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Medical Advisory Committee

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AMERICAN PETROLEUM INSTITUTE
MEDICAL ADVISORY COMMITTEE

THIRTEENTH MEETING

Minutes of Meeting
April 21, 1951
Haddon Hall
Atlantic City, N. J.

MEMBERS PRESENT

B. B. Reeve - Chairman
E. K. Linder - Vice Chairman
Marshall Clinton - Secretary

W. O. Armstrong	Kieffer Davis	W. R. Levis
V. C. Baird	Robert E. Eckardt	James W. Long
F. F. Boys	Kenneth R. Fourcher	E. P. Luongo
J. W. Crookshank	T. M. Frank	M. N. Newquist
L. E. Curtis	A. E. Hoag	Leo J. Wade
	T. J. Kelly	

ASSOCIATES PRESENT OR REPRESENTED

E. W. Adams	L. M. Henderson
L. C. Beard, Jr.	R. M. Landon
J. S. Boylan	K. G. Mackenzie
C. L. Brown	(Rep. by H. R. Warrick)
R. C. Cole	C. A. Neilson
Allan E. Dooley	F. J. Sanders
R. W. Faulk	(Rep. by H. P. Lankelma)
Nelson J. Gothard	R. M. Shepardson

GUESTS

John M. Daly	- Esso Standard Oil Co.
Philip Drinker	- Harvard University
J. W. Hammond	- Humble Oil and Refining Co.
A. W. Horton	- University of Cincinnati
Robert A. Kehoe	- University of Cincinnati
E. O. Mattocks	- American Petroleum Institute
Geo. M. Saunders	- Socony-Vacuum Oil Co., Inc.
William E. Smith	- New York University
D. V. Stroop	- American Petroleum Institute

Total in Attendance - 42

MEMBERS ABSENT

T. E. Allen	Robert Bell Lynn	R. C. Page
D. M. English	Clark R. Miller	E. Richmond Ware

ASSOCIATES ABSENT

W. R. Argyle	T. E. DeVilliers	R. C. Mithoff
R. D. Bent	R. S. Driver	W. H. Price
C. R. Brown	James E. Hill	R. B. Roaper
L. O. Crockett	E. W. Isom	F. M. Watkins
J. B. DeLaune	D. W. Larmer	H. D. Wilde
	C. R. McKay	

I

INTRODUCTION OF MEMBERS AND GUESTS

The chairman welcomed and introduced members and guests who had not attended previous meetings of the committee.

II

DECEASED MEMBER

The chairman reported the death of Doctor Charles A. Swan on April 4, 1951.

ACTION The committee adopted:

Resolution in Memoriam

Charles A. Swan

The Medical Advisory Committee of the American Petroleum Institute records with deep regret the untimely and tragic death of its member, Doctor Charles A. Swan, as result of an automobile accident near Bradenton, Florida, April 4, 1951.

His assistance and cooperation in the work and meetings will be sorely missed by his associates who wish to express their sense of loss and to extend their feeling of sympathy to Doctor Swan's family and to The Standard Oil Company (Ohio).

III

MINUTES OF TWELFTH MEETING

ACTION The committee voted to approve the minutes of the twelfth meeting as circularized with corrected pages 1, 2 and 9.

IV

REPORT OF SUBCOMMITTEE ON CARCINOGENICITY -
DR. M. N. NEWQUIST, CHAIRMAN

On behalf of the subcommittee, Dr. Newquist reported four recommendations for adoption as follows:

1. That the progress report from Kettering Laboratory dated April 12, 1951 should be received and filed.
2. That a copy of the progress report should be sent to Colonel S. J. M. Auld as a personal and confidential communication from the chairman of the Subcommittee on Carcinogenicity, pursuant to the plan adopted at the April 2, 1949 meeting of the committee.
3. That the Memorandum on Measures for the Control of the Hazard Associated with Carcinogenic Materials and Products in the Petroleum Industry from Robert A. Kehoe, under date of April 12, 1951, should be received and filed.
4. That the chairman of the Medical Advisory Committee and the Chairman of the Subcommittee on Carcinogenicity, with Doctor Kehoe and selected members of his staff, should be requested to present the problem of carcinogenicity to the General Committee, Division of Refining, American Petroleum Institute, as soon as practicable.

