FROM 1909, WHEN THE METROPOLITAN BEGAN ITS HEALTH AND SAFETY WORK, TO 1959

1,711,529,994 health and safety pamphlets, including French editions for use in Quebec, have been selectively distributed in the United States and Canada.

280,204,504 represent the total audience which has seen Metropolitan's health and safety motion pictures in theaters, on television, and elsewhere.

12,625,000,000 advertising messages on health have appeared in national magazines.

53,560 showings of professional and popular exhibits on health and safety have been held.

And countless millions throughout the United States and Canada have heard the Company's health radio broadcasts.

A SELECTED LIST OF CURRENT METROPOLITAN HEALTH AND WELFARE PUBLICATIONS

FAMILY HEALTH

ABC's of Childhood Disease
After a Coronary
Emotions and Physical Health
First Aid
Help Yourself to Health
Home Nursing Handbook
Six to Eight: Years of Discovery
Stress — And What It Means to You
Understanding Your Teen-Ager
Understanding Your Young Child
What You Should Know About Cancer
When Our Parents Get Old
Your Teen Years

NUTRITION

Food for the Family
For a Prettier, Peppier You
Hidden Calories
How to Control Your Weight
Metropolitan Cook Book
Nutrition for the Family
What Foods Do You Choose?
What Is Your Best Weight?

SAFETY

A Formula for Child Safety
Caution, Babies Learning
Guide to Good Driving
Your Family's Safety

SCHOOL HEALTH

About Us and Our Friends
Absent From School Today
Aids for Health Teaching (CATALOG)
First Steps in Health Education
Health Bulletin for Teachers (PERIODICAL)
Health Goals for Youth
Health Heroes Biographies
Health Through the Ages
Suggested Student Activities and Projects
What Teachers See

OCCUPATIONAL
HEALTH AND SAFETY

Facts About Menstruation
Ways to Teach Nutrition in Industry
Your Employee Health Program

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INSURANCE COMPANY

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A Look at the

BUREAU OF OCCUPATIONAL SAFETY AND HEALTH

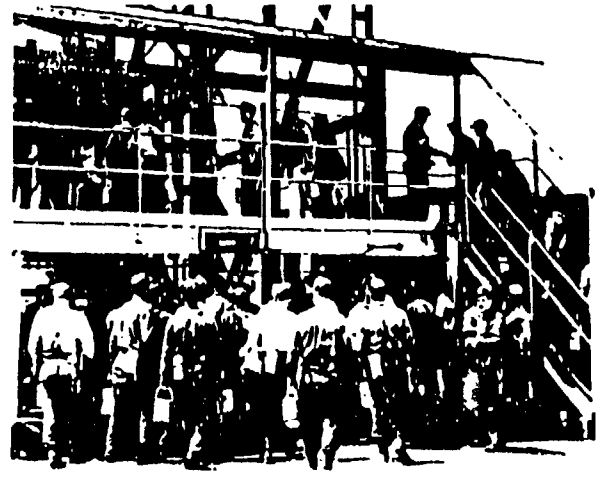
U. S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE

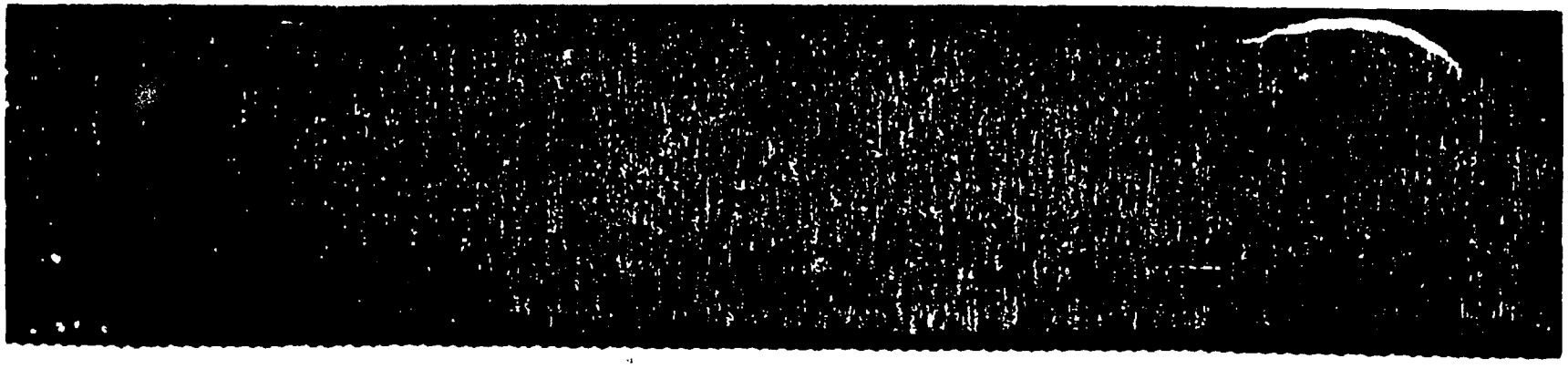
OCCUPATIONAL HEALTH: A NATIONAL PROBLEM

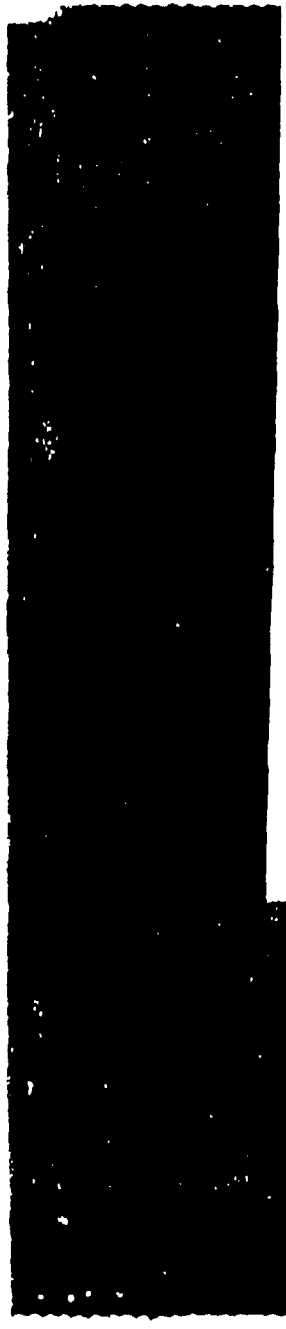
Eighty million people, or 40 percent of the United States population, earn their living in factories, offices, stores, farms, and other work sites. And the remainder of the population is dependent, directly or indirectly, upon the productivity of those who work.

