

AQC 73-1

Manufacturing Chemists Association

Minutes of Meeting

AIR QUALITY COMMITTEE

Landmark Inn

Atlanta, Georgia

April 25-26, 1973

MEMBERS PRESENT:

J. H. Huguet, CHAIRMAN	Ethyl Corporation
M. B. Tohline, VICE-CHAIRMAN	Mobil Oil Corporation
I. L. Alexander for	AMAX - USMR
J. G. Brown	
M. V. Anthony	Stauffer Chemical Company
W. B. Barton	Borden, Inc.
C. B. Beck	Cabot Corporation
Z. G. Bell, Jr.	PPG Industries, Inc.
W. F. Bixby	B. F. Goodrich Chemical Company
W. R. Chalker	E. I. du Pont de Nemours & Company
D. G. Clarke	Rohm and Haas Company
D. B. Coghlan	Foote Mineral Company
B. W. Eley for	Monsanto Company
E. P. Wheeler	
H. R. Guest, Member	Union Carbide Corporation
Alternate	
E. M. Ilgenfritz for	The Dow Chemical Company
R. E. Reinker	
G. J. Kauffman for	The Procter & Gamble Company
A. H. Phelps	
D. J. Keilman for	Hercules Incorporated
R. E. Chaddock	
E. D. Lemon	United States Borax & Chemical Corporation
W. L. Mann	N L Industries, Inc.
R. L. Maycock	Shell Chemical Company
P. W. McDaniel	Union Carbide Corporation
M. G. Morris	Koppers Company, Inc.
E. G. Opdyke	Kay-Fries Chemicals, Inc.
J. W. Pervier	Air Products and Chemicals, Inc.
T. H. Rhodes	Exxon Chemical Company U.S.A.
L. W. Roznoy	Olin Corporation
W. R. Taylor	Diamond Shamrock Chemical Company

CMA 086091

F. W. Velguth	CPC International Inc.
C. R. Walbridge	Allied Chemical Corporation
Jerome Wilkenfeld	Hooker Chemical Corporation
K. D. Johnson, SECRETARY	MCA Staff
J. P. Turner	MCA Staff

GUESTS PRESENT:

J. A. Evans	Shell Oil Company
R. E. Farrell	Vistron Corporation

MEMBERS ABSENT:

J. S. Eckert	Norton Chemical Process Products/Division of Norton Company
R. H. Mansur	Reynolds Metals Company
S. N. Robinson	Mallinckrodt Chemical Works
J. H. Rook	American Cyanamid Company
J. C. Schwegmann	Kaiser Aluminum and Chemical Corporation
J. D. Underwood	Celanese Corporation

1. Minutes of the Meeting of January 24-25, 1973

There being no additions or corrections offered to the subject minutes, they were ordered approved as distributed.

2. Membership - Secretary

The Committee was informed of the approval by the Board, at their February 13, 1973 meeting, of the nominations of Messrs. J. D. Underwood and R. E. Reinker.

Mr. R. E. Farrell, of The Standard Oil Company (Ohio), was introduced to, and favorably received by, the Committee. His nomination will be forwarded to the Board with the Committee's recommendation for approval at the earliest opportunity.

3. Liaison with MCA Board - Mr. Tohline

Mr. Tohline, who had represented the Committee at the last meeting of the Board Liaison Committee for Environmental Quality and Control, reported that the Liaison Committee had expressed a willingness to provide greater Board support for MCA's technical committees. He expressed his disappointment that more of its members did not participate in the Liaison Committee's activities.

4. AQC Budget for Fiscal 1974 - Chairman

Mr. Huguet reported that he had been informed by Mr. Driver that the Committee project for consultative support in the area of photochemical oxidants was slated for Board approval. The Committee's recommendation that MCA support the ASTM Project Threshold - Phase II, in the amount of \$25,000 has been disapproved. The Chairman expressed his approval of the MCA decisions.