ACTION

The subcommittee's report was adopted.

Notes:

1. Copies of April 12 progress report were circularized to members and associates prior to meeting; therefore, copies are not attached to these minutes. Members and associates may obtain additional copies on request to D. V. Stroop.
2. Copies of Doctor Kehoe's memorandum were supplied to those present at the Atlantic City meeting. (Copy of memorandum is attached as Appendix A.) Extra copies may be obtained on request.
3. Copies of the report and the memorandum will be sent to members of the Safety Committee of the Board of Directors and the General Committee, Division of Refining.

V

REPORT OF SUBCOMMITTEE ON FIRST AID - DR. T. M. FRANK, CHAIRMAN

On behalf of the subcommittee, Doctor Frank submitted two recommendations as follows:

1. That the Institute should obtain permission from the American Medical Association and should make available for use in the petroleum industry copies of the first-aid illustrations in the Ivy report as published in the December issue of the Journal of the American Medical Association.
2. That the Medical Advisory Committee should study all methods of artificial respiration with a view to recommending one or more methods as alternate to the Schaefer method.

ACTION The report was accepted.

VI

REPORT OF SUBCOMMITTEE ON TOXICOLOGICAL REVIEWS -
DR. MARSHALL CLINTON, CHAIRMAN

On behalf of the subcommittee, Doctor Clinton reported four recommendations as follows:

1. That future issues of toxicological reviews, either new or revised, need not be printed by letter press method but may be produced by variotype-planograph or other suitable economical methods.
2. That the following nine reviews now acceptable to the General Committee, Division of Refining, should be published:

Acetic acid
Acetone
Beta-naphthol
Butyl acetate
Carbon monoxide

Cyclohexane
Hydrogen fluoride
Methylcyclohexane
Phosphoric acid

3. That the remaining 7 revised drafts and 6 tentative drafts of reviews should be accepted by the Medical Advisory Committee and, subject to editorial revisions, should be referred to the General Committee, Division of Refining and the Safety Committee of the Board of Directors with recommendation for publication.

4. That the subcommittee should be authorized to formulate plans for 5-year periodic revision of each Toxicological Review; such plans to be reported at the fourteenth meeting of the Medical Advisory Committee.

ACTION

1. The report was accepted.
2. The committee voted down a proposal to restrict the distribution of toxicological reviews to member companies of the American Petroleum Institute.

VII

REPORT OF CONSULTANT - PROFESSOR PHILIP DRINKER

The committee received a thought-provoking report including comment on the growing need and scarcity of adequately educated and trained industrial hygienists.

VIII

REPORT OF SUBCOMMITTEE ON FLUORIDES - DR. A. E. HOAG, CHAIRMAN

On behalf of the subcommittee, Doctor Hoag presented a brief report on the need for semi-annual technical progress reports on the desirability of the fluoride project being considered by the Committee on Disposal of Refinery Wastes, and on the need for information to be supplied by members of the committee. (Copy of subcommittee report is attached as Appendix B.)

ACTION

The report was accepted.

IX

REPORT OF SUBCOMMITTEE ON ECONOMIC POISONS -
DR. T. J. KELLY, CHAIRMAN

On behalf of the subcommittee, Doctor Kelly referred to communications received from Doctor Kehoe and E. A. Snyder, Chairman, API Committee on Agriculture, and to a brief dated November 30, 1950 as presented before the Food and Drug Administration in Docket No. FDC-57 concerning petroleum oil sprays in behalf of five oil companies. (Copy of subcommittee report is attached as Appendix C.)