The workers pay 60 percent of the taxes, but their health gets little attention. Two out of three of these men and women work in plants with fewer than 500 employees — plants which usually provide no health services at all. No more than 20 percent of America's workers have even a doctor or nurse on duty at their place of employment.

Every minute of every workday, an American worker — a Pittsburgh factory worker, a Texas rancher, a suburban garage mechanic, or even a secretary — becomes ill or is permanently harmed by a chemical, mineral, or other substance encountered at work. In fact, it is estimated that, each year, over 300,000 workers suffer diseases directly related to their jobs. Two thousand deaths occur annually from the pneumoconioses alone. The potential for exposure is ever increasing, and the development and introduction of new chemicals is frequently more rapid than the documentation of their long



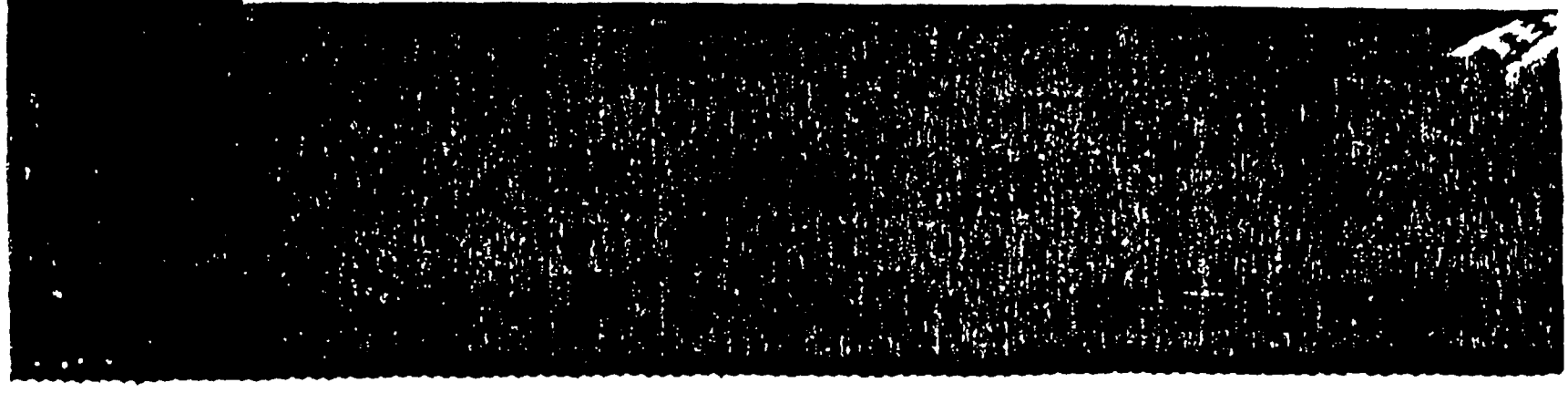




range toxicity. Exposure to physical agents in the form of noise, ionizing and non-ionizing radiation, heat, and cold increases the potential for disease, and the psychic stresses and fatigue of working and commuting take their toll in on-the-job and off-the-job accidents.

The problem, then, is a serious one. But occupational illnesses are preventable diseases. Most on-the-job health damage need not occur if known, effective methods of protection are applied in the workplace. And modern science has the capacity to combat even the new and unfamiliar hazards. hazards often created by science and technology.

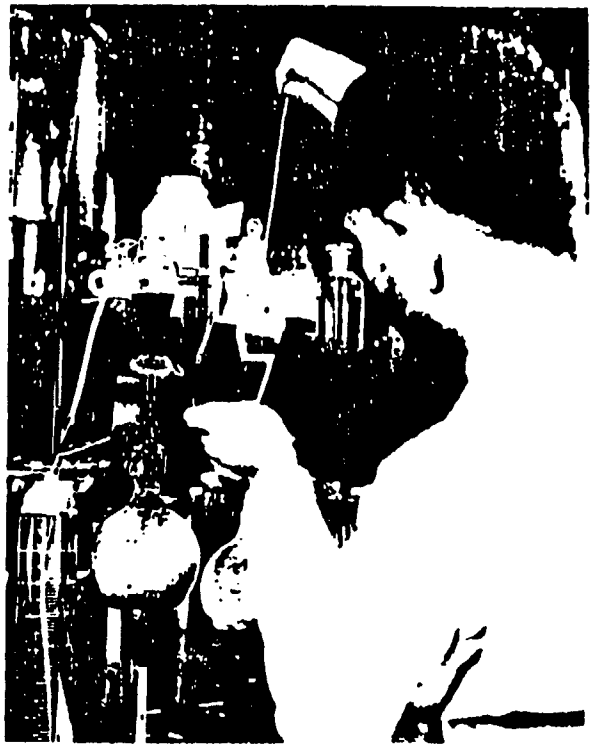
OCCUPATIONAL HEALTH...



THE FEDERAL PROGRAM IN OCCUPATIONAL HEALTH

Over 50 years ago, the Public Health Service launched a national program to protect and improve the health of American workers. For half a century, the program has emphasized the prevention and control of occupational diseases and health hazards and preventive health services for employees.

The Bureau of Occupational Safety and Health, Environmental Control Administration, is the principal occupational health agency of the Federal government. The Bureau performs epidemiological, clinical, and laboratory research, conducts short-term training courses, and provides a system for rapid storage and retrieval of technical information on occupational safety and health. Technical and consultative services are provided to States.



