

FILE NAME: Oil Industry and American Petroleum Institute (API)

DATE: 1945-1950

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DOCUMENT DESCRIPTION: API History of the Subcommittee on Carcinogenicity

API
HISTORY
OF THE
SUBCOMMITTEE
ON
CARCINOGENICITY

1945-1950

API 04606

*MAC
See
12/1/45
Pub*

For Information Only - Not for Publication

A contribution of information to Members of API Medical Advisory Committee.

6-13-45.

THE CARCINOGENICITY
OF
BITUMINOUS COMPOUNDS

*Many
up to
of Ca
in
paraffin
workers
(1945
review)*

Literature Review

April 30, 1945

Library of the
Technical & Research Division
The Texas Company
New York City

API 04616

exams., gas-works tar and pitch were responsible for 70.2% of the cases while coke-oven tar and pitch were held responsible for only 5.4%. Coke-oven tar is much the less injurious especially when cognizance is taken of the fact that coke-oven tar is used much more extensively. The presence of olefins in gas-works tar seems to be of particular importance and may be a cause of oil cancer. Occupational cancer does not occur in the briquet mfg. industry. Mineral oils vary in carcinogenic activity according to their olefin or unsatd. hydrocarbon content. There is no method for the detn. of the amt. of olefins in the various crude oils; if such a method existed, it would be possible to measure the cancer-producing power of mineral oils. Cancer is not attributable to the occupation of mule spinner in the U.S., possibly because of the carefully refined lubricating oils used on the machines, thus ensuring relative freedom from olefins or unsatd. hydrocarbons.

43. Henry, S. A. Study of Fatal Cases of Cancer of the Scrotum. J. Am. Med. Assn., 109, 1667 (1937)
44. Hieger, I., Spectra of Cancer-producing Tars and Oils and of Related Substances. Biochem. J., 24, 505-11 (1930)
45. Hoffman, F. L. Mule Spinners Cancer. Monthly Labor Rev. of U.S., 27, 457-475 (1928)
46. Hoffman, W. J. Industrial Cancer. Prevent. Med., 6, 7-34 (1936)
One of the seven types of industrial cancer discussed is cancer of skin in workers exposed to coal, tar, pitch, soot, shale, petroleum and arsenic. They may cause an epitheliomatous form of cancer.
47. Hogduneng, L. The Cancerigenic Hydrocarbons from Tar and the Tarring of Roads. Ann. Hyg. Publ. Sociale, 27, 1-7 (1939)
The cancerigenic hydrocarbons found in coal tar produce skin cancer in exposed workers usually only after direct contact with the skin for long periods of time. It is believed that man is much more resistant to the action of these materials than lab. animals.
48. Hueper, W. C. Cancer in Relation to Occupation and Environment. Bull. Am. Soc. Control Cancer, 25, No. 6 (June, 1943)
Owing to industrial development, the general population and factory workers in particular, are exposed to many new environmental factors, many of which are disease producing. Occupational cancers are caused by numerous chemical and physical agents. Among them are the heavy metals, nitrates, aromatic amino compounds, benzol, asbestos, mineral oil, soot, radio-active substances, ultraviolet radiation and X-rays. The author cites statistics taken mainly from the records of industrial concerns, but points out their shortcomings.
- Cancer of the urinary tract due to coal-tar is the most recent addition to the list of occupational cancers. It is most frequent in the aniline dye and related industries.
49. Home Office, Rept. of Departmental Comm. to Consider Evidence as to Occurrence of Epitheliomatous Ulceration Among Mule-Spinners. (London, 1926)
Contains a bibliography on cancer among petroleum refiners.

FOR INFORMATION ONLY - NOT FOR PUBLICATION

A CONTRIBUTION OF INFORMATION TO MEMBERS OF THE
A.P.I. MEDICAL ADVISORY COMMITTEE

SHELL OIL COMPANY, INCORPORATED

WOOD RIVER RESEARCH LABORATORIES

REPORT NO. M-1247

JULY 2, 1945

SUBJECT: CARCINOGENIC HYDROCARBONS AND RELATED COMPOUNDS
 A LITERATURE REVIEW

AUTHOR: E. H. ZUIDEMA

API 04653

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Field studies in the petroleum industry show that several thousand employees have daily or frequent contact with this material or blends of this material; while it is estimated that tens of thousands of customers are potentially exposed to blends of this material.

