WU-0075 #19

Asbestos Training

Script

Working With Asbestos

Cassette/Slide Program

Rec'd 4/26/89

WORKING WITH ASBESTOS
CASSETTE/SLIDE PRESENTATION

1. **SLIDE: J-M Logo (Focus)**

2. **SLIDE: Asbestos Rock**
   Asbestos is a potential health hazard.

   Now, that statement is not meant to frighten you. In fact, asbestos is not the only potentially harmful material all of us come into daily contact with at work, at home and elsewhere.

3. **SLIDE: Toxic Substance List**
   The government presently lists more than 60,000 potentially toxic or harmful substances in use today, all of which can cause some kind of health problem if not handled or used properly. It's estimated that we could be exposed to more than 100,000 potentially harmful substances in our modern world---ranging from ordinary . . . .

4. **SLIDE: Flour Sifting**
   Baking flour to exotic chemical compounds with names few can pronounce. Asbestos, like iron dust, fine sand, sawdust and coal dust, also can cause health problems if excessive amounts are inhaled.

5. **SLIDE: Woman Pouring Bleach.**

   But the important thing to remember is the word "potential". Just as we have learned how to safely handle dynamite or materials that emit deadly radiation, and potentially hazardous household substances such as bleach and cleaning fluids, asbestos also can be safely handled and used. And that's what this program is about . . .

6. **SLIDE: Title**
   . . . "Working With Asbestos." There are a number of points we will cover in this discussion.

7. **SLIDE: List - - Health Risks . . .**
   First, we will outline the health risks that have been associated with excessive inhalation of asbestos fiber. Second, we will take a look at the human body's natural defense systems and how they serve to protect us from illness. Third, we will review the environmental dust controls the Company has installed and what it is doing to provide a safe working environment for you. Finally, we'll look at what Federal regulations ask of us in reducing potential exposures and what you yourself can do to help us protect you.

8. **SLIDE: List Of Disease Risks**
   Medical research has associated occupational exposure to asbestos fiber with an increased risk of four human diseases: asbestosis, bronchogenic (lung) cancer, mesothelioma and gastro-intestinal cancer. With the exception of asbestosis, all of these diseases are ones that anyone of us might develop whether or not we ever were exposed to asbestos.

9. **SLIDE: Worker And Girl**
   So, keep in mind that we are talking only about an increased risk as a result of asbestos exposure, just as we talk about increased injury risks for people who build bridges and skyscrapers.

10. **SLIDE: Photomicrograph Of Asbestos Fibers**
    Medical research also indicates that the increased health risks for asbestos workers generally are related only to inhalation of large amounts of asbestos fibers. And, except for some isolated cases, these risks appear to be confined to occupational environments.

11. **SLIDE: Asbestosis (type)**
    Asbestosis is a non-cancerous lung condition which falls into a category called pneumoconioses. These include coal miners pneumoconiosis; siderosis, caused by inhalation of iron particles; and silicosis, caused by inhalation of large amounts of silica or fine sand.

12. **SLIDE: Dr. Wright Reading X-rays.**
Asbestosis can be detected by X-rays. Common symptoms are unusual shortness of breath after exertion, crackling chest noises the physican can hear with a stethoscope, and in some advanced cases, an enlargement of the fingertips.

13. **SLIDE: Bronchogenic (lung) Cancer (type)**
Bronchogenic (lung) cancer is found most commonly in people who are heavy cigarette smokers. In fact, with almost no exceptions, this form of cancer has been found only in those asbestos workers who also are heavy smokers.

14. **SLIDE: Stop Smoking Cartoon.**
People working with asbestos who do not smoke have no greater chance of getting this disease than anyone else who does not smoke. Therefore, exposure to asbestos increases a smoker's risk of getting lung cancer. So, if you don't smoke now, don't start. If you do smoke, make a sincere effort to stop.

15. **SLIDE: Mesothelioma (type).**
Mesothelioma is a very rare cancer of the lining of the chest or abdomen cavities. We still know very little about the factors involved in development of this disease. Recent studies indicate that asbestos is not the only substance that might increase the risk of this disease. There are many cases of mesothelioma among people who have no history of exposure to asbestos fiber.

16. **SLIDE: Diseased Tissue**
Other studies make us suspect that other factors, called co-carcinogens, must be present before this disease can develop. Just what those other co-factors are no one is sure, but research is continuing.

17. **SLIDE: Laboratory Scene.**
In addition to those three, medical researchers also are investigating the possibility that asbestos workers face an increased risk of developing gastrointestinal cancer, that is cancer of the digestive tract. Here again we have a disease that occurs in people not exposed to asbestos, and again, we have a lot more to learn about the role asbestos may or may not play in its development.