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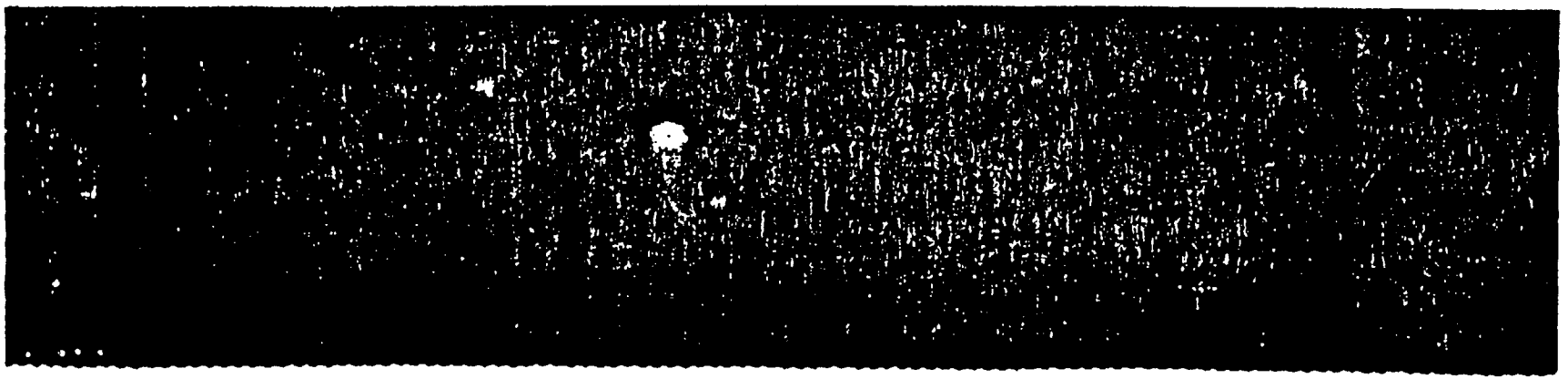
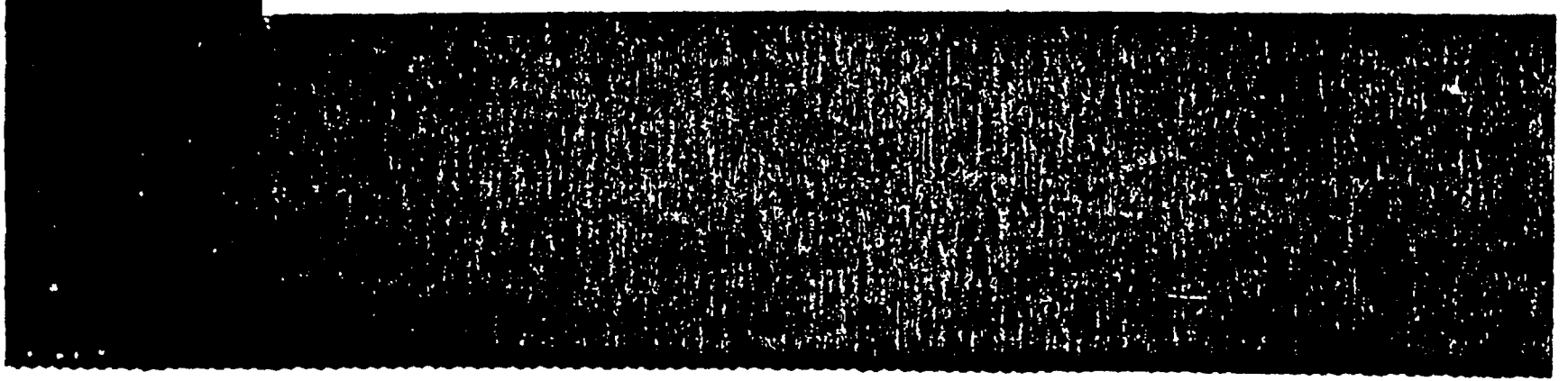


Federal agencies, industry, labor, and other groups. The Bureau also disseminates a wide variety of technical and informational materials. Headquarters offices for the Bureau are located in Rockville, Maryland. The main laboratories are in Cincinnati, Ohio, with field laboratories in Salt Lake City, Utah, and Morgantown, West Virginia.

Since the inception of this Federal program, thousands of workers have benefited from studies of such problems as chest diseases in mining, granite quarrying, and pottery making; lead and mercury poisoning which are ubiquitous; radium poisoning in the watch industry; lung cancer in the chromate-producing industry and uranium mining; and industrial fatigue, illumination, and noise in a variety of industries. The Bureau's study of skin diseases, a leading occupational health problem, has reached into practically every segment of American industry.

While great strides have been made in the control of occupational diseases in the past half century, many of the old problems remain -- health hazards that, in some cases, go back as far as the Bronze Age in man's occupational pursuits. Lead, zinc, mercury, silica, carbon tetrachloride, carbon monoxide, and many other industrial exposures have been well studied. And there is sufficient knowledge available to control them. But still they offer threats to workers. Control procedures break down, are ignored, or allowed to deteriorate.

For example, a recent survey of lead and zinc smelters in one State indicated that controls instituted almost 20 years ago had deteriorated to the point where they were little better than those they had replaced. In other words, today in the space age we are still facing many of the same old problems that first became widespread during the Industrial Revolution.



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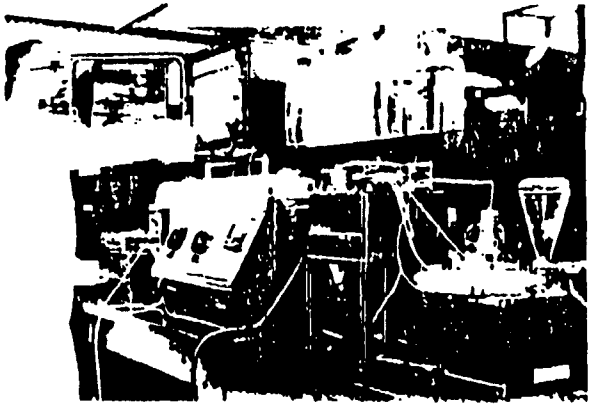
In the meantime, new technology has created a whole new kind of work environment, with a whole new set of hazards and potential hazards. Each step in man's scientific progress — bringing with it tremendous benefits to mankind — has brought, at the same time, unforeseen threats to man's health, or happiness, or peace of mind.

