

SHELL OIL COMPANY

REFERENCE

PLAINTIFF'S EXHIBIT

SH-1899

DATE JULY 24, 1972

TO SHELL CHEMICAL COMPANY - HOUSTON
PLANT - MANAGER SAFETY AND TRAINING -
MR. E. W. SMITH

FROM MEDICAL DIRECTOR
PUBLIC AFFAIRS

SUBJECT BIOLOGICAL MONITORING
PROGRAM

Attached you will find my recommendations regarding the August 1972 Biological Monitoring Program for employees with possible exposures in the RM-17 and Epoxy Resin areas.

The previous laboratory results of approximately 90 employees were reviewed, and recommendations made on each individual are included in the attached tabulation. I am also returning herewith your original laboratory records. Specific laboratory tests were recommended because: (a) previous exposure with some abnormal laboratory findings; or (b) current exposure. The group of employees which should have the previously performed hematology and liver function tests has been narrowed to 31. An additional seven employees should have the specific two or three laboratory procedures as indicated.

When groups of employees such as these are to be given a battery of tests, it is economically advantageous to use one of a number of automated specialty laboratories. One such laboratory which I have investigated and recommend is:

National Health Laboratories
9900 Northwest Freeway
Telephone: 681-8477

This laboratory will provide the indicated laboratory tests, plus an SMA blood chemistry screen, at a cost of \$8.00 per employee. Cephalin Flocc tests are \$1.00 extra. I believe this fee is substantially below that paid to your previous laboratory. If contractual or other business considerations do not prohibit the change, use of the laboratory mentioned above appears advantageous. National Health Laboratories will provide needles, vacu-tainers, etc., necessary for the collection of blood samples, and will provide a pick-up service by runner at your Plant daily. Should you decide to use the services of NHL, I suggest you contact Mr. Elmo Walker at the above number for further discussions.

I will be available to provide any assistance in this program at your request.

R. E. Joyner
R. E. Joyner, M.D.
Medical Director

SHELL CHEMICAL COMPANY
ENVIRONMENTAL ENGINEERING

JUL 26 1972

Attachments

DPMC-01737

LAM 008254

The DPMC Health S.A.F.E. Team Presents. . .

Health Hazards in the Workplace

ASBESTOS

Properties:

Asbestos is the common name for a group of natural minerals that occur as masses of relatively long, thin, silky fibers. Asbestos is fire-resistant and has good insulating properties. In addition, it is resistant to deterioration and chemical attack. Individual asbestos fibers are very small and can not be seen without the aid of a microscope.

Uses:

Because of the unusual properties of asbestos, it has found wide use. Packed, woven, or sprayed on, asbestos has been used in over 3000 commercial and industrial applications. Asbestos is used in making fire-retardant clothing and blankets, roofing and flooring products, textiles (e.g., gloves) brake linings, gaskets, and coatings. Asbestos is also used in fireproofing, soundproofing, and insulation (thermal and electrical). Due to the strength of the fibers, asbestos has found use as reinforcement in plastics and cement (e.g., transite).

Asbestos is most frequently encountered within the Complex as insulation on pipes and structures installed prior to 1973. While the purchase of new insulation containing asbestos has been discontinued, asbestos insulation may be encountered in older units for many years to come.

Health Effects:

Exposure to asbestos, through inhalation or ingestion, may increase the risk of several serious diseases: asbestosis, a chronic lung ailment which produces a scarring of the lung and shortness of breath; bronchogenic (lung) cancer; mesothelioma, a rare cancer of the lining of the chest or abdominal cavity; and cancer of the esophagus, stomach, colon and rectum. These diseases are generally associated with exposure to high concentrations of fibers over a long period of time. They develop slowly and usually do not become evident until many years after initial exposure. Many of the asbestos related diseases that are diagnosed today are the result of exposures received 20 to 40 years ago prior to government regulation of asbestos exposures and at a time when effective exposure controls were not consistently utilized.

Asbestos and cigarette smoking together increase lung cancer risk five-fold over the already high risk due to smoking

alone. Asbestos workers who also smoke are 30 to 90 times more likely to develop lung cancer than nonexposed, nonsmokers. There is evidence that quitting smoking will reduce that risk among asbestos-exposed workers, perhaps as much as 50%. The fibers that cause these conditions are usually too small to be seen - don't take chances! Follow all recommended work practices.

Exposure Summary:

OSHA has established Permissible Exposure Limits (PEL's) for asbestos of 0.2 fibers per cubic centimeter (f/cc), 8-hour time-weighted average and 1.0 f/cc averaged over any 30 minute period. Extensive industrial hygiene monitoring conducted during the last several years indicates that when asbestos is handled in the proper manner as described below, exposure can be maintained well below the PEL's.

