

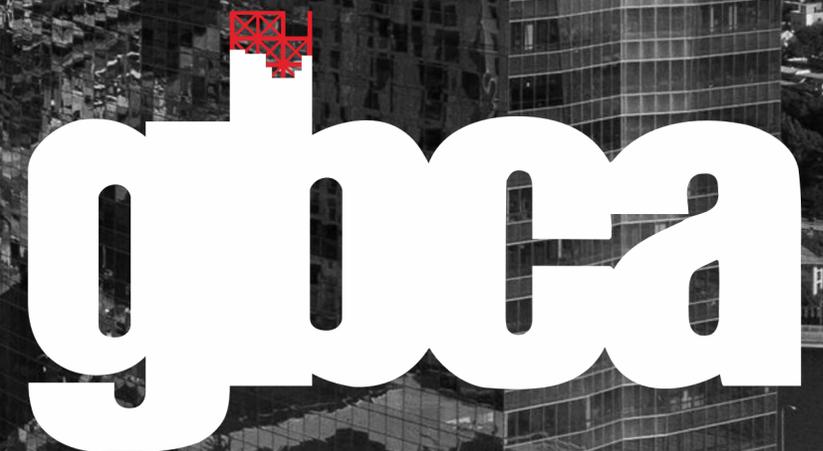
EGGS WITH OSHA

Demolition with a Focus on Asbestos

Presenting
Sponsor:

DVIACA

Delaware Valley
Insulation &
Abatement Contractors
Association, Inc.

The logo for gbooca features the word "gbooca" in a bold, white, lowercase sans-serif font. A red graphic element, resembling a stylized crane hook or a structural component, is positioned above the letter "o".

Presenters:

Theresa Downs, CIH
Area Director – Philadelphia OSHA Office

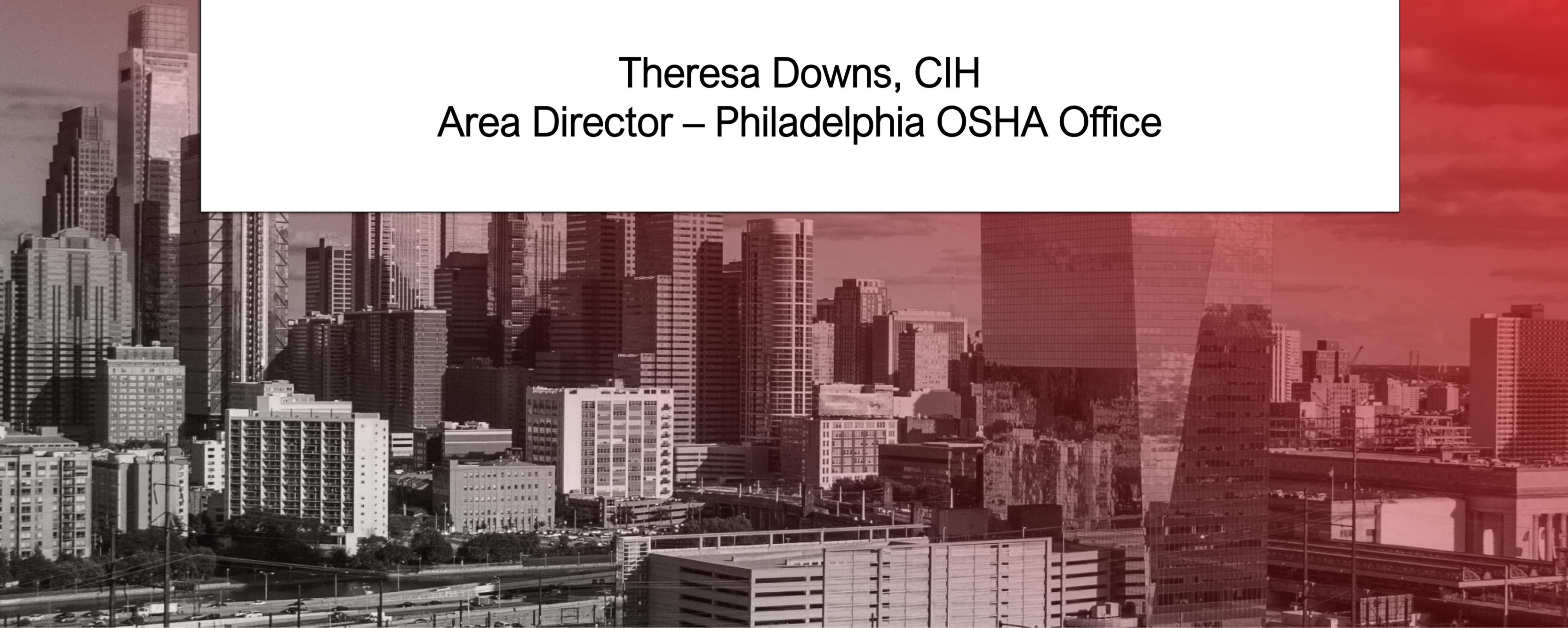
Alan Lloyd, CIH, CSP, ENV SP
Associate Vice President, Pennoni

Steve Schwartz
Demolition Estimator/PM/Expeditor for Haines & Kibblehouse, Inc.

James Harrity
Compliance Assistance Specialist for OSHA

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Theresa Downs, CIH
Area Director – Philadelphia OSHA Office



December 10, 2019
Eggs with OSHA



Asbestos in Renovation & Demolition





- Why we chose Asbestos in Demolition
- The history that carries it into today's work
- Explain how asbestos should be addressed during demolition phases of projects
- Lay out the responsibilities of different parties that are identified in OSHA standards
- Explain our efforts to address the problems we are seeing during this work



Presenter:

Alan Lloyd, CIH, CSP, ENV SP
Associate Vice President, Pennoni

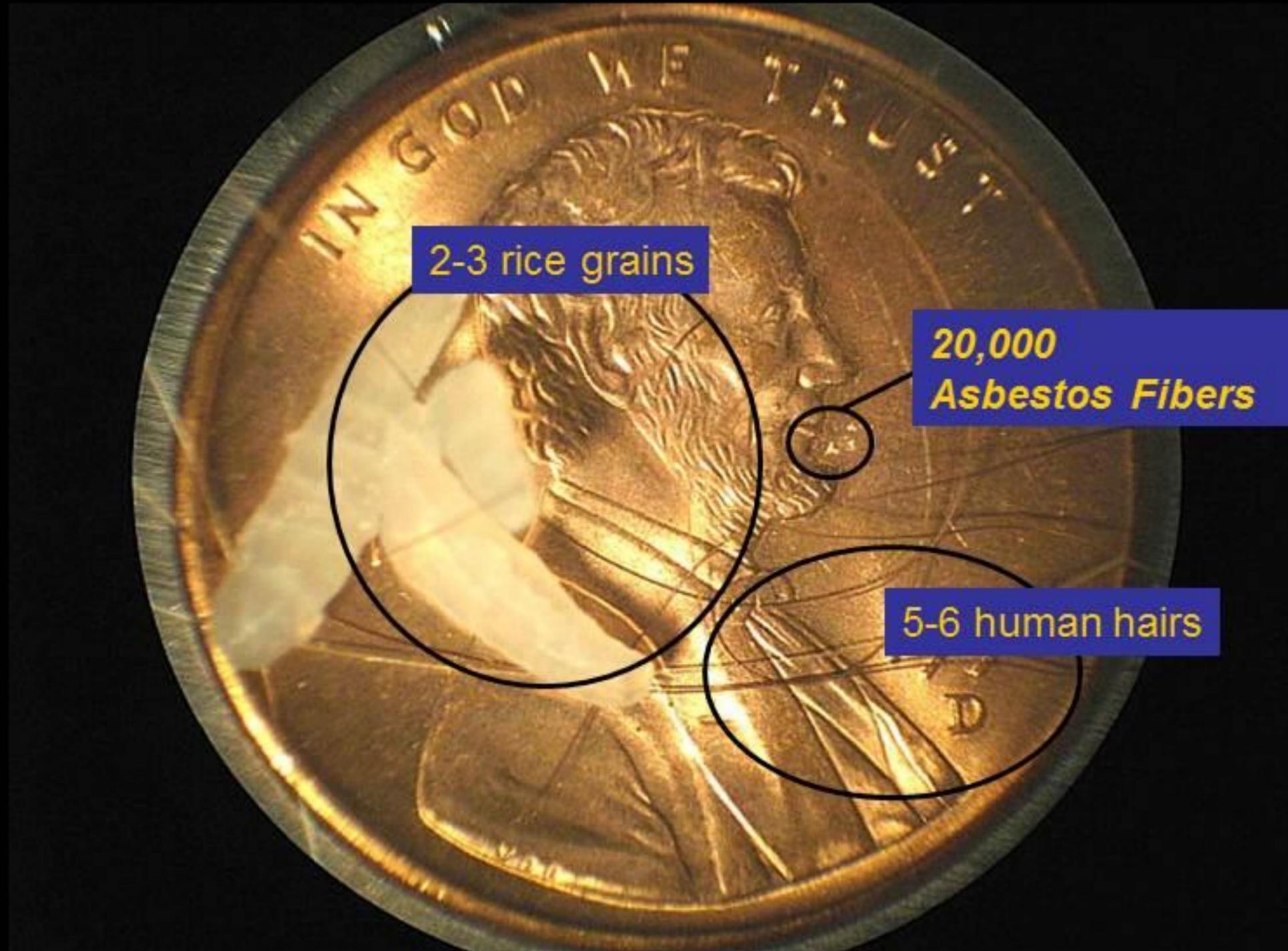
WHAT IS ASBESTOS?







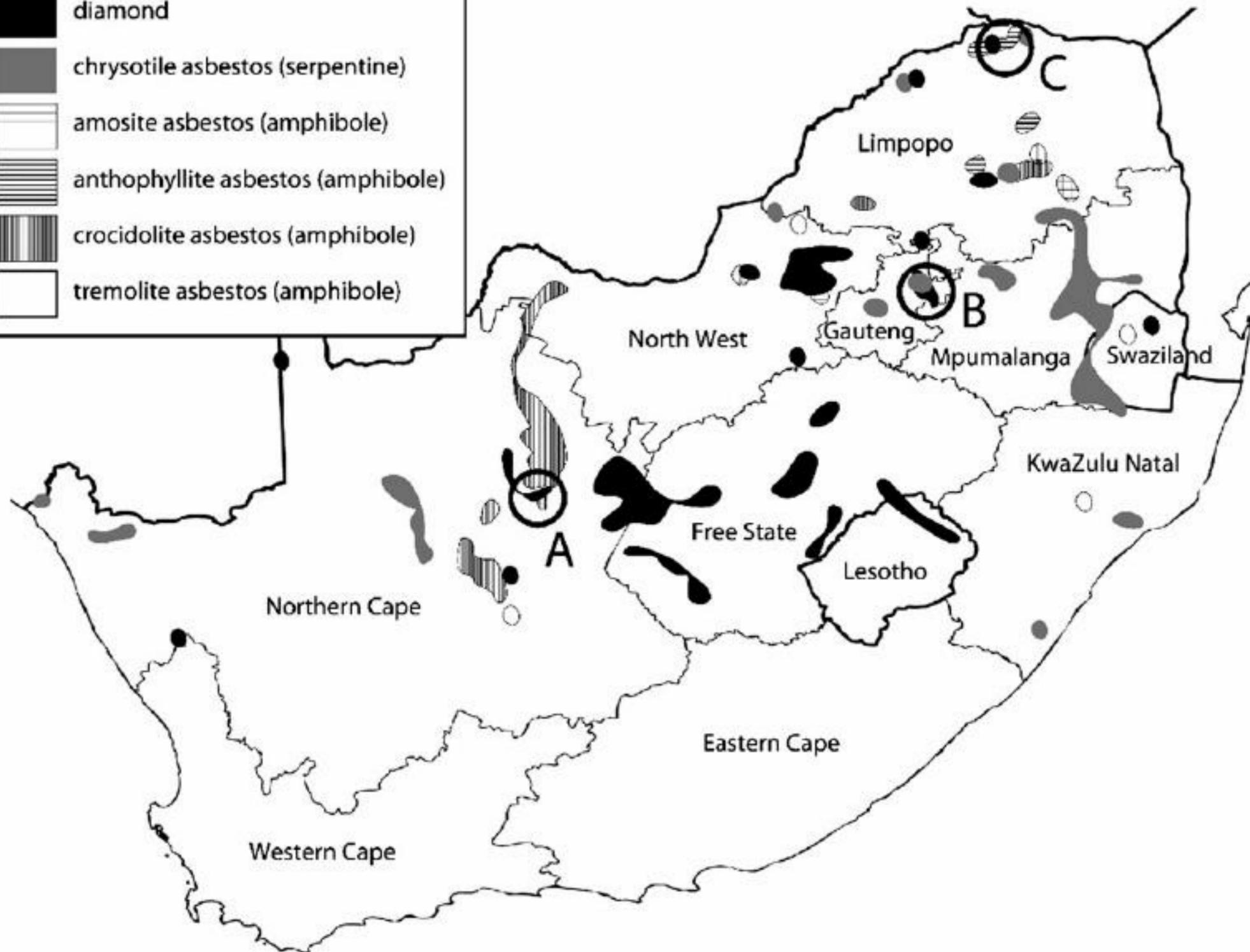
How small is asbestos?





