

Manufacturing Chemists' Association, Inc.

(FOUNDED 1872)

1825 CONNECTICUT AVENUE, N. W.
WASHINGTON, D. C. 20009

271.

MINUTES OF MEETING SAFETY AND FIRE PROTECTION COMMITTEE Sheraton-Boston, Boston, Mass. September 24, 1965

PRESENT

A. L. Cobb, Chairman	Eastman Kodak Company
R. H. Albisser	Merck & Co., Inc.
L. W. Boulton	Polymer Corporation Limited
A. P. Dunlap	Union Carbide Corporation
C. R. Eastman (for P. Folse)	Socony Mobil Oil Company, Inc.
G. L. Gorbell	Monsanto Company
J. Guelich	Allied Chemical Corporation
A. L. Kling	Olin Mathieson Chemical Corporation
S. M. MacCutcheon	The Dow Chemical Company
S. F. Spence	American Cyanamid Company
W. S. Wood	Sun Oil Company
J. Robert Fisher, MCA Board of Directors' Liaison	Fisher Chemical Company, Inc.
F. G. Stephenson, Secretary	Manufacturing Chemists' Association

GUESTS

N. D. Griswold	The Dow Chemical Company
N. G. White	Shell Chemical Company
M. Woodworth	National Fire Protection Association
J. C. Zercher	Celanese Corporation of America

ABSENT

A. H. Christian	FMC Corporation
G. G. Fleming	Celanese Corporation of America
F. E. Macaulay	Wyandotte Chemicals Corporation
J. S. Queener	E. I. du Pont de Nemours & Co.

The Chairman introduced and welcomed Mr. J. Robert Fisher, MCA Board of Directors' liaison representative to the committee.

Mr. John Zercher, Chairman of the MCA Transportation Equipment Committee; Mr. M. Woodworth of NFPA; Mr. N. D. Griswold of The Dow Chemical Company; Dr. N. G. White of Shell Chemical; and Mr. C. R. Eastman representing Mr. P. Folse of Socony Mobil were also welcomed to the meeting.

CMA 044830

1. Minutes of the April 29-30, 1965 meeting were approved as distributed.

2. Review of Safety Workshop - September 23, 1965

In general discussion of the Workshop it was felt that a high technical standard had been achieved in the discussions but that attendance (109) was disappointing.

Publicity had included two press releases and the mailing of announcement folders to local members of the American Chemical Society, American Institute of Chemical Engineers, American Society of Quality Control, Society of Fire Protection Engineers, Connecticut Safety Commission, Safety Council of Western Massachusetts, National Safety Council, American Society of Safety Engineers, etc. Despite the above, it was felt that there were many who had no knowledge of the Workshop and who would have attended had they known.

Mr. Fisher congratulated the committee on the development of the Workshop series and stated that he would discuss publicity aspects with the Board of Directors.

Next Workshop

The Secretary was asked to circulate information on "chemical centers" in the U. S. and Canada so that a decision can be made as to where the next workshop will be held.

Publications Sheet

It was agreed to provide a copy of the MCA publications list for each person attending.

3. (a) Chem-Card Program

The Secretary reported that, under the authorized expansion of the program, an additional 71 chem-cards have been printed, together with a manual containing reproductions of each of the 85 chem-cards now available.

In a letter signed by General Decker, member companies have been advised that the additional chem-cards and the manuals are now available.

Eight thousand copies of the manual will be distributed to the membership of the International Association of Fire Chiefs. Fire Marshals and Police will also be advised.

(b) Water Information Cards

The Inter-Committee Task Group on the Chem-Card Program, working in cooperation with the U. S. Coast Guard, has published 20 water-information-cards (WIC's). Companies using these cards on barges and towboats carrying the 20 chemicals concerned on coastal and inland waterways will be in compliance with Coast Guard Regulations (effective September 1, 1965) requiring the carrying of "information cards."

4. External Markings of Vehicles Transporting Hazardous Chemicals - meeting of ASES

Mr. Cobb reported on the July 14, 1965 meeting called by the Armed Services Explosives Safety Board to develop a uniform placarding system to identify hazards associated with dangerous articles in transportation.

Mr. E. Cox, Chief, Section of Motor Carriers Safety, Bureau of Motor Carriers, Interstate Commerce Commission discussed changes in Section 77.823 which the Commission will propose. Mr. Cox indicated that these will be released in the near future as a rule-making proposal.

Mr. Cobb drew attention to the MCA position which supports the use of "English wording" in preference to use of a code.

The Secretary expressed his opinion that a meeting of the MCA Task Group on External Markings will be called as soon as the ICC proposals are released.

5. Bottom Loading and Unloading of Tank Cars

Mr. J. Zercher, Chairman, MCA Transportation Equipment Committee, discussed his committee's resolution that "The MCA Transportation Equipment Committee recognizes and endorses the practice of bottom loading and unloading of tank cars for commodities approved by interested associations and with the approval of the AAR Tank Car Committee for equipment and design." He advanced his committee's belief that because of the wide adoption of bottom loading and unloading, it is unrealistic for MCA not to recognize and endorse this method or to publish safety information regarding it.

Mr. Cobb asked each committee member to express his views. These were largely as follows:

a) that since there is such extensive adoption of bottom loading and unloading, MCA should "recognize" this method. The word "endorses" should be avoided.

b) that it is desirable that the MCA publication TC-4 and applicable Safety Data Sheets should include safety procedures for bottom unloading.

c) that bottom unloading should be recognized only when
1) the material, and 2) the location permit this to be done safely.

d) that development of a safe procedure for bottom loading and unloading should rest with the Transportation Equipment Committee, but that other interested committees should have an opportunity to review any proposals.

e) that the Transportation Equipment Committee should give consideration to the use of hydraulically operated internal valves similar to those used on tank trucks.

A motion was then unanimously carried "that the Safety and Fire Protection Committee recognizes a need for safety instructions for the bottom loading and unloading of tank cars and believes these instructions should be incorporated in a revised edition of Manual TC-4. Also that the committee will be pleased to cooperate with the Transportation Equipment Committee by reviewing drafts for any revisions of TC-4."