5. Status Reports on Existing Special Projects

5.1 A. D. Little Odor Research Project CMA 086093

The Secretary reported that he had not yet been able to arrange a schedule for a conference with Mr. Kendall because of conflicts in travel schedules. Dr. Bell and the Secretary will attempt to schedule such a conference as soon as possible, and will make every effort to secure early submission of the two reports now overdue: (1) a consolidated report on odor threshold measurements, combining the results of the first four years' study, and (2) a final report on the last year and a half's work on physiological responses to odor stimuli.

5.2 Joseph Coon's Paper on Plume Visibility

The Secretary noted that the final draft of this paper was now undergoing staff review, and was expected to be approved shortly for submission to the printers.

6. Report from Petrochemicals Advisory Committee - Messrs. Pervier and Guest

Mr. J. W. Pervier, of Air Products and Chemicals, Inc., submitted the following chart of the status of the various studies completed or in progress under their EPA contract:

Status of Contract 68-02-0255

April 24, 1973

<u>Chemical</u>	<u>Screening Study</u>	<u>In-Depth Study</u>
Acetaldehyde via ethylene		
via ethanol	Complete	
Acetic acid via methanol	Complete	
via butane		
via acetaldehyde		
Acetic Anhydride	Complete	
Acrylonitrile	Not Required	Complete (3)
Adipic Acid	Complete (2)	
Adiponitrile via butadiene	Complete (3)	
via adipic acid	Complete (3)	
Carbon Black	Not Required	Complete (2)
Carbon Disulfide	In Progress	
Cyclohexanone	Complete (2)	
Dimethyl Terephthalate (+ TPA)	In Progress	
Ethylene	Complete (2)	
Ethylene Dichloride		
via oxychlorination	Not Required	Complete
via direct chlorination		
Ethylene Oxide	Not Required	In Progress
Formaldehyde - silver catalyst	Complete (3)	In Progress
- iron oxide catalyst	Not Required	In Progress
Glycerol	Complete (2)	
Hydrogen Cyanide	Complete	
Isocyanates	In Progress	
Maleic Anhydride	In Progress	
Nylon 6		
Nylon 6,6	Complete	
Oxo Process	Complete	
Phenol	Complete	(1)
Phthalic Anhydride	Not Required	In Progress
High Density Polyethylene	Complete (2)	
Low Density Polyethylene	Complete (2)	
Polypropylene	Complete	
Polystyrene	Complete (3)	
Polyvinyl Chloride	In Progress	
Styrene	In Progress	
Styrene-Butadiene Rubber	Complete	
Vinyl Acetate via acetylene	In Progress	
via ethylene		
Vinyl Chloride	Complete (2)	

NOTES

- (1) In-depth study scheduled.
- (2) Discussed publicly March 22, 1973.
- (3) Scheduled for public discussion May 3, 1973.

CMA 086094

The written reports of Mr. Guest on the March 22 meeting have been distributed directly to the Air Quality Committee; the next meeting is scheduled for May 3, 1973.

Mr. Guest reported that EPA has made the decision to designate the manufacture of formaldehyde as a process for which standards of performance are to be promulgated pursuant to section 111 of the Clean Air Act.

Mr. Bixby reported that EPA has let a contract for a "total environmental impact" study of the butadiene-styrene rubber industry.

7. EPA Strategies for the Control of Organic Emissions -
R. L. Maycock

Dr. Maycock recounted the history of present negotiations of industry with EPA concerning possible revisions to the organic emissions standards suggested in "Appendix B" of the August 14, 1971 promulgation of "Requirements for Preparation, Adoption, and Submittal of Implementation Plans." At a meeting held in Durham last November 22, attended by delegations from both the MCA and the National Paint and Coatings Association, it had been pointed out to EPA that the needs of the chemical industry were not necessarily met by options that might be adequate to meet those of the paint industry. Given a reasonable list of approved solvents, the latter might avail themselves of alternate formulations for their products, but the chemical industry requires rules permitting rational handling of the solvents and volatile organics that are their primary products.

