AQ69-1

Manufacturing Chemists Association

MINUTES OF MEETING

Air Quality Committee

Velvet Cloak Inn — Raleigh, North Carolina

January 26-27, 1972

MEMBERS PRESENT:

| | |
|---|---|
| W. F. Bixby, Chairman | B. F. Goodrich Chemical Company |
| M. V. Anthony | Stauffer Chemical Company |
| W. B. Barton | Borden Chemical Div. of Borden, Inc. |
| C. B. Beck | Cabot Corporation |
| Z. G. Bell | PPG Industries, Inc. |
| J. G. Brown | Climax Molybdenum Company |
| R. E. Chaddock | Hercules Incorporated |
| W. R. Chalker | E. I. du Pont de Nemours & Co. |
| E. W. Kleppinger | Celanese Corporation |
| C. G. Kramer (1/26 only) | The Dow Chemical Company |
| E. D. Lemon | United States Borax & Chemical Corp. |
| R. M. Love | Enjay Chemical Company |
| R. H. Mansur | Reynolds Metals Company |
| J. A. Mullins (for R. L. Maycock) | Shell Chemical Company |
| E. G. Opdyke | Kay-Fries Chemicals, Inc. |
| J. H. Rook | American Cyanamid Company |
| L. W. Roznoy | Olin Corporation |
| J. C. Schwegmann | Kaiser Chemicals, Division of Kaiser Aluminum & Chemical Corp. |
| W. R. Taylor | Diamond Shamrock Chemical Company |
| M. B. Tohline | Mobil Oil Corporation |
| F. W. Velguth | CPC International, Inc. |
| C. R. Walbridge | Allied Chemical Corporation |
| E. P. Wheeler | Monsanto Company |
| J. Wilkenfeld | Hooker Chemical Corporation |
| D. C. Winson (1/26 only) | Eckert, Seamans, Cherin & Mellott |
| J. H. Yeager | Mallinckrodt Chemical Works |
| K. D. Johnson, Secretary | MCA Staff |

GUESTS PRESENT: 1/26-27/72

| | |
|---|---|
| O. J. Clinard | Chemetron Corporation |
| T. H. Rhodes | Enjay Chemical Company |
| W. Town | Celanese Corporation |
| J. P. Turner | MCA Staff |

MEMBERS ABSENT:

| | |
|---|---|
| J. P. Butler | Kawecki Berylco Industries, Inc. |
| J. S. Eckert | Norton Chem. Process Prods., Div. of Norton Company |
| J. H. Huguet | Ethyl Corporation |
| W. L. Mann | N L Industries, Inc. |
| P. W. McDaniel | Union Carbide Corporation |
| J. H. Morris | Merck & Co., Inc. |
| S. S. Paist | Rohm and Haas Company |
| A. H. Phelps | The Procter & Gamble Company |

## I. COMMITTEE MEETING, SESSION I

### 1.0 Minutes of the Meeting of September 21-22, 1971

Two corrections to these minutes were noted. In section I - 2.0, on page 68-3, Mr. Velguth's name was incorrectly stated. It should have been listed as:

Frederick W. Velguth ("Fritz").

Another error was the omission of the name of Mr. Peter Cunningham of the Monsanto Central Engineering Department, from the guest list for the September meeting in St. Louis.

### 2.0 Membership

The following resignations from the Air Quality Committee have been received by MCA:

| | |
|---|---|
| W. T. Laffey | Hercules Incorporated |
| R. M. Love | Enjay Chemical Company |
| A. J. Primosic | Foote Mineral Company. |

In each instance the company involved has now, or soon will, nominate a replacement for the resigning member.

The following individuals have been duly nominated, and have been confirmed by the MCA Board, to membership in the Air Quality Committee:

Joseph G. Brown
Senior Process Engineer
Climax Molybdenum Company Division
American Metal Climax, Inc.
One Greenwich Plaza
Greenwich, Connecticut 06830
Phone: (203) 661-3000 x 262

Dr. Richard E. Chaddock
Executive Coordinator of
Environmental Engineering
Hercules Incorporated
910 Market Street
Wilmington, Delaware 19899
Phone: (302) 656-9811 x 375

John S. Eckert
Norton Chemical Process Products
Division of Norton Company
P. O. Box 350
Akron, Ohio 44309
Phone: (216) 633-3224

Frederick W. Velguth
Technical Manager,
Environmental Control
CPC International, Inc.
Moffett Technical Center
Box 345
Argo, Illinois 60501
Phone: (312) 581-6800.

The nomination of

T. H. Rhodes
Corporate Environmental
Conservation Adviser
Enjay Chemical Company
P. O. Box 3272
Houston, Texas 77001
Phone: (713) 221-0117

has been received and will be forwarded to the Board with a recommendation for favorable action at their next meeting.

The following new addresses are called to the attention of the Committee. You are requested to correct your Committee directories to indicate these changes.

W. Bailey Barton
Environmental Engineering Manager
Borden, Inc.
50 West Broad Street
Columbus, Ohio 43215
Phone: (614) 461-8586

Willard F. Bixby
Manager, Process Engineering
B. F. Goodrich Chemical Company
A Division of
The B. F. Goodrich Company
6100 Oak Tree Boulevard
Cleveland, Ohio 44131
Phone: (216) 524-0200 x 7910

Also, please correct your directories to show Dr. Anthony's new title as:

Vice President, Environmental Affairs.

His address remains as shown in the Committee Directory.

3.0 MCA Board Liaison - W. F. Bixby

Mr. Bixby reported that the chairmen of the seven technical committees under the jurisdiction of the Board Liaison Committee for Environmental Quality and Control had met on Novem-

ber 23, 1971 at a luncheon session to coordinate their presentations to the Board Committee. He indicated strong and widespread support for the request of the Air Quality Committee for MCA to adjust professional staff assignments to permit the staff representatives to these committees to spend substantially more time in a close and continuing liaison with the Environmental Protection Agency. Mr. Byrd, chairman of the Water Resources Committee, had prepared a long and well-reasoned letter to the Board Committee in much the same vein.

Dr. Gerstacker presented to the technical committee chairmen a request that their committees give renewed and intensive consideration to the problem of developing a rating system for the grading of companies' performances in environmental management. He cited the industrial accident reporting system as an example of at least partial success in the development of a composite statistic by which one company's performance in industrial safety could be compared with that of another. He indicated that analogous systems for comparing performances with respect to air pollution control, water pollution abatement, solid waste control, and occupational health are badly needed.

Mr. Bixby reported that he indicated that past efforts toward this goal by the Air Quality Committee had been notably unsuccessful, but that he would ask them to renew their efforts in this regard.

4.0 Report from the Joint Subcommittee on Environmental Law - Mr. Winson

Mr. Winson reported on the recent activities of the task groups from their subcommittee in assisting the various MCA Technical committees in preparing evaluations and statements on pending legislation and proposed regulations.

Reference was made to the presentation Mr. Winson had made to the Subcommittee on recent court decisions relating to the question of "Standing to Sue." A listing of pertinent citations was distributed to the Subcommittee and is available from MCA on request.

5.0 Report from the Ad Hoc Committee on Chemicals Regulation - M. V. Anthony

Dr. Anthony related to the Committee the series of postponements of MCA's appearance before the Senate hearings on

this legislation, and the final appearance of our witnesses on November 5. Copies of the MCA statement and of the follow-up letter submitted to Senator Spong on January 5, 1972, were made available to those in attendance and may be obtained from MCA upon request.

