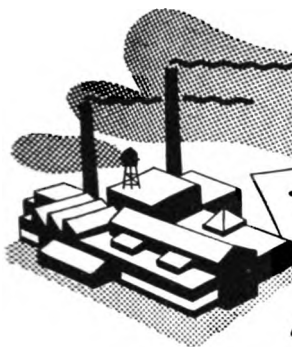


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# INDUSTRIAL HYGIENE

## Newsletter



issued monthly by INDUSTRIAL HYGIENE DIVISION  
 U. S. PUBLIC HEALTH SERVICE • FEDERAL SECURITY AGENCY

Volume 6

October 1946

Number 10

### DISTRICT CONSULTANTS CONFER WITH WASHINGTON STAFF

Industrial hygiene consultants recently appointed to U. S. Public Health Service Districts met in Washington the first week in September for an intensive briefing on their work.

Appointment of District consultants was delayed during the war by the unavailability of experienced personnel. With the return of men to civilian life, Dr. J. G. Townsend, Chief of the Industrial Hygiene Division, U. S. Public Health Service, has been able to fill these important consultant positions with five outstanding men. They are: R. T. Pagé in District 7; Harry E. Seifert, District 2; Joseph E. Flanagan, District 3; Walter E. Doyle, Districts 4 and 9; and A. T. Rossano, Jr., Districts 5 and 8. Until a qualified person can be found, District 1 will be serviced from the Division in Washington.

Among the pertinent problems discussed in the 4-day meeting were the functions of District Offices and the responsibilities of District consultants. The administration of a grant-in-aid program and the necessary reports, records, and audits were carefully studied. Medical control and dental and nursing programs in industry were discussed in detail as well as the latest developments in toxicology, chemistry, and engineering. Sickness absenteeism and an industrial health-education program were also included on the agenda.

The District consultants will probably confer with the Washington staff twice a year to review the work accomplished and to set their sights for the job ahead.

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### ALASKA PLANS INDUSTRIAL HYGIENE PROGRAM

Dr. C. Earl Albrecht, Commissioner of Health for Alaska, has announced his desire to initiate an industrial hygiene program. The first step in activating such a program is to survey typical industries, both large and small, to determine the extent of the need.

Dr. Albrecht and Richard S. Green, Director of the Division of Sanitation and Engineering in the Territorial Department of Health, have requested advice and assistance from the Industrial Hygiene Division, U. S. Public Health Service, regarding the establishment of such a program. In response to this request, Lewis J. Cralley, S. A. Scientist, went to Alaska to confer with these men and others interested in the program. After making a preliminary study of the problems involved in inaugurating an industrial hygiene program in Alaska, Dr. Cralley assisted the personnel in their plans and advised them on the necessary procedures for the conduct of a comprehensive survey. Information on the type of industries, number of employees, potential health hazards, and the facilities for controlling them is fundamental to the establishment of an industrial hygiene service.

Mining, lumbering, and fishing are large and important industries in Alaska. Many other smaller industries exist that also need the services of industrial hygienists. Because of the geographic location and topography of Alaska, as well as the distribution of the population, the administration of an industrial hygiene program presents difficulties not encountered elsewhere.

## INDUSTRIAL HYGIENE NEWSLETTER

issued monthly by  
INDUSTRIAL HYGIENE DIVISION  
U. S. PUBLIC HEALTH SERVICE  
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BETHESDA 14, MARYLAND

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This publication is free to persons interested in the field of industrial hygiene. To be placed on the mailing list, write to Industrial Hygiene Division, U. S. Public Health Service, Bethesda 14, Md.

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No. 10

## Tennessee Inventories State's Industrial Health

With the end of the war, many industries changed their processes and products. This produced many new industrial hygiene problems for the plants and many requested assistance from the Tennessee Industrial Hygiene Service.

Seventy-eight plants employing 208 registered nurses have organized medical programs. The health of the worker in small plants is one of the greatest problems. There appears to have been an awakening of interest in the protection of worker health, which has been voiced by the management of plants of all sizes, even small granite cutting sheds.

One of the outstanding events of the past year was the close cooperation of the Tennessee Industrial Hygiene Service with that of Arkansas in promulgating industrial State codes on pressure work to apply in the construction of bridge piers in the Mississippi River at Memphis.

A set of sanitation practices was prepared that is unusual, perhaps, in that such nebulous descriptive adjectives as "adequate" as it related to maintenance, illumination, marking of unsafe water supplies, temperature, and ventilation were replaced with statements of definite requirements.

Chest X-raying of industrial groups continued through the year. In cooperation with the Statistical Service the study of absenteeism of 1 day or longer that was begun in 1943 is being continued.

For the next year, the outstanding need is more qualified industrial hygiene personnel so that other district offices can be opened. During April a district office for west Tennessee was opened at Memphis. One is also needed in upper east Tennessee.—Dr. H. H. HUDSON.

## Kentucky Industrial Hygiene Division Given Official Status

Under the direction of the Governor, the Department of Health of Kentucky is charged with the establishment of a Division of Industrial Hygiene. This Division, already established on an informal basis, is now given official status. Duties of this Division are:

To provide for studies and surveys for the purpose of determining and evaluating industrial health hazards and exposures and to follow up these investigations with recommendations and to assist in controlling occupational diseases.