In this new world, the threats themselves are little understood by the worker or his employer. It is in the industrial situation, moreover, that man is first exposed to materials which subsequently contaminate our air and water, endangering the whole population.

Furthermore, new processes and massive, high-speed, automated industrial machines have created possibilities for accidental injury and increased occupational exposures that go far beyond the worker's capability for self protection.

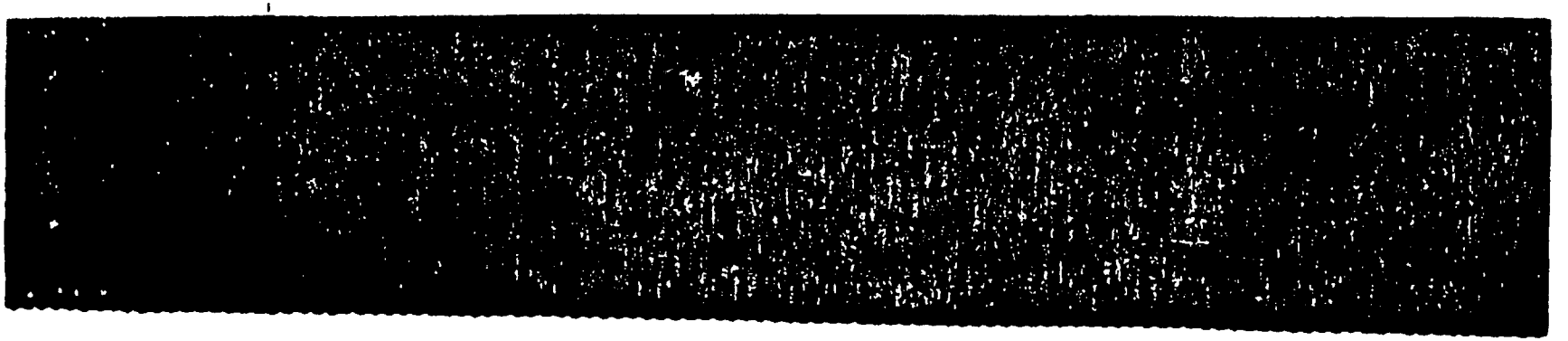
For example, high energy sources such as lasers, which just a few years ago were tools of the scientist, are now commonplace in industry.

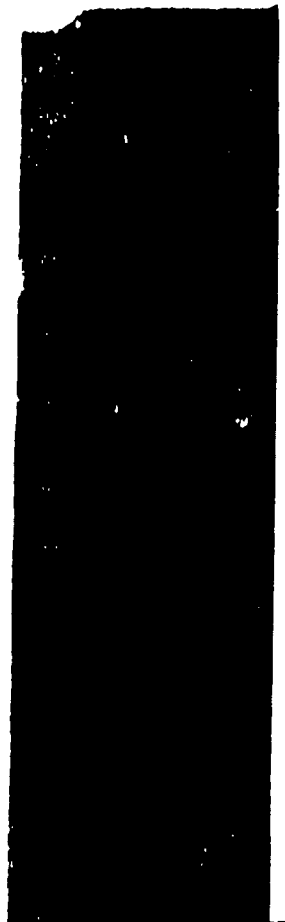
To deal with these special problems, the Bureau is studying the effects of dusts, chemicals, and other environmental hazards on the body and developing preventive and control measures which can be effectively applied in industry. Where serious and widespread problems are suspected, Bureau industrial hygienists perform



industry-wide surveys of the work environment. Physicians, nurses, engineers, chemists, toxicologists, statisticians, physicists, physiologists, and psychologists combine their skills to assess the effects of job hazards on health and efficiency.

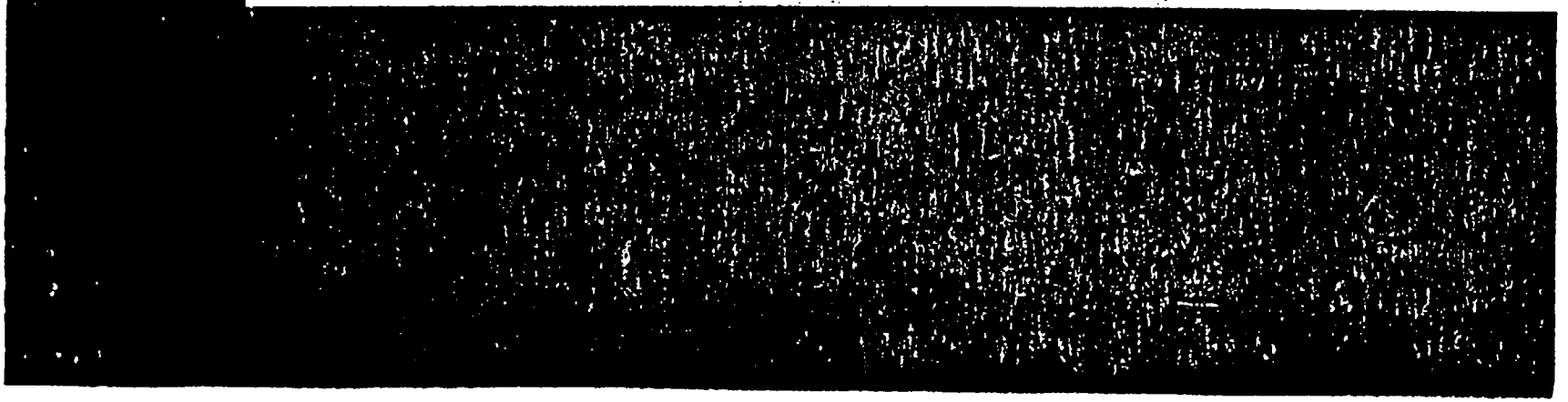
In addition, the Bureau has helped promote occupational health programs in State and local governments throughout the country. Today, all but a few States maintain occupational health units as do a number of local jurisdictions. Direct professional assistance and help in program planning are also provided. Bureau analysts



