

MINUTES

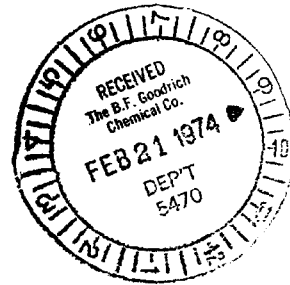
VINYL CHLORIDE SAFETY ASSOCIATION MEETING

Sheraton Hopkins Motel, Cleveland

February 8, 1974

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VINYL CHLORIDE SAFETY ASSOCIATION MEETING

Sheraton Hopkins Motel, Cleveland

February 8, 1974

Joseph Mudd, the chairman of the Vinyl Chloride Safety Association, opened the meeting. There were a total of 31 companies represented with 61 total people. A detailed attendance list is attached to this report.

1. People were very concerned about the implications that PVC dust may be a problem. No one could recall any problems from a health standpoint with PVC dust. Most people felt that NIOSH was concerned with the amount of monomer in the dust.
2. Union Carbide, Dow Chemical, and BFG are the only companies monitoring for vinyl chloride on a routine basis. PPG and Dow use a personnel monitoring system. In this monitoring system a carbon tube is attached to the man and he carries it with him throughout the course of his work. Dow monitors every job one day a month with this device. In addition to personnel monitoring, Dow has permanent sample locations. They verify the data from the personnel monitoring with the permanent sampling locations and generally get good agreement.

I talked to Bob Dostal of Dow Chemical after the meeting knowing that they produce saran at Midland and use vinylidene chloride as well as vinyl chloride. They do monitor for all the chlorinated hydrocarbons with their gas chromatographic analysis system. He said that they know of no problems with vinylidene chloride and vinyl chloride and its toxicology effect upon the employees. We may want to get together and discuss this with Dow personnel at a later date. The buildings at Midland are still open-air construction, and are all winterized, similar to the building we saw in our purchase of the 90 series technology.

3. Hooker Chemical Company in New Jersey was visited by NIOSH approximately one week ago. Don Lassiter, Ph.D., who had visited our Louisville plant, was a member of the inspection group. They made no comment regarding the plant; they just made a tour of the plant facilities.
4. Joe Mudd announced that NIOSH is having an open session to review the MCA information in Cleveland on February 12 at the Sheraton-Hopkins Motel. All the producers were encouraged to join MCA to participate in gathering of data, analytical procedures, etc., to cope with the current situation. About 25% of the people reported they did not currently belong to the MCA.
5. Herm Waltemate announced that he will review the NIOSH recommendations with Vern Rose at our Pedricktown, New Jersey, plant on Tuesday, February 19, 1974. A detailed discussion of the NIOSH standards for polymerization plants

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was then conducted. The question of PVC dust came up again regarding how frequently PVC dust should be cleaned off of overhead structures, conduits, and in places where it tends to collect.

6. Protective clothing was discussed; no one was using impervious clothing for poly cleaning. No one provides a daily change of clothing. Pantasote provides some clothing, but does not launder it. About 50% of the companies do provide some clothing.

Firestone indicated they pay for time for their men to take showers, but they do not inforce them to do so.

Tenneco reported they do not eat in the process area. Most companies do allow their people to eat in the process area.

Three people use airline respirators to clean polys -- American Chemical, ICI, Ltd., and Goodyear.

Of the companies represented, two companies have had liver function tests before the current problem. Now, 90% of them report they will institute such tests. Shell runs liver function tests and a kidney test as a condition of employment.

7. The monomer content of finished PVC was discussed briefly. Some people noted that recently there have been explosions from processing of PVC resin with Henschel mixers (this was previously reported).

One company, Universal PVC, feel they cannot live with the 50 ppm max. for ambient vinyl chloride concentrations. All companies represented were concerned about meeting the 50 ppm max. if it becomes a standard. Most companies had not done any extensive monitoring of their work areas.

8. Dow indicated that for approximately \$200 a company could start personnel monitoring with their equipment. In addition, a gas chromatograph would be required for analyzing the material absorbed on the carbon.
9. Mr. E. J. Young, of ICI in England, reported a case of angiosarcoma. This man was killed in an automobile accident at the age of 71. He had worked for 20 years in PVC. The man was employed in the oldest polymerization plant, and did primarily cleaning and running of the polymerizers. The man was not exposed to any other monomers except vinyl chloride. The diagnosis was made after the automobile accident, and was definitely confirmed to be angiosarcoma.