6.0 Termination of the Reactive Metals Subcommittee

On receiving the report from the Secretary that the MCA Reactive Metals Group had been disbanded, and that a number of the participating ferro alloy companies had resigned from the Association, the Air Quality Committee, on motion duly made, seconded and carried, voted to terminate the Reactive Metals Subcommittee as a unit of the Air Quality Committee. Those of its members affiliated with corporations retaining their MCA memberships were invited to have their executive contacts nominate them to membership on the parent Committee.

7.0 Safety Testing of Chemical Products for Carcinogenicity, Mutagenicity, and Teratogenicity - Dr. C. G. Kramer

As Dr. Kramer's schedule required him to leave Raleigh early, the scheduled presentation of his paper was advanced to the morning session. He referred the Committee to two general references that explored these questions in greater detail. One is the Report of the Secretary's Commission on Pesticides and their Relationship to Environmental Health, Parts I and II, U. S. Department of Health, Education, and Welfare, December 1969.

The chapters (of Part II) of particular concern with the matters under discussion are:

Chapter 5 - Carcinogenicity of Pesticides
Chapter 7 - Mutagenicity of Pesticides
Chapter 8 - Teratogenicity of Pesticides.

A second reference is to the article by W. C. Hueper, "Public Health Hazards from Environmental Chemical Carcinogens, Mutagens and Teratogens," appearing in Health Physics, Vol. 21, pp. 689-707 (November, 1971). Reprints may be available from the author at 4558 McGregor Blvd., Fort Myers, Fla. 33901.

Dr. Kramer started his presentation with a description of the phenomena involved, giving examples of episodes of each that had attracted recent and widespread attention.

He discussed the implications inherent in the chemical, versus the viral theories of cancer causation, and progress being made in diagnosis and therapy. With respect to testing of chemicals for carcinogenesis, he particularly stressed the need to design the experiment with routes of administration of the test chemical that were rationally related to anticipated routes of environmental exposure.

In his discussion of mutations, and their causation by chemical exposure, he called attention to the basic differences in mode of expression, and in the environmental significance of lethal mutants and of dominant and recessive non-lethal mutants.

Dr. Kramer pointed out the need, in testing for teratogenesis, to discriminate carefully between that phenomenon and that of embryo toxicity. He commented that, on occasion, reports of alleged teratogenicity had failed to make this distinction. Embryotoxicity is injury to the embryo secondary to a toxic response in the mother; teratogenicity is the creation, in the embryo, of a developmental defect in the absence of observable signs of maternal injury.

Among the pitfalls of testing for the presence of these properties in chemicals, Dr. Kramer listed the need for appropriate selection of: routes of administration, species of test animals, nature of controls, number and statistical treatment of the test data, quality and completeness of histological studies, and the purity and identity of the chemical under test. Because of the unavoidable problems in extrapolation of results from laboratory animals to the human species, he noted that we must recognize the need to supplement laboratory studies with the careful monitoring of exposed human populations.

The chairman, on behalf of the Committee, expressed the sincere appreciation of the latter for the timely and informative briefing he had delivered, and expressed the hope that we would be able to enjoy the benefits of another such report in the near future.

8.0 Report on Odor Research - Secretary

In the absence of Mr. Phelps, the Secretary presented the First Two Quarterly Status Reports from A. D. Little, Inc. on the results of the 1971-72 research program. In accordance with the suggestions made at the last meeting of the Committee,

some effort has been made to evaluate the apparent changes in perceived odor intensity and the degree of pleasantness or unpleasantness with time. The results of these preliminary observations are reported in the January 21 summary report included in Appendix B to these minutes.

## 9.0 Liaison Reports

### 9.1 Liaison with Other Organizations

Because of the shortage of time and the crowded schedule, reports of liaison with other organizations were dispensed with.

### 9.2 State Legislation Reports

Copies of the reports of developments in the states that have been received by the Secretary are attached to these minutes as Appendix D.

## 10.0 Subcommittee Assignments

### 10.1 Meeting Sites Selection

The chairman appointed a task group composed of Z. G. Bell, Jr. (chairman), J. H. Rook, and C. R. Walbridge to bring in recommendations for the meeting sites for the January 1973 meeting.

### 10.2 Nominations

Jerome Wilkenfeld (chairman), M. V. Anthony, and L. W. Roznoy were named as a Nominations Subcommittee to select nominees for the offices for the June 1, 1972 to May 21, 1974 period.

### 10.3 Standing Subcommittees

Mr. Bixby reviewed the matters of unfinished business for consideration of the subcommittees. In the absence of Mr. Butler, chairman of the Education and Training Subcommittee, and Mr. Phelps, chairman of the Information and Publications Subcommittee, Mr. James Turner of the MCA staff was asked to be responsible for taking notes of the matters considered by these subcommittees.

## II. REPORTS OF THE SUBCOMMITTEES

### 1.0 Reports of the Standing Subcommittees

The written subcommittee reports submitted by the presiding officers of the subcommittee sessions are reproduced in Appendix A to these minutes. The following material relates to the discussions and actions taken on these reports by the full Committee at the time the subcommittee reports were presented to them.

1.1 Technology and Engineering Subcommittee - Mr. C. B. Beck for M. B. Tohline, Chairman

The recommendations of the Subcommittee with respect to funding of the 1972-73 Odor Research Program were approved by the full Committee by motion duly made, seconded and carried.

Similarly, the proposal that MCA start immediately to develop a list of volunteers for work with EPA on the Section III regulations was formally approved. The Secretary will prepare and circulate a questionnaire for this purpose.

1.2 Information and Publications Subcommittee - J. P. Turner for J. P. Butler, Chairman

The recommendations of the Subcommittee that clearance of the A. D. Little Odor Threshold Report on behalf of the Committee be delegated to the Secretary and an oversight group composed of A. H. Phelps, Jr., S. S. Paist, and E. W. Kleppinger was accepted by Committee vote.

The decision to withhold public release of the current reports on physiological responses to odorant stimuli until a more extensive data acquisition and evaluation program had been completed was also approved.

1.3 Standards and Abatement Programs Subcommittee - K. D. Johnson for W. L. Mann, Chairman

The Committee urged that MCA maintain a close surveillance over the sulfur-in-fuels tax proposal of the Administration. It asked the Secretary to circulate the report that

has been prepared by the National Association of Manufacturers on this legislation.

With regard to the noise control legislation, A. H. Phelps and Z. G. Bell, Jr. were asked to prepare a status report. The Secretary was asked to keep the Committee informed on the status of federal legislation on this subject. (Mr. Phelps' report is included with these minutes in Appendix C. The noise control bill as passed by the House on February 27, 1972, H.R. 11021 and the recently introduced Tunney-Muskie bill, S. 3342, are being separately distributed to the Committee.)

The MCA Board request for Committee consideration of a system of rating corporate pollution control performance was referred to an ad hoc subcommittee composed of

W. R. Chalker, chairman
J. C. Schwegmann
W. B. Barton.

Mr. Wilkenfeld's rating chart developed for Hooker Chemical Corporation use, is appended to these minutes in Appendix C.