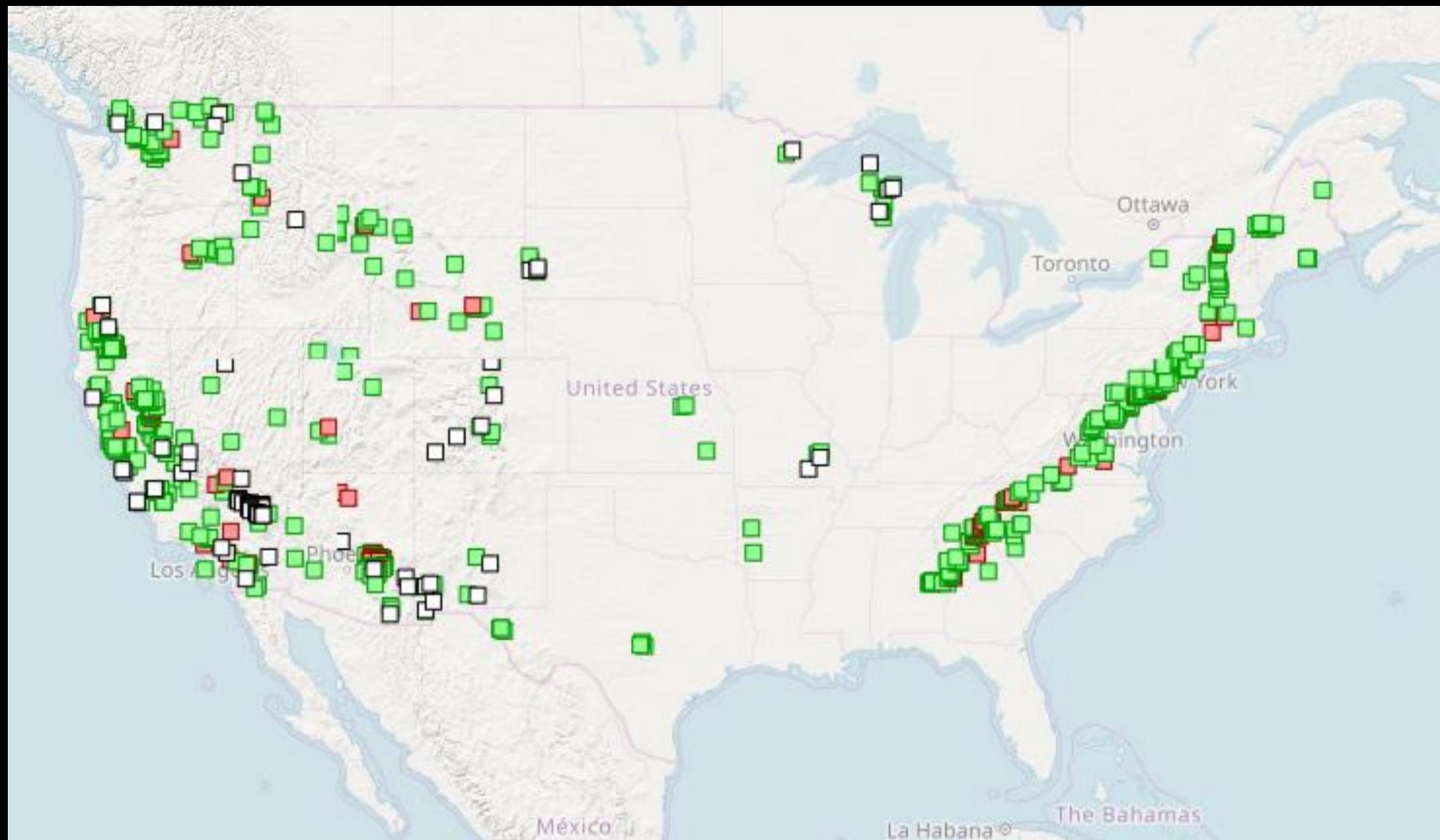
Mineral deposits:

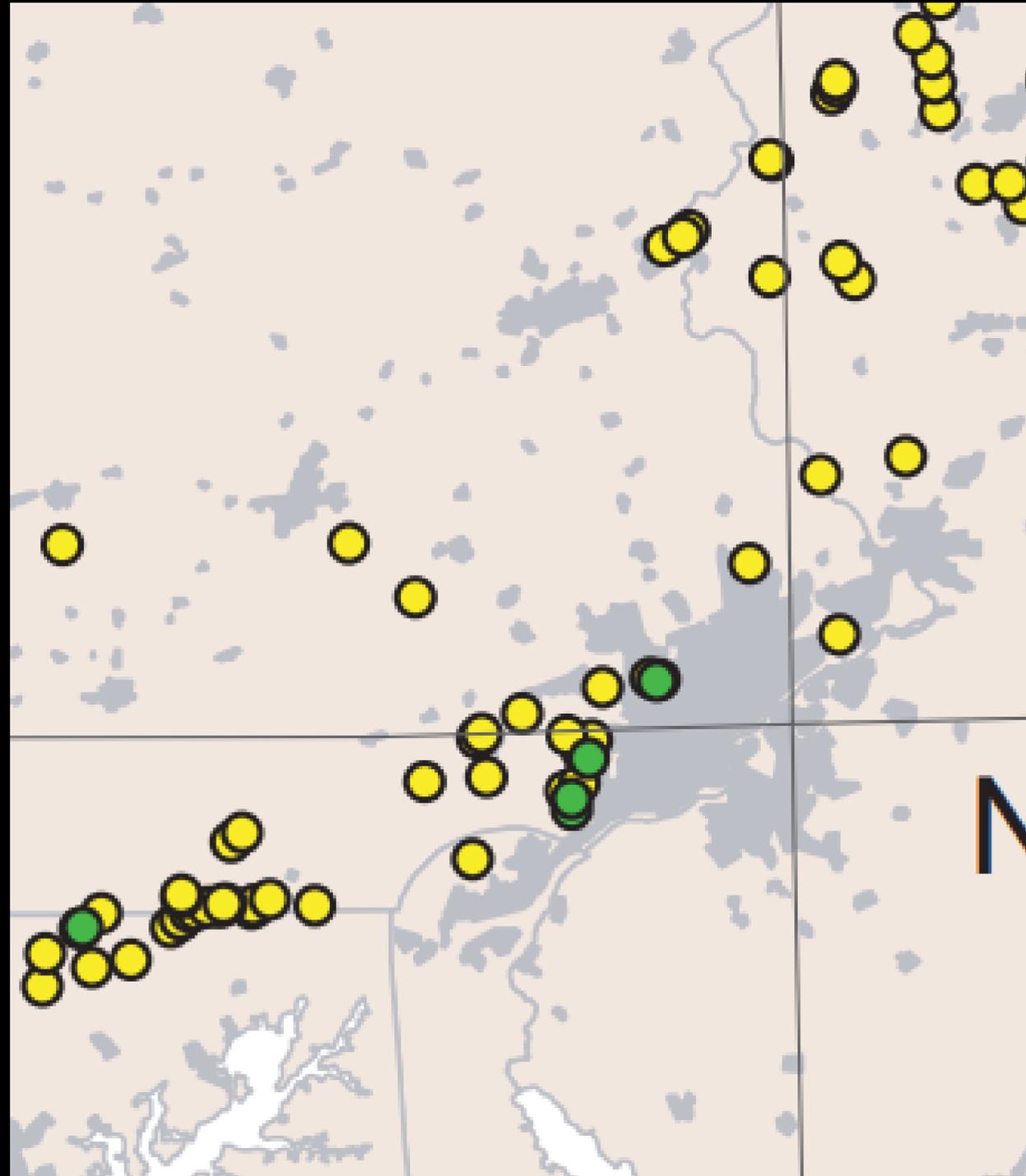
- diamond
- chrysotile asbestos (serpentine)
- ▨ amosite asbestos (amphibole)
- ▨ anthophyllite asbestos (amphibole)
- ▨ crocidolite asbestos (amphibole)
- tremolite asbestos (amphibole)













HOW IS ABESTOS USED?















H.W. JOHNS'

ASBESTOS

**ROOF,
RAILROAD AND SEASIDE
PAINTS.**

SLATE.

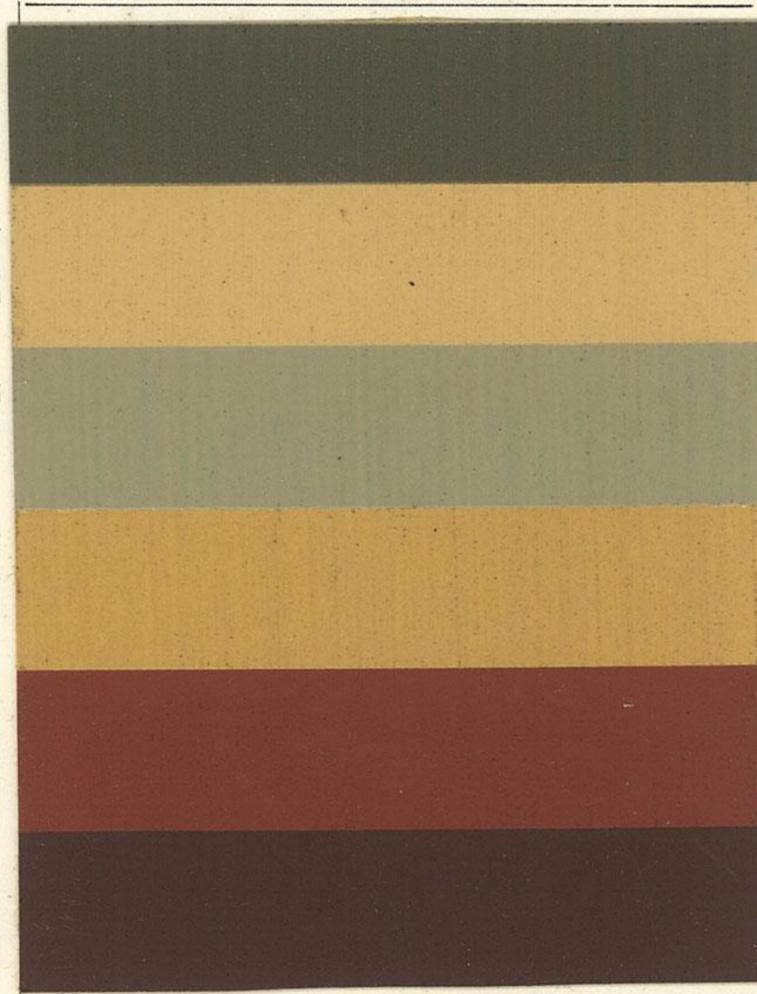
BUFF.

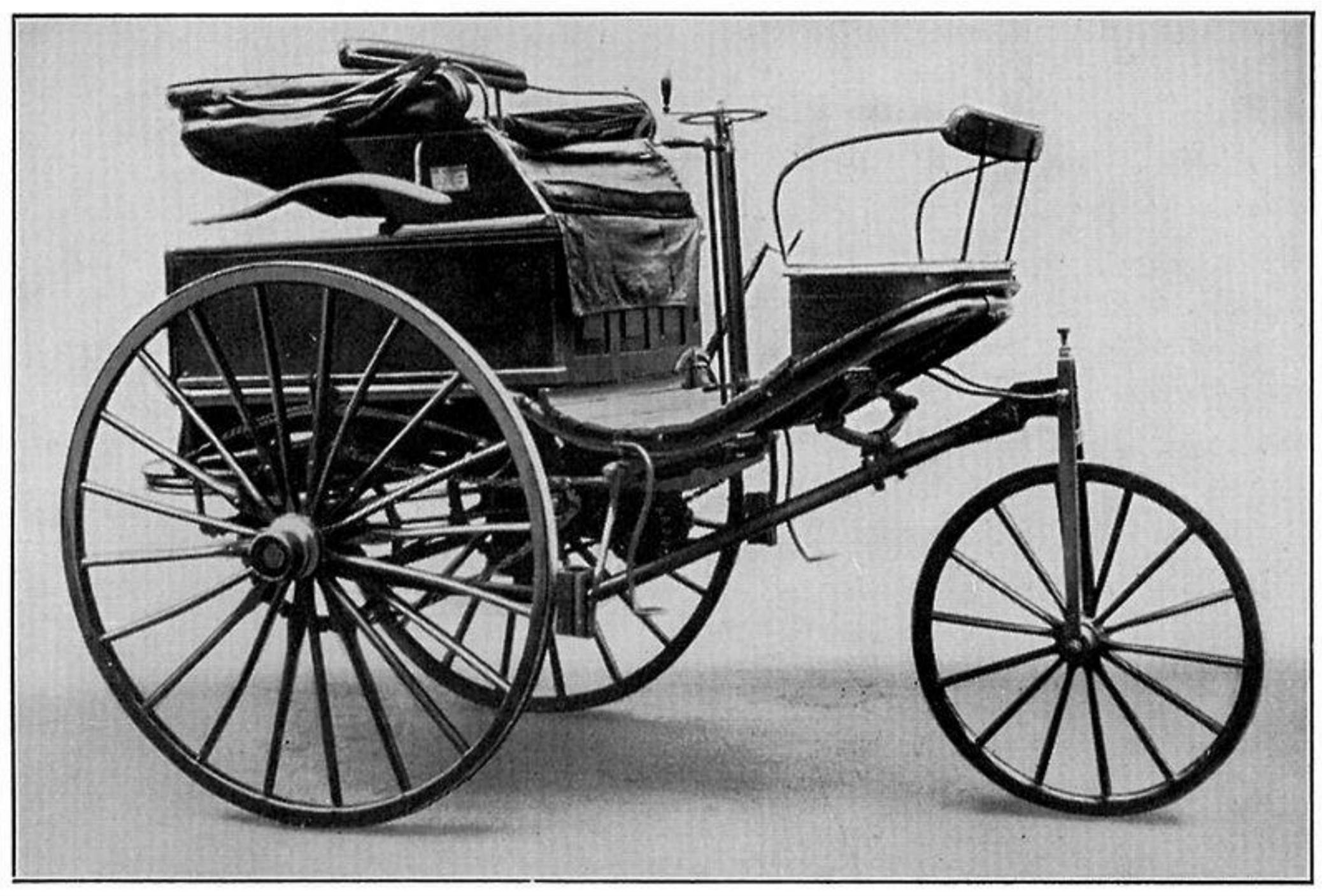
GRAY.

YELLOW.

RED.

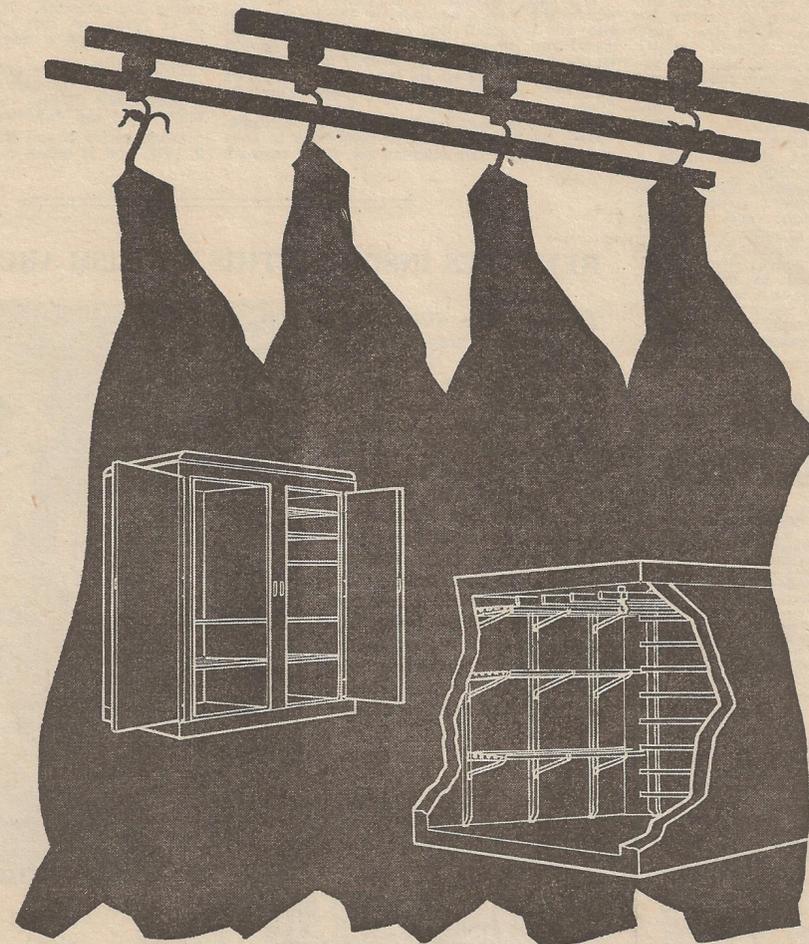
BROWN.





ASBESTOS-CEMENT

solves this problem



The Nation's Need for REFRIGERATOR LININGS

This is one of a series of advertisements designed to show how Asbestos-cement can help to solve an almost infinitely varied range of problems. At present, war-time needs have a monopoly of its service, but when peace comes the manufacturers look forward to extending further its usefulness.