To provide field medical, engineering and chemical services to industry throughout the State for the purpose of evaluating and controlling exposures to hazardous and poisonous materials, and also assist industry in ventilation, illumination and air conditioning problems.

To provide laboratory services for the analysis of materials used in industry which are injurious to the health of the workers.

To provide nursing services to assist in inaugurating nursing programs within industry and to provide consultations with industrial nurses.

To provide educational services by the publication and distribution of pamphlets, brochures, etc., on industrial health subjects and lectures and papers to any group interested in matters pertaining to industrial health.

With the Governor's authority, the Division of Industrial Hygiene, under the direction of W. W. Stalker, will increase its staff and widen its scope of activities in Kentucky.

## Protein Constituents of Diet Reduce Reaction to Toxic Chemical Agents

Considerable interest has been aroused in recent years in the effect of variations in diet on the toxicity of chemical agents. For example, it has been found that animals on low-protein diets are much more susceptible to liver injury by chloroform than those on normal diets. This poisonous action can be largely prevented by single doses of methionine, which is one of the sulfur-containing amino acids in protein.

In the Industrial Hygiene Research Laboratory of the National Institute of Health, Dr. Leon A. Heppel and Dr. Willie W. Smith have studied 3 other important chlorinated solvents from this point of view. They are: (1) Ethylene dichloride, which is used in the synthetic rubber industry and in many solvent operations; (2) propylene dichloride, which is an important insecticide as well as a useful solvent; (3) methyl chloride, which is used as a refrigerant and is also used in the oil refining and synthetic rubber industries. In clinical reports more than 200 cases of poisoning, with about 15 deaths, have been attributed to methyl chloride. All 3 substances have been found toxic to laboratory animals.

With each of these compounds, Drs. Heppel and Smith found that animals on high-protein diets were more resistant to the poisonous action than those on low-protein diets. The particular constituents of protein which conferred protection against poisoning by these agents turned out to be the two sulfur-containing amino acids, cystine and methionine. In the case of methyl chloride, cystine or methionine given as a supplement to a diet moderately low in protein exerts much greater protection than is afforded by a high-protein diet containing the natural amounts of these amino acids.

A few other sulfur compounds which are not normally present in protein were also found to be effective protective agents. Methionine is now being given a clinical trial in industrial situations where exposures to chlorinated solvents occur.

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Dr. Ahmed Bey Zaki, Director of the State Chemical Department of Egypt, has been surveying research laboratory techniques in this country preparatory to establishing industrial hygiene and nutrition research laboratories in Cairo. Dr. Zaki spent several days in Washington, D. C., visiting U. S. Public Health Service.



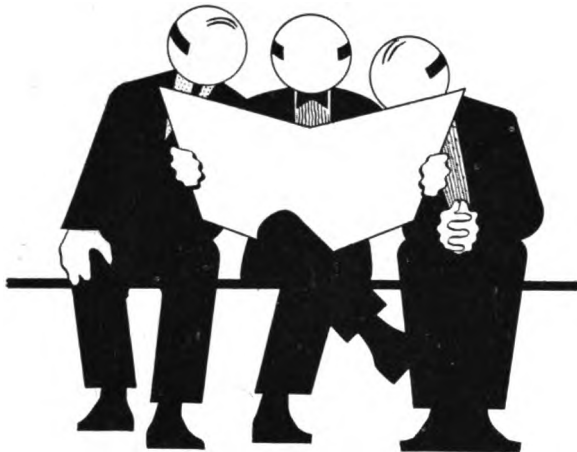
### Visitor from India Textile Mill

Mr. Kanji Dwarkadas of Bombay, India, was a guest of the Industrial Hygiene Division, U. S. Public Health Service, recently, in a tour of industries and governmental offices concerned with the health and welfare of workers. Mr. Dwarkadas is the Labor and Welfare Officer of the India United Group of Mills which employs 19,000 workers. The majority of these workers are women. One out of four takes her children to the modern nursery provided by the plant. Complete medical service is another facility offered to employees and their families. These mills are highly unusual in that they provide health and hazard protection for their workers.



*A dispensary in an India textile mill where the employees and their families receive treatment.*

## ARE THESE YOUR PROBLEMS, TOO?



"We're having trouble convincing a couple of small plant operators in this city that they can afford industrial hygiene services," an industrial hygiene physician in a State unit told a member of the U. S. Public Health Service Industrial Hygiene Division staff. "They need those services badly, but we're too rushed with other requests to take the time to show them they'll save money in the long run. Do you have a movie or a book we can show them?"

"Just hired a new engineer, but he's had little experience, and we'll have to train him fast. Do you have anything we can use in the process?" another State wrote to Bethesda.

"I've just decided to set up a medical department in my plant," a large manufacturer wrote a State unit, "but my employees are balking at physical checkups. I don't have the time to sell them something I know is good for them, and times being what they are I won't force something on them over their objections. Have other people had the same trouble? What have they done?"

Pleas like these, for time saving techniques that can be employed in recruiting professional workers, in training them on the job, in promoting industrial hygiene services where none exist, in overcoming prejudice born of ignorance or misinformation, come regularly and insistently to the Industrial Hygiene Division, Bethesda. Reports indicate that State units receive them, too. The problems they pose are fairly common to all parts of the country—common enough to indicate that a coordinated program might be an effective way to solve them.