1.4 Report of the Education and Training Subcommittee - J. P. Turner for A. H. Phelps, Jr., Chairman

The recommendations of the Subcommittee with respect to future workshops were accepted. Mr. A. H. Phelps was asked to lead out in the development of an electrostatic precipitator workshop and Messrs. Beck and Chalker in an opacity meter workshop. To determine the extent of interest in these subjects, the Secretary will distribute appropriate questionnaires to be prepared by the individuals identified above.

The MCA staff was requested to proceed with plans for an air pollution control seminar series, that Dr. Eckenfelder be dropped from the list of potential directors, and that Dr. Byers of the University of New Hampshire be added thereto.

As an informal poll of the Committee revealed a rather modest level of potential attendance for such a series, the Secretary was asked to circulate a suitable questionnaire to

the MCA Air Pollution Contacts to develop a better picture of prospective attendance. If, in the judgment of MCA staff this response warrants it, they are asked to proceed with the advice and guidance of Messrs. Phelps and Yeager, to make formal arrangements with the selected director to initiate such a series.

## 2.0 Reports of Special Subcommittees and Technical Groups

### 2.1 Report of the Meeting Sites Subcommittee

The Subcommittee recommended that the Air Quality Committee proceed with its plans to meet in Chicago in May, whether or not the Water Resources Committee chose to join them. They also recommended no change in plans to meet in Dallas in September.

Two alternative sites were proposed for the January, 1973 meeting: Atlanta, Georgia and San Francisco, California. A roll call vote of the Committee indicated a clear majority favored the San Francisco site.

Future meeting schedules now are shown as

May 10-11, 1972
Chicago, Illinois
Sherman House

September 20-21, 1972
Dallas, Texas
hotel selection open

January 24-25, 1973
San Francisco, California
hotel selection open.

### 2.2 Report of the Nominations Subcommittee

The Nominations Subcommittee reported that they had not been able to resolve all questions on the selection of a slate of officers for the next biennium, and indicated that they would submit a slate to the Secretary in time for Committee notification and action at the May meeting.

## III. COMMITTEE VISIT TO THE NATIONAL ENVIRONMENTAL RESEARCH CENTER

### 1.0 Introduction

On Thursday, January 27, 1972 the Committee convened in the auditorium of the Environmental Protection Agency's National Environmental Research Center, at Research Triangle Park, North Carolina, to hear a briefing by members of the Office of Air Programs staff and that of the Center on activities of mutual interest. Mr. Donald Walters, of Dr. Steigerwald's staff, served as our host.

### 2.0 Organization and Mission of the National Environmental Research Center

After a welcome and introductory remarks by Dr. Steigerwald, Director of Stationary Source Pollution Control Programs, Dr. Debert Barth, Director of the National Environmental Research Center (a research center under the Assistant EPA Administrator for Research and Monitoring, Dr. Stanley M. Greenfield), discussed the organization of research and monitoring under EPA and the role of the National Environmental Research Center.

He described its mission as the "characterization of pollutants." He identified six major elements in the total characterization of any pollutant:

1. Determination of its effects on both human health and welfare;

2. Development of measurement techniques of adequate sensitivity and specificity;

3. Identification and inventory of sources of emission;

4. Determination of technology and control capabilities of available methods of emission restrictions;

5. Development of data on atmospheric contamination by that pollutant, and on the spatial and temporal distribution of such levels;

6. Develop mathematical models by which to predict the changes in air quality to be anticipated from the adoption of alternative strategies for emissions restrictions.

After summarizing the current status of the proposed program to control beryllium, mercury, and asbestos under authority of Section 112 (Hazardous Air Pollutants) he identified seven more air contaminants that were now under study by the National Academy of Sciencesto determine whether or not they constituted a hazard of such a degree as to warrant controls under that section.

They are:

Lead
Polycyclic Organic Matter "POM" (particulates)
Polycyclic Organic Matter "POM" (gases)
Vanadium
Chromium
Manganese
Nickel.

Dr. Barth indicated that the characterization documents on these materials were expected by the summer of 1972.

Dr. Norton Nelson at New York University has a contract to prepare such documents on polychlorinated biphenyls, arsenic and cadmium.

He mentioned the mercury characterization document as complete, and to be published in a combined volume as background data for the asbestos, mercury and beryllium proposed regulations. He identified the Federal authorities and Dr. Norton Nelson's group as the majcr contributors to the mercury document.

Among the air contaminants of current, but less pressing, interest that he mentioned were:

| | | |
|---|---|---|
| Copper | Barium | Phthalate Esters |
| Zinc | Silver | Aeorallergens |
| Selenium | Antimony | Odors |
| Boron | Tin | Fine Particulates. |

Dr. Charles Dunham has a Biological Effects of Atmospheric Pollutants (BEAP) group (at NAS-NRC) that has an open-ended contract to study five pollutants per year for the National Environmental Research Center.

## 3.0 Division of Standards Development and Implementation

Mr. Donald Goodwin, Director of the Division of Standards Development and Implementation, then discussed the progress his division was making. It is responsible for the review and evaluation of emissions restrictions regulations submitted as portions of the state implementation plans submitted pursuant to Section 110, the standards of performance for new stationary sources under Section 111, and the emissions standards for hazardous pollutants promulgated pursuant to Section 112. Each of these categories is assigned to a separate group in his division. A fourth group is responsible for the analysis of economic effects of proposed restrictions.

### 3.1 State Implementation Plans

He indicated that when it becomes necessary for EPA to promulgate implementation plans for a state that has failed to file satisfactory implementation plans, EPA will "take a hard look" at cost-benefit relationships. Such federal plans would first be published in the Federal Register as proposed plans, public hearings would be held on them, and then the plans, with such revisions as might be necessary, would be promulgated as final.

### 3.2 Standards of Performance for New Stationary Sources

The development of new plant standards to be promulgated pursuant to Section 111 has been proceeding in several groups: (1) those promulgated last December 23, for sulfuric and nitric acid and cement plants and for municipal type incinerators and steam generating plants; (2) rendering plants and hot-mix asphalt plants, petroleum refineries, catalytic crackers, petroleum storage areas, BOF steel, sewage sludge incinerators, secondary lead smelting, brass and bronze processing, and sulfur in fuel gases (expected to be announced around June 1, 1972); and (3) phosphate fertilizers and phosphoric acid, pulp and paper, aluminum reduction, copper, lead and zinc smelters, coal cleaning plants, ferro alloys, and coke manufacture (these are expected to be announced around the first of next year).

Informal advisory committees have been or are being formed for each industry as detailed studies of its technology and control problems begin. At least nine such committees were identified.

Mr. Goodwin made reference to a background paper on stack opacity meters that was expected to be available within a couple of months. He felt that the technical problems in measuring in-stack opacities were pretty well solved, and that most of the commerically available meters were capable of straight forward modifications to bring them up to EPA performance specifications.

3.3 Hazardous Pollutants

Mr. Goodwin offered no firm estimates on when, and for which pollutants, the next batch of hazardous pollutants regulations might be issued. He indicated that there was at present no heavy pressures to rush any of these through.

3.4 Economics Analysis Branch

This office was reported as dealing primarily with direct control costs. Mr. Goodwin identified this area as one in which industry could be very helpful in making cost data on actual installations available to EPA.