Doctor Kelly reported that the information given in the brief solved the problem previously considered, but he recommended the continuation of the subcommittee in the expectation that future problems may arise.

ACTION

The report was accepted.

X

SUBCOMMITTEE ON CUTTING FLUIDS - DR. F. F. BOYS, CHAIRMAN

The committee received a brief progress report from Doctor Boys (Copy of letter dated April 4, 1951 from W. H. Oldacre is attached as Appendix D).

XI

SUBCOMMITTEE ON EYE HAZARDS - DR. KIEFFER DAVIS, CHAIRMAN

The committee received the chairman's progress report and voted to continue the subcommittee pending developments incidental to the work of the Institute's Lubrication Committee.

XII

SUBCOMMITTEE ON MEDICAL POLICIES & PRACTICES
DR. L. E. CURTIS, CHAIRMAN

Doctor Curtis stated that the catalogue of medical department forms had been brought up-to-date by the receipt of a number of new and revised forms which had been supplied by the members.

XIII

NEW BUSINESS

A. Physiological Effects of Atmospheric Pollutants.

On behalf of an informal group of members, Doctor V. C. Baird reported recommendations as follows:

1. We recommend that the Medical Advisory Committee should recognize the importance of certain atmospheric pollutants such as sulfuric acid mist, SO₂, SO₃, and HCl, in their potential effects on the respiratory pattern and on general physiology.
2. We further recommend that the chairman should appoint a Subcommittee on Atmospheric Pollutants to study ways and means of gathering information on this subject and to report its recommendations at the fourteenth meeting of the Medical Advisory Committee.

ACTION

The committee voted to accept these recommendations.

B. Aromatic Hydrocarbons - C₉, C₁₂.

Doctor Eckardt suggested a reconsideration of the decision to defer research work on aromatic hydrocarbons as made at the ninth meeting April 2, 1949.

ACTION The committee favored a circularization of the members to ascertain the extent of their interest with the understanding that in the event of a substantial showing of interest the chairman will appoint a special subcommittee to formulate recommendations for consideration at the fourteenth meeting.

C. Physiology of Skin.

Dr. Eckardt introduced and Dr. Kehoe discussed a Kettering project of fundamental research on the physiology of skin.

ACTION The committee voted to appoint a small subcommittee to study the matter and to report recommendations.

D. Fourteenth Meeting.

The committee voted to hold its fourteenth meeting in the Stevens Hotel, Chicago, Illinois on Friday and Saturday, November 2 and 3, 1951.

XIV

ADJOURNMENT

There being no further business to be acted upon the meeting was adjourned.

* * * * *

EXECUTIVE SESSION

NOTE: In the absence of business requiring executive action the executive session was not held.

* * * * *

Marshall Clinton, M.D.
Secretary

Approved:
B. B. Reeve, M.D.
Chairman

5/21/51

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APPENDIX A

To Minutes of 13th Meeting of Medical Advisory Committee

MEMORANDUM ON MEASURES FOR THE CONTROL OF THE HAZARD ASSOCIATED
WITH CARCINOGENIC MATERIALS AND PRODUCTS IN THE PETROLEUM INDUSTRY

In considering the general problem of the inauguration and implementation of precautionary measures in the light of the available information, sober judgment rather than alarm should prevail. This investigation was initiated by responsible representatives of the petroleum industry, and undertaken by the staff of the Kettering Laboratory, in the belief that this potential hazard was worthy of careful investigation, and that the facts, so far as possible, should be established in time to prevent any possible serious consequences to employees of the industry and to consumers of its products. No evidence has been adduced, thus far, of the existence of occupational cancer in association with the new materials and products now being subjected to study. Thus the situation in that regard is unchanged by the investigations of the Kettering Laboratory, although it cannot be said that information concerning employees of the petroleum industry has been sought widely or systematically, or obtained to such an extent as to justify any valid conclusion on this point.