States have tried various approaches to these problems. One technique with which several have experimented with success—an education and information program—shows signs of being the most effective method of handling them. The use of many and varied information media—films, slide films, pamphlets, posters, newspaper publicity, exhibits, and the like—whose efficiency in getting ideas across has been proved in many fields—can, it seems, go far toward overcoming some of the difficulties faced by those whose goal it is to bring industrial hygiene services to all industrial workers in the country.

In cooperation with State industrial hygiene units, the Industrial Hygiene Division of the U. S. Public Health Service therefore proposes to develop an education and information program. The ultimate aim of such activity must be, of course, the development of education and information programs in every State, geared to the individual needs of that State. Consultation and assistance for such programs are now available.

But since some States may not yet be ready or able to attempt education programs of their own, the Industrial Hygiene Division of the U. S. Public Health Service also proposes to prepare and distribute educational aids for their use. These materials will be planned in cooperation with the States so that they will be of greatest effectiveness.

Below are the plans now under consideration. These plans are tentative. This is an appeal for advice, suggestions, comment, and criticism from all State industrial hygiene units and from others who face industrial hygiene problems which an education program can help solve.

1. The subject matter of the materials which the Industrial Hygiene Division of the U. S. Public Health Service will prepare will tie in with the operating problems of State and local industrial hygiene units. Judging from State reports, the most common are:

- Recruiting and training of personnel.
- Establishment of industrial hygiene services in small plants.
- Development of understanding and of appreciation for good industrial hygiene practices.
- Development of worker participation in plant medical services and health education program.

(Continued on page 12)

## Education and Information Aids

### PAMPHLETS

**At Your Service**—Twenty-page illustrated handbook of information on medical, engineering, chemical, and nursing services available from State industrial hygiene divisions. Available free from State divisions or for 10 cents from the Superintendent of Documents, Government Printing Office, Washington 25, D. C. Bulk orders of 1,000 sold for \$75.

**Workers' Health Pamphlets**—Fourteen popularly written, illustrated pamphlets, designed to give workers basic facts on common industrial and general health problems. Sample copies available on request to the U. S. Public Health Service, Washington 25, D. C. Quantity orders may be purchased from the Superintendent of Documents, Government Printing Office, Washington 25, D. C., at prices listed.

|   | Price<br>per 100 | Price<br>per 1,000 |
|---|------------------|--------------------|
| 1. But Flu Is Tougher.....                                  | \$1. 50          | \$11. 00           |
| 2. Leonard's Appendix—And<br>How It Burst.....              | 1. 00            | 7. 50              |
| 3. KO by CO Gas.....  | 1. 00            | 7. 50              |
| 4. Clara Gives Benzol the Run<br>Around.....                | 1. 50            | 12. 50             |
| 5. Trouble in the Midriff (In-<br>digestion).....           | 1. 50            | 12. 50             |
| 6. Bill Gets the Works (Pre-<br>placement Examination)..... | 1. 50            | 15. 00             |
| 7. Night Shift.....   | 1. 00            | 7. 00              |
| 8. Save Your Skin (Derma-<br>toses).....                    | 1. 00            | 7. 00              |
| 9. Willie's Victory Torch<br>(Welding).....                 | 1. 00            | 7. 00              |
| 10. Facts About VD (in press).....                          | Not yet known    |                    |
| 11. Hold on to Your Teeth.....                              | 1. 00            | 7. 50              |
| 12. Let's See (Vision).....                                 | 1. 50            | 12. 00             |
| 13. Below the Belt (Hernia)....                             | 1. 00            | 10. 00             |
| 14. That Tired Feeling.....                                 | 1. 50            | 15. 00             |

### POSTERS

**Workers' Health Series**.—Twelve 10- by 14-inch posters in color. Subjects correspond with those of Workers' Health Series pamphlets listed above, omitting pamphlets 4 and 10. Available from the Superintendent of Documents, Government Printing Office, Washington 25, D. C. Single copies are 5 cents each. Quantity lots, \$1 per 100 copies of any one poster. Miscellaneous selections, \$3.75 per 100 copies.

Pamphlet  
No.

|   |    |
|---|----|
| WH 18 Cover Up Coughs and Sneezes.....      | 1  |
| WH 19 Don't Gamble with Appendicitis....    | 2  |
| WH 20 Welding.....                          | 9  |
| WH 21 Let's See! Better, Longer, Easier.... | 12 |
| WH 22 Be Kind to Your Stomach.....          | 5  |
| WH 23 See Your Dentist.....                 | 11 |
| WH 24 Beat the Skin Game.....               | 8  |
| WH 25 Know Your Score.....                  | 6  |
| WH 26 Beware of Carbon Monoxide.....        | 3  |
| WH 28 Night Shift.....                      | 7  |
| WH 29 Correct Pick-Up. Avoid Hernia....     | 13 |
| WH 30 That Tired Feeling.....               | 14 |

**Jenny On the Job**.—Eight four-color, 9- by 12-inch posters. Features enthusiastic young woman carrying out health precautions and habits necessary for women workers. Available from the Superintendent of Documents, Government Printing Office, Washington 25, D. C. Sold in sets only, 25 cents per set; 25 percent discount on 100 or more sets.

### EXHIBITS

The Industrial Hygiene Division of the U. S. Public Health Service has several exhibits which may be borrowed for short periods for display at meetings, conventions, and other gatherings.