Mr. Cobb then accepted an invitation from Mr. Zercher for a representative of the Safety and Fire Protection Committee to attend the meeting of the Transportation Equipment Committee to be held in Chicago October 11-13, 1965. Mr. Gorbell agreed to represent the Safety Committee.

An outline of policy will be prepared by Mr. Cobb and distributed to other Safety Committee members for comment and additions prior to the October 11-13 meeting.

6. Safety Publications

A. Chemical Safety Data Sheets

I. The following have been published since the last meeting

- a) SD-90 1,1,1-Trichloroethane
- b) SD-29 (revised) Ethyl Ether

II. In preparation

- a) Paranitroaniline
- b) n-Butyllithium
- c) Zirconium and Hafnium Powders
- d) Beryllium
- e) Phosgene
- f) Dinitrotoluene

III. Revisions

Perchloric Acid Solution (galley proof stage)

B. Revision of Manual "Guide for Safety in the Chemical Laboratory"

Mr. W. S. Wood gave a status report. It is hoped to have a draft of the revised edition assembled in time for the next meeting of the committee, and all members who have accepted responsibility for the various chapters were requested to submit copy as soon as possible.

C. Manual on Disposal of Small Quantities of Hazardous Chemicals

Mr. A. P. Dunlap reported that the task group will proceed with the writing in the near future. A literature search is now taking place. The manual will deal with methods of pre-planning the disposal of chemical waste; with methods of picking up and transporting these materials; and with methods of disposal.

Committee members were asked to cooperate by sending to Mr. Dunlap and Mr. Boulton any suggestions they may have, and also copies of company standards on waste disposal.

7. Development of an Association "statement of policy" on chemical manufacturing safety

Mr. N. D. Griswold proposed that a statement of Association policy on safety in chemical manufacturing, handling, transporting etc. be prepared by the committee and submitted to the Board of Directors for approval. This proposal was well received. It was stressed that Management attitude towards safety has a marked influence on the effectiveness of safety programs.

8. Second Bureau of Mines Course on Explosion Problems in the Chemical Industry

The second course will be held at the Bureau of Mines, Pittsburgh, Pa. during the week commencing November 29, 1965. Those attending should have a degree in chemistry, chemical engineering or mechanical engineering and should have some background in thermal chemistry and thermodynamics. Some experience in fire protection or chemical plant safety is also desirable. Design engineers can also profit from the course.

ASA Bulletin 627 will be used as a course textbook.

Announcement to MCA member companies will be made in the General Bulletin.

Attendance will be limited to 25. The cost will be \$100 per person, excluding living costs.

9. Research Program on chemical atmospheres in which currently-listed explosion-proof electrical equipment may be properly employed.

At the last Safety and Fire Protection Committee meeting, when this matter was discussed, the chairman agreed to contact Underwriters' Laboratories, Inc. and request more detailed information as to costs etc. This has been done. U.L. proposes that the cost, estimated at \$20,000 to classify 15 basic chemicals, be borne by insurance, electrical equipment, petroleum and chemical groups. The 15 chemicals would be chosen from the following: acetylene, acrylonitrile, butadiene, ethylene oxide, methyl chloride, styrene, acrolein, carbon disulfide, ethylene dichloride, vinyl acetate, vinyl chloride, ortho xylene, acetic acid, ammonia, n-butyraldehyde, cyclopentane, dimethylamine, ethyl amine, ethyl benzene, formaldehyde, hydrazine, isoprene, methyl ether, nitromethane, nitropropane, propylene oxide, toluene and vinylidene chloride.

The basic plan of investigation is to make a comparison of the most common properties associated with ignition and explosion phenomena of new chemicals with those for which information is now available and for which classes in the National Electrical Code have already been established. Once these 15 chemicals have been properly classified, chemical manufacturers could subsequently obtain recognition of their proprietary materials by making submittals to U.L. for comparative tests and classification.

It was agreed that the chairman should acknowledge this detailed information received from U. L. but that the committee would review the matter further.

10. Miscellaneous

a) Mr. W. S. Wood submitted a written report on the activities of the MCA Environmental Health Committee.

b) ASTM meeting on Standard Testing Methods for Hazard Characteristics of Organic Materials - June 30, 1965.

Mr. A. L. Cobb reported that a number of MCA companies were represented at this meeting. A suggestion was made that a study group be formed leading to organization of a symposium on the subject and possibly to the development of standards.

Members agreed that this could prove a valuable activity.

- c) Proposal for investigating the fire protection of flammable liquid drum storage as by combined use of automatic sprinklers and automatic high expansion foam systems.

Members received copies of a proposal prepared by the Factory Mutual Laboratory. This would eventually include full scale tests, with drums exposed to fires, to determine the best method of sprinkler and foam system design in typical drum storage buildings. Preliminary tests would be run to correlate temperatures and pressures attained in drums containing water with drums containing heptane under standard fire exposure. Temperatures and pressures would be recorded.

Members expressed considerable interest in this proposal and agreed to discuss the matter in their respective companies so that the committee may make a recommendation regarding financial support of the proposal.

11. Next Meeting

The next meeting will be held at MCA offices, Washington, D. C. on December 16, 1965.

Minutes subject to approval

FGS:cm
10/7/65

Manufacturing Chemists' Association, Inc.

(FOUNDED 1872)

1825 CONNECTICUT AVENUE, N. W.
WASHINGTON, D. C. 20009

304.

