ferries
- Private employers, as well as public sector employers (except federal) on most military bases
- State National Guard civilian employees
- Private contractors at National Guard facilities
- Public sector employers (except federal), as well as private employers at all national parks (except Denali National Park)
- No jurisdiction over ship building and repair



FEDERAL AND STATE REGULATIONS

29 CFR 1910.1001

29CFR 1926.1101

29 CFR 1910.134

29 CFR 1910.1200

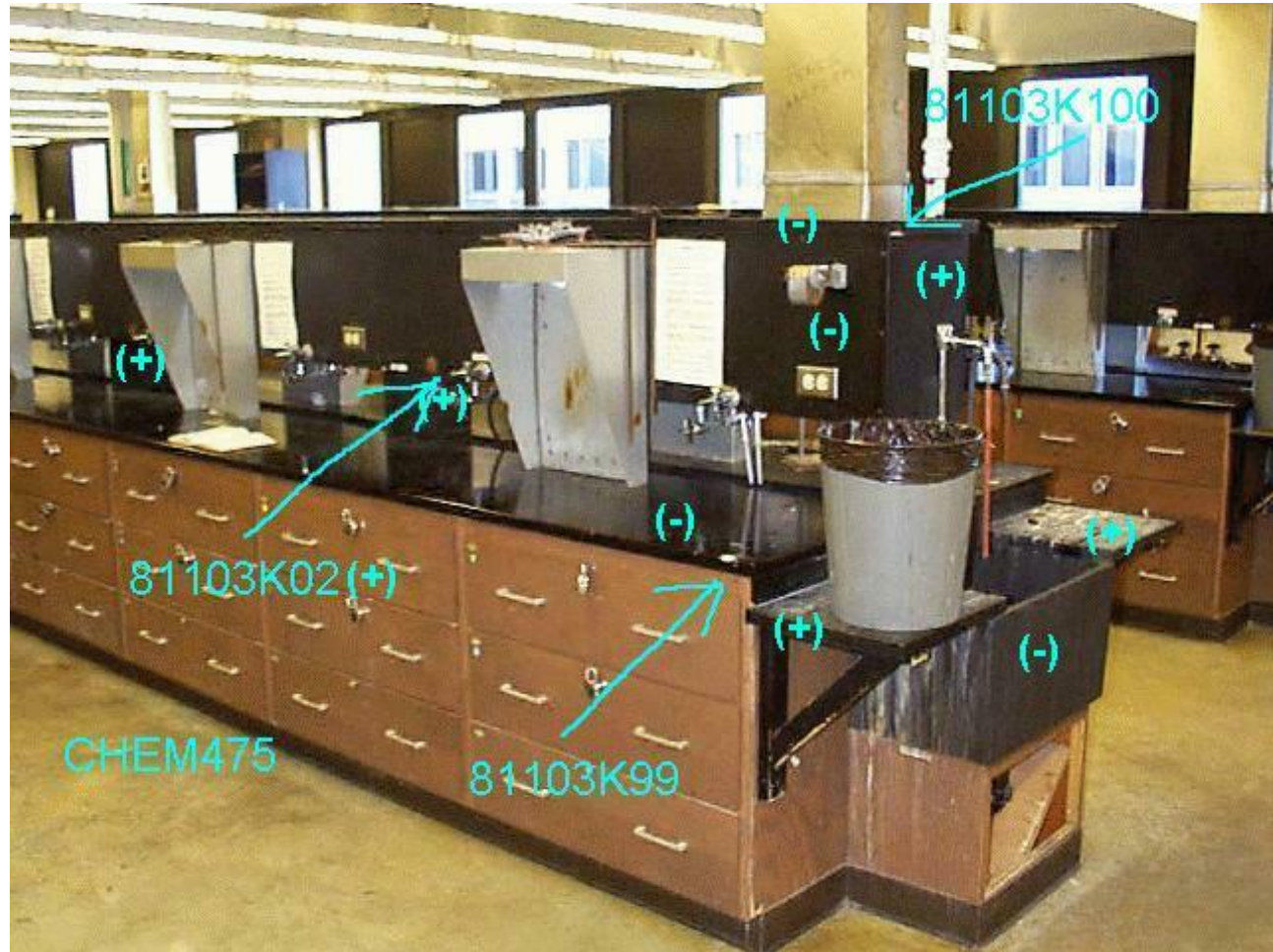


ASBESTOS CATEGORIES

- Surfacing Material
