

©1995 Alcoa

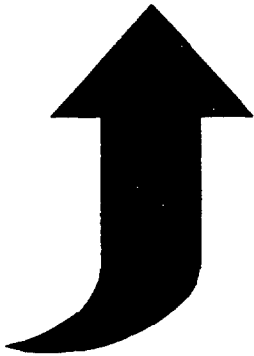
ALCOA Asbestos Awareness Training

ARD 012153



Why Am I Here?

2



To protect you from the potential exposure hazards of asbestos.

- ☐ What are the hazards of exposure to asbestos?
- ☐ What type of jobs/work areas may have potential asbestos exposure?
- ☐ What's required to manage asbestos?
What are my responsibilities?
- ☐ What job specific procedures do I need to follow?



Agenda



Introduction



Potential Health Hazards of Asbestos



Identifying Asbestos Containing Materials



Overview of Requirements



Job Specific Procedures



My Roles and Responsibilities

4

 Ask questions if I'm not sure.



 Know the areas/tasks where I might encounter asbestos containing materials.

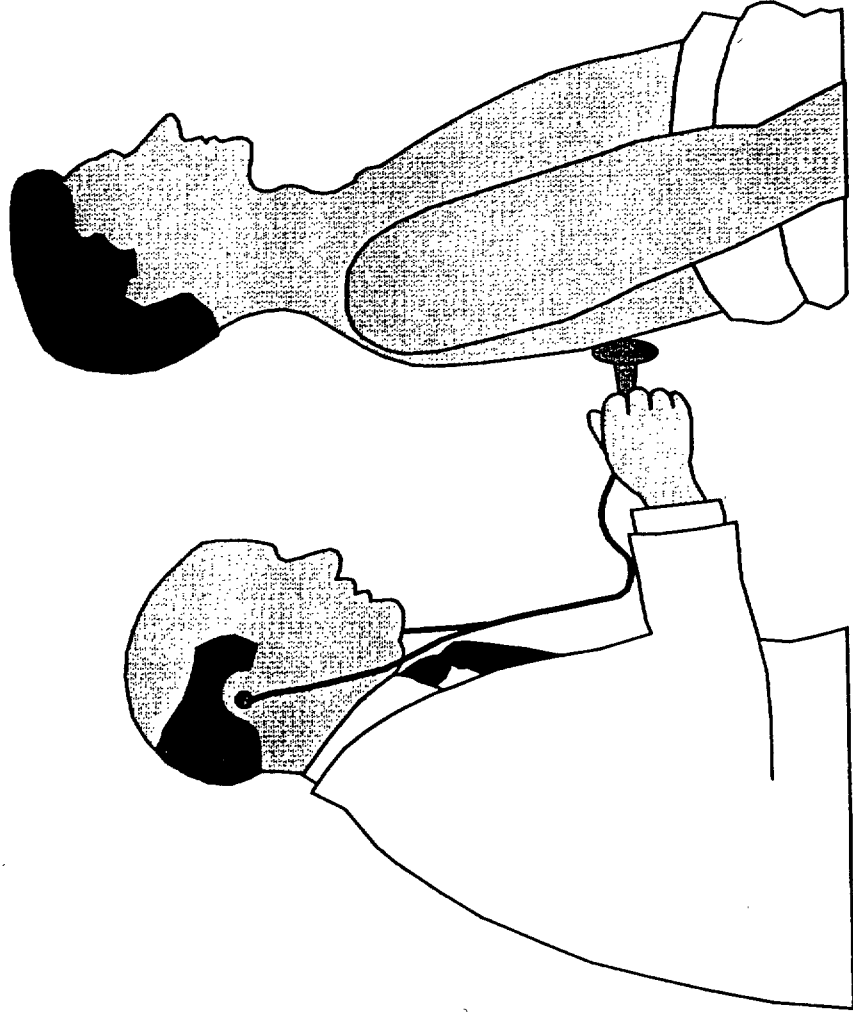
 Ensure safe work procedures are developed and followed for jobs involving potential asbestos exposure.