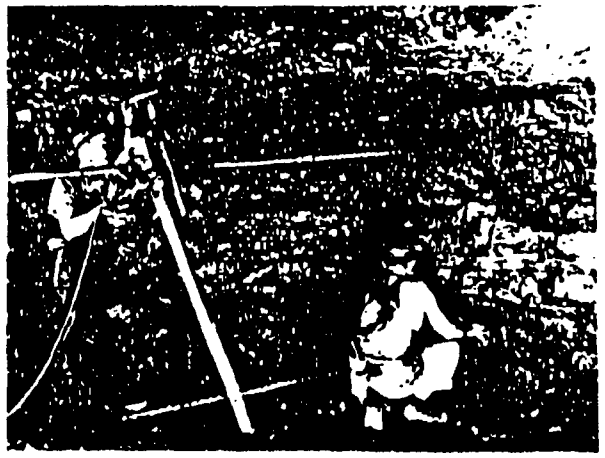


have made a comprehensive study of State and local laws, rules, and regulations pertaining to occupational health.

Through the years, the Bureau has carried out a broad range of activities to uncover and control occupational health problems in many industries. The following discussion includes highlights of current research and field studies programs.



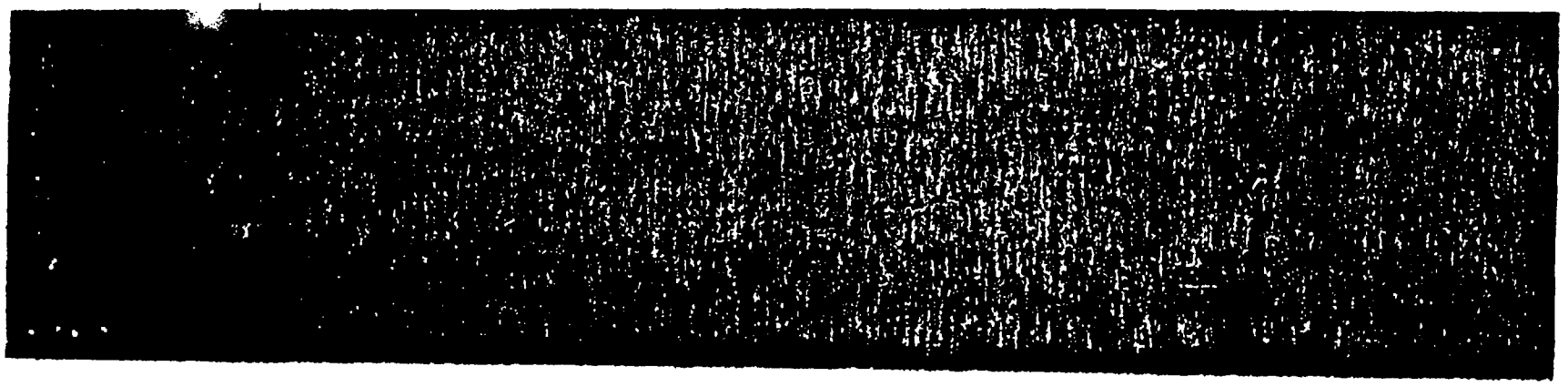
Coal Miners' "Black Lung"



Certainly the occupational respiratory diseases, in terms of disability compensation, represent one of our most important occupational health problems, and one in which adequate controls would pay big dividends, both in reduction of human suffering and in dollars and cents savings to the workers affected, to industry, and to the taxpayer.

Black Lung, or coal miners' pneumoconiosis, is a progressive, crippling lung disorder caused by long exposure to coal dust. It is often complicated by emphysema in the later stages. The death rate from respiratory diseases in soft coal miners is five times that of the general population. It has been estimated that 100,000 soft coal miners in the United States have some degree of pneumoconiosis.

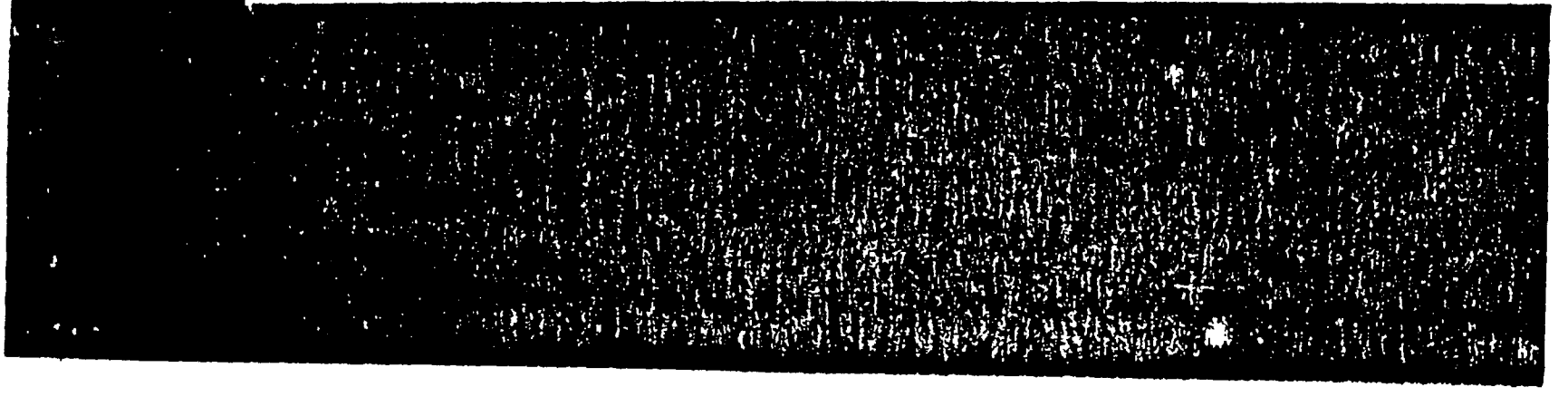
Most of the research on coal pneumoconiosis is conducted by the Bureau's Appalachian Laboratory for Occupational Respiratory Diseases (ALFORD) in Morgantown, West Virginia. ALFORD scientists have conducted medical evaluations — including pulmonary function testing, vector-cardiography, and biochemical analyses — in coal miners to develop better clinical methods of diagnosis.



