



Building B-101

Dow U.S.A.

The Dow Chemical Company
2301 N. Brazosport Blvd.
Freeport, Texas 77541-3257

REV
8/92

OCCUPATIONAL HEALTH SUMMARY REPORT

LOCATION: ETHYLENE DICHLORIDE/NPA

PERIOD COVERED: February 5 - February 24, 1992

MEDICAL:

C. K. Browdy MD
C. K. Browdy, M.D.
Occupational Health Associate

4-29-92
Date

INDUSTRIAL HYGIENE:

M. A. Blue
M. Blue
Industrial Hygienist

4-30-92
Date

APPROVED:

Tom Lipps
T/E. Lipps, M.D.
Director, Occupational Health

5-14-92
Date

REVIEWED:

W. M. Huff
W. M. Huff
Superintendent

5/18/92
Date

cc: D. E. Cragar
J. H. Saunders, M.D.
J. H. Lippman
Summary File

R&S 150998

OCCUPATIONAL HEALTH SUMMARY REPORT

This is a voluntary participation program. The group population is sixteen. Twelve individuals have current information and were not examined at this time. Four individuals were examined between February 5, 1992, and February 24, 1992, for a 100% participation rate.

The Chemical and Physical Agent Inventory (CPAI) for the Ethylene Dichloride production plant shows that the chemical and physical agents of greatest concern are ethylene dichloride, hexachlorobenzene, 1,1,2-trichloroethane, 1,1,2,2-tetrachloroethane, 1,1,1-trichloroethane, 1,1,1,2-tetrachloroethane, and noise. Since the Ethylene Dichloride Medical Surveillance Requirement (MSR) is no different from the periodic core examination, all job classifications are followed on the periodic core examination.

The 1992 Noise Survey is summarized in I. H. Report No. A70-3581-89N. The eight-hour time-weighted average exposures were less than the OSHA Action Level of 50% (85 decibels) for all monitored job classifications. These job classifications are not in the Texas Operations Hearing Conservation Program.

The 1991-1992 Industrial Hygiene monitoring data for ethylene dichloride and vinyl chloride following installation of closed-loop process samplers is summarized in I. H. Report No. A70-3873. All eight-hour time-weighted average exposures were significantly less than the acceptable limits for both ethylene dichloride and vinyl chloride. Short-term samples were collected during process sampling with all exposures non-detectable.

There are eleven TSCA 8(d) chemicals present. They are: ethylene dichloride, 1,1,2-trichloroethane, 1,1,2,2-tetrachloroethane, 1,1,1-trichloroethane, 1,1,1,2-tetrachloroethane, hexachlorobutadiene, ethyl chloride, perchloroethylene, 1,1-dichloroethane, methylene chloride, and hydroquinone.

There were three audiograms done. There were no standard threshold shifts as defined by the OSHA Noise Standard.

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Two individuals have limitation of respirator usage based on initial screening of the medical examination data. Please see the attached list for medical limitation of respirator usage. If these medical restrictions interfere with an individual's job requirements, further evaluation at the Occupational Health Department should be arranged to fully assess the need for medical limitation of respirator usage.

This group of four individuals is too small to draw any meaningful conclusions. All the individual data was normal.

One individual reported to the Occupational Health department with a small second-degree chemical burn to the left wrist from ethylene dichloride. One individual reported to the Occupational Health department complaining of itching after working in a certain area of the process plant. Investigation by Industrial Hygiene identified the probable source as 1,1,2,2-tetrachloroethane, a known skin sensitizer. The vent in this area has been elevated and this individual has had no further problems with itching.

Attachment

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April 29, 1992

MEDICAL LIMITATION OF RESPIRATOR USAGE

may wear a supplied-air positive-pressure (airline) respirator in the control room only.

may use a self-contained breathing apparatus (SCBA) only under the conditions specified by the respirator field test (climb 20 feet and block valve in emergency situation).

The following fourteen individuals have no medical limitation of respirator use:

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