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Statement of

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Department of Health, Education, and Welfare

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Mr. Chairman and Members of the Subcommittee:

I am pleased to appear before you today to discuss how we have implemented certain aspects of our research program mandated by the Occupational Safety and Health Act of 1970. I am accompanied by Dr. Bobby F. Craft, Director of the Division of the Surveillance, Hazard Evaluations and Field Studies; Dr. Joseph K. Wagoner, Chief of the Industrywide Studies Branch; and Mr. Howard Walderman, an attorney with the Public Health Division of the Department's Office of General Counsel. The primary subject of our testimony today will be a discussion of our efforts to notify workers of health hazards that they may have encountered on their jobs and to assist them in entering the medical care system for early diagnosis and treatment if indicated. We will also point out a number of areas where further efforts are required by NIOSH, by other government agencies, by industry, by organized labor and by the academic community.

NIOSH was established by the Occupational Safety and Health Act of 1970 to conduct programs of research, standards development, technical assistance and manpower development. One of our Institute's most important responsibilities under this act is to transmit recommended standards to the Occupational Safety and Health Administration (OSHA) in the Department of Labor. The NIOSH recommendations are intended to serve as the basis, along with other available information, for assisting OSHA in developing new standards and in revising the approximately 400 consensus health standards, consisting only of an environmental limit, that were promulgated when the act was passed.

NIOSH has transmitted more than 60 criteria documents recommending new health standards to the Department of Labor. These criteria documents include an environmental limit for workplace exposure, as well as recommendations on the use of labels and other forms of warning, type and frequency of medical examinations to be provided by the employer, sampling and analytical methods, procedures for technological control of hazards, and suitable personal protective equipment. In addition to criteria documents, under a joint Standards Completion Program with OSHA we have developed draft technical standards for most of the consensus health standards. These standards supplement the existing environmental limits with procedures for informing employees of hazards, monitoring techniques, engineering and control mechanisms, and medical surveillance programs. Once these recommendations have been promulgated into standards, and these standards are enforced, workers should be protected from many of the most serious occupational exposures.

These recommendations are based on laboratory and epidemiologic research conducted by NIOSH and others. This testimony will focus on the kinds of epidemiologic investigations conducted by our industrywide studies program and the procedures we follow in these studies to identify occupationally related hazards and to notify affected workers.

The two most common types of studies we conduct involving workers are retrospective cohort studies and cross sectional medical studies. In cohort studies we obtain employment records from unions, professional societies, and companies for purposes of classifying workers according to departments where they worked, their job category, and the duration of

their employment. Personal identifiers, including name and social security numbers, obtained during this process are used to determine the vital status and current address of the individuals through records kept by other Federal agencies, such as the Social Security Administration, and, until recently, the Internal Revenue Service. When we learn that an individual is deceased we attempt to obtain a copy of the death certificate from the State in which the death occurred. Using the death records, we contrast the observed risk of dying from specific diseases among our study population with the risk expected in that population if they had not been subject to the occupational exposures. To make these comparisons we use as control groups either the general population or another industrial population not exposed to the agent under investigation.

In cross sectional medical studies we elicit a personal history and physically examine workers who have had exposures to agents under investigation as determined by industrial hygiene sampling. The results of these medical examinations are compared with accepted medical norms or similar test results from another population not exposed to the agent in question. In both study approaches the medical, statistical, and industrial hygiene disciplines contribute to the identification of occupationally related health problems.

NIOSH has promulgated regulations governing field investigations (42 CFR Part 85A). Under these regulations, it is our practice to meet with company management and with employee representatives before initiating a study to explain its purpose and scope. Before conducting medical examinations, investigators must receive specific approval from the NIOSH

Human Subjects Review Board and the informed consent of each employee examined. All employees we examine and their designated physicians are notified of the results of these medical examinations. Before releasing final reports on group data (with individual identifiers removed) we provide draft copies to employers and employee representatives for their comments on technical accuracy. The results of our epidemiologic studies are presented in NIOSH criteria documents and technical reports, in scientific journals, at scientific meetings, and at OSHA hearings on workplace standards.

Workplace investigations are also conducted in our health hazard evaluation program. Under this program we respond to requests from employers and employee representatives to investigate a workplace, collect environmental samples, make toxicity determinations, and provide medical examinations for workers. The results of these investigations, including recommendations for work practices, personal protective equipment, and engineering controls, are reported back to plant management, employee representatives, and OSHA.

