PLAINTIFF'S EXHIBIT

MET-741

Dr. ARMSTRONG

THIRD VICE-PRESIDENT

This is the final report of the Industrial Hygiene Section for 1936, including figures for December.

IT-4
9-41

ANNUAL REPORT

of the

INDUSTRIAL HEALTH SECTION

1936

W. J. McConnell, M.D.
Assistant Medical Director

- - -

PERSONNEL OF STAFF

Dr. W. J. McConnell, Assistant Medical Director, Director, Industrial Health Section
Miss Eleanor Rantoul, Research Assistant
Miss Anne Reilly, Secretary to Dr. McConnell
Miss Anne Conway, Stenographer

Mr. J. Wm. Fehnel, Chemist-in-Charge of Industrial Hygiene Laboratory
Mr. Peter Petrick, Technician
Mr. John J. Ferry, Assistant Chemist
Mr. Austin Long, Assistant Chemist
Mr. John Milesnick, Porter in the laboratory

MAJOR SURVEY

The survey of the asbestos plants and mines started in 1934 has been concluded during 1936. This included a recheck survey of some of the plants to determine what improvements, if any, have been effected by the installation of certain equipment designed to control the dust, as well as a number of new plants, particularly on the Pacific Coast. Plants studied in 1936 were:

Johns-Manville
Redwood City, Cal.
Pittsburg, Cal.
Los Angeles, Cal.
Lompoc, Cal.

General Asbestos & Rubber Division of Raybestos-Manhattan, Inc.
North Charleston, S.C.

X-rays of the chests of exposed workers were sent in to the Home Office for diagnosis. In 1936 - 2570 X-rays were interpreted. Over, 3,200 X-rays of asbestos workers have been read in connection with the second asbestos study.

X-RAY INTERPRETATIONS

In addition to the 2570 X-rays of asbestos workers interpreted during 1936 the American Car and Foundry Company has been continuing to send in for diagnosis X-rays of their foundry employees. During 1936, X-rays of 177 of their workers were interpreted. We have also been asked to diagnose X-rays from other Group policyholders sent to us by the Group Claim Section in connection with claims.

SPECIAL RESEARCH

A study was made to determine a method of entrapping mercury and a chemical method of estimation of mercury in the air of a storage battery plant. This was necessary due to the fact that all available methods dealt with the determination of mercury in either the metallic state or in the forms of a

chloride or nitrate but not in the state of the oxide. Therefore, in order to determine the presence and concentration of mercuric oxide in the atmosphere of the plant in question a method giving concordant results was developed.

The presence of the oxides of nitrogen and their concentration in the fumes given off in acetylene welding were studied and a chemical method adopted which gave a true index.

Settled dusts of typical industries were studied and measured to determine the percentages of the various sizes present that might be considered pathogenic.

Various new atmospheric dust sampling devices were tried out under controlled conditions to determine their efficiency and comparison with the accepted standard method.

Methods for the determination of mixtures of acid fumes and solvent vapors are in process of study and development.

SPECIAL SERVICES

A great variety of requests for information or assistance on industrial hygiene subjects are received in this division. These are divided as follows:

Reports (Those requests requiring time and research to answer)		Special Inquiries (Those requests for which information was supplied but not considered as reports)	
Group policyholders	64	Group policyholders	97
Non-policyholders and prospects	58	Non-policyholders and prospects	180
Met. Life Ins. Co. and H.O.	13	Met. Life Ins. Co. and H.O.	55
	135		332

LABORATORY SURVEYS

Included in the above number of special services are 42 surveys made by the Industrial Hygiene Laboratory. In analyzing the samples of atmospheric dusts, fumes and gases collected in the plants studied, 819 analyses were made in the laboratory. The classes of materials analyzed were:

silica and silicates
metals (lead, zinc, copper, tin, mercury, etc.)
fumes (lead, zinc, mercury, solvents such as amyl acetate, methyl alcohol, dichlorbenzine, tricresylphosphate, etc.)
gases (carbon monoxide, sulphur dioxide, nitrous fumes, etc.)

The companies studied by the laboratory represent a wide variety of industrial processes. Included are:

floor coverings, pipe insulation and fire brick manufacture
grey and malleable castings foundry
asbestos fabricating plants
public utilities
heat resistant glass manufacture
gas and combination range manufacture
stainless steel and regular steel products such as open hearth, etc.
glass manufacturing
automobile radiators and car heaters
paint manufacture
railroad car specialties
Alloy steel manufacture
alkaline type storage battery manufacture
china ware - hotel supply
printing ink manufacture
decalcomania
bookkeeping book manufacture
asbestos pipe insulation and magnesia blocks
mining and milling diatomaceous earth
gold mine
oil well equipment

These 42 surveys represent 8 more than were made by the Industrial Hygiene Department of Connecticut during 1936.

FIELD VISITS

During the year there were 85 field visits, exclusive of visits for laboratory survey. Included in this figure are 75 interviews in the Home Office.

ADDRESSES AND MEETINGS

Dr. McConnell and other members of the division attended 17 meetings of medical and safety organizations and made addresses at 7 of these meetings. Forty-eight newspapers and other publications gave press notices to these addresses in 505 column inches.

EXHIBITS

The Industrial Hygiene Laboratory held an exhibit at the American Medical Association meeting in Kansas City, Mo. In addition to a display of dust sampling equipment, 24 X-rays of chests of cases of first and second stages of silicosis and asbestosis, fungus infection, pneumoconiosis caused by exposure to amorphous silica were displayed.

An exhibit was also held of these X-rays at the Graduate Fortnight of the New York Academy of Medicine.

Dr. Philip Pierson, Clinical Professor of Medicine at Stanford University School of Medicine exhibited this collection of X-rays at an exhibit held in California.

PUBLICATIONS

Three booklets of the Industrial Health Section were completely revised and printed during the year. These are:

Physical Examinations in Industry
Industrial Dental Service
Protection of Workers in Welding Processes

LITERATURE

During the year 1936, 11,557 copies of publications were sent to Group policyholders and non-policyholders. Of these 9,409 were sent by Welfare Division order but the letter was sent from this section.

LETTERS

Incoming letters numbered 1,798; outgoing, 1,511.

HOME OFFICE CONDITIONS

In addition to field surveys of the Industrial Hygiene Laboratory, the Industrial Health Section has been of assistance to a number of divisions in the Home Office Buildings in studying their lighting and ventilating problems. In

connection with the use of carbon tetrachloride in certain divisions in the Home Office to clean type a study was made of the concentration of fumes escaping and recommendations were made of safe methods of handling this solvent. We have also assisted the Physician in Charge of our Sanatorium in analyzing for toxicity the paint used in some of the rooms at the Sanatorium.

GROUP ACTUARIAL HEALTH CLAIMS

We are continuing to assist the Group Actuarial Division in analyzing the experience of Groups whose claim experience has been unfavorable in order to ascertain the cause. In a number of instances, where the claims would indicate a potential health hazard, we have found it necessary to visit these plants and make an inspection or survey. Reports of findings and recommendations of ways of controlling these hazards were submitted to the Actuarial Division in order to assist them in arriving at a decision regarding rates.

- - - - -

In connection with the practice of having Group policyholders defray incidental expenses of surveys, these have amounted in 1936 to $3,406.20. $509.53 of this amount has been incurred but not yet billed. This is a credit against our travel account.

J. V. MacConnell
Assistant Medical Director