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HEALTH, SAFETY & ENVIRONMENT COMMITTEE

Boston Marriott Hotel
Two Cambridge Center
Cambridge, Massachusetts

Wednesday
September 27, 1989
8:00 a.m.

Attendees:

Jeff Bonnette, Occidental Chemical
Frank Borrelli, Georgia Gulf
Larry Burmeler, Dow Chemical
Peter de la Cruz, Keller and Heckman
C.A. Gellner, CertainTeed
W.C. Holbrook, BFGoodrich Company
F.G. Jeanson, Vista Chemical
James Kachtick, Occidental Chemical
Jim Kiel, BFGoodrich Company
Joe King, Occidental Chemical
Joe Ledvina, Vista Chemical
J. W. Lewis, BFGoodrich Company
J. Cris Lunn, Borden Chemicals & Plastics
Bob Oubre, Dow Chemical
Charles R. Parnell, PPG Industries
Meredith Scheck, Vinyl Institute
James Turner, Dow Chemical
Paul Usinowicz, Air Products
John Yonge, Shintech Inc.

NOTE: Action items agreed to are attached to these minutes.

I. OPENING OF MEETING

The meeting was convened at 8:00 a.m. jointly by W.C. Holbrook and Frank Borrelli, the outgoing and incoming chairmen respectively. Mr. Borrelli noted the contribution made by Mr. Holbrook during his tenure as chairman of this committee and its SPI predecessor, the Vinyl Manufacturing Technology Committee. A round of applause followed.

II. APPROVAL OF MINUTES OF MAY 8, 1989 COMMITTEE MEETING

Mr. King moved that the minutes of the May 8, 1989 committee meeting be approved as disseminated. The motion was seconded by Mr. Oubre and approved by voice vote.

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III. WASTE MINIMIZATION PRESENTATIONS AND DISCUSSION

Please note copies of materials presented during the waste minimization presentations are enclosed with the minutes of this meeting where noted. This material replaces detailed notes on the presentations. Further questions can be directed to the speaker.

A. Thermal Destruction of VCM/EDC Heavy Ends With HCl Recycle

Speaker: J. Cris Lunn
Borden Chemicals and Plastics
(504)-673-0663

Slide material enclosed.

B. Fugitive Emissions Bagging

Speaker: Frank Jeanson
Vista Chemical Company
(601)-369-3637

Slide material enclosed.

In response to questions, Mr. Jeanson noted that the contractor was TEAM, and commented that approximately 30-40 valves per plant were involved in the study at a total cost of approximately \$65,000. He noted that the study had reduced to less than one-third the emissions figures in comparison to other estimation methods. The committee discussed whether there was interest in pursuing this type of project throughout the vinyl industry. Messrs. Jeanson and Ledvina agreed to answer any further specific questions about the study. It was further agreed that this item would be included on the agenda for the next committee meeting.

C. AquaDetox tm

Speaker: James Turner
Dow Chemical Company
(517)-636-3631

Two papers referred to during the presentation are included:

1. AquaDetox Stripping System For Groundwater Remediation: Presented May 1988 at the Groundwater Protection Seminar.

2. Removal and Treatment of Dissolved and Floating Organic Compounds in contaminated Groundwater: Strang, Tawney and Klumpp, Dow Chemical Company

D. Waste Reduction of Packaging Materials

Speaker: Jim Lewis
BFGoodrich Company
(216)-447-7979

Slide material enclosed.

E. Team Approach To Waste Water Reduction

Speaker: Charles Parnell
PPG Industries Inc.
(318)-491-4858

Summary of comments and insert from company's March 1989 newsletter enclosed.

