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Committee Meeting with Attachments

AMERICAN PETROLEUM INSTITUTE

MEDICAL ADVISORY COMMITTEE32ND MEETING

1:30 P. M.

Monday, November 13, 1961
Conrad Hilton Hotel, Chicago, IllinoisMEMBERS PRESENT:J. W. Osborn, M. D., Chairman
R. F. Schneider, M. D., Vice Chairman
L. E. Renes, SecretaryV. C. Baird, M. D.
F. F. Boys, M. D.
G. H. Collings, M. D.
L. E. Curtis, M. D.
Kieffer Davis, M. D.
R. R. Dugan, M. D.
R. E. Eckardt, M. D.
E. V. Henson, M. D.E. K. Linder, M. D.
B. S. Miller, M. D.
T. H. Mitchell, M. D.
S. L. Rankin, M. D.
M. R. Plancey, M. D.
C. L. Samuelson, M. D.
G. A. Sinclair, M. D.
W. Wayne Stewart, M. D.TECHNICAL ADVISORS PRESENT:E. W. Adams, M. D.
W. H. Barcus
J. T. Brown
W. E. Chalfant
E. K. Daniels
A. E. Dooley
P. D. HalleyJ. H. Johnston
A. W. Lindert
C. A. Neilson, M. D.
A. C. Pabst
J. B. Rather, Jr.
J. A. SpenceMEMBERS ABSENT:R. M. Adams, M. D.
T. E. Allen, M. D.
J. H. Baylor, M. D.
J. W. Crookshank, M. D.
K. R. Fourcher, M. D.
F. D. Gassaway, M. D.
R. Emmet Kelly, M. D.T. J. Kelly, M. D.
E. P. Luongo, M. D.
C. R. Miller, M. D.
R. J. Potts, M. D.
J. C. Ruddock, M. D.
G. M. Saunders, M. D.OTHERS PRESENT:J. C. Calandra, M. D.
W. L. Cullison
Dr. Philip Drinker
I. T. Fritz
E. O. Mattocks
F. A. Reneau

- Bio Test Labs
- Staff, American Petroleum Institute
- Consultant
- Sinclair Refining
- Staff, American Petroleum Institute
- Delhi-Taylor Oil Corporation

I. OPENING REMARKS

API 07709

J. W. Osborn, M. D., chairman of the Medical Advisory Committee, welcomed those present. He especially thanked all the members for their kind assistance and cooperation during the past two years during which he has been chairman of the Medical Advisory Committee.

Chairman Osborn announced the following changes in the Medical Advisory Committee membership since the spring meeting, April 8, 1961: R. F. Schneider, M. D., new vice chairman, replacing Leo J. Wade, M. D., who resigned; L. W. Sanders, M. D., Schyl Corporation, new member; Stewart L. Rankin, M. D., E. I. du Pont de Nemours Co., New Member; R. R. Dugan, M. D., Continental Oil Company, new member, replacing W. J. Armstrong, M. D., retired; R. M. Adams, M. D., formerly with Interstate Oil Pipe Line Company, now with Humble Oil & Refining Company; T. M. Frank, M. D., American Oil Company, deceased; George Wilkening, Technical Advisor, now located in Humble's Houston office; and T. J. Smith, M. D., Technical Advisor, American Oil Company, retired.

II. APPROVAL OF MINUTES

ACTION: It was regularly moved, seconded, and unanimously passed that the minutes of the April 8, 1961, meeting be approved as distributed.

III. CERTIFICATES OF APPRECIATION

Mr. C. E. Spahr, chairman of the Medical and Health Committee of the Board of Directors, presented Certificates of Appreciation to L. E. Curtis, M. D. and J. M. Saunders, M. D., whose certificate was received by Mr. A. C. Pabst. A Certificate of Appreciation for T. M. Frank, M. D. is to be given posthumously to Mrs. Frank by a representative from the American Oil Company.

IV. SUBCOMMITTEE REPORTS

A. Operating Subcommittee

The chairman presented the actions of the Operating Subcommittee, Appendix A, which met on November 11, 1961.

ACTION: It was regularly moved, seconded, and unanimously passed that the minutes of the November 11, 1961, meeting of the Operating Subcommittee be approved, including the actions recommended by this group.

B. Atmospheric Pollutants

C. L. Samuelson, M. D., chairman of the Subcommittee on Atmospheric Pollutants, presented his report which is attached as Appendix B. This subcommittee is recommending that the research project proposed by the Chicago Medical School, under the direction of Philippe Shubik, M. D., be approved.

ACTION: It was regularly moved, seconded, and unanimously passed that the report of the Subcommittee on Atmospheric Pollutants be approved.

Dr. Samuelson reported on his appointment to a committee of the Public Health Service concerned with the surveys to determine the lead content of the air and the lead burden of humans, being conducted by the Department of Health, Education, and Welfare at Cincinnati, Philadelphia, and Los Angeles. The API is financially assisting the survey being conducted at Cincinnati.

C. C₉ - C₁₂ Aromatics

API 07710

Kieffer Davis, M. D., chairman, presented the report of his subcommittee which is attached as Appendix C.

ACTION: It was regularly moved, seconded, and unanimously passed that the report of the Subcommittee on C₉ - C₁₂ Aromatics be accepted.

2. Certificates of Appreciation

J. W. Osborn, M. D. reported that there were now enough recipients of Certificates of Appreciation to constitute a subcommittee to recommend further nominees. A chairman of this group will be appointed the first of the year.

ACTION: It was regularly moved, seconded, and unanimously passed that the report be accepted.

g. Dermatology

J. W. Osborn, M. D. reported that no chairman has been appointed to replace Leo J. Wade, M. D., who had resigned. The report of this group is included as Appendix D.

ACTION: It was regularly moved, seconded, and unanimously passed that the report be accepted.

f. Epidemiology

George Saunders, M. D., chairman of the Subcommittee on Epidemiology, was unable to be present at this meeting. There was no report for this group.

G. Industrial Hygiene

Dr. J. A. Spence, chairman, reported on the activities of the group. His report is shown as Appendix E.

ACTION: It was regularly moved, seconded, and unanimously passed that the report be accepted.

H. Medical Policies and Administrative Practices

R. F. Schneider, M. D., chairman of this group, reported on their activities. A copy of his report is included as Appendix F.