MINUTES OF MEETING SAFETY AND FIRE PROTECTION COMMITTEE MCA Offices, Washington, D. C. December 8, 1966

PRESENT

A. H. Christian, Chairman	FMC Corporation
A. L. Kling, Vice Chairman	Olin Mathieson Chemical Corporation
R. H. Albisser	Merck & Co., Inc.
L. W. Boulton	Polymer Corporation Limited
A. L. Cobb	Eastman Kodak Company
P. C. Folse	Mobil Oil Corporation
G. L. Gorbell	Monsanto Company
F. E. Macaulay	Wyandotte Chemicals Corporation
S. M. MacCutcheon	The Dow Chemical Company
J. V. Savercool	Allied Chemical Corporation
S. F. Spence	American Cyanamid Company
W. S. Wood	Sun Oil Company
F. G. Stephenson, Secretary	Manufacturing Chemists Association

GUESTS

C. Eastman	Mobil Chemical Company
G. F. Sellen	Enjay Chemical Company
M. E. Woodworth	National Fire Protection Association

ABSENT

G. G. Fleming	Celanese Corporation
J. S. Queener	E. I. du Pont de Nemours & Company

Chairman A. H. Christian opened the meeting at 9:00 a.m. He welcomed the guests and reported that Mr. J. S. Queener could not be present but would represent the Committee that day at the meeting of the USASI Z16.1 Committee on Method of Recording and Measuring Work Injury Experience.

1. Minutes of the September 20, 1966 meeting were approved as distributed.

2. Committee Organization

Mr. R. H. Albisser verbally presented the recommendations of the task group created to review the Committee Rules of Organization and Procedure. It was agreed that these proposals be presented to the Committee in written form and voted upon at the next meeting.

3. Membership

Mr. John V. Savercool of Allied Chemical Corporation was welcomed to membership. Mr. George Sellen of Enjay Chemical Company was appointed a member of the Committee subject to ratification by the MCA Board of Directors.

4. Safety Workshops

Safety Workshops will be held in 1967 as follows:

- a) April 17 - At the Ambassador Hotel in Los Angeles.
This workshop will be cosponsored by the CIC of Southern California. The contact will be Mr. W. E. H. Knight of Stauffer Chemical Company, Los Angeles
- b) April 19 - At the St. Francis Hotel in San Francisco.
This workshop will be cosponsored by the CIC of Northern California. The contact will be Mr. Howard Richman of The Dow Chemical Company, Pittsburg, Calif.
- c) April 21 - At the Seattle Center, Seattle. This workshop will be cosponsored by the CIC of the Pacific Northwest. The contact will be Mr. Marshall Ramstad of Pennsalt Chemicals Corporation of Tacoma, Washington

1968 Safety Workshop - A Safety Workshop will be held in Toronto during the last week of May 1968. Mr. L. Boulton agreed to make preliminary arrangements regarding this.

5. Progress Reports on Research Programs

- a) Underwriters Laboratories program on the Classification of Chemicals for Article 500 of the National Electrical Code - Mr. A. L. Kling distributed copies of a report indicating that satisfactory progress is being made. This report is

included with these minutes as Attachment A.

- b) **Factory Mutual Research Corporation - Flammable Liquid Drum Storage Tests** - Mr. A. L. Cobb reported that a problem had been encountered in the initial tests using drums of water since exposure to heat had resulted in high pressures being developed in the drums due to temperature rise in the vapor without appreciable temperature increase in the liquid. He also advised that it had become necessary to redesign and rebuild the thermocouple system.

6. Inter-Committee Task Group on Transportation Hazards Information

Mr. A. L. Cobb reported that the task group has held several meetings and that some progress has been made in the development of a placarding system for use in all modes of transportation, incorporating the use of English wording similar to that required by the ICC in Article 69 combined with numerical severity identification similar to that used in the NFPA 704 system.

The Committee discussed a proposal by Mr. M. Woodworth of NFPA that MCA should finance distribution to some 22,000 fire departments in the country of the new NFPA publication "Fire Protection Guide on Hazardous Materials." This publication, available to the general public for \$4.75, is a compilation of the following existing publications: 325A, 325M, 49, 491M, and 704M. Copies for distribution by MCA as suggested by Mr. Woodworth would be made available for \$1.00 each.

The desirability of making further free distribution of the MCA Chem-Card Manual together with the above was also discussed. It was agreed that since the new MCA publication has already been offered to the general public, that the matter be further considered at the next meeting of the Safety and Fire Protection Committee. In the meantime, Mr. A. L. Cobb agreed to obtain the viewpoint of the Inter-Committee Task Group on Transportation Hazards Information.

7. Environmental Health Advisory Committee

Mr. A. L. Kling distributed copies of a draft for a five year forecast of activities of the Safety and Fire Protection Committee prepared for the information of the Environmental Health Committee. Mr. Kling's proposal was found generally acceptable and it was agreed that it be submitted to EHAC.

8. Short Course on Explosion Problems in the Chemical Industry

The Secretary stated that a list of the 26 persons who will attend the course to be held during the week of December 12 was mailed to the Committee with his letter of December 5.

9. Revised Edition of "Guide for Safety in the Chemical Laboratory"

It was resolved to recommend to the Board of Directors that the sum of \$2,000 be made available immediately so that the services of a qualified technical writer can be obtained in order to complete the preparation of the revised edition during 1967. Mr. W. S. Wood reported that Mr. C. Groves of Du Pont had agreed to undertake the work.

10. Safety Publications

The Secretary submitted a report on the status of the chemical safety data sheet program. This is included in these minutes as Attachment B.

An effort is now being made to revise outdated sheets as quickly as possible but there are still a number in existenc which were first published almost 20 years ago. It is believed desirable that a program be established whereby all chemical safety data sheets will be either revised or reaffirmed every two years. A recommendation regarding this will be included in the document to be submitted to EHAC.

11. Activities of NFPA Committees

It was reported that a list of MCA representatives on the various NFPA committees had been distributed to Committee members. Mr. A. L. Kling discussed the need for better liaison between these representatives and the MCA committees involved and suggested that a questionnaire be prepared so that each representative may report, at least annually. It was agreed to proceed on these lines.

12. Other Reports

- a) Mr. A. C. Clark discussed the possibility that the ICC will expand the definition of a "flammable liquid" possibly to include liquids with a closed cup flash-point up to 100°F. He urged members to discuss the various aspects of such a change with other interested persons within their respective companies so that corporate viewpoints can be dev loped.