Subjects:

**Teamwork: Industrial Hygiene Services for Small Plants**—21 feet long, 3½ feet deep, 7½ feet high.

**Industrial Hygiene Protects You on the Job** (designed for use at Labor Union meetings)—10 feet long, 6 feet high, with lights.

**Dermatophytosis in Industry**—Five panels and two head signs. One panel 30 by 40 inches. Four panels 20 by 40 inches. Head signs 10 by 40 inches.

**Epidemic Ringworm of the Scalp**—Five panels 36 by 48 inches, view box, sterilizer, culture tubes and plates.

**Dermatoses in the War Industries**—Series of framed panels 24 feet long, 6 feet high.

Send requests for use of exhibits to Information Service, Industrial Hygiene Division, U. S. Public Health Service, Bethesda 14, Md.

(Continued on page 12)

## RECENT ADVANCES IN TOXICOLOGY

Lawrence T. Fairhall

Many of the newer metals which were only laboratory curiosities before the war have grown increasingly important to industry in the last 5 years. Such metals as cobalt, beryllium, columbium, indium, and tantalum are now in commercial use, although very little is known regarding the physiological action of these metals.

Dr. Lawrence T. Fairhall, Senior Scientist (R), who is Chief of the Chemical Section, Industrial Hygiene Division, U. S. Public Health Service, has made an evaluation of the known facts regarding the physiological action of the metals and their compounds as separate entities.

Through the courtesy of *The British Journal of Industrial Medicine*, Dr. Fairhall will present in this and subsequent issues brief discussions of these less known metals.

### COBALT

Cobalt has occupied rather a minor position in commerce; but, as new and surprising uses have developed, it has become a very important metal in industry. The amount of cobalt consumed in the United States in 1944 was practically 6,000,000 pounds. Of this amount, stellite and stellite type alloys as well as carbide type alloys consumed 1,757,673 pounds. Apart from this, its chief use was for the production of "Alnico" magnets (an alloy of cobalt, nickel, and aluminum). This magnet is very powerful and capable of lifting 60 times its own weight. Cobalt is extensively used as a bonding or cementing material in the manufacture of tungsten carbide and other metal carbide tool tips and dies. These bonded carbide tools have a hardness approaching that of the diamond, and are rapidly displacing high-speed steel for cutting tools. Less important uses for cobalt are to be found in certain of its alloys, such as noncorrosive and tool steels. Other minor uses for certain nonmetallic purposes are to be found in cobalt salts and driers, ground-coat frit and pigments, and in catalysts. Cobalt oxide is a very efficient catalyst for the oxidation of ammonia, and cobalt-bearing substances are in use as catalysts for the synthetic production of gasoline. A novel and to a certain extent recent use of cobalt is in soil dressings in areas where cobalt deficiency has produced such diseases in sheep and cattle as "bush sickness," "salt sickness," or "enzoötic marasmus."

The increasing exposure of industrial workers to cobalt metal dust or cobalt oxide dust—which has resulted from the rapid growth of the cemented tungsten carbide industry—has drawn attention to

possible injurious action, both on the skin, and after inhalation of this finely-divided material. There is a substantial amount of experimental work on the physiological action of cobalt reported in the literature, and it would appear that the toxicity of cobalt by mouth is low. Antal (1894) found that a gram of cobalt nitrate in 1 percent solution had no perceptible effect on rabbits, although the same quantity in 5 percent solution was occasionally lethal. Chittenden and Norris (1889) also observed that the poisonous action of cobalt on rabbits is slow, and apparent only after the administration of relatively large doses. Intravenously, cobalt has been observed to cause paralysis of the extremities, enteritis and death. Le Goff (1930) found that cobalt given intravenously in man produced a marked dilatation of the blood vessels of the face, with a slight fall of blood pressure.

A well-recognized effect of the administration of cobalt salts to animals is polycythaemia and most of the investigations relating to the physiological activity of cobalt have revolved around this phenomenon. Orten (1936) concluded that the haematopoietic activity of cobalt is the result of an increase in rate of formation of haemoglobin and erythrocytes, rather than of a passive accumulation of red cells resulting from a diminished rate of cell destruction. Frequent reference has been made to the work of Barron and Barron (1936), who state that small amounts of cobalt inhibit the respiration in vitro of various tissues—notably reticulocytes and bone marrow. However, in recent experiments Warren, et al., have been unable to confirm this finding. Frost, et al., found haematopoietic response at a minimum level of 1 mg. per kg. of body weight per day when cobalt was added to iron and copper in the diet.

It has been stated recently by Griffith and others that cysteine has a detoxifying action in cobalt poisoning. According to these investigators, poisoning from cobalt may be due to fixation and loss of sulphhydryl compounds in tissues, with resulting interference with oxidative mechanisms. Cobalt has been shown to produce polycythaemia in rats (Griffith et al., 1942; Orten et al., 1932; de Savitsch et al., 1936; Josland and McNaught, 1938; Anderson et al., 1940; Dorrance et al., 1943), in rabbits (Barron and Barron, 1936; Kleinberg et al., 1939), in ducks (Davis et al., 1945) and in dogs (Frost et al., 1941; Brewer, 1940; Davis, 1940; Frost et al., 1941).