4.0 Applied Technology Division

Mr. Robert Nelegan, Director of the Division of Applied Technology, was our next speaker. He listed the following industries as among those for which industrial studies were now under way:

Paint and Varnish
Petrochemicals
Primary Aluminum
Phosphates and Phosphate Fertilizers
Pulp and Paper
Soap and Detergents.

In fiscal 1973, the following industry studies will be started:

Crushed Rock and Limestone
Surface Coatings

Glass, Brick, and Ceramics
Food Products Industry
Disposal of Agricultural Wastes.

He listed the following types of data as inputs to the studies his division was making:

Present Plant Locations
Future Growth Prospects
Atmospheric Emissions Factors
Process Descriptions
Material Balances
Sources of Emissions
Description of Emissions
Source Testing Technology
Emissions Control Technology
    State-of-the-Art
    Best Available
Economics of Control
    Capital Costs
    Operating Costs
Strategies Available in Air Pollution Episodes
Inspection Procedures
Research
    On-going
    Needed.

Industry advisory committees have been, or are being, formed for the following industries:

Coal Cleaning
Cotton Ginning
Feed and Grain
Soap and Detergents
Ferro Alloys
Phosphate Fertilizers
Primary Aluminum
Paint and Varnish
Petrochemicals.

5.0 Control Systems Division

This division is now being administered by Dr. John Burchard, Acting Director. (Mr. Sheldon Meyers has been reassigned.) The control of sulfur oxides in flue gases was identified as a major topic of study at the present time. Both fuel cleaning and flue gas treatment technologies are under intensive investigation.

## 6.0 Emergency Operations Control Center

Mr. Darryl Tyler described the function of his center as the mechanism by which the need for the Administration to invoke the authority of Section 303 of the Clean Air Act is identified and documented. His center maintains a continuous monitoring of air quality data, emission inventories, and meterological forecasts to anticipate the occurrence of any air pollution episodes in our major industrial areas.

At the present time, both air quality data inputs and available models are of less than optimum quality to satisfy fully the needs of his center. He did indicate, however, that it was unlikely that any very serious episodes could develop without his prior awareness, and the alerting of the authorities responsible for implementing episode plans.

One of the functions of the center is to assist the states in their development of such episode plans for inclusion in their state implementation plans.

## 7.0 Air Pollution Technical Information Center

The literature and technical information services available to the public were next described to the Committee. These include a citation service that, on request, will compile a list of literature citations and provide microfiche copies of the cited literature for any specific information request. This service is now free but a charge may be invoked before too long a time. The Air Pollution Abstracts, now distributed without costs, will be placed on a $19/year subscription basis at the start of the next fiscal year.

Three technical movies are available on a free-rental basis: (1) limestone injection for the control of sulfur dioxide in steam plant flue gases, (2) tall stacks, and (3) plant damage by air pollution. A fourth film on flue gas treatments for the removal of sulfur dioxide is now in preparation.

Slide sets for speakers on air pollution are also available.

EPA air pollution control documents may not always be available on a no-cost basis to private citizens or industry. Where they are not, they can generally be obtained from the

Government Printing Office or from the Department of Commerce's National Technical Information Service, Springfield, Virginia 22151.

8.0 Training Facilities

Mr. Frank King, Director of the Training Institute, described the Manpower Development Program of the Office of Air Programs as divided into two operations: the university program development and trainee support, and the Training Facilities at the National Environmental Research Center. He distributed copies of the Air Pollution Training Courses Catalog for 1971-72 and briefly described the contents of a number of the courses of probable interest to members of the Committee.

Of particular interest were the "on-tape" courses. These permit personnel not able, because of time or distance, to attend the resident training sessions, to follow the lecture series at a time and pace dictated by their own needs.

A tour of the laboratories, with a description of the facilities and test equipment, followed the lecture. The Committee was particularly impressed by the audio visual studio and its complete equipment for the preparation of both audio visual aids and public relations material.

9.0 Consultations

At the conclusion of the scheduled program, a number of the EPA staff men made themselves available for informal discussions of particular problem areas with small groups or individual members of the Committee.

On behalf of the Committee, both the Chairman and the Secretary expressed deep and sincere appreciation to the EPA Staff for the courtesies that had been extended to it.

Respectfully submitted,

Kenneth D. Johnson
Secretary
Air Quality Committee

Minutes Subject to Approval
KDJ:mkb
April 12, 1972

# APPENDIX A

## MINUTES OF SUBCOMMITTEE MEETINGS

### I. TECHNOLOGY AND ENGINEERING SUBCOMMITTEE

C. B. Beck, Acting Chairman submitted the following report:

Attendance:

Dr. C. Kramer
Dr. R. E. Chaddock
W. R. Chalker
M. B. Tohline (Chairman)
Dr. Z. G. Bell
E. D. Lemon
D. J. Clinard (Guest - Chemetron)
J. C. Schwegmann
J. G. Brown
J. Wilkenfeld
E. Opdyke
W. R. Taylor
W. H. Town (Guest - Fiber Ind.)
F. W. Volguth
W. B. Barton
C. R. Walbridge
L. W. Roznoy
Dr. M. V. Anthony
R. M. Love
T. H. Rhodes (Guest - Enjay)
J. A. Mullins
W. F. Bixby
C. B. Beck (Secretary)
Dr. E. W. Kleppinger
D. Winson
J. Rook
Dr. K. D. Johnson (Part-time)

Twenty-seven members and guests were present.

Report of Meeting:

The manufacturing plant environmental rating system suggested by Dr. Gerstacker of Dow was discussed. Dr. Kramer explained Dow's system and Mr. Wilkenfeld discussed Hooker's system. Mr. Wilkenfeld will send the Hooker plan to Dr. Johnson for distribution to the Air Quality Committee members. This project was referred to Mr. Chalker's group for study and recommendations.

Mr. Mullins submitted Dr. Maycock's paper on ambient air vs. stack sampling to Mr. Tohline for distribution to and review by the Subcommittee.

The proposed $NO_x$ source monitoring instrument study was postponed until next meeting as it was believed the EPA visit might give further information.

It was moved by Mr. Wilkenfeld, seconded by Dr. Anthony and unanimously approved by the Subcommittee that MCA Air Quality Committee members be polled for volunteer chemical industry contacts for the EPA emissions standards program under Section 111 of the Clean Air Act. Messrs. Chalker, Love, Huguet, and Tohline are serving now for the petrochemical industry.

A list of questions of interest to the AQC members to be presented to the EPA was discussed:

1. Industries for which new equipment emission standards are being prepared by the EPA.

2. Role of Regional EPA Directors in formulating policy.

3. Future regulations planned by the EPA.

4. Role of trade and technical organizations in advising and recommending standards.

5. EPA's recommendations or studies on opacity meters.

Dr. Johnson reported on the A. D. Little / MCA Odor Study. A revision, compilation and review of the past four years' work will be prepared by A. D. Little by the end of February. The duration effect of odors is being currently studied. For some odors, the tolerance level increases with time; for others, the detectable level reaches a plateau with time. It was moved by Mr. Walbridge and seconded by Mr. Wilkenfeld and voted unanimously by the Subcommittee that the Subcommittee recommend a $40,000 further ADL expenditure to the Air Quality Committee, through May 1972. The EPA also plans continued funding. The task force (Mr. Paist, Dr. Kleppinger, Mr. Phelps) will report their recommendations at the May meeting.