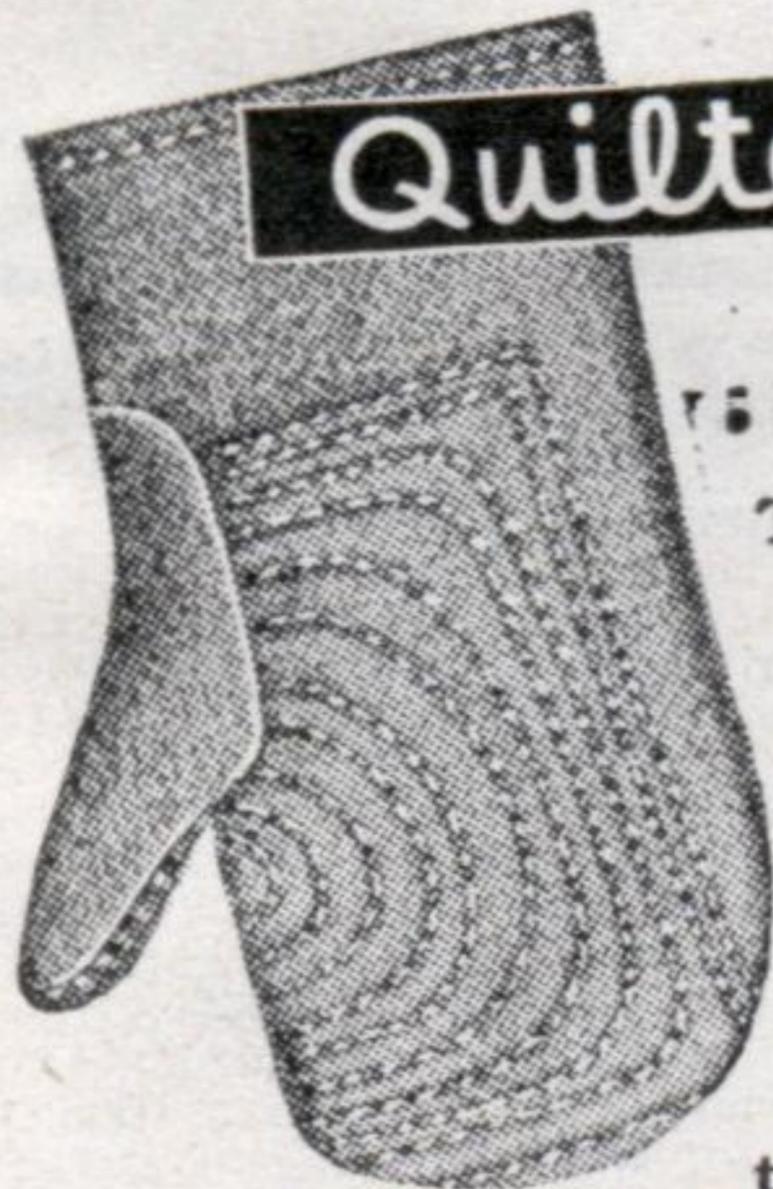


**TURNERS
ASBESTOS
CEMENT
CO., LTD.
TRAFFORD PARK
MANCHESTER 17**



"TURNALL"

Stipple-Glaze Sheets for
Refrigerator and Cold
Storage Chamber Lining



Quilted

ASBESTOS MITTS

... they last twice as long

These asbestos mitts for handling hot metal molds and shapes are reversible to fit either hand. Both sides quilted, won't shred or fray on rough, jagged material. Double wear, double life. Wool lined. All seams double stitched. The answer to troublesome problems. \$2.20 a pair. Discounts for quantities. One of 4300 production-speeding, time-saving safety

gloves, aprons, sleeves, spats, etc. Write for *Free* catalog.

INDUSTRIAL GLOVES CO.

6547 Garfield Blvd., Danville, Ill.

(In Canada: Safety Supply Co., Toronto)



ARE YOU GOING FLOOR-CARE CRAZY?

Get smart...get Flor-Ever

Dirt comes right off Flor-Ever, America's leading vinyl floor, —so Easy—so Fast

Arise, floor-cleaning slaves. Forget flooring aggravation—and add wonderful, gleaming color and smartness to your rooms, too. Discover Flor-Ever.

Flor-Ever is the micro-smooth vinyl floor that is cleaned so much easier. Flor-Ever is the vinyl floor you wax less because it's vinyl-bright. Flor-Ever is the glowing vinyl floor never harmed by ordinary kitchen mess.

And, Flor-Ever is setting new standards for wear.

Flor-Ever's vinyl-rich colors are today's decorator news. They're unbelievably beautiful. Furthermore, Flor-Ever in one of its many forms, is perfect for every place—over wood or concrete—basement to attic (or store, office, institution).

See Flor-Ever's galaxy of colors and styles today!



By the Yard -
By the Tile

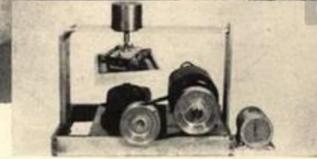


VINYL

FLOORING and COUNTER TOP

for...
basement to attic...
store or office...
everywhere and every purpose

Sloane - Delaware, Trenton, N.J...Flor-Ever vinyl...linoleum...cork...enameled floorings



SETS NEW WEAR STANDARDS

Flor-Ever, in each price and purpose range, outwears equal non-vinyl floor coverings of even greater thickness. On this grinding machine Flor-Ever Standard has withstood as much abrasion as floorings 50% thicker.



NO KITCHEN MESS CAN HARM

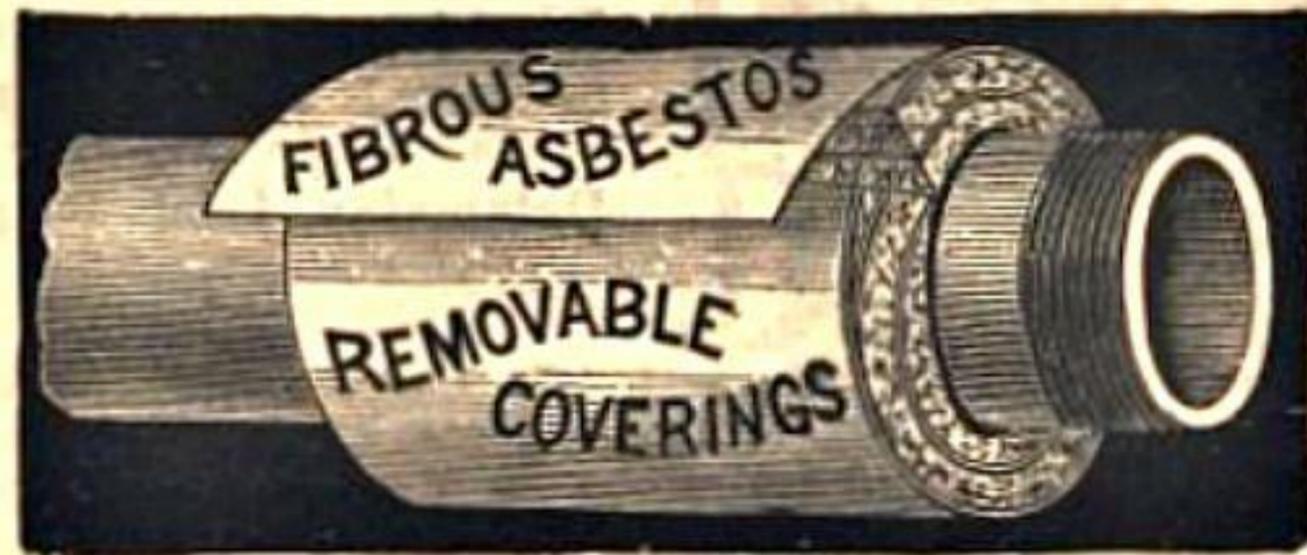
No vegetable, animal or mineral fat, oil or grease ordinarily used in kitchens can harm any Flor-Ever—neither the Standard, the Vinyltone, Vinyl Asbestos, nor Universal.



VINYL LUSTER IS BUILT IN

Flor-Ever, in any of its forms, is naturally lustrous; it's vinyl! The power-polished surface has a vinyl sparkle that lasts longer and light buffing with paste or liquid wax speedily increases its gloss.

PIPE COVERING.



Fireproof Non-conducting Coverings for Steam Pipes, Boilers, and all hot surfaces. Made in sections three feet long. Easy to apply. Asbestos Materials—Fiber, Millboard Packing, and Cement.

CHALMERS-SPENCE CO.
419-421 Eighth St., New York.

The best cigarette NEWS for over 40 years

..THE FILTER TIP

that holds throat irritants
in check



SMOKE CLEAN SMOKE

ALL REPUTABLE MANUFACTURERS remove impurities from the cut tobacco leaf—but irritants developed when the tobacco burns can be removed *only from the smoke itself*. This the du Maurier Filter Tip does. Irritants are retained by the cellulose between the crepe paper which screens the smoke selectively, letting pass for your enjoyment the fragrance, aroma and flavor of the costliest American and princely Oriental leaf, specially blended.

By cleansing the smoke, the du Maurier Filter Tip not only enhances flavor, it also keeps you fit, and protects your throat from irritation.

What the
du MAURIER
SELECTIVE FILTER TIP
does:

It provides the common-sense method of preventing smoker's throat because it effectively retains irritants.

It stops particles of tobacco getting into the mouth.

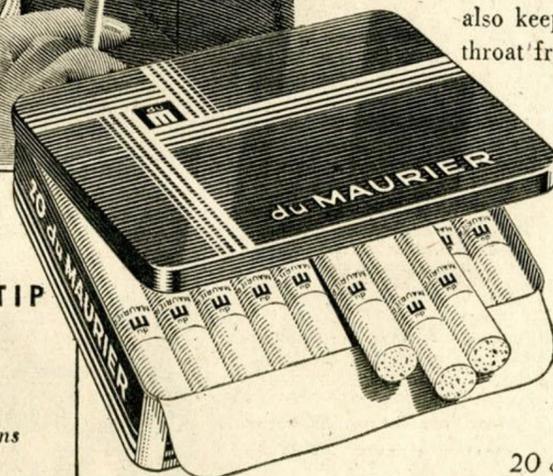
It guards physical fitness.

It protects lips and teeth from stain.

It avoids burning the tongue.

It brings out the flavor and makes the smoke delightfully sweet and cool.

It gives a cleaner, healthier and more satisfying smoke.



Filter-Tipped
in the
Scarlet
Aluminum
Box

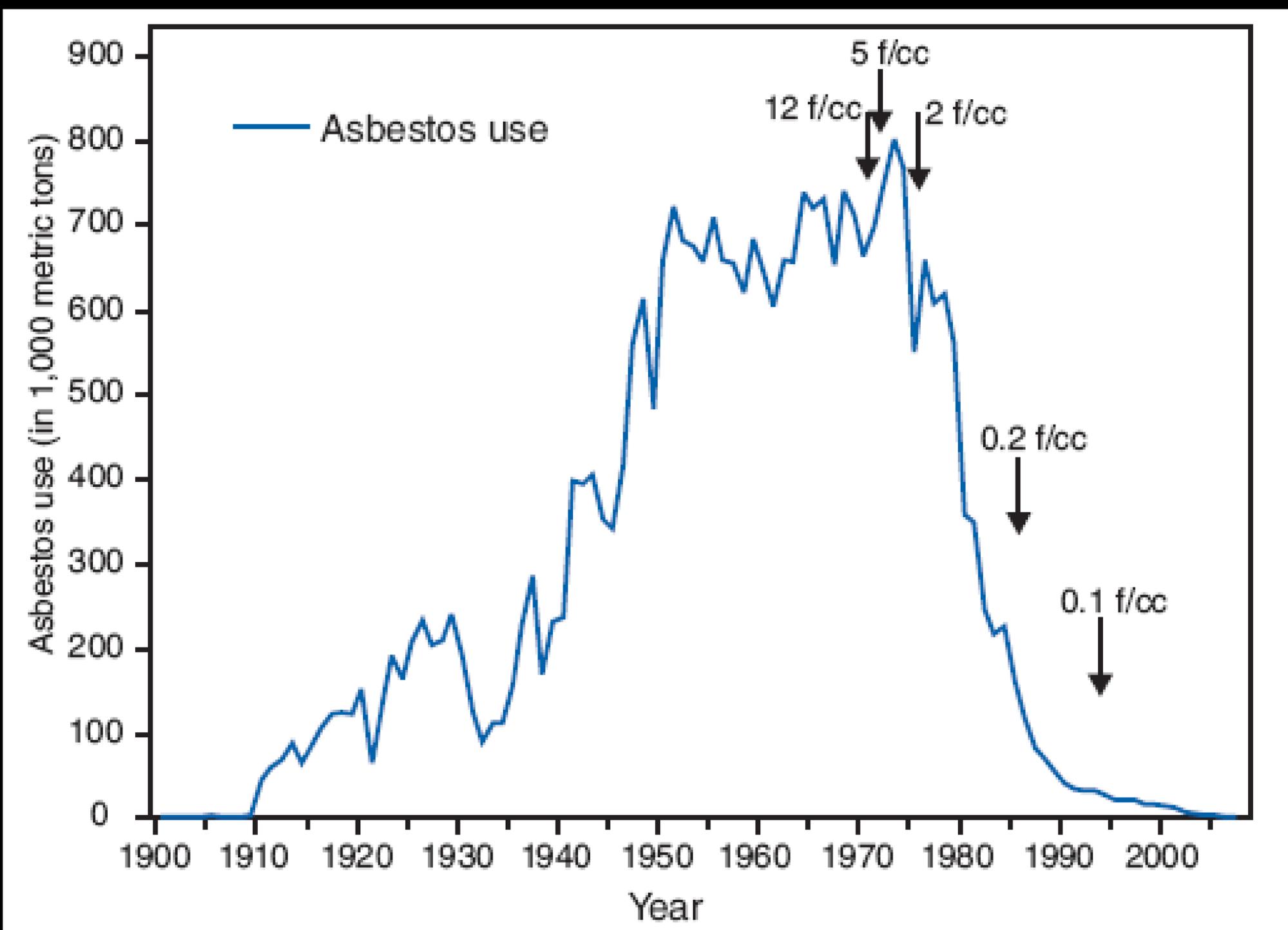
20 cigarettes for 30¢

du MAURIER

CIGARETTES

When only the best will do

MADE IN U.S.A. BY COLUMBIA TOBACCO CO. INC., NEW YORK







Plaster



Drywall











Prohibited Products

- Corrugated paper
- Commercial paper
- Flooring felt
- Rollboard
- Specialty paper
- New uses of asbestos

Authorized Products

- Corrugated asbestos cement sheet
- Flat asbestos cement sheet
- Vinyl asbestos floor tile**
- Asbestos cement pipes
- Asbestos cement shingles
- Friction materials
- Brake linings
- Clutch facing
- Disc brake pads
- Asbestos clothing
- Automatic transmission components
- Roofing felt**
- Roof coating**
- Non-roof coatings
- Millboard
- Pipeline wrap
- Acetylene cylinder filler
- Asbestos diaphragms
- High grade electrical paper
- Packings
- Sealant tape
- Brake blocks
- Missile liners
- Arc shutes
- Battery separators
- Reinforced plastic
- Textile products
- Gaskets







Used in over 3,000
products.