ACTION: It was regularly moved, seconded, and unanimously passed that the report be accepted.

I. Physical Agents

G. H. Collings, M. D. reported on the activities of this group. Dr. Glorig was present at the subcommittee meeting. A copy of his report is shown as Appendix G.

ACTION: It was regularly moved, seconded, and unanimously passed that the report be accepted.

J. Specialty Petroleum Products

API 07711

In the absence of C. H. Baylor, M. D., chairman of the subcommittee, R. F. Schneider, M. D. acted as chairman. The report of this subcommittee is given as Appendix H.

ACTION: It was regularly moved, seconded, and unanimously passed that the report be accepted.

6. Toxicological Reviews

Since H. W. Gerarde, M. D. was unable to stay for this meeting, his report was given by Paul Halley. The report is shown as Appendix I.

ACTION: It was regularly moved, seconded, and unanimously passed that the report be accepted.

7. REPORT OF LIAISON MEMBERS

A. Air and Water Conservation Committee

C. L. Samuelson, M. D. appeared before the Division of Refining's Air and Water Conservation Committee and explained the activities of his group. Mr. L. C. Burroughs, of the Division of Refining, attended the meeting of the Subcommittee on Atmospheric Pollutants. Dr. Samuelson reported that the Air and Water Conservation Committee appeared to be in complete agreement with the recommendation of the Subcommittee on Atmospheric Pollutants to establish a project at the Chicago Medical School.

B. Asphalt Study Committee

Dr. J. A. Spence read the report he expects to present to the Medical and Health Committee. A copy of this is given as Appendix J.

C. First Aid Training

The vacancy caused by the death of T. M. Frank, M. D. has not been filled.

D. Interdivisional Committee on Labeling

A. E. Dooley, chairman of the Interdivisional Committee on Labeling, gave a report of this group's activities. A copy is attached as Appendix K.

E. Oil Mist Liaison Committee

In the absence of N. V. Hendricks, A. E. Dooley presented this group's report which is reported in the Operating Subcommittee minutes. The report prepared by a special group on Oil Mist is to be published shortly. Since it is suitable for distribution to salesmen and other people who are concerned with oil mist, the Medical Advisory Committee is to be contacted to determine the number of reprints of the article that they may wish to order.

F. Petroleum Food Additives

L. E. Curtis, M. D., chairman of this committee, reported that their two subcommittees have been active working toward securing regulations for the use of white oil, technical white oil, odorless light petroleum hydrocarbons, and petrolatum. No consideration of other petroleum products is being given by the committee. There was indication that the Food and Drug Administration is interested in the composition of lube oils and greases and insecticide base oils.

G. Quarantine Service

In the absence of George M. Saunders, M. D., his report was read and is attached as Appendix L.

Wax Committee

R. E. Eckardt, M. D., chairman of the Advisory Committee to the Wax Research Project, reported on the activities of his committee. A copy of his report is attached as Appendix M.

U. S. Public Health Service Liaison Activity

Chairman Osborn said that the activity in this field is reported in the Operating Subcommittee minutes.

Delaney Amendment

L. E. Curtis, M. D. reported that as a result of recommendations from the Interdivisional Committee on Petroleum Food Additives and the Advisory Committee to the Wax Research Project, C. E. Spahr, chairman of the Medical and Health Committee, had appointed R. D. Bent, chairman, and Kieffer Davis, M. D. members of a committee to work with other associations to endeavor to have the Delaney Amendment changed.

II. 1962 BUDGET

Chairman Osborn reviewed the amount of money which is in the current 1962 budget. \$42,000 for atmospheric pollutants; \$5,000 for review of atmospheric pollutants medical literature; \$2,500 for noise; and \$2,000 for consulting services.

III. NEW BUSINESS

The Medical Advisory Committee agreed that its chairman should get together with the chairman of the Division of Refining's Air and Water Conservation Committee and formulate a joint committee, as indicated in the Operating Subcommittee minutes.

I. NEXT MEETING

The next meeting of the Medical Advisory Committee and its subcommittees will be held in Chicago April 6, 7, and 9th, 1962.

L. E. Renes, Secretary

Reported by E. O. Mattocks

Approved:

J. W. Osborn, M. D., Chairman
January 2, 1962

FOR COMMITTEE USE ONLY

NOT FOR PUBLICATION

AMERICAN PETROLEUM INSTITUTE

MINUTES OF THE MEDICAL ADVISORY COMMITTEE'S
OPERATING SUBCOMMITTEE

6:00 P. M.

Saturday, November 11, 1961

Conrad Hilton Hotel, Chicago, Illinois

MEMBERS PRESENT:

J. W. Osborn, M. D., Chairman
R. F. Schneider, M. D., Vice Chairman
L. E. Renes, Secretary

V. C. Baird, M. D., Past Chairman
C. H. Baylor, M. D.
(Represented by E. V. Henson, M. D.)
J. H. Collings, Jr., M. D.
L. E. Curtis, M. D. (PFA)
Kieffer Davis, M. D.
A. E. Dooley (ICL)

R. E. Eckardt, M. D. (Wax)
H. W. Gerarde, M. D.
N. V. Hendricks (Oil Mist)
(Represented by A. E. Dooley)
E. O. Mattocks, Ex-Officio
C. L. Samuelson, M. D.
J. A. Spence

I. INTRODUCTORY REMARKS

The chairman announced the following change in Operating Subcommittee membership since the spring meeting: R. F. Schneider, M. D., new vice chairman, replacing Leo J. Wade, M. D., who resigned. All members of the Operating Subcommittee were present or represented.

II. APPROVAL OF LAST MINUTES

ACTION: It was regularly moved, seconded, and unanimously passed that the minutes of the April 7, 1961, Operating Subcommittee meeting be approved as distributed.

III. REPORTS OF SUBCOMMITTEE CHAIRMEN

A. Atmospheric Pollutants

C. L. Samuelson, M. D. reported that his subcommittee is recommending that the project submitted by Dr. Shubik, to investigate the carcinogenic properties of certain polycyclic aromatics when injected into the lungs, be approved. This will involve an expenditure of \$41,500 during 1962. \$42,000 has been included in the 1962 budget for this purpose.

