# HARVARD UNIVERSITY

UNIVERSITY HEALTH SERVICES

ENVIRONMENTAL HEALTH AND SAFETY

INDUSTRIAL HYGIENE
46 Oxford Street
Cambridge, Massachusetts 02138
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## ASBESTOS SURVEY

May - 1984

1) What Kind of Institution? [2]

(please put appropriate number in box)

1. University
2. Research Laboratory
3. Private Removal Contractor
4. Government Agency
   a. regulatory
   b. non-regulatory
   c. other
5. Manufacturing Company
   a. oil
   b. chemical
   c. other
6. Insurance
7. Utility Company
8. Consultant/Consulting Firm
9. Construction
10. Non-profit Organization
11. Transportation
12. Other: (specify) - _____

2) Has your Institution issued a formal policy statement concerning asbestos?

1. ☐ YES
2. ☒ NO

3) Have you developed written procedures for:

1. ☒ Asbestos Abatement Personnel
2. ☒ Personnel Involved in Routine Maintenance
3. ☒ Outside Contractors (Renovations, etc.)
4. ☐ None
5. ☐ Other: (specify) - _____

PLAINTIFF'S EXHIBIT

ATT-268

LLA 001522

4) Who is responsible for the following:

(please fill in appropriate number choice from below)

a. Inspection ---------- [2]
b. Sampling ---------- [2]
c. Analysis of friable material ---------- [2]
d. Assessment of need for corrective action ---------- [2]
e. Implementation of interim control procedures ---------- [2]
f. Evaluation of selection of alternative abatement operation [2]
g. Development of a bidding process ---------- [4]
h. Directing and monitoring abatement activities ---------- [2]
i. Evaluation of contractor performance ---------- [2]
j. Monitoring building maintenance activities on a continual basis ---------- [2]
k. Maintaining records of survey results and all remedial actions ---------- [2]

Choices: 1. No One
2. Safety Office
3. Private Outside Environmental Consultant
4. Maintenance Personnel
5. Other: _____

5) Have you conducted a survey to identify asbestos?

1. [x] YES
2. [ ] NO

5a. If yes, what % age of your buildings have been surveyed?

1. [ ] 0%
2. [ ] <50%
3. [x] >50%
4. [ ] 100%

5b. If yes, what % age of those surveyed were found to have asbestos?

1. [ ] 0%
2. [x] <50%
3. [ ] >50%
4. [ ] 100%

5c. If no survey has been conducted, is one planned?

1. [ ] YES
2. [ ] NO

6) What is the level of concern toward asbestos? (check all that apply)

1. [x] Apathetic
2. [x] Unaware
3. [x] Concerned
4. [ ] Actively Involved
5. [ ] Frightened (hysterical)
6. [ ] Don't Know

7) What type of training or general information programs do you have concerning asbestos?

1. [x] Written Handouts
2. [x] Audio-Visual
3. [x] Lecture or Oral Presentation
4. [ ] None
5. [ ] Other: (specify) - _____

8) Is there a medical surveillance program for those who work with asbestos?

1. [ ] YES
2. [x] NO

8a. Is this program -

1. [ ] Mandatory
2. [ ] Voluntary
3. [ ] Other: _____

8b. If yes, what does it include? (check all that apply)

1. [ ] Pulmonary Function Tests
2. [ ] General Physical
3. [ ] X-rays

8c. If X-rays are recommended, with what frequency are they received?

1. [ ] Annual
2. [ ] Bi-annual
3. [ ] Only as Required by Physician
4. [ ] Other: _____

9) Do you have a specific policy/program to deal with asbestos prior to renovation or building function change?

1. [ ] Remove all as part of renovation
2. [x] Evaluate condition and take action as necessary
3. [ ] None
4. [ ] Other: (specify) _____

9a. How many buildings are you responsible for?

1. ☐ <10
2. ☒ 10-100
3. ☐ >100

9b. How many employees?

1. ☐ <500
2. ☐ 500-1000
3. ☐ 1000-2000
4. ☒ >2000

9c. How many students?

1. ☒ 0
2. ☐ <1000
3. ☐ 1000-5000
4. ☐ >5000

9d. How many maintenance personnel

1. ☐ <10
2. ☐ 10-20
3. ☒ >20

10) Have you sampled and analyzed bulk material for asbestos?

1. ☒ YES
2. ☐ NO

10a. If yes, who did sampling?

1. ☒ Health and Safety Department
2. ☐ Outside Consultant
3. ☐ Other: _____

10b. Where was analysis performed?

1. ☒ Inhouse Laboratory
2. ☒ Outside Laboratory

10c. What method of analysis was used?

1. ☒ PLM
2. ☒ PLM with dispersion staining
3. ☐ SEM
4. ☐ SEM with energy dispersive X-ray fluorescence
5. ☐ TEM
6. ☒ X-ray diffraction
7. ☐ Selective area energy dispersion
8. ☐ Colorimetric

10d. What criteria are used to evaluate bulk samples?

1. ☐ %
2. ☒ Type
3. ☐ Both

REMOVAL

11) How much asbestos has been removed in the past year ($yd^3$)?

1. ☐ None
2. ☐ <50
3. ☐ 50-500
4. ☒ >500

11a. If removal has been done, who conducted most of the removal?

