

# Manufacturing Chemists' Association, Inc.

(FOUNDED 1878)

1825 Connecticut Avenue, N. W.  
WASHINGTON 9, D. C.

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## MINUTES OF MEETING SAFETY AND FIRE PROTECTION COMMITTEE Chemists' Club, New York City December 11, 1963

### PRESENT

|                             |                                                       |
|-----------------------------|-------------------------------------------------------|
| G. G. Fleming, Chairman     | Celanese Corporation of America                       |
| A. L. Cobb, Vice Chairman   | Eastman Kodak Company                                 |
| R. H. Albisser              | Merck & Co., Inc.                                     |
| L. W. Boulton               | Polymer Corporation Limited                           |
| A. H. Christian             | American Viscose Division, FMC Corp.                  |
| P. C. Folse                 | Socony Mobil Oil Company                              |
| G. L. Gorbett               | Monsanto Chemical Company                             |
| J. Guelich                  | General Chemical Div., Allied<br>Chemical Corporation |
| J. A. Hawthorne             | National Lead Company                                 |
| A. L. Kling                 | Olin Mathieson Chemical Corporation                   |
| S. M. MacCutcheon           | The Dow Chemical Company                              |
| J. S. Queener               | E. I. du Pont de Nemours & Co., Inc.                  |
| W. S. Wood                  | Sun Oil Company                                       |
| F. G. Stephenson, Secretary | Manufacturing Chemists' Association                   |

### GUEST

|                |                          |
|----------------|--------------------------|
| N. D. Griswold | The Dow Chemical Company |
|----------------|--------------------------|

### ABSENT

|                |                           |
|----------------|---------------------------|
| F. E. Macaulay | Wyandotte Chemicals       |
| S. F. Spence   | American Cyanamid Company |
| N. G. White    | Shell Chemical Company    |

Chairman G. G. Fleming opened the meeting at 9:30 a.m.

- Minutes of the September 24, 1963 meeting were approved subject to the following amendment:

Page 238 Item 10 change "The chairman then appointed the following subcommittee to prepare the new edition" to "The chairman then appointed the following subcommittee to coordinate the preparation of the new edition".

The chairman thanked Mr. Kling and other members of the subcommittee for work done to date. It is believed that this visual aid program can prove a valuable addition to the safety service provided by the Committee.

It is anticipated that the slides and scripts can be produced economically. Distribution could be effected through the Association.

4. Fire and Explosion Protection Devices Required by Insurance Companies

There was general expression of concern that insurance companies are tending to "go overboard" in their fire protection device requirements. A suggestion was made that the chemical industry, through MCA, should join in developing fire and explosion hazard tests on which decisions as to the need for various protective devices could be based. There was some agreement with this proposal but it was pointed out that we should not be surprised if the tests indicate present deficiencies in some areas of fire and explosion protection, for example, in tank venting.

Mr. Kling referred to the activities of the joint Safety and Fire Protection Committee/ Insurance Committee task group (now disbanded) in this area. He referred to the minutes of the June 4-5, 1962 meeting of the task group which indicate some areas in which major losses are occurring. The following is an excerpt from those minutes:

"2. Control House involvement in recent fires and explosions indicates an area for further improvement. A study of several losses indicates a variety of conditions in the subject building, some good, some bad. The undesirable situations resulted in injury or loss of life to occupants, severe damage to contents and prolonged shut down of operations. It is recommended that a Safety Guide be prepared on this subject. The following are some of the items which the Committee feels should be included:

a) The need for substantial construction for adequate protection of personnel and contents. Reinforced concrete appears desirable and reasonable for such construction. Bearing walls of brick, concrete block, or weaker material may result in collapse from fire or explosion exposure.

b) Control House location separate from hazardous operations is desirable. The exposure to instruments in the Control House and loss of operating records is important.

c) Protection for occupants and contents should include limitation of flammable or combustible occupancy. Due consideration should be given to possible business interruption, delivery time of instruments, records of operations and the need for skilled instrument mechanics.

d) Location and installation of control lines to and from the Control House should be considered so that adequate protection is provided.

e) As a matter of design, openings which could transmit fire, explosion pressures or excessive heat should be considered.