- b) Mr. A. G. Robinson of MCA staff described how the CIC in Michigan is participating in the development of a State safety code for the chemical industry. Mr. F. E. Macaulay has been appointed a member of the committee which will develop the code. He agreed to keep the MCA Committee fully advised regarding developments.

c) Bottom Unloading of Tank Cars

The Secretary advised that the Transportation Equipment Committee has recommended the creation of a 4 man task group, 2 from the T&D Committee and 2 from the S&FP Committee to develop wording on the bottom unloading of tank cars for inclusion in MCA's safety publications. It was resolved to participate in this activity and the Chairman advised that he will nominate 2 representatives.

- d) The Secretary reported that the Chemical Packaging Committee is reviewing the format used in packaging sections in chemical safety data sheets and may make some new proposals.

13. Handbook on Waste Disposal

Mr. L. Boulton reported that it is proposed to prepare a series of handbooks in order to make available to chemical users information on the disposal of small quantities of hazardous waste material. The first volume will cover materials used in industrial laboratories and in general will deal with the disposal of small quantities up to 1 gallon or 5 pounds. Mr. Boulton requested specific participation in the project by experienced lab personnel from such companies as Eastman Kodak, Merck, Sun Oil and Dow. Committee members representing those companies agreed to attempt to make arrangements for such participation. A budget of \$5,000 for this project will be requested for 1967 in the Committee's 5 year forecast of activities.

14. Meeting Arrangements

- a) The next meeting will be held in New York City commencing 1:00 p.m. on Wednesday, March 1, 1967. It will continue as necessary on March 2.

b) A meeting will be held during the last week of September, 1967 possibly at the Sterling Forest Conference Center at Tuxedo, New York.

Minutes subject to approval

ATTACHMENT A

TO Mr. Alan L. Kling AT 460 Park Ave. DATE December 6, 1966
FROM Dr. Richard Y. Le Vine AT 460 Park Ave. COPY TO
SUBJECT U.L. RESEARCH PROGRAM ON THE CLASSIFICATION OF -
CHEMICALS FOR ARTICLE 500 OF THE -
NATIONAL ELECTRICAL CODE

The first meeting of the Advisory Committee for the above U.L. Research Program was held on September 14, 1966 at the U.L. in Chicago. Present at the meeting were representatives of the MCA, API, AIA, NEMA and NFPA. All of these organizations with the exception of the NFPA are lending financial support to the project.

The equipment to be used in the program and the factors involved in determining the suitability of explosionproof electrical equipment for a certain chemical atmosphere are discussed in the attached article, "Testing Electrical Equipment for Chemical Atmospheres" by William C. Westerberg. Fig. 1, 2 & 3 show details of the equipment.

The first step of the investigation involves the testing in this new equipment of chemicals which are presently classified as Class I, Group A, B, C&D atmospheres in Article 500 of the N.E.C. The second step of the investigation involves the testing of 15 chemicals which are not presently classified or listed. The third step is the correlation of the test data and the classification of these unlisted chemicals into the present groupings. This will not only add 15 chemicals which are widely used in the chemical industry, to the NEC, it will hopefully make it possible to have any chemical tested and classified by UL without the laborious and expensive procedure of trying the chemical atmosphere in actual electrical equipment. Another benefit of the project may possibly be an increase in the kinds of electrical equipment approved for Groups A&B as new chemicals are added to these Groups and a demand for approved equipment is created.

The Advisory Committee selected 15 chemicals for testing and suggested the following order of testing:

- | | | |
|----------------------|-------------------|-------------------------|
| 1. Anhydrous Ammonia | 6. Styrene | 11. Carbon Disulfide |
| 2. Propylene Oxide | 7. Isoprene | 12. U.D.M.H. |
| 3. Ethylene Oxide | 8. Vinyl Chloride | 13. Xylene |
| 4. Propylene | 9. Vinyl Acetate | 14. Acetaldehyde |
| 5. Butadiene - 1, 3 | 10. Acrylonitrile | 15. Ethylene Dichloride |

Prior to the meeting, UL had run materials of the present 4 Groups of Class I in the apparatus. Results were as follows:

CMA 044842

TO Mr. Alan L. Kling
FROM
SUBJECT

AT

DATE December 6, 1966

AT

COPY TO

<u>Group & Atmosphere.</u>	<u>Max. Pressure (PSI)</u>	<u>Max. Safe Gap (In)</u>
A Acetylene	340	.003
B Hydrogen	240	.003
C Ethyl Ether	115	.012
C Ethylene <i>cyclopropane</i>	168	.027
10 D Gasoline	100	.029

Since the meeting, UL has run anhydrous ammonia and classified it as a Class I, Group D atmosphere.



Richard Y. Le Vine

RYLeV:jy
Attach.

CMA 044843

MANUFACTURING CHEMISTS ASSOCIATION
SAFETY AND FIRE PROTECTION COMMITTEE

ATTACHMENT B

CHEMICAL SAFETY DATA SHEETS

Status Report -- December 1966

Chemical	Author company	Technical Sections	Medical Sections on hand	Draft Distributed for comments	Other
Carbon Disulfide SD-12	FMC	X	X	X	Printing stag
Dimethyl Sulfate SD-19	Du Pont	X	X	X	Published Nov. 1966
Nitrobenzene SD-21	Am. Cy.	X	X		
Phosgene (new)	Mobay	X	X	X	
Caustic Soda SD-9	Dow	X	X	X	
Methyl Bromide SD-35	Dow	X	X	X	
Sodium Cyanide SD-30	Du Pont	X	X	X	
Hydrofluoric Acid SD-25	Chem Pack Comm.Task Group				
Ammonia Aqua SD-13	Eastman Kodak		X		
Methanol SD-22	Celanese	X			
Caustic Potash SD-10	Allied				
Chlorosulfonic Acid SD-33	Merck				
Ethylene Dichloride SD-18	Olin		X		
Hydrogen Sulfide SD-36	Mobil				
Perchloroethylene SD-24	Dow				
Tetrachloroethane SD-34	Dow				
Phosphoric Anhydride SD-28	Not Allocated				
Phosphorus Trichloride SD-27	Monsanto	X			
Hydrogen Peroxide SD-53*			X		
Calcium Carbide SD-23	Am. Cy.	X	X	X	

