

# Background

40 years working with top companies to achieve world class safety in their sector.

- Classes: OSHA 10/30 Hour, Incident Investigation, Confined Space, Excavation Safety, Cranes Signaling, Rigging Safety, Fall Protection, Scaffold Competent Person, Silica Competent Person, CHST Prep, Lockout, Machine Guarding, OSHA Recordkeeping, and Safety Management
- Services: Mock OSHA Inspections, Site Safety Audits, Expert Witness,
- Since 1987, he has trained over 50,000 people including OSHA compliance officers and Fortune 500 Clients in numerous areas of Safety and Health.





# Dust

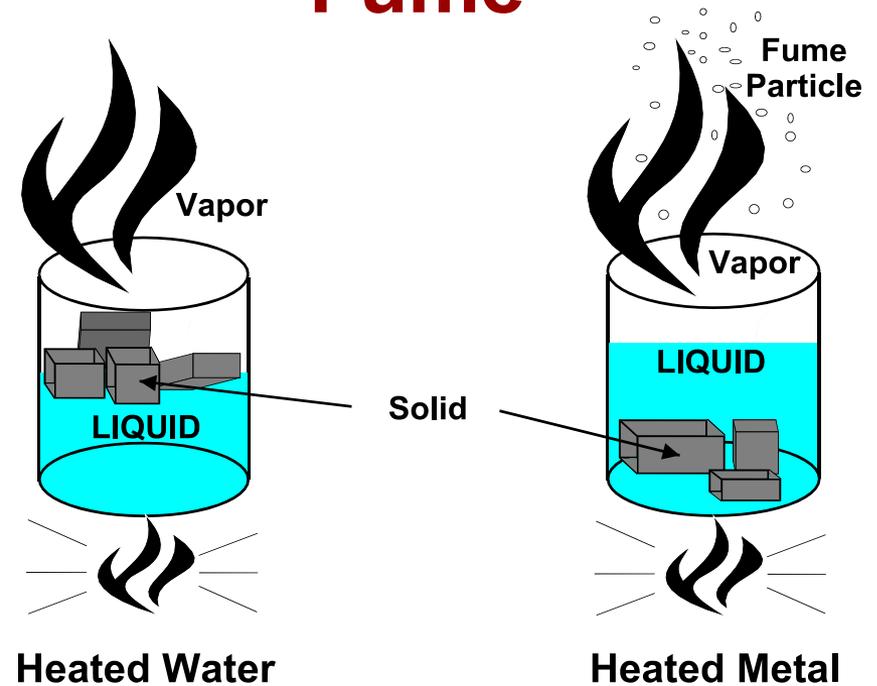
- Dust are solid particles that are formed by handling, crushing, grinding, drilling, or blasting of organic or inorganic materials.



# Fumes

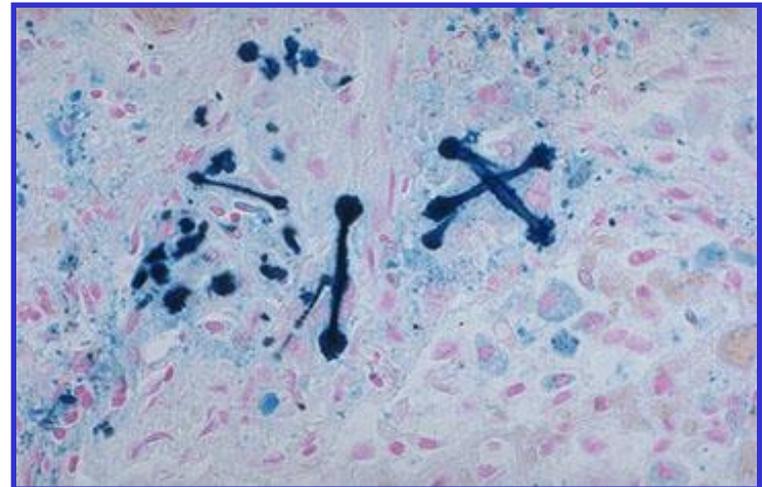
- Fumes consists of very small fine solid particles in air that form when solid particles are heated to a high temperature, evaporate to vapor, and become solid again

## Fume



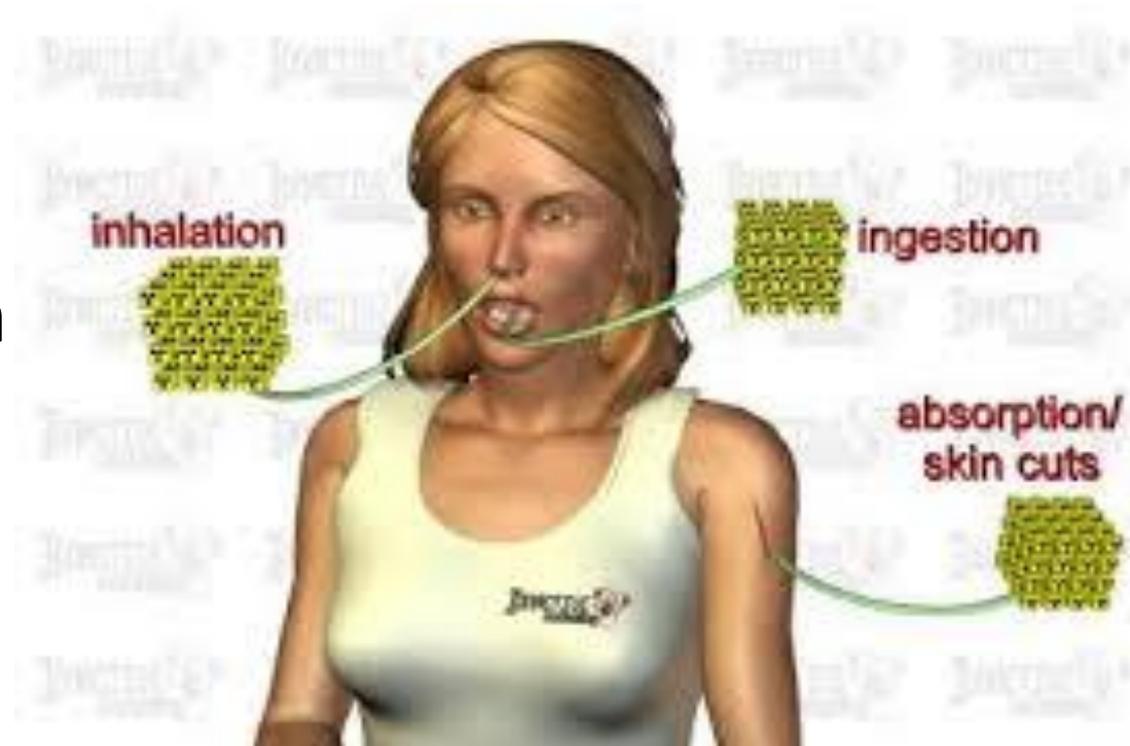
# Fibers

- Solid particles whose length is several times greater than their diameter. Asbestos is an example.



# Routes of Entry

- Inhalation
- Ingestion
- Skin Absorption
- Injection



# Respiratory System

- The respiratory system is the major route of exposure for airborne chemicals and dusts.



# Acute Exposure

- Acute exposures and acute effects generally involve short-term, high concentrations, and immediate or prompt health effects (illness, irritation, or death).



# Chronic Exposure

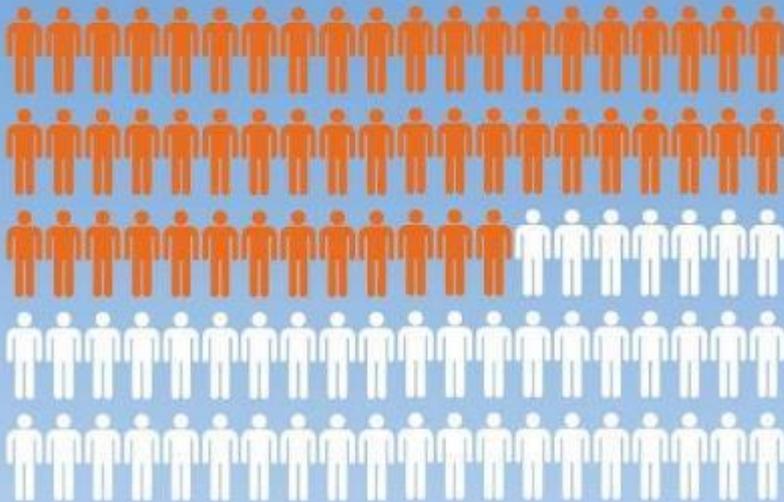
- Chronic exposure refers to exposure continued or repeated for a prolonged period, usually years. For example, asbestosis.



# Nov 2018

## Stop cancer at work

**53%** of all work-related deaths are caused by occupational cancer.



**THESE DEATHS ARE PREVENTABLE**

With more than 100,000 deaths a year, cancer is the number one work-related killer in the EU28



Estimations of occupational cancer deaths per EU country in 2011, based on Takala report (2015).



# Clean Air Paradox

- **Quality** of Air
- 78.1% Nitrogen
- 20.9% Oxygen
- 0.9% Argon
- 0.03% Carbon Dioxide



# Units Seem Small

1 % = 10,000 ppm

PEL = Permissible Exposure  
Limits (OSHA)

5 Mg/M<sup>3</sup> is very **small**

2 f/cc = 2,000,000f/M<sup>3</sup>

OSHA has said that following  
some PELs may not protect  
the workers.



