



REVIEWED

Building B-101

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

OCCUPATIONAL HEALTH SUMMARY REPORT

LOCATION:

INORGANIC CHEMICALS RESEARCH
C&M/MAG METALS TS&D
CHEM & METALS R&D ADMINISTRATION

PERIOD COVERED:

June 22 - August 17, 1994

MEDICAL:

C. K. Browdy MD 8-31-94
C. K. Browdy, M.D. Date
Occupational Health Associate

INDUSTRIAL HYGIENE:

S. D. Ripple 1HIT 9-1-94
S. D. Ripple Date
Industrial Hygienist

REVIEWED:

cc: L. J. Burme
J. H. Saunc
Summary 1

yearly
Hygienist
Vinyl



Building B-101

Dow U.S.A.

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

October 4, 1993

TO WHOM IT MAY CONCERN:

The individuals working in the V1V2 plant (which is now the Chlorinated Ethane Products production plant) were followed on the Vinyl Chloride Standard when I arrived in 1978. During the mid-80's they no longer had potential exposures to continue being followed on the Vinyl Chloride Standard.

C. K. Browdy, M.D.
Occupational Health
238-5018

OCCUPATIONAL HEALTH SUMMARY REPORT

This is a voluntary participation program. The group population is fifty-six. Three individuals are in the Management Examination Program. Fifty-six individuals were examined between June 22, 1994, and August 17, 1994, for a 93% participation rate.

The Chemical and Physical Agent Inventories (CPAI) for Inorganic Chemicals Research and C&M/Mag Metals Technical Support and Development show that the chemical and physical agents of greatest concern are chlorine, noise, caustic soda 50%, sodium hydroxide, nickel powders (alamo), copper (powder and fume), potassium fluoride, sodium fluoride, glacial acetic acid, and vinyl chloride. All job classifications are followed on the periodic core examination with the exception of six individuals who are followed on the Vinyl Chloride Medical Surveillance Requirement (MSR), which conforms to the Vinyl Chloride Standard.

Over the past ten years, ten major surveys have been conducted for the research and TS&D groups in Inorganic R&D; most of the this work was done at the Membrane Cell Pilot Plant. No surveys were done for the Propylene Oxide research group in R&D. Overall, exposures have been low.

The 1990 Industrial Hygiene monitoring data for chlorine for the membrane cell technology and membrane laboratory evaluation group is summarized in I. H. Report No. B22-3626C. Individual eight-hour time-weighted average (TWA) exposures for the technicians in the two groups were below the detection limit and less than 0.15 ppm chlorine. Area concentrations in the two cell test rooms, measured over seven to eight hour periods, were also below the detection limit and less than 0.15 ppm.

The 1992 Noise Survey at the Inorganic Chemical research and Development's pilot plant in B-1406 is summarized in I. H. Report No. B14-4878. The primary source of noise was the rotor used for mixing molten magnesium in a furnace set on an elevated platform. Noise levels ranged from 91 dBA at 115 feet away from the rotor to 104 dBA at 1 foot away

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The HOCl pilot plant at A-1430 was monitored for noise with all of the plant's primary noise sources in operation. No noise levels above 90 decibels were located.

There were fifty-six audiograms done. There were two standard threshold shifts as defined by the OSHA Noise Standard.

The liver is considered the main target organ for vinyl chloride. Five of the six individuals followed on the MSR came in for evaluation. None of these five individuals had any elevation of their liver enzymes.

Seven individuals have limitation of respirator usage based on initial screening of the medical examination data. Please see Attachment A 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.

Individuals with life-style factors that are amenable to medical or dietary intervention include the following: seven smokers, thirty-two individuals who are overweight, fourteen individuals with uncontrolled hypertension, and twenty-six individuals with elevated cholesterol levels. Please see Attachment B for a graphic representation of this data. Please contact the Health Promotion Department (238-4334) for assistance in modification of these life-style risk factors.