Dr. Samuelson stated that after seven months work as chairman of this subcommittee, he had found the work overwhelming and extremely time-consuming. He did not believe that a company physician could justify spending the large amount of time required to adequately handle the chairmanship of this important group. He believed that someone should be added to the API staff who could handle the technical aspects of the work of the Subcommittee on Atmospheric Pollutants. Dr. Osborn stated that he fully agreed with Dr. Samuelson that a staffman was needed to also take over a large amount of the technical work required of the MAC chairman. There was no criticism of the current staff administrative work. There was definite need, however, for a physician who could relieve the members of the Medical Advisory Committee of certain details which they are now required to do.

Dr. Schneider endorsed fully the statements of Drs. Osborn and Samuelson, stating that he believed a full-time staffman to handle the activities under the Medical and Health Committee was needed.

ACTION: It was regularly moved, seconded, and passed, with Dr. Collings voting in the negative, that the principle be endorsed that an API man should be secured to serve in a technical capacity to service the committees reporting to the Medical and Health Committee.

ACTION: It was regularly moved, seconded, and unanimously passed that the previous motion be tabled.

3. C9 - C12 Aromatics

Kieffer Davis, M. D., chairman of the subcommittee, reported that after a careful review of the work being conducted by Dr. Carl Nau, it was voted to terminate this investigation with the expenditure of the 1961 funds. This will result in a withdrawal of the \$10,000 item placed in the 1962 budget for a continuation of this project.

4. Certificates of Appreciation

J. W. Osborn, M. D., chairman, reported that there had been no meeting of this group.

5. Dermatology

J. W. Osborn, M. D. stated that there was no report for this group.

6. Epidemiology

J. W. Osborn, M. D. indicated no report.

7. Medical Policies and Administrative Practices

Ralph Schneider, M. D. asked for the reaction of the Operating Subcommittee on the desirability of disbanding this subcommittee. No new problems have been brought to the attention of this group since the issuing of their "Guiding Principles in Regard to the Scope, Objectives, and Functions of Occupational Health Programs in Petroleum Operations." Dr. Schneider indicated there were two possibilities for action. One was to consider the desirability of collecting data from participating companies on the operation of their medical practices and the other was the disbanding of the subcommittee.

A considerable number of opinions were expressed on both possibilities. Dr. Schneider thanked the group for their opinions.

G. Oil Mist

Mr. Allan Dooley reported for Mr. N. V. Hendricks. The "Report of Oil Mist Study Group," prepared by a small group, is to be published in the Archives of Occupational Health. Mr. Dooley asked if the companies wished to order a number of reprints of this article to give to their salesmen and other interested employees. It was agreed that a letter should be sent to the members of the Medical Advisory Committee requesting that they let the API office know if they wished copies of this reprint. These requests will be transmitted to Mr. Hendricks in order that the

Printer may produce the number of copies at a minimum cost to the companies.
Mr. Dooley reported on the activity of the Oil Mist Liaison Group with Dr. Stockinger at the Public Health Center in Cincinnati. Three cutting oils have been furnished Dr. Stockinger for study.

I. Physical Agents

G. H. Collings, M. D. stated he had no report.

J. Specialty Petroleum Products

E. V. Henson, M. D. reported for Dr. Baylor. The subcommittee recommends that the \$5,000 in the 1961 budget which had been earmarked for work to be done by Dr. Nau, on studying the effect of kerosine ingestion in animals, not be spent. Since this work has not been done in 1961 and is not expected to be done, the subcommittee requested that the work be discontinued.

K. Industrial Hygiene

Dr. J. A. Spence stated he had no report.

L. Toxicological Reviews

H. W. Gerarde, M. D. stated that his subcommittee may request Dr. Drinker to rewrite some material for the toxicological reviews. It was indicated that this work would be paid for from the consultant fee item in the budget.

M. Public Health Service Liaison Activities

Chairman Osborn complimented Mr. Hendricks in obtaining various people in the Public Health Service to serve as liaison with API members on interested subjects. Chairman Osborn emphasized the necessity of API members calling on these contacts and trying, insofar as possible, to keep an active relationship with these people. The group, in general, agreed to the necessity of contacting the Public Health Service people as frequently as possible.

IV. 1962 BUDGET

Chairman Osborn reported that in the 1962 budget were three items: \$47,000 for atmospheric pollutants, \$2,500 for noise, and \$2,000 for consultant fees, making a total of \$51,500.

V. SPECIAL ASPHALT STUDY COMMITTEE

Dr. J. A. Spence reported on the activities of the Special Asphalt Study Committee. This committee was recommending to the Medical and Health Committee that a permanent standing committee be set up to resolve the question of whether petroleum asphalts present a special hazard. Considerable discussion resulted as to the type of committee that should be set up. There were differences of opinion as to whether it should be an interdivisional committee or a committee appointed by the managements of the asphalt producing companies. It appeared to be generally agreed that the Medical Advisory Committee should have official representation on this committee.

ACTION: It was regularly moved, seconded, and unanimously passed that the Medical Advisory Committee establish the following as a basic principle: When a committee is formed which concerns itself with the health aspects of the petroleum industry, the Medical Advisory Committee believes it essential that they be officially represented on such committee and any representatives who are nominated by the Medical Advisory Committee will reflect the opinion of the Medical Advisory Committee. The Medical Advisory Committee believes this principle should apply in the formation of the new Asphalt Committee.

VI. MEDICAL AND HEALTH SESSION

Chairman Osborn called the attention of the subcommittee to the Group Session scheduled for Monday morning, November 13th, sponsored by the Medical Advisory Committee.

VII. SPRING MEETING

The Industrial Medical Association is to meet in Chicago, April 10, 11, and 12. The Industrial Hygiene Association is to meet in Washington, D. C., the first part of May.

ACTION: It was regularly moved, seconded, and passed that the Medical Advisory Committee meeting be held in Chicago, Illinois, on April 6, 7, and 9, 1962, the subcommittees to meet on Friday, April 6, and Saturday, April 7, and the Medical Advisory Committee to hold its meeting on Monday, April 9th.

VIII. NEW BUSINESS

A. Formation of Joint Committee - Division of Refining

Chairman Osborn explained the need for a closer working relationship with the Air and Water Conservation Committee of the Division of Refining. The desirability of setting up a joint committee composed of the officers of the Medical Advisory Committee and the Atmospheric Pollutants Subcommittee, together with the officers of the Air and Water Conservation Committee and the chairman of the appropriate subcommittee, was discussed in detail.

