

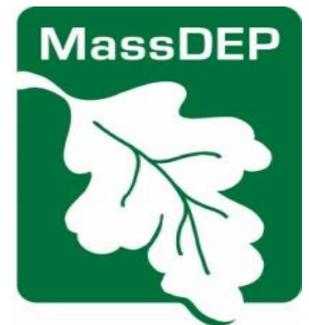
# MassDEP Asbestos Overview

2025 MassDEP-MHOA Annual Seminars

Feb-25: Delaney House, Holyoke

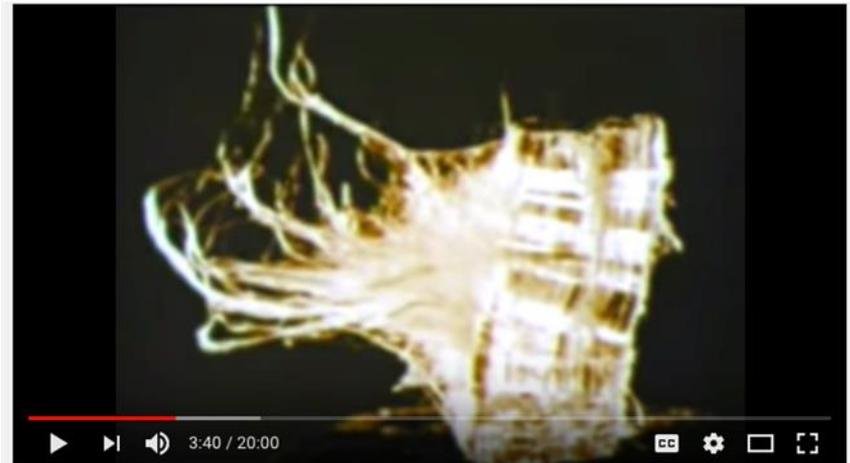
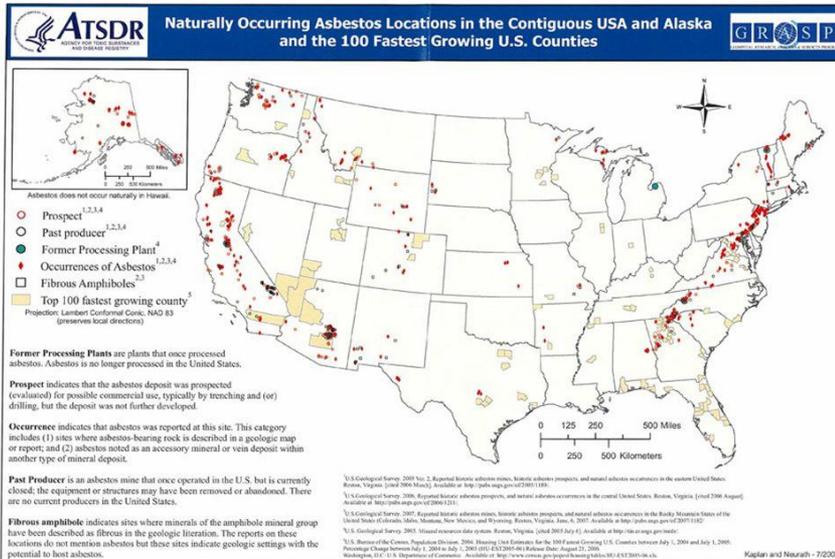
Mar-11: Cyprian Keyes, Boylston

Mar-12: Virtual

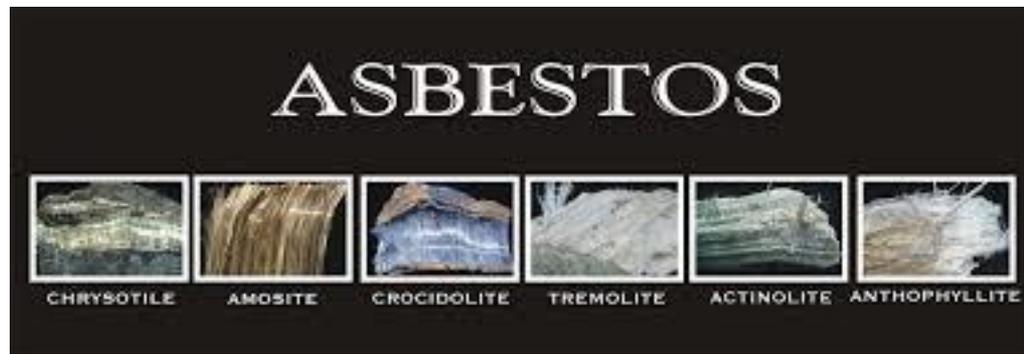


# Naturally Occurring Fibrous Mineral Environmentally Stable & Non Biodegradable

## Asbestos & geology



Asbestos A Matter of Time 1959 US Bureau of Mines



- Desirable Physical Properties
  - High Tensile Strength
  - Resistant to Corrosives & Other Chemicals
  - Resistant to Heat & Flame
  - Flexible
- Asbestos Containing Material (ACM) > 1% Asbestos (USEPA regulatory definition)
- Laboratory Analysis Required to Determine Type
- >3,000 Building Products
  - Widely used Commercial & Residential Use until 1970s
  - Still Used Today: Automotive, Vinyl Tiles, Roofing Material, Adhesives, Mastics, Some Imported Cement Pipes & Corrugated Sheeting