Attachments

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ATTACHMENT A

August 31, 1994

MEDICAL LIMITATION OF RESPIRATOR USAGE

The following seven individuals may wear respirators for escape only:

The following fifty-six individuals have no medical limitation of respirator usage:

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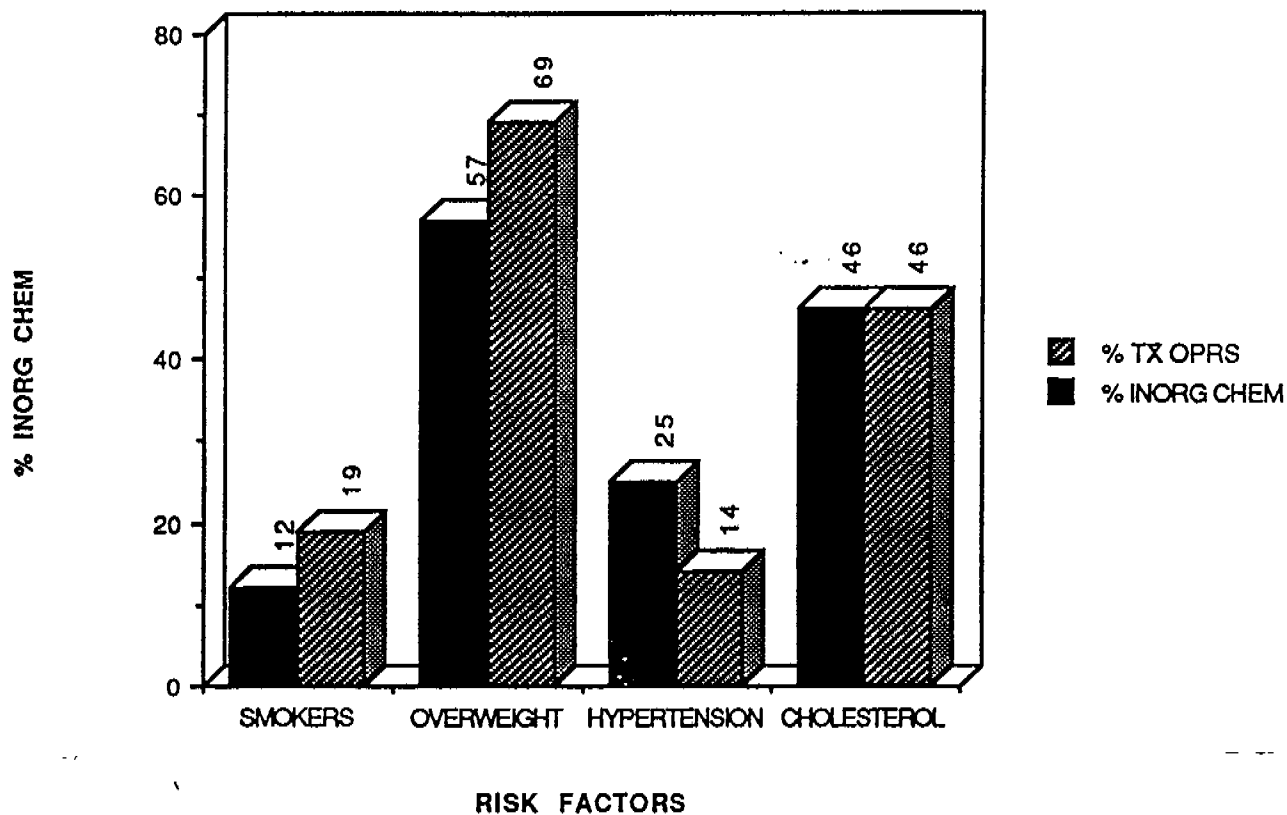
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REDACTED

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August 31, 1994

Data from "INORGANIC CHEM RESEARCH"



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MEDICAL SURVEILLANCE REPORT WORKSHEET

GROUP NAME:

LAST REPORT DATE:

START DATE: 6/22/94

MSRs:

CURRENT Vinyl Cl 6

IH PLANT CODE: 56334, 55052, 55033

N= 56/60 = 93%

STOP DATE: 8/17/94

PERIODICS: 50

EXIT -

DATAPOINTS:

GENERAL HEALTH:

POOR PFTs= 3/56 = 5%

HIGH Cr= 2/56 = 4%

ANEMIA= 4/56 = 7%

HIGH GLUC= 2/56 = 4%

ABN LFTs: INDs= 5/56 = 9% TESTS= 8/280 = 3%

CV RISK FACTORS:

OVERWEIGHT: 32/56 = 57%

HIGH BP= 14/56 = 25%

SMOKERS= 7/56 = 12%

HIGH CHOL= 26/56 = 46%

AUDIOS:

DONE= 56
ABN= 41/56 = 73%
WORSE= 23/56 = 41%
STS= 2/56 = 4%

IHPR OF 1,2,3:

ISH STUDIES:

Total 63
Exam 56
Mgmt 3
DNEI 4
83

Resp: I- 57
III- 6
63

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