ACTION: It was regularly moved, seconded, and unanimously passed that the Operating Subcommittee endorse the principle that the Medical Advisory Committee officers and the chairman of the Atmospheric Pollutants Subcommittee should form an active group with the corresponding Air and Water Conservation Committee members.

B. Liaison Members on Operating Subcommittee

ACTION: It was regularly moved and seconded that the Operating Subcommittee recommend to the chairman of the Medical Advisory Committee that the liaison members of the Medical Advisory Committee not be appointed to membership on the Operating Subcommittee. The motion lost by a six to five vote.

X. ADJOURNMENT

The meeting adjourned at 11:45 P. M.

L. E. Renes, Secretary

Reported by E. O. Mattocks

Approved:
J. W. Osborn, M. D., Chairman

REPORT OF THE SUBCOMMITTEE ON ATMOSPHERIC POLLUTANTS

C. L. Samuelson, M. D., Chairman

The subcommittee convened on Friday morning, November 10, 1961 with eight members and thirty-three visitors in attendance. The Air and Water Conservation Committee was represented by Mr. L. C. Burroughs.

The open meeting was devoted to the presentation of research proposals by Drs. Shubik and Saffiotti, of the Chicago Medical School's Institute of Medical Research, and by Dr. Carl Nau, of the University of Oklahoma Medical Center.

Following these presentations there was a period of general discussion, questions, and answers. The subcommittee greatly appreciated the active and general participation of all in attendance.

The subcommittee then convened in closed session. The proposals presented, as well as one submitted by Dr. Hine, were further considered as were the comments made at the open session.

As a result, the subcommittee unanimously agreed to recommend to the Medical Advisory Committee the adoption of Dr. Shubik's proposal, a copy of which is attached, as a research project in the field of air pollution.

C. L. Samuelson, M. D., Chairman

C O P Y

B-2

C O P Y

THE CHICAGO MEDICAL SCHOOL
Institute of Medical Research

DIVISION OF ONCOLOGY
2020 West Ogden Avenue
Chicago 12, Illinois

TELEPHONE Canal 6-4100

August 30, 1961

C. L. Samuelson, M. D.
Medical Director
The Ohio Oil Co.
Findlay, Ohio

Dear Doctor Samuelson:

The basic outline of our proposed studies is described in my previous letter to Mr. W. H. Barcus. The following account somewhat extends some of these proposals and I hope will clarify some of the experiments that we hope to undertake.

One of the main problems in the study of atmospheric pollution has been the lack of a satisfactory biological tool. Biological techniques for the induction of bronchogenic carcinoma are under study in our laboratory. A series of experiments on the Syrian golden hamster using repeated intratracheal intubations of colloidal suspensions of known carcinogens showed that this animal species is susceptible to bronchogenic carcinoma induction. (Cancer Res. 18:592, 1958). A new technique has been developed by Dr. Saffiotti of this laboratory for the introduction of carcinogens directly into the lungs, using an inert dust as carrier of the carcinogen. By this method large doses of carcinogenic aromatic hydrocarbons can be introduced with a single intratracheal injection into the lungs, where they are evenly distributed in the peribronchial spaces and phagocytosed in clusters of cells. Extensive information has been collected from previous studies with inert dusts and different cytotoxic dusts on the cellular reactions in the lungs and they will provide an useful background for the study of the reaction of lung tissue to dusts carrying a carcinogen.

It is proposed to use this technique to study the following problems:

- 1) the carcinogenic effect of different aromatic hydrocarbons on the lung; 2) the histological changes leading to tumor formation in the bronchial epithelium; 3) the relative effectiveness of different carcinogens on the lung and on the skin; 4) the rate of elution of carcinogens from the lung, determined by analytical methods and referred to both the tissue weight and the amount of inert dust present.

Possible developments of these studies will be: 1) testing of new compounds for carcinogenicity on the lungs; 2) studying the metabolism of carcinogens in the lung by the use of labelled compounds; 3) studying the in vitro effect of particulate carcinogens on single cells in tissue culture; 4) studying the effect of other environmental cytotoxic dusts on the reaction of the lung to carcinogens and the incidence of lung tumors.

API 07720

L. Samuelson, M. D.

The budget for these studies will be composed essentially of salaries for additional personnel and consumable supplies such as additional animals, their feed and care and some chemicals to be used. I would currently propose that the budget for the first year would be as follows:

Research pathologist (full time)	\$10,000.00
Technician (full time)	5,000.00
Animal caretaker (full time)	3,600.00
Organic chemist	9,000.00
Total salaries	<u>\$27,600.00</u>

Consumable supplies:

Animals, cages and feed	5,000.00
Chemicals, glassware, etc.	3,000.00

Travel	500.00
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Subtotal	\$36,100.00
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Overhead (15%)	5,415.00
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TOTAL	<u>\$41,515.00</u>
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Sincerely yours,

/s/ Philippe Shubik

Philippe Shubik
Professor of Oncology

PS:ir

REPORT OF THE SUBCOMMITTEE ON C₉ - C₁₂ AROMATICS

Kieffer Davis, M. D., Chairman

The subcommittee met at 1:00 P. M., Friday, November 10, 1961, at the Conrad Hilton Hotel, Chicago, Illinois. All members were present with the exception of one. Eleven visitors were in attendance.

Dr. Nau, chief investigator, reported on the completion of his injection studies in rabbits, rats and monkeys, and the results parallel closely those obtained from inhalation exposures to the aromatic fractions.

Although there was no formal report from the technical task group which was appointed several months ago, it was their general opinion that it was impractical to make further fractionations of the C₉ - C₁₂ aromatics for the purpose of identification and further biological study.

After considered discussion by the subcommittee members and visitors, it was agreed that the objectives set out in this research program had been achieved and that no further studies were indicated.

Dr. Nau was requested to present a final report on this work at the next MAC meeting.

Kieffer Davis, M. D., Chairman

APPENDIX D

REPORT OF THE SUBCOMMITTEE ON DERMATOLOGY
J. W. Osborn, M. D., Chairman Pro Tem

November 10, 1961
9:00 A. M.