# Asbestos Products still Available in Commerce

The manufacture, importation, processing and distribution in commerce of these building products are **not banned** (partial list):

- Asphaltic roofing shingles, felts, flashing
- Cement shingles/panels
- Cement pipe
- Vinyl floor tile
- Millboard
- Gaskets
- Adhesives/mastics

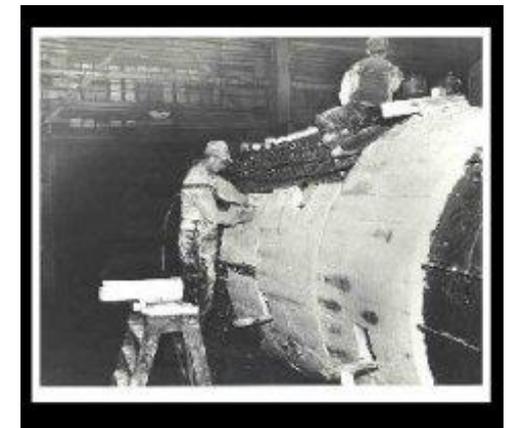
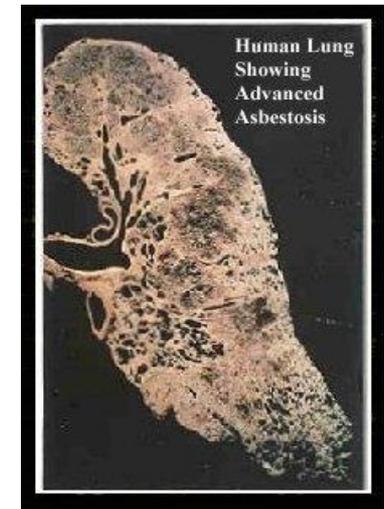


Image Source: Rosenfeld Injury Lawyers

Reference: <https://www.epa.gov/asbestos/us-federal-bans-asbestos>

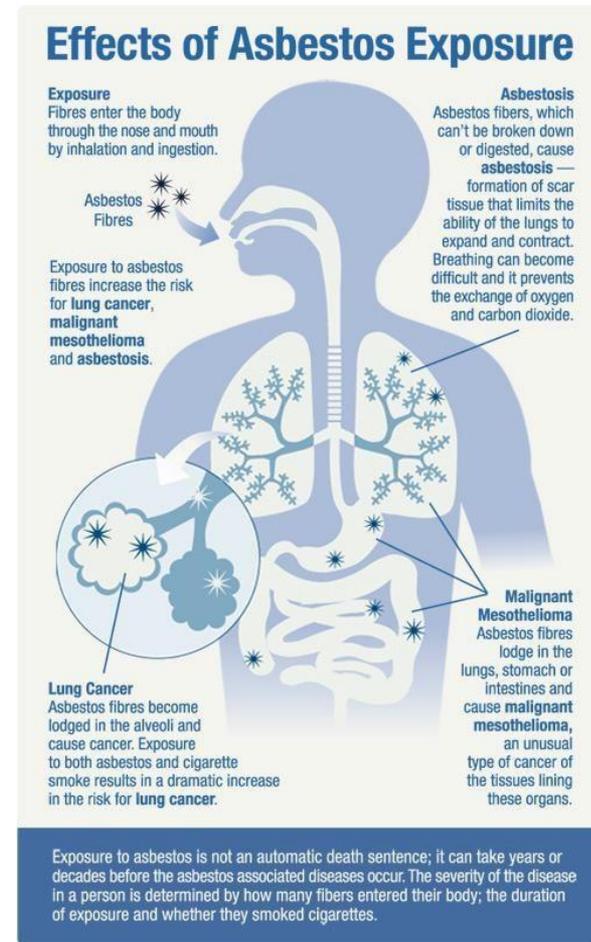
# HEALTH HAZARDS

- Primarily Inhalation Hazard; Secondarily Ingestion Hazard
- Must Be Disturbed, Friable & Airborne
- Friable= Able to be pulverized or reduced to powder by hand pressure when dry.



# Diseases Associated with Asbestos Exposure

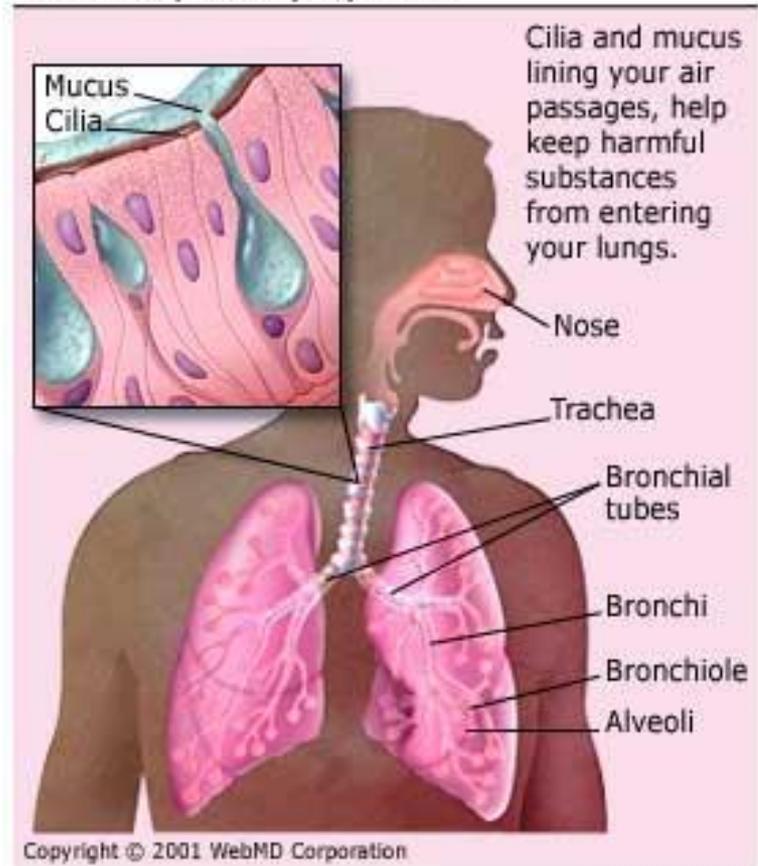
- Asbestosis (fibrosis of the lung)
- Lung Cancer
- Mesothelioma (Pleural & Peritoneal)
- Colon Cancer
- Latency Period (10 to 40 years)
- Risk - Level & Duration of Exposure