# Health Effects

- Irritation
- Asphyxiation
- Organ Specific Effects
- Mutagen
- Teratogen
- Acute/Chronic
- Reversible vs. Nonreversible

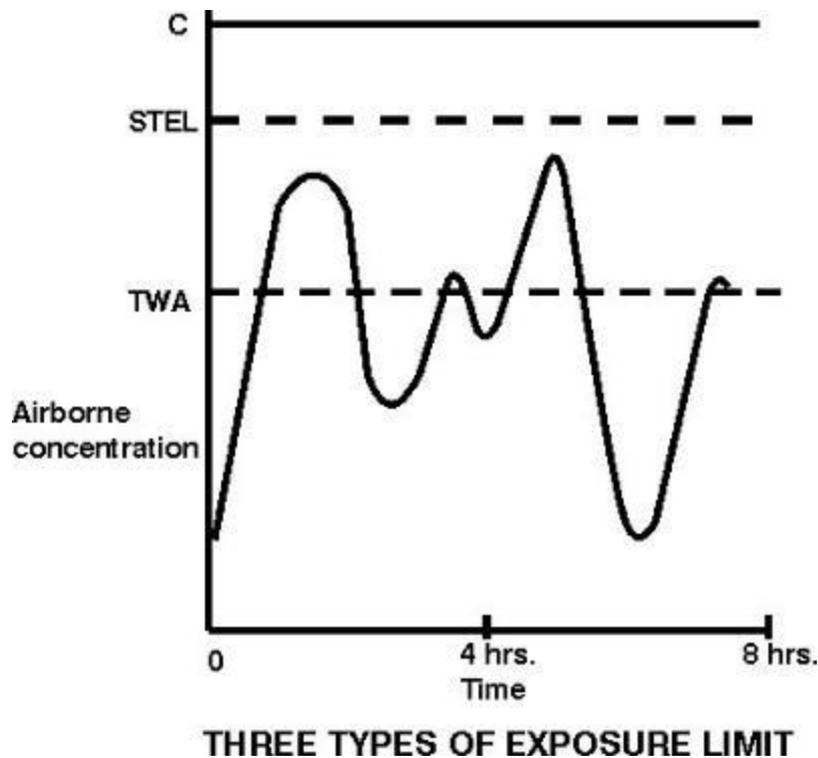


# Factors

- Genetics
- Age
- Health status
- Route of entry
- Frequency and **duration** of exposure



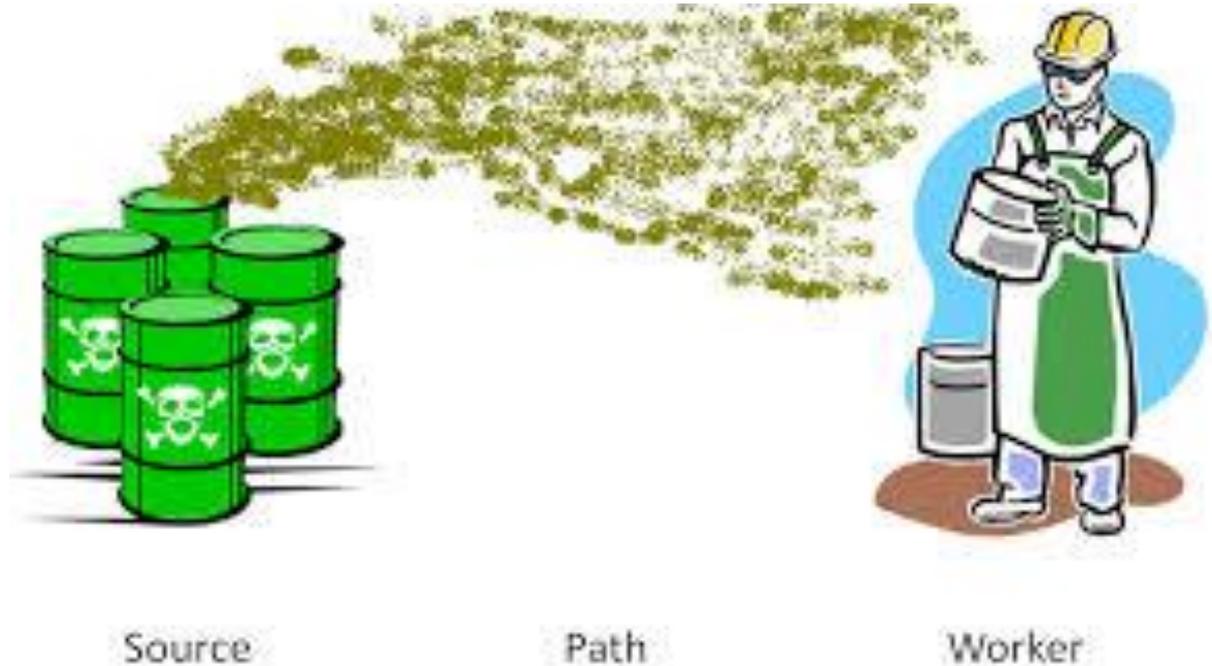
# Exposure Limits



- Animal Studies
- Epidemiological studies
- Industrial Experience
- STEL – 15 minutes
- Ceiling – never exceeded
- Threshold Limit Value

# Control of Health Hazards

- Hierarchy of Controls
  - Engineering
  - Substitution
  - Work practices
  - Administrative
  - Personal protective equipment



# Engineering Controls

- Engineering controls include:
  - Substitution with less harmful material
  - Enclosure
  - Isolation
  - Ventilation - "Should be within two duct diameters for welding smoke."

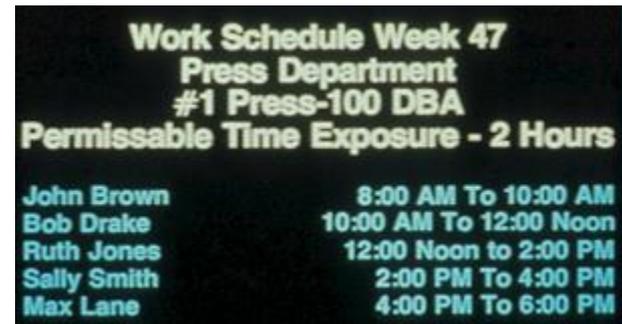


# Ventilation



# Administrative Controls

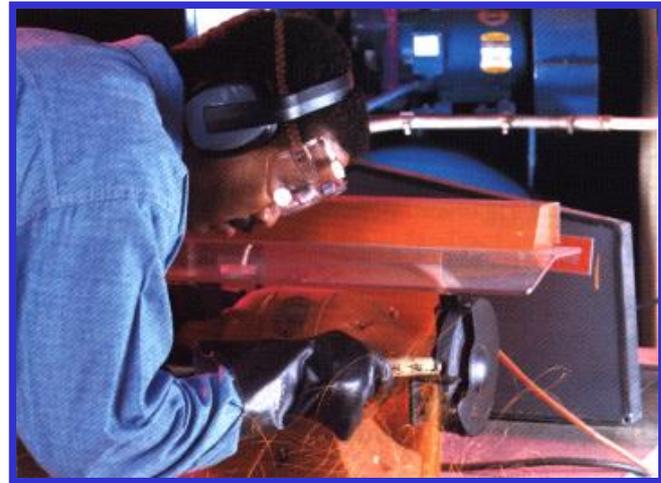
- Administrative controls include:
  - Controlling employees' exposure by scheduling production and workers' tasks
  - Or both, in ways that minimize exposure levels



Work Schedule Week 47	
Press Department	
#1 Press-100 DBA	
Permissible Time Exposure - 2 Hours	
John Brown	8:00 AM To 10:00 AM
Bob Drake	10:00 AM To 12:00 Noon
Ruth Jones	12:00 Noon to 2:00 PM
Sally Smith	2:00 PM To 4:00 PM
Max Lane	4:00 PM To 6:00 PM

# Personal Protective Equipment

- Personal protective equipment includes:
  - Respirators
  - Ear muffs
  - Gloves
  - Safety goggles
  - Helmets
  - Safety shoes
  - Protective clothing



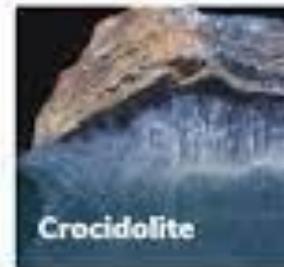
# What is Asbestos

- A naturally occurring mineral
- Added to building materials because of its good insulating, strength, sound-proofing, fireproofing and corrosion-resistance properties



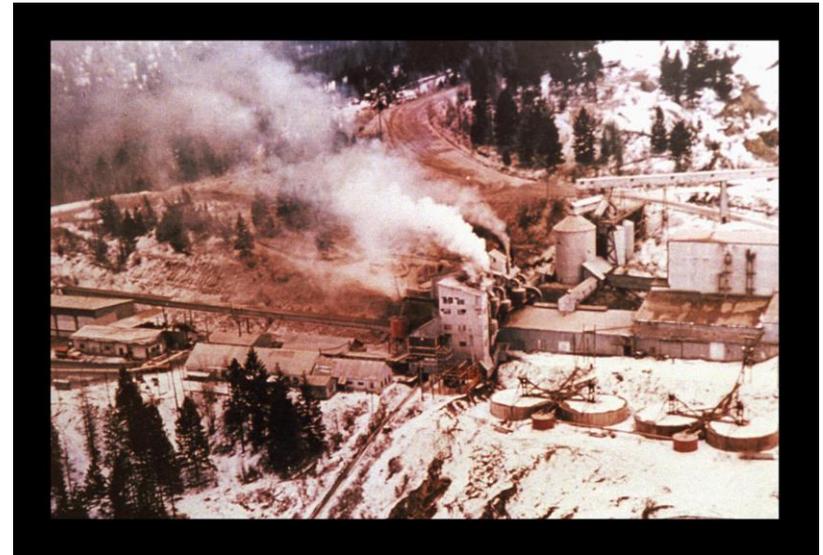
# What Is Asbestos

Asbestos is the name given to a group of naturally occurring minerals used in certain products, such as building materials and vehicle brakes, to resist heat and corrosion.