F. Heavy Ends Reduction at a PVC Plant

Speaker: Jim Kachtick
Occidental Chemical
(713)-884-4110

IV. REGULATORY ISSUES

A. EPA Land Disposal Rulemaking: FO24 Waste

Mr. de la Cruz reviewed the substance of his contacts with the EPA Office of General Counsel regarding the EPA's final rule for land disposal restrictions under RCRA for the second one-third of the schedule of restricted wastes (54 FR 26594; June 23, 1989); Specifically, as it relates to whether the proposal indirectly changes the definition of wastes from chlorinated aliphatics production (FO24) to include waste waters. A September 14th letter from Mr. de la Cruz to Mrs. Scheck was referenced in which Mr. de la Cruz asked whether the committee desired an interpretive letter from EPA that would state clearly that waste waters are not FO24 wastes. Mr. Ledvina, noting that this is a monomer plant issue, indicated that his company was interested in pursuing the issue with EPA's Office of General Counsel. There being no discussion to the contrary, Mr. de la Cruz was asked to contact EPA regarding such an interpretive letter.

The committee held a discussion regarding definitions in the background document and reviewed individual company

determinations regarding the interpretations of FO24 waste generation. Following this discussion, Mr. Holbrook asked whether there was interest in pursuing the subject. The following companies indicated an interest: PPG, Vista, Borden, Dow, Occidental Chemical, Georgia Gulf, and BFGoodrich. Mr. Lewis of BFGoodrich volunteered to chair a task force on the issue.

B. California Air Resources Board: Draft Report on Vinyl Chloride

Mrs. Scheck noted that comments had been filed on behalf of SPI with the CARB regarding their draft report on vinyl chloride. She noted that these comments had been prepared with the assistance of Dr. John Krokosky, who represents Dow on the VI Technical Committee.

C. SPI v. EPA: EPA Proposed Rulemaking - Revisions to Vinyl Chloride Standard

Mrs. Scheck distributed copies of the Notice of Proposed Rulemaking (54 FR 38939; September 21, 1989) with regard to the NESHAPS-Vinyl Chloride, which contains a summary of EPA's review and responses to the issues presented in SPI's petition for reconsideration and stay of the revisions to the Vinyl Chloride Standard promulgated in September 1986. The committee discussed the contents of the proposed rulemaking. It was decided that the VI would request to participate in the public hearing should one be scheduled. It was further agreed that Mr. de la Cruz would circulate VI draft comments with a meeting scheduled if substantial revisions to the draft are necessary.

D. OSHA: EDC PEL Update

Mr. de la Cruz reviewed for the committee, the status of litigation as it relates to OSHA's Final Rule amending the air contaminants standard by establishing new permissible exposure limits and STELs for 428 substances including EDC (54 FR 2332; January 19, 1989). Mr. de la Cruz noted the August 15, 1989 interim settlement agreement between OSHA and SPI, under which OSHA permits the use of half-mask and full-mask air purifying respirators under certain conditions to achieve the PEL for EDC. He noted the contributions made by Loren Anderson of PPG and Robert Adams of Occidental Chemical in this activity and the development of a test program to gather additional appropriate data.

E. SARA Form R's - 1988 Data

Mrs. Scheck distributed charts reflecting input received from VI member companies reviewing Form R submissions on vinyl chloride monomer and ethylene dichloride. Mr. Holbrook asked for a roundtable discussion on what individual companies are doing under CMA's Responsible CAIR Program to demonstrate reductions in waste. Mr. Ledvina urged increased sharing of appropriate technical information by VI members, recognizing that some individual company activities may not be appropriate to be shared. Mr. Yonge noted that companies are already being asked by regulators why emissions numbers vary from one company to another. Mr. Holbrook asked for discussion regarding whether the group should further explore a) whether there should/could be a zero discharge goals and b) what programs, if any, should be developed. The committee agreed that the concept was worth further discussion. The following individuals expressed an interest in exploring the concept: Lunn, Oubre, King, Borrelli, Usinowicz, Holbrook, Yonge.

Mr. Ledvina addressing the issue of PVC scrap generated by plants and compounders, suggested that the industry may be able to collectively address the issue. Following a brief discussion, it was agreed that Messrs. Ledvina and Yonge would further discuss the issue for consideration by the committee at its next meeting.

F. EPA Acute Hazardous Events Data Base

Mrs. Scheck reviewed activities pursued on behalf of the VI to review the contents of EPA's Acute Hazardous Events Data Base as it relates to VCM and PVC and noted its incorporation in pending Clean Air Act legislature proposals.