The Coons Opacity paper is expected to be reviewed and finally approved by the end of February.

For future research to be recommended to the Air Quality Committee, an accidental release workshop was discussed and referred to the Education and Training Subcommittee.

A noise study was discussed and referred to Mr. Chalker's ad hoc committee.

The EPA Air Pollution Survey Form was discussed. A meeting will be held in Washington of the Business Advisory Committee on Federal Reports with OMB in February. Dr. Johnson will attend. This will be taken up by the MCA Joint Subcommittee on Environmental Law.

Stack opacity meters were discussed. A workshop was recommended to the Education and Training Subcommittee. Mr. Chalker and Mr. Beck were appointed to serve on a task force.

## II. INFORMATION AND PUBLICATIONS SUBCOMMITTEE

Report of Meeting:

The Subcommittee discussed two reports from Arthur D. Little. One was an expected report on a four-year study on odor threshholds. It is recognized that there has been some misuse of odor threshhold data in proposed odor regulations. The issuance of this report should be useful to the Committee members in refuting these proposals. The Subcommittee recommended that the Committee authorize release of this publication under the direction of Dr. Johnson and appropriate members of the Committee.

The other Little publication is an annual report on a joint MCA-EPA study entitled "Exploratory Study -- The Changes in Physiological Parameters in Human Subjects in Response to Blind Odorant Presentations." The Subcommittee recommended that this report not be released since it is in preliminary form. It will be distributed to AQC. The Subcommittee urged that discretion be exercised in the use of this report.

Allin Robinson of MCA's Public Relations staff and the St. Louis CIC are developing independently slide presentations on air pollution control suitable for showing to students and citizen groups. After developing a proper story line, Mr. Robinson will ask member companies to supply necessary visual aids.

## III. STANDARDS AND ABATEMENT PROGRAMS SUBCOMMITTEE

Report of Meeting:



The Subcommittee met as scheduled in the Prince William Room of the Velvet Cloak Inn. In the absence of the Chairman, Dr. K. D. Johnson presided.

The first item of business considered by the Subcommittee was the pending legislation proposing to place a tax on emissions of sulfur oxides to the atmosphere from fossil fuel combustion or sulfide ore smelting. Although it recognized that the MCA Board has not yet made a decision on the role MCA should play as these bills come up for hearing, the Subcommittee urged that the staff keep the Air Quality Committee well informed on the nature and status of the various proposals as they appear.

The problems that presently proposed noise control legislation would create for the industry received extensive discussion. It was the consensus that state and local laws and regulations, setting ambient noise level standards, would likely be more difficult to comply with than the proposed federal legislation, which seems to focus more on product standards for new devices.

The Secretary was asked to determine whether the Smithsonian Institution's Science Information Exchange had complied and published any summary report on noise control research, or effects of noise research that could be identified to the Committee.

The request of the MCA Board for the development of a rating system for corporate performance in environmental protection was discussed in some detail. The unsuccessful efforts to achieve any progress on a comparable task several years ago were reviewed. It was the consensus of the Subcommittee that any such system could be valid only for self-evaluation by corporate executives, and that the factors pertinent to the judgments arrived at must necessarily involve highly sensitive and proprietary information. Recognizing the problems inherent in the assignment, it nevertheless indicated its willingness to try again to come up with something to fill the need identified by the Board request.

## IV. EDUCATION AND TRAINING SUBCOMMITTEE

Report of Meeting:

A report on the wet scrubber workshop held December 15 in Washington, D. C. was distributed to the Subcommittee. Oz Phelps is looking for a volunteer to run a similar one in the future on electrostatic precipitators.

The Technical Subcommittee suggested holding a workshop on opacity meters. Curt Beck and William Chalker will analyze the need for such a workshop and proceed if the responses so dictate.

A teachers workshop was conducted in October in Chicago. Another probably will be held in St. Louis on solid wastes later this year.

The Subcommittee has considered several proposals for conducting technical seminars on air pollution abatement. Wes Eckenfelder and Roy F. Weston submitted early proposals. Of these, the Subcommittee preferred Weston's, with the reservation that the proposal may be too commercially oriented.

An additional proposal had been received from the University of New Hampshire. The Subcommittee cited two objections: (1) It obligates MCA for contingency funds and (2) suggested speakers have not been confirmed.

The Subcommittee recommended that the ad hoc committee on technical seminars be continued and given authority to accept a proposal from Weston or the University of New Hampshire.

A seminar was conducted with the League of Women Voters in St. Louis last fall. The St. Louis CIC had reservations about what was accomplished and did not consider a similar effort worthwhile in the future. However, the St. Louis CIC volunteered to advise other CIC groups which might attempt seminars with the League in other areas.

The Subcommittee asked that the Committee add to its membership more physicians qualified to speak on the medical aspects of air contaminants.

# APPENDIX B

## MCA-EPA Status Report, 1971-72

## PHYSIOLOGICAL RESPONSES TO ODORANTS

ADL Nos. 71741 and 73720
January 21, 1972

The MCA test chamber, in addition to providing a means of presenting samples to naive subjects without bias for both physiological testing and recalled verbal responses, is a useful experimental tool for sample presentation of odorants to experienced odor analysts. Although the bulk of the experimental work has been devoted to accumulating data on changes in physioloigcal parameters, some experiments have been carried out with trained subjects to determine the odor characteristics and intensity of odor of additional new chemicals and chemical mixtures. In a second experimental area, we are beginning to explore the relationship between apparent intensity of odorant as a function of the duration of exposure.

From the odor studies of some additional chemicals, it would appear that few of the amines that have been classically described as unpleasant are in themselves described in noxious terms. Generally they are characterized as being ammonia-like at concentrations near and above the minimum detection level. On this basis materials such as putrescine and cadaverine have not been included in the testing program. Butyric acid, which has been used in many studies to represent an unpleasant odorant, at the concentrations studied produced more pain response than objectionable odor. Up to this time, therefore, we have avoided the use of this compound as one of the so-called unpleasant odorants.

A most encouraging result of our studies with both trained and naive subjects for the pairs of odorants tested (amyl acetate versus tetrahydrothiophene and diethyl malonate versus hexyl mercaptan) indicates that the selection of odorants based on the expert panel analyses has been relatively consistent with all groups of individuals, i.e., that close to 100% of the trained subjects recognized the unpleasant odorant at the two highest concentrations while with pleasant odorants a smaller percentage of the population recognized the odorant with 100% being approached only at the highest concentration. Although the same patterns of recognition occur with both odorant pairs, the ability to recognize an odorant is less positive with naive subjects.

A second interesting observation from the so-called preference response is the effect of duration of exposure on the hedonic judgment. In all tests the compounds selected as unpleasant (tetrahydrothiophene and hexyl mercaptan) were considered to be unpleasant by a large portion of the group, but the duration of exposure was a significant factor only in the comparison of amyl acetate and tetrahydrothiophene. Again, it would appear that the naive subjects as a group are less critical of the unpleasant odorant than are those subjects who are expecting odorant presentations.

MCA-EPA Status Report, 1971-72
ALD Nos. 71741 and 73720

It is important to remember that in all tests with naive subjects the odorant concentrations that we are dealing with are from 4 to 32 times minimum detection concentration and only with hexyl mercaptan at the highest concentration does 100% of the group agree that the exposure is unpleasant.