An industrial hygiene standard for the amount of coal dust a miner can safely breathe has been recommended and should prove to be an important contribution in preventing the disease.

In addition, ALFORD is involved in a long-term, medical-environmental study of 5,000 coal miners in over 30 mines throughout the country. The study, conducted in cooperation with the Department of Interior's Bureau of Mines, is designed to obtain more recent estimates of the number of miners who have coal pneumoconiosis and to check the adequacy of the standard. Data on pulmonary function, X-ray, and work history are being collected from the volunteer miners who are surveyed.

OCCUPATIONAL HEALTH...



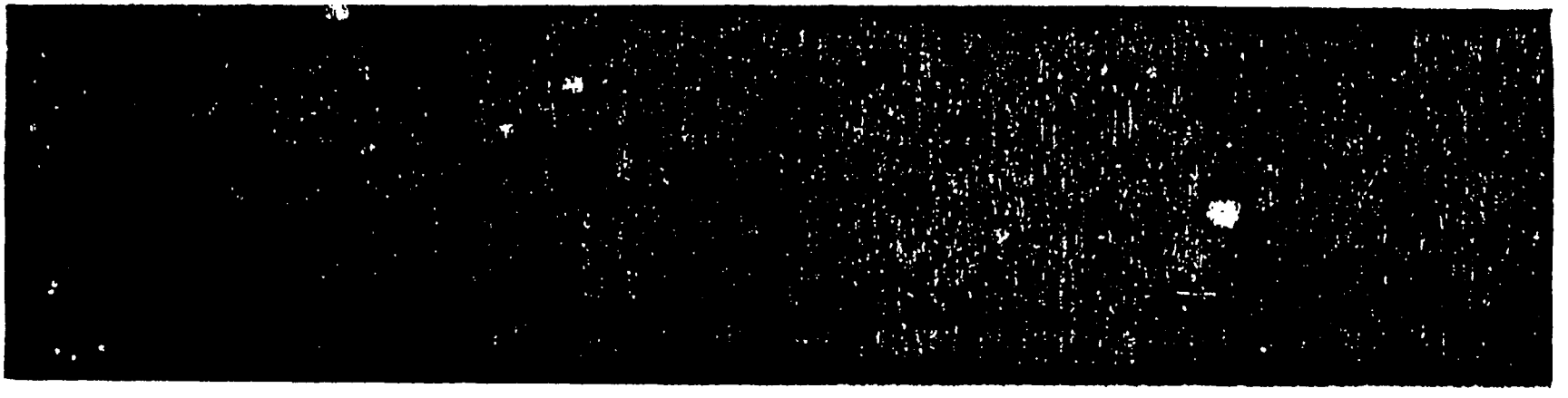
EALTH...

Uranium Mining

For several years now, Bureau researchers have been studying the health hazards associated with the uranium mining industry. Investigative surveys indicate that some miners are developing lung cancer from breathing uranium decay products in the mine. Of the 6,000 men who have been uranium miners, an estimated 600 to 1,100 will die of lung cancer within the next 20 years because of radiation exposure on the job. Studies also indicate that the chance of getting lung cancer is directly related to the degree of exposure.

Most of the research in uranium is conducted by the Bureau's Western Area Occupational Health Laboratory in Salt Lake City, Utah. Epidemiological and environmental studies have been conducted to determine a safe working level for alpha radiation exposure. Current research is centered on developing diagnostic technique and evaluating the effectiveness of control measures.

OCCUPATIONAL HEALTH...



Asbestos

Three and a half million American workers are exposed to asbestos fibers in their jobs. They face a dual threat: not only are they subject to the lung scarring pneumoconiosis of their trade, asbestosis, but they are also endangered by lung cancer associated with the inhalation of asbestos fibers. Recent studies of asbestos insulators showed that one of every five deaths in this group were caused by lung cancer — seven times the expected rate. Half of the men who had worked in the trade had X-ray evidence of asbestosis. One in every 10 deaths were caused by mesothelioma, a rare cancer of the lung that strikes only one in 10,000 in the general working population.

The Bureau has conducted environmental evaluations of more than 10,000 asbestos workers in the friction, textile, cement, and building products industries to characterize worker exposure to asbestos fibers. In addition, medical surveys have been initiated to establish the present health status of workers.

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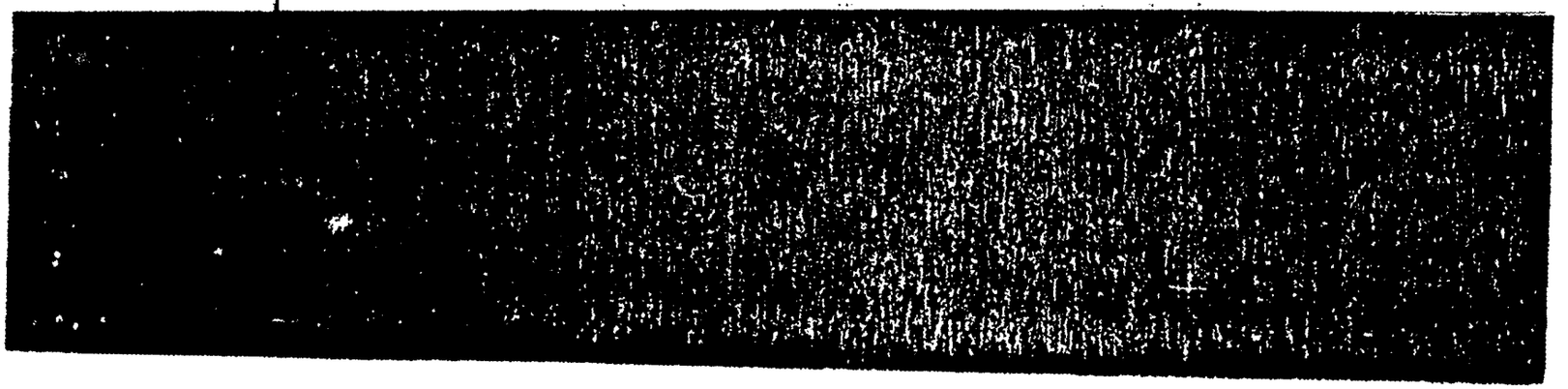
Beryllium