# Where did we get Asbestos?

- It was mined underground.
- Libby MT mine.



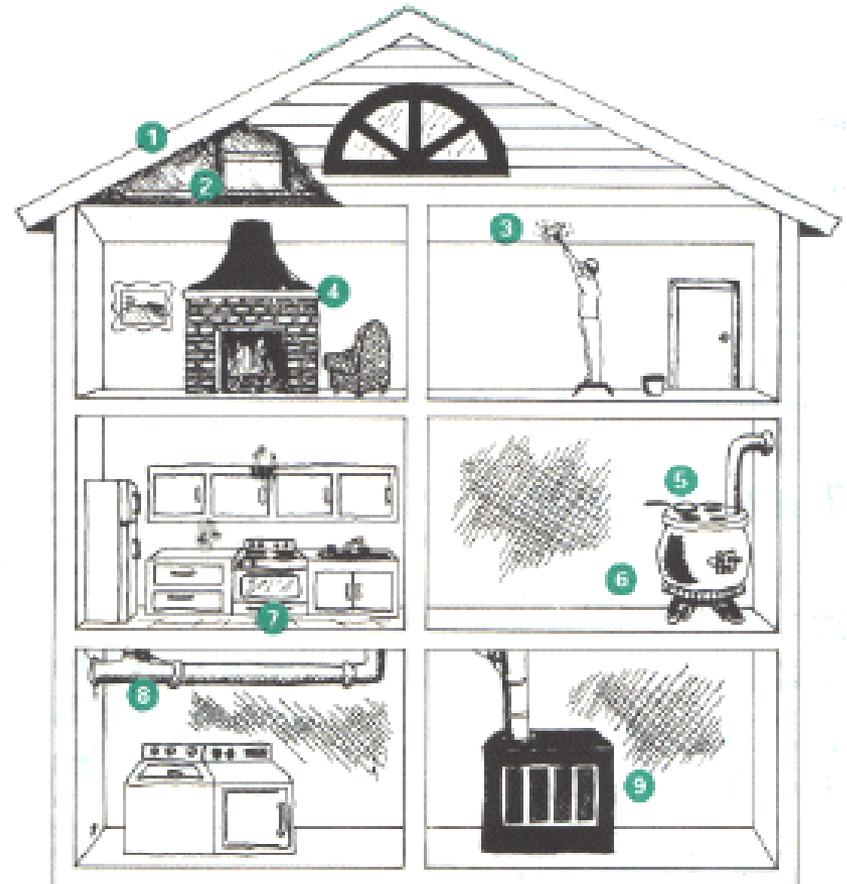
# Asbestos

- Libby MY
- 400 died
- Thousands with respiratory issues



# Examples of Asbestos Use

- Shingles
- Floor tiles
- Asbestos cement
- Roofing felts
- Insulation & acoustical products
- Steam pipes, boilers
- “Popcorn” ceilings
- Patching, joint compounds, textured paint, asbestos paper tape
- Brakes, clutch facings
- Plastics, fabrics, paints, paper