INFORMATION DISSEMINATION

A vital part of our research program is getting information to those who can put it to good use--workers, employers, occupational safety and health professionals, other government agencies, and other researchers. Toward this end NIOSH has developed a program of information dissemination. This year we will issue over 100 different NIOSH publications and many additional articles appear in scientific journals. We will distribute about one and one half million copies of our publications and additional

copies will be available from the Government Printing Office and the National Technical Information Service of the Department of Commerce. One of these documents, used primarily by health professionals, is our annual Registry of Toxic Effects of Chemical Substances, which in 1976 listed approximately 21,000 different chemicals. A subfile of suspect carcinogens from that list contained 2,400 substances and another subfile is being developed on pesticides and agricultural chemicals. NIOSH also sponsors conferences and publishes their scientific proceedings. In addition to publishing scientific proceedings of a conference on occupational carcinogenesis, which we co-sponsored, we are publishing a version written in non-technical language to be used by workers and other laymen.

We have developed a series of health and safety guides specifically targeted on small businesses. These guides, covering such diverse establishments as auto repair and body shops, foundries, and sporting goods stores, give general health and safety guidelines and provide a checklist of OSHA regulations applicable to that particular establishment. We also have a series of good work practices manuals for workers in different occupations.

A criteria document, "An Identification System for Occupationally Hazardous Materials," which was transmitted to the Department of Labor in 1974, presented a uniform identification system that would alert employers and employees to hazardous chemicals through placards, labels, and material safety data sheets. This system would provide for the identification of hazardous materials, indicate the degree and type of hazard, describe symptoms of overexposure, and prescribe safe handling procedures, emergency

care, and disposal methods. Adherence to such a system would substantially improve the information available on chemical exposures in the workplace.

Criteria documents can serve a useful purpose even before being promulgated into enforceable standards. They are widely distributed and many companies and unions use them as a basis to control hazards even though the documents do not have the force of law. They provide an up-to-date review of the existing literature and state of knowledge on a hazard and serve as an impetus for further research by NIOSH and others.

Late this year NIOSH will publish five documents summarizing in non-technical language the supplemental information developed on the consensus health standards promulgated by OSHA. One document will be a general guide, one will be a pocket handbook, and the remaining documents will cover respirators, personal protective equipment and medical monitoring.

We issue current intelligence bulletins when we receive new information on potentially dangerous chemical substances. In 2 to 4 weeks we can provide background information on the chemical, including its known toxicity to man and animals, known producers and users, estimated extent of occupational exposure, and further NIOSH action planned. These bulletins are now distributed to 1,200 representatives from the occupational safety and health community, other government agencies, management, labor, and public interest groups.

NATIONAL OCCUPATIONAL HAZARD SURVEY

Despite these efforts we recognize that employers and employees are still not generally well informed about occupational health hazards. Between 1972 and 1974 NIOSH conducted a National Occupational Hazard Survey

to determine the extent of worker exposure to chemical substances and physical agents. Visits were made to 4,636 workplaces selected to provide a representative cross section of industry type and size. The NIOSH teams collected general information about each plant, such as its major product or service, the number of employees, and the availability and kind of medical care. They also recorded the number of workers in each job category potentially exposed to chemical and physical agents.

Although we have had access to certain aspects of the survey in making rough estimates of specific workers exposures, we are just now beginning to be able to use the data in establishing priorities and projecting worker exposure to a large number of hazards. A major problem in completing the study is that companies surveyed were often not aware of the chemical composition of the substances used in their plant. Over 70 percent of the exposures identified were recorded as trade name products for which the chemical composition was not known to the company. We contacted more than 10,000 manufacturers to identify precisely what chemicals were contained in these trade name products. To date, we have determined the chemical composition of only slightly more than half of those trade name products.

Based on our survey, we estimate that more than 7 million workers in the United States are exposed to trade name products containing an OSHA-regulated toxic substance. Even more disturbing, our survey indicates that there may be more than 300,000 workers exposed to trade name products containing one of the 16 carcinogens currently regulated by OSHA. A single employee may be exposed to more than one regulated hazard or to more than one regulated carcinogen. In these cases, neither the employer nor the

employees may have been aware of the ingredients of these products because they were known by trade name rather than by chemical composition. In our survey, the manufacturers designated as trade secret nearly one third (32.5%) of the products containing an OSHA-regulated substance and more than one third (35.4%) of the products containing a cancer-causing agent.