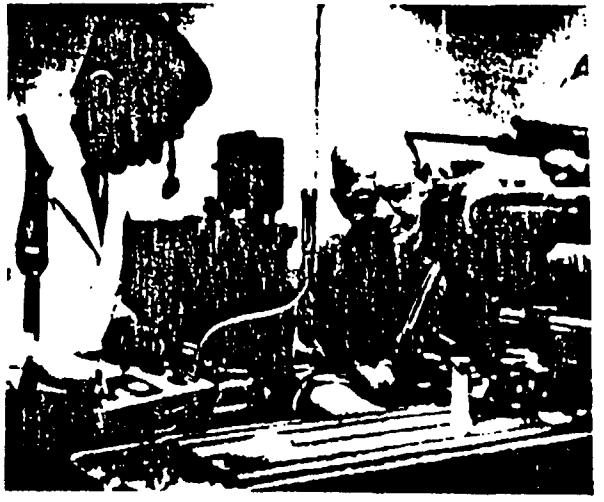
An estimated 500,000 workers are exposed to some form of beryllium, a strong, lightweight metallic element. Long exposures to beryllium and certain of its components can cause skin disease, conjunctivitis (eye disease), acute pneumoconitis (lung disease) and chronic pulmonary berylliosis which can be fatal.

Much of the beryllium is used as an alloying agent with copper. In the aerospace industry, typical applications are rocket interstage spacers and aircraft brakes. Beryllium also is used in the construction of nuclear reactors.

The Bureau has undertaken a comprehensive survey in major American industrial plants producing and using beryllium to determine the extent of beryllium disease and to identify factors that may contribute to its development. The study includes medical investigations of beryllium workers, detailed studies of the environment in which they work, and a review of mortality records. One of the main objectives of the study is to determine safe levels of exposure to beryllium and its compounds and to establish recommendations for engineering control methods.



Noise

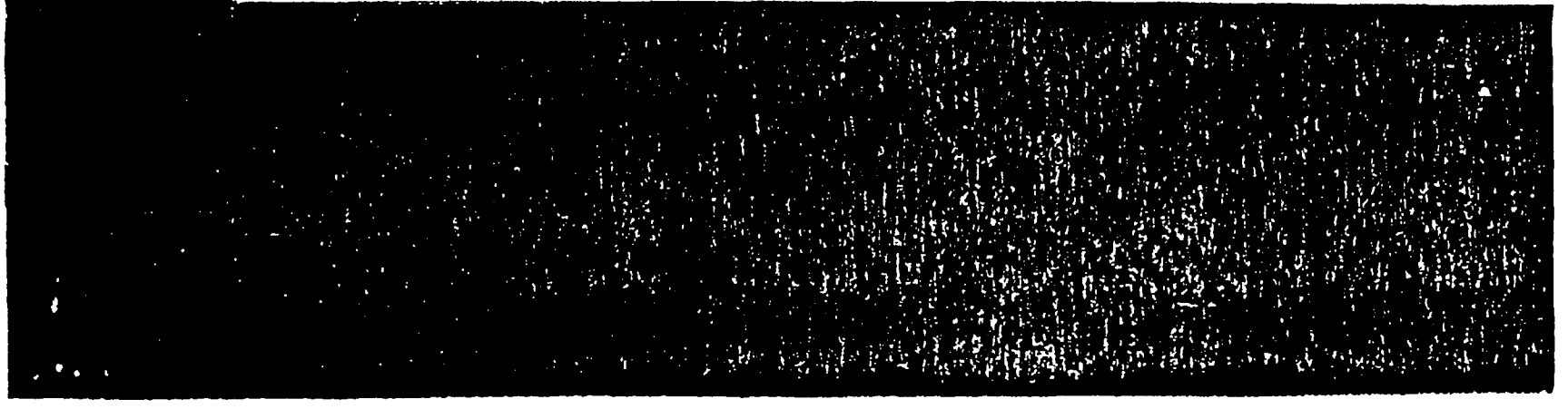


An estimated seven million industrial workers in this country are exposed to noise levels in the work place that could damage their hearing. The general health and well-being of countless other millions of Americans are threatened daily by the variety of noises that accompany our busy and mobile society — noise from airplanes, highway traffic, even appliances around the house.

But the main source of noise-induced hearing loss is the worksite. To deal with this serious problem, the Bureau established a National Noise Study in 1967. Researchers are working to identify the effects of noise on the health, productivity, and well-being of workers.

In a specially-equipped mobile van, noise and hearing surveys are being conducted in a variety of industrial sites all over the country. Workers are being tested to determine how exposure to machinery and general factory noise affects hearing. Noise levels within the respective plants are also being measured. The data collected from these surveys will be used to document criteria for safe noise exposure.

Hearing tests have been performed on workers in steelmaking, metal fabrication, paper products, printing,