The above evidence indicates that the petroleum industry is faced with a serious potential cancer problem. There are many unanswered questions concerning the nature of this hazard and how it might be prevented or controlled. These questions can only be answered by carrying out a program of medical research along the lines which the Medical Advisory Committee is recommending.

In case more detailed information is desired, it can be arranged for a member of the Medical Advisory Committee to discuss this question with members of the Safety Committee or Executive Committee of the Board of Directors.

*oil ind.
has a
"serious
potential
cancer
problem"
⇒ research
(1948)*

SELECTED REFERENCES

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Occupational neoplastic disease. The American Journal of Cancer,
Vol. XV, April 1931, p. 641.
- Heller, Imre
Occupational cancers. The Journal of Industrial Hygiene, May 1930,
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Occupational cutaneous cancer attributable to certain chemicals
in industry. British Medical Bulletin, Vol. 4, No. 5-6, 1947,
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Occupational tumors and allied diseases. Charles C. Thomas,
Publisher. 1942. p. 896.
- Phillips, Charles
The relationship between skin cancer and occupation in Texas:
a review of 1569 verified lesions occurring in 1190 patients.
Texas State Journal of Medicine. January, 1941, p. 613.
- Schwartz, L., Tulipan, Louis, and Peck, S.M.
Occupational diseases of the skin. Chapter XVI - Dermatoses
caused by petroleum. p. 232. Lea & Febiger, Philadelphia 1947.
- U.S. Public Health Service
Disabling morbidity, and mortality from cancer among the male
employees of an oil refining company with reference to age,
site, and duration, 1933-38, inclusive, by William M. Gafafer.
Public Health Reports, August 23, 1940, p. 1517.

WCH
1942

at the next session; and the moderator of each panel will present a summary at the general meeting at the close of the conference. The proceedings of the meeting will be published in the Society's magazine and other journals.

Dr. Hoag was glad that the petroleum industry is being represented so that inaccurate statements may be corrected. He cited as an example the tendency of uninformed persons to say that refined paraffin wax produced cancer. He felt that the various companies should try to get the facts to the employees and said that he is preparing an article for Socony's employee magazine titled "Some Things You Should Know About Cancer", and including some discussion of skin cancer.

Mr. Cole was of the opinion that all these recent developments were forcing the petroleum industry to take action. He suggested that all API companies should institute the indicated control steps soon.

Dr. Kelly reported that a bulletin "Environmental Cancer" has been published by the National Cancer Institute and is available from the Superintendent of Documents Washington, D.C. at a price of twenty cents.

Dr. Frank reported that local management was supporting his medical program and that more information (possibly including pictures) from the API would be helpful in informing management more thoroughly of the problem.

Dr. Swan stressed the importance of any publicity or information being accurate and complete.

Dr. Lewis said that in the matter of giving out information it was essential to be factual and to create the opportunity for its release.

Mr. Stroop believed that the publicity problem was not so disturbing; that the API had a good defense against possible misstatements because of the investigations now in progress by the API and the individual companies.

Dr. MacKenzie said that with the Cancer Society now in the picture, added weight would be given to the problem. He cited reports on incidence of skin cancer among various groups and recommended that in all information releases, the complete story be given to show that there are other things than certain petroleum products which may cause skin cancer.

Dr. Newquist recommended that the statement now on file with the API be reviewed and brought up to date if necessary.

Dr. Holt pointed out that in his opinion, and it was the view of the Jersey Company, that the employees should be told that a potential hazard exists relative to the handling of high boiling oils, and that reasonable precautionary measures should be instituted to prevent skin contact and ingestion of these materials. These views and suggestions are based on the biological and experimental results which have shown that these materials cause the development of cancer when applied repeatedly to the skin of mice and other animals.

Dr. Hoag said that Socony has started an educational program by first informing local plant doctors who, in turn, are gradually telling foremen groups and the employees about cancer, including skin cancer. He said that the men have been

Socony
employee
mag.

"Some Things
You Should
Know About
Cancer"

in prep
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U.C.H.
"Env. H. Ca
publicity unit"

Holt (SHAW)
Hoag (Sany)
discuss
telling
workers
abt. skin
cancer &
prevention

told to go to the medical department when they notice warts or other skin lesions.

Dr. Newquist was of the opinion that it would be inadvisable to single out the term skin cancer and that it would be better to tie it in with other conditions. Any examination directed toward skin cancer should be tied in with the periodic examinations.