* Data Sheets and supplements being combined

CMA 044844

SC -574

MINUTES OF MEETING

SAFETY AND FIRE PROTECTION COMMITTEE

ROYAL YORK HOTEL

Toronto, Ontario, Canada

September 23, 1976

PRESENT:

John M. Pardee, Chairman
Jack S. Snyder, Vice Chairman

Robert J. Brant
John H. Dolbear
Russell W. Frank
E. V. Gentile
Timothy T. Hubbard
Herbert J. Kolodner
Albert Kover
Richard Y. LeVine
Harry A. Partlow (a)
A. I. Raney
Dale J. Schillinger
Sanford Schreiber
H. Solomon (b)
Robert E. Sourwine
J. J. Walker
Herman Waltemate
J. T. Seawell, Acting Secretary

Eastman Kodak Company
Merck & Company, Inc.

ICI United States Inc.
Reichhold Chemicals Inc.
Ferro Corporation
Ashland Oil, Inc.
Chevron Chemical Company
Celanese Corporation
Diamond Shamrock Corporation
Olin Corporation
Monsanto Company
Phillips Petroleum Company
Mallinckrodt, Inc.
Allied Chemical Corporation
Exxon Chemical U.S.A.
PPG Industries, Inc.
Union Carbide Corporation
B. F. Goodrich Chemical Co.
MCA

- (a) For Russell L. Miller
- (b) For W. C. Kohfeldt

GUESTS:

H. D. Applequist (Nominee)
W. Leonard Ball (Nominee)
G. E. Cain
William Driscoll
R. L. Finocchio
Albert A. Glomski (Nominee)
James F. Hayes

The Standard Oil Company
Air Products & Chemicals Inc.
Hercules Incorporated
Diamond Shamrock Corporation
PPG Industries, Inc.
IMC Chemical Group, Inc.
Dart Industries, Inc.

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R. O. Howard (Nominee)
P. L. McKay
Joseph Mettalia, Jr. (Nominee)
George F. Rotter
P. W. Simmons (Nominee)
Lowell E. Snodgrass
Donald T. Watters

Virginia Chemicals Inc.
Canadian Industries Limited
Rohm and Haas Company
Armak Company
Dow Chemical Company
Ferro Corporation
Union Carbide Corporation

MEMBERS ABSENT

J. C. Caporossi
Dennie L. Dowell
Orville Henderson
R. B. Howard
Ned K. Walters
Walt Woodson

American Cyanamid Company
Borg-Warner Chemicals
Hooker Chemicals & Plastics
Shell Oil Company
E. I. du Pont de Nemours & Co.
Eli Lilly & Company

1.0 Introduction of Guests

2.0 Approval of Minutes of June 15, 1976 Meeting

The minutes of the June 15, 1976 Meeting were approved as distributed.

3.0 Industrial Injury Experience Reports

The Chairman presented a thorough-going introduction and recapitulation of the status of this subject to date.

Mr. Levine, Chairman of the Task Force on Industrial Injury Experience (IIE), presented a summation of the deliberations and recommendations of his Task Force. He began with a re-emphasis of the request made by the full Committee during the June 15, 1976 meeting which is summarized as follows:

If at all possible, member company managements want to avoid three systems, i.e., a National Safety Council (NSC) system, an MCA system, and an Occupational Safety and Health Administration (OSHA) system. The final consensus of the full Committee embodied three points:

- (1) The MCA system should be identical to that of the NSC system,

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- (2) The Task Group on IIE Reports is to take an additional look at what is desired, and
- (3) The findings of the Task Group are to be reported fully to MCA so that the ultimate system that evolves can be reported to the MCA Board for approval.

Task Force deliberations covered a number of important items which are summarized as follows:

- (1) The National Safety Council has not finalized what it will report. In fact, there may be different reporting for the following purposes: Contest Reports, Award Plan, and Accident Facts.
- (2) The NSC Contest Reports will use an Incidence Rate of Death Cases plus Lost Work Day Cases with Days Away from Work and is an attempt to continue the Z 16.1 Disabling Injury Frequency in a slightly modified form.
- (3) The above-mentioned NSC Lost Work Day Case Incidence Rate will be different from the one which the Bureau of Labor Statistics (BLS) will report. Therefore, whatever Lost Work Day Incident Rate MCA chooses, it will be different from either NSC or BLS.
- (4) NSC's "Accident Facts" will report a number of different Incidence Rates, but whether they will be the same as BLS, no one is yet able to ascertain.
- (5) Whatever rates MCA chooses, it is only a matter of what calculations to make. The Task Force has asked for all of the figures of the OSHA 102 Form and will not require the collection of additional data.

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- (6) While the Task Force did not favor the NSC Lost Work Day Case Incidence Rate, it recognized that it was undesirable for MCA to be reporting a lost Work Day Case Incidence Rate which would be considerably higher than that of the NSC.

After lengthy discussions, the Task Force decided to recommend that as of January, 1977 the rates to be reported by MCA should include both Lost Workday Case Incidence Rates as follows:

- (1) Total Recordables Incidence Rate (Total Cases - Column 1, Code 31, OSHA 102)
- (2) Limited Lost Workday Case Incidence Rate (Deaths and Lost Workday Cases Involving Days Away From Work - Columns 2 plus 4, Code 31, OSHA 102)
- (3) Total Lost Workday Case Incidence Rate (Deaths and Lost Workday Cases Involving Days Away From Work and Days of Restricted Activity - Columns 2 plus 3, Code 31, OSHA 102)

The Plant Achievement Awards should be of two types:

Certificate of Honor - To be given to any plant which completes the calendar year without an OSHA Death or Lost Workday Case involving days away from work or days of restricted activity.

Certificate of Achievement - To be given to any plant which completes the calendar year without an OSHA Death or Lost Workday Case involving days away from work.