# DEFENSE MECHANISMS

- Nose & Mouth
- Mucous Lined Breathing Passages
- Cilia
- Macrophages

The Respiratory System



# At-risk Population Today

- Population Groups Most Likely to Be Affected and Exposed today?
  - Individuals in the Construction Trades
  - Firefighters
- Development of asbestos-related disease is a function of exposure and individual risk factors.

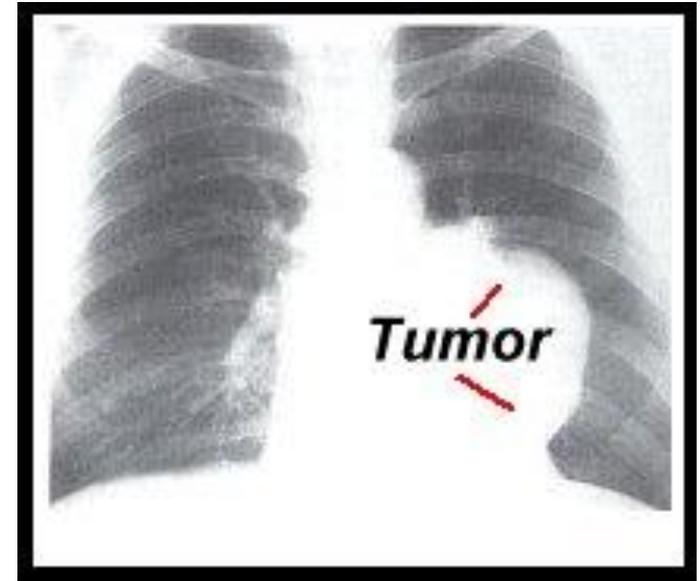


# Potential Risk Factors

- Concentration of asbestos fibers
- Duration of exposure
- Frequency of exposure
- Iron Content
- Type of asbestos fibers involved in exposure & Dimensions, type & durability of asbestos fibers
  - Wide fibers (diameter greater than 2 to 5 microns) entrained URT
  - Long thin asbestos fibers can reach the lower airways & alveoli -can tend to be retained in the lungs
  - Sharp, needle-like amphibole fibers are associated with higher risk of disease

# SMOKING

- Impairs Body's Primary Defense Mechanism
- Increased Risk of Lung Cancer
- Multiplicative Effect
  - 90X non-exposed, non-smoker



# MassDEP Asbestos Program

## focus on Demolition and Renovation Projects

- Performance standards:
  - Prevent air emissions
  - Protect public health, safety and environment
- Essential Elements of Program:
  - **Survey/Notification** prior to work
  - **Asbestos abatement** work practice standards
  - **Asbestos-containing waste material** must be properly managed
- Must also comply with DLS requirements (<https://www.mass.gov/asbestos-safety-program>):
  - Worker qualifications/training
  - Work practices/worker safety
  - Final clearance monitoring

### MassDEP Asbestos Webpage



Mass.gov

Search Mass.gov

LIVING WORKING LEARNING VISITING & EXPLORING YOUR GOVERNMENT

OFFERED BY Massachusetts Department of Environmental Protection Show 1 more

RELATED TO Asbestos Project Lookup

GUIDE

## MassDEP Asbestos, Construction & Demolition Notifications

Asbestos is a fibrous natural mineral once used in a variety of building materials. It is known to cause lung cancer and respiratory diseases. MassDEP regulates abatement, construction and demolition projects that involve asbestos.

Feedback

IN THIS GUIDE

<http://mass.gov/dep/asbestos>

# MassDEP Survey Requirements

- Required prior to ANY demolition/renovation project
  - ANY structure of ANY age
  - Demo/Reno projects include, but are not limited to:
    - Old boiler/piping repairs/replacement
    - HVAC repairs/upgrades
    - Electrical repairs/upgrades
    - Home/facility improvement projects



A thorough asbestos survey is required prior to demolition or renovation activities on a structure of any age.