Earlier observations by the expert odor analysts suggest that it would be interesting to study the change of apparent intensity with time. This work suggests that the 120-second duration selected for the physiological testing could well be an important factor. In many instances the apparent intensity of an intermediate exposure was reported to have decreased from a slight to moderate intensity to just detectable in 2-3 minutes. With most individuals, the apparent intensity of odor increased at some time after this period, but rarely to the intensity initially observed. The increase in apparent intensity is not evident in exposures that are less than three mintues in duration.

A second experimental approach to this type of study has been the attempt to maintain an odor strength by increasing the concentration of odorant to compensate for reported decreases in intensity. By increasing the concentration of exposure in intervals of 20% of the concentration, one reaches the maximum output of the syringe pump with most of the individuals tested within five minutes. The apparent intensity of the odorant is not reported to increase and in most instances was not maintained at a constant intensity with this rate of concentration change.

We have intiated some studies using more complex odorants, specifically those associated with petroleum products and their combustion products. It appears that using expert panel members and this method of presentation it will be possible to define the slope of the intensity versus concentration curve more quickly and easily than with other methods of presentation. The suggestion has been made that more unpleasant odorants may have steeper slopes that those considered to be pleasant. This generally is in accord with the information from the testing with trained and naive subjects with the two odorant pairs which we have examined.

It may be that, in addition to information obtained regarding the feasibility of physiological monitoring as a means for measuring detectability and "unpleasantness" of odorants, the more pragmatic use of the presentation system will allow information to be developed which will provide a better understanding of odorant perception.

# APPENDIX C

## I. REPORT ON NOISE LEGISLATION

A. H. Phelps

New Jersey: Assembly Bill #2181 was passed and signed into law 1/24/72. It gives extremely broad power to the State Department of Environmental Protection to adopt regulations on noise. Noise is defined as sounds of such duration and level as to be or tend to be injurious to human health or welfare or unreasonably interfere with the enjoyment of life or property. Registration may be required along with the filing of reports by any persons involved in operations which may result in noise--for a registration fee not less than $10 nor more than $250. Sources may be inspected. Violation of regulations may be the cause of a fine up to $3000 per day.

Illinois: The Illinois Pollution Control Board received proposed noise regulations February 16 which are similar to, but slightly tighter than, those of Chicago. Effective date will be three months after adoption "to allow time to comply." There is a non-degradation clause which supersedes any zone's dB levels. For residential areas the limit at the lot line is 55 dBA daytime, 45 dBA nighttime.

For retail, trade and service areas 55 dBA daytime and nighttime.

For industrial areas, 62 dBA day and night.

For each class there are also octave band limits, and predominately discrete frequency components must be 5 dB below these limits.

Bells and chimes for religious services are exempted.

## II. HOOKER CHEMICAL CORPORATION

### Environmental Aesthetics Rating Form*

Letter to Hooker Plant Managers

At the last Plant Manager's Meeting, we discussed the need for bringing our facilities into such condition that they are not obviously adversely effecting the environment. In an attempt to provide a simple method for rating plants, the attached form was developed. While it is recognized that this is not a complete measure of pollution, it can serve as a basis for judging overall progress in a manner similar to the safety rating system now in use.

Since rating such as this by its very nature is subjective, in order to determine if a reproducible rating could be made by different people, a pilot effort was conducted. This included six plants of different size, type, and geographic location with R. F. Schultz, the Plant Manager and myself independently rating the plants.

The results indicated wide enough spread between rators (plus or minus 12% maximum) that I would not recommend plant to plant comparison. It is interesting to note however that in almost every case two of the three rators were very close and the maximum deviation from the average is usually less than five units.

Looking at the results of the pilot effort, it is my opinion that any plant rated lower than 35, either is receiving or can expect complaints. A score of over 40 should be considered as the minimum acceptable.

While I am not requesting completion and return of the rating sheet, it is suggested that you take ten minutes and objectively complete it for your plant before the national students "Environmental Teach-In" scheduled for April 22nd.

I would be happy to discuss the results with you if you wish.

* Copied by MCA with the permission of Mr. J. Wilkenfeld, Director of Environmental Health, Hooker Chemical Corporation.

Explanatory Notes for Use When Rating Manufacturing Facilities for Environmental Aesthetics

AIR

1. Effluent Visibility - Should include consideration of not only stack plumes but the effect of general plant air on the community. Such things as building and road dust, acid fumes, reaction products and any discharges from building monitors and tank vents must be included.

Where opacity regulations exist, compliance should be considered, however, this should not be the limiting factor. Persistence of plumes beyond the plant property, etc. should also enter in the judgment.

2. Odor - Frequency, persistence, agreeable or disagreeableness of odors as noted at the plant boundary and beyond should be considered.

3. Other Sensory Effects - Include such things as eye or skin irritation, soiling or damage to clothes or cars.

4. Dust or Mists - Include directly visible and nonvisible materials, fall-out and contribution to the general effect on the area.

WATER

5. Effluent Visibility - Includes consideration of the degree of discoloration and extent of discoloration as well as frequency.

6. Taste or Odor - Should consider frequency as well as severity and whether complaints occur.

7. Other Sensory Effects - Include foaming characteristics, aeration to cause foams with preexisting oilslicks, soapiness, and any other consideration.

8. The presence of oil slicks floating or settleable solids, trash etc. should be considered.

GENERAL

9. Noise should include consideration of all noise noticeable beyond the plant property such as loud speaker systems, whistles, conveyor or grinder noises. (Complaints received from neighbors should be given extra weight.)

10. General Plant Appearance should give considerable weight to the visibility of discharge points even though the wastes coming out are not considered obnoxious. A visible cooling water outfall should rate lower than a submerged, contaminated discharge point for this purpose.

Also consider if the facility blends in with the surroundings, neatly and attractively or does it intrude in an obvious, degrading manner.

# MANUFACTURING FACILITY RATING FOR ENVIRONMENTAL AESTHETICS

Facility _____

Date Rated _____

By _____

| | 5<br>Very Good | 4<br>Adequate | 3<br>Fair | 2<br>Poor | 1<br>Very Poor |
|---|---|---|---|---|---|
| AIR | | | | | |
| Effluent Visibility | | | | | |
| Odor | | | | | |
| Other Sensory Effects | | | | | |
| Dusts or Mists | | | | | |
| WATER | | | | | |
| Effluent Visibility | | | | | |
| Taste and/or Odor | | | | | |
| Other Sensory Effects | | | | | |
| Solids or Other Visible Materials | | | | | |
| GENERAL | | | | | |
| Noise | | | | | |
| General Plant Appearance | | | | | |

Total _____

Comments:

# APPENDIX D

## STATE LIAISON REPORTS

IOWA - W. R. Taylor

IOWA - Opposition to state implementation plan developed at recent public hearing. Industry spokesmen claimed it will kill state coal mining and sawmills, hamper diesel locomotive operations, bankrupt county road funds and raise utility costs. Coal spokesmen said no coal native to the state can meet 3% sulfur limit. Herbert Floyd, LeMars, representing Iowa County Engineers Association, said fugitive dust rule alone will cost $40-million per year, and maybe more in damage suits. Environmentalists urged tougher rules, particularly public access to industry records. Plan was prepared by Dr. Charles Campbell, chief of State Health Department environmental engineering staff, who said he and his nine employees were too busy to spend some $300,000 budgeted since May - including filling 20 vacant positions.