 Wear protective clothing when needed.

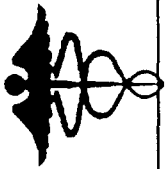
 Wear monitoring equipment if I'm asked, and make sure I understand what the results mean.

 Be actively involved in training.

Section 2: Potential Health Effects



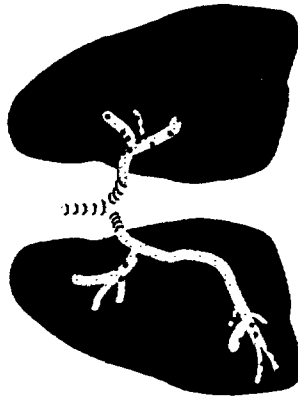
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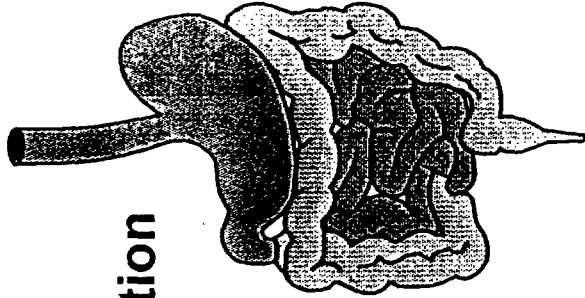
Routes of Entry

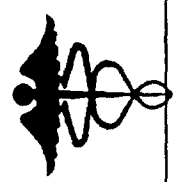
Asbestos can enter the body in two ways:

Inhalation (primary concern)



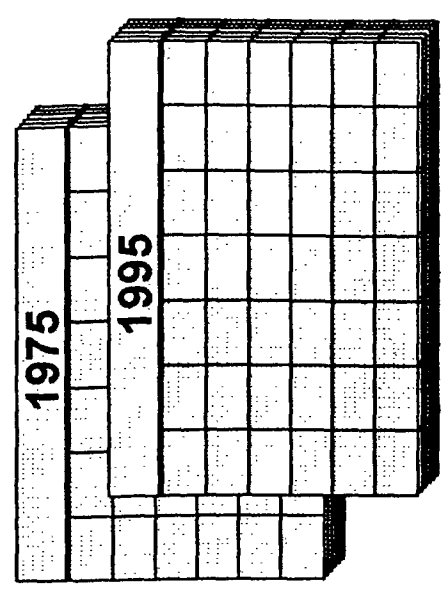
Ingestion



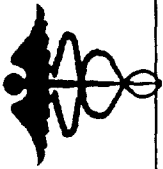


Chronic Health Effects

The health effects from asbestos exposure are chronic in nature. The disease may not appear until 20 years following exposure.

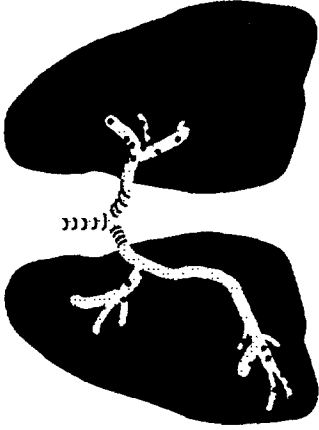


There are no known acute (immediate) effects associated with inhalation of asbestos fibers.



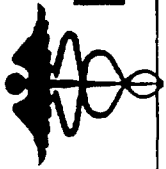
Conclusive Studies

Studies have shown a direct association between exposure to asbestos and certain health effects.



What are these health effects?