V. ENFORCEMENT UPDATE

Mr. King summarized the Enforcement Update report he was scheduled to make at the September 28th meeting of the Vinyl Chloride Safety Association. The committee also discussed recent enforcement activity undertaken by EPA Regional Offices.

VI. DISCUSSION OF LABELING ISSUES

Mr. Kiel, of BFGoodrich, reviewed labeling regulations in New Jersey to be effective March 1, 1990 and noted the implication these regulations potentially have on companies that ship products to customers in New Jersey. He noted that the

regulations require the listing of the top five ingredients on the label, as well as the use of CAS numbers.

Mr. Holbrook reviewed the discussions at the May 8th joint meeting of the Legal and Health, Safety & Environment Committees regarding MSDS and labeling practice issues and noted that the committee was under the impression that the issue was to be further discussed at this session. Mrs. Scheck was asked to clarify with Mr. Luss whether he intended further discussion on the issue and how he wishes the committee to proceed.

VII. NEW BUSINESS

Vinyl Chloride: RQ Level

Mr. Holbrook asked for discussion as to whether there was any interest within the industry in petitioning the EPA to raise the RQ for vinyl chloride. The committee discussed current reporting practices relating to relief valve discharges, and also discussed current regulatory/enforcement initiatives in this area. After discussion, the committee agreed not to pursue the suggestion at this time.

VIII. NEXT MEETING DATE

The next meeting of the committee was tentatively scheduled for Tuesday, January 23, 1990 to be finalized at the chairman's determination.

Respectfully submitted,

Meredith N. Scheck

Meredith N. Scheck

ACTION STEPS AGREED TO AT THE HSE MEETING ON SEPTEMBER 27, 1989

1. FO24 WASTE ISSUE

P. de la Cruz to contact EPA regarding interpretive letter on waste water issue. Interest in pursuing definitions in background document was discussed. Jim Lewis, BFGoodrich Company (216)-447-7979 agreed to chair the task group on issue. The following individuals/companies expressed interest in being involved:

Charles Parnell, PPG - (318)-491-4858
Joe Ledvina, Vista Chemical - (713)-588-3446
J. Cris Lunn, Borden - (504)-673-0663
Frank Borrelli, Georgia Gulf - (302)-323-8118
Bob Oubre, Dow Chemical - (409)-238-9455
Jim Kachtick, Occidental - (713)-884-4110

2. REVISIONS TO VINYL CHLORIDE STANDARD AS PUBLISHED SEPTEMBER 21, 1989 (54 FED. REG. 38938)

VI to request to participate in public hearing if one is held (done October 5, 1989). Peter de la Cruz to provide draft ~~comments~~ in sufficient time for scheduling of special meeting regarding necessary revisions.

3. DISPOSAL OF SCRAP PVC SOLID WASTE GENERATED BY PVC PLANTS/COMPOUNDERS

Joe Ledvina of Vista (713)-588-3446 and John Yonge of Shintech (409)-233-7861 agreed to review issue and develop recommendations for the committee to discuss regarding industry position/possible activities.

4. TITLE III EMISSIONS: DISCUSSION OF ZERO DISCHARGE CONCEPT

As part of the discussion on SARA Title III emissions and current CMA activity under the CAIR Program, the following individuals agreed to a) further explore whether there should/could be a zero discharge goal, and b) what programs if any, should be developed to achieve this goal:

J. Cris Lunn, Borden - (504)-673-0663
Joe King, Occidental - (215)-326-6749
Paul Usinowicz, Air Products - (215)-481-4153
John Yonge, Shintech - (409)-233-7861
Bob Oubre, Dow Chemical - (409)-238-9455
Frank Borrelli, Georgia Gulf - (302)-323-8116
W. C. Holbrook, BFGoodrich - (216)-447-7925

5. MSDS - HAZARD COMMUNICATION STANDARD DISCUSSION

Group reviewed discussion at joint Legal-HSE Committee Meeting in May 1989 related to MSDS - Hazard Communication Standard. Scheck to ask Luss whether Legal Committee has any further interest in pursuing issue and if so, to schedule discussion for next committee meeting (tentative date January 23, 1990).

from: J.H.