*Where Asbestos Hazards May Be Found In The Home*

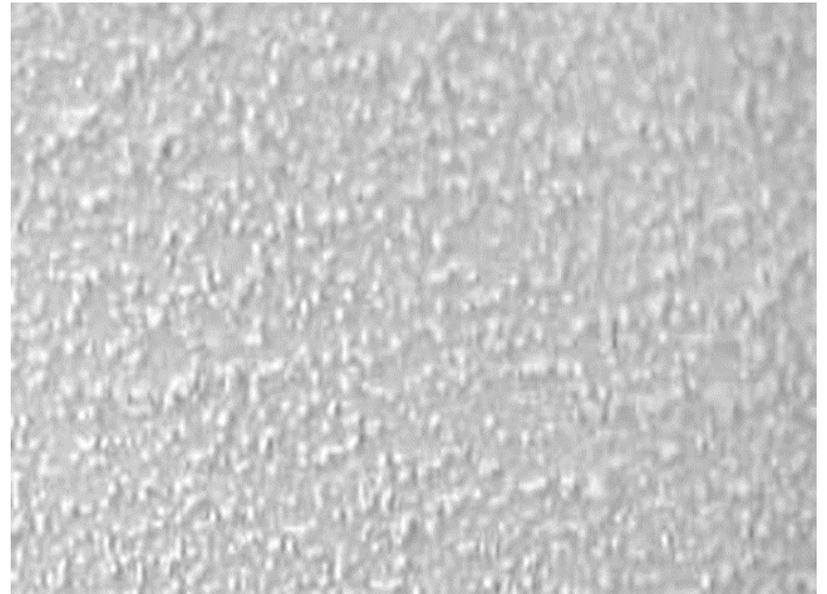
# Asbestos



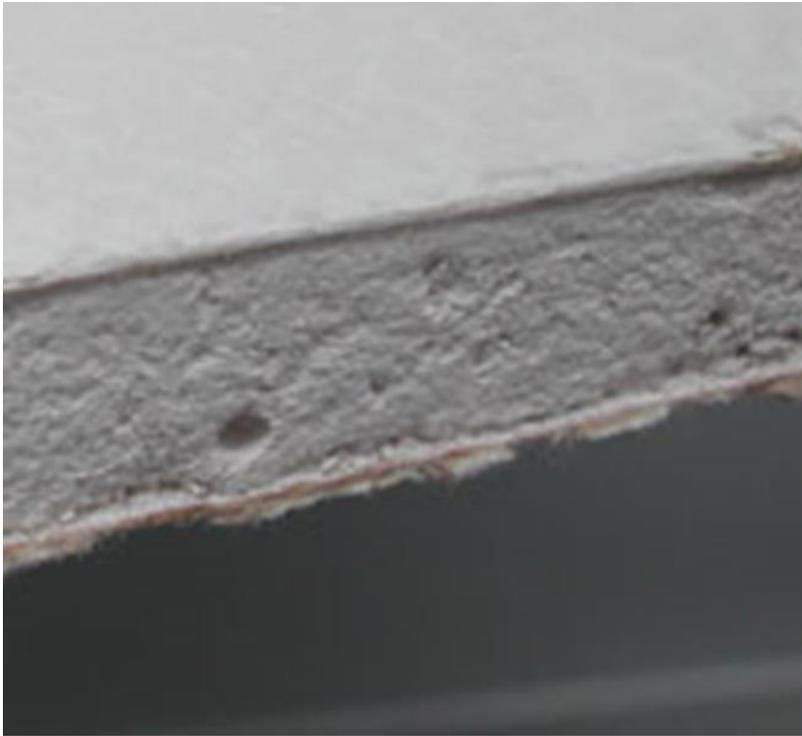
# Asbestos



# Asbestos



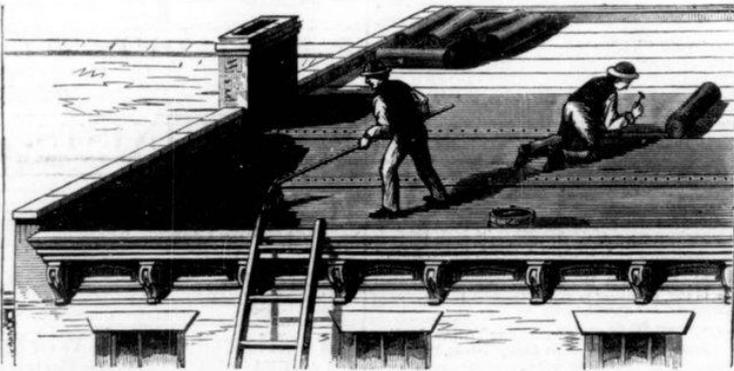
# Asbestos



# Asbestos

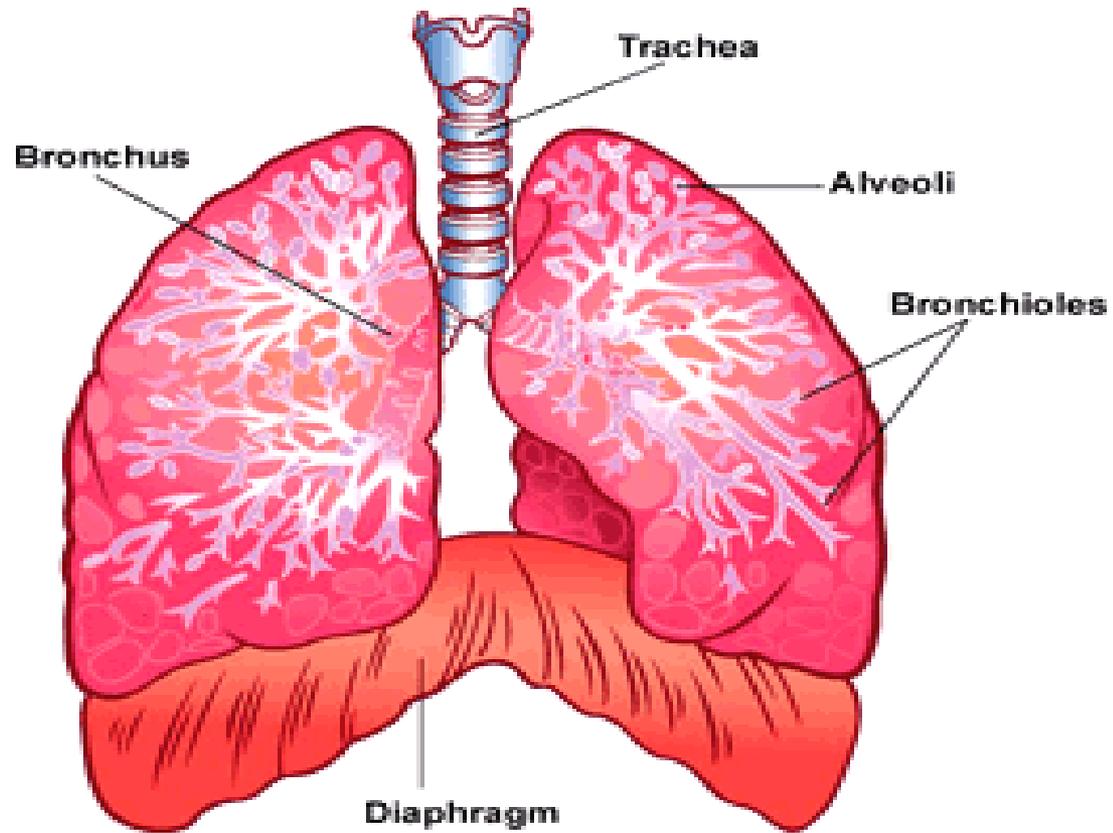


1858. **THE GREAT IMPROVEMENT** 1871.  
IN  
**R O O F I N G .**  
First Premium Awarded by American Institute, 1870.  
First Premium Awarded by Louisiana State Fair, 1870.  
First Premium Awarded by Texas State Fair, 1871.



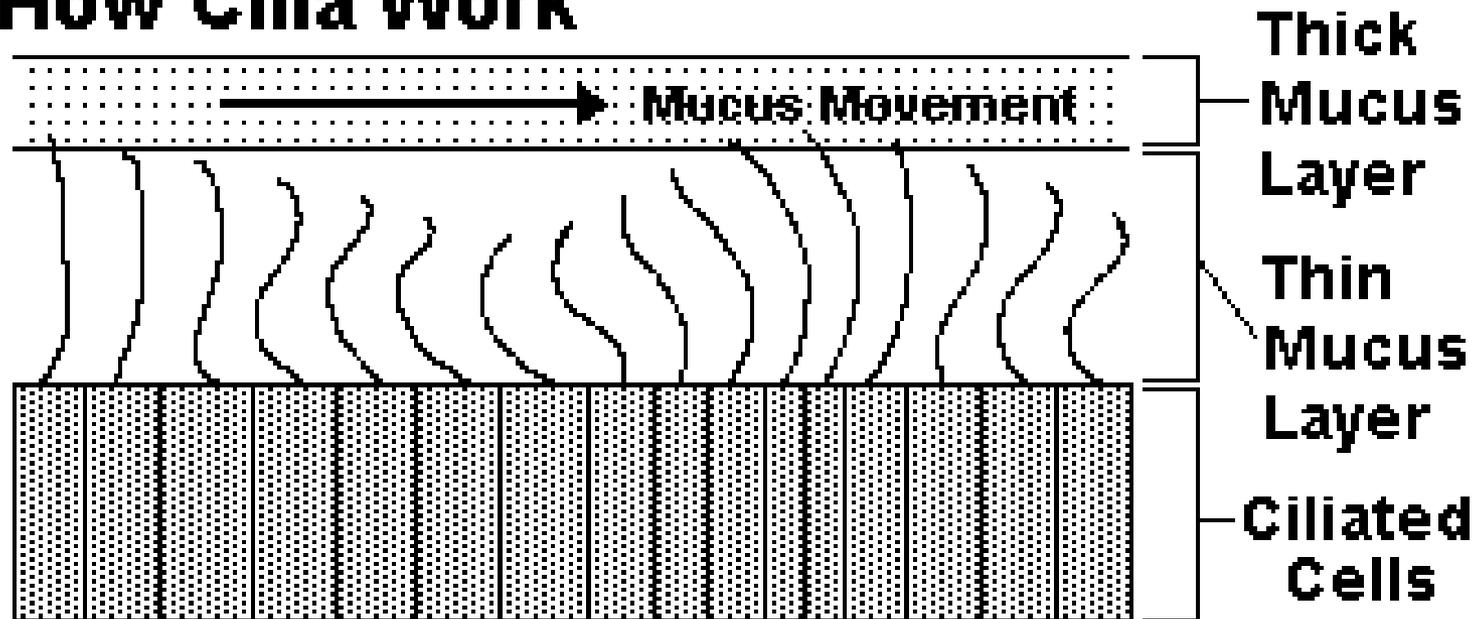
**Asbestos Roofing** | **Asbestos Roof Coating**  
Adapted for **STEEP or FLAT ROOFS IN ALL CLIMATES.** | For **RESTORING AND PRESERVING Old SHINGLE, TIN, and OTHER Roofs.**  
From Certified Report of Judges **AMERICAN INSTITUTE EXHIBITION of 1870:**  
H. W. JOHNS' IMPROVED ROOFING—"Is strong and flexible; unaffected by the sun's heat, practically fire-proof, and is really an article of the first order of merit."

# Lungs



# Lungs' Defense Mechanisms

## How Cilia Work



Copyright 1998 by [asthma.guide@mining.com](mailto:asthma.guide@mining.com)

# Lungs' Defense Mechanisms



ferruginous  
body

two nuclei of multi-nucleated giant  
cell

# Why is Asbestos a Health Hazard?

- Asbestos is made up of microscopic bundles of fibers.
- These fibers get into the air and may become inhaled into the lungs, where they may cause significant health problems.
- Researchers still have not determined a “safe level” of exposure



## Health Effects of Exposure to 9/11 Dust

AN ESTIMATED  
**410,000 - 525,000**  
people were exposed to the toxic dust during  
9/11 rescue, recovery and cleanup efforts.



NEARLY  
**16%**  
have been diagnosed with cancer.<sup>1</sup>  
For comparison, about 8% had been  
diagnosed with cancer in 2007.

APPROXIMATELY  
**35%**  
report seeking medical care  
for shortness of breath.<sup>1</sup>

AT LEAST  
**352**  
people have been  
diagnosed with asbestosis.<sup>1</sup>

NEARLY  
**70%**  
of recovery personnel have  
suffered from lung problems,  
including World Trade  
Center cough syndrome.

At least 444 people  
were diagnosed with  
pulmonary fibrosis.<sup>1</sup>



**46.7%** of 9/11 first responders and survivors  
who reported intense dust cloud  
exposure report experiencing  
shortness of breath, wheezing or  
persistent cough.<sup>1</sup>



**11%** reported  
experiencing  
all three.<sup>1</sup>

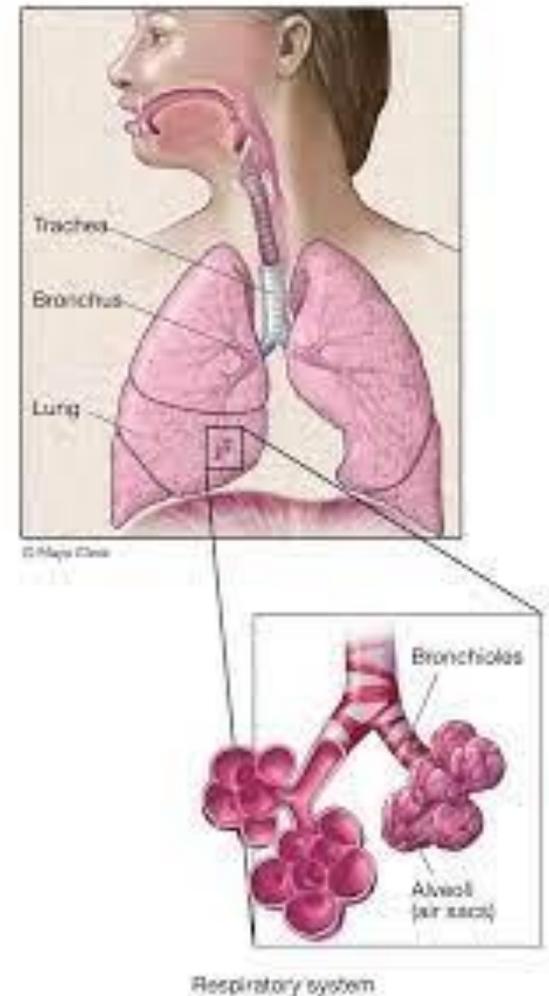


<sup>1</sup>As of 14 years after 9/11  
Source: World Trade Center Health Registry

Asbestos.com.  
Enough to you by The Mesothelioma Center

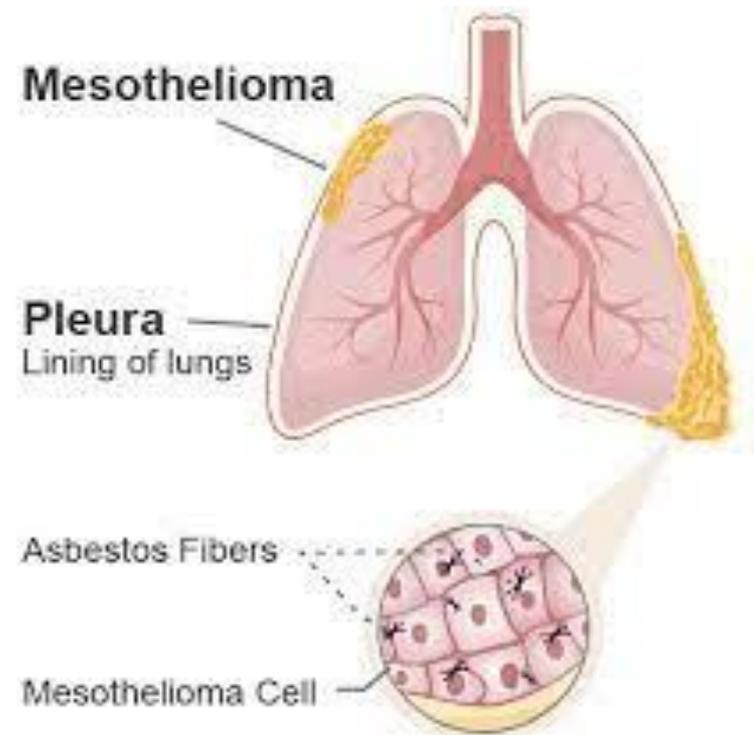
# Health Issues

- Asbestosis a lung disease was first found in naval shipyard workers.
- As asbestos fibers are inhaled, they become trapped in the lung tissue.
- The body tries to dissolve the fibers by producing an acid.
- This acid, due to the chemical resistance of the fiber, does little to damage the fiber, but may scar the surrounding tissue.
- Eventually, this scarring may become so severe that the lungs cannot function.
- The *latency period* is often 25 - 40 years.



