

WU-0075# 18
FINAL
SCRIPT

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S C R I P T

WORKING WITH ASBESTOS

July 26, 1979

UCC 006860

1. Asbestos is a potential health hazard. Now, that statement is not meant to frighten you. In fact, there are many potentially harmful materials all of us may come into contact with everyday, both at work and at home.
2. But the important thing is to remember the word "potential." Just as we have learned to safely handle many highly toxic chemicals, so too, can we safely handle asbestos if we take a few simple precautions. And that's what this program is about...
3. ..."Working With Asbestos." There are a number of points we will cover in this program.
4. First, we will outline the health risks that are related to breathing asbestos fibers. Second, we will look at your body's natural defense system and how it helps to protect us from illness. We will describe the Federal OSHA regulation on asbestos and finally...
5. ...we will review the controls to prevent exposure to asbestos dust, and what you can do to protect yourself and to help us protect you.
6. Medical research has associated occupational exposure to asbestos fiber with an increased risk of four diseases;

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6. (continued) asbestosis, bronchogenic (or lung) cancer, mesothelioma, and gastrointestinal cancer. With the exception of asbestosis, all of these diseases are ones that anyone of us might develop whether or not we were exposed to asbestos.
7. Medical research also indicates that the increased health risks for asbestos workers are generally related to breathing large amounts of asbestos fibers. Generally, but not always, these risks are confined to work environments.
8. Asbestosis is a non-cancerous lung condition which falls into a category of diseases called pneumoconioses. These include black lung, caused by inhalation of coal dust, and silicosis, caused by inhalation of some forms of silica.
9. Asbestosis can be detected by x-rays. Common symptoms are unusual shortness of breath, and crackling chest noises the physician can hear with a stethoscope.
10. Bronchogenic cancer is most often found in people who are heavy cigarette smokers. In fact, ^{when} this form of cancer ^{occurs} it almost always occurs in work in asbestos workers, who are also heavy smokers. We'll explain why in a minute.
11. Asbestos workers who do not smoke have ^{five times the risk} ~~little more~~ chance of getting lung cancer than anyone else who does not smoke.

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11. (continued) Asbestos workers who smoke heavily have ^{five} ~~eight~~ times the risk of lung cancer compared to all other smokers and 92 times the risk of non-smokers not exposed to asbestos.

12. So if you don't smoke now, don't start. If you do smoke, its never too late to stop. Stopping will greatly reduce your risk of developing lung disease.

13. Mesothelioma is a very rare cancer of the ^{inner} lining of the ~~chest or~~ abdomen. Studies indicate that asbestos is not the only substance that might increase the risk of this disease.

Researchers also believe that asbestos may cause an increased risk of gastrointestinal cancer, that is, cancer of the digestive tract. This is very rare and we have a lot more to learn about the role asbestos may play in its development.

14. These diseases all have long latent ^{cy} periods--the time between the beginning of exposure and the time when the disease may develop. These periods range from five to twenty years for asbestosis, and thirty years or more for mesothelioma. Cases seen today are not ^{necessarily} an indication of present-day working conditions, but of conditions that existed ^{many years ago.} ^{was known} Very little about the health effects of asbestos then.

15. The human body has a built-in defense system for coping with inhaled dust and other foreign materials, including asbestos. All the air we breathe is first filtered in our nasal passageways to remove larger particulates.
16. The respiratory tract is lined with a sticky mucous carpet, which moves upward on top of ^{tiny} hair-like structures called cilia.
17. This system works like an escalator, trapping and moving foreign particles upward to the nasal passages.
- muco-ciliary escalator
18. This ^{muco-ciliary escalator} system extends all the way down our windpipe, into the two main air passages to the lungs and into smaller and smaller branches. At the end of the system are tiny air sacs called alveoli, where oxygen is absorbed into the blood.
19. Substances that escape the ciliary defense system are attacked by special cells which surround the particles. These cells are called phagocytes, and protect the lungs from foreign particles and many diseases.
20. But smoking ^{immediately paralyzes} the cilia on this mucous carpet so it can no longer ^{clear away} the particles. Also, smoking causes changes in lung tissue that can render other defense systems inactive.
- So remember, smoking and asbestos do not mix.

MEMO

JAN. FEB. MAR. APR. MAY JUN. JUL. AUG. SEP. OCT. NOV. DEC.
 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

TO _____

FROM _____

UNION
CARBIDE

SUBJECT _____

Asbestos sent motor on
 plate should not be
 removed from this shipping
 cartons until it is with
 certified or controlled by
 local exhaust system.

MEMO

JAN. FEB. MAR. APR. MAY JUN. JUL. AUG. SEP. OCT. NOV. DEC.
 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

TO _____

FROM _____

UNION
CARBIDESUBJECT Patasap 33

~~When possible, asbestos tanks~~
~~should be thoroughly certified~~
~~before leaving.~~

When possible, asbestos
 products shall be handled in
 a wet state sufficient to
 prevent the emission of dust
 to the atmosphere. The applicability
 of wet methods is limited and
 is usually reserved for stamping
 old insulation or cutting sheet
 products with a abrasive saw.

sampling

31. You may be asked to wear a small pump during your work.
The pump samples the air you breathe, and traps any asbestos fibers on a filter.

