

LEB
WOKH *Painesville*
Vinyl Chloride May 15, 1973
PAINESVILLE AIR SAMPLING PROGRAM RECEIVED

Summary of Results to Date

MAY 21 1973

MEDICAL
DEPARTMENT

A program to sample and analyze the atmosphere in the working areas of the plant where employees might be exposed to monomer vapors was begun in December, 1972, using sampling equipment brought to Painesville by Dr. W. D. Harris. Purchase of our own sampling equipment and new chromatograph columns has, with the assistance of sampling by the Process Engineers, resulted in a more detailed survey of atmospheric composition. The data are presented in the attached table.

Due to priority given to a THF sampling program for the past several months, the chromatograph has not been available much of the time to run analyses for vinyl chloride in the atmosphere. It is planned that a second chromatograph will be purchased to allow each instrument to be dedicated to a single use. This will avoid the excessive change-over time currently encountered when switching from one column to another.

Also tabulated below are data obtained on vapor samples in and around certain pieces of equipment where explosive mixtures might develop. This work was done at the request of the Vinyl Chloride Safety Association. The lower explosive limit for vinyl chloride is 4% by volume or 82,500 ppm by weight in air.

None of the areas sampled showed any danger from reaching the lower explosive limit.

The TLV for vinyl chloride was exceeded in only one area where personnel work. That was inside an SD reactor during cleaning. This result cannot be said to be typical. Other areas over the 200 ppm TLV were tank and dryer exhaust streams where personnel are not located.

The TLV for vinyl acetate was grossly exceeded in the area around the Derrick screen while running Marvinol 56. As is the case with reactor cleaning, however, personnel are in this atmosphere for a relatively short time.

The TLV for THF was also greatly exceeded in the area around the Rototherm and again this is not an area normally populated.

C. B. Westerhoff
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CEW:wp
Attachment

CC: BRL WHI CHK NAM NCW MCJ OJH RWK REH CJU JDP
✓ Dr. W. D. Harris - Oxford

URL 13465