The Vinyl Institute, A Division of The Society of the Plastics Industry, Inc.
Wayne Interchange Plaza II, 155 Route 46 West, Wayne, New Jersey 07470, (201) 890-9299

of issuing this paper was noted inasmuch as the issue of vinyl chloride monomer generation has been raised in Wisconsin and California. Roy Gottesman noted that an EPA contractor had recently made inquiry on the impact of PVC in landfills, apparently related to this issue. It was agreed that John Krokosky will make the necessary modifications and have the paper in final form to Roy Gottesman by October 6th. The paper will then receive legal review, and will be issued as a technical information sheet, this to be followed by appropriate public relations releases via the Edward Howard and Company agency.

The possibility of publishing this in a technical journal will be pursued separately as well as possible presentations at appropriate conferences.

Assignment: John Krokosky is to complete the modifications of the paper and submit same to Roy Gottesman by October 6th.

Roy Gottesman is to coordinate the publication of the paper as a technical information bulletin from the Vinyl Institute, as well as appropriate public relations releases.

2. Indoor Pollution From PVC

Frank Borrelli reported that he has now received information relating to phthalate plasticizer releases, which indicates that this should not create an indoor pollution problem. This information will be incorporated into the balance of the paper, which should be completed in October.

Assignment: Frank Borrelli is to complete the rewriting of this paper and to submit it to Nora Jacobs as soon as possible during the month of October.

B. Pipe Issues

1. Update on California EIR Status

Roy Gottesman reported on the historical and current status of the California EIR. The Draft EIR has been issued and is very favorable toward plastic pipe. The draft report indicates no adverse environmental impact would be caused by the expanded

use of plastic pipe. Drs. Hirschler and Hinderer and Don Goodman served as consultants to third party experts who will appear at the hearings on behalf of the plastics industry. The hearings were scheduled to be held on September 26th in Los Angeles, September 27th in Oakland and at the request of the union, a third hearing date on October 5th in Sacramento has been added. The plastics industry and the union will only have one opportunity to speak at one hearing.

Roy Gottesman noted that a coordinated effort involving public relations, the availability of press kits and media briefings in selected markets has been developed.

2. Pipe Resource Organization (PRO)

Al Reventas reported on the activities of this group. He noted that no additional issues have been raised requiring Technical Committee consideration. A meeting with code consultants has been planned for October 10th. (Since the date of this meeting the Code Consultants Meeting has been rescheduled to October 24th.) The purpose of this meeting is to focus efforts on all code matters, and to develop an overall strategy for the forthcoming year. Roy Gottesman and Fred Clarke reviewed the make-up of the various model code bodies including BOCA, SBCC, ICBO and the NEC published by NFPA, and indicated those areas that are covered by Dr. Clarke and those which are monitored by Dr. Joe Zicherman. At the present time, our consultants are mainly involved in monitoring activities and reacting to proposals. We do nothing pro-active at this point. The purpose of the meeting therefore, will be to develop a strategy for the future.

Brief discussion was held on individuals who could participate in these meetings. Dr. Carroll volunteered the services of Don Goodman and Steve Hookanson of Vista Chemical will represent the Electrical Materials Council, while Al Reventas of Shintech will represent PRO.

Assignments: Chuck Bush is to investigate Goodrich involvement in this code consultant activity, and preliminarily suggested Peter Lloyd.

Frank Borrelli is to investigate Georgia Gulf involvement and will advise Dr. Gottesman.

C. Fire and Combustion Toxicity

1. Smoke Toxicity

Marcelo Hirschler provided a review of current activities on smoke toxicity. Some apparent problems relative to the listing of PVC pipe in New York State were discussed.

There was also discussion on recent activity in New York City, where the agency certifying building materials proposes to use the University of Pittsburgh test results divided arbitrarily by 7 for all chlorine or fluorine-containing products. The reason for this arbitrary factor is not founded in any substantive science, but rather because the inventor of the testing procedure, Dr. Yves Alarie has proposed it. With this factor, all PVC products would fail. A meeting sponsored by SPI was held on September 6th to review the situation, and to establish a coalition to see what might be done. Marcelo Hirschler and Roy Gottesman attended this meeting and reported that current plans are for a second contact with Marvin Hassman in New York City by Pat Toner, as well as a meeting by the Wallcoverings Trade Associations with Rosalyn Anderson. Further, separately, Hank Roux of Armstrong is trying to obtain a different "playing field".

