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JUN 28 1971

J.J.W.

UNION CARBIDE CORPORATION
CHEMICALS AND PLASTICS
ENGINEERING
BOUND BROOK, NEW JERSEY

MEMORANDUM

June 24, 1971

To: Mr. R. F. Valois
Chemicals and Plastics
Bound Brook, New Jersey

Cc: Mr. R. E. Byrne - Niagara Falls
Mr. Frank Cozzarelli - 312
Mr. M. G. Ferri - 312
Mr. D. H. Frodey - 312
Mr. R. E. Graebert - 312
Mr. C. L. Higgins - 312
Mr. H. E. Kasting - 312
Mr. N. H. Ketcham - 511
Mr. L. J. LaFrance/ - 4th Floor
Mr. P. W. McDaniel
Dr. C. S. McKinley - 312
Mr. R. E. Nicolson - 312
Mr. H. L. Robinson - 511
Mr. S. P. Spence - 312
Mr. J. J. Walker - 511
Mr. J. P. Zuccarelli - 312

From: Mr. R. W. Schwartz

Subject: Safety Meeting
Chemicals and Plastics Operations
General Electric Company, Hooker
Chemical Corporation and Union
Carbide Corporation

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R.R.A.

Through the efforts of Mr. Kenneth Barr, Manager - Phenolics Product Section, General Electric Company; John J. Lenihan, Vice-President and General Manager of the Durez Division of Hooker Chemical Corporation and Mr. R. E. Nicolson, Operations Manager - Thermosetting and Epoxy Resins of Union Carbide a meeting of Safety/Medical personnel of the three (3) companies met at the Hooker Chemical Corporation plant in Niagara Falls on June 18, 1971.

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The intent of the meeting as understood by the conferees was to discuss safety problems incident to the handling of asbestos in the manufacture of phenolic resins. In actuality the discussion was broader and encompassed a number of problems involving safety in chemicals and plastics operations.

Those in attendance at the meeting were as follows:

General Electric Company:

David H. Guilbault
Safety Administrator
General Electric Company
Pittsfield, Massachusetts

David G. Paff, MD
Associate Medical Director
General Electric Company
Pittsfield, Massachusetts

Hooker Chemical Corporation:

Louis W. Rohrdanz
Corporation Coordinator -
Safety & Security

Union Carbide Corporation:

R. W. Schwartz
Process Safety & Fire Protection Engineer
Engineering Department
Bound Brook, New Jersey

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On the subject of asbestos, the following major points were discussed:

1. The current and proposed Threshold Limit Values were discussed. It was agreed that the engineering solution to the problem of meeting the Threshold Limit Values lay in capturing the material at the source as efficiently as possible and checking on the effectiveness of the system by monitoring the area periodically.
2. Dr. Paff described some of the current thinking on the dangers of asbestos to human beings. I will not attempt to report in detail what he said except to indicate that the effect of asbestos on human beings is not completely understood nor has sufficient work been done to be able to say definitely how such exposure affects the human being. It must, under certain conditions of fiber size and concentration, be considered dangerous to humans. Dr. Paff is sending each one of us a summary of his remarks on this point, which will be available for anyone who wishes it.
3. With respect to asbestos, as a conversion factor, two (2) million particles (of asbestos) per cubic foot of air equals 10 to 12 fibers greater than five (5) microns in length. This is the criteria used by the General Electric Industrial Hygiene Department.
4. Hooker Chemical Corporation reports that they use Mine Safety Appliance Company Dust - Foe No. 66 Respirator for protection of persons exposed to asbestos. General Electric Company stated they also use this unit.
5. Dr. Paff recommended that each of us obtain and study a document called "Documentation of Threshold Limit Values" published by the American Conference of Governmental and Industrial Hygienists. This document gives the pertinent backup scientific information and data on which the Threshold Limit Values for various products were based. He states that it will substantially increase our knowledge of how the Threshold Limit Values were reached, and the significance of the data.

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6. The writer mentioned the availability of pelletized asbestos as marketed by Union Carbide Corporation's Mining and Metals Division. Both Hooker and General Electric were very interested and asked for samples and literature, which I later requested through Mr. Robert Byrne of Union Carbide's Mining and Metals Division in Niagara Falls, who will take the necessary follow-up action.
7. There was a limited discussion on different closed systems for handling asbestos starting with the receiving point and concluding with the asbestos blended into the resin. General Electric and Hooker Corporation indicated a number of trials but no real success in this field.
8. Considerable discussion was held relative to the problem of capturing asbestos dust in associated operations such as the handling of the empty bags. All participants agreed that activities at their company along these lines were not completely satisfactory. Hooker Chemical Corporation appeared to have the best approach wherein they dropped "empty bags" by gravity through a closed chute into a compacting device which densifies, wraps and binds the bags, which are then trucked to a landfill site and buried. (Union Carbide practices at Bound Brook are particularly dangerous in that the bags are thrown rather indiscriminately on the floor after emptying, then conveyed by a four wheel truck to a loading dock where they are turned over to a private scavenger, possibly without warning of the hazard. The ultimate disposal practice is not known.) It was reported that asbestos can be incinerated to destruction at temperatures over 900°F.

Many items of mutual interest in industrial safety in chemicals and plastics operations were discussed. Examples would be the difficulties and shortcomings of ventilation projects, both building and process. All admitted considerable lack of success in achieving good system design and operation. It was mentioned that this could be the subject for another meeting of this group.

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Considerable time was spent discussing procedures requiring coordination among Engineering groups, Plant Safety personnel, and Production people. I believe that Group I Engineering Department procedures excel in this field.

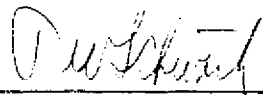
All were concerned about the implementation of the new Federal Occupational Safety and Health Act. The sheer volume of the law and the possible changes in present practices are the principal concerns.

It was the consensus of the group that many high noise level problems would have to be resolved by the use of ear protection as opposed to reduction of levels by engineering and construction means. To some degree this is contrary to the specific law which states that ear protection can not be used where engineering solutions are possible (Walsh-Healey Act). General Electric is sending each of the conferees a technical bulletin on personal "air plugs" developed by their company.

The short discussion was held on the explosibility of the fine phenolic resins. It was agreed that current industry practices in fire protection and explosion venting, backed up by facilities engineered to minimize the problem, and good housekeeping were the solution to the problem.

Those persons involved in this meeting were very compatible, interested in the broad field of safety in chemicals and plastics, and were of the opinion that considerable benefit would accrue to all from future meetings of this group particularly as the Occupational Safety and Health Act implementation progresses. No specific action was taken to arrange any meeting in the future.

From a personnel safety and materials handling standpoint, I would urge that Union Carbide's effort in the field of pelletized asbestos and bulk handling closed system activities use in phenolic production, be pursued vigorously, as possible solutions to the potentially dangerous handling procedures at Bound Brook.


R. W. Schwartz

RWS/jlb