The DuPont Award should be awarded on the basis of the OSHA Total Recordables Incidence Rate as follows:

1977 Award	% Improvement =	$\frac{1977 \text{ Rate} + 1976 \text{ Rate}}{1976 \text{ Rate} + 1975 \text{ Rate}}$
1978 Award	% Improvement =	$\frac{1978 \text{ Rate} + 1977 \text{ Rate}}{1977 \text{ Rate} + 1976 \text{ Rate} + 1975 \text{ Rate}}$

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$$1979 \text{ Award} \quad \% \text{ Improvement} = \frac{1979 \text{ Rate} + 1978 \text{ Rate}}{1977 \text{ Rate} + 1976 \text{ Rate} + 1975 \text{ Rate}}$$

Two awards should be given as follows:

- Group 1 - Member companies with annual exposures of 2 million or less man-hours
- Group 2 - Member companies with annual exposures of over 2 million man-hours

In addition to having the greatest improvement, the winner must have no Incidence Rate -- 1) Total Recordables; 2) Limited Lost Workday Cases; or 3) Total Lost Workday Cases -- which exceeds the average rate for the contest group concerned.

Since this is a new Award System, the final selection of the winner should be reviewed by the Task Force before announcement by MCA.

After consideration of the Task Forces' recommendations, a motion on the following Amendment was made, seconded and passed:

"In addition to the proposals of the Task Force, the Committee recommends that member companies be instructed that statistics reported to MCA shall be identical to the compilation of data presented on Department of Labor Form 102".

The motion was made, seconded, and passed to accept the report and the recommendations of the Task Force as modified by the preceding Amendment.

Now that the ground rules have been established for 1977, the Committee and the Task Force will turn its attention toward improving participation of member companies. Further, additional detailed consideration will be given to the development of a statistic to better reflect the Element of Severity.

4.0 Initial Report on Task Group on Control House
Design and Location

Mr. Solomon presented a report on behalf of the Task Force Chairman, Mr. Kohfeldt. Among the more important points made by Mr. Solomon were the following:

- (1) The questionnaire entitled "Factors to Be Considered in Control House Design and Location" needs to have the preamble amplified whereby a more detailed description of the ultimate use of the questionnaire data will be presented.
- (2) References to multi-unit and single units for control houses confuses the issue and should be clarified.
- (3) Three companies have specifically stated that an explosion factor has been figured into their design criteria.
- (4) Most of the companies which have reported to date call attention to the need to limit window size.

The Committee requests that the Task Force in pursuit of its mission be guided by two objectives which are:

- (1) The preparation of a consensus directly from questionnaire data, and
- (2) The development for publication appropriate guidelines which are to evolve from the aforementioned consensus.

4.1 Status Report on Questionnaires Completed to Date

As of September 20, 1976 twenty-four questionnaires had been returned. All of these have been forwarded immediately to the Task Force Chairman.

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5.0 Report of Subcommittee on Accident Case Histories

It was reported that the May-June issue should be received from the printer sometime during the week beginning September 27, 1976. The July-August issue has been typed and will be in the hands of the printer during the week ending September 24.

The Chairman asked for two volunteers for this Task Force on the basis that each volunteer will assume the editorship for at least one issue. Mr. P. W. Simmons of The Dow Chemical Company and Mr. Joseph Mattalia, Jr. of the Rohm and Haas Company volunteered to serve in this capacity.

The Chairman emphasized the importance of additional contributions to this publication--not classic cases which have been told time and again, but hopefully, those which will contribute additional know how to the art and science of dealing with industrial chemical accidents.

6.0 Report of Task Force on Committee Service

The Chairman, Mr. R. J. Brant called attention to the multiple assignments given to this Task Force during the June 15 meeting. (See item 8.0, page SC-569 of the June 15, Minutes).

Work is progressing on:

- (1) A description of what constitutes a good safety program, and
- (2) How a safety program should be audited.

To date, 12 companies have sent in copies of their audit program. The Chairman urges that companies who have not returned their Safety Audit Guidelines do so at the earliest possible time. It is the objective of this Task Force to have available a draft of a Safety Audit Guide sometime during the first week in January, 1977.

The Chairman reported that data and opinions on the seven areas assigned (see above-mentioned reference to the June 15 Minutes) are available and will be compiled for dis-

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tribution to the Task Force within the next two weeks. The critiques of the Task Force members will be composited and redistributed for a joint discussion at a meeting of the Task Force on December 6 prior to the next S&FP Meeting. Currently, it is not anticipated that a draft for Committee review will be available before the first or second Committee Meeting during 1977.

7.0 Task Force on Recommendations on Handling and Storage of Cylinders of Flammable Compressed Gases under Industrial Conditions, e.g., the Metal Working Industry.

On or about July 30, 1976 the Chairman, Mr. John Pardee formed an Ad-Hoc Task Force for the purpose of giving further consideration to and taking necessary action on the inquiry of Blakeney Associates.

The Ad-Hoc Task Force was comprised of the following members of the Safety and Fire Protection Committee and S&FP nominees representing manufacturers of propylene:

Mr. E. V. Gentile	Ashland Chemical Company
Mr. R. B. Howard	Shell Chemical Company
Mr. W. C. Kohfeldt	Exxon Chemical Company
Mr. R. L. Miller	Monsanto Company
Mr. J. J. Walker	Union Carbide Corporation.

Nominees

Mr. H. D. Applequist	The Standard Oil Company
Mr. P. W. Simmons	Dow Chemical U.S.A.

By way of background information, Blakeney Associates has contacted MCA on several occasions in an effort to secure some "relief" from the "highly restrictive" recommendation which appears on page 10 of Safety Data Sheet SD-59 which reads in part as follows:

"Keep cylinder out of sun and away from heat".

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Mr. Blakeney points out that all of his cylinders conform to DOT specifications which permit the use of these cylinders both indoors and outdoors.

In addition to its deliberations on propylene, the work of this Ad-Hoc Task Force has also been concerned with the following:

SD-7	Acetylene
SD-36	Hydrogen Sulfide
SD-37	Styrene Monomer
SD-38	Ethylene Oxide
SD-40	Methyl Chloride
SD-55	Butadiene (Inh)
SD-56	Vinyl Chloride
SD-57	Methylamines
SD-67	Hydrocyanic Acid
SD-84	Boron Hydrides
SD-100	Ethylene

Of the three boron hydrides treated in SD-84, the Task Force is concerned only with diborane.