Contact  
100 Cambridge Street, Suite 900  
Boston, MA 02114  
617-292-5500  
<http://mass.gov/dep/asbestos>

MassDEP  
MassDEP Asbestos  
Survey Requirements  
MassDEP - Bureau of Air & Waste  
Asbestos Program

<https://www.mass.gov/doc/asbestos-survey-requirements-prior-to-demolition-or-renovation-information-guide/download>

# MassDEP Survey Requirements

- Owner/Operator must engage **DLS-licensed Asbestos Inspector** to conduct “**thorough**” inspection of the area to be worked on
  - Identify all material containing asbestos in any amount (including <1%)
  - Destructive survey (inspect/sample behind wall cavities, through floor layers, above ceilings)
  - Must use approved analytical methods (e.g., Polarized Light Microscopy (PLM))
  - Any suspect ACM not analyzed must be identified as ACM
- Keep the Survey Report for at least two years (preferably longer; DLS requires retention of records for at least 15 years)

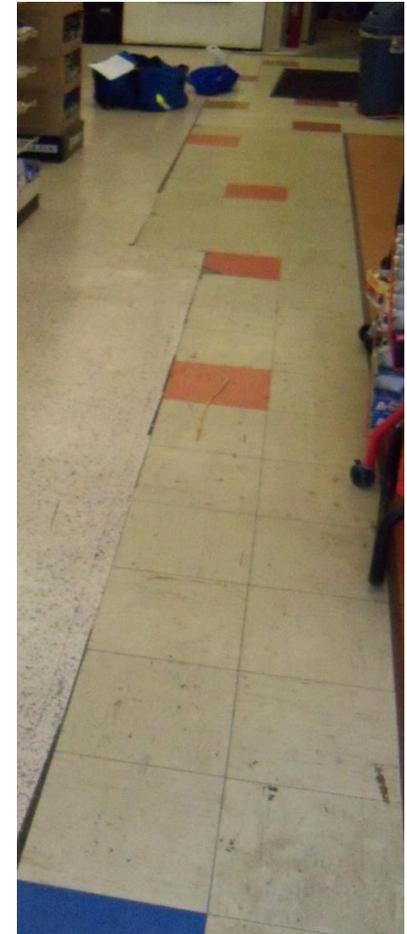
# Purpose of Survey

- Comply with State and Federal regulations
- Identify and properly manage materials that contain asbestos
  - Minimize uncertainty/doubt
  - Avoid “surprises” (i.e., unforeseen disturbance of ACM) and added project cost (e.g., decontamination, disposal, possible enforcement & penalties)
  - Protect health and safety of workers, building occupants and members of the public
- Survey report enables determination of:
  - Notification requirements
  - Licensed contractor requirements
  - Work practice requirements
  - Sequence of project tasks
    - Removal requirements prior to demo/reno
    - Minimize volume managed as ACWM
  - Waste packaging, transportation and disposal requirements
- Building Officials can request to see survey report for any questionable materials/facility components

# “Suspect Asbestos-Containing Material”

- MassDEP Definition (310 CMR 7.15(1)) Products reasonably likely to contain asbestos based on appearance, composition, and use
- Includes (but is not limited to):

Non-fiberglass insulation (e.g., pipe, boiler, duct work)	Mastic (flooring or cove base adhesive or damp-proofing)
Spray-on fire proofing	Vinyl floor and wall tiles
Asphalt roofing and siding (shingles, roofing felts, tars, etc.)	Vinyl sheet flooring (i.e. linoleum)
Cement/transite shingles	Wallboard Joint Compound
Cement/transite pipes	Plaster
Cement sheets (corrugated and decorative)	Ceiling tiles
Cloth vibration dampers or duct work	Window, door, building seam caulk and/or glazing
	Vermiculite Attic Insulation



# ASBESTOS BUILDING

TYPICAL LOCATIONS FOR THE MOST COMMON ASBESTOS-CONTAINING MATERIALS

KEY

## ROOF AND EXTERIOR WALLS

- 1 Roof sheets and tiles
- 2 Guttering and drainpipe
- 3 Wall cladding
- 4 Soffit/facia boards
- 5 Panel beneath window
- 6 Roofing felt and coating to metal wall cladding

## BOILER, VESSELS AND PIPEWORK

- 7 Lagging on boiler, pipework, calorifier etc.
- 8 Damaged lagging and associated debris
- 9 Paper lining under non-asbestos pipe lagging
- 10 Gasket in pipe and vessel joints
- 11 Rope seal on boiler access hatch and between cast iron boiler sections
- 12 Paper lining inside steel boiler casing
- 13 Boiler flue

## CEILINGS

- 14 Spray coating to ceiling, walls, beams/columns
- 15 Loose asbestos in ceiling/floor cavity
- 16 Tiles, slats, canopies and firebreaks above ceilings
- 17 Textured coatings and paints

## INTERIOR WALLS/PANELS

- 18 Loose asbestos inside partition walls
- 19 Partition walls
- 20 Panel beneath window
- 21 Panel lining to lift shaft
- 22 Panelling to vertical and horizontal beams
- 23 Panel behind electrical equipment
- 24 Panel on access hatch to service riser
- 25 Panel lining service riser and floor
- 26 Heater cupboard around domestic boiler
- 27 Panel behind/under heater
- 28 Panel on or inside, fire door
- 29 Bath panel