Kent and McCance found that in man the gastro-intestinal tract is the main channel of

excretion for the cobalt naturally occurring in food, and that, intravenously injected, cobalt is chiefly eliminated through the kidneys. The process of elimination of cobalt from the tissues of man is very slow. In the rat cobalt is excreted chiefly in the urine, and, according to Copp and Greenberg, most of the ingested cobalt is quickly eliminated. Using radioactive cobalt, these investigators found that the amounts distributed in tissues are very small, while the bone—and the glandular organs, such as the pancreas, liver, and spleen—retain the larger amounts.

In an investigation made in the tungsten-carbide industry, Schwartz and his associates have shown that powdered cobalt produces dermatitis. Stewart has shown that in a patient sensitive to both cobalt and nickel, hyperaemic oedematous vesicular lesions were produced by cobalt, and that the sensitivity was somewhat less than to nickel. Haxthausen has experimentally demonstrated a hypersensitivity of the skin to cobalt, while Rabeau and Ukrainczyk have been unable to confirm the reciprocal hypersensitivity of nickel-sensitive subjects to cobalt and vice versa.\*

### Ringworm Exhibit to Travel Southward

An exhibit explaining the control of epidemic ringworm of the scalp was shown at the A. M. A. Convention in San Francisco during July. This elicited so much interest that Dr. Louis Schwartz, senior author of the exhibit, has been asked to show it at the Southern Medical Association meeting, which convenes in Miami, November 4-7. Soon after, he will display it in Mexico City for the Mexican Medical Association.

The first of the five-panel exhibit shows the incidence of ringworm of the scalp in the United States and in the schools of Hagerstown, Md. Charts describe the methods used for controlling epidemics, including sanitation of barber shops, setting up of treatment clinics in the schools, method of identifying cases by means of the Wood's Light, method of sterilizing electric clippers and other barbers' instruments, evaluation of various topical applications for treatment, and cultures of *Microsporon audouini*. Photographs of actual cases are shown.

Co-authors with Dr. Schwartz are Dr. Samuel M. Peck, Dr. Isadore Botvnick, and Dr. A. L. Leibovitz, all previously on the staff of the U. S. P. H. S.

\*For a bibliography on this subject, write Managing Editor, Industrial Hygiene Newsletter.

### Los Angeles Industries Grow More Health Conscious

When the Los Angeles Division of Industrial Hygiene was first started in 1940, about 6 industries in the area employed industrial nurses. Except for the railroads, no physicians were employed full time in local industries. A recent survey revealed that 117 establishments employ 191 full-time nurses. All but 6 are registered nurses. Sixty-one of these establishments are manufacturing plants, 12 are in public utilities and transportation, 14 in retail trade, and the balance in other businesses.

There are 17 full-time industrial doctors and 34 plants that employ doctors on a part-time basis. Since there are 5,000 industrial establishments with a work population of approximately 200,000 in the City of Los Angeles, it is evident that only a fraction of the industries are providing in-plant medical and health service. Only about 20 percent of the labor population is protected by preventive health and medical service.

To this unprotected segment of industry, the Division of Industrial Hygiene will devote most of its efforts during the next year. Small plant health service will be organized whenever possible, probably on a group sharing basis or individual plant service. In the first group, 5 or 6 plants with a total employment of 1,000 to 1,500 workers will share the services of 1 physician and 1 or more nurses. In the second method, individual plants will employ a physician and nurse part time, but on an agreed schedule of regular visits.

Environmental surveys, medical examinations, industrial health education programs, and laboratory studies will be an integrated part of a co-operative plan effected by the plants and the Division for improving the health and working conditions of employees in industry.

### Chief, Newark Industrial Hygiene Division Dies

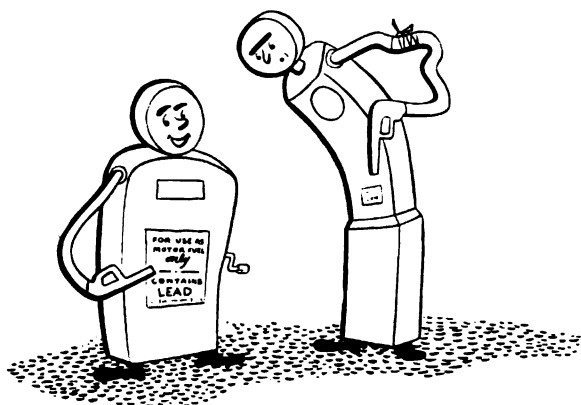
Lewis E. Boutillier, Chief of the Industrial Hygiene Division of the Department of Health in Newark, N. J., died August 13. Mr. Boutillier was with the Newark Health Department for 43 years. He started in the Department as an inspector and served in various divisions among which were Food and Drug, Sanitary, and Communicable Disease before he was appointed to the position he held at the time of his death.

## Fashions Change in Gasoline Signs

Regulations pertaining to tetraethyl lead gasoline signs have become outmoded. Warning signs on filling station pumps will be redesigned to be more uniform, effective, and practical.

In 1926, four sets of "model" regulations were printed in Public Health Bulletin No. 163 for the guidance of the States that wanted to adopt uniform control of such matters. These proposed regulations were in four groups, as follows:

- I. For the manufacture of tetraethyl lead and the blending of the latter to make ethyl fluid.
- II. For mixing.
- III. For distribution of ethyl gasoline.
- IV. For automobile garages, repair shops, service stations, and filling stations.



Since that time, the increased availability of gasoline containing tetraethyl lead and the change in the design of pumps that dispense the gasoline necessitate a new design for the warning sign. A sign should call the consumers' attention to the fact that such gasoline contains tetraethyl lead and that it is designed for use only as a motor fuel.