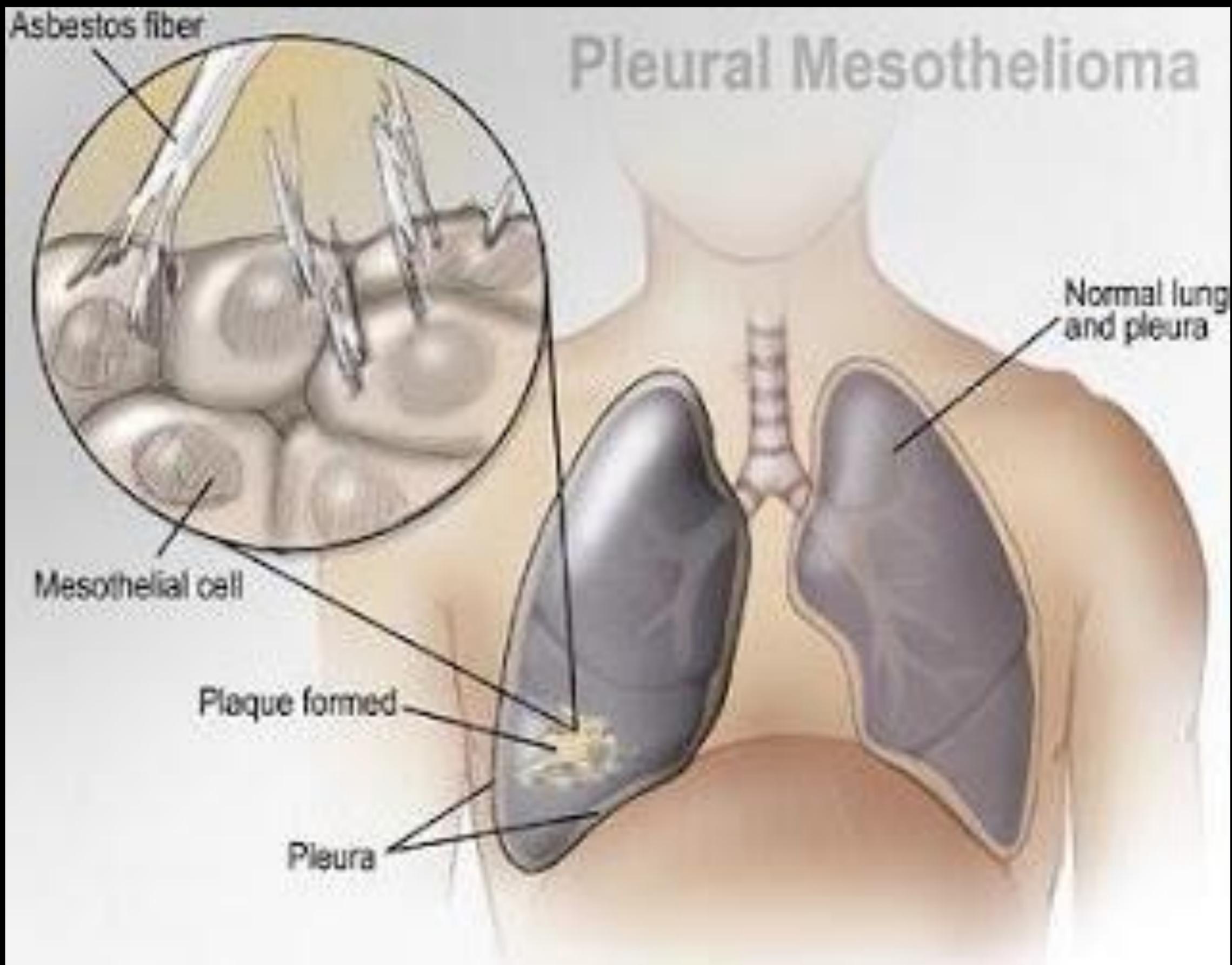
IS ASBESTOS SAFE?