## FLOORING MATERIALS

- 30 Floor tiles, linoleum and paper backing, lining to suspended floor

## AIR HANDLING SYSTEMS

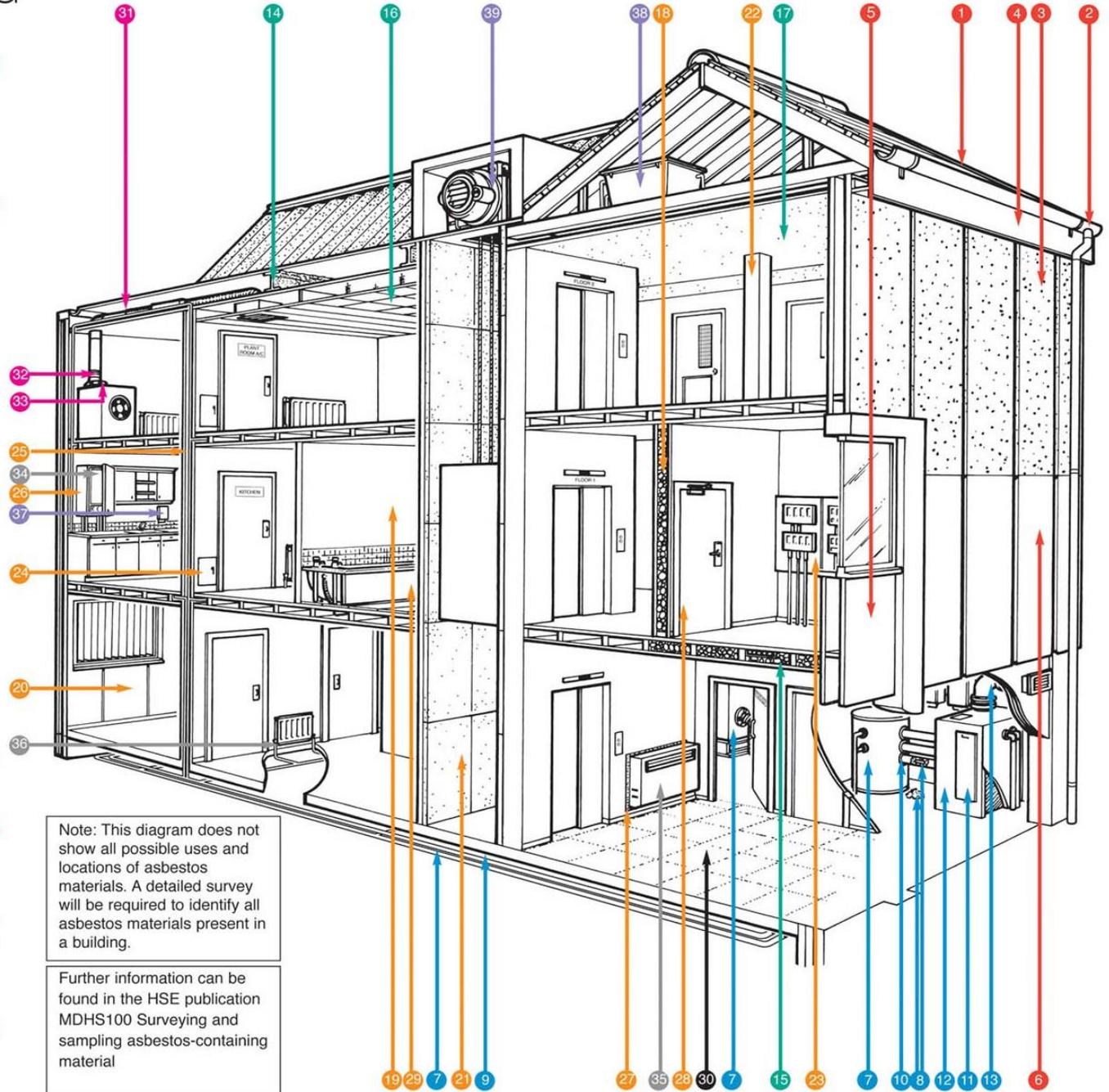
- 31 Lagging
- 32 Gaskets
- 33 Anti-vibration gaiter

## DOMESTIC APPLIANCES

- 34 Gaskets, rope seals and panels in domestic boilers
- 35 'Caposil' insulating blocks, panels, paper, string etc in domestic heater
- 36 String seals on radiators

