

ANNUAL REPORT FOR 1942
of
THE INDUSTRIAL HEALTH SECTION

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PLANT SURVEYS

During the year 1942, nearly twice as many surveys were conducted as in 1941. The number of different industrial plants studied in 1942 was 58, as compared to 30 in 1941. As in 1941, firms engaged in manufacturing heavy metals comprise the major part of the studies, with ore mines second. The industries studied may be classified as follows:

Metals	62.1%
Ore mines	15.5
Coal mines	8.6
Asbestos plants	8.6
Chemicals	1.8
Quarries	1.7
Wood	1.7
	<u>100.0%</u>

The samples collected in the plants necessitated making 1,536 separate analyses in the laboratory. Analyses have also been made, as in the past, of materials shipped to the laboratory from plants of our Group policyholders. These tests were mostly for free and total silica. A number of materials used in our Home Office buildings has also been analyzed.

In addition to the above surveys, the plants or offices of three policyholders were visited and advice given regarding hazards or medical service.

Requests for plant surveys and information were received from Group policyholders and others in all lines of industry. To give an idea of the variety

of firms which request this service, the following are some of the more important firms which we have served:

Armstrong Cork Company	Ruberoid Co.
Consolidated Gas Electric Light & Power Co.	Continental Baking Co.
Pennsylvania Greyhound Lines	Higgins Corp.
American Viscose Corp.	Atlas Powder Co.
Idaho Maryland Gold Mines Corp.	N.Y. Telephone Co.
American Rolling Mill Co.	International Business
Standard Oil Co.	Machine Corp.
Union Carbide Co.	Braden Copper Co.
American Seating Co.	Florida Power & Light Co.
Humble Oil & Refining Co.	Lewisburg Chair and
Tennessee, Coal, Iron & R.R. Co.	Furniture Co.
Blackwall Zinc Co.	Norton Company
Republic Steel Corp.	U.S. Leather Co.
Kohler Co.	Virginia Electric & Power
Marshall Field & Co.	Caterpillar Tractor Co.
Vickers, Inc.	Johns-Manville Corp.
National Enameling & Stamping Co.	Baker & Taylor Co.
Montgomery Ward Co.	Bell Telephone Laboratory
Bethlehem Steel Co.	A.P. Green Fire Brick Co.
Pendleton Ship Yards	N.Y. Employing Printers
Norfolk & Western Railroad	Assoc. Inc.
General American Transportation Co.	General Electric Co.
Kimball Piano Co.	Monarch Machine Tool Co.
General Motors Corp.	Asbestos Textile Corp.

RESEARCH STUDIES

Due to the increased number of requests for plant surveys resulting from the speed up in production, due to industry's victory effort, more routine work has been loaded upon the laboratory. This additional work has left little time for research problems. The laboratory staff did design and construct a new type of centrifugal pump which could operate on A.C. or D.C. current of 110-220 volts.

TRAVEL CREDIT

The amount of money expended for travel in the Industrial Health Section during 1942 amounted to \$4507.57. However, of this amount \$4047.63 was paid to us by the Group policyholders for expenses incurred by our men in the field while conducting plant surveys. Therefore, our total expenditure for travel for the year amounted to \$459.94.

SPECIAL INQUIRIES

Nine hundred thirty-seven (937) special inquiries were received during the year for information covering a wide range of subjects. This is an increase of 39% over 1941. //

X-RAY INTERPRETATIONS

Before Dr. McConnell left for the Service, he had read and interpreted 158 X-rays received from our Group policyholders.

MEETINGS AND ADDRESSES

Dr. McConnell and other members of the staff attended 38 meetings during the year 1942. The following addresses were made:

Dr. McConnell made an address over Radio Station WABC on "Heat Stroke and Other Effects of Health".

Dr. McConnell gave a series of lectures to Naval medical officers at a training course in industrial medicine and surgery at the College of Physicians and Surgeons, Columbia University. He also addressed the Industrial Hygiene class at Columbia University and demonstrated our apparatus for collecting and sampling air.

Dr. McConnell continued during the spring semester a class in industrial hygiene at New York University. He had to secure a substitute for the fall semester due to his induction into the Army. Mr. Fehnel gave a lecture to this class on "The Conservation of Man Power".

Mr. Fehnel gave a paper entitled "Health Hazards in Steel Mills" at the joint annual meeting of the American Association of Industrial Physicians and Surgeons and the American Industrial Hygiene Association.

Miss Rantoul attended a meeting in Washington of the Committee on Standards for Maternity Care and Employment of Mothers in Industry.