Colorado - J. A. Mullins

AIR POLLUTION CONTROL ACTION
STATE OF COLORADO

Public hearings were held on January 12, 1972, on the State Implementation Plan. The plan had previously been submitted to the EPA for review. A summary of the plan and its provisions follows:

I. GENERAL

Colorado is divided into eight (8) regions. Four of these regions are classified as Priority III for all pollutants. The Metro-Denver area was used as the State's example region, and was classified as Priority I for particulates, carbon monoxide, and oxidants (hydrocarbons).

The State lacks the legal authority to require owners to monitor and report emissions and has asked the EPA to delegate its authority, under the Clean Air Act, to the State in order to satisfy this requirement.

One unusual definition used by Colorado is that of "Multi-Chamber Incinerator" in that it requires a minimum of three combustion chambers.

II. CONTROL STRATEGY

A. Particulates

The State plan claims that application of Regulation No. 1 together with Federal motor vehicle controls (??) will achieve primary ambient air quality. Due to lack of available technology, they are requesting an 18-month extension to achieve secondary standard.

B. $SO_2$

Only one region (Four Corners) is classified as IA due to emissions from New Mexico part of the region. However, Colorado proposed to adopt very strict $SO_2$ emission controls (maximum stack concentration of 150 ppm(v)) throughout the State to maintain present quality.

C. Carbon Monoxide-Oxidants (HC)

The State proposes to adopt motor vehicle controls (retrofit) in addition to Federal controls. This combination will achieve required ambient air quality by 1977.

D. $NO_x$

No strategy is required due to Priority III classification throughout the State.

III. REGISTRATION

Colorado proposes to require emission notice filing on all existing equipment as soon as regulation approved. Construction permits will be required on all new or altered sources. Operating permits will be required for all new and all existing (6-month grace period) equipment.

IV. STATE AMBIENT AIR STANDARDS

The Colorado Implementation Plan concerns the achievement of National Ambient Air Standards. However, the State has adopted more stringent standards for particulates and $SO_2$ and proposes to adopt more stringent standards for the other pollutants. There is no stated strategy for achieving these more restrictive standards.

Indiana - C. B. Beck

SUBJECT: NEW INDIANA PROPOSED AIR REGULATIONS

Indiana has proposed three new air pollution regulations, APC 15, APC 16 and APC 17. Hearings were held on November 25, 1971. APC 15 and APC 16 apply only to counties having a population of 60,000 or greater, or which contain a city having a population of 30,000 or greater or are included in the Chicago, Cincinnati, Louisville or Indianapolis Air Quality Control regions or where photochemical oxident (APC 15) or carbon monoxide (APC 16) level exceeds the ambient air quality standards. APC 17 limits nitrogen oxides emissions for the state and Federally-designated Intrastate regions.

APC 15 (1) Regulates the storage and loading of, and water separators for, volatile organic materials, to agree with the EPA August 14 Implementation Plan; (2) Requires an afterburner, boiler, flare or other Board-approved device for hydrocarbon emissions from refineries, ethylene plants and vapor blowdowns; (3) Requires that volatile organic waste liquids be either burned in heat generating equipment, refined or incinerated if burning or refining not economically feasible. Use in a landfill is forbidden; (4) Sets controls on waste organic and vapors to prevent ground level concentrations from exceeding 20% of the maximum 3-hour ambient standard.

APC 16 requires burning of carbon monoxide gases from (1) petroleum refineries, (2) ferrous smelters having a capacity of 10 tons per hour process weight rate or greater and (3) incinerators, in afterburners, boilers or other Board-approved devices.

APC 17 restricts nitrogen oxides emissions from fuel burning equipment of 250 million Btu/hour or greater. Different emission levels are proscribed for coal, oil and gas fired equipment. A maximum ground level concentration of 0.04 ppm for a 1-hour test, is proscribed for any other process or combustion source.

Louisiana - J. H. Huguet

The Louisiana Air Control Commission prepared revised regulations and an implementation plan which were presented at a public hearing on December 21, 1971.

There were no particular surprises in the material presented since they pretty well followed the Federal Register guidelines. The Louisiana Chemical Association, represented by Mr. Wolbrette, made a statement which covered the following:

1. Clarification of the language describing time for compliance. The state had not included any considerations of secondary standards. Language similar to that in the guidelines was recommended.

2. The emission limitation figure of 1300 parts per million for emission of sulfur oxides (as $SO_2$) from new sulfur recovery plants was stated as not being technologically possible. The emission limitation of 2000 ppm as $SO_2$ from any existing source was said to be impossible for recovery plants and for plants which manufacture sulfuric acid from spent sulfur.

3. The plan calls for a 50% rollback of hydrocarbons being discharged and follows the guidelines for control of hydrocarbons from new sources. The need for this was questioned for Louisiana.

Maine - J. H. Huguet

The Environmental Improvement Commission of the State of Maine drafted an implementation plan and regulations and held a public hearing on December 14, 1971.

Mr. Merrill C. Welles, Jr. representing the 250 member Associated Industries of Main presented a statement at this hearing as follows:

1. Licensing - The time is far too short to obtain all of the information needed for licensing. More definition is needed in this area. (The plan states that licenses must be obtained for all process sources and fuel burning by January 1, 1971.)

2. Testing of Emissions - Procedures are complex and equipment is expensive. Sampling of particulates and $SO_2$ from stacks and continuous monitoring of smoke density should only be required to solve problems. ("The Commission will require monitoring for certain pollutants." No specific requirements were given.)

3. Visible Smoke Emissions - The proposed 30-day compliance schedule is impossible. (Regulation is for $NO_2$ Ringelman except for periods not exceeding 5 minutes in any hour.)

4. Low Sulphur Fuel - This is arbitrary and not needed for the most of the fuel burning installations in this state. It is a good example of a regulation blindly recommended because our more urban neighbors to the south need such regulations. (A maximum of 1.5% sulfur fuel is required for the metropolitan Portland area and 2.5% sulfur is required in the other regions - Compliance date is October 1, 1972.)

5. Process Weight Tables for Particulate Emission - These are totally unjustified as they unnecessarily penalize the larger, more efficient operations. (The process weight relationship proposed for Maine is the same as in Appendix B of the Federal Register which is considerably more stringent than the table used in many other states.)

6. Town Dumps - The imposition of sanitary land fill in Maine is premature. (Open burning is generally prohibited after June 1, 1974.)

7. $SO_2$ Restriction on Sulfite Mills - This is unattainable with present technology. (An $SO_2$ emission of 20 pounds per air dried ton of sulfite pulp is required for all new sources and on existing sources by June 1, 1974.)

8. Timetable - The timetable is too short. Even the federal plan allows three years to meet primary air quality standards plus a reasonable time to attain the more stringent secondary air quality standards. Some states have objected to this short timetable, but EIC staff enthusiastically recommends attainment of <u>secondary</u> standards in two short years.

New Jersey - P. W. McDaniel

Partial implementation plans for compliance with Federal requirements have been prepared for submission by the state before January 30, 1972. A public hearing on these was held at Trenton, January 6, 7, 1972. The plans are considered more restrictive than Federal guides. Much objection has been raised to the limits for particulate emissions (both liquid and solid) of 0.02 grains/$ft^3$ (Std.).