1. ☐ Don't Know
2. ☐ Own Staff
3. ☐ Unlicensed Removal Contractor
4. ☒ Licensed Removal Contractor
5. ☐ Other: (specify) - _____

12) Is there a cutoff point beyond which inhouse staff are not allowed to do removals and outside contractors are called in?

1. ☒ YES
2. ☐ NO

12a. If yes, what is this cutoff point?

1. ☐ EPA Guidelines (160 linear feet, 260 $ft^2$)
2. ☐ 9 linear feet
3. ☐ Glove Bag Limits
4. ☒ Other: (specify) - Any removal

12b. What is your or your office's role during asbestos removals?

1. ☐ Contractor selections
2. ☒ Write work specifications
3. ☐ Air sampling inside work area
4. ☒ Air sampling outside work area
5. ☐ Random visual monitoring
6. ☒ Continuous visual monitoring
7. ☐ Other: (specify) - _____

13) What is your preferred practice?

1. ☐ Encapsulation
2. ☐ Only removal
3. ☐ Enclosure
4. ☒ Depends on condition and location
5. ☒ Other: Restrict Access & Administrative Controls for Work Practices

14) If you choose not to remove, how do you treat the following?
(please fill in appropriate number choice from below)

a. Trowelled on surfaces ---------- ☐
b. Sprayed on surfaces ---------- ☐
c. Friable pipe coverings ---------- ☐
d. Air cell pipe coverings ---------- ☐
e. Cementitious (e.g. transite, shingles) ---------- ☐

Choices: 1. Wet wrap
2. PVC sleeves
3. Aluminum sleeves
4. Latex
5. Liquid encapsulant
6. Double insulation with FG

15) Is air sampling conducted during removal?

1. ☒ YES
2. ☐ NO

15a. Is air sampling conducted during encapsulation

1. ☐ YES
2. ☐ NO

16) If yes, who conducted air sampling?

1. ☒ Safety Office
2. ☐ Private outside environmental health consultant
3. ☐ Removal contractor
4. ☐ Regulatory agency
5. ☐ Other: _____

17) Who conducted analysis of air samples?

1. [X] Safety Office
2. [ ] Private outside environmental health consultant
3. [ ] Removal contractor
4. [ ] Regulatory agency
5. [ ] Other: _____

18) What is the analytic method used?

1. [ ] FAM (GCA or other)
2. [X] PCM (NIOSH, A, old method)
3. [ ] PCM (NIOSH, B, new method)
4. [ ] TEM (EPA)
5. [ ] SEM
6. [ ] Other: _____

19) a. What is the maximum airborne level allowed outside work area? -- [4]
(Choose number from below which corresponds to appropriate level)
If other, specify: _____ [ ]

b. What level is permissible after removal to allow reoccupancy? -- [ ]
If other, specify: 0.05 [X]

c. What is maximum allowable level before respirators are required in the work area? ---------- [ ]
If other, specify: Always Required [X]

1. <0.01 f/cc
2. 0.01 f/cc
3. 0.04 f/cc
4. 0.10 f/cc
5. 0.50 f/cc
6. 2.00 f/cc
7 Other: _____

20) What is your average sampling time?

1. [ ] <1 hour
2. [ ] 1-3 hours
3. [X] 3-8 hours
4. [ ] >8 hours

21) What is your average sampling volume (liters)?

1. ☐ <200
2. ☐ 200-400
3. ☐ 400-600
4. ☐ 600-800
5. ☒ 800-1000
6. ☐ >1000

22) How are swipe tests taken?

1. ☒ Not done
2. ☐ Manual with filter
3. ☐ Manual with tape
4. ☐ Filter/surface vacuum
5. ☐ Other: _____

23) How are swipe samples analyzed?

1. ☐ PLM
2. ☐ PCM
3. ☐ SEM
4. ☐ Other: _____

24) How are swipe samples evaluated?

1. ☐ Qualitatively
2. ☐ Quantitatively

25) If qualitative, your action levels are?

1. ☐ None established
2. ☐ 1-10 fibers
3. ☐ 10-100 fibers
4. ☐ >100 fibers

26) Do you have a database of sampling results you are willing to share?

1. ☒ YES
2. ☐ NO

27) Do you have any control measures for fiberglass?

1. ☐ YES
2. ☒ NO

27a. If yes, what is your action level?

1. ☐ 0.1 f/cc
2. ☐ 3 f/cc
3. ☐ Other: _____

28) Do you DOP test the HEPA air handlers used during removal?

1. ☐ YES
2. ☒ NO

29) What negative pressure system do you use?

1. ☒ Microtrap
2. ☐ ET
3. ☐ Custom made
4. ☐ Other: _____

30) Do you always use negative pressure?

1. ☐ YES
2. ☒ NO, Only when: Feasible (ie window or access to outside available)
3. ☐ NEVER

31) Do you have a policy concerning transite?

1. ☒ YES
2. ☐ NO

31a. What is it?

1. ☐ Removal
2. ☒ No action
3. ☐ Local exhaust when drilling or sawing
4. ☐ None
5. ☐ Other: (specify) - _____

32) Comments/Suggestions/Questions: I would appreciate some exchange of information on replacement materials

*Thank you*