## OTHER

- 37 Fire blanket
- 38 Water tank
- 39 Brake/clutch lining

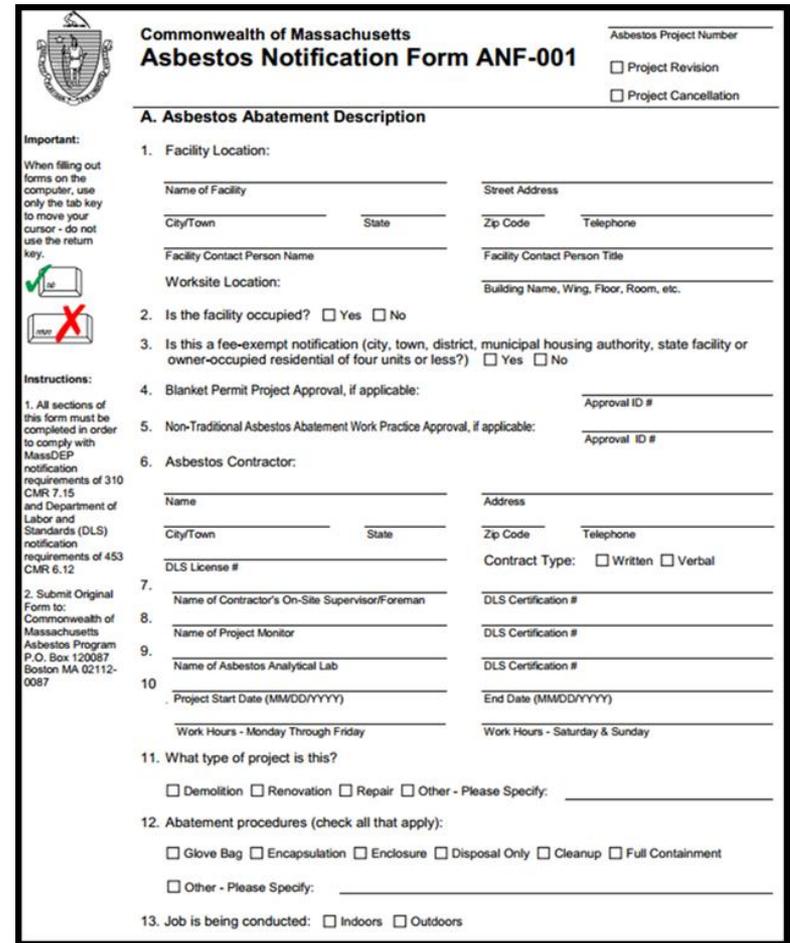


Note: This diagram does not show all possible uses and locations of asbestos materials. A detailed survey will be required to identify all asbestos materials present in a building.

Further information can be found in the HSE publication MDHS100 Surveying and sampling asbestos-containing material

# AQ04 Notification Requirement

- Submit Asbestos Notification Form (AQ04/ANF-001) 10 working-days prior to start of abatement activity.
- Except for VAT floor tile, gypsum WB/Joint compound systems, and exterior cement shingles, notification is required for any amount removed
- Regardless of notification requirement, reg. work practices apply in all cases.
- Online notification satisfies both MassDEP and DLS requirements <https://www.mass.gov/how-to/file-an-aq-04-anf-001-asbestos-removal-notification>
- Upon request, emergency waiver may be granted to start work sooner at discretion of MassDEP staff <https://www.mass.gov/doc/emergency-waiver-request-procedures-asbestos-abatement-demolition-projects/download>



**Commonwealth of Massachusetts**  
**Asbestos Notification Form ANF-001**

Asbestos Project Number \_\_\_\_\_  
 Project Revision  
 Project Cancellation

**A. Asbestos Abatement Description**

**Important:**  
When filling out forms on the computer, use only the tab key to move your cursor - do not use the return key.

1. Facility Location:  
Name of Facility \_\_\_\_\_ Street Address \_\_\_\_\_  
City/Town \_\_\_\_\_ State \_\_\_\_\_ Zip Code \_\_\_\_\_ Telephone \_\_\_\_\_  
Facility Contact Person Name \_\_\_\_\_ Facility Contact Person Title \_\_\_\_\_  
Worksite Location: \_\_\_\_\_ Building Name, Wing, Floor, Room, etc. \_\_\_\_\_

2. Is the facility occupied?  Yes  No

3. Is this a fee-exempt notification (city, town, district, municipal housing authority, state facility or owner-occupied residential of four units or less?)  Yes  No

4. Blanket Permit Project Approval, if applicable: \_\_\_\_\_ Approval ID # \_\_\_\_\_

5. Non-Traditional Asbestos Abatement Work Practice Approval, if applicable: \_\_\_\_\_ Approval ID # \_\_\_\_\_

6. Asbestos Contractor:  
Name \_\_\_\_\_ Address \_\_\_\_\_  
City/Town \_\_\_\_\_ State \_\_\_\_\_ Zip Code \_\_\_\_\_ Telephone \_\_\_\_\_  
DLS License # \_\_\_\_\_ Contract Type:  Written  Verbal

7. Name of Contractor's On-Site Supervisor/Foreman \_\_\_\_\_ DLS Certification # \_\_\_\_\_

8. Name of Project Monitor \_\_\_\_\_ DLS Certification # \_\_\_\_\_

9. Name of Asbestos Analytical Lab \_\_\_\_\_ DLS Certification # \_\_\_\_\_

10. Project Start Date (MM/DD/YYYY) \_\_\_\_\_ End Date (MM/DD/YYYY) \_\_\_\_\_  
Work Hours - Monday Through Friday \_\_\_\_\_ Work Hours - Saturday & Sunday \_\_\_\_\_

11. What type of project is this?  
 Demolition  Renovation  Repair  Other - Please Specify: \_\_\_\_\_

12. Abatement procedures (check all that apply):  
 Glove Bag  Encapsulation  Enclosure  Disposal Only  Cleanup  Full Containment  
 Other - Please Specify: \_\_\_\_\_

13. Job is being conducted:  Indoors  Outdoors

**Instructions:**  
1. All sections of this form must be completed in order to comply with MassDEP notification requirements of 310 CMR 7.15 and Department of Labor and Standards (DLS) notification requirements of 453 CMR 6.12  
2. Submit Original Form to: Commonwealth of Massachusetts Asbestos Program P.O. Box 120087 Boston MA 02112-0087