- ☐ Lung cancer
- ☐ Asbestosis
- ☐ Mesothelioma
- ☐ Gastrointestinal cancer



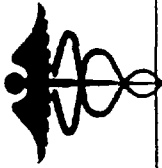
Health Effects/Symptoms

Lung Cancer (not unique)

- ☐ Chest X-Ray may show pleural plaques, calcification, or fibrosis.
- ☐ Latency period of about 20 years

Mesothelioma

- ☐ Shortness of breath
- ☐ Pain in the walls of the chest or abdomen
- ☐ Long latency period (30-40 years)
- ☐ Always fatal



Health Effects, cont'd.

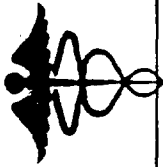
10

Asbestosis

- ☐ Shortness of breath (even at rest in later stages)
- ☐ Coughing
- ☐ Fatigue
- ☐ Often a progressive disease
- ☐ In severe cases, death may result from respiratory or cardiac failure

Gastrointestinal Cancers

- ☐ No consistent dose-response relationship



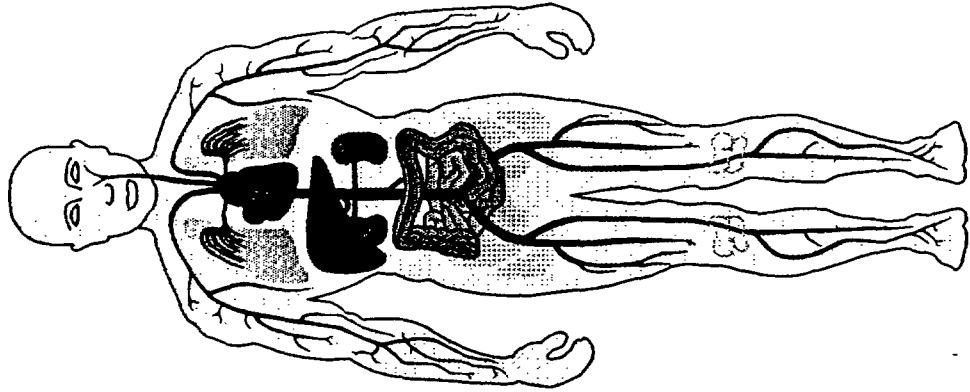
Other Studies

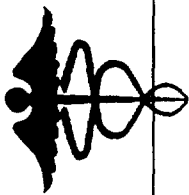
11

Exposure to asbestos has been *suggested* to cause increased incidence of other cancers:

What are these cancers?

- ☐ Esophageal
- ☐ Kidney
- ☐ Laryngeal
- ☐ Pharyngeal
- ☐ Buccal Cavity

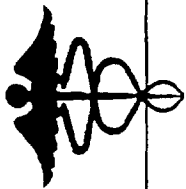




STOP SMOKING!



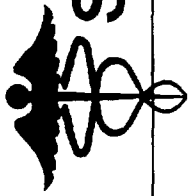
**Cigarette smoking increases
your chances of getting lung
cancer by as much as 90%**



Smoking Cessation Programs



**Our Medical Department would
like to help you butt out!**



Smoking Cessation Programs

For more information....



☐ **National Cancer Institute**

☐ Call 1-800-4-CANCER

☐ **American Cancer Society**

☐ Call 404/320-3333

☐ "Great American Smokeout" every November

☐ **American Heart Association**

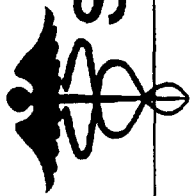
☐ Call 214/750-5300

☐ **American Lung Association**

☐ Call 212/245-8000

☐ **Office on Smoking and Health**

☐ Rockville, MD



Smoking Cessation Programs

- [slide 10 continued]



Section 3: Identifying Asbestos





Asbestos was Used Extensively

Used extensively until 1980 in:

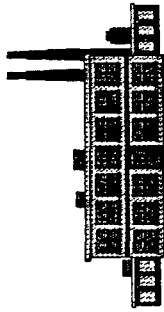
- ☐ 4 Fireproofing structures
- ☐ 4 Thermal insulation systems
- ☐ 4 Plaster
- ☐ 4 Acoustical surfacing
- ☐ 4 Floor and ceiling tiles
- ☐ 4 Brakes, clutches, etc.

