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UNION CARBIDE INTERNAL ORRE PONDEN E

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Date January 28, 1974

Originating Dept.

Answering letter date

Subject Meeting of Technical Task Group on Vinyl Chloride Research Manufacturing Chemists Ass ciation Washington, D. C. January 25, 1974

CONFIDENTIAL

Attached are my notes from the Technical Task Group Meeting on Vinyl Chloride Research, held in Washington, D. C. on January 25, 1974, along with a suggested statement for general information.

R. N. Wheeler

R. N. Wheeler, Jr.

RNWJr/ra

Attachments

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MEETING OF TECHNICAL TASK GROUP
ON
VINYL CHLORIDE RESEARCH
MANUFACTURING CHEMISTS ASSOCIATION
WASHINGTON, D. C.

JANUARY 25, 1974

Mr. Anton Vitone, President of B. F. Goodrich, discussed the attached Press release briefly. (See also the article from the Wall Street Journal dated January 24, 1974.)

Dr. Creech, Medical Director for B. F. Goodrich's Lousville, Kentucky plant noted last summer that liver problems of employees warranted a study of liver function tests. Testing of 400 employees were given the SMA-12 blood test series of which four are related to liver function. Dr. Creech was identified as having previously noted the occurrence of acroosteolysis in B. F. Goodrich employees. Strict interpretation of th t st results identified 55 employees who are to be given additional follow-up. Diagnosis of angiosarcoma in the liver is possible only by liver biopsy.

The liver problems noted involved four employees — one 49 years f age with 24 years Company service, one 38 years of age with 16 years of Company service, one 58 years of age with 29 years of Company servic , and one 43 years of age with 19 years of Company service. One case of angio-sarcoma has been verified, two have been diagnosed, and one previous death from liver cancer is suspect. Angiosarcoma is rare with approximately 21 cases per year in the United States. Previously it has been believed t be caused by a material used in gallbladder X-ray technique (Thoratrast) or by intake of heavy metals. It is a tumor of the blood vessel lining. Because of functions of the liver with regard to blood, it is generally affected by th dis as . Because early diagnosis is very difficult, the disease is universally fatal. Other symptoms are upper intestinal bleeding or apparent cirrohosis of the liv r.

The men involved had been operator helpers or operators in the Vinyl R sin Plant. None had shown any symptons of acroosteolysis. The plant used vinyl chloride, vinylidene chloride, and methyl ethyl acrylate monomers. It is B. F. Goodrich's oldest plant. Operating area ventilation is not as good as later plants. Employees at the plant were not given routine physical examina-tions. B. F. Goodrich also makes butadiene polymers at this plant. Exposure to vinyl chloride at the Louisville plant is estimated to be 15-20 ppm TWA. Ventilation of operating areas was less than 6 air turnovers per hour.

Dr. Creech became concerned about the employee liver problems before Christmas and consulted with Dr. M. N. Johnson. Dr. Johnson, on January 14, 1974, employed Tabershaw-Cooper Associates, Inc. to study the epidemiology in depth, to provide help in the industrial hygiene area, and t act as a consultant.

The Stat of Kentucky requir s the reporting of occupational deaths or suspected deaths within 48 hours and, as a result, as soon as th evidence was reviewed and confirmed, B. F. Goodrich reported to NIOSH on January 22, 1974 and to the State of Kentucky on January 23, 1974. Dr. M. M. Key of NIOSH was apprised of the study data that the group had obtained from the European studies. (Permission to release was secured from the European companies.)

On January 23, 1974, the Plant Manager informed all employees of the situation. This was done by sitting down with small groups (12) and discussing what was known. Employees with specific personal questions w re referred to Dr. Creech. Plant Managers at other B. F. Goodrich resin plants will show Press release and hold meetings with employees. All customers of B. F. Goodrich are being mailed copies of the Press release. B. F. Goodrich feels this is a worker problem and will not involve customers.

Dr. Tabershaw reported that the ongoing MCA epidemiology study had covered 4,400 people with 1,600 more to cover. There had been 122 deaths in the 4,400 with no specific cancer outstanding. The data was not refined yet and more would be reported on February 20, 1974. Individual companies may obtain a summary of data on their employees, if they desir and if they pay Tabershaw-Cooper for the cost of preparation. (UCC's Texas City data has been given Tabershaw-Cooper Associates; South Charleston data will be supplied January 30, 1974.)