# Asbestos Abatement Project Requirements

## Managing Asbestos Containing Waste Material (ACWM)

- Packaging
- Transportation
- Storage & Disposal
- Waste Shipment Record

Massachusetts Asbestos Waste Shipment Record		MassDEP Asbestos Notification Number	
<b>Work Site</b>			
Name & Address of Facility or Work Site _____ Telephone Number _____			
Owner/Operator (Generate) Name _____ Telephone Number _____ Asbestos Abatement Project			
Name & Address of Asbestos Contractor			
Department of Labor Standards (DLS) License Number _____ Contact Person Name (if Different From Above) _____ Telephone Number _____ Asbestos Containing Waste Material (ACWM) - Specify Type & Amount Generated			
<input type="checkbox"/> Friable <input type="checkbox"/> Non-Friable			
Quantity in Cubic Meters (Cubic Feet) _____ Quantity in Cubic Meters (Cubic Feet) _____			
Containers Used for Shipment of ACWM - Specify Type & Number Used			
<input type="checkbox"/> Drums/Barrels <input type="checkbox"/> 55 Gallon Plastic Drums/Barrels <input type="checkbox"/> Other _____			
Work Site Owner/Operator Certification: "I hereby certify that the contents of this shipment are fully and accurately described above and that they have been characterized, packaged, marked and labeled in accordance with 310 CMR 7.10."			
Signature _____ Title _____ Date _____			
<b>Name &amp; Address of Company or Person Transporting ACWM</b>			
Contact Person Name (if Different From Above) _____ Telephone Number _____ Date ACWM Was Picked Up (MM/DD/YYYY)			
Transporter's Certification: "I hereby certify that the contents of this shipment are in all respects in the proper condition for transport according to applicable international, federal, state and local regulations."			
Signature _____ Title _____ Certification Date (MM/DD/YYYY)			
<b>Name &amp; Address of Company or Person Transporting ACWM</b>			
Contact Person Name (if Different From Above) _____ Telephone Number _____ Date ACWM Was Picked Up (MM/DD/YYYY)			
Transporter's Certification: "I hereby certify that the contents of this shipment are in all respects in the proper condition for transport according to applicable international, federal, state and local regulations."			
Signature _____ Title _____ Certification Date (MM/DD/YYYY)			
<b>Name &amp; Address of Company or Person Operating Disposal Site</b>			
City/Town _____ State _____ ZIP Code _____			
Contact Person Name (if Different From Above) _____ Telephone Number _____ Date Shipment Was Received (MM/DD/YYYY)			
<b>Indicate Any Discrepancies</b>			
Disposal Facility Certification: "I hereby certify that (1) the quantity of ACWM listed on this asbestos waste shipment record is the same as the quantity accepted for disposal and (2) this facility holds the appropriate permits and/or authorizations to accept for disposal the ACWM described."			
Signature _____ Title _____			



Image Source: ILC Dover

# Clarification about Material Containing < 1% Asbestos

- Should be identified in the pre-demo/reno survey
- **ACWM includes material contaminated with any amount of asbestos (even <1%)**
- If material with any asbestos gets mixed with non-asbestos C&D, all must be handled as ACWM
- Keep segregated, and manage separately from other C&D debris to reduce disposal costs
- Notification required prior to disposal of ACWM
- **Never send to C&D Processor**



# FINAL CLEARANCE MONITORING

- Certified Asbestos Project Monitor (independent of Asbestos Contractor)
- Prior to removal of containment/Neg. Air Unit
- Visual Inspection
- Air Clearance monitoring (for re-occupancy)
- Analytical Methods
  - General project: Phase Contrast Microscopy (PCM): dust particles 0.01 fibers/cc
  - School project: Transmission Electron Microscopy (TEM): asbestos 70 structures/mm<sup>2</sup>



Image source: [www.asbestospecialist.co.uk](http://www.asbestospecialist.co.uk)

# Suggested Checklist for Building Officials Asbestos Survey/Removal Requirements

1. Was the structure, or the portion of structure where work will be performed, thoroughly surveyed by a DLS-certified asbestos inspector prior to **ANY** demolition or renovation activity?
  - *Ask for copy of asbestos survey report.*
2. Did survey identify any Asbestos-Containing Material (ACM)?
  - *Note: Any suspect ACM not analyzed must be managed as ACM*
3. If ACM was identified, has it been removed?
  - *Ask for copy of Asbestos Notification Form (ANF)*
  - *Ask for evidence of project completion*
    - *Final clearance monitoring report, or*
    - *Waste Shipment Record (WSR), or both documents*

# AQ06 Construction/Demolition/Renovation Notification Requirement

- Submit 10 working-days prior to start of construction, demolition, or renovation of a building/structure:
  - Industrial/Commercial/Institutional
  - Residential buildings with more than 20 units (EPA requires notification for demo of any residence >4 units)
  - Required by several municipalities
- Use MassDEP form BWP AQ06 *Notification Prior to Construction or Demolition*
- Prevent release of dust or other hazardous pollutants (e.g., asbestos)
- Notification form asks about:
  - Asbestos survey
  - Survey results
  - Any asbestos abatement activities



**Massachusetts Department of Environmental Protection**  
 Bureau of Waste Prevention • Air Quality

**BWP AQ 06**  
 Notification Prior to Construction or Demolition

Asbestos Project Number \_\_\_\_\_

---

**Important:**  
When filling out forms on the computer, use only the tab key to move your cursor - do not use the return key.

