

Interoffice Communication

To All VCM Plant Employees
From R. D. Gamblin
Date April 3, 1974
Subject Current Status of Vinyl Chloride Information

You have all been informed of the investigation of a possible link between employee exposure to vinyl chloride and the cancer deaths of four employees of B. F. Goodrich in Louisville, Kentucky. We have also appraised you of our program to reduce employee exposure to VCM and of CONOCO's participation in an industry-sponsored survey of medical-histories of employees related to the VCM and PVC industry. We would like to take this opportunity to communicate the most current accurate information available to you concerning both the industry-wide status of the problems and our efforts to reduce employee exposure.

The number of confirmed cases of angosircoma among PVC or related industries remains at nine. Seven of these cases were in the B. F. Goodrich Plant at Louisville, Kentucky. All of these cases occurred to personnel with over thirteen years employment in the industry. Our Medical Department is continuing its regularly scheduled evaluation of employee blood-liver profile tests of CONOCO PVC and VCM workers. No unusual liver functions have been noted.

Effective March 22, 1974, OSHA issued emergency temporary health standards to protect workers exposed to vinyl chloride while proceeding with normal rule-making procedures for a permanent standard. The level of exposure to VCM was set at 50 ppm maximum. This standard applies to VCM in all types of industrial plants. Work procedures and monitoring requirements were defined specifically for the PVC industry. We expect the same requirements to apply to the VCM sector of industry as well. Some of the highlights of the requirements are:

- Daily or continuous monitoring of the work area at strategic locations.
- Employees entering areas not in compliance must wear full face, supplied air respirator or continuous flow type air supply.
- Employees shall be required to wear full body protective clothing and gloves prior to entering a "regulated" area. Prior to leaving a regulated area, protective clothing and equipment must be left at the point of exit.

- Where an employee has known contact with liquid VCM, showers are required as soon as possible.
- Storage of food, beverages, smoking, or chewing tobacco are prohibited in regulated areas.

These are by no means all of the requirements, but only some highlights. We have a great deal of work ahead to determine what the impact is on our procedures, and what are "regulated" areas within our plant.

The medical requirements for employees exposed to VCM have just been issued. We have not yet received a copy. However, CONOCO Medical has already issued requirements for our plant which include:

- Complete annual physical examination for every plant employee.
- Blood analyses every six months
- Urine analyses annually
- Chest X-ray annually
- Pulmonary tests annually

These requirements will be revised to comply with the regulations when they are received. We are currently working on a schedule for the expanded testing program.

CONOCO's management have made a commitment to reduce exposure to vinyl chloride throughout our operations. These efforts include utilization of instrumented monitoring systems; enforcement of strict rules where employee exposure might be a possibility; a high level of maintenance to prevent leaks in piping, valves, and similar equipment and improvements in ventilation. Portable vinyl chloride detection equipment is being used for initial plant exposure surveys. These surveys are being used primarily to determine engineering and maintenance priorities. Results from our survey so far show time weighted averages (TWA) of approximately the following levels:

	<u>Normal</u>	<u>Maximum</u>
Lab Analyses	5 - 10 ppm	50 ppm (1 time)
Pumper/Loader	3 - 5 ppm	66 ppm (1 time)
Block I & II Operations	1 - 3 ppm	4.95 ppm
Boardman	0 - .6 ppm	1.5 ppm
Chief	0 - .6 ppm	2 ppm
Maintenance	0 - .6 ppm	2.44 ppm

All VCM Plant Employees
Page 3
April 3, 1974

Paul Fetzner is keeping the record of the results. The data is available for review by individual employees, if requested.

In addition to the increased plant engineering and maintenance activities directed toward reduction of vinyl chloride exposure, work practice rules for potentially exposed employees are being reviewed and upgraded. As work procedures are revised, considerable effort by the individual employee will be required in order to work out the "bugs" so that we comply with the regulations as soon as possible.

As you know, several areas in our plant are currently under engineering review to determine feasible means to reduce potential vinyl chloride concentration sources. Some projects are already in the design stages for both EDC and VCM reduction:

- Tank Car Vent System (VCM)
- Vinyl Sampling Systems (VCM)
- Dock Vent Recovery System (VCM)
- C-103 Reboiler Clearing (EDC)
- C-102 Emptying and Dumping (EDC)
- S-109 (EDC)

Although it has not been proven that vinyl chloride was a direct cause of the nine angiosarcoma cases, the VCM Plant is actively working to identify and reduce possible employee exposure to vinyl chloride. Every effort is being made to identify possible vinyl chloride sources through testing and analysis in the plant. Once identified these sources will be reduced and/or eliminated through engineering controls, if possible.

We will continue to keep you informed of developments that occur related to this problem, and appreciate your help in defining the extent of our problem. We ask for your continued patience as we move into the more demanding phases of controlling the problem.


R. D. Gamblin
Plant Manager

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