2. NIBS Toxic Hazard Assessment Program

This program was aimed at developing a potential toxic hazard test, rather than toxic potency. The program has been supported by the plastics industry and the Vinyl Institute contributed \$10,000 to the development. In its current stage of development, the test results in an IT50 and rigid conduit does not produce satisfactory results. Marcelo Hirschler indicated his belief that the major technical deficiency in the test is that it does not produce carbon monoxide when the material being burned contains hetero elements. Marcelo Hirschler indicated his belief that a modification of the test is necessary to more nearly relate to actual fire conditions. The NIBS Steering Committee met recently and at that time, it was decided not to send the test onto ASTM, but to expand the working group and address the issues raised at that meeting.

Subsequently, another group meeting within SPI reconsidered the issue because there are insufficient funds to further develop the test at NIBS.

In the discussion that followed, it was Dr. Hirschler's recommendation that the Vinyl Institute contribute funding and work to modify the test. Roy Gottesman offered his view that since NIBS does not have money to proceed, a better venue for further development of the test would be ASTM. He suggested that the test be moved into ASTM with appropriate caveats including the fact that the test is not fully developed. Such an approach would be consistent with the needs and expectations of other members of SPI.

Debbie Neale questioned the necessity for submittal to ASTM as she does not sense the urgency for having this information available as there is not current legislative pressure on the issue. The assignments listed below were agreed upon:

- Fred Clarke is to work with Dr. Hirschler to develop a technical position paper dealing with the NIBS test as currently developed and the strengths and shortcomings in the testing procedure.
- Debbie Neale will work with Lew Freeman and Pat Toner at SPI advising them of her views that there is still time in the legislative process before any actions are required and attempting to delay any submittal to ASTM.
- Vinyl Institute will continue to work with NIBS in refining the test, provided they are able to obtain funding.
- Marcelo Hirschler will attend a meeting with Richard Gann at NIST regarding this test, but will do so as a representative of BFGoodrich Company and not the Vinyl Institute.

3. University of Edinburgh Corrosion Study

Preliminary results are available, but were not discussed at this meeting as it was to be reviewed in-depth at the Electrical Materials Council Meeting which was scheduled to follow this Technical Committee Meeting.

4. Publications On Medical/Health Effects Program

Dr. Hinderer was not present to report on this.

Assignment: Roy Gottesman is to follow-up with Bob Hinderer regarding the completion of these publications at Southwest Research.

D. Solid Waste Management

1. Heavy Metals in Incinerator Ash

a. Cadmium - Position Statement

The position statement developed by the subcommittee was presented by Chuck Bush. The statement was as follows:

"Position Statement on the Use of Cadmium-Containing Materials in PVC

Because of growing public concern and accumulating data about the presence of cadmium-containing products in the municipal solid waste stream disposed of by incineration, the Vinyl Institute recommends that alternatives to cadmium-containing stabilizers and pigments be vigorously pursued and, as technically viable substitutes are identified, manufacturers expeditiously incorporate them in PVC compounds and products."

In the ensuing discussion, there were some feelings that the statement was not as forceful as some felt necessary. However, the positions of the Cadmium Council and the Dry Color Manufacturers Association were mentioned. The above position statement was approved by a 12-2 vote on motion of Mr. Lefebvre with one modification - "PVC" in the statement is to be replaced by "vinyl".

The following assignments were agreed to:

- Chuck Bush will advise the Board of this position statement and recommend its acceptance.
- Chuck Bush will reply to recent letters that he has received from the Dry Color

pending verification of lead stabilizers in vinyl shoes.