On the other hand, the information obtained by animal experimentation, while not strictly applicable to man or to the conditions of his occupational exposure, is such as to strengthen the suspicion which was originally responsible for these investigations, that an occupational hazard exists. Ordinary prudence, therefore, would suggest that a program which will lead step-wise to appropriate and effective measures of control be evolved, and that preparation be made for its general application. It is apparent that the petroleum industry will proceed, not in disregard of the safety of its employees, but in frank recognition of any hazard that may exist and of the measures necessary to control such hazard, to develop and fulfill its economic and technologic role in our industrial society. This it should do, in the assurance that there are procedures in the armamentarium of industrial hygiene which can be applied effectively to the solution of this problem. It seems desirable at this time to visualize these procedures, and to point out their applicability in principle to the situation which seems to exist.

One is concerned, at this point, not with the avoidance of moral or economic liability or responsibility, if and when occupational disease should develop, but rather with the prevention

of such disease, so far as possible, and with the means for its early recognition and effective treatment, if it should occur because of unrecognized faults in the control procedures. What then is to be done? Certainly it is the height of futility, and a mere gesture of piety, to issue warnings and general instructions to employees of the industry, with the idea that absolution has been obtained thereby from responsibility for what may occur. Nothing has been demonstrated more clearly, by the application of modern methods of industrial hygiene, than the necessity of supplementing admittedly wholesome but impersonal educational procedures by careful hygienic and medical supervision applied unremittingly to every pertinent operation and to every individual employee who is involved in potential hazard. No advice or instructions to workmen subjected to an insidious hazard is worth the energy required to enunciate it, or the paper on which it is written, unless it is interpreted by intelligent demonstration at the site of the hazard, implemented by suitable and adequately maintained equipment, and reinforced by the medical supervision that will detect the early evidences of inadequacies in preventive measures, or departures therefrom. Incidentally, the facts concerning the incidence of this occupational disease, or conversely, the facts which will prove that the hazard and the disease potentially deriving therefrom are nonexistent, can only come from the type and quality of medical supervision envisioned above, provided on a broad base in the petroleum industry. Therefore, not only the control of this hazard, if it proves to be significant, but also the establishment of its significance, in terms of attack rates and other epidemiologic data now being sought, are dependent upon the quality and quantity of such hygienic and medical supervision in the petroleum industry. Without such facilities the epidemiologic phase of this investigation is doomed to dismal failure.

In accordance with these policies, which are the fundamentals of industrial hygiene, the industry should give careful consideration to the means by which it can prepare itself to meet the challenge of the serious occupational hazard, which seems likely to be found. In so doing it will find itself in a strategic position in relation not only to this problem but to others which will arise inevitably out of the future activities of a dynamic technologic industry. The answer to present and future problems of this type is more and better industrial medicine, and more and better technologic understanding and control of the hazards of the industrial environment. In this organized regimen, general sanitation, good housekeeping, the inculcation of appropriate procedures and habits of personal cleanliness and hygiene among employees, and the application of specific safeguards against specific occupational hazards will fit into their proper places simply and as a matter of routine. Without such an organized regimen, these procedures will be sporadic, fortuitous and ineffectual.

In our opinion, in relation to the potential hazards under consideration here, the industry should first examine carefully

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all of the technologic and operational possibilities (segregation and control of materials for specific uses, dilution of potentially dangerous materials, and like measures) for the limitation and prevention of the hazard. In view of the apparent significance of the remaining hazard, it should then consider how best and most expeditiously it can provide itself, generally, with the organized hygienic facilities required for the appraisal and control of this and other occupational hazards.