In pursuing this subject further, an MCA delegation, with Dr. Larry Faith present as our consultant, had met with EPA representatives on February 27, 1973. At that time, favorable consideration was given to a concept proposed by our delegation that, rather than a narrow list of "exempt" solvents, with all others subject to very rigid, uniform restrictions, a control scheme be based upon the concept that a graded series of controls be established to be applied to organic emissions to a degree proportional to their photochemical reactivity.

At the invitation of EPA, Dr. Maycock prepared an extensive list of volatile organic compounds of commercial importance. Copies of this list were distributed to the members of the Committee, and he asked them to review this list and suggest additions or deletions.

Discussions are continuing between MCA and EPA to develop criteria for the division of candidate chemicals into categories based upon photochemical reactivity, test methods for determining the classification of compounds of presently unknown photochemical reactivity, and control schemes appropriate to such classes.

8. DuPont Draft of CED Report on Economic Impact of Sulfuric Acid Plant Controls

The Secretary relayed the request of Mr. James Parsons, author of this draft, for prompt submission of comments and corrections from those to whom he had submitted review copies.

9. Recent Developments in Small Particle Control Technology

9.1 Pentapure Scrubber - Mr. Lemon

Mr. Lemon reported that he had visited the plant of the manufacturer, and had observed operation of a pilot scale unit in a test in which a gas stream bearing 5-3 grains/scf of redispersed bag house dust had been cleaned to 0.001 gr/scf. Security restrictions (during pendency of patent negotiations) prevented him from describing the design of the unit, but he expressed optimism that the device would prove to be a significant development in particulate control technology.

9.2 Aronetics "Apitron" Scrubber - Mr. Beck

Mr. Beck described this as a modified venture in which both the gas flow and the high relative velocities of particulates and water droplets are achieved by partial flash evaporation of superheated water in a two-phase flow nozzle at the throat of the venturi. As the water is heated by the hot, dirty process gas, fouling of heat exchange surfaces in the waste heat boiler is a major problem.

9.3 Petersen Separator - Mr. Walbridge

No performance data were available on this device.

9.4 Other Developments

Mr. Kauffman (of Procter & Gamble) briefly described a new scrubber that had proved effective in removing fatty materials from waste gases in a detergent manufacturing process. These had proved very troublesome with conventional devices because of their tendency to clog them. A recent development at John Manville for cleaning high temperature gases was also called to the attention of the Committee, which expressed an interest in being kept informed as operating experience was gained with these devices.

10. Technical Seminar on Air Pollution Control Technology

The Secretary reported on the cancellation of the Houston seminar for lack of adequate registration. He indicated that a renewed effort would be made to publicize the fall session (September 10-14 in Chicago). In the absence of strong support for this meeting, he said that MCA would urge this program be discontinued.

The Committee expressed hope that a successful and useful seminar program could survive, but agreed that, lacking industry support evidenced by student registrations, the Committee ought not place itself in the position of trying to promote further seminars.

11. Report from the Joint Subcommittee on Environmental Law - Mr. Evans

Mr. Evans discussed the concern of the Subcommittee with the failure of EPA to give consideration to statutory requirements for consideration of factors of economics and technological feasibility in the standards they were promulgating or encouraging the states to adopt. Standards recently proposed and/or adopted by the state of Illinois were given particular mention. He mentioned potential avenues for judicial challenge of such standards on these grounds.

Items of common interest to both the Air Quality Committee and the Joint Subcommittee on Environmental Law, and potential topics for consideration at the joint session of these two groups next October (see paragraph 18.2 of these minutes) were reviewed. The presentation of selected case histories of enforcement cases seemed to be of particular interest.

The Chairman appointed Dr. M. V. Anthony as Chairman of a task group to work with the JSEL Chairman in developing a suitable program for the joint session.