It is the unanimous decision of this Subcommittee that the recommendation, "Keep cylinder out of sun and away from heat", should be retained in the following Safety Data Sheets:

Butadiene (Inh)	SD-55
Ethylene Oxide	SD-38
Styrene Monomer	SD-37

The recommendation to retain the above-mentioned quoted statement is based on the advisability of maintaining the stability of these products. Inhibitors used to stabilize the monomers are depleted more rapidly where exposed to elevated temperatures.

In Labels for the remaining Safety Data Sheets listed above, to include propylene (SD-59), the recommendation, "Keep cylinder out of sun and away from heat", should be deleted.

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The Task Force is unanimous in its decision that the label on all 12 chemicals should contain the statement, "Keep away from heat, sparks and open flame", consistent with good storage practices for hydrocarbons.

The Task Force further points out that these Safety Data Sheets are out of date, especially with respect to ICC/DOT information.

8.0 Loading and Unloading Flammable Liquid Chemicals -
Tank Cars, TC-29

The acting Secretary, on behalf of Mr. Butterbaugh, reported that the Transportation Equipment Committee expects to have available for review the draft of what is anticipated will be the final document on or about the week of December 6.

The input of the S&FP Committee is appreciated and, to date, no additional comments have been received regarding S&FP's contribution to this document.

9.0 Subcommittee on Outside Organizations

Dr. H. J. Kolodner reported that he had scheduled a meeting with Mr. Zercher during the week beginning October 4, for the purpose of correcting, updating, and filling vacancies on the MCA roster of memberships and outside organizations.

Consideration was given to the concept of having "an MCA Master List" maintained on all MCA representation on outside organizations and that quarterly a report would be made by each representative. Failure to report after a reasonable length of time would result in the consideration being given to replacement of the representative. The concept calls for a report even if it reads, "No action--action underway".

9.1 Liaison with National Fire Protection Association
(NFPA)

Dr. R. Y. LeVine will represent the S&FP Committee as a voting delegate at the NFPA National Convention. Section 101 of the NFPA Code is to undergo significant review at the Committee meeting on

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November 15-18, 1976. The proposed changes in Section 101 were published in a Committee report covering the May, 1976 meeting in Houston. S&FP Committee members should review these proposed changes and should there be objections or desired modifications, Dr. Levine should be informed so that he can vote accordingly.

Similarly, significant changes in Pamphlet 30 should also be brought to Dr. Levine's attention as this document also is up for significant review.

10.0 Chemical Packaging and Generation of Static Electricity

The Acting Secretary, on behalf of Mr. Butterbaugh, reported that the questionnaire on the subject of Chemical Packaging and Generation of Static Electricity will be sent out during the week beginning November 1, 1976. Mr. Butterbaugh reported that the questionnaire will include an item concerning plastic drums. It will also reflect a problem that is receiving increasing consideration, i.e., the generation of static electricity when pouring dry chemicals into reactors, etc.--not only from plastic containers, but also any other container where static might be generated.

11.0 Publications

Mr. John Pardee presented a thoroughgoing recapitulation of concepts and recommendations evolving from MCA meetings in which he has participated to date. Mr. Pardee gave particular attention to discussions during the September 2, 1976 meeting concerning the eight recommendations made by the Legal Advisory Committee. At the request of MCA management, Mr. Pardee secured the opinion of the full Committee on each of these LAC recommendations. A very brief summation of Committee deliberations and actions is presented as follows under the respective recommendations:

Recommendation No. 1. The Committee endorses this recommendation with the proviso that adequate MCA staffing be secured to "upgrade and regularize" publications, the most critical area being that of Safety Data Sheets.

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Recommendation No. 2. The Committee endorses this recommendation. Again, with the proviso that if this recommendation is to be carried out either in whole or in part that adequate staffing be secured.

Recommendation No. 3. The Committee endorses this recommendation with the proviso that a health hazard should clearly have been shown to exist - not a "suspected carcinogen" or some chemical placed on someone's list of chemicals to be investigated more extensively.

Later in its deliberations, the Committee divided this recommendation into two parts and decided the following:

- 3A. The Committee heartily endorses thoroughgoing literature citations.
- 3B. The Committee does not endorse "that these publications should alert their readers to reports of significant health hazards----".

This in the opinion of the Committee gets into the realm of the "newsletter approach" and this is to be avoided at all costs.

Recommendation No. 4. The Committee does not endorse this recommendation.

Recommendation No. 5. The Committee endorses this recommendation with a proviso put in the form of a formal motion which carried:

"The Committee endorses Recommendation No. 5 on a "discretionary basis", i.e. that the Subcommittee or Task Force preparing or revising a publication have the authority to use its discretion as to whether outside experts should be used."

Recommendation No. 6. The Committee endorses this recommendation.

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Recommendation No. 7. The Committee took no action as it considers this recommendation outside its area of expertise.

Recommendation No. 8. See notation under Recommendation No. 7.

11.1 Report of the Chairman of the Task Force
on Safety Guides

The Chairman of this Task Force, Mr. J. C. Caporossi, reported that the summary of Committee Member recommendations on individual Safety Guides indicates a consensus in favor of maintaining most Safety Guides in circulation as shown in Section I of the report of this Task Force.

Further, the consensus also clearly indicated that work on Safety Guides should take second place to consideration of and action on Safety Data Sheets. The report and recommendations of this Task Force will be under continuing study as final plans evolve for the MCA Publications Program.

The Chairman reported further that the Task Force on February 18, 1976 recommended a significant change in course in Safety Guide Publications, including the discontinuation of several guides as described in Section II of the Task Force report. On reexamination of the matter, the Task Force resubmits its original recommendations to the Committee as one plan of action.