Signed: /s/ Robert A. Kehoe
Robert A. Kehoe, Director
The Kettering Laboratory
College of Medicine
University of Cincinnati

April 12, 1951

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APPENDIX B

To Minutes of 13th Meeting of Medical Advisory Committee

REPORT OF SUBCOMMITTEE ON FLUORIDES - DOCTOR A. E. HOAG, CHAIRMAN

I

Commenting on the Fluoride work at Kettering Laboratory, it was the consensus of the subcommittee that at least some brief report of technical progress be made prior to the holding of each API Medical Committee meeting. Such report need only summarize the technical findings and conclusions so that some idea may be had by the subcommittee of the progress of the work and permit intelligent decision to be made relative to continuation of the work. No action on appropriation of monies is necessary at this time.

II

The subcommittee expressed sympathy with the "Proposed Study of Fluoride Damage to Vegetation" and requested their feelings in this matter be transmitted to the API Committee on Disposal of Refinery Wastes. While API Medical Committee is not directly concerned, it is recognized that ingestion of Fluoride containing vegetation and water may lead to animal Fluorosis.

III

It is proposed to the API Medical Committee that company members thereof report to the chairman and members of the Fluoride Subcommittee on a voluntary basis, incidents of health and agriculture damage attributable to Fluorides and that such information be studied and tabulated by the Fluoride Subcommittee, and where expedient, be released to the members of the API Medical Committee generally.

AMERICAN PETROLEUM INSTITUTE

50 WEST 50TH STREET

NEW YORK 20, N. Y.

May 11, 1951

Memorandum to: Mr. D. V. Stroop

Dr. Thomas J. Kelly of the API Medical Advisory Committee, directed a letter dated March 9, 1951 to Mr. E. A. Snyder, Chairman of the Committee on Agriculture, calling the latter's attention to the following motion which was made November 10, 1950 during the session held by the medical group:

"That a recommendation be made to the appropriate committee of the API to determine which petroleum products, and in what amounts, may exist as spray residue in food products."

In the thought that the Medical Advisory Committee may not have been familiar with previous excellent work along this line, Mr. Snyder replied to Dr. Kelly under date of March 16, 1951, citing facts presented by five cooperating companies before the Food and Drug Administration during the latter part of 1950. A copy of that complete report is attached.*

We have recently learned that Dr. A. E. Griffiths of Socony-Vacuum; Charles Daniels, Entomologist with the Shell Chemical Corporation; and Leo Gardner, Vice President of California Spray-Chemical Corporation made up a Technical Advisory Committee to assist in the preparation of facts which were included in the report presented to the Food and Drug Administration.

The actual presentation before the Administrator was made by Dr. Willard Machle, who is associate clinical professor of preventive medicine at the New York College of Medicine. Dr. Machle had as his counsel, Mr. John D. Conner, Washington, D. C. attorney. The five companies cooperating in presentation of this report did so as the result of an invitation to all interested oil companies issued by the National Agricultural Chemical Association. Dr. Machle and John Conner also represented the chemical group in similar presentations to the Food and Drug Administration.

(Dr. Griffiths served as Chairman of the Technical Advisory Committee. He is located at the company's research laboratories in Brooklyn and during a recent telephone conversation, told us that he had no knowledge of any recent interest on the part of the Medical Advisory Committee concerning this subject, and added that he would be very happy to cooperate in presentation of any available facts.)

* Copies are not available for members and associates of Medical Advisory Committee.

Companies responding to the invitation of the NACA are:

California Spray-Chemical Corporation
The Shell Chemical Corporation
Socony-Vacuum Oil Company
The Standard Oil Company of (Indiana)
The Standard Oil Company of (Ohio)

A brief summary of evidence presented follows:

Statement of Issue

- I. The decision of whether petroleum oil is a poisonous or deleterious substance is not an absolute determination which can be made in a void, but one which must be made on the basis of its use as a pesticide.
- II. Petroleum oil pesticides are required in the production of fruits and vegetables.
 - A. Petroleum oil sprays are used both alone and in conjunction with other insecticides and fungicides.
 - B. Petroleum spray oils are highly refined fractions from which there has been removed substantially all the reactive olefinic and aromatic hydrocarbons.
 - C. Petroleum oil sprays are suitable and are extensively used for controlling the wide range of pests which must be controlled in the commercial production of fruits and vegetables.