At the request of the Ethyl Corp., and with the assistance of the Chemical Products Agreement Committee, the regulations concerning the distribution of ethyl gasoline were rewritten. The first section reads:

Each filling station shall keep displayed prominently on each pump which delivers motor fuel containing tetraethyl lead a sign or signs, composed of enameled metal or of material of equivalent durability, inscribed in prominent heavy Gothic capital letters, black on white background, with one or the other of the following statements arranged as shown:

(a)

CONTAINS LEAD  
(Tetraethyl) and is to be used as motor fuel only; not for cleaning or for any other use. Avoid spilling.

(b)

For use as a motor fuel only  
CONTAINS LEAD  
(Tetraethyl)

The printed matter on these signs, not counting the enclosing border, should measure approximately 7 inches wide by 8½ inches high in the case of (a) above, and 7 inches by 6 inches high in the case of (b). Such a sign shall be located on any side (front, back, or lateral surface) of each pump, at such height (between 4 and 5 feet above ground level, when the design of the pump will permit), and in such position (free of intervening structures or equipment) as to be most easily observed. Island pumps will require a sign on front and back, or on both lateral surfaces, while pumps approached on but one side from either direction will require one sign on the front or one on each lateral surface.

Containers for this gasoline sold to customers should also be similarly labeled.

## Industrial Skin Diseases Major Problem for Hoosier Industrial Hygienists

Of all occupational diseases reported to the Division of Industrial Hygiene in Indiana, 83 percent are skin diseases, according to Dr. L. W. Spolyar, Director of the Division. During the past fiscal year, 354 cases of occupational diseases were reported on a voluntary basis.

The bulk of field studies was concerned with skin irritants and sensitizers, dust problems in industry, poisonings due to heavy metals, especially lead and mercury, and exposures to solvents, particularly trichlorethylene and carbon tetrachloride.

On the basis of previous requests from industries, as well as a knowledge of the State's needs, Dr. Spolyar has placed the reporting of occupational diseases at the top of his list of long-term objectives. Absentee studies are another essential part of an adequate industrial hygiene program. Training personnel through instituting courses in both graduate and undergraduate classes for medical, engineering, nursing, dental, and chemical students is another very important part of the Indiana program. To cooperate with other agencies in the control of tuberculosis and venereal diseases, to encourage the practice of rehabilitation and mental hygiene in industry, and to develop codes and regulations for the guidance of industrial plants are other vital goals in the Hoosier program for industrial health.



## Southeastern Industrial Hygienists Organize

At a recent meeting, the present members of the American Industrial Hygiene Association from the southeastern States organized a conference of industrial hygiene for this region. It will be a section of the national association.

Its purpose is to solicit the enrollment of active safety directors, safety engineers, nurses, doctors, and other qualified personnel from industry and governmental agencies to work unitedly on the problems of environment, industrial health, job placement, and all the other major controllable factors that affect the welfare and efficiency of industrial employees. This organization will be made up of local people who have mutual problems, and it should be a splendid opportunity for seminars, exchange of experience and views, and a medium for the development of standards and policies concerning industrial health in the Southeastern States.

A future goal is to create enough local interest that sections from small areas may be developed and hold frequent meetings. The need for better educational opportunities in the field of industrial hygiene was recognized and toward this end courses will be promoted in the colleges of these States.

—*Industrial Lights, July 1946, S. C. State Board of Health, Division of Industrial Health.*

## C. I. O. and A. F. L. Sponsor TB-VD Survey in Oregon

Local unions sponsored a joint tuberculosis—venereal disease survey in Clatsop County, Oreg. The Oregon Tuberculosis Association X-rayed about 3,600 persons with their portable equipment and the Division of Industrial Hygiene performed blood tests for about 3,100 of the same group.

This survey was preceded by many months of health education spade work on the part of the County Health Department and the local unions. Members of the labor organizations distributed venereal disease literature to their members and assisted in the survey. The interest and participation by the Clatsop County residents were considered excellent evidence of the value of a preliminary educational program.

## Ohio Engineers Asked to Register

The special session of the Ohio Legislature recently amended the Engineers and Surveyors Registration Act in Ohio to give all engineering college graduates (previous to January 1, 1946), who were or are in military service, a chance to register by exemption. They will have 6 months after the effective date of the act (June 1946) or 6 months after they are out of military service, whichever is later, to file their application.

This amendment will afford interested parties in the above group opportunity to become registered as professional engineers in Ohio. Detailed information is available from the Board of Registration for Professional Engineers and Surveyors, 1113 Wyandotte Building, Columbus 15, Ohio. Registration is a prerequisite to employment as an Industrial Hygiene Engineer with the Division of Industrial Hygiene, Ohio Department of Health.

## New Jersey Follows Through on Social Hygiene Program

On Social Hygiene Day New Jersey's Division of Industrial Health sent to all State industries its monthly bulletin, "What Stake has Industry in Controlling Venereal Diseases?" Three months later, this was followed by a monthly bulletin, "What Does This Mean to You?" In this latter bulletin, the Public Law 103, 1945, was reprinted in full, followed by an explanation of the law's implications as far as the plant physicians and personnel managers were concerned.

Since the issuance of those bulletins, more than 50 inquiries were received by the Division, requesting advice. Physicians and nursing consultants visited 12 of these plants, helping to improve venereal disease employment policies. As other plants become interested and informed, a more just employment policy will be adopted throughout the State.