"3. A review of 32 losses each over \$50,000 which occurred in 1960 in plants insured through insurance members' organizations reveals the following classification as causes or contributing factors. (Note: Some losses had more than one contributing cause)

- 14 -- Design Failures
- 11 -- Supervisory Failures
- 5 -- Lack of Preventive Measures
- 5 -- Inadequate Protection
- 4 -- Material of Unknown Hazard

" Further study of these factors is recommended so that better standards can be developed and deficiencies eliminated.

"4. Further studies of these losses indicate that some factors occur with disturbing regularity showing the need for standards or guides for severe installation. These are as follows:

- a) Venting (emergency). A guide should include information on the reason for venting, calculations of venting areas and factors to determine potential need, safe discharge location, and the need for inspection and maintenance.
- b) Structural protection for fire exposure.
- c) Application of Inert Gas for fire and explosion prevention.

" The NFPA guide for the use of inert gas will probably be revised in the near future. It is suggested that members of the Safety and Fire Protection Committee review the present recommendation and supply the NFPA Technical Committee on Inerting with any suggestions which they might have."

Mr. Kling advised the group that a few chemical companies have maintained contact with fire insurance companies on an individual basis and undertook to give a further report at the next meeting.

5. MCA Semi-annual Meeting Panel on "Organization for Emergency."

It was generally agreed that the panel had done a very commendable job but that an attendance of 60-70 did not justify the work involved.

6. Revision of "Guide for Safety in the Chemical Laboratory"

Mr. A. H. Christian reported that the subcommittee will meet with a representative of the publisher, D. Van Nostrand Co., Inc., in New York on January 6. The purpose of the meeting is to discuss the scope and objectives of the revised edition and to agree on procedure.

7. Safety Publications

Chemical Safety Data Sheets

(a) New sheets in preparation

|                   |   |                     |
|-------------------|---|---------------------|
| Methyl Chloroform | - | S. M. MacCutcheon   |
| Paranitroaniline  | - | G. L. Gorbell       |
| Beryllium         | - | Brush Beryllium Co. |

(b) Revisions

SD-4 Phenol - in galley proof stage  
SD-31 Acrylonitrile - draft ready for distribution  
SD-30 Sodium Cyanide - draft to be distributed  
SD-29 Ethyl Ether - draft to be distributed  
SD-13 Ammonia Aqua - A. L. Cobb  
SD-18 Ethylene Dichloride - A. L. Kling  
SD-21 Nitrobenzene - S. F. Spence  
SD-22 Methanol - G. G. Fleming  
SD-23 Calcium Carbide - S. F. Spence  
SD-24 Perchlorethylene - S. M. MacCutcheon  
SD-26 Phosphorus Oxychloride - G. L. Gorbell  
SD-27 Phosphorus Trichloride - G. L. Gorbell  
SD-28 Phosphoric Anhydride - G. L. Gorbell  
SD-11 Perchloric Acid - J. Guelich  
SD-12 Carbon Disulfide

### Safety Guides

- SG-15 Training of Process Operators - printed September 1963
- SG-16 Liquid Chemicals - Sampling of Tank Car and Tank Truck Shipments - printed November 1963
- Identification and Transfer of Materials - to be printed
- Fire Protection in the Chemical Industry - A. L. Cobb
- Electrical Grounding - F. E. Macaulay
- Instrumentation for Safety - G. L. Gorbell
- Safety Inspection in the Chemical Plant - A. H. Christian
- Safety Evaluation of New Processes - R. H. Albisser
- Procedure for Routine Maintenance of Chemical Equipment - R. H. Albisser

It was agreed not to prepare a safety guide on Hazardous Chemical Reactions but to include a section on this subject in the revised edition of the laboratory safety manual

Controlling Chemical Process Reactions - It was agreed to postpone publication of a sheet on this subject.

### 8. Case Histories of Accidents

The secretary was requested to write to the safety representatives of all member companies inviting participation in the accident case history reporting program; a copy of the "guide for preparing case histories of accidents" should be enclosed with the letter.

### 9. Safety Workshop

It was agreed to proceed with preparations for the chemical industry safety workshop to be held in New Jersey in September or October 1964.

### 10. Next Meeting

The next meeting will be held on March 18 and 19, 1964 at the offices of the Celanese Corporation of America, Charlotte, North Carolina.

Minutes subject to approval

FGS:cm

12/31/63