In administering our responsibilities under the Occupational Safety and Health Act of 1970, we have identified a number of problem areas in occupational health that are not being adequately dealt with by our Institute, by other government agencies, by management, by labor, and by the academic community. We would like to state the problems as we see them and offer suggestions for dealing with them through the combined efforts of various sectors of society.

INFORMING EMPLOYEES AND EMPLOYERS ABOUT WORKPLACE EXPOSURES

The National Occupational Hazard Survey shows that the widespread use of trade name products and lack of a uniform system for labeling hazardous materials makes it difficult for workers to know what substances they are exposed to. This problem is compounded by the frequent claim that product ingredients are trade secrets, even though they may be known to be toxic or even cause cancer. Interactive effects of certain mixtures can be more toxic than any of its separate components, as for example rust preservatives (nitrites) and emulsifiers (amines) used in some cutting and hydraulic fluids have the potential to combine to form nitrosamines, a potent class of carcinogens.

NIOSH will take the following steps with regard to information collected during the National Occupational Hazard Survey:

- Transmit to OSHA and EPA a listing of trade name products that contain an OSHA-regulated carcinogen.
- Notify companies that we intend to make information on the presence of an OSHA-regulated carcinogen in a trade name product generally available if it has not been designated as trade secret. If the presence of an OSHA-regulated carcinogen in a product has been designated as a trade secret, we will attempt to remove that designation in accordance with procedures set forth in 42 CFR section 85.7(b). These procedures were administratively adopted by NIOSH to apply to "trade secrets" obtained in the survey. We will notify companies in writing that we question and intend to remove the trade secret designation. Companies have 15 days from notification to provide evidence to support their claim that the information is in fact a trade secret. When trade secret designations are removed NIOSH will make the information available to the public.
- Notify companies that have not revealed the composition of their trade name products to NIOSH that we believe they should take immediate steps to inform their customers if one or more of their products contains an OSHA-regulated carcinogen and inform us of what action they are taking.
- Offer to assist workers, employers, or formulators of trade name products to find out whether or not their products contain an OSHA-regulated carcinogen. We believe responsible trade associations and private laboratories can assist in this effort.
- Request that the Environmental Protection Agency take regulatory action under the Toxic Substance Control Act that will assure labelling of any trade name product containing an OSHA-regulated carcinogen.
- Consider similar steps for trade name products containing other OSHA-regulated chemicals or any chemicals newly identified as posing health hazards. We believe, however, that it is important to deal first with currently regulated carcinogens.
- Continue our efforts to resolve the components in trade name products collected during our National Occupational Hazard Survey and develop a mechanism to update that survey.
- Continue to support adoption of a uniform labelling and warning system such as that recommended in our 1974 criteria document.
- Propose that a clearinghouse be established, either by the government or by private industry, to provide information on trade name products that would protect consumers and workers without revealing legitimate trade secrets. Cosmetic labeling regulations, recently promulgated by the Food and Drug Administration, which list constituents in order of diminishing concentration without revealing the precise amount might serve as a useful beginning.

Medical Follow-up of Workers Exposed to Toxic Substances

NIOSH has been criticized for not informing all workers in our past study populations that they may have been exposed to hazardous chemical or physical agents and ensuring that they receive the opportunity for diagnosis and treatment where indicated. We recognize the need for such

notification and medical follow-up and have been vocal in stating that, except in certain limited cases, the need is not now being met. Conducting such a program on our own would be beyond our existing resources and legislative authority, which are primarily directed toward providing the scientific basis for standards to prevent future occupational exposures.

We have already mentioned ways in which we notify workers on the results of our studies. We discuss the results of our research with management and labor at plants where the studies were conducted. Although we do not notify workers individually, unless we have examined them, we expect that those still employed at the plant would generally be informed about our study results by their union or by management. We would not expect that workers in other similar plants would be directly informed about the results of our studies. An even bigger problem involves workers who once worked in such plants but no longer do so. These workers who may have changed jobs or retired are less likely to know of health risks attributable to past workplace exposures.

For certain specific populations shown to be at high risk we have worked with the National Cancer Institute to ensure that medical examinations are provided to affected workers. Two such examples include former asbestos workers in Tyler, Texas, and former benzidine workers in Baltimore. We have also assisted management in providing medical examinations to former worker of a bis-chloromethyl ether plant. We are currently providing medical examinations to all interested current and former employees of the Velsicol Chemical Plant in Bayport, Texas, who were exposed to the pesticide Phosvel, a neurotoxin.