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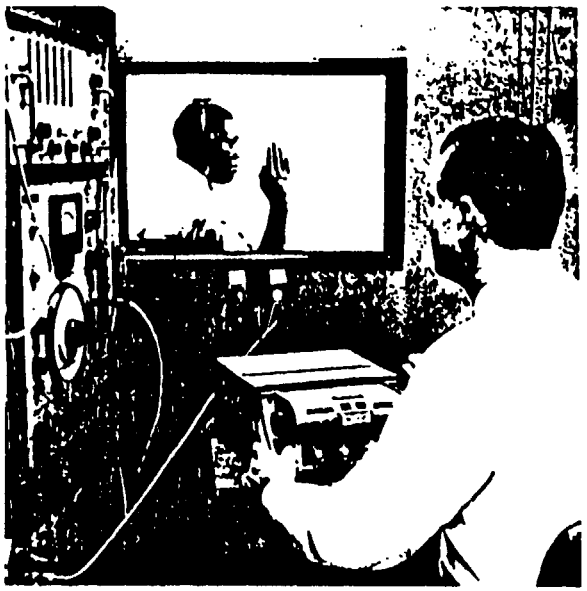
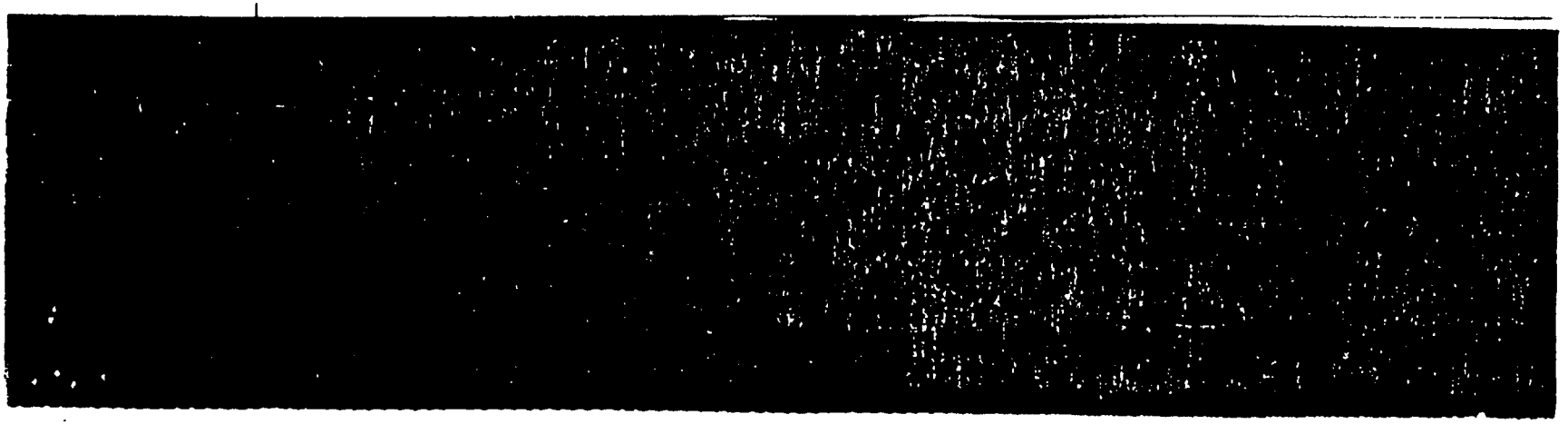
quarrying, lumber cutting operations, and earth-moving and heavy construction work. Laboratory studies include the determination of hearing loss produced by continuous and impulse types of industrial noise, and the psychological effects of noise, particularly the alterations in perception and in the ability to learn and perform complicated tasks.



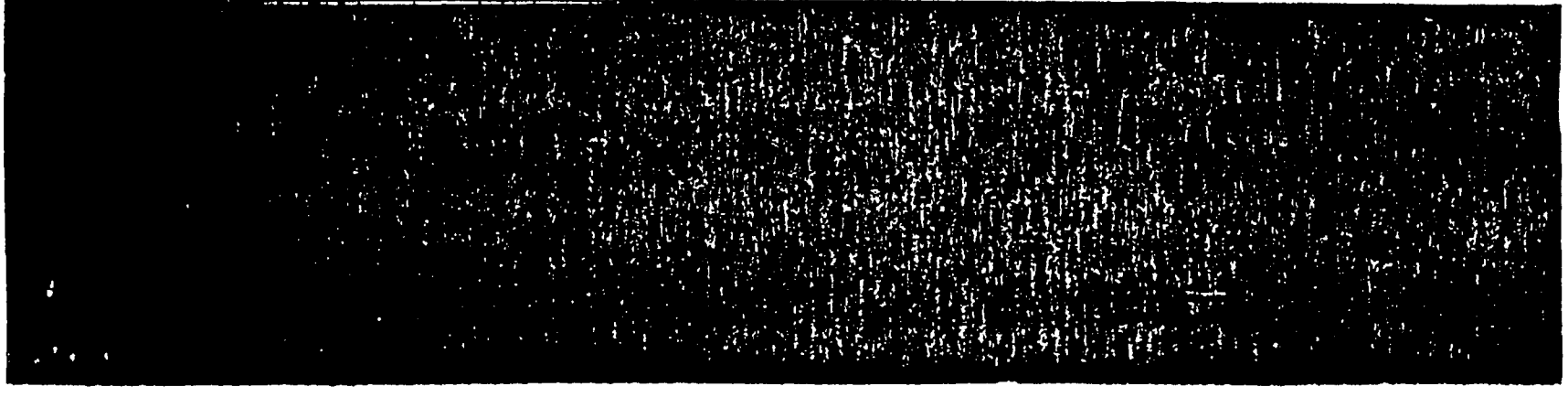


THE CHALLENGE IN OCCUPATIONAL HEALTH

Occupational diseases then, represent a most serious health problem that has not received the national attention that it should. Many employees are continually threatened by a variety of job-related diseases — from skin rashes to lung cancer.

And it isn't only factory workers and miners who are affected. Occupational illness is also a serious threat to mechanics, dry cleaners, farmers, and many others, even office workers and secretaries.

The Bureau of Occupational Safety and Health continues the search to develop better techniques, materials, and equipment for detecting and controlling occupational hazards and diseases. In training, consultative, and health education services, knowledge gained through re-



search is passed on to other agencies and organizations with responsibilities for worker health, to those in the health professions, and to the workers themselves.

Conserving and protecting the health of people who work should become a vital concern to all Americans. What about your job and your health? If you do not have sufficient health services where you work, consult your personal physician and discuss potential hazards to which you might be exposed.

For further information on job health hazards write:

Office of Information
Bureau of Occupational Safety and Health
Environmental Control Administration
U. S. Public Health Service
1014 Broadway, Cincinnati, Ohio 45202

OCCUPATIONAL HEALTH...

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U. S. GOVERNMENT PRINTING OFFICE : 1969 O - 355-143