 - sprayed on/troweled-on (acoustical plaster on ceiling, fireproofing material, materials on surfaces for acoustical)
- Thermal System Insulation (TSI)
 - ACM → pipes, fittings, boilers, tanks, ducts, to prevent heat loss > 1% asbestos
- Miscellaneous Materials
 - floor tiles, ceiling tile, linoleum, etc.
- Homogeneous Areas
- Functional Spaces

29CFR 1910.1001

- PACM- Presumed Asbestos Containing Material → Pre-1980
- ACM- Asbestos Containing Material → More than 1%
- Building/Facility Owner-



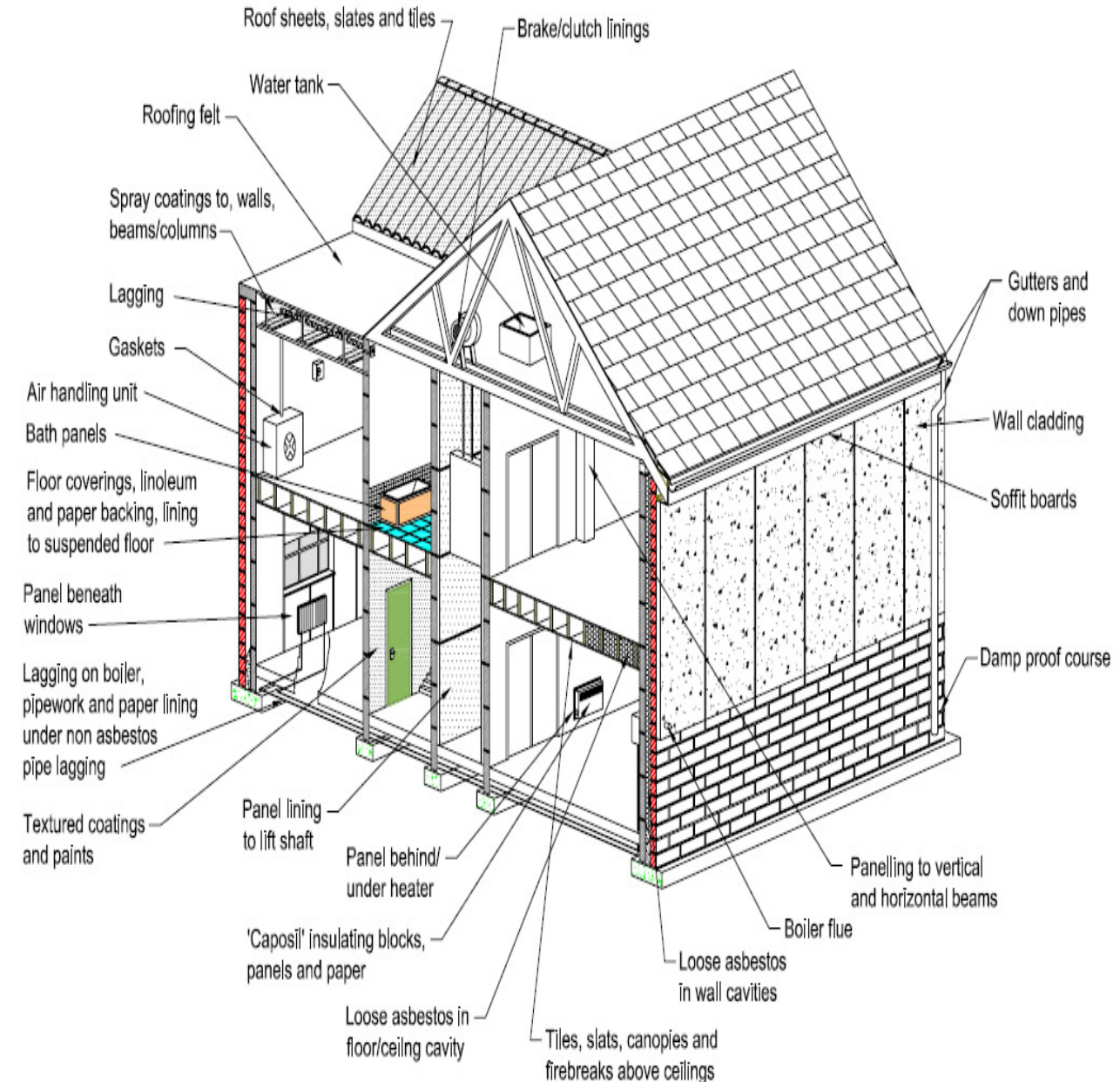
BUILDING SURVEY

(GENERAL INDUSTRY)



