

ASBESTOS AWARENESS SCRIPT

Preparation for Class:

1. Arrive at 690 Building no later than 9:45 AM.
2. Gather materials from Storage Room and move to Conference Room.
 - a. Attendance sheet.
 - b. Materials for display and to pass around.
 1. Asbestos samples.
 2. Transite sample.
 3. Reading handout.
 - c. V. C. R. tape and slide carrousel.
3. At 10:00 AM. or when Dow Chemical class is over.
 - a. Give five (5) minute break.
 - b. Final equipment set up.

Begin Class:

1. Introduction Slide: The Midland Area Contractors Safety Council Inc. is offering this Asbestos Awareness Training Program, and would like to thank all the contractors in the Midland area for their cooperation making safety and good health their number one concern. Making you aware of a life threatening hazard that everyone faces every day is our #1 goal this morning.
2. Michigan Law: Reasons Why Law Applies To Everyone In Room.
 - a. Trades people will always be exposed by disturbing insulation, drop ceilings etc.
 - b. Office workers are exposed by damaged asbestos around them or by maintenance work around the area.

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- c. Asbestos has not been completely banned from construction materials so it may be present even in newer buildings.
3. Asbestos May Be Found In: Review each item, slide points out prevalence of asbestos all around us.
 4. A Few Lesser Known Uses of Asbestos: Review and discuss. Point out lab desks or tables, Dow is careful, but most outside people such as high schools don't even know that they contain asbestos. They are not dangerous until cut or broken.
 5. Man Spraying Decorative Finish: Shows how many coatings were and are applied. This may or may not be asbestos.
 6. Asbestos Exposure Can Cause: Read slide, point out dangers and that we will discuss these in detail later.
 7. Kids Playing Basketball: Points out concern for school age children. Most diseases have a long latency period. So that kids who are exposed at an earlier age run a greater risk of contracting a disease in later life. Later slides will show gymnasium ceilings that have asbestos and are damaged.
 8. Asbestos Through The Years: Asbestos has been used for thousands of years. Review each and discuss the interesting aspects of each. Spend specific time on the last item. After 1936 asbestos was the most used construction material, even more than brick and wood.
 9. "...And This Is The Way We've Used It": Discuss where people are likely to run into each of these common products. Point out that later we will learn that the combination of cigarette smoke and asbestos is extremely dangerous. Point out that Kent Micronite Filters in the 60's used asbestos in their filters.
 10. Why Asbestos Was And Is Used: Does not burn, etc. It is very hard to replace and in some cases a good replacement has not been found.
 11. Asbestos Is: Review what it actually is, go over whole slide. Discuss that it is actually mined from the earth. There are three (3) types of asbestos.

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- a. Chrysotile: White asbestos, used in 90 to 95% of commercially produced asbestos. Majority is mined in Canada.
 - b. Amosite: Brown asbestos, accounts for about three percent (3%) of commercially produced asbestos. Majority is mined in Africa. Amosite is more chemically and acid resistant and is more heat resistant.
 - c. Crocidolite: Typically blue asbestos, it is mined mainly in Africa. Used in about one (1) percent of commercially produced asbestos.
 - d. At this point pass around asbestos samples.
12. Slide of Asbestos Rock: This is how it actually looks in its natural state.
 13. Slide of Quarter: These fibers are still quite large.
 14. Microscope Picture: Asbestos is harmful because it breaks down into the smallest fibers known to man. Point out scale which is one (1) micron or one-one millionth of a meter. Five (5) of these fibers end to end is about the thickness of a sheet of paper.
 15. Color Microscope Picture: Example of Phase Light Microscopy. This is how experts determine if fibers are actually asbestos. A microscope must be used to determine if a substance is asbestos or not. You can not tell by looking at it with the naked eye.
- Asbestos has a large surface to weight ratio. So like a feather it will stay airborne for a long time. In fact , an asbestos fiber can stay airborne almost indefinitely. That's why when you disturb fibers, air currents may carry the fibers throughout a building.
- Fibers that are harmful are the ones that are too small to see.
16. Air Enters Our Respiratory System: Go through entire slide.
 17. Body Diagram: Show Alveoli, this is where oxygen exchange takes place. When this is scarred, as in the next slide, the blood can not get rid of it's carbon monoxide, and get oxygen.
 18. Close Up of Alveoli: Shows the thicker lining due to scarring from

asbestos. Where this scarring takes place no air exchange can take place. This is what happens when a person has Asbestosis.

19. Asbestos Exposure Can Cause: Read slide.
20. Asbestosis: Go over slide.
21. Mesothelioma: Go over slide.
 - a. Very rare.
 - b. Only known cause is asbestos.
 - c. It is always fatal.
 - d. Three types of exposure.
 1. Occupational: Mining, insulating, etc.
 2. Paraoccupational: Families of workers.
 3. Neighborhood Exposure: Living near the above.
22. Lung Cancer: Go over slide, point out added danger of smoking.

Asbestos corns and warts are caused by chronic irritation of the skin by asbestos fibers. Usually found on the hands. Not believed to lead to skin cancer.
23. X-ray of Lungs: Left is Asbestosis, right is Mesothelioma. Dark areas are healthy lung tissue. White areas are scarred or cancerous tissues.
24. Graph of Fatalities Per One Thousand: Go over each type and show the difference in death rates for those who are exposed to asbestos and those who are not. Also point out that although no direct link between other cancers and asbestos has been proven, statistics show that people who have been exposed to asbestos have a higher incidence rate of other cancers.
25. ACM is Asbestos Containing Material. Must contain at least one-percent (1%) asbestos to be an ACM. Slide giving definition of Friable and Nonfriable:

Friable means the material can be crumbled or reduced to smaller pieces with hand pressure.