2. Recycling

a. Recycling Task Force

Roy Gottesman reviewed the activities of this group during the past several months, including contacts at Wellman and Browning Ferris as well as the Dupont/Waste Management joint venture. The necessity for developing a sortation technique that results in removal of PVC was highlighted, particularly as it relates to contamination of PET, which has been observed by several recyclers.

The methods for separation of PVC that are currently available were reviewed as follows:

1. Govoni-Tecoplast - Roy Gottesman reported on a recent contact with IFM, the U.S. subsidiary of Govoni. They will not license their technology, but want to sell a complete MRF. Chuck Bush reported on his recent visit to the Govoni facility in Italy and stated his belief that the technology is based on x-ray fluorescence.
2. Rutgers - Bill Carroll discussed the contacts at Rutgers, including the escalation in cost to \$199,000 to obtain, install and develop a process based on x-ray fluorescence using an ASOMA device.
3. National Recovery Technology Inc. - Roy Gottesman and Bill Carroll discussed their recent visit to NRT in Nashville and the development there of an x-ray technology and detection method that has proven successful in finding all types of vinyl products, viz bottles, pipe, containers for flammable liquids in a mixed solid waste stream. They offered their opinion that the separation of vinyl from a mixed plastic stream should be feasible using the same technology.

Following the discussion, it was agreed that at the Executive Board Meeting on September 20th, Dr. Bush will recommend to the Board that a grant of \$150,000 be given to NRT to develop

Manufacturers Association and the Cadmium Council.

- Assuming acceptance of the revised policy statement by the Executive Board, Roy Gottesman will send same to the Council For Solid Waste Solutions for their incorporation into an overall plastics industry statement.

b. Lead - Franklin Associates Report

Mr. Lefebvre discussed the activity at Franklin Associates which indicated that there was actually more lead due to plastics in the waste stream than had been originally suggested. Largely, this is due to an unexpected finding of lead in imported shoes. It is necessary to develop a position paper on non-critical applications of lead. In that statement, it will be necessary to point out that wire and cable applications are not a major part of the municipal solid waste stream.

Bill Carroll proposed a statement that would embody the use of lead, mostly in electrical applications in wire and cable which is not part of the municipal solid waste stream. Gabe Lefebvre suggested that Franklin Associates be asked to get a separate estimate from a shoe trade association, to confirm their findings regarding lead levels in shoes.

The following assignments were agreed to:

- Bill Carroll will provide a draft position statement regarding lead in non-critical applications.
- Bud Hall and Chuck Bush are to finish the development of a white paper on non-critical applications of lead.
- Samples of imported shoes are to be obtained by Bill Carroll in the Philadelphia area, Gabe Lefebvre in the midwest and Joe Ledvina in the Houston area, and these will be sent to Larry Brecker for lead analysis.
- Franklin Associates will be asked to hold-up any further work on their report,

a process for the sortation and separation of vinyl from a mixed plastic stream, using their technology and that in addition, \$50,000 be given to Rutgers, via the Plastics Recycling Foundation to enable them to purchase the ASOMA device and incorporate it into the sortation program being sponsored by the Council For Solid Waste Solutions.

b. Council For Solid Waste Solutions

Bob Elcik, who is a member of the CSWS Operating Committee provided an update on the Council's recent activities along with hand-outs.

c. Vermont Republic Industries

Don Goodman provided a report on the first year project at Vermont Republic Industries. Their suggestion for a second year program is to find products that could be manufactured from recycled vinyl. Included in their suggestions are a conductive container for computer chips, a file folder that could be used for the collection of office paper for recycling, and a space saver to be installed in a toilet tank to conserve water. There was discussion too concerning the desirability of encouraging this type of activity at VRI or whether the best approach would be to find markets for VRI in which they could sell their material.

The following assignments were agreed to:

- Roy Gottesman will write to Al Voegele at VRI advising him of the committee's views regarding the development of a product from recycled vinyl vs. marketing recycled vinyl more broadly.
- Don Goodman, working with Al Voegele, will develop a proposal for a second year program for consideration by the Technical Committee.
- Work at Georgia Gulf to try to develop a file folder for recycled office paper will be brought to conclusion and within the next few weeks, Don Goodman is to convene a telephone conference with Chuck Bush,