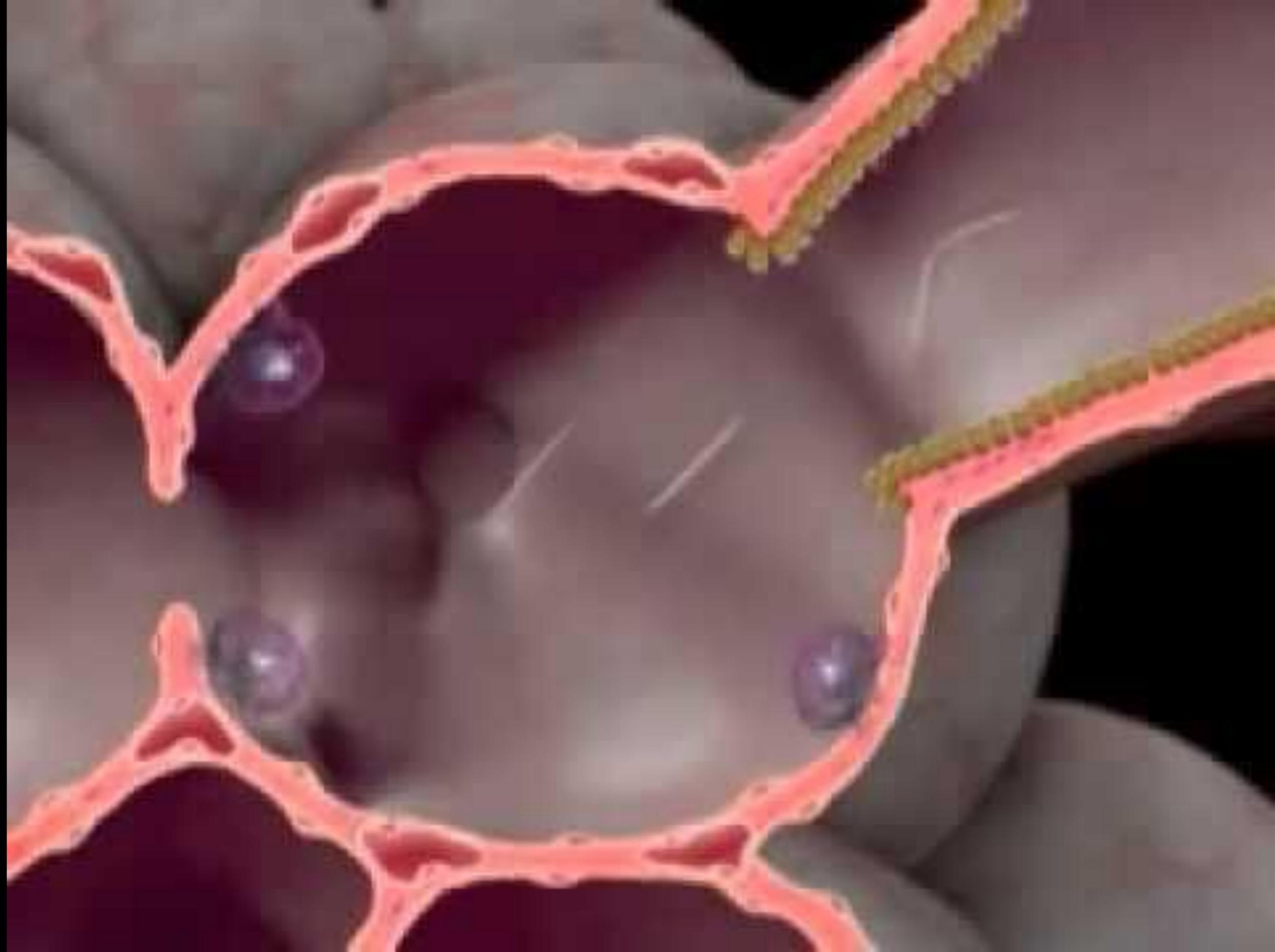






Pleural Mesothelioma







Exposure
to Asbestos Occurs

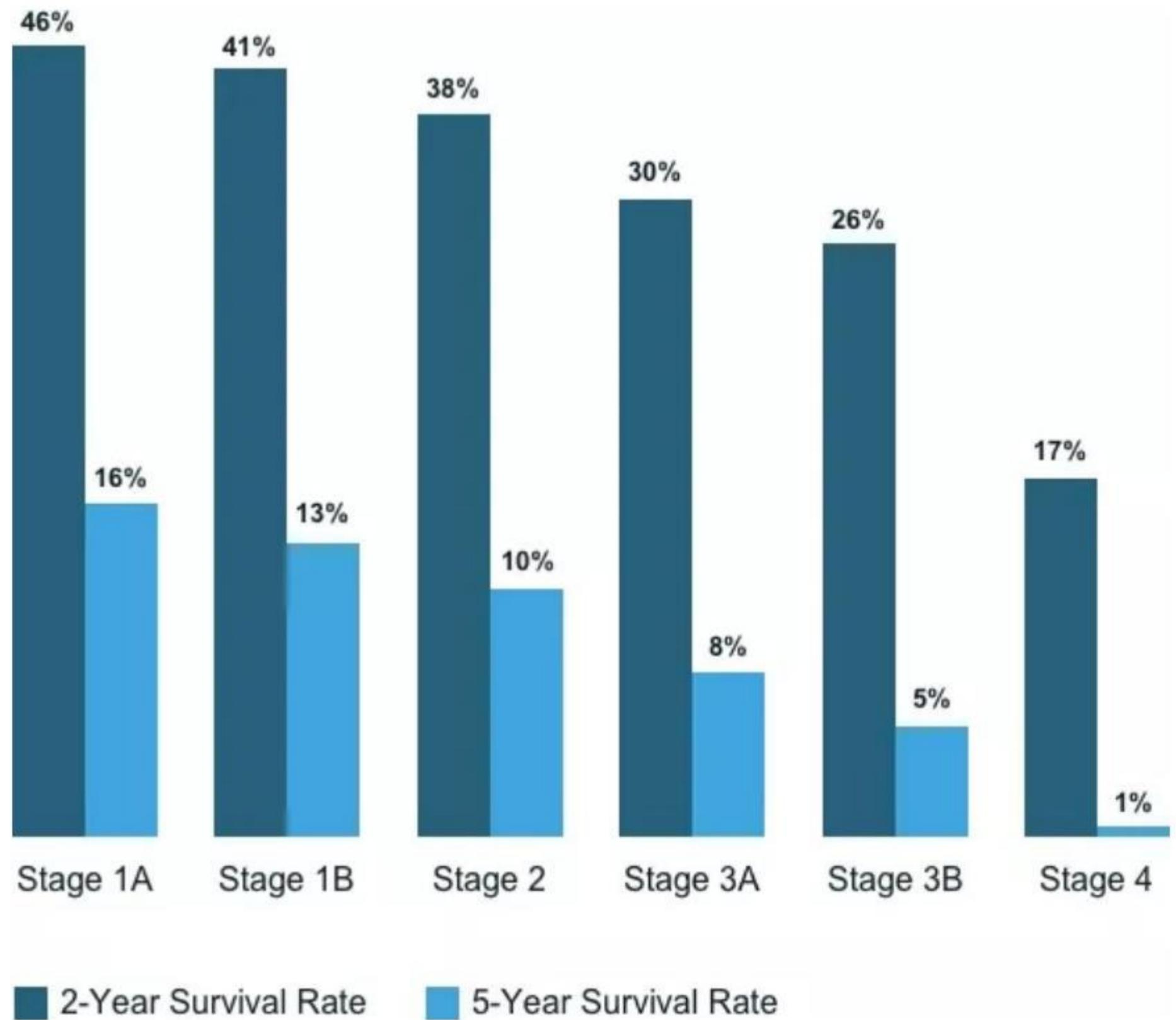


47.9 Years
Mean Latency for Men

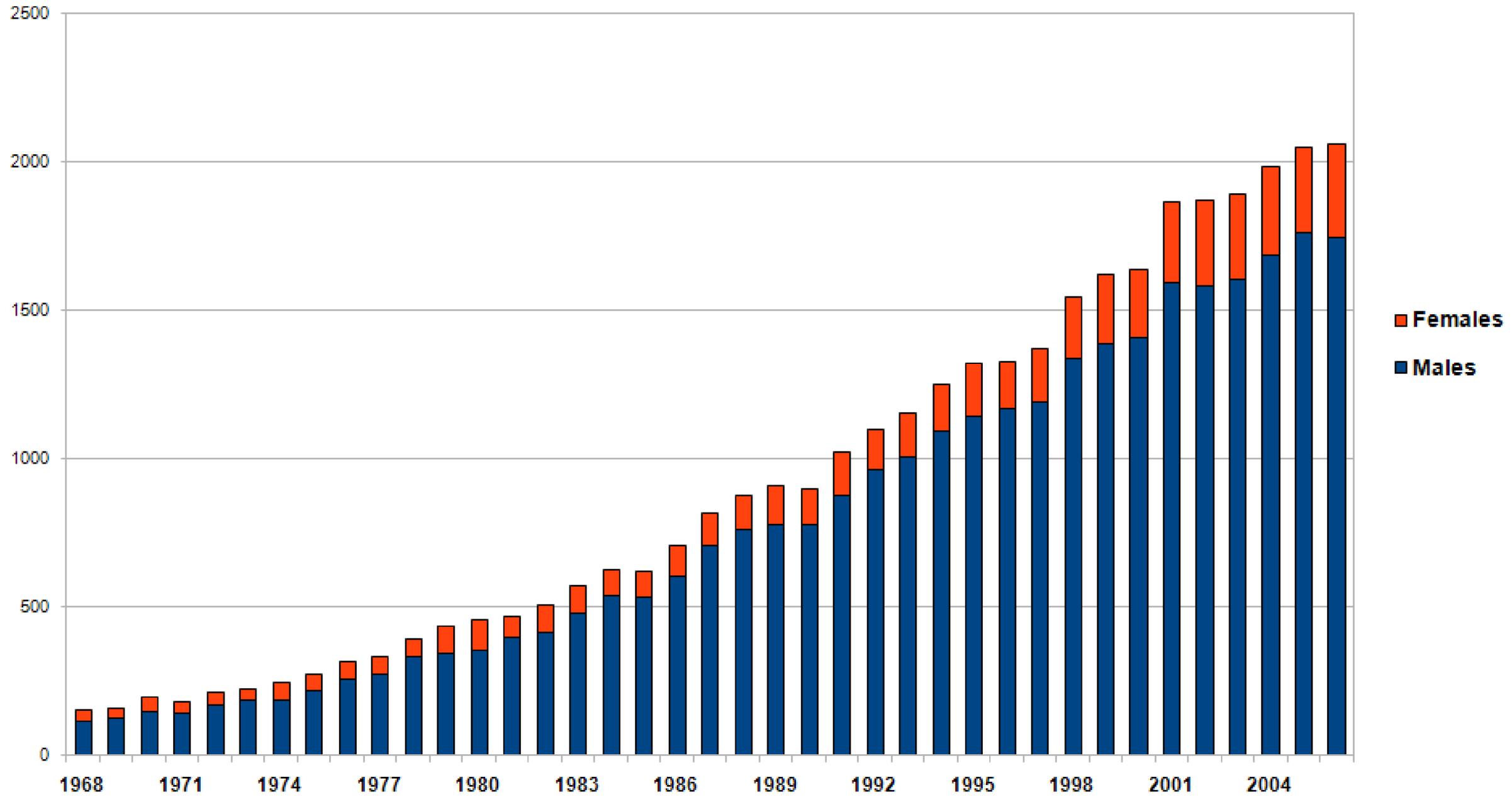


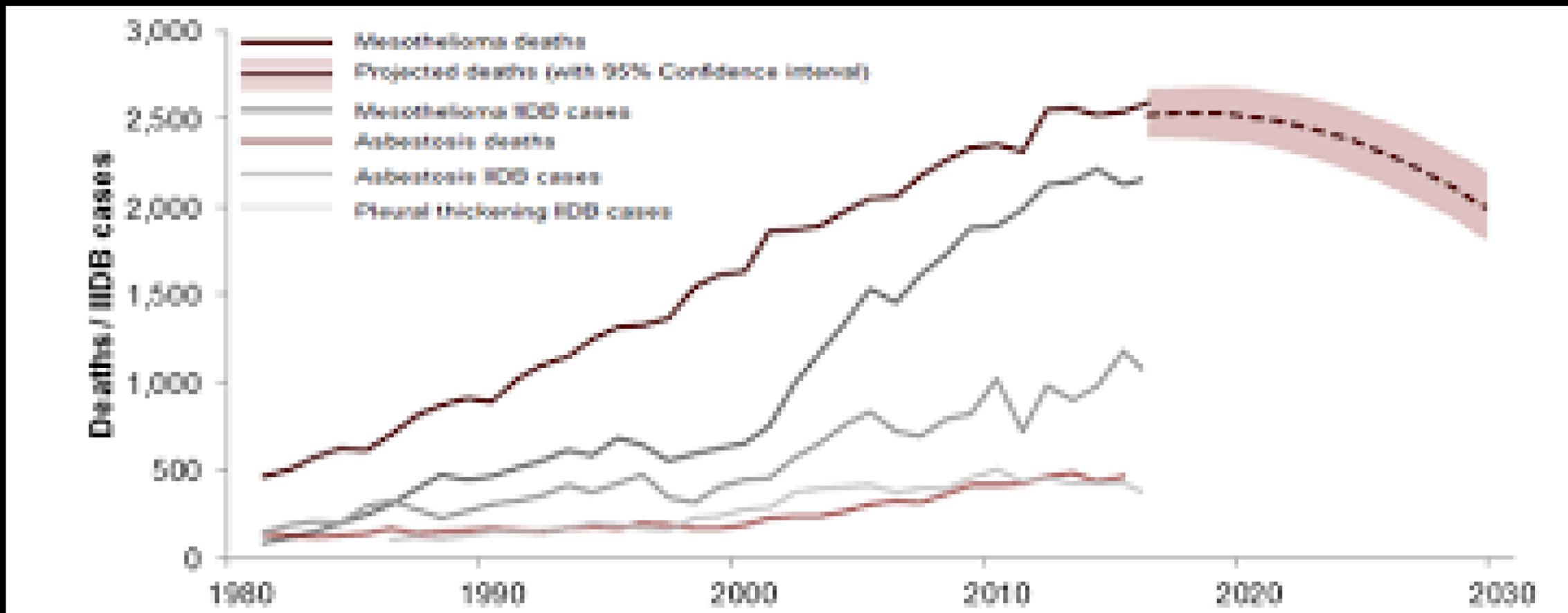
53.3 Years
Mean Latency for Women





Death certificates mentioning mesothelioma, 1968-2006





ACCORDING TO
WORLD HEALTH ORGANIZATION

MORE THAN
107,000
PEOPLE DIE EACH YEAR

FROM
**ASBESTOS-RELATED
LUNG CANCER, MESOTHELIOMA
AND ASBESTOSIS RESULTING FROM
OCCUPATIONAL EXPOSURE**



IS ABESTOS BANNED?

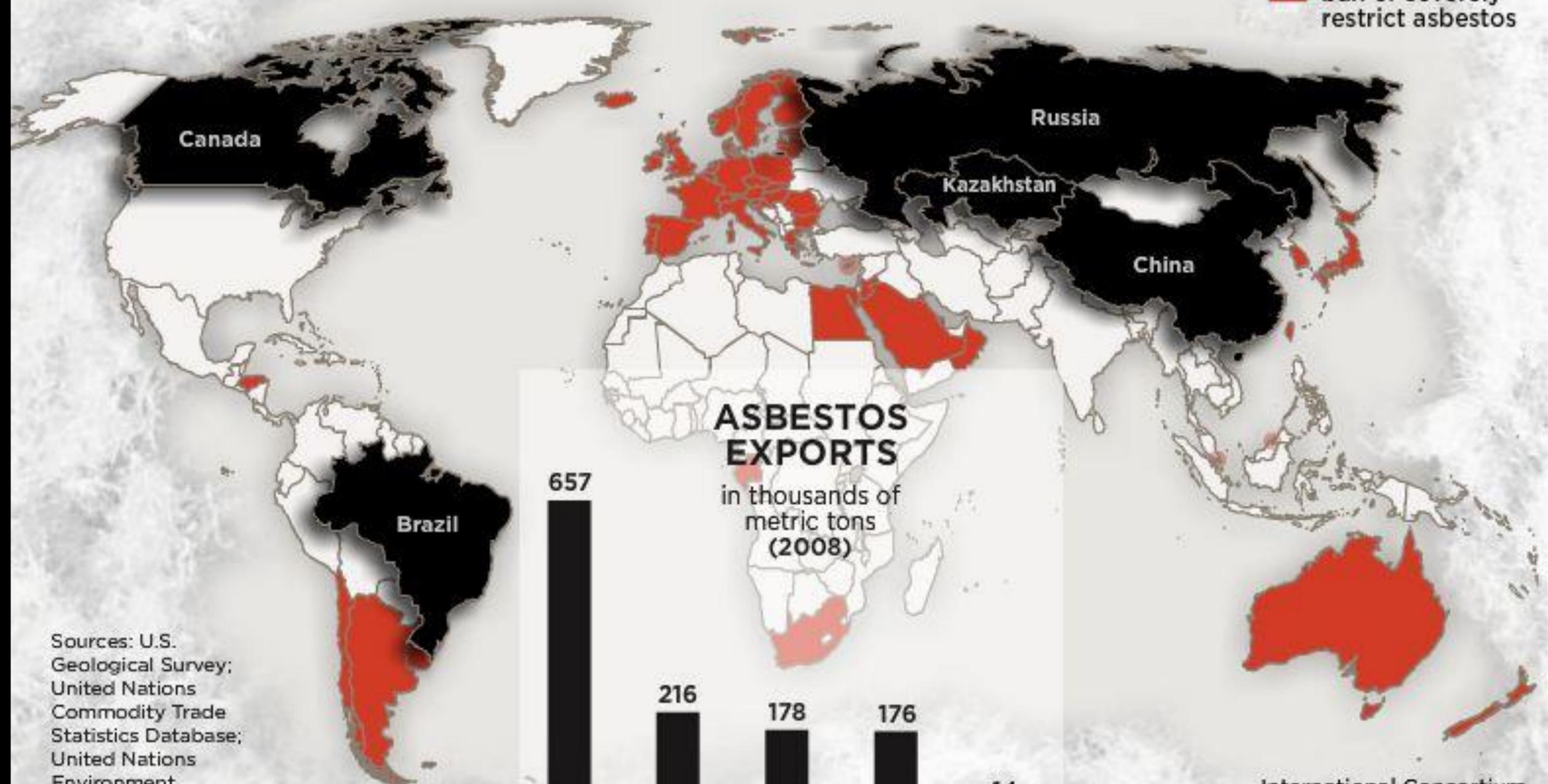
Countries with Bans on Asbestos



- Countries with Full or Partial Bans
- Countries Expected to Ban Asbestos Completely by 2020
- Countries with No Bans

Top 5 Asbestos Exporters

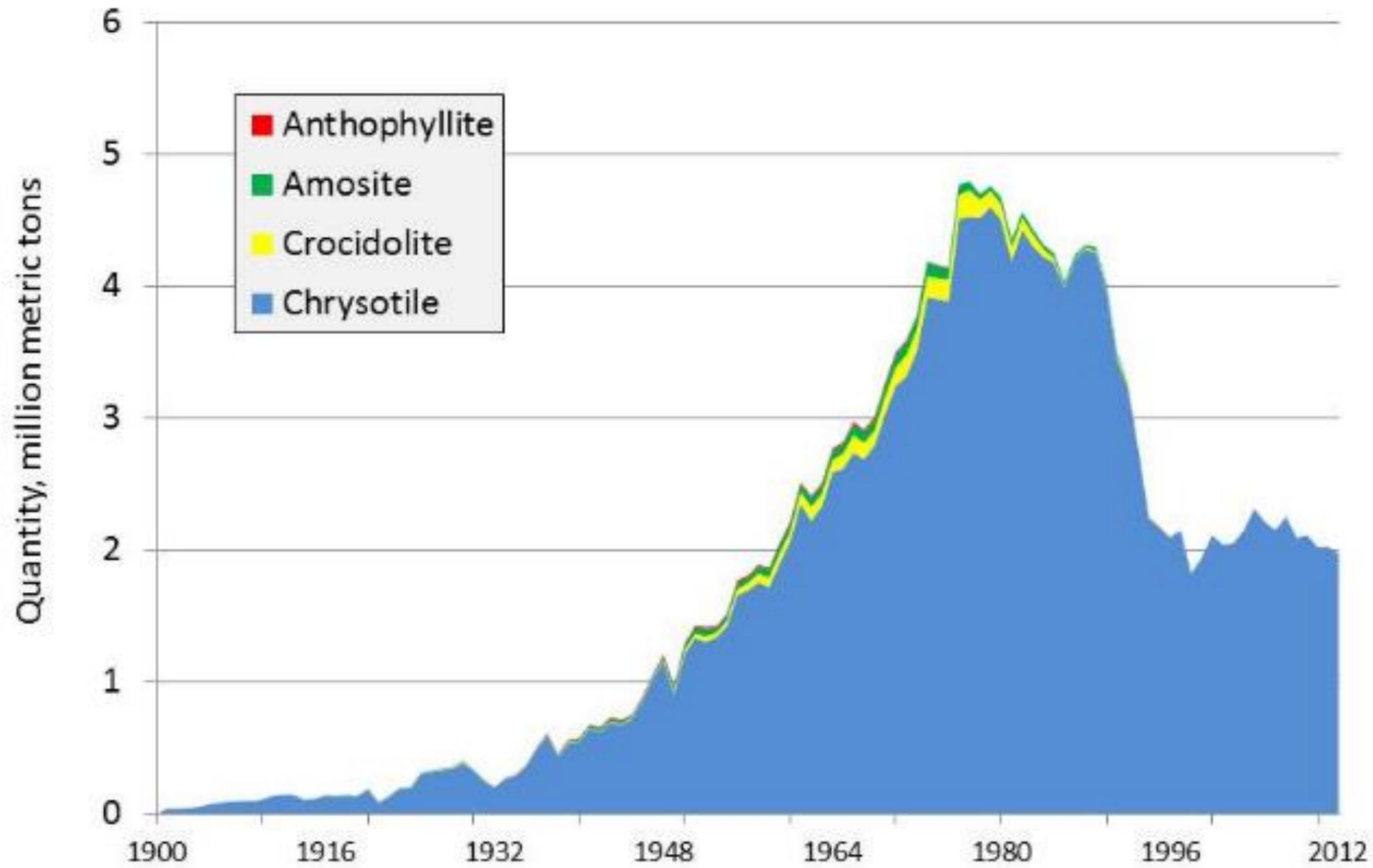
- Top 5 asbestos exporters
- Countries that ban or severely restrict asbestos



Sources: U.S. Geological Survey; United Nations Commodity Trade Statistics Database; United Nations Environment Programme; International Ban Asbestos Secretariat

International Consortium of Investigative Journalists
Graphic by www.stephenroutree.com

World Production of Asbestos, by Type



Clean Air Act of 1970 classified asbestos as a hazardous air pollutant and gave the EPA the power to regulate the use and disposal of asbestos. Spray-applied asbestos products were banned with the passage of this act.

In 1976, the **Toxic Substances Control Act (TSCA)** provided the EPA the authority to place restrictions on asbestos.

The **Asbestos Hazard Emergency Response Act of 1986 (AHERA)** made the EPA establish standards for inspecting and removing asbestos in schools. In **1990**, the EPA expanded the certification requirements to apply to commercial buildings.

In July 1989, the EPA issued the **Asbestos Ban and Phase-Out Rule (ABPR)**, which planned to impose a full ban on the manufacturing, importation, processing and sale of asbestos-containing products. ... never happened...overturned in 1991 and could only be applied to a few products...

The EPA determined that six categories of asbestos-containing products fit that classification, including:

- Flooring felt
- Rollboard
- Commercial paper
- Corrugated paper
- Specialty paper
- New uses of asbestos

Only spray-applied asbestos and these six products are banned in the U.S. All other uses of asbestos, such as automotive brake pads and gaskets, roofing products, floor tiles, joint compound, etc are legal.

1994 – OSHA Asbestos in Construction Standard

2016 - Frank R. Lautenberg Chemical Safety for the 21st Century Act

April 5, 2019 – Significant New Use Rule. Becomes effective June 5, 2019

FEDERAL
DEMO/RENO
REQUIREMENTS

Federal Asbestos Regulations
Common to day-to-day asbestos control work

*Always check for
State/Local program
requirements!*

EPA

OSHA

NESHAP

40 CFR Part 61
Subpart M

Demolition,
renovation and
waste issues

Inspections prior to
disruption

Notifications

Required removal

Waste packaging &
approved landfills

Waste shipment
records

AHERA

40 CFR Part 763

K-12 schools, public and
private

Inspections &
Assessments

Management Plans

Communication

Training requirements

Abatement final clearance
issues

**Worker Protection
Rule**

40 CFR Part 763 Subpart G

OSHA protection for those
in State/Municipal
employment

**General
Industry**

29 CFR 1910.1001

Permissible exposure
limits and exposure
assessments

Inspection before
exposures

Communication

Worker protection;
Respiratory protection
must meet
29 CFR 1910.134

Training

Mandatory appendices

Construction

29 CFR 1926.1101

Permissible exposure
limits and exposure
assessments

Inspection before
exposures

Communication

Worker protection;
Respiratory protection
must meet
29 CFR 1910.134

**Classes of asbestos
disturbing work (I-IV)**

Significant work practice
requirements

Training

Mandatory appendices



1980's



1980's



OSHA determined that buildings constructed after January 1981 are less likely to have asbestos-containing materials installed in them, but this is not for certain.