Asbestos is a
naturally
occurring
mineral.

Unless positively known otherwise, assume
these types of materials constructed prior to
1980 contain asbestos.



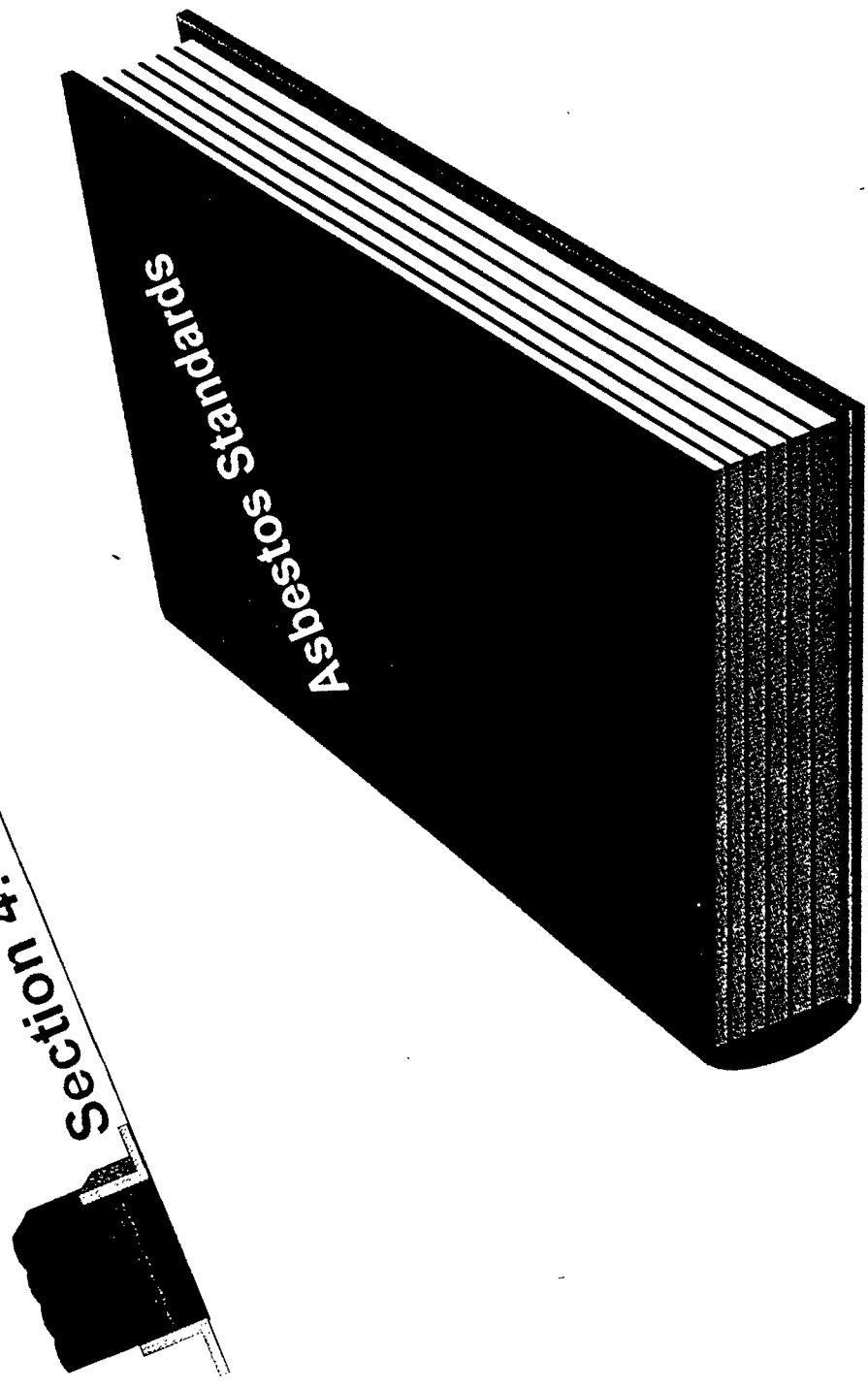
Asbestos at Our Facility



*Add location
specific
information:*

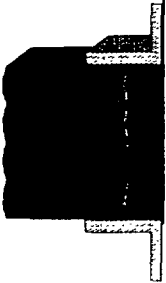
- *List job tasks where potential asbestos exposure could occur.*
- *If possible, take pictures (and make into slides) of the processes, showing where the asbestos is and what the asbestos containing product looks like.*

Section 4: Overview of Requirements



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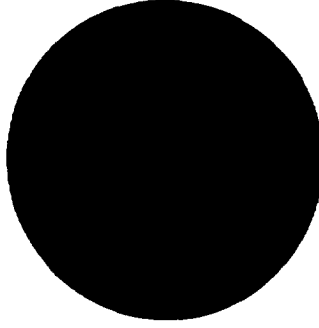
ARD 012171



Asbestos Standards

☐ Alcoa Engineering Standard 18.18

Scope: Applies to Alcoa locations worldwide.



- ☐ Mandatory Standard
- ☐ Tracks U. S. OSHA Standards closely



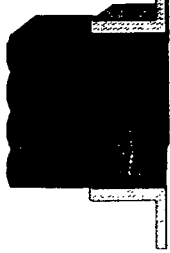
Asbestos Standards

☐ OSHA Construction Std (1926.1101)

Scope: Broad application; includes activities that *intentionally disturb* asbestos.

- ☐ Removal, repair, demolition and salvage, encapsulation, etc.
- ☐ Construction, alteration, repair, maintenance, renovation
- ☐ Installation of new products containing asbestos