- Owner
- Facility Lessee
- Employer

Exterior	Interior insulation
<ul style="list-style-type: none"> Asbestos cement pipes (e.g., drain pipes) Roof felting Asphalt shingles Soffit boards Stucco Asbestos cement siding Brick mortar Window putty Deck undersheathing Asbestos cement shingles 	<ul style="list-style-type: none"> Spray-applied insulation (acoustic and fireproofing) Vermiculite (blown-in) insulation (e.g., in attics) Paper backing on fibreglass insulation
Flooring	Heating (HVAC) and ducting
<ul style="list-style-type: none"> Vinyl sheet flooring and mastic Vinyl floor tile and mastic Poured flooring/leveling compound Asphalt flooring 	<ul style="list-style-type: none"> Furnace duct tape Furnace/boiler insulation Pipe (mechanical) insulation Hot water tank insulation Mastic Asbestos rope and gaskets Asbestos cement board Asbestos cardboard insulation
Walls & Ceilings	Other
<ul style="list-style-type: none"> Drywall mud Plaster Asbestos cement board Textured coatings Ceiling tiles 	<ul style="list-style-type: none"> Fireplace box and mantel Artificial fireplace logs and ashes Fire doors Insulation on electrical wiring Fire blankets Chalk boards Heat reflectors Penetration firestopping Candescent light fixture backing (pot lights)



29CFR1926.1101

- Class I → TSI & Surfacing Material
- Class II → ACM not TSI/surfacing materials. Wallboard, floor tiles and sheeting, roofing, and siding shingles, and construction mastics.
- Alaska Statutes- Required training
 - Initial 40 Hours
 - Refresher-Yearly-8 Hours
- Class III → Repair and Maintenance Operations (likely to be disturbed)
- Class IV → Maintenance and Custodial Activities- Employees contact but do not disturb ACM and/or PACM. Activities to clean up dust, waste and debris resulting from Class I, II, III activities.
- Training-



A Roof should be more than an umbrella —

FOR ages, now, a roof has been thought of as that part of a building which sheds water. Today, a roofing must be more than that. It must measure up to two added requirements to qualify as a modern building material—durability and fire-safety.

But the questions—“How long will it last?” and “Is it fire-safe?”—have their answers only in the material of which a roofing is made.

Logical, then, that Johns-Manville Asbestos should be chosen as the material for modern roofing. For this fibrous mineral is permanently immune to heat or cold, rain, snow or sleet. It cannot decay or disintegrate—it is inherently durable.

And as to fire-safety—you know that Asbestos simply cannot burn.

How important this is! For a thoroughly

waterproof roof may last through several seasons of weather, but the roofing, the building and its contents, and even lives, may all go in a seven-minute rain of sparks.

Not that a watertight roof isn't important—roof leaks cause great damage—but why worry over roof leaks in the face of these facts? You can immerse Asbestos in water, but its fibres emerge unimpaired because they are literally stone, without affinity for moisture. Imagine these same fibres sliced into flexible sheets, waterproofed with asphalt expertly blended.

But, more than this, Johns-Manville Asbestos Roofing has, in the largest measure, these other properties—longer life, immunity from communicated fire.

In the list on the left you will find the Johns-Manville Asbestos Roofing for your building.

H. W. JOHNS-MANVILLE CO., New York City
10 Factories—Branches in 63 Large Cities
For Canada: Canadian Johns-Manville Co., Ltd., Toronto

Asbestos Roll Roofing, Johns-Manville Standard and Cobur-blende Asbestos Shingles, Johns-Manville Asbestos Ready Roofing, Johns-Manville Corrugated Asbestos Roofing, Johns-Manville Built-Up Asbestos Roofing, Johns-Manville Asbestos Roofings are approved by the Underwriters' Laboratories, Inc.