Since autopsy reports are the only way to confirm angiosarcoma, it should be pointed out that the reports should be checked for possible lung problems. This might help pin down any effects of PVC dust.

10. I indicated the type of equipment BFG was using for the analysis of vinyl chloride in their PVC buildings by using the Bendix instrument as a monitoring device with the OVA used to hunt leaks. Many other companies indicated they were going to purchase and install similar equipment.

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It was reported that Bendix also has flame ionization chromatographs which could be used to differentiate different types of chlorinated materials. It was estimated that a total system for ten points would cost about \$16,000. Airco is putting in such a system, but they are using a Beckman flame ionization chromatograph. Dow reported that they suck samples into their analysis point from at least 250 feet away.

11. PPG reported they get values of one part per million and less in their open-air vinyl chloride manufacturing plants.
12. General Tire made a presentation on how they remove the vinyl chloride from their polymerization vessels after recovery. They have 4,000 gallon polymerization vessels and are required to enter them every third time for polymerizer cleaning. They now plan to install a THF solvent cleaning system. A few years ago they added a gas holder to vent vinyl chloride from the poly after recovery. Since that time, they have added water to the polymerizer at the end of the polymerization and allowed the monomer in the poly to vent to the gas holder. They indicated that the additional vinyl chloride monomer savings paid for this installation. They also vent recovery vents and pumps into gas holders which are maintained at about 1 psig. Their polys apparently have reflex condensers which are filled with water at the same time as the poly is filled. There is about a five to eight gallon free space after this system is completely filled. A total of thirty minutes is required for this operation from the time the charge is completed until the vessel is opened and ready for cleaning by entry.

In addition to removing most of the vinyl chloride from the poly, this system has many advantages. It provides a uniform load for the recovery operation and allows them to safely vent 10,000 pounds of vapor (one poly charge) in a few minutes to prevent any loss to the atmosphere. It also provides a system to vent their pumps, charge bottles, to a gas holder so that it minimizes vinyl chloride lost to the atmosphere.

The water is added to the polymerizer through a Fitterhoff rinse valve. This is an external valve that is pushed into the reactor when rinsing is required. These valves are then pulled up before the charge is initiated. The waste water from the reactor flush goes to a waste treatment and the vinyl chloride content is reduced to approximately 10 ppm max. before exiting into the lake. Untreated water is used for this flushing operation (hot water is used to help reduce the vinyl chloride content of the water).

ICI reported that they pull vacuum, break the vacuum with nitrogen, pull vacuum the second time, and break with air before entering to clean the polymerizer.

Diamond Shamrock reported that they can get down to below 50 ppm in ten minutes with their evacuation system to be used prior to poly entry.

13. Bob Mehall of Diamond Shamrock reported that they have programs to keep people out of the areas above 50 ppm max. They have found by sampling with the OVA 200-500 ppm levels in their polymerization areas. They hope to be able to

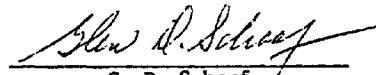
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reduce the frequency of entering by cleaning when they start using their HRC system. They are now implementing a daily personnel monitoring program and plan to monitor each employee one shift per week. All Diamond employees are offered the SMA 12 test. In case of any abnormality, they schedule a personal conference with the company physician. They also plan to provide SMA 12 tests for all technical employees. Diamond reported they also have a gas holder in their polymerization process.

14. The meeting ended as we were informed that Tenneco had just got a call from NIOSH and they plan to visit their plant next week.

It was agreed that the Vinyl Chloride Safety Association would meet again in approximately two months in Cleveland to review the current situation.