MEMBERS PRESENT:

J. W. Osborn, M. D., Chairman Pro Tem
A. E. Dooley
R. R. Dugan, M. D.

MEMBERS ABSENT:

C. H. Baylor, M. D.
F. D. Gassaway, M. D.
B. S. Miller, M. D.

GUESTS:

Rupert C. Burtan, M. D.

-

American Oil Company - Whiting Refinery

The only activity during 1961 has been continued liaison with the Hygiene Panel, Lubrications Committee, Division of Marketing, in maintaining contact with Mr. Floyd Van Atta, the United Auto Workers of America industrial hygienist, since the October 3, 1960 meeting with him in Detroit, fully reported in the November 14, 1960 minutes of the MAC. (Appendix E)

Since then, the Hygiene Panel supplied Mr. Van Atta with 500 or more booklets on "Good Plant Practice for Workers Using Petroleum Products" and accompanying wall placards for use in the UAW Summer Training Schools for Shop Stewards.

In early June, 1961, Mr. M. D. Gjerde of the Hygiene Panel reported that he talked with Mr. Van Atta by phone who stated that he had no suggestions to make regarding Hygiene Panel further efforts; was appreciative of having the supply of the Good Plant Practices booklet and wall placards for use at the UAW training sessions during the summer; and, that he was leaving the procurement of speakers up to the individual school staffs.

The committee recommends continuing liaison with the Hygiene Panel in maintaining regular contact with Mr. Van Atta at least twice a year to follow developments.

Due to Dr. Leo J. Wade's resignation from the MAC in June, 1961, this subcommittee needs a new chairman appointed for 1962.

J. W. Osborn, M. D.
Chairman Pro Tem

REPORT OF THE SUBCOMMITTEE ON INDUSTRIAL HYGIENE
Dr. J. A. Spence, Chairman

The Subcommittee on Industrial Hygiene met on November 11, 1961, with six members, Professor Drinker as consultant, and eight guests present.

Liaison members to the American Standards Association committees reported there had been no recent activities on the Z-62, Z-37, and Z-4 Committees.

It is planned that the project report, "The Industrial Hygiene Aspects of Petroleum Refining," will be submitted to the Medical Advisory Committee at the Spring 1962 meeting.

In connection with the study on C₉ - C₁₂ Aromatics, the subcommittee plans to review the major marketing uses of the C₉ - C₁₂ type aromatic products. If indicated, a study will be considered to determine whether the present industrial uses of these products are hazardous to health.

The status of the U.S.P.H.S. Lead-in-Air study was reviewed by Dr. Samuelson. No action was required by the Subcommittee on Industrial Hygiene.

The present status of the U.S.P.H.S. Study on Oil Mists was reported by Mr. Dooley. No action was requested from the subcommittee.

Effective January 1961, Federal Standards for Safety and Health were established under the Walsh-Healey Act. Mr. Wm. Avrett was appointed as subcommittee liaison member to serve with other industry groups interested in this act. He reported that on November 7, the Manufacturing Chemists' Association submitted suggestions to modify requirements covering toxic materials in the working environment. It was also pointed out that the Manufacturing Chemists' Association would like to be informed if any company is inspected under the Walsh-Healey Act by a government inspector.

Dr. J. A. Spence, Chairman

REPORT OF THE SUBCOMMITTEE ON MEDICAL POLICIES AND ADMINISTRATIVE PRACTICES
Ralph F. Schneider, M. D., Chairman

MEMBERS PRESENT:

Ralph F. Schneider, M. D.
G. H. Collings, Jr., M. D.
Gordon Sinclair, M. D.

MEMBERS ABSENT:

F. F. Boys, M. D.
T. J. Kelly, M. D.
G. M. Saunders, M. D.

GUESTS:

Peter Melia, M. D.

Thomas H. Mitchell, M. D.

There has been no work in progress nor have there been inquiries or problems proposed to this subcommittee during this past year.

The members of the subcommittee propose to carry out a study and ultimately make a recommendation to the Medical Advisory Committee regarding the kind of statistical data and reports that the members might record in order to be able to carry out comparative and epidemiological studies relating to health factors in the petroleum industry.

Ralph F. Schneider, M. D., Chairman

APPENDIX G

REPORT OF THE SUBCOMMITTEE ON PHYSICAL AGENTS
G. H. Collings, M. D., Chairman

The matter of developing a suitable noise standard to define safe occupational exposures has been of interest and concern to industry for some time. However, the complexity of the basic technology and the lack of information on this subject has delayed agreement on a standard which might receive industry-wide application.

The Subcommittee on Physical Agents felt that perhaps agreement on a standard could be reached within the petroleum industry and has addressed itself to the definition of such a standard with the expectation that its use, even on an informal basis, would assist in comparing environmental noise data between petroleum companies and the promotion of a more uniform approach to noise control.

Late this year it became apparent that a breakthrough was imminent in developing a standard for industry in general and that the widespread acceptance of this standard may not be long off. The standard is the one proposed for acceptance by the International Standards Organization.

The subcommittee will obtain copies of this standard for distribution to MAC members and will recommend its adoption now for the petroleum industry.

Dr. Glorig met with the subcommittee and visitors at the recent meeting for discussion of matters pertaining to hearing, noise, and hearing loss.

G. H. Collings, M. D., Chairman

APPENDIX H

REPORT OF THE SUBCOMMITTEE ON SPECIALTY PETROLEUM PRODUCTS
C. H. Baylor, M. D., Chairman

Dr. Ralph Schneider acted as chairman for Dr. C. H. Baylor. In addition to five members of the subcommittee, several visitors were also present.

During the past year there were relatively fewer cases of kerosine poisoning reported by Dr. A. A. Mintz and Dr. R. J. McKay, Jr., in their studies relating to the treatment of such cases. The clinical reports and laboratory blood specimens were sent to Dr. H. W. Gerarde for analysis on 28 such cases. Many of the cases reported, however, involved ingested material other than kerosene and since the number of cases were small, no correlation could be made between blood hydrocarbon levels and the clinical picture.

Therefore, the projects relative to clinical investigation by Drs. Mintz and McKay will continue through 1962 before a final report is made.

The animal experimental work carried out by Dr. Nau is considered completed and the report which is hereby attached is considered a final report. The results of this investigation generally substantiate those previously reported by Dr. Gerard's work. The \$5,000 in the 1961 budget for this work which was not used is hereby released to the general fund.