Mr. Fischer pointed out that with precautionary measures in effect, such as tagging lines and tanks, provision of showers, emphasis on personal hygiene, the men will ask why. If they are told merely that the materials are irritants, they may become careless and not follow the precautions.

Mr. Fischer, in response to a request for information, said that, while not all fractions boiling above 700° F. were carcinogenic, they should be considered as suspicious until proven otherwise. Waxes were in a class by themselves. The normally crystalline carcinogens in crudes (e.g. Lima crude) may be concentrated during certain steps in wax processing. The 700° F. cut-point applied only to hydrocarbons; other carcinogenic compounds that boil below 700° F. may be present, such as aromatic amines perhaps in shale oils, certain sulfur and oxygenated compounds.

Dr. Holt, in discussing the effect of dilution, said tests show that 65-69% mixtures of decanted oil in non-carcinogenic oil have essentially the same potency as undiluted decanted oil, 50% mixtures about 3/4 the original potency, 29% mixtures 1/3 to 1/4 of the original potency. No data are available as yet on the potencies of blends containing less than 25% decanted oils.

Mr. Fischer, in reply to an inquiry about crank-case drainings, said that he had no information as to their carcinogenicity but would suspect them because of the severe conditions that crank-case oils may undergo.

Dr. Frank said he had seen a statement that pipeline paint may be carcinogenic.

It was decided to hold another meeting of the Subcommittee after the Memphis meeting and before the Detroit meeting, the time and place to be determined by the Chairman.

A.E. Dooley
Secretary

McIver Woody
Chairman

not
enough
to tell
workers
carcinogens
are just
"irritants"

REFERENCES

WCH
1942

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July 12, 1949

Dr. Philip Drinker
Harvard University
School of Public Health
55 Shattuck Street
Boston 15, Mass.

Dear Doctor Drinker:

This is in reply to your letter of June 30 and results from my letter of July 6 to Doctor Hoag, a copy of which was sent to you.

Doctor Hoag suggests that I return the invoice to you with request that it be paid from your current funds with the understanding that the Subcommittee on Permissible Concentrations should request a corresponding increase in the next grant to be recommended for Harvard as outlined in the second alternative stated in my letter of July 6.

The invoice is returned herewith.

We trust that this procedure will be acceptable to you.

Very truly yours,

DVB:d

cc: Doctors V. C. Baird
J. P. Molt
A. E. Hoag
B. B. Reeve

Enclosure

*Drinker
work on
permissible
concentrations
1949*

API 04872

HARVARD UNIVERSITY
SCHOOL OF PUBLIC HEALTH

DEPARTMENT OF INDUSTRIAL HYGIENE

55 Shattuck Street
Boston 15, Massachusetts

June 10, 1943

Mr. D. W. Stroop
American Petroleum Institute
50 West 50th Street
New York City

Dear Mr. Stroop:

Herewith bill for \$137.51 for killing the article on
Dyeing bills as per vote of API Medical Committee at Detroit
last April. You will remember that the paper actually was in
galley proof, having been approved by the committee, then ap-
proval was withdrawn and we were stuck with the cost of print-
ing the galleys. I do not think it would be fair to charge
this against our own special budget.

Please advise.

Yours sincerely,

Philip Drinker
Philip Drinker

PD:sl

enc.

*Drinker
bill for
"killing"
article
on cutting
oil dermatology*

API 04875



President and Fellows of Harvard College

desire to express their gratitude to

American Petroleum Institute

for the generous gift of

three thousand dollars on account of a
renewed grant to continue investigation
of permissible concentrations of toxic
substances, under the direction of Pro-
fessor Philip Drinker.


Recording Secretary

March 6, 1950

Drinker
director
of perm.
conc.
project
1950



API
gives
Harvard
10 K for
Drinker
perm.
concn.
project
1949

President and Fellows of Harvard College

desire to express their gratitude to

American Petroleum Institute

for the generous gift of

ten thousand dollars in continued support of investigation of permissible concentrations of toxic substances under the direction of Dr. Philip Drinker, as stated in their letter dated March 14, 1949 to Mr. Claflin.