B. F. Goodrich is attempting to minimize employee exposure to vinyl chloride monomer by extensive testing and strict control of process leaks and vents. They have established a task group to reduce exposure levels to a maximum of 50 ppm. A report on instruments for monitoring vinyl chloride concentrations is attached. Dr. B. M. G. Zwicker said they would have a final report on monitoring systems about February 4, 1974 and would supply the report to interested companies. The address is :

Dr. B. M. G. Zwicker
B. F. Goodrich Company
6100 Oak Park Boulevard
Cleveland, Ohio 44131

Periodic gas testing prior to 1973 showed VCM concentrations well below 500 ppm. The samples showed, however, a high degree of variability. More intensive testing showed that VCM tended to layer in the air and diffuse very slowly as it was carried to exhaust systems. They also noted that exhaust system vents tended to be picked up by intakes, thus, they felt the proper control technique was to eliminate leaks and vents. They do not feel that permanently installed systems are useful in leak control.

B. F. Goodrich recomm nds th Century Organic Vapor Analyzer, Century Systems Corporation, Arkansas City, Kansas. The cost is $2,000 to $3,000 per instrument. It uses the flame-ionization principle and is portable. It is not, however, specific for vinyl chloride, and backup testing with flame-ionization chromatography is needed. In their Louisville plant, they have full-time leak testing and repair. Operation of the Century analyzer is a skilled job. The instrument is called intrinsically safe for explosive atmospheres. They have found no good way of determining employee exposur on a TWA basis (time weighted average).

General discussion identified the following governmental agencies that could become involved:

Center for Communicable Disease

National Cancer Institute

National Institute of Safety and Health

Food and Drug Administration

Department of Labor OSHA

Department of Transportation

Consumer Safety Group

The feeling generally expressed was that the problem would be best handled by NIOSH and that it would be to the industries advantage to keep it within NIOSH.

NIOSH people are at Louisville reviewing conditions and will report to a NIOSH meeting in Washington on February 1, 1974.

The Technical Task Group discussed and agreed on the following:

1. MCA will prepare a low key statement for the Press but will not release it unless pressed.

2. MCA will draft a letter to Dr. Marcus Key of NIOSH, reaffirming industry support and cooperation as offered in the meeting with NIOSH last summer. The letter will include a request for suggestions in how the MCA group can support NIOSH in the work required.

3. To continue MCA's postur of lead rship in this area, three subcommitt s wer d signated. Th se are identified as:

(a) Diagnostic and Medical Surveillance

(b) Work Practices

(c) Analytical Procedures

The Medical Committee named was:

Dr. M. N. Johnson	-Chairman	The B. F. Goodrich Company
Dr. E. Q. Hull		Union Carbide Corporation
Dr. C. U. Dernehl		Union Carbide Corporation
Dr. George Roush, Jr.		Monsanto Company
Dr. Ernest Dixon		Allied Chemical Corporation
Dr. B. W. Duck		The British Petroleum Company
Dr. R. W. McBurney		Diamond Shamrock Corporati n
Dr. David P. Duffield		Imperial Chemical Industries Ltd

The Work Practices Committee named was:

Mr. R. N. Wheeler, Jr.	-Chairman	Union Carbide Corporation
Dr. W. J. Boyne		Borden Chemical, Division of Borden, Inc.
Dr. Z. G. Bell, Jr.		PPG Industries, Inc.
Dr. W. Mayo Smith		Air Products & Chemicals, Inc.
Mr. A. W. Barnes		Imperial Chemical Industries Ltd
Mr. Howard L. Kusnetz		Shell Chemical Company
Mr. Richard Maier		Stauffer Chemical Company

The Analytical Procedure Committee named was:

Mr. R. Henderson	-Chairman	Olin Corporation
Dr. Z. G. Bell, Jr.		PPG Industries, Inc.
Dr. B. M. G. Zwicker		B. F. Goodrich Company
Mr. Flynt Kennedy		Continental Oil Company
Mr. A. W. Barnes		Imperial Chemical Industri s Ltd
Mr. H. Hoyle		Dow Chemical Company

The various subcommittees will report at the February 20 meeting on their plans of action.

R. N. Wheeler, Jr.

RNWJr/ra

Attachments