32. Afterwards, the Industrial Hygienist will determine the asbestos concentration by ^{counting the number of fibers on} ~~looking at~~ a piece of the filter under a microscope, ~~and counting the number of fibers.~~

Whenever we monitor you, the results are sent to your supervisor. It is their responsibility to show them to you. These results are entered into a computer and kept for at least twenty years.

33. Whenever possible, asbestos should be thoroughly wetted before handling, mixing, cutting, scoring or any other job. The purpose of this is to prevent the loose asbestos fibers from blowing around.

Asbestos cement, mortar ^A or plaster should not be removed from their shipping cartons until it is either wetted or the area is well-ventilated.

34. Whenever doing work involving asbestos, the proper type of respirator must be used.

For normal dust exposure, either the Norton Model 170A respirator, or the 3M disposable respirator may be used.

21. Asbestos fibers are long, narrow particles with sharp edges. If they are not removed before they get to the lungs, they can become embedded in the fleshy tissue of the lung. Once in, they generally remain there.
22. Our defense system senses a foreign body in the lung, and acts to protect the lung by forming a tough scar tissue around the fiber. The more fibers, the greater the scar tissue. Over a period of years, this leads to difficulty in breathing, and shortness of breath--the disease we described as asbestosis.
23. The Occupational Safety and Health Administration, known to you as OSHA, has developed a standard for asbestos exposure. This standard limits your allowable exposure to two (2) asbestos fibers per cubic centimeter of air averaged over the workday, and a "ceiling" of 10 fibers per cubic centimeter of air, not to be exceeded at anytime.
24. What is Union Carbide doing to protect you from excessive exposure to asbestos? The greatest chance that you will be exposed to asbestos fibers occurs when you are stripping old asbestos insulation.
25. We provide routine periodic physicals to all employees who are exposed to asbestos fibers in their work. These

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25. (continued) are all conducted by a licensed physician, and include a chest x-ray.
26. The result of the examination will be discussed with you and upon written request, those results will be made available to your family doctor.
27. Asbestos fibers are released when you cut or saw the insulation. For this reason, several precautions must be taken when removing insulation to prevent exposure.
28. Determine whether the insulation you are stripping contains asbestos.
29. When asbestos is involved, barricade the work area by erecting guardrails, sawhorses or a rope. Post caution signs at the barricades. The signs should read:

C A U T I O N

AVOID BREATHING DUST

CONTAINS ASBESTOS

MAY CAUSE BODILY HARM

USE PROTECTIVE EQUIPMENT

DO NOT REMAIN IN AREA

30. Notify the Industrial Hygiene Department, x5129 or 4752 before working so that air sampling to monitor the working area can be arranged. *if deemed necessary.*

31. You may be asked to wear a small pump during your work.
The pump samples the air you breathe, and traps any asbestos fibers on a filter.

32. Afterwards, the Industrial Hygienist will determine the asbestos concentration by ^{counting the number of fibers on} ~~looking at~~ a piece of the filter under a microscope, ~~and counting the number of fibers.~~

Whenever we monitor you, the results are sent to your supervisor. It is their responsibility to show them to you. These results are entered into a computer and kept for at least twenty years.

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1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

TO _____

FROM _____

SUBJECT Paragraph 33

UNION
CARBIDE

roughly wetted
; or any other job.
use asbestos fibers

d not be removed
either wetted or

the proper type of

ton Model 170A
tor may be used.

35. Both of these respirators filter the asbestos before you breathe it. They have both been tested and approved by NIOSH for use with asbestos.
36. Where you are in a confined space, or when the asbestos dust is very heavy, a supplied-air respirator ^{should} ~~is to~~ be used. The Safety Department provides training in the proper use, care and maintenance of these and other respirators.
37. Special clothing, such as coveralls, ^{gloves} or head coverings may be required on certain jobs ^{when the asbestos levels may be high.}

This clothing will be provided when it is needed.

The contaminated clothing should be collected and moved in sealed plastic bags so that no one else will reuse the clothing until it is properly cleaned.

38. Waste material, bags, debris and old insulation must be collected and disposed of in plastic bags. When full, the bags must be sealed and sent to the landfill for burial. Each bag should have a large tag or label which reads:

39.

C A U T I O N

CONTAINS ASBESTOS FIBERS

AVOID CREATING DUST

BREATHING ASBESTOS DUST MAY CAUSE

SERIOUS BODILY HARM

40. Finally, and most important, use good housekeeping and common sense in your work. When cutting insulation from overhead pipes, lower it to the ground, never drop it.
41. Keep all surfaces free of accumulated asbestos dust. When cleaning an area containing asbestos dust, wet-clean or vacuum clean it. Never use a broom, brush or an air hose to clean up dry asbestos.
42. Each of you will receive a booklet at the end of this program. We urge you to read the whole booklet very carefully.
43. If you are ever unsure of how to perform a job safely without exposing yourself to asbestos 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, bring it to the attention of management.
44. So before you start any job, remember these three key points:
45. If you have any questions, we will be happy to answer them. Thank you for your attention.