18. **SLIDE: Latent Periods (chart)**
A key point to remember is that all the diseases mentioned have long latent periods – that time between the beginning of exposure and the time disease may develop. These latent periods range from 5 to 20 years for asbestosis, to 30 or more years for mesothelioma. These long latent periods also account for the disease being seen today among some long-time employees of the asbestos industry.

19. **SLIDE: Plant Interior**
These cases are not an indication of present day working conditions, but of conditions that existed many years ago when medical science, government, labor and industry knew little about the potential health effects of asbestos fiber inhalation. It now is generally believed that modern dust control systems and work procedures will eventually eliminate most asbestos-related occupational health risks.

20. **SLIDE: Cartoon Sketch Of Man**
Even though you still may be exposed to some asbestos fiber, this does not mean that you will inhale it, or that if you inhale it, that it will get into your lungs, or even if it gets into your lungs that you will get sick. To understand this, let's take a look at how the human respiratory system works.

21. **SLIDE: Diagram Of Mouth To Lungs.**
The human body has a remarkable built-in defense system for coping with inhaled dust and other foreign material, including asbestos fiber. All the air we breathe must first pass those little nose hairs in our nasal passageways, which pre-filter the larger particles so that only those of a certain size can get into the respiratory tract.

22. **SLIDE: CU Of Section Of Cilial System.**
The respiratory tract is lined with a sticky mucous carpet, which moves upward on top of hair-like cells called cilia.

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23. **SLIDE: CU Of Section Above As Air Enters With Dust.**
This escalator system traps and then sweeps upward unwanted particles and fibers . . . back up to the nasal passages where they can be removed or swallowed, and eventually eliminated from the body by that route.

24. **SLIDE: CU Of Section Above - - Air Gone - - Particles Trapped.**
This mucous-cilial escalator system extends all the way from the nasal passages...

25. **SLIDE: Diagram of Lung.**
Down our windpipe, into the two main air passages to the lungs, and on into smaller and smaller tree-like branches. At the end of this system are tiny bulb-like structures called the alveoli, where oxygen and carbon-dioxide are exchanged.

26. **SLIDE: CU Of Surrounded Fiber In Alveoli**
Substances that manage to escape the cilial defense system then are subject to attack by special cells . . . which surround and render virtually harmless most invading particles.

27. **SLIDE: CU Of Cigarette Being Snuffed.**
Again, we must emphasize the dangers of smoking. If you work with asbestos and don't smoke, don't start. If you do smoke, make a sincere effort to stop. Smoking and asbestos just don't mix.

28. **SLIDE: Damaged Cilial System.**
One of the reasons for this is that smoking damages the mucous carpet so it no longer can trap invading particles as effectively. Also, deposits from smoking cause changes in lung tissue that can render other defensive systems ineffective. A person who smokes 10 cigarettes a day increases the possibility of lung disease 20 times, or 2,000 percent. So kick the habit.

29. **SLIDE: Question.**
What is the Company doing to protect you? Engineering controls are the most important.

30. **SLIDE: Bag Opening Station.**
To prevent dust generation we have installed modern ventilation systems and modified other equipment to improve its effectiveness. Most of you are probably familiar with these devices.

31. **SLIDE: Exhaust System.**
Here we have a good example of exhaust control on a piece of equipment. Any dust created in this operation is sucked away from the operator to a dust collector.

32. **SLIDE: Pipe Finishing Machine.**
Some of these systems are unique to the asbestos industry, and some are unique to Johns-Manville. They represent huge expenditures of money and development time.

33. **SLIDE: Wet Cutting.**
In some instances, we use water to suppress dust . . . to keep it from getting airborne where we could inhale it.

34. **SLIDE: Enclosed Equipment.**
In other cases, we completely enclose the equipment that might generate dust and use a vacuum system within to draw it away.

35. **SLIDE: Jeffrey Bag House.**
These ventilation systems usually end up in dust collectors, or baghouses as we call them. This is the largest dust collector in the world, located at J-M's Jeffrey Mine in Asbestos, Quebec, Canada. It contains more than 80,000 filter bags connected to about 4 miles of ventilation system.

36. **SLIDE: Smaller Baghouse.**
In most plants, a smaller baghouse is enough. They all work on a principle similar to your household vacuum cleaner, except when it comes to size.

37. **SLIDE: Hygienists Packing Trunk.**
All these engineering controls are good only if they continue to reduce the amount of airborne asbestos. To make sure this is the case, we conduct a regular program of monitoring.

38. **SLIDE: Hygienist Observing Operation.**
At varying times during the year, J-M industrial hygienists will check asbestos fiber levels in each plant. These measurements are taken in two ways.

