SM-32 (REV. 5-78)

Shell Oil Company
Interoffice Memorandum

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DECEMBER 16, 1980

PLAINTIFF'S EXHIBIT
SH-1992

FROM: MANAGER, HEALTH & SAFETY, OPERATIONS, HEAD OFFICE

TO: SEE ATTACHED DISTRIBUTION LIST

SUBJECT: REVISED ASBESTOS MEDICAL SURVEILLANCE PROGRAM

Attached is a revised asbestos medical surveillance program. This is the second revision since the original 1972 program. The previous revision in December 1977 called for medical surveillance of all current employees who are regularly exposed to above 0.1 fiber/cc as an eight-hour TWA. While maintaining that guideline, this revision has been developed to: 1) include employees who have had significant exposure in the past; and, 2) define more precisely the frequency of exposure required for medical surveillance.

The current program includes mainly insulators. The new program includes other crafts where people have had or may have exposure in excess of 0.1 fiber/cc. Evaluations of various activities have shown that during rip-out or removal of asbestos-containing insulation, potential exposures could exceed 0.1 fiber/cc. As a result, we recommend that employees involved in this type of activity for the length of time specified in the policy be included in the medical surveillance program. Exceptions to this practice are possible if local monitoring data shows that potential exposure levels (without regard to respirators) are less than 0.1 fiber/cc.

I request that you provide Dr. Jerry G. Simpson, Corporate Medical Department, with a list of employees to be added to the special exam program. Note that those employees already participating in one of the other special exam programs (e.g., VCM, pesticides, etc.) will not require a separate examination. However, the separate Special Asbestos Medical Examination Record should be completed for those employees. We also remind you to document for OSHA compliance those employees who opt not to participate in the program. The Corporate Medical Department is also modifying the exam to be more specific for the potential health effects of asbestos. That modification is explained in the attachment.

Please contact me or Jerry Ransdell as questions or needs arise.

R. L. Brunner

R. L. Brunner

RLB:PJW

Attachment

For information
Shell Pipe Line Corporation - J. R. Hurley

SHELL ASBESTOS MEDICAL SURVEILLANCE PROGRAM

Pertinent Background Facts on Asbestos

- Asbestos is a human carcinogen. Inhalation may cause lung cancer, mesothelioma, and other diseases such as asbestosis and pleural lesions.
- Generally, the incidence of cancer and asbestosis among occupationally exposed persons increases with increasing intensity of exposure; the inhalation of high concentrations for short durations may be as harmful as prolonged exposure to low concentrations.
- From all available evidence, the period between first exposure to asbestos and death from lung cancer appears to be related to intensity of exposure. A latency period approximating fifteen years is probably the minimum for asbestos-related lung cancer.
- Tobacco smoking increases the incidence of lung cancer and complicates asbestosis among asbestos workers.

Regulatory Background

- Permissible exposure limits to airborne concentrations of asbestos fibers are defined by OSHA standards (29 CFR 1910.1001) as follows: a) Permissible exposure level -- "The 8 hour time-weighted average airborne concentrations of asbestos fibers to which any employee may be exposed shall not exceed two fibers, longer than 5 micrometers, per cubic centimeter of air..." b) Ceiling concentration -- "No employee shall be exposed at any time to airborne concentrations of asbestos fibers in excess of 10 fibers, longer than 5 micrometers, per cubic centimeter of air..."
- Per OSHA Program Directive #300-16 dated October 11, 1978, titled, "Minimum Airborne Fiber Concentration For Initiating and Continuing Asbestos Medical Examinations", the term "...exposed to airborne concentrations of asbestos fibers..." is administratively interpreted to mean "...exposed to a minimum of 0.1 asbestos fibers longer than 5 micrometers per cubic centimeter of air..." on a time weighted average basis.

Shell Concerns

- Surveys now indicate that in addition to "insulators" who are currently included in our asbestos medical surveillance program, other employees such as pipefitters, riggers, etc. may also be exposed to asbestos as a result of their work activity.
- Our current medical surveillance program does not satisfactorily address the question of past exposure to asbestos.