### "PROBABILITY, WHERE IS THY STING?"

War Department Educational Manual EM 758, Life Insurance: The fact is, that in the first half of the normal range of life, death is only a chance and, so far as any given year is concerned, a very small one. The odds are greatly against it. But if it does not occur in the first half, the probability that death will occur in the latter half of life becomes a certainty, and . . .

**STATE AND LOCAL NEWS**

**Indiana.**—The Division made a detailed study of a silicosis problem in a plant that manufactures roofing granules from native clay. The clay runs 35 percent free silica. Engineering controls were almost nonexistent and dust clouds filled the plant. For most operations the counts ran 200 million. Only four employees had remained with the company for three consecutive years. After a conference with plant officials, these recommendations were agreed upon: Look for a new source of clay, institute X-ray program, provide respirators, and begin engineering studies on controls. November first was set as the dead line for carrying out these suggestions.

**Massachusetts.**—Bulletins recently published by the Division of Occupational Hygiene are: "Prevention of the Ill Effects of Heat" and "Publications Currently Available for Distribution—June 1946."

**Detroit, Mich.**—J. Brennan Gisclard has accepted a position with the Bureau of Industrial Hygiene where he will work in the field of chemistry and toxicology.

**Minnesota.**—Mr. Stanley Remeneski, Chemist, was placed on the staff of the Division for fulltime work.

**New Jersey.**—In the interest of clearing the atmosphere of pollution, the local board of health of an industrial city of this State has requested the Division to study the health menace of smoke, gases, and fumes emitted from the various industrial plants.

Dr. Kenneth F. Schaefer, Industrial Hygiene Physician, addressed 40 members of Hillside Rotary Club, outlining for them the industrial hygiene services of the Division which are available to industrial plants and workers.

**St. Louis, Mo.**—An industrial hygiene nursing consultant and two chemical engineers have been added to the staff during the last few weeks. Another advantageous change has come with the rearrangement of space assigned to the Industrial Hygiene Section, which has brought together the complete staff of the Section.

**Oregon.**—This Division was instrumental in the development for the first time of a program of preplacement physical examinations for food handlers in a frozen food storage plant. In view of the number of frozen food and canning plants, the rapid expansion of this industry, and the interest shown by the packers, it is quite likely that this phase of health protection in the prepared foods business will expand.

**Pennsylvania.**—A summary of the activities of the Bureau for the fiscal year ended June 30, 1946, has been completed. A total of 9,025 industrial plants with 883,978 employees was contacted during the year. These contacts consisted of 7,464 inspections, 14 preliminary surveys, 49 engineering studies, 15 medical consultations, 30 dental consultations, 714 follow-up inspections and 768 routine visits.

A total of 7,891 hazards involving 554,830 employees was investigated and 2,044 recommendations affecting 112,411 employees were made during the period. By follow-up inspections it was found that 1,054 recommendations affecting 46,795 employees had been complied with. A total of 673 samples were collected upon which 1,109 determinations were made.

**South Carolina.**—Administration and enforcement of the Pure Food and Drug laws has been assigned to the Division of Industrial Health. Mr. Thomas D. Wyatt, Drug Inspector, joined the Division staff to assume this responsibility.

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An inquiry from a prospective employee as to the harmful effects of soap dust led to a plant survey. Heavy concentrations of the dust filled the workroom and caused an average turn-over in personnel of eighty percent per month.

Recommended engineering controls were accepted. The exhaust ventilation system was installed for a cost of \$750. Employee turn-over has been reduced to an insignificant percent and the net profits increased \$144 per day.—*Industrial Lights*, July 1946, South Carolina Board of Health.

## CONGRESS ON INDUSTRIAL HEALTH TO CONVENE IN BOSTON

"Lead Poisoning" will be the subject of an all-day clinical toxicological conference during the Seventh Annual Congress on Industrial Health scheduled to convene in Boston September 30. At the surgical conference, the "Foot in Industry" will be the subject of discussion.

Lecture and conference topics planned for the second day of the meeting are "Human Relations in Industry," "Industrial Physiology," "Workmen's Compensation," and "Pan-American Industrial Health." On the closing day, those attending will meet in general sessions to hear speeches on "Atomic Energy—Its Effects in Industry and Medicine," "A Positive Health Program for Industry," and "Health and Welfare Programs in Industry."

## CONGRATULATIONS, CHICAGO

For "outstanding civic achievement in the abatement of harmful, wasteful, and needless noise," the City of Chicago has been announced as the winner of the 1946 Grand National Award of the National Noise Abatement Council. In presenting the gold plaque, Paul J. Washburn, President of the Council, cited the city for its "effective, continuous program of education and action to increase interest in noise control."

Group winners among cities divided according to size were New York City; Memphis, Tenn.; Salt Lake City, Utah; and Beverly Hills, Calif. In naming the winners, the Committee on Awards examined reports of noise abatement activities in 95 United States cities scattered throughout 34 States.

## U. OF CHICAGO OFFERS INDUSTRIAL NURSES SURVEY COURSE

Wednesday evening classes for industrial nurses will be offered by the University of Chicago during the autumn and winter quarters. Special lecturers from the fields of industrial medicine, engineering, personnel relations, and nursing will present the latest developments in their particular professions. Further information can be secured by writing Nursing Education, 5733 University Avenue, Chicago 37, Ill.

