SM-32-DPC (1-75)

PLAINTIFF'S EXHIBIT

SH-669

SHELL OIL COMPANY SHELL CHEMICAL COMPANY
DEER PARK MANUFACTURING COMPLEX

DATE SEPTEMBER 16, 1976

TO DEER PARK MANUFACTURING COMPLEX -
MAINTENANCE ENGINEER - MANAGER

FROM INDUSTRIAL HYGIENIST
DEER PARK MANUFACTURING COMPLEX

SUBJECT ASBESTOS SAFETY BULLETIN

This is in response to a question from your organization regarding the fate of asbestos fibers which are inhaled. Please see that this answer is coordinated within your organization and forwarded to J. W. Dickens.

Airborne asbestos material will usually consist of a wide range of fiber sizes. The fiber size is the primary factor which determines what happens to the fiber that has been inhaled. The larger fibers will be filtered by nasal hair or be trapped by the wet surfaces of the upper respiratory tract. Fibers small enough to enter the lungs can adhere to the lung surface or eventually be exhaled through normal breathing.

The lung has biological mechanisms to guard against the deposition of foreign material. The lung surface is lined with minute hairs which transport dust particles such as asbestos fibers from the lungs to esophagus where the material is expectorated or swallowed. Fibers reaching the deepest portions of the lungs, where the tiny hairs do not exist, can be absorbed into blood capillaries or captured by special cells and stored in the lungs.

The best available information about exposure levels and incidence of injury was studied in the development of a safe exposure level. The purpose of the exposure limit is to prevent a person from inhaling so many fibers that collectively they cause lung injury. Therefore, a limit of two fibers per cubic centimeter of air was judged as providing adequate protection against injury.

By following the work procedures covered in the safety bulletin, environmental levels can be kept well below the permissible exposure limit. The use of approved respirators to supplement the work procedures is additional insurance against exposure.

J. D. Ransdell

JDR:bc

J. D. Ransdell

cc - R. L. Bryan
D. E. Miller THIS COPY FOR
F. G. Reitz
J. L. Rivard
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Chron

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