# Health Issues

- **Mesothelioma:**
- a cancer of the pleura ( the outer lining of the lung and chest cavity) and/ or the peritoneum ( the lining of the abdominal wall).
- This form of cancer is peculiar because the only known cause is from asbestos exposure.
- The *latency period* for mesothelioma is often 15-30 years.



# Health Issues

- **Lung Cancer:**
- Asbestos is a contributing factor of lung cancer.
- The effects of lung cancer are greatly increased by cigarette smoking (by about 50%).
- Cancer of the gastrointestinal tract can also be caused by asbestos.
- The *latency period* for cancer is often 15-30 years.



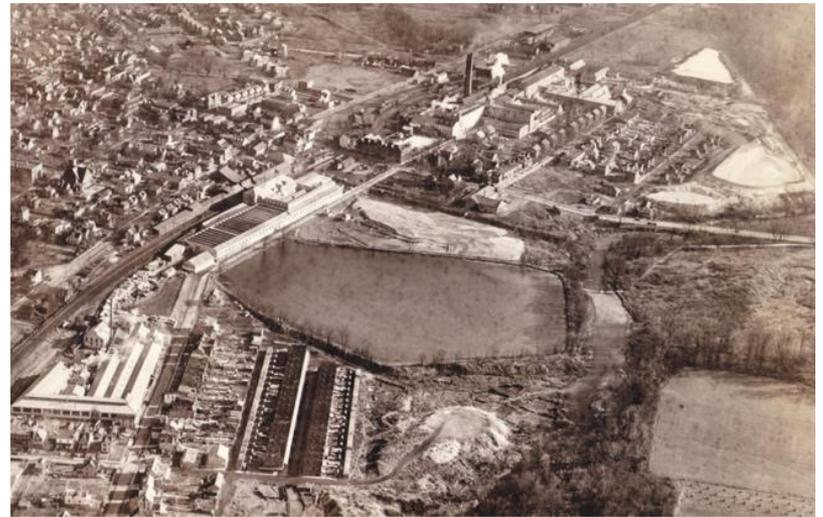
# 1960s

- The Snowmen



# EPA

- The purpose of the Asbestos National Emission Standard for Hazardous Air Pollutants (NESHAP) Program is to protect public health from exposure to regulated asbestos-containing material (RACM) during NESHAP facility renovation/demolition activities, **asbestos** removal, transport and disposal, closely monitoring those activities for proper notification and asbestos emissions control



Ambler PA Superfund

# Asbestos

- Ambler PA
- Marilyn Amento's Joe Jr. dad died from environmental exposure in the town's air in 2015

AMBLER ASBESTOS PRODUCTS



PAPER, MILLBOARD, PACKINGS  
GASKETS, TEXTILES AND GARMENTS

KEASBEY & MATTISON  
COMPANY  
AMBLER, PENNA.

# EPA

- Under Section 112 of the Clean Air Act (CAA), Congress gave the U.S. Environmental Protection Agency (EPA) the responsibility for enforcing regulations relating to asbestos renovations and demolitions activities.
- The CAA allows the U.S. EPA to delegate this authority to state and local agencies.



# 1973

- In 1973, under the EPA's Clean Air Act, most spray-applied asbestos products were banned for fireproofing and insulating purposes.



# Asbestos

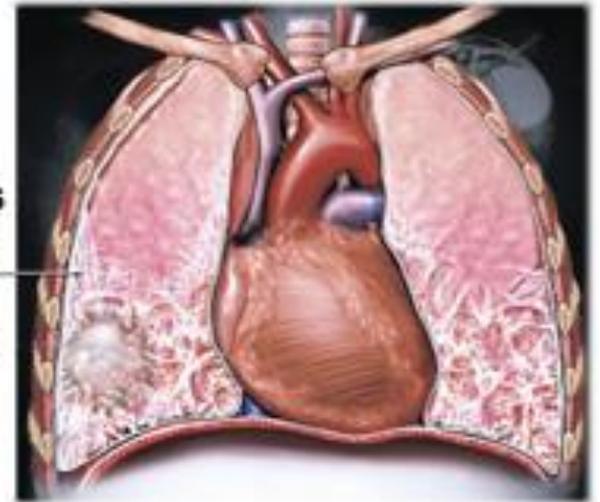
- **1918** A Prudential Insurance Company official notes that life insurance companies will not cover asbestos workers, because of the "health-injurious conditions of the industry."
- In **1933**, Metropolitan Life Insurance Co. doctors found that 29% of workers in a Johns-Manville plant had asbestosis.



# History of Standards

- Consensus Standards
- ACGIH 1946 MAC's
- Bureau of Mines 1954
- OSHA 1970

White fibers  
represent  
asbestos  
in the lung



# Asbestos

- OSHA
- Must comply with 1926.1101
- 1910.1001



# Terms

**Abatement:** any operation that is designed to permanently remove asbestos-containing materials.



# Terms

## Asbestos Hazard Emergency

**Response Act (AHERA):** this act became law in 1987 and specified a plan by which K-12 schools would manage asbestos.



# Terms

**Asbestos-Containing Material (ACM):** any material that contains more than 1% of asbestos.



# Terms

**Asbestos related work:** any work that involves ACM and may result in the release of any quantity of asbestos fibers into the air.



# Terms

**Disturbance:** contact with any material that contains ACM or PACM that causes release of fibers.



# Terms

**Fiber:** a particulate form of asbestos, 5 micrometers or longer, with a length-to-diameter ratio of at least 3-to-1.

ASBESTOS FIBER  
Average diameter  
0.2 microns

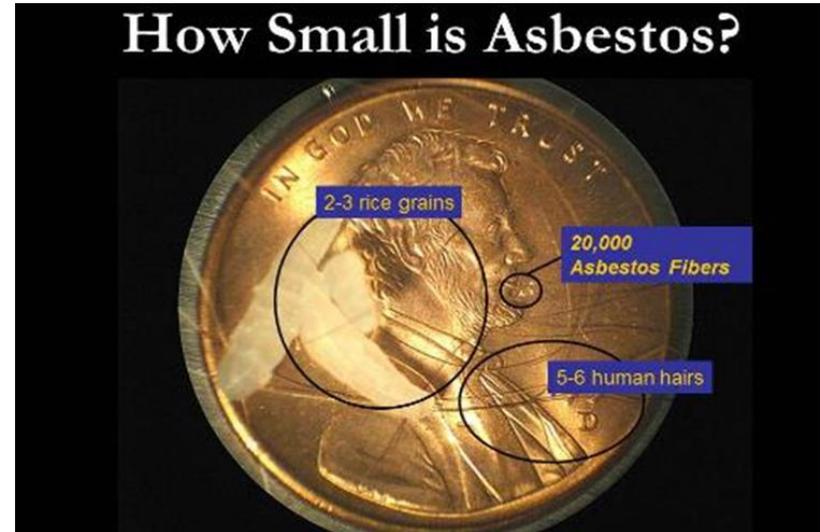


HUMAN HAIR  
Average diameter  
50-70 microns



# Terms

- **Fiber:**
- Greater risk if fiber's size is greater than 5 microns (1 inch = 25,000 microns)
- Most fibers removed from lungs within a few hours.
- Long and/or thin fibers, particularly in the deepest parts of lung may stay for years or may never be removed.



# Terms

**Friable** -Asbestos-containing material can be crushed with hand pressure



# Terms

**Intact:** ACM that has not crumbled, been pulverized, or otherwise deteriorated.



# Terms

**Presumed Asbestos-Containing Material (PACM):** materials that may contain asbestos but have not yet been tested.



Asbestos Ceiling Tiles



Asbestos Ceiling Paint,  
Textured/Popcorn Ceilings



Asbestos Pipe Insulation



Asbestos Flooring Materials

# Terms

**Removal:** all operations where ACM and/or PACM is taken out or stripped from structures or substrates, including demolition operations.



# Terms

**Renovation:** any operations that involves altering a facility or one or more facility components in any way.



# December 2014

- Evanston IL
- \$132,000 to six contractors
- OSHA's inspection found that onsite asbestos consultant directed the HVAC contractor to cut and remove 60 feet of piping that contained asbestos insulation without PPE.



Typical asbestos pipe.

# Asbestos

- OSHA 0.1f/cc
- EPA-recommended clearance criteria for reoccupancy into work area following asbestos abatement, often cited as 0.01 f/cc.