- *LOI*, September 5, 1996

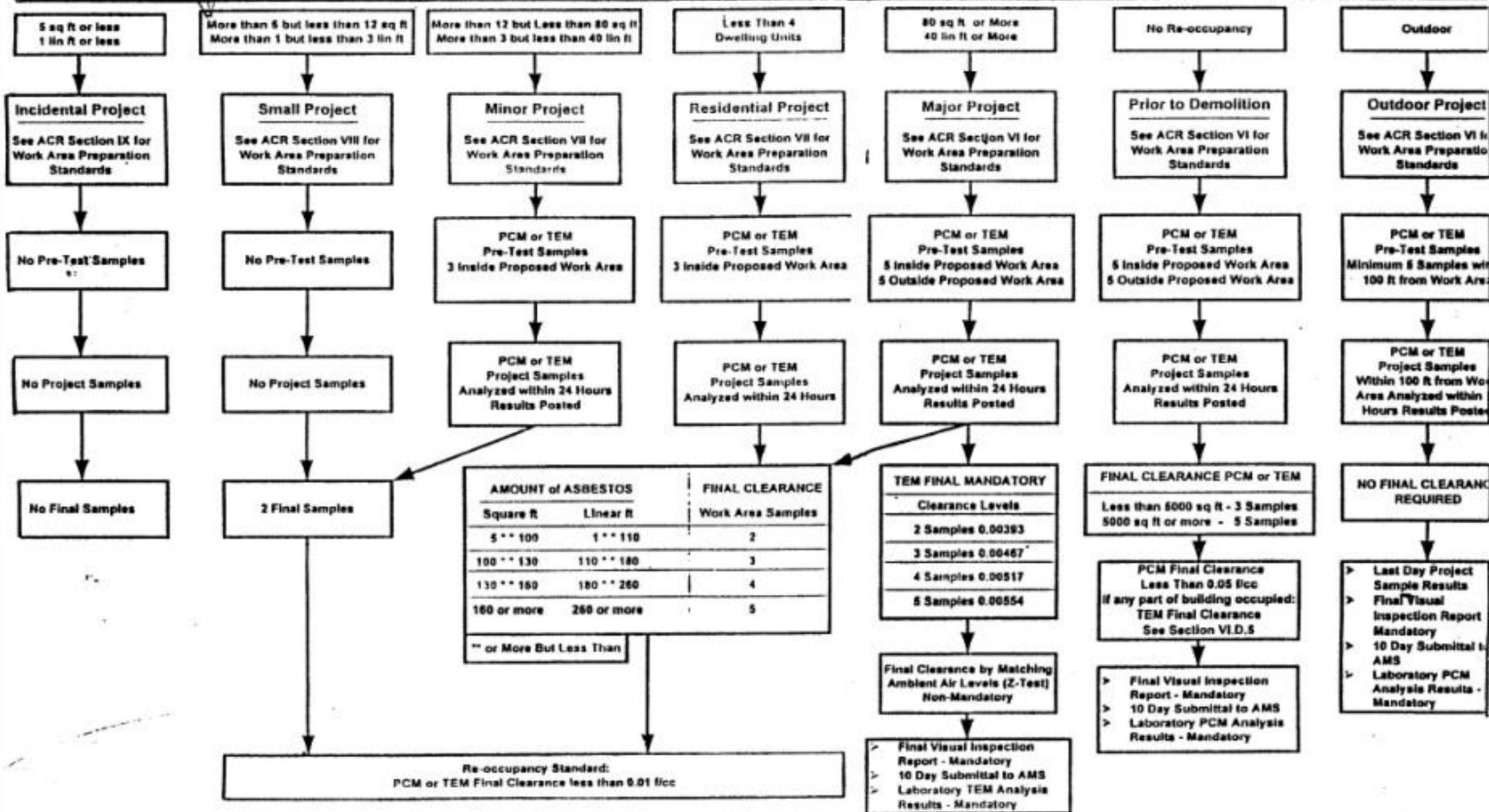
Presume vs Assume

PENNSYLVANIA
REQUIREMENTS?

CITY OF PHILADELPHIA
REQUIREMENTS?

City of Philadelphia Air Sampling/Project Standards

1/9/2006





City of Philadelphia - Department of Public Health
Public Health Services - Air Management Services
Asbestos Control Unit - 321 University Av., 19104

Order Use Only	Date Received L&I:	Date Received AMS:
	Date Inspected:	Inspector #

Asbestos Inspection Report

Name of Building:	Address	Phone #
HOAGIE CITY	2136-38 MARKET ST	(610) 207-1676
Name of Building Owner:	Address	Phone #
STB INVESTMENT CORP	300 W 43RD ST SUITE 400 New York, NY 10036	406 212-2779
Name of Licensed Investigator:	License #	Phone #
Kenneth A. Hudron	0321	267-623-7141
Name of Certified Lab:	License #	Phone #

Scope of Work: (include all locations)

No Asbestos Found

Could not complete the inspection because the building or a portion of has been declared imminently dangerous (ID) and in danger of collapse. INVESTIGATOR MUST BE ON SITE DURING DEMOLITION!

Asbestos Containing Material Present? Yes (List Below) No

List Asbestos Containing Material (ACM) located in the planned renovation/demolition area(s). Damaged ACM must be listed and then repaired or removed prior to renovation. You (investigator) must label all ACM that may be left in the work area. Page 1 of

Location	Description	Type (Code 1)	Amount		Condition (Code 2)	Action (Code 3)
			Square	Linear		

<p><u>Code 1</u></p> <p>FR1 - Friable NF1 - Non-Friable, Cat. 1 NF2 - Non-Friable, Cat. 2</p>	<p><u>Code 2</u></p> <p>DD - Deteriorated or Delaminated ND - Non-Damaged</p>	<p><u>Code 3</u></p> <p>REM - Removal necessary prior to Demo/Reno NRN - No removal necessary, label ACM REP - Repair & Label ACM, removal not necessary</p>
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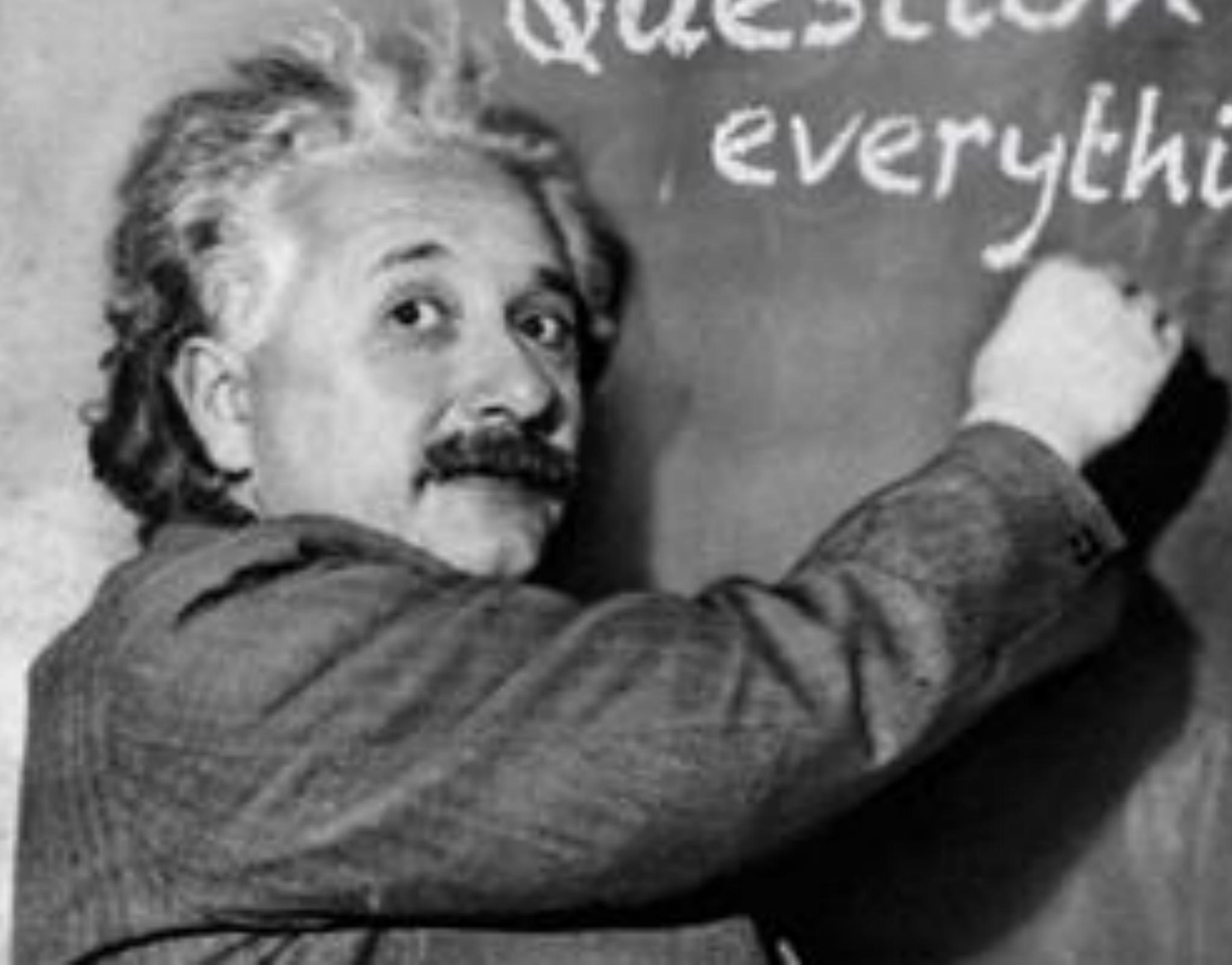
I hereby certify that the foregoing statements are true and the information contained in this report is true. This certification is made subject to the penalties set forth in 18 PA. C.S. §4904 relating to unsworn falsification to authorities. Furthermore I certify that the inspection, sampling, and labeling requirements of section X of the Asbestos Control Regulation (ACR) have been met. The building owner has been notified of the ACR requirements and given a copy of this report. If the inspection has revealed ACM which will be disturbed by the proposed work or if it has revealed ACM in bad condition, the building owner has been notified to remove or repair the ACM in accordance with the ACR prior to renovation or demolition activity.

Signature of Licensed Asbestos Investigator:	Date:	Signature of Building Owner:	Date:
<i>Kenneth A. Hudron</i>	7-28-13	<i>BE-HALK</i> OF STB INVESTMENTS	11-28-13

Asbestos in the News

- Philadelphia Schools
 - Claire's Cosmetics
- Asbestos in Drinking Water
 - J&J Baby Powder Case
- Man Arrested for Dumping Asbestos
- Contractor pleads guilty to mishandling asbestos
- Contractor pleads guilty to improperly removing asbestos
- Asbestos endangering workers on jobsite

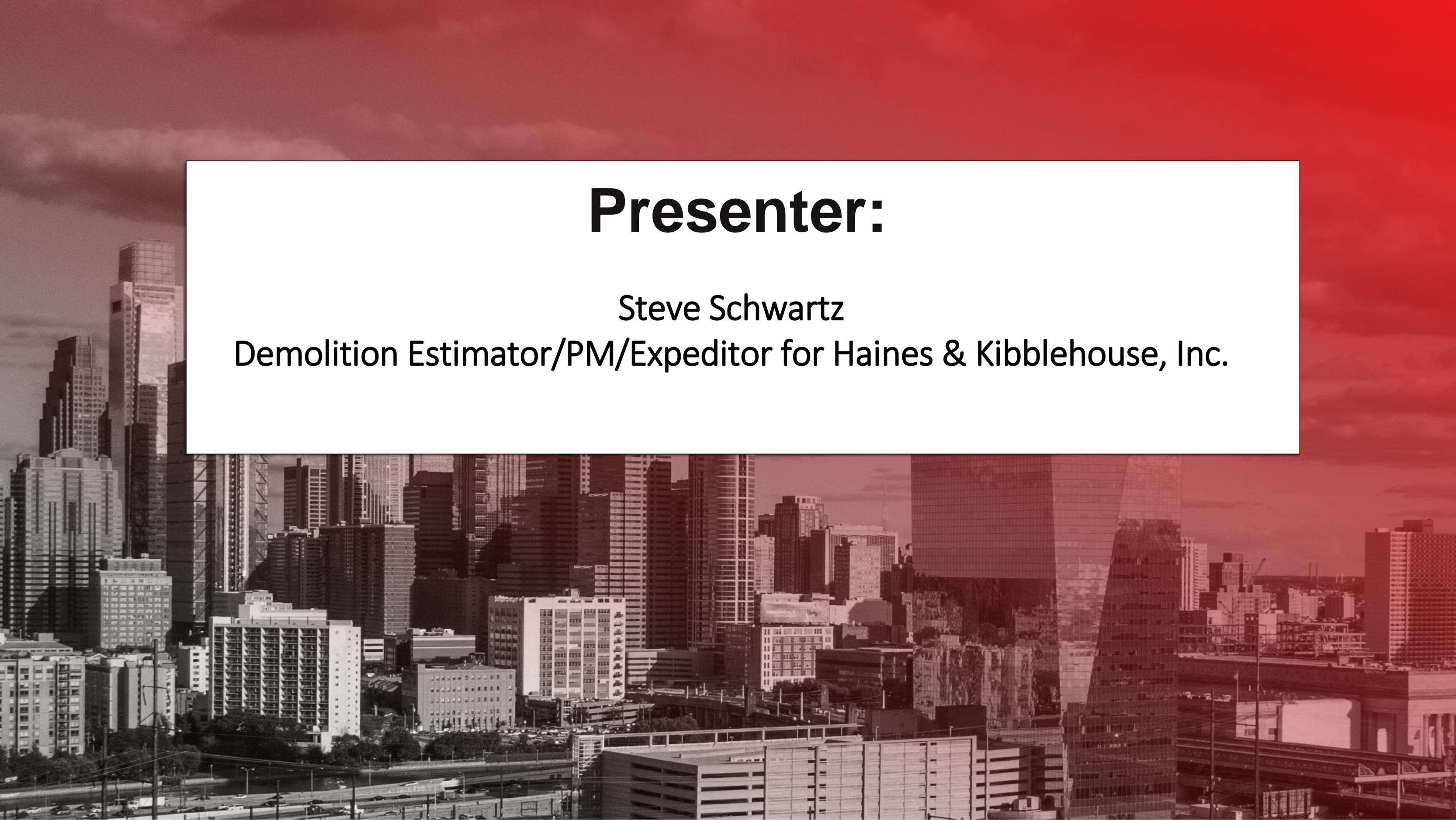
Question
everything

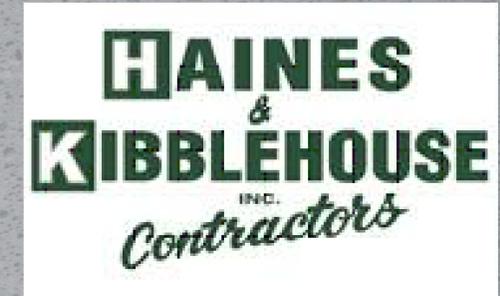


Presenter:

Steve Schwartz

Demolition Estimator/PM/Expeditor for Haines & Kibblehouse, Inc.





PRE-DEMOLITION SURVEY

The Pre –Demolition Survey is vital in all types of demolition to prevent accidents and is the law. The NDA strongly encourages it's members and other contractors to use some sort of standardized form on **all** of their demolition projects.