R. F. Schneider, M. D., Acting Chairman

Report of Dr. C. Nau
Univ. of Okla.
Oklahoma City, Okla.
10/13/61

API

PROGRESS REPORT ON KEROSENE STUDY

Materials and Methods:

White Wistar strain female rats were used in our work. These rats weighed between 250 and 300 grams. The rats were given kerosene by three different methods:

- 1) Subcutaneous Injection: The subcutaneous injections were given in the groin of an unanesthetized rat. A $1\frac{1}{2}$ ", #24 gauge needle was used to minimize leakage from the skin puncture.
- 2) Intragastrically.
 - a) Surgically: Rats which had been starved for 24 hours were anesthetized with sodium pentothal (40 mg/kg) given intraperitoneally. A surgical incision was made below the xiphoid process, the stomach retracted, and the esophagus ligated. Injection directly through the stomach wall was performed with a $\frac{1}{2}$ ", #26 gauge needle. When another substance was given in conjunction with the kerosene, both were drawn into the same syringe and given as one injection.
 - b) Stomach Tube: A #10 rubber catheter was passed down the esophagus of a rat starved for 24 hours and lightly anesthetized with ether. After completing the administration of the kerosene and other substances, the contents of catheter were washed down by $1-1\frac{1}{2}$ cc of water.

The determination of kerosene in the blood was carried out on a Beckman DU spectrophotometer at a wave length of 221 mμ and a slit opening of 2.0mm. After drawing the blood from the rat's inferior vena cava, (usually 4cc), it was extracted with an equal amount of spectrograde iso-octane, which had been double distilled in a pyrex glass still. The sample was then centrifuged for 15 minutes at 2,000 r.p.m. A sample of the extractant was decanted from the centrifuge tube and read in a 10mm cell. A dilution was sometimes made if the optical density of the unknown was greater than could be read on the scale of the spectrophotometer. The concentration of the unknown sample in parts per million was read from a standard curve, prepared from known concentrations of kerosene in iso-octane. Corrections were made for background readings obtained when blood from a normal animal was obtained and extracted with the iso-octane. This reading was determined to be 10ppm, and all the figures presented in the tables are correct readings.

Results:

The subcutaneous injection of kerosene was given in order to establish a blood concentration curve of kerosene for different periods of time. Four cc was selected as the amount to be given, and the animals were killed at different times. The results are summarized in Table 1.

Table 1 - Subcutaneous Injection

<u>No. of rats</u>	<u>Amt. given</u>	<u>Time killed after injection</u>	<u>Kerosine concentration in blood, ppm</u>
6	4cc	2 hours	207
6	4cc	4 hours	182
6	4cc	6 hours	138
5	4cc	24 hours	37.3
5	4cc	48 hours	19.3

The procedure was then changed to simulate the ingestion of kerosine. The abdominal surgery was performed as described before, with the ligation of the esophagus included as a part of the procedure to insure the aspiration to be impossible. Three groups of rats were run as controls, each having been given 1cc of kerosine by this method, and then killed at 2, 4, and 6 hours after ingestion. With this curve having been established, several different household products were given along with the kerosine to determine if the blood levels could be lowered. These animals were killed at 4 hours since the peak blood concentrations of the controls was observed at 4 hours. These results were presented in Table 2.

Table 2 - Intragastric Injection, Surgically

<u>No. of rats</u>	<u>Substance given</u>	<u>Time killed after injection</u>	<u>Kerosine conc. in blood, ppm</u>
14	1cc kerosine	2 hours	96
14	1cc kerosine	4 hours	108.5
14	1cc kerosine	6 hours	87
12	2cc cold H ₂ O + 1cc kerosine	4 hours	145
10	2cc homo. milk + 1cc kerosine	4 hours	89.2
11	2cc tomato juice + 1cc kerosine	4 hours	84
7	1cc 50% Pepto Bismal + 1cc kerosine	4 hours	73
12	2cc evaporated milk + 1cc kerosine	4 hours	41

Our last bit of experimental work consisted of giving kerosine via a stomach tube (#10 rubber catheter). These results are presented in Table 3.

Table 3 - Intragastric, Stomach Tube

<u>No. of rats</u>	<u>Substance given</u>	<u>Time killed after injection</u>	<u>Kerosine conc. in blood, ppm</u>
15	1cc kerosine	4 hours	61
17	1cc kerosine + 2cc evaporated milk	4 hours	97

Conclusions:

The first question in our project was whether there was a direct correlation between blood kerosine levels and pulmonary changes. Each time an animal was killed in order to obtain a blood sample, the animal was autopsied, and gross observations were made of the lungs, heart, liver, and kidneys. These observations would sometimes reveal very slightly hemorrhagic lungs and congested liver. These changes were sporadic and did not correlate with the blood levels of kerosine. The other organs appeared normal. Microscopic examination revealed a chronic pneumonitis present in our strain of experimental rats, so no positive correlation could be made.

The second part of our plan was to find, if possible, some common household product, which, when given orally, would lower the blood levels of kerosine resulting from absorption from the gastro-intestinal tract. The peak concentration observed giving rats kerosine intragastrically by the surgical method was 108.5 ppm and occurred 4 hours after the animal was given the kerosine. With this in mind, several products were given with the kerosine, and the results obtained are presented in Table 2. From our work, it appears that cold water enhances the absorption of kerosine, and that evaporated milk inhibits it. However, we must emphasize that this is only a preliminary study, and our results are not conclusive and should not be taken as such. When the kerosine was given to the rats by the stomach tube, our results were exactly opposite from those observed when the surgical method was used. These results are presented in Table 3. We have no explanation for this, but it would provide for some interesting studies as we hope to continue our work next summer.

APPENDIX I

REPORT OF THE SUBCOMMITTEE ON TOXICOLOGICAL REVIEWS

H. W. Gerarde, M. D., Chairman

The subcommittee met on Saturday, November 11 at 1:00 P. M. in the Private Dining Room No. 5. A number of guests were present during the meeting.