# Twin Towers

- Marcy Borders
- 1973-2017



# 9/11 DUST EXPOSURE RELATED TO CANCER

20 YEARS LATER

The Sept. 11, 2001, terrorist attacks on the World Trade Center in New York City changed America forever. In the two decades since, researchers have linked the toxic dust from the WTC debris to deadly conditions such as lung cancer, mesothelioma and other respiratory diseases.

**410,000-525,000**

The number of first responders, residents and cleanup workers exposed to contaminated air from the collapse of the Twin Towers.

**112,000 X HIGHER**

The asbestos levels above the legal limit of a building near Ground Zero. Tests showed that the building had become toxic.

**3,000+**

The number of first responders who have died after 9/11.

**1.8 MILLION**

The tons of debris removed from Ground Zero.

**1,366**

The number of people who have died from lung or other related cancers.

**19%**

The increase of cancer diagnoses in firefighters who served during 9/11.

**\$7.375 billion**

The amount of money the federal government is authorized to spend on the Victim Compensation Fund that was extended until 2092, assuring that all families of victims and survivors would be covered, both medically and financially.

**2,000 TONS**

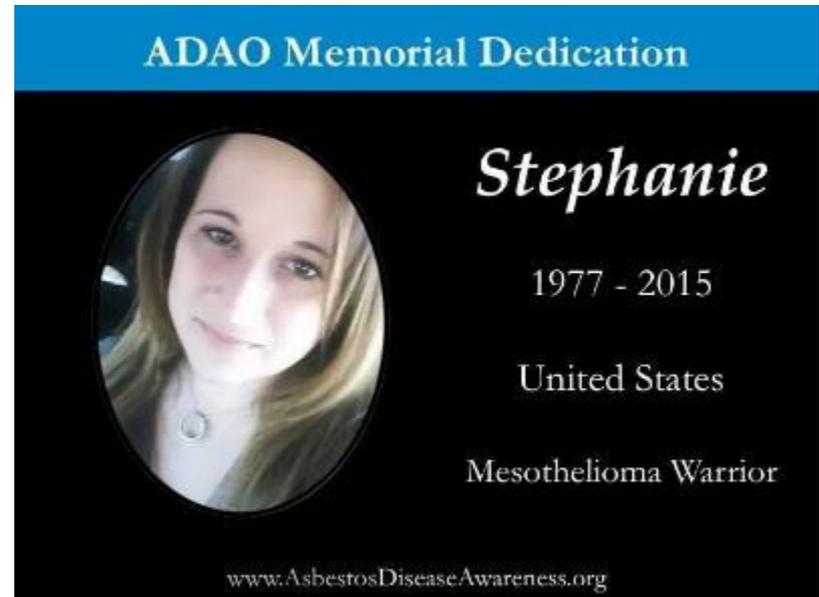
The amount of asbestos fibers that were released into the air by the towers' collapse.

Sources: WTC Health Program, FealGood Foundation, CNN

Asbestos.com

# Asbestos

- 3000 die in the US
- Some are spouses or kids of asbestos workers
- Stephanie Harper of the North Texas city of Bonham



# Asbestos

- Tony Rich fibers like ceramic wools rockwool all collect.
- Can usually tell asbestos



# May 2018

- A California jury has awarded \$11.4 million at the conclusion of a take-home asbestos exposure trial, finding that the defendant had acted with malice when it failed to warn employees of asbestos-related hazards.
- This suit was brought by tenants who allege they were exposed to asbestos



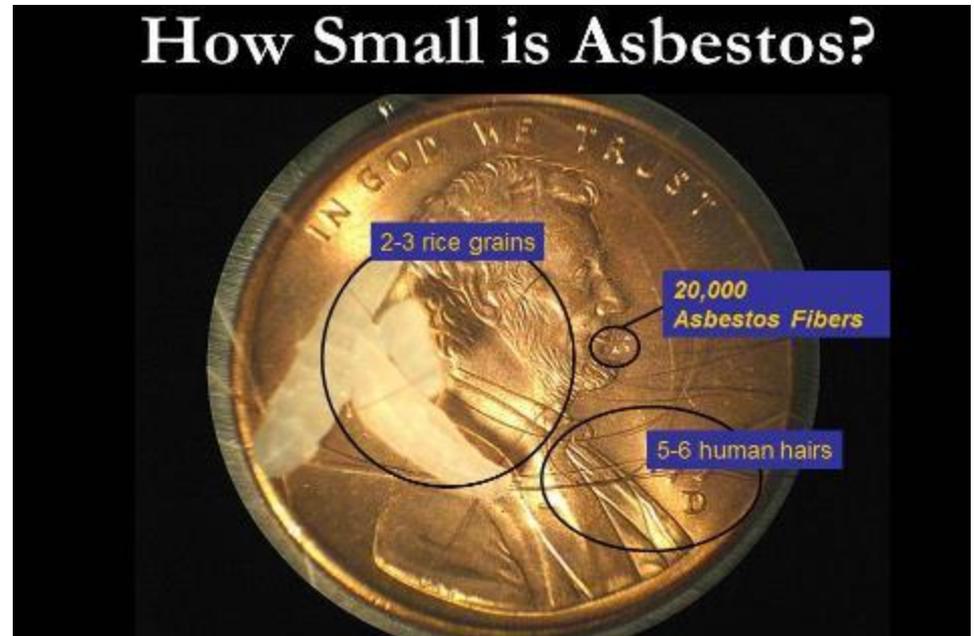


- Heather Von St James – hugging Dad
- Mike Mattmuller – dad ground asbestos brakes as a mechanic

# Asbestos

# June 2014

- The asbestos lawsuit that saw a \$1 million award
- Richard Rost has Mesothelioma
- Defendants included Ford Motor Company (Ford), General Electric, Westinghouse and Ingersoll-Rand.
- However, the latter three defendants settled with the plaintiffs out of court, before the trial had an opportunity to begin.



Overall, nearly 3,000 people are [diagnosed with mesothelioma](#) each year in the United States, which represents 0.02 percent of all U.S. cancer cases.

# Jan 2016

Lab #	Sample #	Description	Time On	Time Off	Total Min	Flow Rate	Volume (L)	Fiber Count	Result (f/cc)	Notes	
	B-9	Blank	_____						0/100	—	No Fibers observed
	B-10	Blank	_____						0/100	—	HFO
	803-11a	Unit 803 Living Rm	1410	1610	120	10 10	1200	3/100	0.004		
	803-11b	Unit 803 Living Rm	1410	1610	120	10 10	1200	5/100	0.004		
	703-12a	Unit 703 Kitchen	1415	1615	120	10 10	1200	10/100	0.004		
	703-12b	Unit 703 Kitchen	1415	1615	120	10 10	1200	7/100	0.004		
	703-13a	Unit 703 Living Rm	1420	1620	120	10 10	1200	12/100	0.005		
	703-13b	Unit 703 Living Rm	1426	1620	120	10 10	1200	10/100	0.004		
	703-14a	Unit 703 Foyer	1430	1630	120	10 10	1200	11/100	0.004		
	703-14b	Unit 703 Foyer	1430	1630	120	10 10	1200	14/100	0.005		

# Case Study #1

- Aurora
- White Powder from pipe Insulation
- Hires 3 Homeless people for \$60 each to remove it
- Asbestos over the surfaces
- Cited 2 Willful



Old Pipe insulation  
can contain  
asbestos

# Case Study #2

- Church notices tile in basement area peeling.
- One of the members offers to remove it.
- Mastic used to set it was asbestos complaint.
- What should have been done?



Example of tile type used.

# Case Study #3

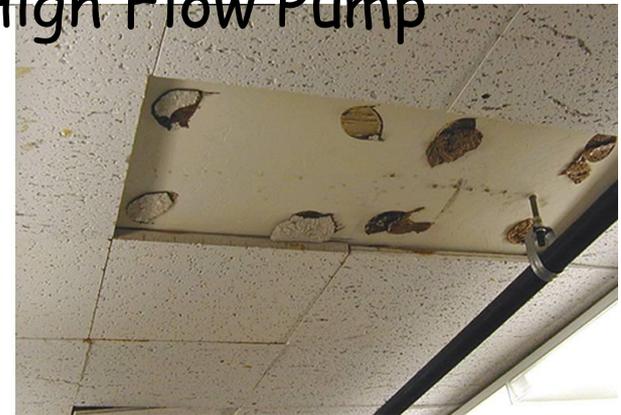
- Middle School
- Employees on renovation job concerned about possible asbestos in dumper
- Hi-flow pumps used
- Asbestos abatement hired to clean it after notified

Asbestos on mastic, floor tile, and ceiling tiles.



High Flow Pump

GLUE-ON  
ACOUSTIC  
CEILING TILE  
& EXPOSED  
BROWN MASTIC



# #1 Most Cited

- 1926.1101(k)(9)(i)
- The employer shall, at no cost to the employee, institute a training program for all employees who are likely to be exposed in excess of a PEL and for all employees who perform Class I through IV asbestos operations.



A training exercise.

# #2 Most Cited

- 1926.1101(e)(1)
- All Class I, II and III asbestos work shall be conducted within regulated areas.



Sample regulated area

# #3 Most Cited

- 1926.1101(f)(2)(i)
- a "competent person" must conduct an exposure assessment immediately before or at the initiation of the operation to ascertain expected exposures during that operation or workplace.



Sample of a tile scraped to be tested.

# #4 Most Cited

- 1926.1101(i)(1)
- **General.** Protective clothing, such as coveralls or similar whole-body clothing, head coverings, gloves, and foot coverings for any employee exposed to airborne concentrations of asbestos that exceed the TWA and/or excursion limit.



Typical protective clothing.