12. Emergency Releases for Chemical Process Operations -
Mr. Clark for Mr. Paist

In the absence of Mr. Paist, his alternate, Mr. Clark, reported on the progress made by the task group assigned to this problem. They are developing proposed guidelines for equipment designers in the provisions they make for emergency releases. At least one more draft of these guidelines will be subjected to task group review before they are ready for distribution to the Committee.

13. Toxic Substances Legislation

The Secretary reported on current developments on pending legislation. MCA's President Driver had testified at both House and Senate hearings on March 16 and March 21, respectively. Copies of MCA statements have been made available to the Committee. Neither subcommittee had yet reported out a bill.

14. Site Selection Workshop

Dr. Anthony reported the favorable consideration of the proposed workshop by the intercommittee task group studying the concept. Efforts will be made to secure the active collaboration of these other committees (Water Resources, Solid Wastes, Public Relations, and Industrial Relations) in developing a program for the workshop.

15. Report from the Public Relations Department -
Mr. Turner

After summarizing the Public Relations Department's current activities of interest to the Committee, Mr. Turner discussed the proposal to broaden the case history reports to cover safety problems, as proposed in Mr. Richard Blewitt's letter of April 16 to the Committee.

Among the developments indicating wider public awareness of the need to balance equities in arriving at environmental management decisions, he noted the formation

of the Council for Environmental Balance, the tone of the President's message on energy and the environment, and the activities of the National Environmental Development Association.

16. Chemical Safety Data Sheets

The comments of Mr. R. J. Brenner, Mobil Chemical's Manager of Environmental Controls, in regard to the failure of certain MCA safety data sheets to recognize regulation requirements in the handling and disposal of chemicals and waste materials, was brought to the attention of the Committee. Although MCA and its committees cannot be expected to maintain an awareness of regulatory requirements in all state and local jurisdictions, our members, in the preparation of Chemical Safety Data Sheet sections on handling and waste disposal, should be careful not to imply sanction of practices that may be in violation of local regulations. In questionable cases they should alert the reader to the possible existence of specific regulatory requirements that may conflict with MCA's general recommendations.

17. Liaison Reports

17.1 American Petroleum Institute - Mr. Tohline

Mr. Tohline's report of API projects of interest to the Committee is distributed as an enclosure with the mailing of these minutes.

17.2 Intersociety Committee on Methods of Air Sampling and Analysis

PPG has again offered to have one of their staff men cover the next meeting of the Committee as an MCA observer. His report will be distributed to the Air Quality Committee when received.

17.3 American Institute of Chemical Engineers

The following excerpts from the AIChE's "Goals for 1973," relating to their effort to increase their interaction with the federal agencies and their views on the energy crisis, may be of interest to the members of the Air Quality Committee:

INCREASE OUR INTERACTION WITH THE
FEDERAL GOVERNMENT VIA:

- a) making significant progress in the AID/LIFE Project
- b) transmitting a completed report on "Motivation Techniques for Pollution Control"
- c) transmitting a status report on what has already been accomplished in "Technology Transfer"
- d) developing a strategy and action plan for transmitting a 1974 report on "Testing Procedures for Pollution Control Equipment"
- e) presenting at least 10 different federal "testimonies of record" by Division members (identified as such, but acting as independent professional(s)).

The current fuel crisis, which has hit many parts of the nation this winter, at least a year earlier than was anticipated, points up in just one more way the inter-relationship of all aspects of environmental problems. It shows again not only that an interdisciplinary approach to problem solution is needed, but also that an overall long-range systems approach and evaluation is a necessity. The fuel crisis has, in part, been brought on by the conversion of combustion operations from high sulfur coal to natural gas and low sulfur fuel oil. Now it becomes apparent that these moves represented purely short-range and temporary expedients to solving pollution problems.

It is time, in fact past time, to make a long-range appraisal of our pollution problems and of our resources - of energy, minerals, manpower, and production and financial capability - and to adopt a program that does not have to continually shift gears or change directions.