- ☐ Emergency clean up of spills
- ☐ Storage, transportation, disposal, containment of and housekeeping activities

Continue



Four Classes of Construction Work

- OSHA Construction Std (1926.1101), cont'd.

Involve removal:

- 4 Class I - TSI and surfacing material
- 4 Class II - other materials (e.g., floor tile, roofing panels, etc.)

Do not involve removal:

- 4 Class III - repair and maintenance work where ACM or PACM are likely to be disturbed
- 4 Class IV - maintenance and custodial work (including disposal) that involve contact with ACM or PACM



Asbestos Standards

☐ OSHA General Industry Std (1910.1001)

Scope: Narrow application; includes activities that *do not intentionally disturb* asbestos.

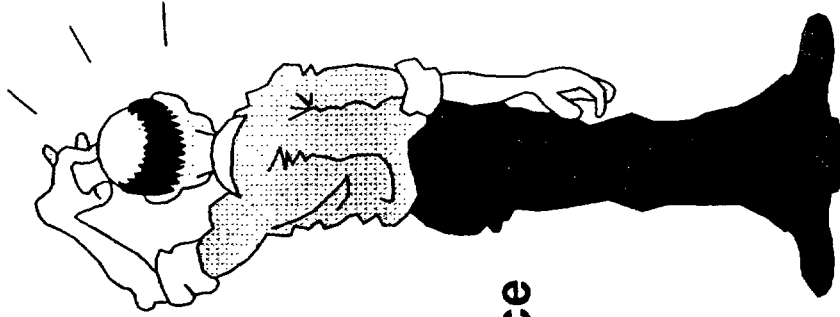
- ☐ ☐ 4 Removal of brake linings
 - ☐ Exclusively for automobiles
 - ☐ Does not include forklifts, construction equipment, etc. (Construction Std.)
- ☐ ☐ 4 Manufacturer of asbestos
- ☐ ☐ 4 Custodial work
 - ☐ Moving furniture and accidentally smash a hole into a wall containing asbestos
 - ☐ Buffing asbestos floor tile



Changes in the Requirements

What's the difference between the "old" and "new" ?