The Task Force also submits an alternative plan which would entail the revision of all Safety Guides except those in Group A of Section I in accordance with OSHA regulations and in further accordance with the current "state of the art". The details of this proposal are summarized in Section III of the Task Force report.

The Task Force submitted the following proposed schedules for Minor Revisions of Drafts and Major Revisions of Drafts. These proposals are summarized as follows:

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Minor Revisions of Drafts

1. First Draft - one month
2. First Draft Comments - one month
3. Second Draft - one month
4. Second Draft Comments - one month
5. Final Publication - two months

Major Revisions of Drafts (As described under Groups C, D & E of the Task Force Report)

1. First Draft - six months
2. First Draft Comments - twelve months
3. Second Draft - three months
4. Second Draft Comments - six months
5. Final Publication Approvals - six months

It is anticipated that Schedules A and B would commence simultaneously, with those guides requiring minor revisions completed at the time the first draft of major rewrites would be submitted to the Committee for comments. First Draft Comments in the major rewrites would encompass a twelve month period, allowing each member nearly a full month to comment on each guide. Second Draft Comments on major rewrites, limited to changes in the first draft, would require each member to review two drafts per month.

Each Safety Guide should be assigned to a Committee member for continuing review. A formal report on each Safety Guide should be requested by the Chairman at an interval not exceeding two years. Should developments occur in the interim the assigned members should report them to the Committee on a timely basis. It is anticipated that the process of continuing review will be coordinated by an appointed Subcommittee.

12.0 Workshop - 1977

The Chairman of this Task Force was requested to form a group for the purpose of drafting a program at the earliest possible time.

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13.0 Occupational Safety and Health Administration's
Request for Technical Recommendations on Revision
of Section 1910.111 of Title 29 CFR, Regulations
for the Storage and Handling of Ammonia.

Mr. T. T. Hubbard, Chairman of this Ad Hoc Task Force, reported that all of the commentaries and recommendations on:

- (1) Safety Equipment;
- (2) Training of Workers and Manufacturing Facilities;
- (3) Safety Practices during Ammonia Production; and
- (4) Safety Practice and Distribution Facilities had been completed.

The Acting Secretary reported that during the follow-up discussions with Mr. John Etherton of OSHA, Mr. Etherton expressed appreciation for the recommendations submitted to him and indicated that if he needs further assistance he will contact MCA.

By way of explanation, Mr. Etherton reported that to date over 100 commentaries have been received in response to their request on the Anhydrous Ammonia Standard. He emphasized that by no means have OSHA engineers had an opportunity to review thoroughly all of these commentaries.

14.0 Task Group on Liaison with Other MCA Activities

Mr. Herman Waltemate served as liaison between S&FP and OHC during the morning session of the OHC meeting. He reported to the S&FP Committee that an OHC Task Force had been set up to study and keep informed on NIOSH/OSHA activities as they relate to benzene. Because of the breadth of involvement of benzene in chemical formulations and as a contaminant in other chemicals, this chemical is to receive careful attention on a continuing basis.

Mr. Waltemate reported that OHC had formed a Task Force which will concern itself with the area of Personal

Protective Equipment. Initially, this Task Force will be concerned with three areas:

1. Ear
2. Respiratory, and
3. Handling and Packaging

Mr. Richard O. Howard of Virginia Chemicals, Incorporated volunteered to serve as a member of this Task Force representing the S&FP Committee.

15.0 Visit to UK during 1977

In the absence of Mr. N. K. Walters the Chairman presented an interim report on the agenda items evolving from Mr. Walters' explorations with Dr. Cowie. The Chairman reported that Mr. Hutchesson was enthusiastic about the proposed visit to the UK sometime during April or May of 1977. The Chairman expressed the opinion that MCA should "guarantee" at least 10 participants to insure coverage of agenda items by both Safety and OHC representatives. Mr. N. K. Walters will finalize plans for member participation and arrangements.

Among the more important agenda items discussed by Mr. Walters with the Chairman were the following:

1. New concepts in training
2. Labeling and in-plant safety communications
3. Priorities in Safety and Fire Protection
4. Policy discussions with respect to Plastic Testing
5. Meaningful plant inspections
6. Health and Safety in the workplace - meaningful observations to date
7. Post Flixborough reactions

16.0 Membership

Because of his pending retirement, Mr. Russell W. Frank graciously resigned his membership in order to create a membership for a nominee.

Mr. Orville W. Henderson has resigned from Hooker Chemical.

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The two resignations mentioned above together with that of Mr. John Jorgensen created three vacancies. The Membership Review Board recommended to the Committee for membership the following gentlemen:

Mr. P. W. Simmons	Dow Chemical U.S.A.
Mr. R. O. Howard	Virginia Chemicals Inc.
Mr. H. D. Applequist	The Standard Oil Company

The motion was made, seconded and passed by the full Committee to accept the recommendations of the Membership Review Board.

17.0 Pending Action on TC-8: "Recommended Practices for Bottom Loading and Unloading Flammable Chemical Liquids to and From Tank Trucks".

Mr. J. J. Walker volunteered to resolve this matter with Mr. Butterbaugh and expressed the opinion that the consensus of the S&FP Committee had been presented in an earlier communication. He explained to the Committee members that an earlier agreement had been reached that recommendations to eliminate bottom loading entirely should not be made; however, this procedure is not recommended especially where bottom unloading is to be carried out under pressure. Mr. Walker emphasized that top unloading is the preferred procedure.

18.0 Cargo Information Cards

The Transportation Equipment Committee has recommended that MCA form an Inter-Committee Task Group to coordinate the review of MCA's Cargo Information Cards and Manual. Publication of some of the cards began in 1965 and the Manual was published during 1970. Some of the cards are out of print and all cards should be reviewed and updated, if necessary. The S&FP Committee was requested to name two or three representatives to serve on this Inter-Committee Task Group.

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The following two gentlemen will serve as
representatives of the S&FP Committee:

Mr. Michael Kelymann
Mr. T. T. Hubbard

Monsanto Company
Chevron Chemical Company


J. T. Seawell
Acting Secretary

JTS/cms

Minutes Subject to Approval:
11/4/76