LITERATURE

During 1942, 76,405 publications were sent on request, an increase of 31% over 1941. //

CORRESPONDENCE

The incoming letters to the section during the year amounted to 2,242, and the outgoing numbered 1,368.

COMMITTEES

Members of the section have continued to serve on a number of committees which have been active during the year and attended a number of meetings. The following are new committees and others to which members have been reappointed during 1942.

New committees

A committee has been formed among Home Office building men entitled War Emergency Committee, to devise ways and means of equipping the Metropolitan Home Office buildings with protective devices in case of air raids. Dr. McConnell and Mr. Ferry are members of this committee and attended a number of meetings and rendered advice and assistance.

Dr. McConnell has been appointed a member of an advisory committee to prepare proposed industrial code rules relating to the revision of the Code on the Removal of Dusts, Gases, and Fumes at the New York State Department of Labor.

Dr. McConnell has been appointed a member of the advisory committee with Dr. Wittmer and Dr. Watson on intensive post-graduate instruction in industrial health by industrial physicians and the Faculty of the Long Island College of Medicine.

Reappointments

Dr. McConnell has been asked to serve on the Technical Advisory Committee on Sensations of Comfort of the American Society of Heating and Ventilating Engineers.

Dr. McConnell has been asked to serve again on the National Association of Manufacturers' Industrial Relations Committee.

He was also reappointed to the following committees:

American Society of Refrigerating Engineers Committee on Biological Research
Technical Advisory Committee on Air Conditioning in Industry of the American Society of Heating and Ventilating Engineers

Committee on Ventilation and Atmospheric Pollution of the
American Public Health Association
Committee on Standard Methods for the Examination of Air of
American Public Health Association

HOME OFFICE SERVICES

As in the past, our assistance has been requested on frequent occasions by the different departments charged with the maintenance of the Home Office buildings. These requests covered advice regarding illumination, ventilation, health hazards of different operations and materials used, etc. In addition, our office has been represented on the War Emergency Committee, a committee charged with the responsibility of plans for air raids in Home Office buildings. This entailed a number of conferences and testing of various materials to be used for protection. Dr. McConnell was in charge of decontamination procedure in case of gas attack. He gave a number of lectures on poisonous gases, methods of detection, physiological action, first aid treatment, etc. to members of the decontamination squads.

A few of the requests follow:

Information regarding inflammable solvents in use and methods of storage in laboratories.

Shatterproof tests on electric light bulbs covered with garinol were made to test its efficiency.

Information regarding control of refrigerants in case of a bombing raid.

Analyzed food from Home Office cafeterias.

Advice regarding elimination of faulty plumbing.

Analyzed specimens of urine of claimants for permanent disability.

Reviewed proposals regarding defouling stations on the Pacific Coast sent in by Dr. Shepard.

Inspected the Typewriter Repair Room to see if they had carried

out our recommendations regarding the use of sodium cyanide.

Information regarding a fire-proofing compound which is effective in preventing cloth from igniting and bursting into flame.

Analyzed sample of the lacquer cleaner which is to substituted for Utility Wash.

Analyzed sample of Protecto-Kote thinner.

Information regarding the formula for making "supertropical" bleach used to decontaminate floors, walls, etc. in case of a gas raid.

Temperature and humidity readings of eight of most congested air raid shelter areas in Home Office buildings.

Information regarding the composition of bottled gas.

Information regarding toxicity of fumes from creosote sprayed on wood in connection with a double indemnity death claim.

Recommended use of G-M-E 1 mask to be used by the attendant in the Sanatorium laundry to prevent inhalation of formaldehyde and ammonia fumes.

PUBLICATIONS

Report of the survey of the leather industry entitled "Health Hazards of the Leather Industry" was completed and appeared in the May issue of the Journal of Industrial Hygiene and Toxicology. Copies of this reprint were sent to industrial hygienists and those particularly interested.

Dr. Fred O'Flaherty of the Department of Leather Research of the University of Cincinnati arranged for the report of the leather survey to be reprinted in the trade journal "Hide and Leather".

Dr. McConnell rewrote his chapter in "A Textbook of Medicine by American Authors", edited by Dr. Russell Cecil.

Dr. Joseph E. Zbar, Editor of Philosophical Library requested permission to use Dr. McConnell's article on "Mobilization of Industrial Hygiene for National Defense" (which appeared in the American Journal of Public Health" as a chapter in a book on "Public Health in War Time".

Dr. McConnell prepared a "Memorandum on Protective Measures Against Common Implements of Warfare". This has been given a good deal of publicity and reprinted in the New York State Journal of Medicine. A digest of the article was published in "The Digest of Treatment" by J. B. Lippincott Company. The demand for this memorandum has been very great and it has created a good deal of interest.