- Employee training programs for asbestos have not sufficiently emphasized the known synergism between asbestos exposure and smoking.

Objective

Revise existing asbestos medical surveillance policy in order to correct any deficiencies and fully address the concerns described above.

Policy

- Employees whose present job assignment results in exposures to asbestos of 0.1 fibers, longer than 5 micrometers, per cubic centimeter (TWA) or greater (regardless of respirator usage), on a reasonably predictable and repeated basis,* shall be included in Shell's annual asbestos medical surveillance program.

- Employees, who can be identified as having had job assignments in the past, in which exposures can be determined as probably exceeding 0.1 fibers, longer than 5 micrometers, per cubic centimeter (TWA) or greater (regardless of respirator usage), on a reasonably predictable and repeated basis,* shall also be included in an annual asbestos medical surveillance program.

- Available exposure data indicate that exposures during "ripout" or removal of asbestos-containing insulation may exceed 0.1 fibers per cubic centimeter. Accordingly, all employees, regardless of job title, whose work assignments now or in the past, would involve "ripout" or removal of asbestos-containing insulation, on a reasonably predictable and repeated basis,* are to be included in an annual asbestos medical surveillance program.

- Employees who have been in an asbestos medical surveillance program prior to employment with Shell shall be included in Shell's annual program.

- Once an employee has been included in an asbestos medical surveillance program, the surveillance should be continued throughout the term of his or her Shell employment. Upon leaving Shell, each employee who has been included in an asbestos medical surveillance program shall be administered according to the Shell pre-separation counseling or extended medical surveillance program policy (post-retirement physical examinations), whichever is appropriate.

* The phrase "reasonably predictable and repeated basis" is currently interpreted for present job assignments, to mean at least eight hours of exposure per calendar quarter. For exposures that have occurred in past job assignments, "repeated" shall mean at least two calendar quarters. It should be recognized that these exposure criteria represent an administrative judgment, since minimal exposure levels required to cause disease are not known with certainty at this time. This administrative judgment may be revised in the future, with the concurrence of Corporate Medical, Toxicology, Safety and Industrial Hygiene and the affected functional management.

Implementation: Suggested Action Plan/Guidelines

- Evaluate exposures and identify employees whose job assignments, now or in the past, result in exposure to asbestos as defined in the Policy, and include them in the annual asbestos medical surveillance program.

- Due to the varied nature of potential exposure throughout Shell, there may be specific employee concerns that will require the prudent, balanced judgements of both functional management and the Head Office Corporate Medical and Safety and Industrial Hygiene Department. Full consultation, prior to arriving at a decision, is encouraged in these cases.

- For the above identified employees, provide improved training and information to emphasize: a) Synergism of asbestos and smoking. b) Need for participation in medical examination programs.

- Review current operating procedures for reducing or eliminating physical contact between asbestos fibers and employees.

ASBESTOS MEDICAL SURVEILLANCE

The up-dated asbestos medical surveillance examination will consist of (1) a complete, comprehensive medical history to elicit symptoms of asbestos-related disease (especially respiratory) with a detailed review of this history by medical personnel; (2) a 14 x 17 P-A chest x-ray; (3) spirometry, including forced vital capacity (FVC) and forced expiratory volume in one second ($FEV_{1.0}$) and (4) the balance of the Voluntary Periodic Examination every second (if 40 and above years old) or third year (if less than 40 years old).

The employee in an occupation regularly exposed (past or present) to airborne concentrations of asbestos fibers (as defined in the Shell Asbestos Medical Surveillance Policy) should have preplacement, annual and termination examinations. If adequate records show that an asbestos medical surveillance examination has been performed within the past one-year period, no medical examination should be done even though the employee retires, terminates or transfers. The Voluntary Periodic Examination or participation in another medical surveillance program may be used for the asbestos examination if it fulfills all the requirements of the asbestos medical program.

The modified program is in keeping with the emphasis of the OSHA regulation and is specific for asbestos-related health problems. In addition, the Voluntary Periodic Examination at two- to three-year intervals will enable the examining doctor to look for other conditions not related to asbestos exposure.