# #5 Most Cited

- [1926.1101\(l\)\(2\)](#)
- **Waste disposal.** Asbestos waste, scrap, debris, bags, containers, equipment, and contaminated clothing consigned for disposal shall be collected and disposed of in sealed, labeled, impermeable bags or other closed, labeled, impermeable containers.



Asbestos put into plastic bags.



# #6 Most Cited

- 1926.1101(k)(3)(i)
- Before work in areas containing ACM and PACM is begun; employers shall identify the presence, location, and quantity of ACM, and/or PACM therein pursuant to paragraph (k)(1) of this section.



Signs warning of Asbestos presences will need to be posted.

# Case Study #5 Metal Container



# Illinois EPA Involvement

- 12/10/10 IEPA went to company
- Samples taken on piping, compactor and on floor – positive
- 12/17/10 referred to OSHA
- Referred to Illinois States Attorney.
  - Cease and desist order
  - Court ordered remediation of facility shut down plant until IEPA deemed the area clean.

# Pipe Insulation



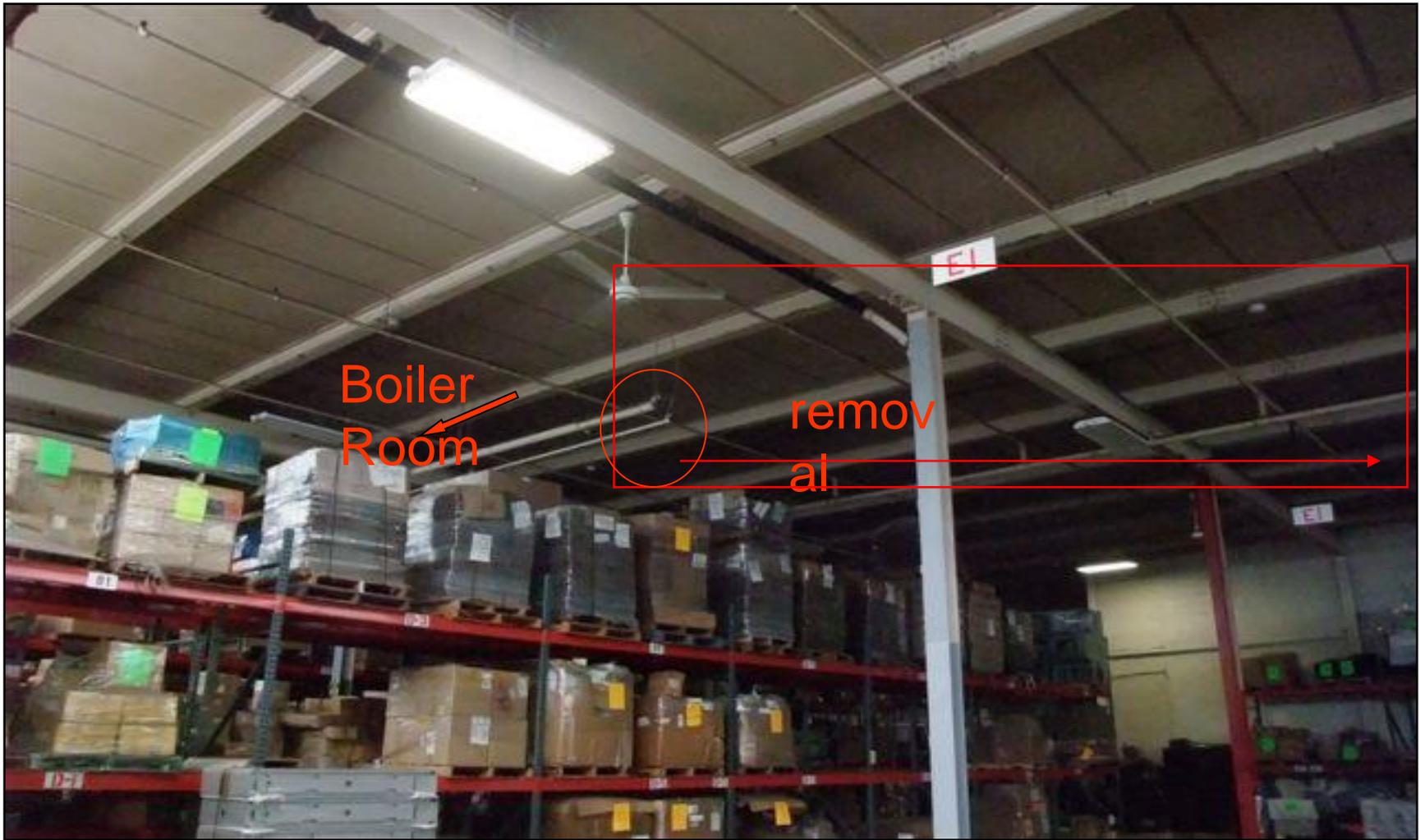
# OSHA Investigation

- Based on interviews conducted
  - Safety consultant hired in 2002
    - CSP
      - Identified machine guarding and asbestos issues at facility.
      - Made specific recommendations to mgmt regarding asbestos.
      - Sent detailed report outlining specific asbestos safeguards to company management.
        - » Virtually all recommendations were ignored by the employer.

# Description of Events

- Nov. 29 through Dec. 10, 2010, Plant Manager, directed five employees to remove and dispose of piping and heaters covered with asbestos containing insulation.
  - Only the Lead Man was told that the material contained asbestos
  - No one had been trained
  - Provided employees only with dust masks for protection.
  - Removed the pipes from the ceiling with reciprocating saw and brought them to the floor
  - Ripped-off the insulation with help of utility knives
  - Disposed of ACM/PACM in compactor for later disposal in a dumpster
  - Pipes placed in metal recycling bin
  - Dry swept the asbestos containing debris

# Area Removed



# Area Removed



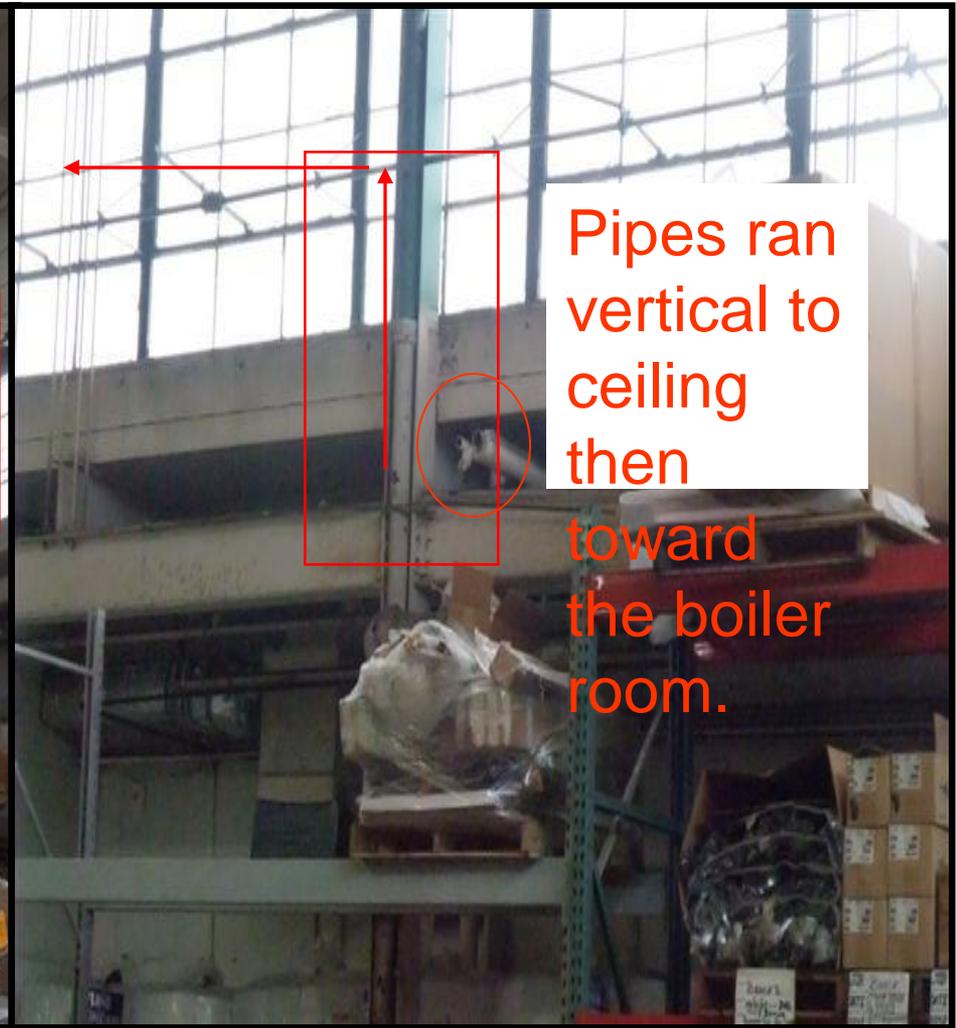
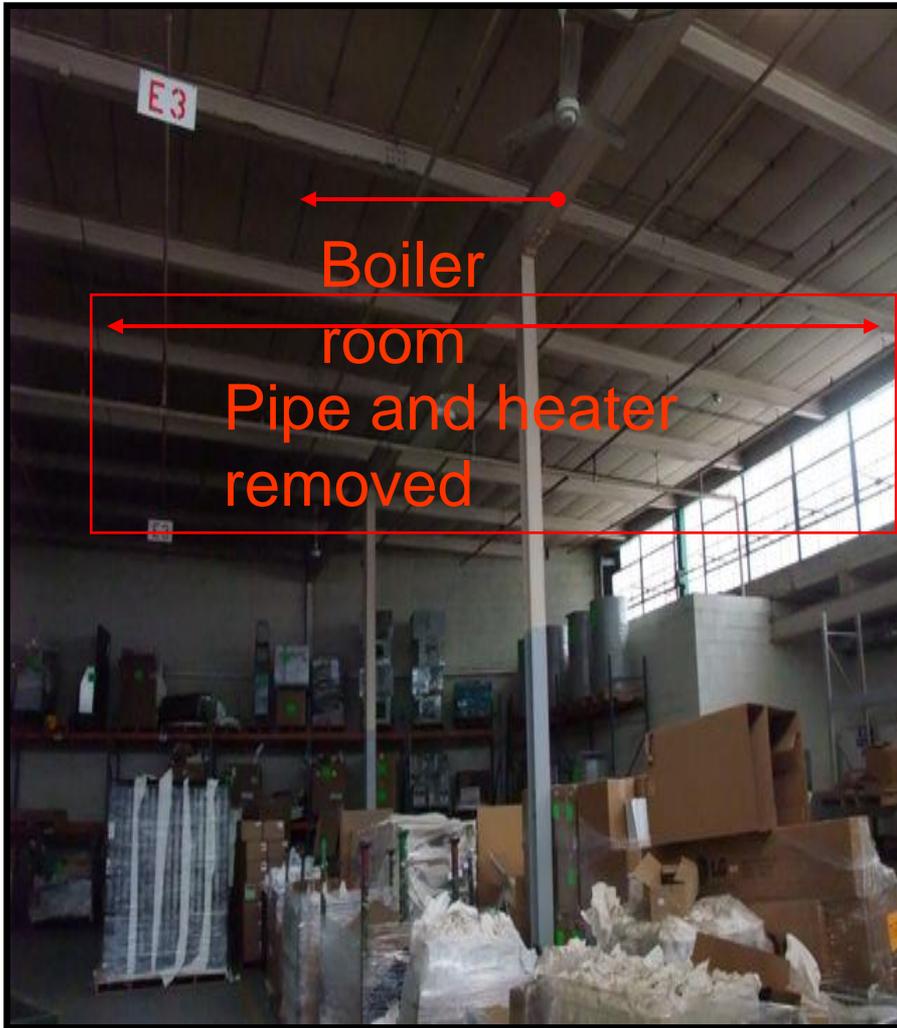
Pipe and heaters Removed