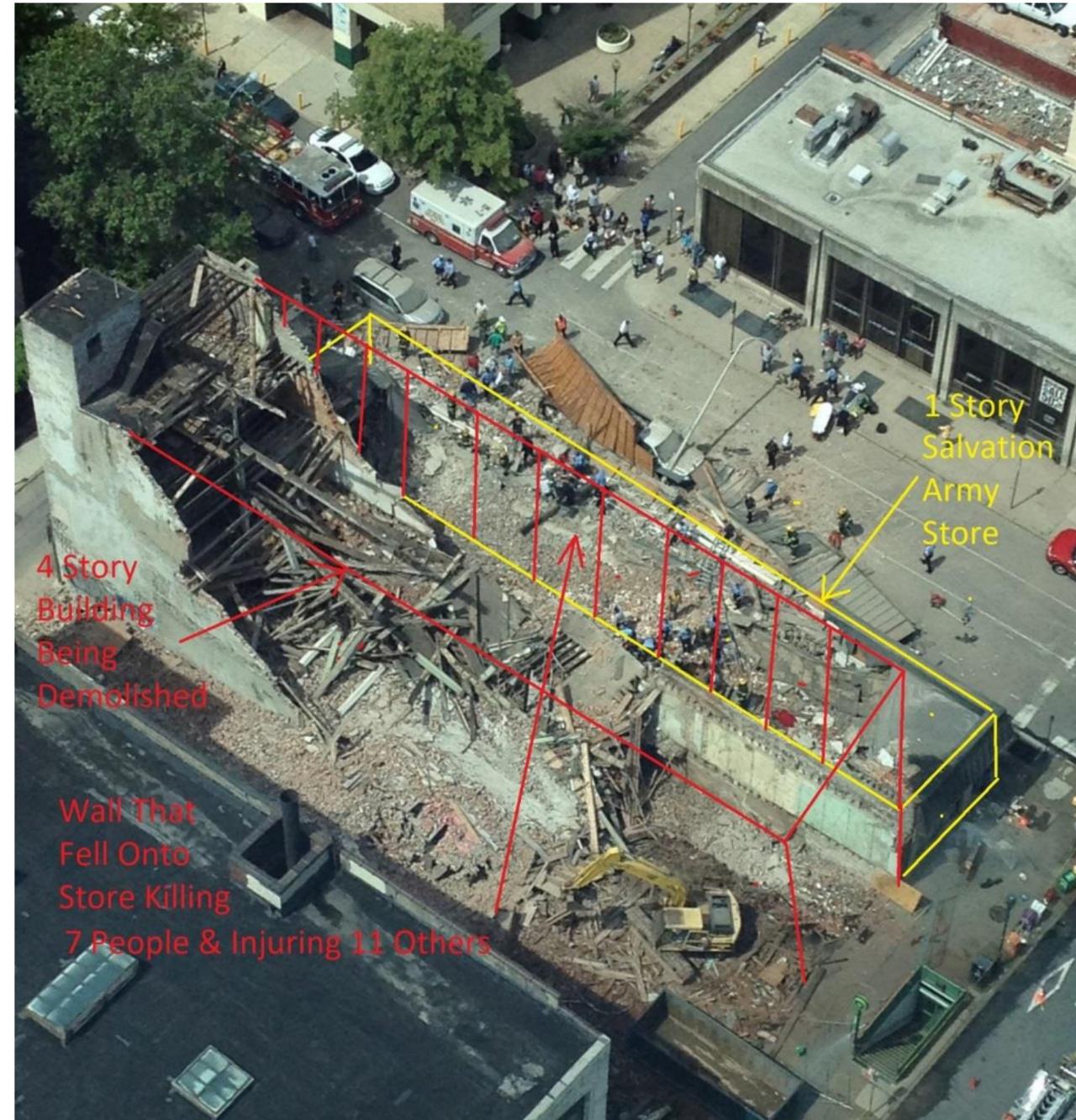
WHY DOES A PRE-DEMOLITION SURVEY MATTER?



SOURCE: Photograph Taken By Michi Ellers on 6/5/13
From the Murano Building, On the North Side of Market Street



WHY DOES A PRE-START SURVEY MATTER?



ENGINEERING SURVEY

- OSHA requirements
- ANSI requirements
- Local requirements of some municipalities
 - NYC, Philadelphia, Toronto
- NDA forms



NOTIFICATIONS

- Government
 - Federal
 - State
 - Local
- One Call (811)
- Neighbors



Know what's below.
Call before you dig.



FEDERAL REQUIREMENTS

- Asbestos NESHAP Notification-
 - Required for structural demolition except certain residential properties
 - Not required for gut out or soft demo
 - Special note- a full survey by an environmental engineer should be contracted by the owner and available to the demolition contractor before the bid and/or start of work. Should abatement be required prior to demo, a copy of the final report should be given to the demolition contractor for his records. This is not law but should be a procedure followed on all demolition jobs.
- Engineering survey by a "competent person" per OSHA regulations
 - Required for all demolition
 - An OSHA "competent person" is defined as "one who is capable of identifying existing and predictable hazards in the surroundings or working conditions which are unsanitary, hazardous, or dangerous to employees, and who has authorization to take prompt corrective measures to eliminate them" [29 CFR 1926.32(f)].
 - See the hand outs for examples

SPECIAL NOTE

- Not all asbestos or hazards will be discovered prior to the start of work.
- The response to discovery of anything hazardous or dangerous is what really counts in protecting lives and property

POST SURVEY DISCOVERIES OF ASBESTOS

- **Standard work practice if disturbed**
 - If suspect asbestos is found while doing demolition, stop work immediately.
 - All personnel should leave area except those required to-
 - Wet the area
 - Secure the area to limit access
 - Post labels and signage in perimeter area
 - Call asbestos crew/abatement contractor/owner
- **Standard work practice if undisturbed**
 - Secure the area to limit access if materials are suspected friable,
 - Post labels and signage in area
 - Call asbestos crew/abatement contractor/owner

A city skyline, likely New York City, is shown in a grayscale or sepia tone. A large, semi-transparent red rectangle covers the right side of the image. Overlaid on the left side of the red area is a white rectangular box containing text. The text is centered within the box and reads: "Presenter:", "James Harrity", and "Compliance Assistance Specialist for OSHA".

Presenter:

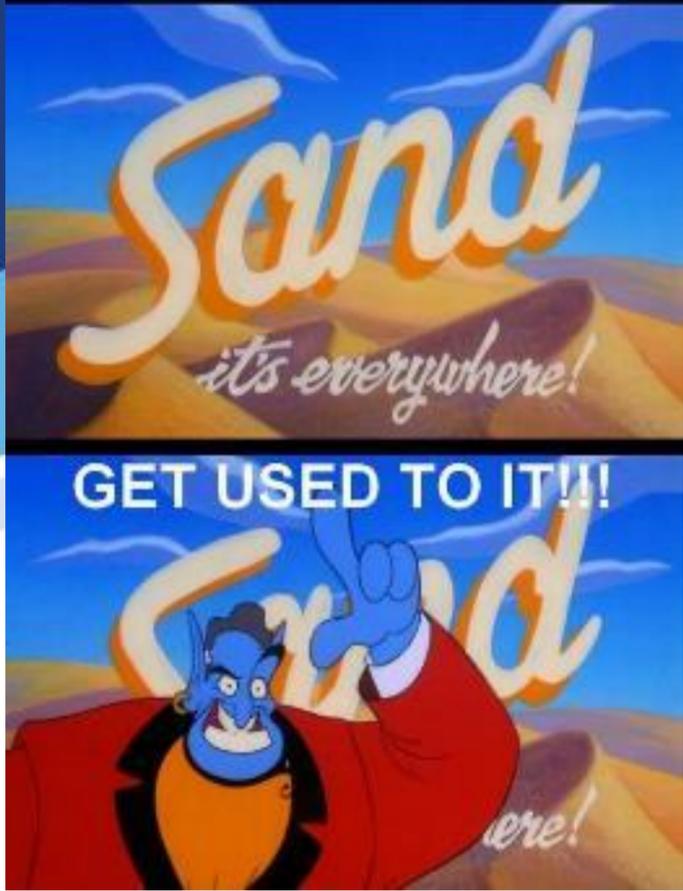
James Harrity
Compliance Assistance Specialist for OSHA

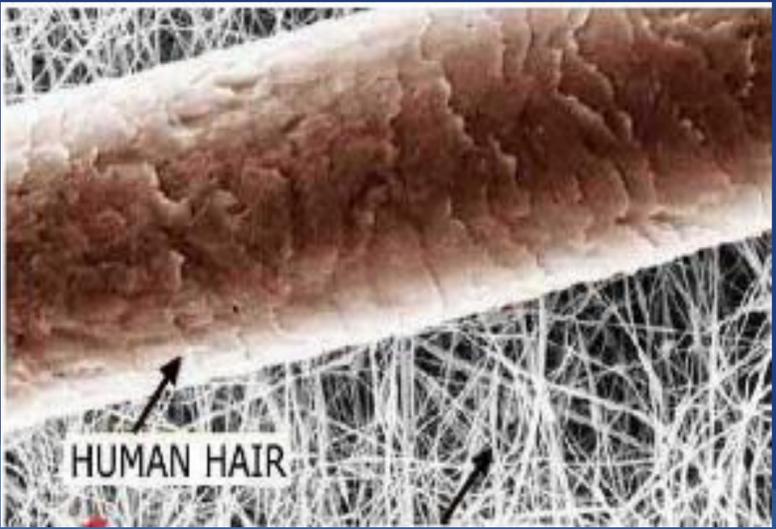
Disclaimer

This information is intended to assist employers, workers, and others as they strive to improve workplace health and safety. While we attempt to thoroughly address specific topics, it is not possible to include discussion of everything necessary to ensure a healthy and safe working environment in a presentation of this nature. Thus, this information must be understood as a tool for addressing workplace hazards, rather than an exhaustive statement of an employer's legal obligations, which are defined by statute, regulations, and standards. Likewise, to the extent that this information references practices or procedures that may enhance health or safety, but which are not required by a statute, regulation, or standard, it cannot, and does not, create additional legal obligations. Finally, over time, OSHA may modify rules and interpretations in light of new technology, information, or circumstances; to keep apprised of such developments, or to review information on a wide range of occupational safety and health topics, you can visit OSHA's website at www.osha.gov.

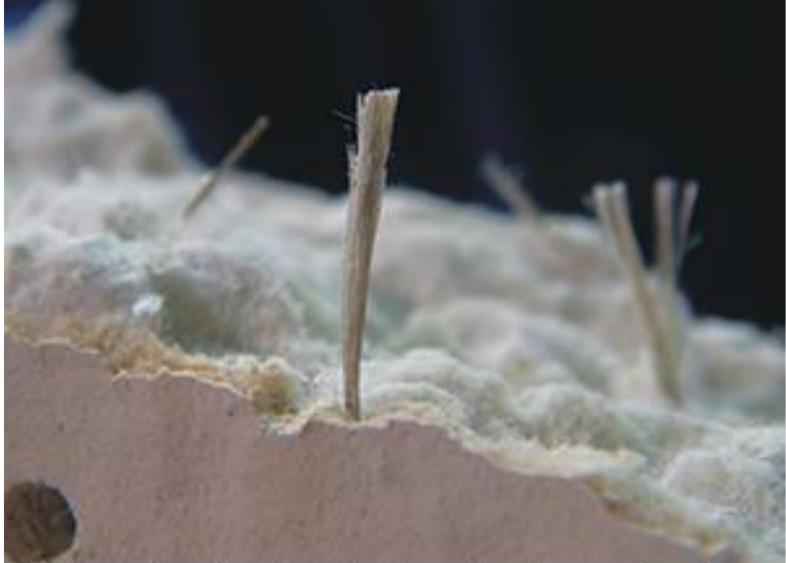
Where is it found?

- Sprayed-on fire proofing & building insulation
- Insulation for pipes & boilers
- Wall & ceiling insulation
- Ceiling tiles
- Floor tiles
- Putties, caulks, & cements
- Roofing shingles
- Siding shingles
- Wall & ceiling texture in older buildings
- Joint compound in older buildings
- Brake linings & clutch pads
- Electrical wiring & cabinets
- Paints





Asbestos-containing materials cannot be differentiated by visual means. They must be analyzed by a laboratory test.



Detail view of asbestos fiber bundles protruding from matrix of ceiling panel's fractured edge. Under normal naked-eye observation the minute amosite structure looks like a single fiber, but as shown above in finer detail, the asbestos "fiber" is actually a bundle of yet countless smaller asbestos fibers, and those fibers of yet exceedingly smaller microscopic fibers and fibrils.

Asbestos is most hazardous when friable. The term "**friable**" means that the asbestos is easily crumbled by hand pressure



Water damage, continual vibration, aging, & physical impact such as drilling, grinding, buffing, cutting, sawing, or striking can break the materials down making fiber-release more likely.



Project Planned Asbestos- \$50,000

Delta- \$1,072,000

Lomax- \$1,072,861

Total Actual- \$2,535,861

29 CFR 1926.1101

OSHA's Asbestos Standard for the Construction Industry

- Includes but is not limited to the following where asbestos is present:
 - Demolition or salvage of structures
 - Removal or encapsulation of materials
 - *Construction, alteration, repair, maintenance, or renovation*
 - Installation of products containing asbestos
 - Spill/emergency clean-up
 - Transportation, disposal, storage, containment and housekeeping activities on the site where construction activities are performed
- Excludes asphalt roof coatings, cements, mastics



29 CFR 1926.1101

Asbestos Work



- Class I Asbestos Work: activities involving the removal of TSI or surfacing ACM and PACM
- Class II Asbestos Work: activities involving the removal of ACM which is not TSI or surfacing material. Examples: removal of asbestos-containing wallboard, floor tile, and roofing shingles
- Class III Asbestos Work: repair and maintenance operations where ACM and/or PACM is likely to be disturbed
- Class IV Asbestos Work: maintenance and custodial activities during which employees contact but do not disturb ACM or PACM and activities to clean up dust, waste and debris resulting from Class I, II, and III activities

29 CFR 1926.1101

(k) Communication of Hazards – Duties of Building and Facility Owners



- Before work is begun, *identify the presence, location, and quantity* of ACM/PACM, including
 - All TSI and sprayed on/troweled-on surfacing materials in buildings or substrates constructed no later than 1980
 - All resilient flooring material installed not later than 1980



29 CFR 1926.1101

(k) Communication of Hazards – Duties of Building and Facility Owners

- Notify the following persons of the presence, location, and quantity of ACM/PACM
 - Prospective employers applying for/bidding for work
 - Employees of the owner who will work in or adjacent to areas containing such materials
 - *All employers on multi-employer worksites whose employees will be performing work within or adjacent to areas containing such materials*
 - Tenants who will occupy areas containing such materials

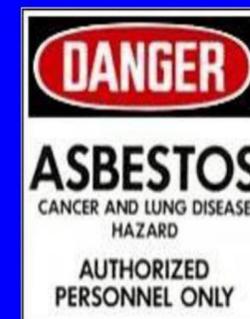


29 CFR 1926.1101

(k) Communication of Hazards – Duties of Building and Facility Owners

- Post signs at entrance to mechanical rooms/areas which employees may reasonably be expected to enter and which contain ACM and/or PACM
- Identify material present, its location, work practices to avoid disturbance
- Post signs or labels on previously installed ACM/PACM to inform employees of which materials are affected

Warning Signs & Labels



Signs in areas of ACM/PACM to inform employees and asbestos workers

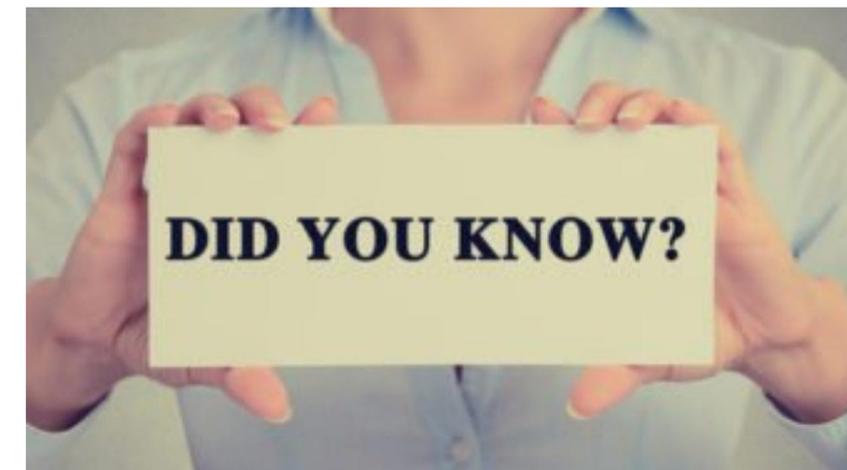


Labels affixed to products containing asbestos

29 CFR 1926.1101

(k) Communication of Hazards – **Duties of Employers**

- Before work, identify the presence, location, and quantity of ACM/PACM
- Before work, inform the following persons of the location and quantity of ACM/PACM and the precautions to be taken to confine airborne asbestos
 - Owners of the building/facility
 - Employees who will perform work and employers of employees who work and/or will be working in adjacent areas