- ☐ Lowering of the PEL (permissible exposure limit)
- ☐ Changes in classification of asbestos work
- ☐ New training certification requirements
- ☐ More flexibility in methods of compliance
- ☐ New medical surveillance requirement
- ☐ New notification requirements
- ☐ New regulated area requirements





Overview of Requirements

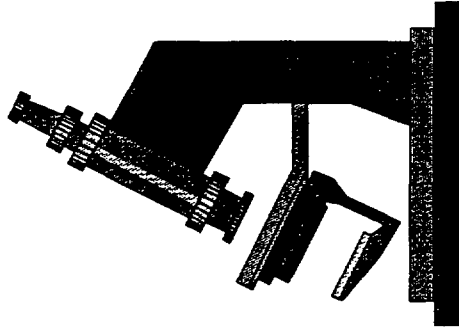
- ☐ **Permissible Exposure Limits**
- ☐ **Regulated Areas**
- ☐ **Engineering Controls and Work Practices**
- ☐ **Housekeeping Procedures**
- ☐ **Waste Disposal Procedures**
- ☐ **PPE, including Respirators**
- ☐ **Hygiene Facilities**
- ☐ **Communication of Hazards**
- ☐ **Medical Surveillance**
- ☐ **Other Management Practices**



Permissible Exposure Limits

 PEL = 0.1 f/cc [fiber per cc of air] as an 8 hour TWA [time weighted average]

 EL (Excursion Limit) = 1.0 f/cc averaged over 30 minute sampling period





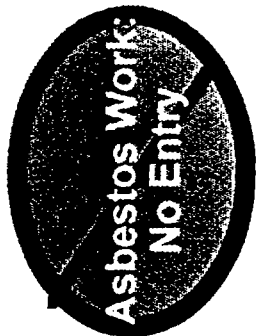
Exposure Monitoring

- ☐ 4 Why it's done
- ☐ 4 When it's done
- ☐ 4 How it's done
- ☐ 4 How results will be communicated
- ☐ 4 Past findings



Regulated Areas

Refers to:

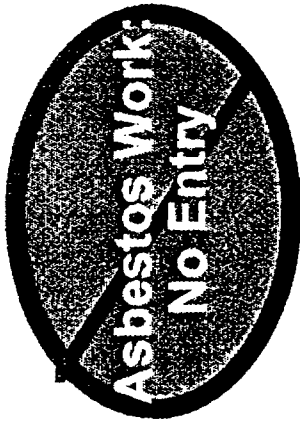


- ☐ 4 Any work area with a reasonable possibility of exceeding the PEL or EL, or
- ☐ 4 Areas where Class I, II and III asbestos work is done, or
- ☐ 4 Adjoining area where asbestos waste and debris accumulate



Regulated Areas, cont'd.

Requirements:



☐ 4 Marked

☐ 4 Limited access (authorized only)

☐ 4 Respirators used

☐ 4 No smoking, eating, drinking, chewing gum or tobacco, or applying cosmetics



☐ 4 Supervision of work by competent person

Engineering Controls and Work Practices

☐ Requirements

- ☐ 4 Vacuum cleaners, local exhaust with HEPA filters
- ☐ 4 Wet methods or wetting agents unless infeasible (e.g., electrical hazards)
- ☐ 4 Prompt cleanup and disposal of wastes in leak-tight containers





Controls and Work Practice No-No's



- 8 High speed abrasive disc saws without LEV or enclosures without HEPA exhaust
- 8 Compressed air to remove asbestos (unless used in conjunction with enclosed ventilation system)
- 8 Dry sweeping or other dry cleanup methods
- 8 Employee rotation as the way to reduce exposure levels