## DERMATITIS STUDY INSTITUTE FEATURE

From the Oregon Health Bulletin, July 24, 1946

Over 100 persons attended the Institute on Occupational Dermatitis sponsored by the Industrial Hygiene Division of the Oregon State Board of Health on July 15. Highlight of the Institute was an address by Dr. Louis Schwartz, Chief, Dermatoses Section, U. S. Public Health Service.

Dr. Schwartz stated that two-thirds of all cases of occupational disease reported are dermatitis. He classified the causes of occupational dermatoses and suggested treatment and preventive measures. Dr. Schwartz presented an analysis of the skin hazards and irritants found in industries of Oregon.

Mrs. Olive W. Klump, Assistant Director, Bureau of Public Health Nursing, Los Angeles County Health Department, the other out-of-State speaker, discussed the nurse's work in the control of occupational dermatitis. Mrs. Klump stressed importance of a general knowledge of dermatitis and the processes in a plant which cause the occupational disease. She emphasized that the nurse is responsible for obtaining accurate and complete case histories and record keeping.

Dr. Douglas G. Cooper of the State Industrial Accident Commission stated that 2,000 cases of dermatitis were accepted annually by the Commission. He stressed the need for more accurate information concerning each case.

Dr. Courtland Booth, Chairman, Industrial Health Committee, Multnomah County Medical Society, referred to the industrial nurse as the "eyes and ears" of the physician. She should have complete knowledge of the conditions in her plant.

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## SUMMER COMPLAINTS

Industrial hygienists in St. Louis welcome the cool October days when residents close their windows. During July the number of complaints about unpleasant odors begins its usual seasonal rise and continues until cold weather when windows are closed. Most complaints are caused by dust, fumes, or odors from small industrial establishments. In many cases the difficulty can be corrected by more careful industrial housekeeping. In other instances the installation of control equipment is necessary in order to protect the health and welfare of St. Louis citizens.

(Continued from page 5)

(Continued from page 4)

**FILMS**

**Capital Story**—(16 mm. 14 minutes). Industrial hygienists and laboratory technicians track down the cause of an industrial poisoning. Also shows some aspects of work of industrial physicians and engineers. Prints are available free for 2-week loan from the U. S. Public Health Service, Bethesda 14, Md. Prints may be purchased from Castle Films, 30 Rockefeller Plaza, New York 20, New York.

### New Medical Director for Industrial Hygiene Foundation

Dr. C. Richard Walmer has been appointed Medical Director of the Industrial Hygiene Foundation at the Mellon Institute, Pittsburgh, Pa. Dr. Walmer will hold the rank of Senior Fellow in the Mellon Institute.

As a full-time physician for Industrial Hygiene Foundation, Dr. Walmer will direct the medical phases of the Foundation's work for the improvement of working conditions and the advancement of employee health in industry. He will also serve as Secretary of the Foundation's Medical Committee, which is headed by Dr. A. J. Lanza, Associate Medical Director, Metropolitan Life Insurance Co., New York.

For the past 5 years, Dr. Walmer has been associated with Dr. T. Lyle Hazlett, Medical Director at Westinghouse Electric Corp., serving as toxicologist and as a consulting specialist in industrial medicine. He has had wide experience with sick disability cases and in the protection of workers against health hazards.

### Plan Survey of European Industries

John A. Logan, representing the Rockefeller International Health Commission, Rockefeller Foundation, has conferred with members of the Industrial Hygiene Division, U. S. P. H. S., in preparation for an extensive survey of European industries. In cooperation with the Government agencies of each country, Mr. Logan will study the needs of various industries in respect to sanitary engineering and industrial hygiene. After detailed reports and recommendations are made, it is expected that the respective governments will launch intensive programs to assist industries in providing more healthful working conditions for their employees.

2. The Industrial Hygiene Division will prepare educational aids to use in solving these problems. Suggested materials include a pamphlet giving suggestions on how to set up industrial hygiene services in small plants; slide films and folders for recruiting and training industrial nurses, engineers, and physicians; a basic film on the services rendered by a good industrial hygiene program; and several small exhibits for use at meetings.

3. Through consultation and through articles in the *Newsletter*, the Industrial Hygiene Division will help States and others concerned plan how to make the most effective use of these aids.

Some ground has already been broken in the establishment of an industrial hygiene information and education program. Many health departments already employ health educators whose services can be used by industrial hygiene units to get an education program under way. And insofar as materials are concerned, some are already available.

The Industrial Hygiene Division of the U. S. Public Health Service is looking forward to comments from Newsletter readers on all phases of these plans. Please send suggestions, ideas, criticism, and requests for assistance to the Information Service, Industrial Hygiene Division, U. S. Public Health Service, Bethesda, Md.

### Nurses Hear J. J. Bloomfield

J. J. Bloomfield, Assistant Chief, Industrial Hygiene Division, U. S. Public Health Service, spoke September 16 to the Milwaukee County Section of Industrial Nurses and the Wisconsin State Industrial Relations Association on the subject of "New Goals and Needs for Industrial Nurses."

On September 25, Mr. Bloomfield discussed industrial hygiene problems with the field workers at the National Tuberculosis Association institute in New York City. In October he is scheduled to speak at Harrisburg to the Pennsylvania Organization for Public Health Nursing.