Protective Measures:

WHEN WORKING WITH INSULATING MATERIALS OF UNKNOWN ORIGIN, HANDLE AS IF THE MATERIAL IS ASBESTOS.

When working with asbestos, both the person doing the job and the work area must be protected. Before beginning the job, the area should be barricaded and appropriate warning signs erected. Employee personal protection should include half or full face respirators (dependent on expected or measured concentrations) with HEPA (purple) cartridges or air-supplied respirators. Disposable coveralls and gloves that are impervious to asbestos fibers must be worn. Asbestos must be handled in a wet state to minimize airborne fibers. Hand sprayers and wetting agents are available from the Warehouse. The work area should be kept clean by wet sweeping and bagging of all debris or by using a HEPA filtered vacuum device during and after asbestos removal. Dry sweeping and blowing asbestos debris is not permitted. Asbestos waste should be bagged and sealed in labeled bags and disposed in accordance with DPMC requirements. Upon completion of an asbestos job, all contaminated equipment and clothing should be cleaned or disposed of properly.

First Aid:

A person who is inadvertently exposed to asbestos fibers should remove contaminated clothing and shower thoroughly with soap and water for 15 minutes. Report to Medical to complete showering and obtain clean coveralls. Dispose of contaminated clothing in a sealed, labeled bag.

References:

Additional information may be obtained from the DPMC Health & Safety Department and the Medical Department.

PRE-SEPARATION COUNSELING
REGARDING ASBESTOS

Shell initiated a program in 1972 which provides annual medical examinations for those employees who work with asbestos. Our records indicate that you participated in this medical program. Since you will soon leave employment with Shell, we believe we should review with you the reasons the program was started and furnish you pertinent information regarding possible health effects potentially related to asbestos exposure.

HEALTH EFFECTS

Many asbestos fibers are small enough to be inhaled deep into the lung. Once fibers are trapped in lung tissue, one or more serious disease processes may be initiated. These processes usually occur very slowly; as much as 40 years may intervene between first exposure and identification of an asbestos-related disease.

The three common diseases associated with asbestos exposure are:

1. Asbestosis - a disease characterized by fibrosis (scarring) of lung tissue. These changes develop slowly and show up on chest x-ray as strand-like scarring, more apparent in the lung bases. Symptoms include shortness of breath and persistent cough.
2. Mesothelioma - a cancer of the lining of the lung (pleura) or lining of the abdominal cavity (peritoneum). The growth may show up on chest x-ray as a mass on the pleura. Symptoms may include pain in the chest or abdomen and loss of weight.
3. Cancer of the lung - a cancer of the bronchus (airway) or lung tissue. This cancer, which also occurs in persons never exposed to asbestos, shows up on chest x-ray as a density or mass in the lung tissue. Symptoms may include cough, chest pain, loss of weight, and blood in the sputum.

Cessation of smoking will greatly reduce the risk of cancer of the lung in workers previously exposed to asbestos. Although there is conflicting evidence, the incidence of lung cancer in non-smoking asbestos workers does not appear to be substantially greater than in the general population (which includes smokers and non-smokers). The smoking asbestos worker, however, has a risk of lung cancer many times greater than the general population and many times greater than unexposed non-smokers. The risk of lung cancer increases with increased levels and duration of exposure.

SHELL'S EXAMINATION PROGRAM (ACTIVE EMPLOYEES)

For active employees potentially exposed to asbestos, a medical evaluation is offered annually. This includes:

1. OSHA questionnaire on work and exposure history for asbestos.
2. Complete medical and smoking history.
3. Pulmonary function testing and chest x-ray.
4. B-Reading of the chest x-ray by a certified B-reader.
5. Physician examination which emphasizes the respiratory system.

Every 5th year (or every 2 years for those employees aged 50 and over), the scope of the evaluation is expanded to a complete medical evaluation which includes a physical examination, blood tests, electrocardiogram, etc.

RECOMMENDATIONS

1. Persons who have potential exposure to asbestos, either now or in the past, should definitely avoid cigarette smoking.
2. Since you are leaving Shell and will no longer be participating in the special examination program for asbestos workers, we recommend that you make arrangements for periodic physical examination as recommended by your personal physician, to include chest x-ray and pulmonary function testing. Should your physician have any questions about the Shell program or results of tests performed while you were an active Shell employee, he/she may contact the Medical Department at your last work location or Shell Corporate Medical Department, P. O. Box 2463, Houston, Texas 77252, telephone 713-241-3974.