The subcommittee wishes to make the following recommendations:

1. The final drafts on cyclohexane and styrene are to be circulated to members of the Medical Advisory Committee for approval for publication.
2. Professor Drinker will write a brief section on Air Pollution for inclusion in the final drafts of the Reviews on SO₂ and Sulfuric Acid. These reviews will then be circulated to members of the Medical Advisory Committee for approval.
3. Professor Drinker will also write a Toxicological Review on Gasoline after the subcommittee has decided on a satisfactory definition of gasoline. The definition of gasoline will first be submitted to the members of the Medical Advisory Committee for approval.
4. The second drafts on cumene and kerosine will be circulated for comments and suggestions.
5. Although there is a backlog of drafts on hand, suggestions for new reviews will be obtained by canvassing the membership of the Medical Advisory Committee.

Reported by
P. D. Halley

1961 REPORT OF THE SPECIAL ASPHALT STUDY COMMITTEE
TO THE MEDICAL AND HEALTH COMMITTEE

J. A. Spence, Ph.D., - Chairman

Mr. C. E. Spahr, as chairman of the Medical and Health Committee, in March, 1961, appointed a Special Asphalt Study Committee and asked that it review current knowledge on asphalt, especially the medical and health aspects. Furthermore, the Special Asphalt Study Committee was asked to recommend on the desirability of establishing, within the API framework, a permanent Committee on Asphalt.

The Special Asphalt Study Committee met in Chicago, September 27, 1961, and after carefully reviewing the problem, arrived at the following conclusion:

The Special Asphalt Study Committee has reviewed the limited literature and found no indication of a recognized health problem to man resulting from petroleum asphalts. There are, however, experimental studies reported in which the experimenters conclude that certain asphalts, not well defined, are carcinogenic to experimental animals. Also, the group is aware of repeated inquiries from public health officials and the medical profession concerning any health hazard from exposure to possible carcinogens in asphalts. These involve paving, roofing, waterproofing and similar asphalt stocks. Also, there has appeared in the public press, from time to time, releases which have inferred, as in the case of petroleum waxes, that there is a public health hazard from asphalt. Based upon these findings, it is the considered opinion of the Special Asphalt Study Committee that there is a definite need for the petroleum industry to resolve the question of whether petroleum asphalt presents a public health hazard.

It is, therefore, the Special Asphalt Study Committee's unanimous recommendation to the Medical and Health Committee that a standing committee be set up, within the framework of the API, to consider the medical and health aspects of asphalts, and that if set up, such a committee be composed of representatives nominated by the management of the various asphalt producing companies.

It is also recommended that the function of the standing committee be to keep abreast of all developments related to the health hazards of asphalt and to advise the Medical and Health Committee on any significant activities in this area. This would encompass epidemiological, toxicological and analytical problems and require close liaison with the U. S. Public Health Service and other groups interested in asphalt.

It is felt that with this report the Special Asphalt Study Committee has completed its assignment.

J. A. Spence, Ph.D. - Chairman

November 14, 1961

APPENDIX K

REPORT OF THE INTERDIVISIONAL COMMITTEE ON LABELING

Allan E. Dooley, Chairman

1. To conduct toxicological studies on representative petroleum distillates named in the regulations relating to the Federal Hazardous Substances Labeling Act.
2. To protest to the Food and Drug Administration, certain requirements contained in the August 12, 1961 labeling regulations.
3. To collaborate, to the extent of its ability with other industry associations in efforts to extend the date of the penalty provisions of the Federal Hazardous Substances Labeling Act beyond the presently-effective date of February 1, 1962.

The Committee is now engaged in a revision of the API Bulletin on Precautionary Labeling 2511.

Allan E. Dooley, Chairman

REPORT ON LIAISON WITH QUARANTINE SERVICE TO
MEDICAL ADVISORY COMMITTEE

Liaison with the Epidemiology and Domestic Operations Branch, Division of Foreign Quarantine of the U. S. Public Health Service has continued. Since the last report, Dr. James G. Telfer, who was formerly Chief of the Branch, has been made Chief of the Division. Dr. Ray Vanderhook is now Chief of the Epidemiology and Domestic Operations Branch and is our liaison. Dr. Vanderhook was formerly chief medical officer of the quarantine stations along the Mexican border. He would like to attend a meeting of the API Medical Advisory Committee at some future date.

Since the last report to the MAC on 8 April 1961, there have been numerous communications from the Branch concerning disease occurrence, quarantine regulations and immunization requirements. Some of the information was felt to be of sufficient importance to the API members to pass on to the MAC. Some was not.

A chronological listing of events is given below:

- 18 Apr. 1961 The U. S. Public Health Service reported on an epidemic of yellow fever in the interior of Ethiopia and, also, on an outbreak of yellow fever in the central part of Peru in Tingo Maria. It was recommended that all precautions be taken to insure that all travelers to these countries be immunized against yellow fever.
- 18 Apr. 1961 Information was given by the U. S. Public Health Service that there had been no reported cases of cholera in the Near East area for several months, including Afghanistan and West Pakistan, and, therefore, cholera vaccinations were not recommended for Near East countries.
- 2 May 1961 The U. S. Public Health Service informed us that they had had an unofficial report under the date of the 27th of April, 1961, of an outbreak of cholera in Afghanistan. Further information was being sought from the World Health Organization. Reports from India indicated that in Calcutta the expected seasonal increase in cholera had come a month earlier than usual this year. For the week ending 22 April, 1961, there were 180 cases reported from Calcutta.
- 9 June 1961 The U. S. Public Health Service informed us that previous reports they had had of a case of smallpox in Germany and a case of cholera in Spain had not been confirmed.
- 16 June 1961 A memorandum was received from the U. S. Public Health Service giving information on new Iraqi quarantine regulations for entrance. All travelers arriving from India by air or sea must possess an international certificate of cholera vaccination. Two doses are required six days apart, the first dose no more than six months prior to arrival and the second dose no less than six days prior to arrival. Travelers not complying will be placed in Iraqi quarantine for five days.