Through —

Asbestos

and its allied products

INSULATION that keeps the heat where it belongs

CEMENTS that make kilns and ships ship-proof

ROOFINGS that are done for ships

PACKINGS that are proven under heat

LININGS that make kilns safe

FIRE PREVENTION PRODUCTS

JOHNS-MANVILLE

Serves in Conservation

JOHNS-MANVILLE

Asbestos

Resistant to heat.



water, wear and weather

No magic wand turned it into theatre curtains, table mats, coverings for pipes, linings for furnaces. Only the ceaseless research and labor of a national institution—Johns-Manville—has developed Asbestos. And now Asbestos is a necessity to the

large manufacturer and the standby of housewives on ironing day—the roof of huge buildings and the cap for tiny nerves in a sensitive tooth. This is the work of Johns-Manville—hundreds of J-M Products pour into every avenue of life.

H. W. JOHNS-MANVILLE COMPANY
New York City

10 Factories—Branches in 63 Large Cities
Asbestos Fabrics, Packings, Roofings, Shingles, Brake Linings, Building Materials, Electrical Devices, Heat Insulations, Refractory Cements, Waterproofing.



When you think of Asbestos you think of Johns-Manville

When writing to Advertisers please mention Popular Science Monthly

ASBESTOS BUILDING SURVEY

29CFR 1926.1101

Building/Facility Owners

- Prospective employers applying/bidding for work (employees reasonably expected to work in/adjacent to areas containing PACM/ACM)
- Employees of the owner who will work in or adjacent to areas containing such material
- Multi-employer worksites; employers of employees
- Tenants who will occupy the areas

Employers

- Employees → perform work in or adjacent to areas containing ACM and/or PACM
- Before work → Survey
 - Inform
 - Owners of building/facility
 - Employees who perform such work
 - Employers of employees who work and/or will work in adjacent areas

TRAINING REQUIREMENTS

29CFR1926.1101

- Class I & II → 40 Hour Initial/8 Hour Refresher by training program approved by AKOSH
- Class III → Maintenance & Custodial Staff set forth in EPA 40CFR763.92(a)(2). Hands-on and 16 Hours minimum
- Class IV → Maintenance & Custodial Staff set forth in EPA 40CFR763.92(a)(1). ACM/PACM presence, quantity, and location, recognition of damage, deterioration and delamination, training must be at least 2 hours



STATE OF ALASKA STATUTES



AS 18.31.010-020

Coordination with
DOL&WD for public
schools and
University of Alaska



AS 18.31.250

- Naturally Occurring Asbestos
- Immunity in a civil action under AS 09.65.245(a)(2)



AS 18.31.200



- Guidelines for employee training certification programs(a)(1)
- Review certification programs (a)(2)
- Assure employee training (b)(3)
- Penalties \$1,000 (d)