29 CFR 1926.1101

(d) Multi-Employer Worksites



- An employer whose work requires a regulated area shall inform other employers of
 - Nature of such work
 - Existence of and requirements pertaining to regulated areas
 - Measures taken to ensure that employees of other employers are not exposed
- Abatement shall be by the contractor who created or controls the source of contamination



29 CFR 1926.1101

(d) Multi-Employer Worksites (cont'd)

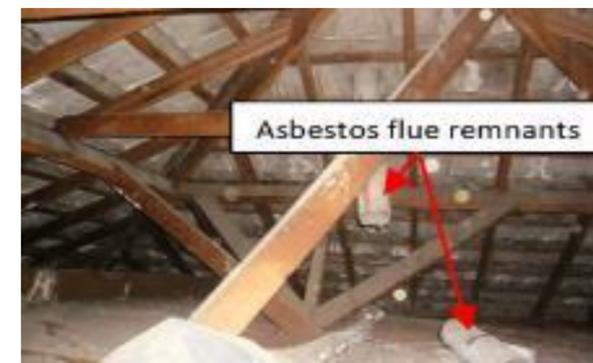
- All employers of employees exposed shall comply with applicable protective provisions
- All employers of employees working adjacent to regulated areas established by another employer, shall daily ascertain integrity of the enclosure and/or other controls
- All general contractors shall be deemed to exercise general supervisory authority over work covered by this standard and shall ascertain that the asbestos contractor is in compliance



29 CFR 1926.1101

(k) Communication of Hazards – Duties of Employers (again)

- Within 10 days of completion, inform the building/facility owner and employers of employees who will be working in the area of
 - Current location and quantity of ACM/PACM remaining
 - Final monitoring results, if any
- Within 24 hours of discovering ACM/PACM on a worksite, convey presence, location, and quantity of such newly-discovered materials to
 - Owner
 - Other employers of employees working at the worksite
- Post signs or labels on previously installed ACM/PACM to inform employees of which materials are affected



29 CFR 1926.1101

(k) Communication of Hazards –

Criteria to Rebut the Designation of PACM

- An employer or owner may demonstrate that PACM does not contain asbestos by the following:
 - Having an AHERA inspection
 - Performing tests that demonstrate that the material is not ACM
 - > Collection of bulk samples following requirements of 40 CFR 763.86
 - > Performed by an accredited inspector or CIH
 - > Analysis of samples by persons/laboratories participating in nationally-recognized testing programs or round robin testing program
 - > For flooring materials, a determination by an IH based on recognized analytical techniques
- Data and information must be maintained for as long as they are relied on to rebut the presumption

1926.1101(k)(9)(i)

Training

- The employer shall train each employee who is likely to be exposed in excess of a PEL
- Each employee who performs Class I through IV asbestos operations, in accordance with the requirements of this section.

Not exposed in excess of PEL?

Not Class I through IV?

No MSDS?



training

1926.59 to 1910.1200

HazCom- Letter January 9, 1990

- Hazard Communication Standard is for the ER to provide information to EE on the hazards they encounter in the workplace.
- For example, employees of a demolition crew may be exposed to asbestos which was not brought into the workplace by the employer.

<https://www.osha.gov/laws-regs/standardinterpretations/1990-01-09-2>

1926.1101(o)

Competent Person

- 1926.1101(o)(1) *General*. On all construction worksites covered by this standard, the employer shall designate a competent person, having the qualifications and authorities for ensuring worker safety and health required by subpart C, General Safety and Health Provisions for Construction (29 CFR 1926.20 through 1926.32).
- 1926.1101(o)(2) *Required Inspections by the Competent Person*. Section 1926.20(b)(2) which requires health and safety prevention programs to provide for frequent and regular inspections of the job sites, materials, and equipment to be made by competent persons, is incorporated.

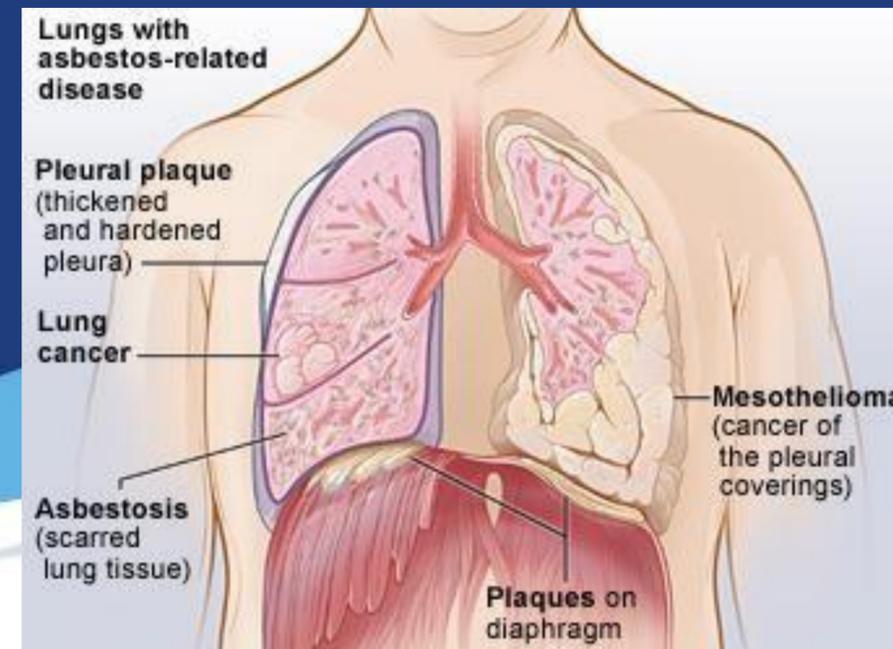
1926.1101(K) Smoking Cessation



- 1926.1101(k)(9)(viii)(C) The relationship between smoking and asbestos in producing lung cancer;
- [1926.1101\(k\)\(10\)\(iii\)](#) The employer shall inform all employees concerning the availability of self-help smoking cessation program material. Upon employee request, the employer shall distribute such material, consisting of NIH Publication No, 89-1647, or equivalent self-help material, which is approved or published by a public health organization listed in Appendix J to this section.



Smoking Cessation



Smoking contributes to the development and severity of asbestos-related diseases in three ways:

- Smoking impairs your lungs' natural self-cleaning
- Smoking increases inflammation and scarring in your lungs.
- Smoking reduces your lungs' ability to absorb oxygen.



Smoking Cessation



- The chances of developing lung cancer associated with asbestos exposure, asbestosis and smoking are dramatically increased when these three risk factors are combined, and quitting smoking significantly reduces the risk of developing lung cancer after long-term asbestos exposure, according to a new study.
- Asbestos Exposure in Non-Smokers chance of lung cancer up 5.2X
- Asbestos Exposure in Smokers chance of lung cancer up > 28X
- Asbestos Workers who quit smoking had a drop in mortality from lung cancer in 10 years, after 30 years of not smoking mortality rates were similar to workers that had never smoked

American Thoracic Society (ATS). "Asbestos exposure, asbestosis, and smoking combined greatly increase lung cancer risk." ScienceDaily. ScienceDaily, 12 April 2013. <www.sciencedaily.com/releases/2013/04/130412084227.htm>.

Asbestos Surveys



Flavors-

- Management Survey- No samples
- Screening- Samples damaged PACM
- Limited- Samples what the owner wants
- Construction/Renovation- scope of work
- Pre-Demolition- comprehensive



Asbestos Survey Reports



Complete Document from the Company

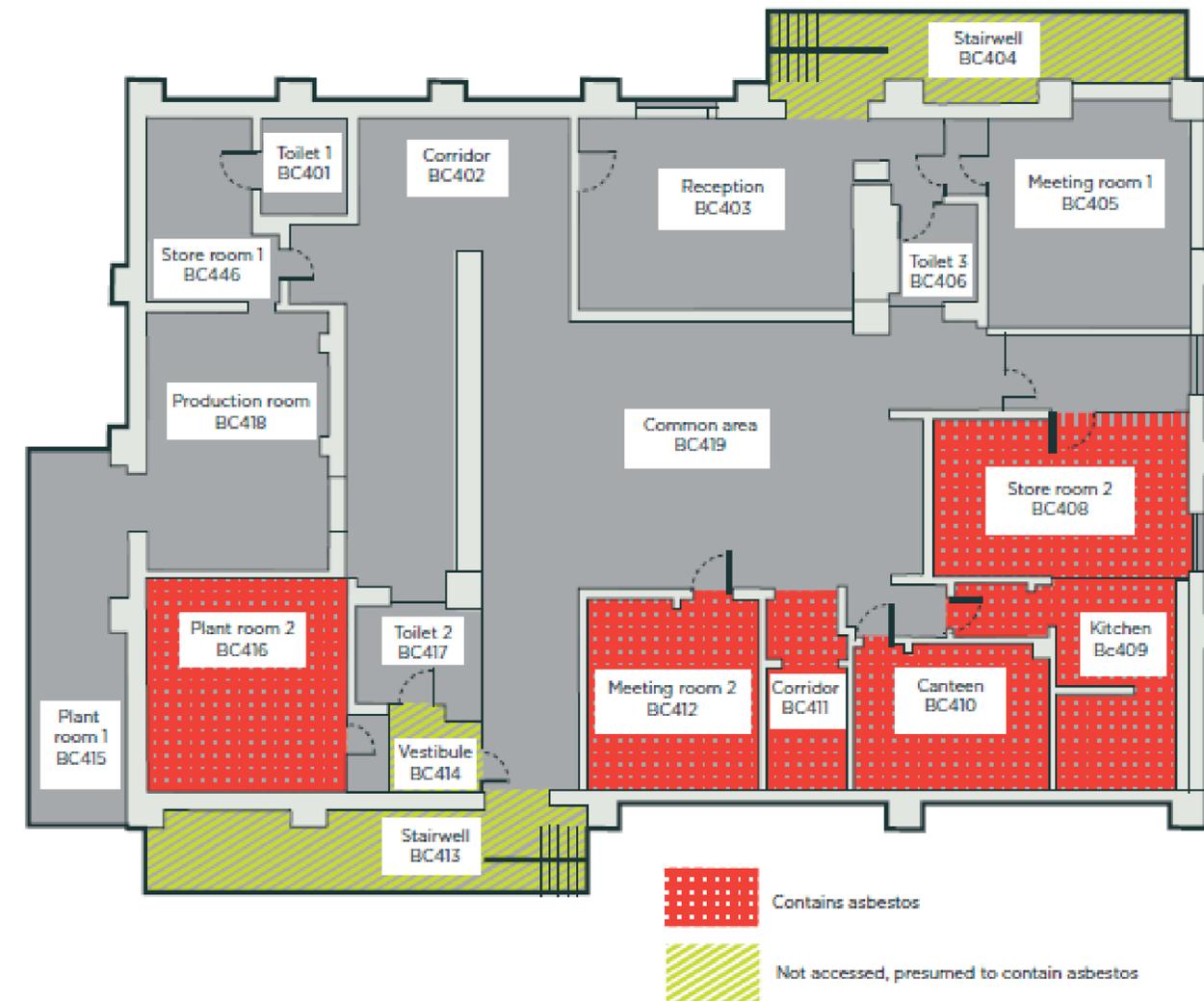
- Introduction- What was requested
- Summary- What was done & found (strategy)
- Tabular Data-Where, What, Condition, Recommendation, Quan.
- Regulatory Information- EPA, OSHA, State...
- Appendices- Lab Certs., Sample sheets, Lab results...

Date Samples Received: **May 09, 2015**
 Method: **EPA 600/R-93/116 - Short Report, Bulk**
 Turnaround: **24 Hour**
 Date Samples Analyzed: **May 09, 2015**

ND=None Detected
 TR=Trace, <1% Visual Estimate
 Trem/Act=Tremolite/Actinolite

Client Sample Number	Lab ID Number	LAYER	Physical Description	Sub Part (%)	Asbestos Content		Non Asbestos Fibrous Components (%)	Non-Fibrous Components (%)
					Mineral	Visual Estimate (%)		
#1 E	EM 1401808	A	Brown mastic	TR		ND	TR	100
		B	Brown/multi-colored sheet vinyl w/ gray/multi-colored fibrous backing material	100		ND	35	65
#1 B	EM 1401809	A	Brown mastic	TR		ND	0	100
		B	Beige mastic	2		ND	TR	100
		C	Tan/multi-colored sheet vinyl w/ gray/multi-colored fibrous backing material	98		ND	35	65
#3 K	EM 1401810	A	Yellow mastic	2		ND	TR	100
		B	Black mastic	8		ND	TR	100
		C	Tan/black floor tile	90	Chrysotile	8	0	92

FEM Analysis recommended for organically bound material (i.e. floor tile) if PLM results are <1%.



Asbestos Findings (Con't)

ACM MATERIALS LISTING

The following table contains a listing of materials confirmed or presumed to contain asbestos in or on the building. The listing includes the space ID, Space name, ACM material, homogeneous sampling area (HSA), and Approximate quantity.

ACM MATERIALS LISTING				
Space I.D.	Space Name	ACM Material	HSA #	Approx. Quantity
Ground Floor				
	Entire ground floor with suspended ceilings (offices, open spaces, storage, meeting rooms, toilets, lobby, staff lounge, work rooms)	Sprayed-On Fireproofing (encapsulated residual, loose debris above suspended ceilings)	A-24	11,313 SF
		Pipe elbow insulation	A-35	Not quantified
1001	Garage Bay	Pipe elbow insulation	A-35/16	29 Elbows
		Fire door (metal) – rear exit	A-47	32 SF
1002	Garage Bay	Pipe elbow insulation	A-35/16	6 Elbows
		Fire door (wood)	A-46	28 SF
1002A	Garage Entry – at stairwell entry	Sprayed-On Fireproofing above solid plaster ceiling (intact)	A-24	10 SF
		Fire door (metal) – exit	A-47	28 SF
1003	Janitor	Pipe elbow insulation	A-35/16	2 Large elbows
		Linoleum	A-43	180 SF
		Sprayed-On Fireproofing, encapsulated residual on portion of space with "I" beams	A-24	50 SF
1004	Rear Stairwell	Fire Doors (2 doors)	A-46	56 SF
1006	Duct/Pipe Shaft	Sprayed-On Fireproofing un-encapsulated debris	A-24	36 SF

Test Methods



Bulk Samples

- PLM- Polarized Light Microscopy- OSHA-Type & %
- TEM- Transmission Electron Microscopy- stronger better for NOBs Non-Friable Organically Bound materials
- SEM, XRD

Air Samples

- PCM- Phase Contrast Microscopy-OSHA- fiber concentrations in air (does not distinguish asbestos from other fibers)



Other Guidance- NESHAP

EPA asbestos guidance:

Will a demolition method make ACM friable?

- [Asbestos/NESHAP Regulated Asbestos Containing Materials Guidance EPA 340-1-90-018](#)
- [A Guide to Normal Demolition Practices Under the Asbestos NESHAP EPA 340-1-92-013](#)
- [How EPA's Asbestos Regulations Apply to Residential Buildings Used for Fire Training](#)
- [How EPA's Asbestos Regulations Apply to Municipal Demolition Activities](#)
- [Discovery of Asbestos After Demolition is Underway](#)
- [Protect Your Family from Asbestos-Contaminated Vermiculite Insulation](#)
- [Correspondence about Applicability of Asbestos NESHAP](#)





www.osha.gov

800-321-OSHA (6742)

Thank you! Questions?

Save the date for the next
Eggs with OSHA on February 25, 2020

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Insulation &
Abatement Contractors
Association, Inc.