The energy situation emphasizes the need for non-polluting methods of using our vast coal reserves, since these are the only current energy sources rather rapidly available in adequate quantity. It also points to the longer-range need of developing a non-polluting energy source which could be made available all over the world in abundant quantity. Perhaps this means we must put greater emphasis on research into more practical methods of utilizing solar radiation and recovery of waste energy.

In the area of manpower and production facilities, it appears that we need to consider regulatory timing commensurate with engineering manpower and facilities available for production of control equipment. A little thought here indicates that neither the manpower nor the production facilities are available to convert every power-generating station in the country to pollution-free operation within a period of two years.

And last, but certainly not least, we as members of the technical community should be hard at work looking for alternate routes and better ways to apply processing technology in a non-polluting manner. Anaconda has been much in the news this past week in regard to their plans to use a new solvent refining method for copper ore. Instead of roasting the sulfide ore as in the past, which releases SO_2 to the atmosphere, they will use a liquid processing technique which extracts copper from the ore by solution. While the technique is not really new, this is apparently the first time it has been considered as a means of preventing pollution on a large scale. If Anaconda has also been successful in preventing formation of water pollutants, it should certainly be a step forward. This is an example of the types of alternate processing techniques that we must be considering and developing.

Mr. Huguet summarized the scheduled program of the Institute, including both meetings and training sessions, pertinent to air pollution controls.

17.4 Air Pollution Control Association

The annual meeting is scheduled for June 24-29 in Chicago. No major sessions appear to be of particular interest to the chemical industry.

17.5 U. S. Environmental Protection Agency

EPA schedules (as of February 1973) of interest to the Air Quality Committee are listed below

(1) Revision of National Secondary Ambient Air Quality Standards for Sulfur Dioxide

Publish proposed revisions - April 1973
Promulgate final revisions - July 1973

(2) Standards of Performance for Groups II and III Industrial Facilities

Publish proposed Group II standards - March 1973
Publish proposed Group III standards - July 1973
Promulgate final Group II & III standards - October 1973

(3) National Emission Standards for Hazardous Air Pollutants

Publish final standards for mercury, beryllium, and asbestos - March 1973

18. Future Meeting Plans

CMA 086102

18.1 Field Trip to TVA SO₂ Control Project

The Secretary reported that he had been informed by TVA that it would be two to three years before the full scale demonstration project on SO₂ control by limestone injection and wet scrubbing would be operating. The Committee agreed to postpone consideration of a field trip in conjunction with a southeastern meeting until a more firm estimate could be obtained on the time of completion of the project.

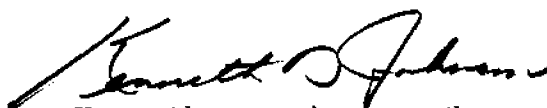
18.2 Fall Meeting 1973

The Committee agreed to schedule its fall meeting in Washington, D. C., on Wednesday and Thursday, October 10 and 11. The Secretary was instructed to invite the JSEL to meet concurrently with us, and to schedule a half-day of joint sessions and a joint luncheon on Thursday. He was also asked to select a suitable member of the EPA legal staff to be our luncheon guest and to address the group.

18.3 Winter Meeting 1974

In response to a strong expression of interest by members of the Committee in a visit to the Las Vegas facilities of the National Environmental Research Center, the Chairman appointed a Task Group (Bailey Barton, Chairman, M. V. Anthony, and L. W. Roznoy) to submit recommendations concerning the possible reconsideration of the previous decision to meet in Research Triangle Park, North Carolina, and the substitution therefor of a meeting in Las Vegas. The Task Group subsequently reported with a recommendation that the Committee meet on February 13 and 14, 1974, in Las Vegas, Nevada, with a visit to the National Environmental Research Center there. The Committee strongly supported this recommendation, and asked the Task Group to submit written justification for this site to permit MCA management to judge the need to make an exception to the general rule against committee meetings in "resort" areas.

Respectfully submitted,



Kenneth D. Johnson, Ph.D.

Secretary

Air Quality Committee

Minutes Subject to Approval
September 26, 1973
KDJ:mb

Distribution "C"

Attachment