G. D. Schaaf

GDS/clb
Att.
2/19/74

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ATTENDEES OF THE
VINYL CHLORIDE SAFETY ASSOCIATION MEETING
FEBRUARY 8, 1974

NAME	COMPANY	LOCATION
✓ B. WORTHINGTON	DIAMOND SHAMROCK	CLEVELAND
✓ C. H. KIM	UNIROYAL, INC.	PAINGSVILLE, OHIO
✓ C. B. WESTERHOFF	" "	" "
✓ F. TILLSON	CONOCO CHEM	OKC OKLA
✓ IAT DIXON	GOODYEAR	PLAQUEMINE LA
✓ H. A. LLOYD	GEORGIA-PACIFIC	PLAQUEMINE, LA.
✓ HARRY LOGLIN	ETHYL CORP	BATON ROUGE LA
✓ P. L. BYGART	TENNeco	FLEMINGTON N.J.
✓ R. E. LARANG	CONOCO	POCAHONTAS OKLA
✓ W. C. KOCH	Allied Chem.	MORRISTOWN, N.J.
✓ J. C. PALINSKY	Universal P.V.C.	PAINEVILLE, Ohio
✓ C. E. GREMILLON	CONTINENTAL OIL	WESTLAKE, LA.
✓ A. F. BROENWIELSIEK	ETHYL CORP	BATON ROUGE, LA
✓ Robert Lynch	PPG	Lake Charles, La
✓ George Benin	Borden	Illipoli, Ill
✓ C. W. Wadelin	Goodyear T & R Co.	Res. Div., Akron, Ohio 44316
✓ Glen H. Schief	B.F. Goodrich	Cleveland.
✓ Herman Waltemate	B.F. Goodrich Chem.	Cleveland
✓ J. Robert Mehall	Diamond Shamrock	Cleveland
✓ F. R. KLEBACHER	OLIN CORP	ASSONET MASS
✓ David L. Gendron	Monsanto Co.	Springfield, Mass
✓ GAR W. FLETCHER	" "	" "
✓ Roy STARK	PPG	1775134000, Pa
✓ Wesley S. Allen	" "	" "
✓ Bill Kubat	Hooker Chemical	Burlington, U.S.
✓ Bill Madden	Firestone Plastics Co	Pottstown, Pa
✓ Brian D. Cole	Hooker Chemical	Burlington NJ
✓ F. L. ANDERSON	STOFFER	DELAWARE CITY, DE.

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Name	Company	Location
C. A. Christian	DOW	Fresno, CA
ROLF KOGSTAD	NORSK HYDRO	N.Y.
E. J. Young	ICI	Black Pool ENG
A. L. Donaldson	OHIO	BRANDENBURG KY
J. R. Mudd	General Tire	Ashtabula Ohio
D. A. Foss	BORDEN Chem	LEOMINSTER MASS.
Walt M. Jeff	UNIRoyal Chem.	Painesville, Ohio
B. Copes	G.A.C.C.	FITCHBURG MASS
Paul Cohen	Great Am. Chem. Corp.	" "
✓ John Floros	" "	" "
✓ Brian Kerckhoff	Esso Chemical Can	Scraper Ont. 500
✓ A. W. Furman	Great Am. Chem	Fitchburg Mass.
✓ R. L. Frantz	Union Carbide	Texas City, Texas
✓ S. H. Krieger	Imperial Oil Ltd	Toronto Canada 500
✓ Charles Gimlett	General Tire	Ashtabula Ohio
✓ K. K. SHEH	Pantacote Co.	Passaic. N.J.
R. L. Lammore	General Tire	Akron, Ohio
✓ H. E. Kling	American Chemical	Long Beach, Calif
✓ J. M. Linnson	PPG CARIBE	PONCE, PR
✓ Madder	Firestone	POTTSTOWN NJ
✓ Roy W. The Cure	Pantacote	Passaic NJ -
✓ James M. Lawrence	Diamond Shamrock	Cleveland OH
✓ Donald G. Miller	Shell Chem	Houston
✓ Guy Pappas	Pantacote Co	St. Petersburg, FL
✓ J. J. Jones	B.P. Chemicals	Research Centre Sunbury &
✓ S. K. LAW	KEYSER-CENTURY	SANCTUS. CALIFORNIA
✓ R. W. Lander	General Tire	Akron, OH
✓ Fred Hall	Georgia Pacific	Plaquemine, La.

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<u>NAME</u>	<u>COMPANY</u>	<u>LOCATION</u>
Deary Cope	STAUFFER Chem.	Delaware City, De
HERBERT H. KASTER	HOOVER Chem	BURLINGTON N.J.
DARWIN E. RICHARDS	TENNELL CHEMICALS	SANDLER BROOK, N.J.
✓ John T. BARR	AIR PRODUCTS	WAYNE, Pa.
DOSTAL		
Mal TROWbridge	Goodyear	Magara Falls

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