26. Graph Showing Percent of Positive Tested Asbestos By Material. General discussion. Buildings built after 1972 may still have asbestos materials. Point each percentage of materials that contain asbestos. (AHU stands for air handling unit.)

Examples Of Common Ways To Become Exposed:

27. Air Vent Showing Air Erosion To Ceiling. If this material contains asbestos then fibers are being blown throughout the room.
28. View Above A Drop Ceiling. Very Typical. Ceiling tile, pipe covering, fireproofing on deck above, all could be ACM, and may or may not be friable. Discuss how this could lead to an exposure.
29. Slide Showing Restaurant Ceiling: Is this or isn't it ACM, how could an exposure occur here? Sweeping ceiling, light maintenance, etc..
30. School Gym: Sprayed on insulation: ACM? This is in good shape but...
31. Gym Ceiling Showing Damage Due To Kids: This is now friable and capable of releasing asbestos.
32. Heat Register Showing Air Erosion: Again if this is an ACM, fibers are being released.
33. Structural Beam: A type of sprayed on insulation or fireproofing. Could be friable.
34. Insulated Pipe: Typical pipe insulation that may or may not contain asbestos. Should be tested before handling.
35. Ceiling: Sprayed Ceiling. Could be sound proofing, thermal insulation, fire proofing, or strictly for appearance. Most likely friable.
36. Insulated Pipe: Shows damaged insulation, could be ACM, appears to be friable. Should definitely be tested before handling.

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37. Transite Pipe: Normally non-friable until broke, drilled, ground, sawed, etc. Thousands of miles of this pipe currently being used as underground water piping. Still being repaired. In order to install or repair this pipe it is necessary to cut and grind on it. This will release a lot of fibers.
38. Wall: Perforated wallboard over a sprayed on insulation or fireproofing. Both may contain asbestos. Must be tested.
39. Pipe Insulation: This is "Aircell" pipe insulation. Most likely contains asbestos. Is definitely friable.
40. Ceiling: Typical Hallway Ceiling With Sprayed On Surface. ACM? Friable? Exposure when light bulbs are changed?
41. Ceiling: Insulation Has Been Gouged Out To Install Conduit. Appears to be friable, does it contain asbestos? Was there a fiber release here?
42. Ceiling: Typical Hallway Ceiling In A School, Public Building, Office Building. ACM ceiling? Potential for exposure when bulbs are changed?
43. Ceiling: Water Damage From A Leak. ACM? When it dries, can fibers be released?
44. Ceiling: Water Damage From Leaks. (Same as above)
45. Dome Ceiling: Sprayed on thermal insulation, fireproofing, sound proofing, or strictly for appearance. ACM? Friable?
46. Stairs: Structural steel appears to have been sprayed with fireproofing. Friable? ACM? Likely release from hands, heads, or large boxes moving up conveyor on right side?
47. How to Avoid Exposure
48. NOT THIS: Do not sweep. This releases fibers.
49. NOT THIS:
50. NOT THIS:

51. Procedure For Exposure (NO SLIDE)
52. NOT THIS: Dust mask will not hold back asbestos fibers.
53. Respirator: HEPA filters are designed to trap asbestos fibers. ONLY FOR CERTIFIED ASBESTOS WORKERS!
- Problem with a half mask respirator is that if the seal between face and mask is broken air containing fibers will be sucked in.
54. Respirator:
 (Top) Full faced supplied air respirator.
 (Bottom) Powered Air Purifying Respirator. (P.A.P.R.)
- If seal is broken clean air will blow out instead of sucking in asbestos containing air.
55. Abatement: Workers suited for asbestos removal. Note visqueen on walls. Note air hoses for supplied air respirators.
56. Enclosure: Note double-visqueen on floor, note double sealed fixtures on walls. Visqueen will be disposed of with the asbestos. The abatement industry consumes lots of visqueen.
57. De-Con Diagram: (From right to left)
- Work Area: is where the asbestos is.
- Equipment Room: (dirty room) is where tools, equipment, contaminated clothing and boots are left when exiting.
- Showers: are taken before removing respirator.
- Airlock: is a buffer between the showers and the clean room and is not always necessary.
- Clean Room: for dressing into street clothes.
58. Jobsite: Typical abatement project. Note extensive use of visqueen on

walls, windows, columns, and floors to prevent contamination while stripping the ceiling.

- 59. Danger Sign On An Enclosure Door. Do not enter an area with this asbestos warning! Do not cross barricades with this sign.
- 60. Asbestos Bags: Bags now must say "DANGER!" not "CAUTION!"

SUMMARY:

The main points I would like you to remember are:

- 1. Asbestos does present a real health hazard.
- 2. The extent of the hazard is proportional to the amount you are exposed.
- 3. Therefore, it is important to keep exposure to yourself and others to a minimum.
- 4. Asbestos has been widely used in many common products and can be found almost everywhere.
- 5. To be harmful asbestos must be in a friable condition.
- 6. If you are exposed, wet yourself down and report to your supervisor.
- 7. Take precautions to prevent others from being exposed.
- 8. Do not clean up asbestos yourself. Only a licensed asbestos removal contractor can do the clean up.

Thank you for your attendance, I hope this class has indeed raised your awareness of asbestos and it's hazards.

Things To Do When Class Is Over:

- 1. Rewind tape.
- 2. Make sure slides are in proper order for next instructor.

3. Make sure attendance sheets are filled out and put in proper place.
4. Turn off V. C. R. and other equipment. Turn out lights.
5. Return all materials to Storage Room.

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