



DOW CHEMICAL U.S.A.

REV
8(E)

Building B-101

OCCUPATIONAL HEALTH
TEXAS OPERATIONS
FREEPORT, TEXAS 77541



Accredited by
Accreditation Association
for Ambulatory
Health Care, Inc.

OCCUPATIONAL HEALTH SUMMARY REPORT

LOCATION: ETHYLENE DICHLORIDE/NPA
PERIOD COVERED: March 1 - April 10, 1990
REPORT DATE: May 22, 1990

MEDICAL:

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

5-24-90
Date

INDUSTRIAL HYGIENE:

M. A. Blue
M. Blue
Industrial Hygienist

5-24-90
Date

APPROVED:

J. H. Saunders
J. H. Saunders, M.D.
Director, Occupational and
Environmental Health

31 May 90
Date

REVIEWED:

W. M. Huff
W. M. Huff
Superintendent

6/8/90
Date

xc: D. Cragar
R. Fike, M.D.
Summary File
J. H. Hippman, Safety Director



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OCCUPATIONAL HEALTH SUMMARY REPORT

This is a voluntary participation program. The group population is 13. Ten individuals have current information and were not examined at this time. Three individuals were examined between March 1, 1990 and April 10, 1990 for a 100% participation rate.

The Chemical and Physical Agent Inventory (CPAI) for the Ethylene Dichloride plant shows that the chemical and physical agents of greatest concern are ethylene dichloride 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 1988 Noise Survey is summarized in I. H. Report No. A70-3212N. The eight-hour time-weighted average exposures are less than 85 decibels on the A-scale. These individuals are not included in the Hearing Conservation Program.

The 1989 Industrial Hygiene monitoring data is summarized in I. H. Report No. A28-3390C-89. Eight-hour time-weighted average exposures to ethyl chloride, 1,1-dichloroethane, 1,1,2,2-tetrachloroethane, vinyl chloride, and vinylidene chloride were well below their respective Industrial Hygiene Guides (IHGs). The eight-hour time-weighted average and short-term exposures to ethylene dichloride for the Control Operator C exceeded the recommended guidelines of 1.0 ppm and 2.0 ppm, respectively, with average exposures of 1.3 ppm and 5 ppm, respectively. Exposures were potential since respiratory protection was worn during sample catching and line clearing activities.

There are eleven TSCA 8(d) chemicals present. They are: ethylene dichloride, 1,1,1,2-tetrachloroethane, 1,1,2,2-tetrachloroethane, 1,1-dichloroethane, 1,1,1-trichloroethane, hexachlorobutadiene, ethyl chloride, perchloroethylene, 1,1,2-trichloroethane, methylene chloride, and hydroquinone. Monitoring data is described above for ethylene dichloride, 1,1-dichloroethane, and 1,1,2,2-tetrachloroethane. Hydroquinone is used as a laboratory chemical and is present in small amounts.

There were two audiograms done as part of the periodic core examination. There were no standard threshold shifts as defined by the OSHA Noise Standard.

One individual has medical 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 employee's job requirements, further evaluation at the Occupational Health Department should be arranged to fully assess the need for medical limitation of respirator usage.

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The liver is considered the main target organ for ethylene dichloride. There were no elevations of liver enzymes in the two individuals tested.

Attachment

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ATTACHMENT

May 22, 1990

MEDICAL LIMITATION OF RESPIRATOR USAGE

may wear a positive-pressure supplied air respirator or a negative-pressure respirator. He may not use a self-contained breathing apparatus (SCBA) for other than escape.

The following twelve individuals have no medical limitation of respirator usage:

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