W. Herbert Carter

Recording Secretary

March 17, 1949

SAFETY COMMITTEE OF BOARD OF DIRECTORS

REPORT OF CHAIRMAN - JOHN R. SUMAN

Concurrently with important developments in refining methods, processes, and products, the industry's toxicological problems are growing in number and complexity. Oil companies are making substantial increases in their medical staffs and facilities.

These developments led to the creation of the Institute's Medical Advisory Committee in 1945. Since then the committee has served constructively by making useful information available to oil companies for their protection of employees and customers against accidental injury and for the defense of industry against unreasonable and unnecessary laws and regulations, as well as unjustified and false claims for damages.

*MAC
has helped
defend oil
industry
from lawsuits,
claims*

The organization of this committee and its semiannual meetings have facilitated an informal exchange of medical information of intangible but substantial value in the prevention and treatment of industrial injuries and occupational disease.

The committee also has been instrumental in organizing special studies and investigations on important toxicological problems with cooperative grants-in-aid at the University of Cincinnati and Harvard University.

The initiation of this work promptly after the end of the war has placed the industry in a favorable position at a time when numerous proposals are being made to give government new and far-reaching controls in the field of industrial medicine and hygiene.

The individual members of the committee, through their several professional channels and associations, acquire valuable information regarding these trends in regulatory legislation. The pooling of the information thus obtained clearly indicates trends which are disquieting.

Highlighted by the California smog problems and supplemented by the reports on the Donora situation, there is an active drive to impose an American Standard Code on Industrial Hygiene. This proposal is put forward by the American Conference of Governmental Industrial Hygienists, which has drafted a code that is far from realistic and shows little sympathy for the practical needs of industry. If adopted generally, such an arbitrary code would impose unreasonable and unnecessary restrictions upon industry, and might readily become the basis for state laws and regulations.

*Concern
over an
American
Std. Code
for IH
(TLVs?)*

Another indication of the growing interest of government is a letter recently received from the Chief, Division of Industrial Hygiene, Public Health Service. He suggested a meeting with the Medical Advisory Committee to discuss potential health hazards and possible control procedures in the petroleum industry. The committee has invited him to attend its regular mid-year meeting in April and has held some preliminary discussions with his representatives at a recent subcommittee meeting held at Kettering Laboratory in Cincinnati.

Because of enforcement difficulties it may be safe to assume that statutory and regulatory control of industrial hygiene will be unreasonably restrictive and unnecessarily so for responsible and progressive companies which voluntarily are adopting policies to insure hygienic working conditions.

It is encouraging to note the number of companies which are adopting such progressive policies because it suggests the possibility of avoiding some or most statutory and regulatory controls.

AMERICAN PETROLEUM INSTITUTE

SUBCOMMITTEE ON CARCINOGENICITY

Minutes of Meeting
April 23, 1950
Hotel Sherman
Chicago, Illinois

Members Present

McIver Woody (Chairman)
Marshall Clinton
T. M. Frank
A. E. Hoag
J. P. Holt (Rep. by R. E. Eckardt)
T. J. Kelly
J. W. Long
M. N. Newquist
Chas. A. Swan

Associates Present

L. O. Crockett
Allan E. Dooley
R. W. Faulk
R. M. Landon
H. P. Lankelma
K. G. Mackenzie (Rep.
by H. R. Warrick)
R. M. Shepardson

Members and Associates of Medical Advisory Committee

W. O. Armstrong	E. W. Adams
V. C. Baird	R. D. Bent
F. F. Boys	R. C. Cole
Kieffer Davis	T. E. DeVilliers
E. K. Linder	L. M. Henderson
E. P. Luongo	C. A. Neilson
B. B. Reeve	F. M. Watkins
E. R. Ware	

Guests

N. W. Bolyard - Standard Oil Co. (Ind)
Philip Drinker - Harvard School of Public Health
J. W. Hammond - Humble Oil and Refining Co.
Howard Hansen - Esso Standard Oil Co.
A. W. Horton - University of Cincinnati
W. C. Hueper - National Cancer Institute, Bethesda. Md.
R. A. Kehoe - University of Cincinnati
R. C. Page - Standard Oil Co. (N. J.)
J. J. Phair - University of Cincinnati
H. G. S. van Raalte - Shell Oil Co., Curacao, N. Ant.
W. E. Smith - New York University
D. V. Stroop - American Petroleum Institute
P. M. Waddill - Phillips Petroleum Co.

Total in attendance - 44

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WCH
invited
to
attend
Subc.
mtg