39. **SLIDE: Woman Wearing Personal Sampler.**
You may be asked to wear a small pump during your work. This unit draws in air from your breathing zone onto a filter.

40. **SLIDE: Hygienist At Microscope.**
Afterwards, the Industrial Hygienist will look at a piece of this filter under a microscope, count the number of fibers seen of a certain size, and then calculate the amount in the air. If his tests show levels above those permitted by the Government, immediate action is taken to correct the situation.

41. **SLIDE: Man In Respirator.**
During the time it takes to find an engineering solution, you may be asked to wear a respirator.

42. **SLIDE: Area Sampling.**
The other method is called area monitoring, and uses the identical personal monitoring equipment, except that in this case the pump stays in one place to take a continuous sample of an area.

43. **SLIDE: Code Of Federal Regulations.**
The permitted levels mentioned refer to the exposure standards set by the Occupational Safety and Health Administration, usually called OSHA. They limit your exposure to a certain number of fibers per cubic centimeter of air over the average 8-hour work day. They also specify the highest levels you ever can be exposed to without using special protective equipment.

44. **SLIDE: Cartoon Of Man.**
There are a few other important things the government requires and the company provides to protect your health.
If exposure limits ever are exceeded, you will be notified and told what corrective action is being taken. And, as we noted, engineering controls are the accepted method of correction.

45. **SLIDE: Man Being Fitted For Respirator.**
Respirators can only be used as a temporary measure and no one who could not function properly with a respirator will be required to wear one. Such cases will be handled on an individual basis.

46. **SLIDE: Caution Sign.**
Another requirement is the posting of caution signs wherever exposure limits are exceeded, as well as in areas where respirators are necessary.

47. **SLIDE: Asbestos Handling Poster.**
You've probably noticed some other signs in the plant on how to safely handle asbestos. These were produced by us to serve as reminders about proper work practices.

48. **SLIDE: Label.**
Caution labels also are placed on materials and products that during handling, machining, application or disposal might release fiber above permitted limits.

49. **SLIDE: Respiratory Protection Sign.**
Become familiar with these caution signs and labels and obey them at all times.

50. **SLIDE: Cartoon Of Medical Exam.**
The other important thing we do is provide free medical exams for employees exposed to asbestos fiber. These are all conducted by a licensed physician, and include full chest x-rays...

51. **SLIDE: Man Blowing Into Tube.**
And lung function tests, The results of each annual exam.

52. **SLIDE: Man & Doctor Examining X-rays.**
Will be discussed with you and, upon written request, those results will be made available to your own family doctor.

53. **SLIDE: Locker Room Scene.**
One additional point. Since you do come into contact with asbestos we want to be sure that you do not take any fiber home on your work clothes, shoes or other items to avoid exposing others. This is why we provide change rooms and lockers. The best procedure is to change clothes before going home.

54. **SLIDE: Man Resealing Bag.**
There are some simple rules you should follow to protect yourself. Very simply, don't create dust. In handling raw material, make sure packages are not broken. If a bag is broken, seal it immediately or place it in a closed container.

55. **SLIDE: Man Using Vacuum System.**
If any fiber is spilled, clean it up immediately with a vacuum cleaner. If this is not possible and you must sweep, then wet the material first. Never sweep dry asbestos. You will create airborne dust.

56. **SLIDE: Photo Of Bag Opening Operation.**
Always follow the safe work practices outlined by your supervisors. Use equipment properly and never try to bypass them. Check the dust control equipment on your job to make sure it is working properly. If it isn't, tell your supervisor.

57. **SLIDE: Cartoon Of Workman.**
If you are ever unsure of how to handle a material or perform an operation safely without exposing yourself to airborne fiber, talk to your supervisor first.
Don't take chances with your health. We don't want you to. If you see a possible health hazard we may have overlooked, bring it to the attention of management so we can correct it.

58. **SLIDE: Foundry Worker.**

Asbestos is a remarkable material...

59. **SLIDE: Pipe Insulation.**
Used everyday in more than 3,000 different products...

60. **SLIDE: Floor Tile.**
If we are to continue making these importnat products...

61. **SLIDE: Machine Parts.**
you and your employer must cooperate in maintaining the...

62. **SLIDE: Brake Insulation.**
Highest standards of safety and health on the job.

63. **SLIDE: Bag Opening Operation.**
Asbestos can be safely handled and used in the workplace without any threat to health. We are doing all we can to maintain a healthy work environment. With your help, we will continue to succeed.

64. **SLIDE: Cartoon: Safety Is Teamwork.**
Now, if you have any questions, we will be pleased to answer them. If any of the people here today cannot provide an answer, they will get one for you as soon as possible.

65. **SLIDE: J-M- Logo.**

(END PROGRAM)

ATTENDANCE

Date Program Presented:

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