Material presented on Pages 72-80 seems to best summarize evidence presented in the language of the layman.

Quoting directly --

"Due to the fact that petroleum oil sprays have been used for the control of pests since about 1875, and because these materials have been generally considered to present no residue hazard, very little data is available on the precise quantity remaining on the mature fruit or vegetable. The evidence which was presented establishes clearly, however, that the residues at time of harvest do not exceed trace amounts in most instances. In a majority of the cases no residue remains at harvest"

Pg. 76 -- Para. 2 --

"Against this background, we turn to the question of whether either the normal use or the possible misuse of petroleum sprays presents any hazard to the public health

"In considering the possibility of injury from acute toxicity we must consider not only the normal use, but also the possible occasional misuse. As has been noted above, the normal use of petroleum sprays results in no residue at harvest in the majority of cases and in only 'trace quantities' in the other cases. Therefore there is no possibility of injury to the consumer from acute toxicity in the normal use of petroleum sprays."

Pg. 77 -- Para. 2 --

"There is, of course, the possibility that occasionally petroleum sprays will be misused with a resultant higher residue, although there is no evidence in the record of any such instances."

Pg. 78 -- Para. 1 --

"This leaves as the only possible type of injury to the consumer from the use of petroleum sprays, that arising from chronic ingestion. In evaluating the possibility of chronic toxicity, from continuous ingestion over a period of time, we believe we need to consider only the trace residues which will result from normal use of petroleum sprays. While there is a possibility that occasionally a producer might apply the spray at a heavier than normal rate, or closer to harvest than is usual, we do not believe that there is possibility that this will be done frequently enough to be of any significance."

Pg. 78 -- Para. 2 --

"We believe that the evidence conclusively establishes that the smallest quantity of petroleum oil which could produce a deleterious physiological effect if it were continuously ingested daily over long periods of time is so much larger than this daily intake of assumed trace residues that there is automatically a safety factor far in excess of that required by either the normal use or any conceivable misuse of these sprays."

Information which we have been able to gather indicates that individual companies within the industry are following this subject closely and there appears to be no necessity for any study or research project being undertaken by any committee of the American Petroleum Institute.

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Perhaps this exchange of information and the citing of names of individuals who have taken a leading part in this research work, will be helpful to the Medical Advisory Committee.

For your information.

Lowell A. Kern, Executive Secretary
Committee on Agriculture

LAK:ht
Enc.

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APPENDIX D

D. A. STUART OIL CO., LTD.
2727 South Troy Street
Chicago 23, Illinois

April 4, 1951

B. B. Reeve, M.D.
Medical Director
STANDARD OIL COMPANY (Ind.)
910 South Michigan Avenue
Chicago, Illinois

Dear Mr. Reeve:

Your letter of April 2nd has been transmitted to me en route. I do not have complete files with me, so trust that the following information will be helpful to you.

The sub-panel on Detergent Oil Hygiene has a definite program of laboratory investigation under way and a complete report will be available as soon as it has been approved by the panel. This program involves the actual biological testing of the most widely used detergent additives.

The Cutting Fluid Hygiene Panel is meeting in Detroit on April 10th and I hope that they are able to formulate a constructive program. To date the difficulty seems to be that there is so little actual trouble encountered in industry and interest on the part of consumers and suppliers of cutting fluids is not easily aroused.

I expect to return to Chicago upon the 12th and will get in touch with you by phone shortly after my arrival.

Dr. Kieffer Davis has written to Mr. K. G. Mackenzie and I have received a copy of Mackenzie's reply to him, so that he is in possession of the information regarding the Hygiene Panel substantially as I have written it to you.

Sincerely yours,

/s/ William H. Oldacre

W. H. Oldacre

WHO:b

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