

L.H. File



THE DOW CHEMICAL COMPANY

TEXAS DIVISION
FREEPORT TEXAS 77541

October 25, 1968

DOW CONFIDENTIAL

John Mayfield
Solvents Laboratory
A-2422

cc: J. A. Skaggs
R. O. Brown
D. J. Kilian, M. D.

HOOD VELOCITY INSPECTIONS AND ANALYSIS OF AIR SAMPLES IN
A-2410 LAB

I. Hood Velocity:

Face velocity of four fume hoods was checked during the last week of September, 1968. The minimum velocity ordinarily recommended to insure adequate protection is 100 fpm. All hoods were marked at the sash level which gave a reading of 100 fpm. Three of the four hoods were not considered to provide adequate air flow, and, under normal use, would probably not afford protection against entry of fumes into the room.

In addition to the four fume hoods, a hooded structure is being used above a sink to collect fumes from chemicals dumped into the sink or from laboratory procedures being conducted on the adjacent work bench. The hood device is not effective in accomplishing the task. It needs to be redesigned to provide a better canopy to come down over the work area, and air velocity should be increased.

II. Air Samples:

Air samples were taken to determine the presence of contaminants in the laboratory. Results are attached. Based on the attached data, the greatest potential for overexposure to vapors would be due to occasional high levels of vinyl chloride. The threshold limit value (average, daily, 8-hour, acceptable exposure limit) for this vapor is 500 ppm. The data does not indicate a constant high level exposure this great.

R&S 020569



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It should be pointed out, however, that a daily exposure, even for a shorter time period, to concentrations such as the 1340 ppm recorded on 10-3-68, might be a potential problem. This should be investigated to determine whether or not this level of vapor concentration is a daily occurrence, connected with the work routine and the lack of proper ventilation.

D. J. Calley
Industrial Hygienist

DJC/lam
Attachment

R&S 020570

P. C. Gay, M.D.

-2-

July 15, 1976

In summary, Mr. Buchanan has had some jobs, primarily Mag 3 and Metal Cutting, where he was potentially exposed to some noise levels exceeding 90 dB(A). (Chipping cells and using compressed air to blow them clean, and working near the auto-fueler where metal cl. boards hit the steel to the A-10 might

CONTAMINANT	DATE AND TIME OF SAMPLING			
	8-14-68 8:25 AM	9-16-68 2:20 PM	9-27-68 10:20 AM	10-3-68 8:15 AM
1,1,1-Trichloroethane	0.5	< 1.0	1.0	4.0
1,1,2-Trichloroethane	1.0	< 0.8	3.0	
1,1,1,2-Tetrachloroethane	< 0.7			
1,1-dichloroethane	< 2.0	< 0.5	5.0	
Trichloroethylene	< 0.9	< 1.0		
Vinyl chloride and/or				
Ethylene dichloride	80.0	20.0	80.0	1340.0
Vinylidene chloride	3.0	4.0	50.0	3.0
Ethyl chloride			2.0	
Methanol			120.0	
Ethane		4.0		
Ethylene		7.0		
Perchloroethylene	< 0.8	< 0.5		
Freon 12				
Unknown			4.0	

DJC/lam
Safety and Loss Prevention
10-29-68

R&S 020571

BSH → A 2000 Aux File