Housekeeping Procedures

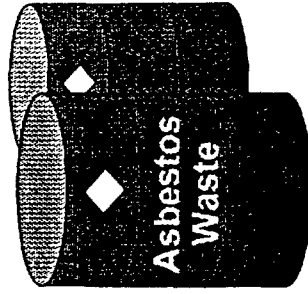
- 4 HEPA vacuuming equipment**
- 4 Special floor care for vinyl and asphalt tile**
 - Sanding prohibited
 - Stripping - wet methods, low abrasion, low speed
 - Burnishing, dry buffing - pad can't contact ACM
- 4 Proper waste disposal**



Waste Disposal Procedures

What to collect:

- ☐ 4 Scrap, waste, debris
- ☐ 4 Bags, containers
- ☐ 4 Equipment
- ☐ 4 Clothing



What to do with them:

- ☐ 4 Double lined bags
- ☐ 4 Follow location procedures
- ☐ 4 Special landfills
- ☐ 8 Do NOT put in regular trash!



Personal Protective Equipment

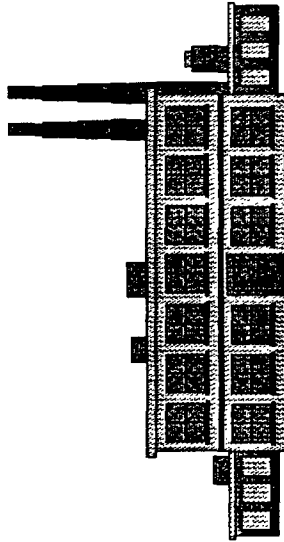
4 Protective clothing required
when exposure is at or above the
PEL of 0.1 fiber/cc for all classes of
work

4 Respirators required
for all classes of work when
exposure may be at or above
the PEL



Respiratory Protection

Type of respirator based on exposure potential



Location specific information:

- Location Respirator Program
- Types of respirators used based on jobs/exposures
- How to obtain respirators

Employee can “upgrade” to PAPR



Hygiene Facilities and Practices

For Class IV work - When exposure exceeds the PEL

- ☐ 4 Equipment room
- ☐ 4 Lunchrooms
- ☐ 4 No smoking in work area



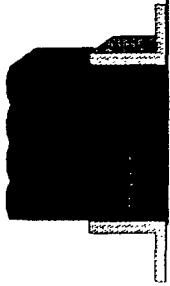
Communication of Hazards

☐ Information and Training

- ☐ 4 Asbestos Standards available
- ☐ 4 Type and length of required training dependent upon type of asbestos work

☐ Warning Signs

☐ Product Labeling



Warning Signs

- 3 Posted at entrance to mechanical rooms/areas containing ACM or PACM
- 3 Identify the material and its location

DANGER!
Asbestos
Cancer and Lung Disease Hazard
Authorized Personnel Only



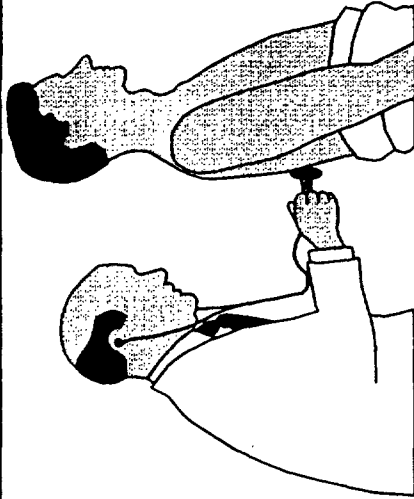
Posting and Labeling, cont'd.