Dr. McConnell wrote a paper on "Indoor Environmental Atmosphere and Its Control" for Medical Clinics of North America. Copies of this paper were sent to state industrial hygienists and to a selected mailing list.

Reviewed two articles by Dr. Victor G. Heiser of the National Manufacturers Association on "Defense Workers' Lunch Box" and "Pack a Lunch - Man Can Work On".

Reviewed Chapter II of the 1942 Guide of the American Society of Heating and Ventilating Engineers and gave suggestions for rewriting it.

Reviewed paper entitled "Physiological Reactions of Workers in Hot Industries with Atmospheric Conditions of Various Relative Humidities", published by the Research Committee of the American Society of Heating and Ventilating Engineers.

Reviewed pamphlet on "Health of the Workers".

Reviewed article for Nursing Bureau on "Communicable Disease Technique".

Reviewed revised edition of First Aid booklet.

Reviewed instructions to be sent to our nurses regarding their participation in air raid emergencies.

Reviewed and offered comments for revision of Rabies booklet.

Revised our booklet "Air Conditions and the Comfort of Workers".

Reviewed article on "Showers" to be issued by the Policyholders' Service Bureau.

Commented on paragraph on "Health Hazards in War Production Areas" which appeared in November 1942 Service Digest of Policyholders' Service Bureau.

Commented on new book issued by U.S. Department of Labor, Division of Labor Standards entitled "Arranging Shifts for Maximum Production".

Reviewed the revised edition of Conquest of Typhoid Fever booklet.

Prepared an article on "Rocky Mountain Spotted Fever" to be sent to an agent who is in Army.

Reviewed Health Bulletins for Teachers for the School Bureau.

Reviewed and offered criticisms on articles prepared by the Policyholders' Service Bureau and members of the Welfare Division on health hazards of industrial processes.

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THE INDUSTRIAL HEALTH SECTION AND THE WAR

Since the outbreak of the war and before, there has been a great increase in requests from industrial firms for information regarding the hazards of processes and the toxicity of solvents and materials newly introduced in the plants in connection with the war effort. The following requests were received from firms and individuals so engaged.

Surveys

Ruberoid Co. (survey of four plants) - make asbestos roofing for government projects.

Republic Steel Corp. (recheck surveys of all plants and mines) - make shells and all kinds of steel

Blackwell Zinc Co. (survey of two plants) - supply zinc for war projects.

Geo. L. Roper Co. - make shells

General American Transportation Co. - make P.T. boats

Sundstrand Machine Tool Co. - make machine tools

Maremont Automotive Products (make springs and mufflers for tanks)

Asbestos Textile Corp. - make cloth and brake linings for government

Union Carbide Co. - (requested surveys of seven plants) - alloys for making steel

Kimball Piano Co. - make desks for the government

Armored Force, Fort Knox - study of armored tanks and army trucks

Armstrong Cork Co. - shells, insulation, linoleum for battleships, etc

Walter Kidde & Co. - fire extinguishers

In addition to complete surveys, eighty nine requests for assistance were received from the above and other firms and individuals and from Navy and Army bases. These requests covered such subjects as adjustment of workers to changing shifts; relative hazards from electric shock from the use of alternating and direct current in welding; toxicity of emulsifying or wetting agents, chlorinated paraffins and barium peroxide and other compounds; information regarding a twin chemical cartridge mask; hazards of explosives manufacture; hazards of handling TNT; substitutes for tetrachlorethane in airplane factories; recommendations as to how to handle an epileptic and fit him into industry; information regarding hospital-bed requirements in city to take care of increased personnel due to war work.

There has been a very increased demand for our booklets on welding, first aid service in small plants and the first aid booklet. The requests for assistance on methods of maintaining the health of personnel have also increased.

In 1941 Dr. McConnell was appointed a consultant of the United States Public Health Service to make a survey of the medical facilities available in industrial plants. This work necessitated consulting with the Directors of State Industrial Hygiene Divisions and visiting plants in Philadelphia, Pittsburgh, Jersey City, Trenton, Bayonne, Baltimore, Harrisburg, Lancaster, Lansing, Chicago, Louisville, Indianapolis, and Boston. In localities where these representatives of the Industrial Hygiene Divisions were to make the visits themselves, Dr. McConnell discussed with them the survey form to be used, methods of presenting the survey, etc. He personally made visits to 49 plants in different sections of the country.

Dr. McConnell reported for active service with the War Department on August 28, 1942.

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TESTIMONIALS

Attached are copies of several letters which express appreciation for our service.