We are aware that these limited programs do not assure adequate follow-up of exposed workers. Such a program would require the combined efforts of all government agencies involved in evaluating or regulating substances to which workers are exposed. It would also involve the efforts of private industry and academic institutions that conduct occupational health studies. It would certainly involve those industries which expose their employees to toxic substances and unions representing their workers.

The success of such an effort will also depend on the existence of a supply of occupational safety and health professionals and a health care system adequate to meet the increased demand for services. As a physician, I must also point out that although medical surveillance for early diagnosis and possible treatment of occupational disease can be helpful, it also has its limitations. There are a number of occupational illnesses, including certain forms of cancer, which do not respond well to available medical and surgical treatment. New diagnostic techniques are being developed that might indicate which individuals are at greatest risk, but we do not yet know whether widely applying them would assure diagnosis in time to change the course of the illness. An example of such a technique is exfoliated cytology, that is, examining cells from the respiratory tract, the bladder, and other sites for pre-cancerous changes.

By pointing out the limitations of current medical surveillance techniques, I do not mean to say that medical surveillance of workers at risk is not important. Potentially high risk workers should in fact be provided with the best medical screening and care that current science and technology allow. At the same time we in the Federal government should

encourage research that will provide more effective methods of diagnosis and treatment.

There are additional barriers to assuring adequate follow-up of exposed workers. The Occupational Safety and Health Act of 1970, unlike section 203 of the Federal Coal Mine Health and Safety Act of 1969, does not provide for the right of transfer to a less hazardous worksite at the same rate of pay once a worker shows clinical evidence of occupational illness. It has been our experience that some workers, once notified that they may have health problems, refuse to seek further medical evaluation because they fear loss of their jobs once their condition becomes known. For example, a lead worker with impaired renal function, who should receive no further lead exposure, may not be able to get such a job assignment, yet is very unlikely to get compensation until clinical disease is further advanced.

Workers' compensation laws do not adequately address occupational diseases, especially those with long latency periods or those that have multiple causes. Workers' compensation laws do not generally provide for payments to a worker who may show evidence of impaired functional ability but not frank clinical disease. Yet evidence of early disease, impaired functional ability, or even a previous work history of exposure to agents that induce disease after a long latency period may be sufficient to limit employment opportunities for workers. This is because the employer of last record is usually responsible for compensation even though exposures at previous worksites may be partially or wholly responsible for late developing illnesses.

The question we must ask is what can each sector of society do now to notify workers about occupational hazards they encounter and provide adequate medical care and compensation for those affected.

NIOSH is taking the following steps:

- .We will seek further assistance from the National Cancer Institute in ensuring that specific worker populations are notified and placed in health care systems.
- .We will ask the National Advisory Committee on Occupational Safety and Health (NACOSH) to advise NIOSH and OSHA on the regulatory, social and health aspects of informing, protecting, and caring for exposed workers.
- .We have drafted regulations that would enable us to require employers to provide their employees with medical examinations at NIOSH expense under certain circumstances.
- .We will notify all employees whose medical records were submitted to NIOSH pursuant to provisions in OSHA carcinogen standards of their potential exposure to a cancer-causing agent. We will assist these employees in obtaining access to medical care.
- .We expect to begin funding educational resource centers to train occupational physicians and nurses, industrial hygienists, safety engineers, and related professionals by the end of the fiscal year.

In addition, we would support the following steps to be taken by others:

- .Other government agencies need to examine their provisions for worker notification and follow-up.
- .We are supporting OSHA's efforts to promulgate comprehensive health standards at a faster rate. Such standards would prescribe medical examinations required to be made available by the employer to his employees presently exposed to the hazard.
- .A mechanism needs to be developed to ensure medical examinations for employees who have retired or found other jobs, since it is doubtful that they would be covered by medical surveillance provisions of OSHA standards.
- .Companies and unions must also take responsibility for determining what hazards are present in the workplace and notifying potentially exposed workers.
- .Companies must provide adequate health insurance, job retention, job reassignment, and workers' compensation policies so that the individual worker is adequately protected from the medical and economic consequences of occupational exposures.

The primary purpose of the Occupational Safety and Health Act of 1970 is to establish standards that will reduce workplace exposures to safety and health hazards so that no worker will suffer diminished health, functional capacity, or life expectancy as a result of his work experience. Until adequate standards are developed, however, we must not forget to provide for the workers suffering as a result of existing workplace conditions.

Mr. Chairman, I will be pleased to answer any questions you or Members of your Subcommittee may have.