Labels -

-  **Must be placed on all products and containers that contain ACM or PACM**
-  **Must be clearly seen**

DANGER!
Contains Asbestos Fibers
Avoid Creating Dust
Cancer and Lung Disease Hazard

Medical Surveillance



Required for employees who:

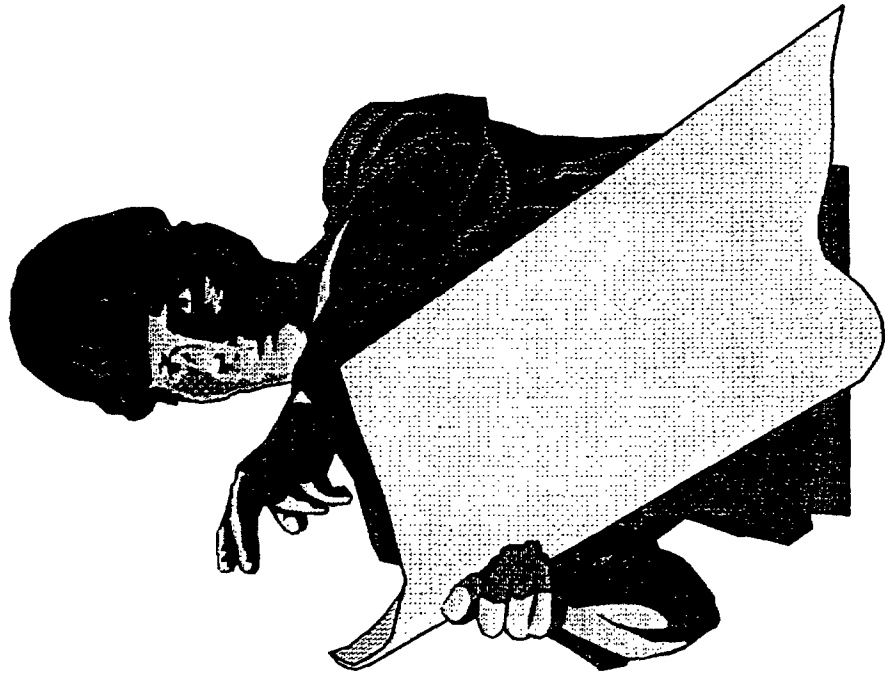
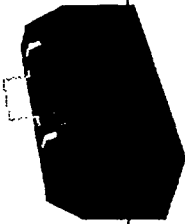
- ☐ 4 Are exposed at or above the PEL or EL for 30 or more days/year
- ☐ 4 Perform Class I, II or III work for 30 or more days/year regardless of exposure
- ☐ 4 Wear negative pressure respirators



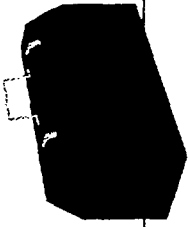
Other Asbestos Management Practices

- ☐ **Recordkeeping**
- ☐ **Procurement Practices**
- ☐ **Contractor Selection**
- ☐ **[add other specific practices for your location]**

Section 5: Job Specific Information

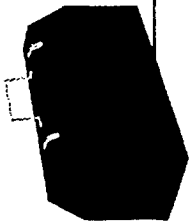


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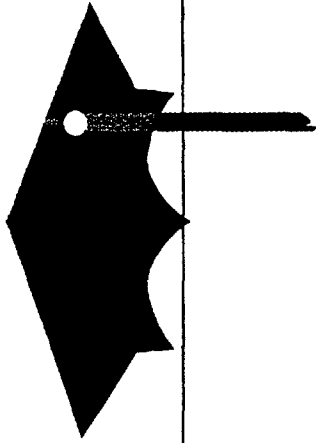
Specific Job Requirements

- ☐ What should I do if I believe a material may be asbestos?
- ☐ What should I do if I'm aware of a accidental release of asbestos?
- ☐ Where can I get more information on how to perform my job safely?
- ☐ What other reference materials are available?



Specific Job Requirements

Hands-On Training



Wrap Up

- ☐ What type of jobs may have potential asbestos exposure?
- ☐ What are the hazards of exposure to asbestos?
- ☐ What are my responsibilities?
- ☐ What is the company doing to protect me from exposure?