EXIT

EXIT

EXIT

# Area Removed



# Photos – ACM Pipes



# Compactor



# Interviews - Management

- Owner,
  - Authorized the work
    - to make the area more aesthetically appealing
    - the employees would have been laid off due to little work in the facility
  - Was aware of the ACM on the boiler
- Plant Manager
  - Directed the work
  - Claimed awareness of ACM on the boiler but not the pipes

# Interviews – Lead Man

- Plant Manager told him the insulation contained asbestos
- The employees conducting the removal were not instructed that the material was asbestos.
- The employees dry swept and disposed of material were not instructed that the material was asbestos.
- None of the employees were trained for asbestos work
- Only provided with dust masks

# Employer Knowledge of Facility's ACM

- Building built in 1951.
- 2002 - Consultant advised company of asbestos hazard
  - CSP
  - Initially hired to provide guidance on machine guarding problems
  - Saw potential asbestos containing material.

# Heightened Knowledge of Regulation

- Company asked CSP to test the material.
- CSP relayed the positive ACM samples.
- Discussed the options to manage and/or dispose of material.
- Provided regulatory and training information to the Company.
- June 2003 Company received a quote from a contractor for a boiler enclosure to be built.

# Photos- Enclosure



# Enclosure Interior



# Asbestos Repair on Boiler



# A Pattern of Disregard: Evidence of previous ACM removals



# Other Removal



# Why?

- **COST**

- **Potential Removal Cost \$250,000+**

- Paying for Asbestos permits.
    - Removal of ACM in facility by licensed contractor.
    - Disposal of ACM by legal means.
    - Not providing training, protective clothing, and respirators for employees.
    - If abatement contractor was used, facility might be shut down during work.
      - Halting production at facility.
    - Recycling of pipe and heaters

# Summary of Violations

- 1926.1101 Asbestos
  - 8 Serious (\$50,400)
  - 4 Willful (\$252,000)
  - 15 Egregious (\$945,000)
- TOTAL \$1,247,400

# Violations - Serious

- **1926.1101(e)(1)**
  - **Work in Regulated areas** **\$6300**
- **1926.1101(g)(2)**
  - **Exhaust, Ventilation** **\$6300**
- **1926.1101(g)(3)**
  - **Saws and Dry Sweeping** **\$6300**
- **1926.1101(g)(4)**
  - **Engineering Controls** **\$6300**
- **1926.1101(g)(5)**
  - **Negative Enclosure** **\$6300**
- **1926.1101(h)(2)**
  - **Respiratory Program** **\$6300**
- **1926.1101(j)(1)**
  - **Hygiene Facilities** **\$6300**
- **1926.1101(l)(2)**
  - **Proper Disposal** **\$6300**

# Violations – Willful

- 1926.1101(f)(1)
  - Air Monitoring \$63,000
- 1926.1101(f)(2)
  - Exposure Assessment Grouped
- 1926.1101(f)(3)
  - Daily Monitoring Grouped
- 1926.1101(g)(1)
  - Engineering Controls and Work Practices \$63,000
- 1926.1101(k)(3)
  - Duty of employer to ID ACM \$63000
- 1926.1101(k)(6)
  - Mechanical room identification of ACM \$63000
- 1926.1101(k)(8)(vii)
  - Labeling Previous PACM or ACM Grouped

# Violations – Willful Egregious

- 1926.1101(h)(1) & (h)(3)(i)[A]
  - Respiratory Protection \$315,000\*
- 1926.1101(i)(1)
  - Protective Clothing \$315,000\*
- 1926.1101(k)(9)(i)
  - Employee Training \$315,000\*
- \* \$63,000 x 5 employee exposures

# Total Violation Amount

- 8 Serious \$50,400
- 4 Willful \$252,000
- 3 Willful - Egregious \$945,000
  
- Total Penalty \$1,247,400

# 2013

- Franklin “Al” Bieri, 54, of Lebanon, Ill., was sentenced in federal court to five months in prison, followed by three months of home confinement.
- Disposed in dumpster with no bagged or labels



Failed to notify Environmental Protection Agency at least 10 working days prior to beginning the asbestos work an offense punishable under the Clean Air Act.

# 2018

- \$1.8 million dollar fine to IL Roofer for OSHA violations for asbestos.
- “This case stands out because of the outrageous behavior of Joseph Kehrer,” said Assistant Secretary of Labor for Occupational Safety and Health David Michaels.
- Workers were threatened with firing if they spoke to investigators, Michaels said.



# Baby Powder

Johnson & Johnson SETTLEMENT

- \$8.9 BILLION
- 60,000+ LAWSUITS

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EVENING NEWS NEXT 25 YEARS  
with NORA H O'DONNELL

# Accidental Contact

## Minor Contact:

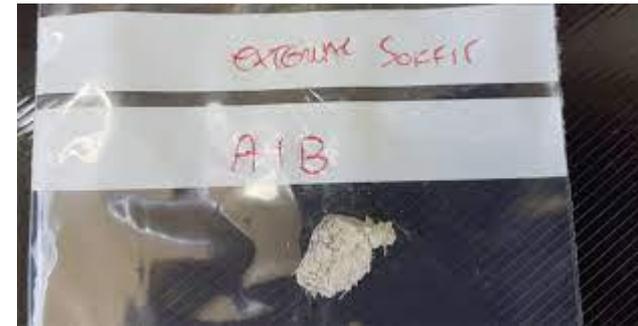
- (i.e. brushing up against PACM with small amount of fiber sticking to clothes)
- DO NOT brush off or blow off PACM.
- Remove PACM with **wet** rag or **wet** paper towel.
- Wrap **wet** rag or **wet** paper towel containing PACM in another layer of **wet** rag or **wet** paper towel.
- Dispose of rags and/or paper towels in sealed plastic bag
- Use N100 Respirator



# Accidental Contact

## Major Contact:

- Take measures to terminate contact with PACM.
- Notify supervisor and Asbestos Coordinator and management.
- Initiate testing procedure for PACM material contacted.
- Change clothes and shower
- Clothing may be bagged and remain sealed until testing procedure determines if ACM is present.
- Use N100 Respirator and protective clothing

A promotional poster for the PRO-LAB ASBESTOS TEST KIT. The poster features a smartphone displaying the app interface, a list of features, and a call to action to protect the family.

**PRO-LAB**  
**ASBESTOS**  
PRUEBA DE ASBESTO  
**TEST KIT**

- Safe and Easy to Use  
Seguro y fácil de usar
- EPA Approved Lab Methods  
Métodos de laboratorio aprobados por la EPA
- Detects Hazardous Asbestos  
Detecta asbesto peligroso
- Email/Text Result Notifications  
Notificación de resultados por Email/Texto

**Test For Asbestos Before You Renovate:**  
Prueba de asbesto antes de renovar:

- Pipe Insulation / Aislamiento de tuberías
- Vinyl & Linoleum Floor Tiles / Suelos de vinilo y linóleo
- Popcorn & stucco Ceilings / Techos de poliestireno y estuco

**PROTECT YOUR FAMILY!**

DOWNLOAD THE PROLAB TEST KITS APP  
DESCARGA LA APP DE PROLAB TEST KITS

**\$40.00\* FEE REQUIRED FOR LAB RESULTS**  
\$40.00\* cuota de análisis requerida para resultados de laboratorio

\*PER SAMPLE LAYER ANALYZED / \*Por capa de muestra analizada

# The Wives

- Rachel
- Alabama
- One Lung Removed



# Questions?