Much objection has also been raised to a brand new chapter on control of pollution by volatile organic substances including odors therefrom. These rules cover storage tanks, transfer operations, surface coating, degreasing, dry cleaning and printing. They are complex and should be studied at length. A section on odor seems to conflict with existing Chapter 6 and prohibits any odor detectable by sense of smell. Effort will probably be made by New Jersey manufacturers to have both the chapters on particulates and organics reconsidered during the 90 day period after the January 30 deadline.

New York State - J. Wilkenfeld

New York State's Air Regulations have been modified to meet the requirements of the Federal Air Standards and hearings on the implementation plans are scheduled for later in January. The major modification in the regulations is the lowering of permissable levels of sulfur in fuels used on the Niagara Frontier and the adoption of emergency plans. This latter plan is not unusual.

**North Carolina - J. H. Yeager**

Authorizing Agency:

Board of Water and Air Resources
Air Pollution Control Division
Raleigh, North Carolina

Authority:

The North Carolina Water and Resources Act, adopted July 1, 1967.

Recent Activities:

The Board published a comprehensive plan for implementing the National air quality standards in October, 1971. Included in the plan is a review of all regulations adopted to date, emission inventories and regional air quality measurement data. Significant aspects of the plan are:

1. Dividing the state into 8 quality control regions (one is interstate).
2. Classifying the regions by priority which reflect measured or estimated air quality in terms of Federal standards.
3. Control strategy - $SO_2$
   a) 2.3 lbs/MBTU for fuel combustion, present
   b) 1.6 lbs/MBTU for fuel combustion by 1980 (Note: EPA standard is 1.2 lb/MBTU, new sources)
   c) 1% S in fuel (or $SO_2$ removal facilities)
   d) 27 lbs/ton $H_2SO_4$ produced in $H_2SO_4$ plants. (Note: EPA standard is 4.0, 2 hr, ave.)
   e) Registration and monitoring of significant sources required.
   f) Provision for variance procedures.
4. Control strategy - particulates
   a) Elimination of open burning (except leaves in specific areas).
   b) Control of visible emissions from all sources to R #1.
   c) Fossil fuel burning; 0.6 lbs/MBTU/hr for small units and 0.1 lbs/MBTU/hr for large (> 10 MBTU/hr).
   d) Wood burning; 0.7 lbs/MBTU/hr for small units and 0.15 lbs/MBTU/hr for large.
   e) Incinerators; 0.2 lbs/100 lbs refuse for units of < 1 ton/hr and 4.0 lbs/hr for larger.
   f) Require generally 95% collection efficiency for industrial sources.
   g) Registration and monitoring of significant sources required.

5. Control strategy - CO, HC, photo-oxidants, $NO_x$

   a) Adopts motor vehicle emission standards of Federal government.

   b) Hydrocarbons and photo-oxidants -- follows Los Angeles Code Rule #66 except sets limit at 40 lbs/day.

   c) $NO_x$

      (1) Fuel burning: 0.3 lbs/hr (oil), 0.9 lbs/hr (coal) for units .250 MBTU/hr.

      (2) $H_2SO_4$ and chamber $H_2SO_4$ plants; 5.8 lbs/ton acid produced. (Note: EPA limit is 3.0 lbs, 2 hr. ave.)

6. Compliance schedule

   a) New sources, immediately.

   b) Existing sources, within 3 years except where otherwise stated.

   c) Priorities to determine abatement scheduling and variances.

7. Emergency (Alert) Plan similar to that recommended by EPA. Complete plan set up.

Regulations and Standards Adopted to Date:

Reg. #1 - Prohibition of open burning

" #2 - Control and prohibition of visible emissions

" #3 - Classification of air contaminant sources (used for registration purposes)

" #4 - Registration of sources

" #5 - Control & prohibition of odorous emissions

Ambient air standards for $SO_2$, particulates, CO, photo-oxidants, hydrocarbons and $NO_x$.

Emission control standards for:

Fuel burning sources
Wood burning indirect heat exchangers
Refuse burning
Hot mix asphalt plants
Fertilizer manufacturing plants
Pulp and paper mills
Mica or feldspar processing
Sand, gravel and crushed stone operations
Lightweight aggregate processes
Wood finishing operations
Portland cement plants (differs from EPA)
Miscellaneous industrial processes (particulates)
$SO_2$ from fuel burning
Sulfuric acid plants

Regulations and standards proposed for adoption by July 1, 1972:

Reg. #6 - Compliance with emission standards (covers schedules, registration, variances, etc.)

" #7 - Emergency (Alert) Plan



Emission control standards for:

Hydrocarbons from stationary sources
$NO_x$ from fuel burning, nitric acid plants and chamber sulfuric acid plant

Tennessee - J. Wilkenfeld

On December 13, hearings were held in Nashville on the proposed Air Quality Regulations. Questions were raised regarding $SO_2$ emissions for stationary power units — maximum 500 PPM. TVA took serious objection to these regulations. Also, objections were raised concerning the timing of the hearings. Sufficient time was not allowed for interested people to receive, read, and study the proposed regulations before the hearing. As a result, the Air Quality Control Board has scheduled additional hearings in Memphis, Nashville, Knoxville, and Chattanooga on January 13. TMA (Tennessee Manufacturers Association) issued a very strong letter of objection to these proposed regulations.

Vermont - P. W. McDaniel

State authorities are preparing plans for submission to EPA. A bill has been introduced in the legislative to this end and a public hearing on it is to be held in late January. There is some early feeling that the language of the bill dealing with particulates needs clarification.

Washington - R. H. Mansur

The Department of Ecology has proposed the following new regulations which will probably be adopted early in 1972:

1. Emergency Episode Plan WAC 18-08, which could shut a plant down 35%, 70% or 100% at statuses Alert, Warning, or Emergency respectively. Cost and difficulty of curtailing certain operations is to be taken into account.
2. General regulations WAC 18-04, which will establish standards for areas where there is no authority.
3. Ambient standards WAC 18-46, which are simply copied from EPA.

Also proposed are regulations to do with agricultural burning and open burning.

Puerto Rico - P. W. McDaniel

Environmental Control Board is working toward development of standards compatible with Federal requirements but recently indicated they would probably not be available for several months.

D-11

STAUFFER CHEMICAL COMPANY
1612 K STREET, N.W.
WASHINGTON, D.C. 20006

MYRON V. ANTHONY
VICE PRESIDENT
ENVIRONMENTAL AFFAIRS AND
DIRECTOR - WASHINGTON OFFICE

TELEPHONE
(202) 347-7627

January 19, 1972

Dr. Kenneth Johnson
Manufacturing Chemists Association
1825 Connecticut Avenue, N. W.
Washington, D. C. 20009

Dear Ken:

Re: Legislative Report

Alabama - January hearings were scheduled on proposed rules and regulations with January 14th being latest date for comment.

Montana - No report as yet.

Nebraska - Hearings on proposed rules and regulations scheduled for January 20th.

Nevada - Hearings were scheduled for September but rules for hearings were considered too restrictive by ecologists. League of Women Voters were able to force postponement of the hearings. Changes were made in the regulations and hearings rescheduled for January 10th.

Sincerely,

Jack.

MVA:dw