AS 18.31.200



- (b) DOL Notification and approval
- (c) Certification Required

Cramped working conditions

ALASKA ADMINISTRATIVE CODE



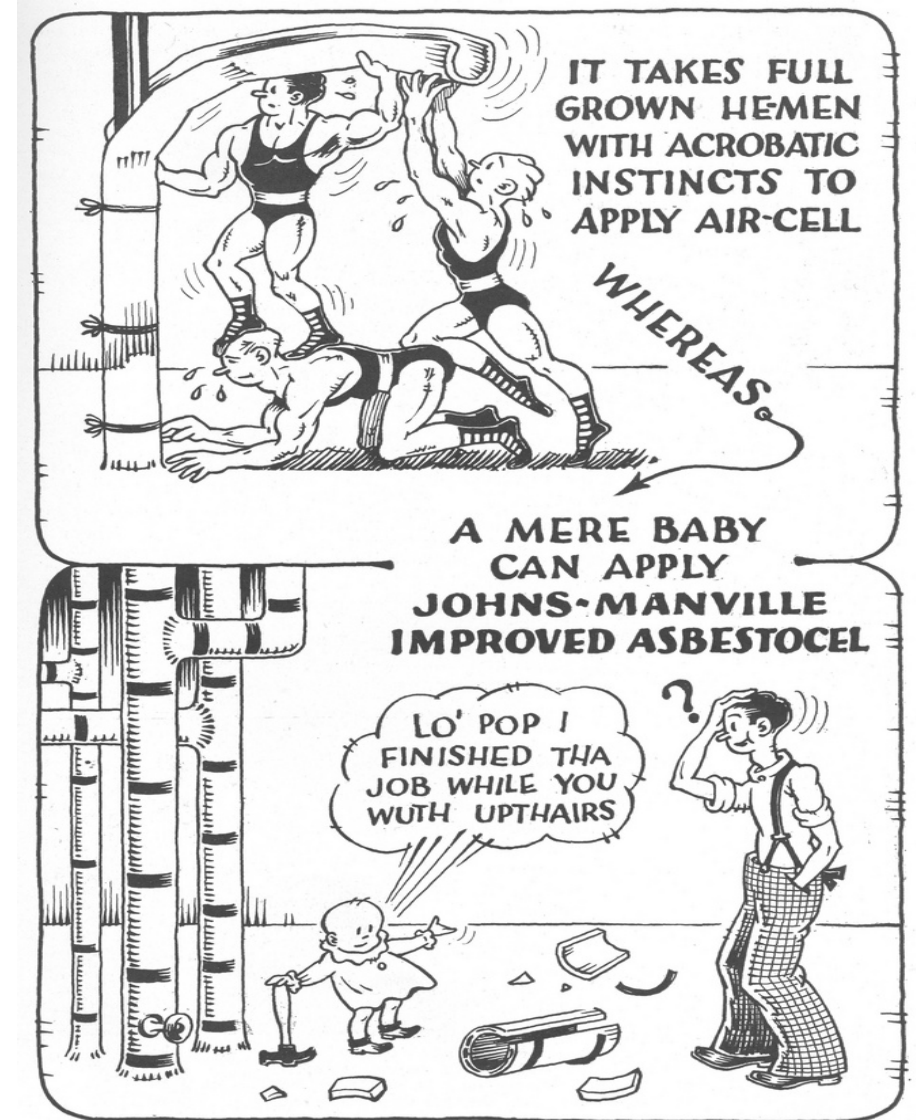
8 AAC 61.600-790



- Training program requirements
- Instructor qualifications
- Issuance and duration of certificate
- Notification
- Monitoring
- Recordkeeping
- Definitions



Pouring and leveling Zonolite Insulation Fill.



EPA, REGION 10

- Implements the asbestos National Emission Standards for Hazardous Air Pollutants (asbestos NESHAP)
- Clean Air Act (since the mid-1970s)
- Apply to demolitions and renovations of “facilities” which means commercial buildings, residential buildings with more than 4 units, and a wide variety of structures (pipelines, towers, storage tanks, and bridges)
- Must do a survey to identify how much asbestos is present and its condition
- Notify EPA 10 days in advance before starting
- Safe work practices to prevent asbestos dust from leaving the job site and impacting the public
- Wet removal, not allowing it to fall to the ground, placing waste in a leak-tight containers, label waste debris (bags/containers)

AHERA



- Asbestos Hazard Emergency Response Act (AHERA)
- Nonprofit, elementary and secondary schools (Includes Pre-schools)
- Public AND Private
- **40 CFR Part 763**

AHERA DESIGNATED PERSON TRAINING REQUIREMENTS

- Health Effects of Asbestos
- Detection, identification and assessment of ACBM
- Options for controlling ACBM
- Asbestos Management Programs
- Federal/State regulations (OSHA, DOT, EPA, etc.)

LOCAL EDUCATION AGENCY (LEA)

- Inspections
- Re-inspections- 1 time every 3 years
- Assessment
- Management Plan
- Response Action
- Operations and Maintenance (O&M)
- Training
- Notification- Employees/occupants (annual); parent, teacher, employee organization (annual), short-term workers
- Periodic Surveillance (Every 6 months)
- Recordkeeping
- Warning Labels (routine maintenance areas)



CONTACTS

- US EPA Region 10, Alaska Operations Office
- John Pavitt
- (907) 271-3668

- AKOSH
- (907) 269-4940