- 20 June 1961 The U. S. Public Health Service gave information concerning a small outbreak of louse-borne typhus in Arabia.
- 13 July 1961 The U. S. Public Health Service informed us that they had been notified of a case of suspected smallpox in Anchorage, Alaska. An infant, the child of a Korean family which was en route from Japan to Copenhagen, took sick and was hospitalized. It was stated that the disease was probably chickenpox. No further reports were received.
- 13 July 1961 One of the medical directors called to inform us that one of their ship captains had reported an outbreak of smallpox in Palembang. Information was given by the U. S. Public Health Service which indicated that cases had been reported regularly from Java for the past many months, the highest incidence being in February when the reported cases averaged 300 a week over a three-week period, but that recently only sporadic cases had been reported.
- 17 July 1961 The U. S. Public Health Service gave further information concerning louse-borne typhus - about 40 cases along the pipeline in Arabia.
- 17 July 1961 The U. S. Public Health Service informed us that Sarawak had declared the Kuching Division infected with cholera as of 14 June, 1961. This was the first time that cholera had been reported from Sarawak.
- 15 Aug. 1961 The U. S. Public Health Service informed us that they had received a report of a confirmed case of cholera in Macao. It was stated that apparently there was an extensive epidemic current in China and that the Chinese Government was carrying out a mass vaccination campaign. No cases had yet been reported from Hong Kong.
- 17 Aug. 1961 The U. S. Public Health Service informed us that Hong Kong had reported two proven cases of cholera and two suspects and that the area was declared infected by the Hong Kong Government.
- 11 Sept. 1961 The U. S. Public Health Service gave information concerning two cases of suspected smallpox in England, presumably imported from Spain.
- 13 Sept. 1961 The U. S. Public Health Service reported that the suspected case of smallpox reported in England was declared not to be smallpox by the British Health Service.
- 3 Oct. 1961 The U. S. Public Health Service informed us of an outbreak of plague in Ecuador in Manta about 125 miles north of Guayaquil. The Government was instituting a campaign of vaccination and rodent and flea control. The number of cases was not known. The World Health Organization was to check on the reports.
- 6 Oct. 1961 The U. S. Public Health Service informed us that an outbreak of influenza in "near epidemic" proportions was reported from India, type of virus as yet unidentified, in the extreme northeast portion of India in the vicinity of Darjeeling, Kalaimpang, Changtok and Sikkim. Possibly the disease has spread from China. The World Health Organization was to follow up on further spread, if any.

6 Oct. 1961

The U. S. Public Health Service informed us that the World Health Organization reported that there was a cholera-like disease in Manila and the vicinity and that so far 62 cases with 12 deaths had been reported up to October 5th. Laboratory tests were said to be contradictory. The Division of Foreign Quarantine is requiring a certificate of cholera vaccination from all arrivals from the Philippine Islands. If the arrival is apparently healthy but not in possession of a certificate, the individual will be kept under surveillance.

6 Oct. 1961

The U. S. Public Health Service informed us that a few cases of yellow fever had been reported in one province in Ethiopia in the southwest part of the country.

Recommendations

It is recommended that:

1. This report be accepted by the Medical Advisory Committee.
2. Dr. Ray Vanderhook be invited to meet with the Medical Advisory Committee at some future date.

Prepared by

George M. Saunders, M. D.
1 November 1961

GMS:ar

1961 REPORT OF THE ADVISORY COMMITTEE TO THE WAX RESEARCH PROJECT
TO THE MEDICAL AND HEALTH COMMITTEE

R. E. Eckardt, M. D. - Chairman

The Advisory Committee to the Wax Research Project met in Chicago on November 11, 1961. At that time, the final report of the biological work conducted by the Chicago Medical School, under the direction of Dr. P. Shubik, was received. Effort will be made to file a petition with the Food and Drug Administration for approval of the use of petroleum waxes as food additives by the first of 1962. If this is not possible, it will be necessary that a request for an extension for another six months be made to permit the use of petroleum waxes until such time as the petition can be prepared and filed.

In essence, these studies showed that the feeding of five different waxes at levels of 10% in the diet of rats for two years resulted in no significant tumor or cancer production. Previously reported skin painting studies in mice and rabbits, and subcutaneous implantation studies in mice had revealed no cancer-producing potential for these waxes, except for sarcoma production by implantation. Recent experiments demonstrated that this was the result of a physical property of the waxes, rather than a chemical property. Similar physical properties are exhibited by certain plastics (Teflon, cellophane, etc.) and by glass. Thus, it is felt that these biological studies have conclusively demonstrated that there is no hazard to the public from the use of waxes as components of food or food packages. It is on this basis that the petition will be worded.

Analytical studies by the Chicago Medical School, materially helped and assisted by an Analytical Subcommittee of the Advisory Committee to the Wax Research Project, will permit the submission of a suitable analytical method as a part of our petition. It is believed that this method will permit adequate quality control of waxes to satisfy the requirements of the Food and Drug Administration.

The Advisory Committee to the Wax Research Project believes that, upon the issuance of a favorable regulation by the Food and Drug Administration on waxes, its work will have been brought to a successful termination and that there will be no further need for its existence. However, it is possible that the Food and Drug Administration will not issue a favorable regulation for the use of wax. In accordance with the law at that time, the wax petition was filed March 1, 1961 with the Food and Drug Administration, although the biologic testing was not complete. The Food and Drug Administration indicated that the petition was not acceptable because of the absence of sufficient data to permit an evaluation of the safety of petroleum waxes as a food additive. They, likewise, requested that biologic tests be conducted on minute quantities of hydrocarbons which had been found in certain petroleum waxes. These hydrocarbons have been quoted in literature as being suspected of forming cancer. While the literature references were of uncertain value and did not relate to their use as a food additive, it appeared that the Food and Drug Administration expected the American Petroleum Institute to run biologic tests to prove whether or not they were cancer forming when used as a food additive. It was after receipt of this request that the Advisory Committee to the Wax Research Project recommended \$100,000 be placed in the 1962 budget to continue the wax investigation.

Following the filing of the wax petition, the Congress of the United States modified the Food Additives Law to permit granting of further extensions in those cases where investigational work had not been completed. After this action by Congress, the American Petroleum Institute petition was withdrawn. The chief

investigator of the wax project, Dr. Philippe Shubik, and the Wax Committee are firm in their belief that the American Petroleum Institute should not undertake the long and expensive biologic testing requested by the Food and Drug Administration. We believe that when the current investigational program is completed, that the petroleum industry will have complied with the Food Additives Law and the petroleum industry should be prepared to stand on this decision. It may be necessary to resort to legal means to support these rights. The Program and Budget Review Committee reduced the \$100,000 recommended by the Wax Committee to \$50,000, which amount is now in the 1962 budget. This money may be needed to conduct further biologic tests or to finance legal assistance, if these are needed.

R. E. Eckardt, M.D. - Chairman

November 14, 1961