**Instructions:**

1. All sections of this form must be completed in order to comply with the Department of Environmental Protection notification requirements of 310 CMR 7.09

2. Submit Original Form To:  
 Commonwealth of Massachusetts  
 Asbestos Program  
 P.O. Box 120087  
 Boston, MA 02112-0087

**A. Applicability**

A Construction or Demolition operation of an industrial, commercial, or institutional building, or residential building with 20 or more units is regulated by the Department of Environmental Protection (MassDEP), Bureau of Waste Prevention - Air Quality Division, under Regulations 310 CMR 7.09. Notification of Construction or Demolition operations is required under 310 CMR 7.09 (2) ten (10) days prior to any work being performed. The following information is required pursuant to 310 CMR 7.09.

Is this a fee-exempt notification (city, town, district, municipal housing authority, state facility, owner-occupied residential property of four units or less)?

Yes  No

Type of Notification:

Project Revision  Project Cancellation

---

**B. General Project Description**

1. Facility Information:

Name of Facility _____		Street Address _____	
City/Town _____	State _____	Zip Code _____	Telephone _____
Facility Contact Person _____		Contact Person Title _____	
Facility Contact Person Telephone _____		Facility Contact Person Email _____	

Facility Size:

Square Feet _____	Number of Floors _____
-------------------	------------------------

Was the facility built prior to 1980?  Yes  No

Describe the current or prior use of the facility:  
 \_\_\_\_\_  
 \_\_\_\_\_

Is the facility a residential facility?  Yes  No If yes, how many units? \_\_\_\_\_ Number

2. Facility Owner:

Facility Owner Name _____		Address _____	
City/Town _____	State _____	ZIP Code _____	Telephone _____
On-Site Manager/Owner Representative _____		Address _____	
City/Town _____	State _____	ZIP Code _____	Telephone _____

<https://www.mass.gov/how-to/aq-06-constructiondemolition-notification>

# Suggested Checklist for Building Officials

## Notification Prior to Construction/Demolition/Renovation

1. Does the project involve an institutional, commercial or industrial structure, or any portion of such a structure?
2. Does the project involve of a residential structure, or any portion of such a structure, with more than 20 dwelling units?
3. Does the project involve the demolition of a residential structure with more than 4 dwelling units?
4. **If yes to any of above, then the owner/operator is required to submit an AQ06 Notification Prior to Construction, Demolition, or Renovation.**
  - 10 working-days (ca. two weeks) prior to start of any activity
  - MassDEP can grant emergency waiver upon request

# Asbestos Project Look-up Tool

< Mass.gov | Executive Office of Energy & Environmental Affairs (EEA) An official application of the Commonwealth of Massachusetts

 **Energy & Environmental Affairs**  
**Data Portal**

HOME    DASHBOARDS    SEARCH DATA ▼    HELP ▼

## Search for Asbestos Projects

Project ID ⓘ <input type="text"/>	City/Town ⓘ <input type="text" value="Select"/>
Form Type ⓘ <input type="text" value="Select"/>	Location Name ⓘ <input type="text"/>
Location Address ⓘ <input type="text"/>	Project Start Date ⓘ <input type="text"/> to <input type="text"/>
Project End Date ⓘ <input type="text"/> to <input type="text"/>	

# For More Information:

- MassDEP Asbestos Regulation – July 2019: <https://www.mass.gov/doc/310-cmr-715-massdep-asbestos-regulation/download>
  - Questions about Asbestos Regulations and Policy: Mike Elliott, email: [michael.elliott@mass.gov](mailto:michael.elliott@mass.gov), telephone: 617/571-0824
- Regional MassDEP Asbestos Contacts: Technical Questions
  - Central: Christa Cronk, [christa.cronk@mass.gov](mailto:christa.cronk@mass.gov), 508-965-5267
  - Northeast: Grady Dante, [grady.dante@mass.gov](mailto:grady.dante@mass.gov), 978-921-1152
  - Southeast: Colleen Ferguson, [colleen.ferguson@mass.gov](mailto:colleen.ferguson@mass.gov), 617-680-6657
  - Western: John Moriarty, [john.Moriarty@mass.gov](mailto:john.Moriarty@mass.gov), 857-443-5348
- Find your region:  
<https://www.mass.gov/service-details/massdep-regional-offices-by-community>
- Asbestos Project Lookup Tool (via EEA Data Portal):  
<https://eeaonline.eea.state.ma.us/portal#!/search/asbestos>
- Asbestos Survey Requirements Guide: <https://www.mass.gov/doc/asbestos-survey-requirements-prior-to-demolition-or-renovation-information-guide/download>
- MassDEP Asbestos Website:  
<http://mass.gov/dep/asbestos>
- Department of Labor Standards (DLS)
  - Information, Licenses, Complaints.....617/626-6960
  - DLS web site: <https://www.mass.gov/asbestos-safety-program>

# References:

- USEPA Asbestos Website: <https://www.epa.gov/asbestos>
- Asbestos Training Requirements: <https://www.epa.gov/asbestos/asbestos-training>
- OSHA Asbestos Fact Sheet: <https://www.osha.gov/sites/default/files/publications/OSHA3507.pdf>
- Agency for Toxic Substances and Disease Registry (ATSDR) Asbestos and Your Health: <https://www.atsdr.cdc.gov/asbestos/index.html>
- Consumer Product Safety Commission – Asbestos in the Home: <https://www.cpsc.gov/safety-education/safety-guides/home/asbestos-home>
- MassDEP Asbestos Website: <http://mass.gov/dep/asbestos>
- Massachusetts Department of Labor Standards Website: <https://www.mass.gov/asbestos-safety-program>